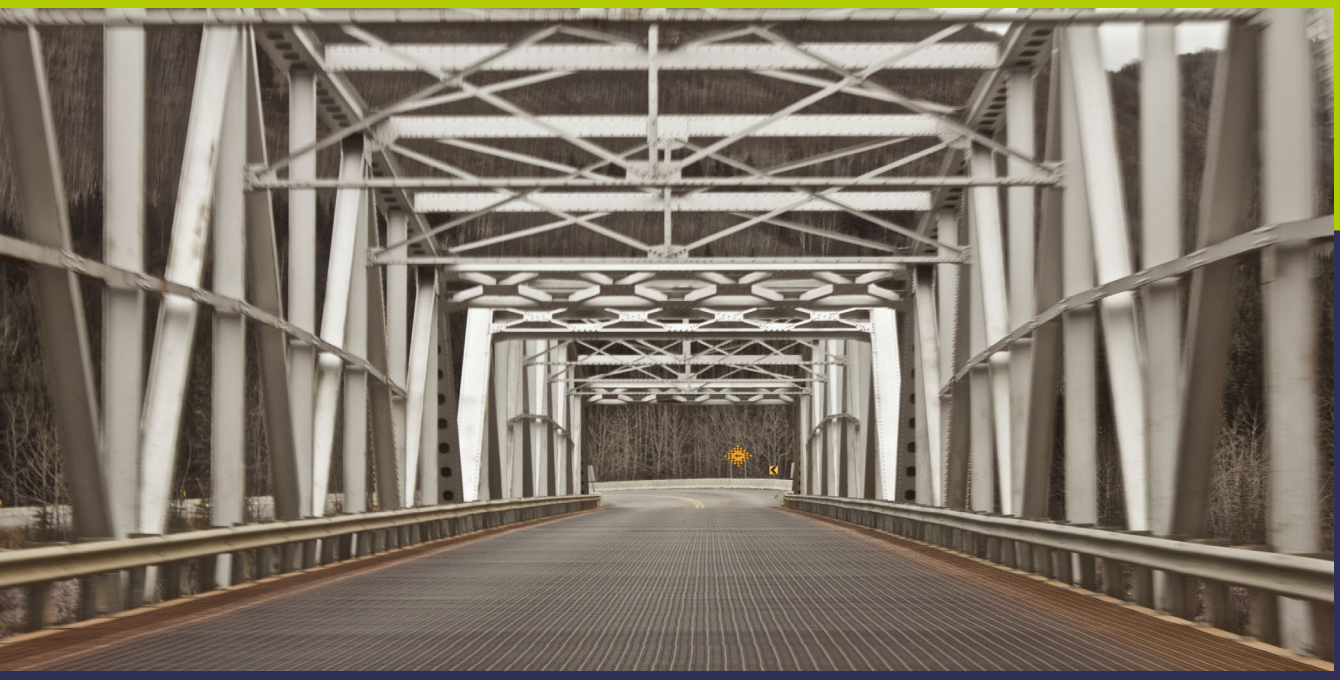
European Commission

EUROPEAN BARRIERS IN RETAIL ENERGY MARKETS



IRELAND
Country Handbook

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Energy

EUROPEAN BARRIERS IN RETAIL ENERGY MARKETS PROJECT: Ireland Country Handbook

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Please note that this and the other country handbooks form just part of the deliverables of the “European Barriers in Retail Energy Markets” project. For more detail on methodology, Europe-wide results and the Barriers Index, please refer to the following associated reports: “Final Report of the European Barriers in Retail Energy Markets Project”; “Report on the European Retail Energy Market Barriers Index”

SUMMARY

Project Outline

The following project outline describes the overall European Barriers in Retail Energy Markets Project. It relates to all the countries and markets which are the focus of the project.

The Context

European retail energy market liberalization is now well into its third decade in the most mature markets. Customers of electricity and gas are now free to choose their electricity and gas suppliers in nearly all markets across the EU and in a number of other European markets. At the same time, the European Commission and national European regulators have created a basis for non-discriminatory market access for energy suppliers through a series of regulations and directives. In theory at least, the European retail energy market is a place where new suppliers and providers of retail services can enter the market and compete relatively freely and on equal terms for customers in the market; a place where formerly incumbent electricity suppliers can compete for gas customers and where gas suppliers can compete for electricity customers; a place where a supplier from one region or jurisdiction can compete in another, without facing unreasonable or excessive barriers; a place where a capacity aggregator or other innovative business model can compete to provide its services to retail energy customers.

Objective

The European Barriers in Retail Energy Markets project was established to research the extent to which the theory is the case in practice; the extent to which energy suppliers across Europe face a variety of barriers to enter and compete in the market; to identify which barriers exist and to provide some suggested solutions to those barriers. The project thereby aims to support the European Commission and Member States in developing policy and implementing actions to reduce barriers.

This project has also designed and calculated a performance index that ranks different countries according to how easy it is to do business in the retail energy segment by combining a selection of measurements into a single score. The project is on the other hand, not intended as a measure or indicator of the ‘competitiveness’ of any given market, and it does not in this respect judge the effectiveness of regulatory authorities or governments, many of which have put great effort into developing their markets.

It is also important to note that all the markets included in this research are continuously evolving. Changes are being planned and improvements (and in some cases additional barriers) are possible as a result. While this project highlights and considers known future changes, it cannot make assumptions as to the effectiveness and outcomes of those changes. This project is therefore weighted in the present, based on the actual context in the market, whilst accepting that the present context may change, in some cases imminently.

Competitor Perspective

What sets this project apart from previous Europe-wide projects looking at the issue of barriers is above-all that it primarily takes the perspective of the competitor rather than any objective view of regulators, economists or academics. This is an important distinction since it requires an acceptance that even if the existence of specific barriers may not seem logical or rational, and even if they are not permitted or legal, even if they were supposed to have been eradicated, those barriers are significant at least in the experience or expectations of competitors in the market.

Notwithstanding this however, the project does not simply accept whatever competitors claim. On the contrary, the researchers have gone to great lengths to ensure that claims are challenged and justified. Cooperation with regulatory authorities to understand the regulatory context of claims, along with survey and interview feedback from competitors (including incumbent suppliers) with alternative perspectives or points of view, have also been considered to ascertain a balanced evaluation of the barriers in any given market. This approach may therefore be of value to policy makers, and complementary to other studies addressing market outcomes.

In some cases, claims by respondents have been made which cannot be corroborated. For instance, there have been claims by many respondents across Europe about integrated utility behaviours that represent barriers to independent suppliers in the markets. Barriers apparently resulting from a lack full ownership unbundling. Such behaviours may well be regulated against, may even be considered illegal, and authorities may have powers to investigate them – and maybe do so. They are impossible to prove given the mandate and resources of the researchers of this project, yet they are widely reported by respondents and broadly documented in other researches. Such barriers may be considered allegations by the respondents, but where they appear to merit further consideration they have been raised since their potential impact on competition is substantial.

Scope & Scale of Research

The project focuses on electricity and (in most cases) gas markets in 30 European countries, namely the EU27 states plus Great Britain, Norway and Switzerland. It was conducted over the course of more than a year with the cooperation and assistance of nearly all of the relevant national regulatory authorities (the report does not however represent their views and has not been ratified by them), around 150 suppliers and many other stakeholder organizations, across all focus markets. Great Britain was included in the project and cooperation was received from numerous suppliers, the regulator (OFGEM) and other stakeholders. Switzerland and Malta were included to a lesser extent since they are not yet open markets for household customers.

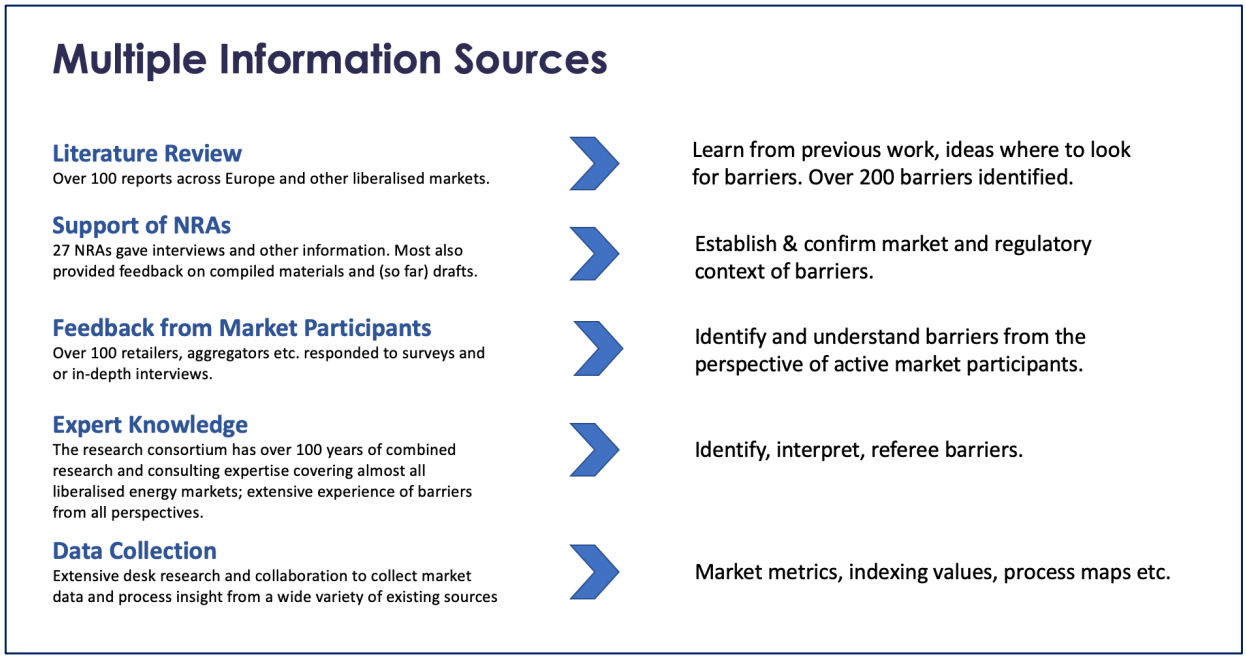
The project focuses on retail (supply), including also demand aggregation services, other additional offerings and new model retail, especially relating to the household segment customers (in some markets households and smaller SMEs may be difficult to distinguish). The project additionally concentrates primarily on barriers that are specific to the energy (electricity and gas) retail market – as opposed to barriers that are true of most markets, such as basic business costs and risk - and it gives priority to barriers for which a potential solution might be sought, as opposed to barriers which are a fact of any energy market and which could not realistically be overcome (such as the barriers relating to the core price volatility of energy as a commodity). The project does not aim to list every possible barrier in the market, however small.

Sources of Information

Many sources of information were used as part of the project. These included an extensive literature review of over 100 public reports, to assist in the targeting of survey questions; interviews with national regulatory authorities (NRAs) to understand the regulatory context in markets; feedback from market participants (suppliers and other competitors) and extensive data gathering for the purpose of collecting market metrics, market processes and

index values. For the latter the task of identifying sources that could deliver comparable and reliable index values was a key challenge of the researchers. The expert knowledge of the project consortium (which has extensive experience from the markets and issues concerned was also used to add judgement to the process. Specifically, the core project team comprised over a dozen researchers and experts from nine European countries, including international experts who have analysed Europe's energy markets since even before they liberalized.

Figure 1 – Multiple Information Sources



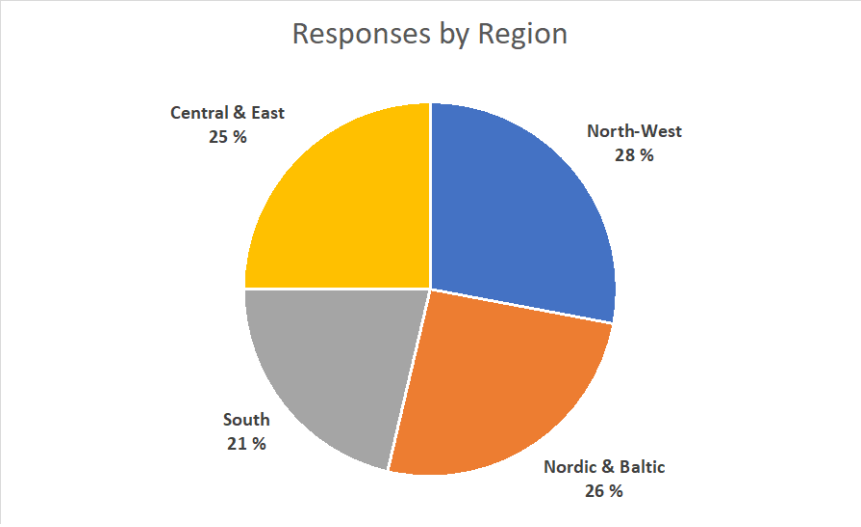
Surveys & Interviews

The primary research mediums used in the project were an extensive questionnaire and in-depth interviews. The purpose of the questionnaire, which contained separate questions depending on the type of respondent, was to provide a comprehensive and structured identification, weighting and magnitude of the barriers as experienced and perceived by suppliers and other competitors. Questions were categorized and broken down according to what was known through the body of existing literature and the experience of the project consortium, ensuring that all known barriers were addressed by the questionnaire. The questionnaire additionally facilitated the identification of barriers that hitherto had not been revealed by the literature review, or which were country specific. Interviews provided additional support and clarification to the findings from the questionnaire as well as allowing respondents to focus on top-of-mind barriers and the interviewers to dig deeper into key and / or unclear issues. While some respondents provided both questionnaire and interview responses, many provided one or the other.

The survey was publicly and widely promoted (via web sites, social media and by other direct means) to potential respondents from 17th June until late October 2019 but remained open until late February 2020 so that stakeholders contacted during Country Handbook development had the chance to respond. The dissemination of information on the project was further facilitated by a widely promoted public website through which over 300 people subscribed.

The Competitor Sample

143 questionnaire and interview responses were received representing 120 unique market-specific responses covering 28 focus markets. 71% of responses were through questionnaires versus 29% through interviews. Malta (a closed market for household customers) and Slovakia were the only markets from which responses were not received, although three additional markets received a level of response which was considered insufficient on which to conclude barriers based solely or primarily on respondent feedback. In these markets, namely Bulgaria, Cyprus, Czech Republic, the project consortium applied their expert insight and additional desk research to support the analysis of the markets. Switzerland, also a closed market for household customers, also naturally received insufficient response. The responses from 24 markets were therefore considered sufficient for the purpose of interpreting the barriers within those markets primarily based on respondent feedback. It is important to note that the response rate in no way impacted the index, which is not dependent on responses.



Analysis of the sample shows that responses were spread evenly among the regions. 66% of responses were non-incumbent competitors compared with 34% which were former incumbents in the markets concerned. In many cases the former incumbents are only former incumbents in one region within the overall country they are in. A large proportion of the former incumbents are furthermore active across multiple regions and countries, and therefore are both incumbents and non-incumbents, defenders and challengers. Among the non-incumbent players were a mix of more established competitors and more recent new entrants, along with more traditional supplies, new model suppliers and aggregators.

More information on the nature of the sample and responses can be found in the Final Report for this project.

Confidentiality

The importance of data protection and anonymity within the project cannot be stressed enough. Most respondents provided information on condition of anonymity. It was promised by default to questionnaire respondents and was in most cases explicitly requested by interviewees. Many participants additionally stated that they were nervous to respond at all since they were active in a market where there were only a handful of suppliers (or at least independent suppliers) which they felt meant that their responses could easily identify them. This risk was perceived as even greater in cases where the participant had made public statements on issues that would be contained in the research (the risk of readers putting two and two together was a concern). In some cases, respondents stated that they even feared a backlash from other stakeholders if their identity was revealed, or (for

e.g. a brand-new entrant in a market with one brand-new entrant) stated that if we revealed that they were a new entrant the market authority would instantly know who they were and that they were afraid it might inhibit their entry process.

Under such circumstances, it was decided that not only would all responses be anonymous, but also that the type of respondents would not be revealed in connection with given responses on a country level. It has been claimed by a handful of market authorities that this policy reduces the value of the research. The researchers feel that it in fact increases the value of the research since it has allowed respondents to provide information in an uninhibited fashion in a European market where, by and large, independent suppliers – and especially independent new entrant suppliers – are few and far between.

Deliverables

The project has three key deliverables:

- **28 country specific handbooks** detailing the barriers identified in each country together with suggestions for possible solutions. While most of the handbooks cover electricity and gas markets, some only cover electricity or cover gas to a lesser extent due to the absence or limited presence of gas. Additionally, two countries, Malta and Switzerland do not have country reports due to their closed nature with respect to household customers.
- **A robust, peer-reviewed barriers index** of how easy it is to do business in each country. The European Retail Energy Market Barriers Index, contained in the separate European Retail Energy Market Barriers Index Report, allows the objective comparison of market barriers across the focus markets. The report also includes a ranking of the focus markets.
- **An overall Final Report** containing a full project description and bringing together the findings and common learnings from all countries.

The Barrier Index and Ranking

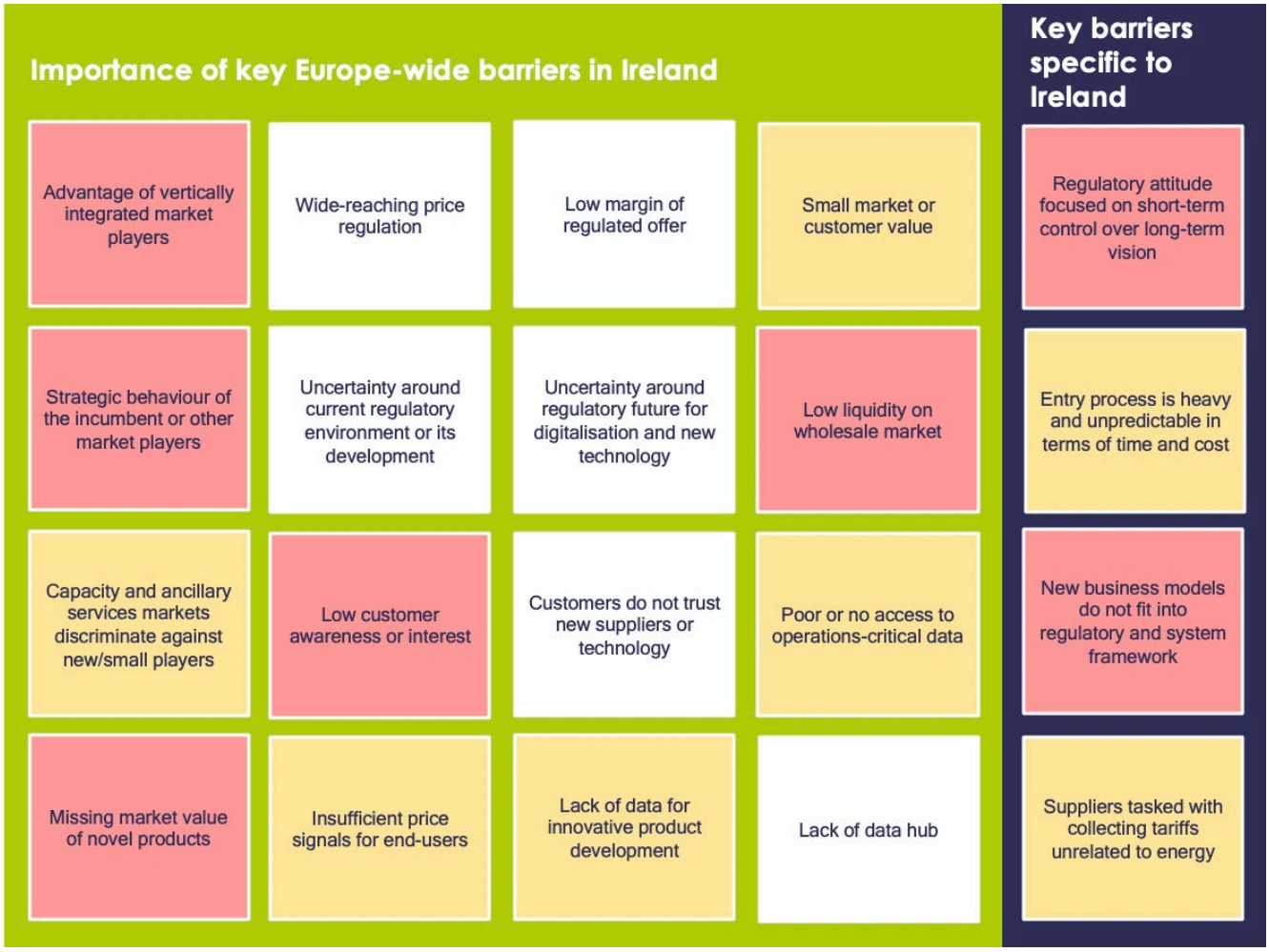
The purpose of the 'European Retail Energy Market Barriers Index' is to enable a degree of comparability between the barriers' context in each of the markets. It is based on metrics that can be collected for all markets, metrics for which available data currently exists. As such it provides a simple, best-available proxy benchmark measure for each of the categories of barriers identified by the project, for each market, and thereby ranks each market. It is intended to be used as an evolving periodical index and ranking on a European and national level.

The index and ranking should, however, presently be considered more of an approach and an indication than an absolute or definitive ranking. It represents the current state of market monitoring data in Europe and will evolve over time as data availability improves. Over time we would expect and recommend that governments and NRAs advance new metric collection to better enable future editions of the index and ranking.

A full description of the Index, its methodology and detailed findings and the ranking can be found in the separate Index report for this project. Within each country handbook the index values for that given country is presented.

Key barriers in the Irish market

The following figure highlights the key barriers identified in the Irish market.



Key recommendations

Ireland has an active energy market with high switching rates and regular new market entries. However, smaller suppliers and novel actors still face a number of barriers that prevent them from functioning to their full potential.

- **Market-dominant, ownership bundled incumbent.** While the market share of the incumbent has decreased to one of the lowest levels in Europe since liberalisation and its behaviour with regards to its integrated DSO is well regulated[1], there remain some indications that this situation may be arguably exploited for the incumbent's gain, to the detriment of independent suppliers. From our studies across Europe, it appears that requiring ownership unbundling is the only lasting intervention that could alleviate this issue, although in the mean time a centralized and equal data hub can significantly improve fairness towards independent suppliers, at least in terms of data access.

- **Forward market liquidity.** Smaller suppliers in particular were hindered by the lack of an established forwards market, reducing their ability to hedge against price risks. An explicit trading platform for futures would mitigate this, as is under discussion.

- **Smart meters may not meet their market potential.** Smart meters are currently being rolled out, but the planned data resolution and frequency (the responsibility of the Data Protection Commission, not CRU) may not be sufficient to allow market actors to capitalize on this new technology to design new products or trade end-user loads. It is strongly recommended that data sharing requirements should be more frequent and higher resolution, so that profitable products and services can be created from this large expense.

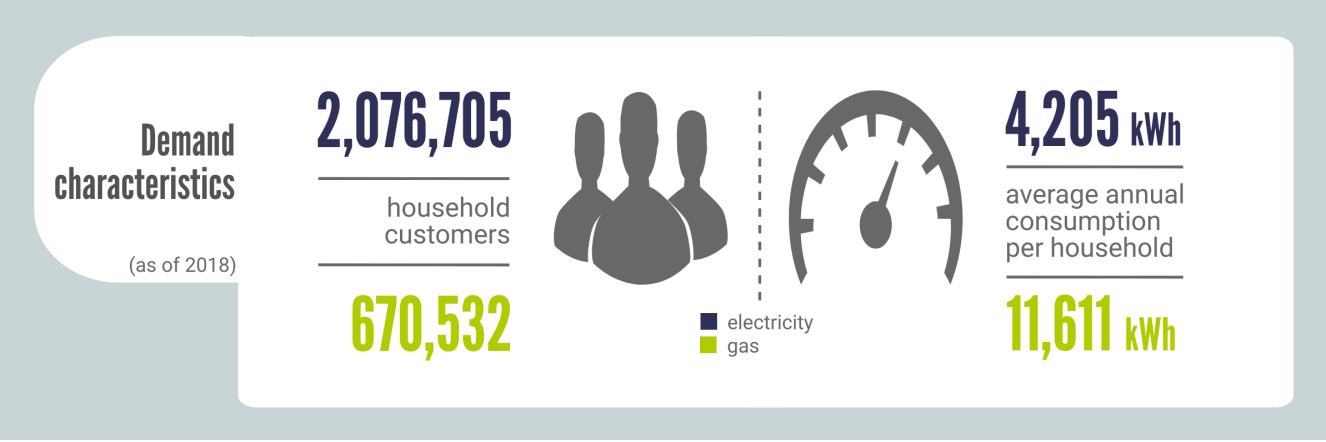
- **Attitude of the CRU.** The regulator was felt to have a short-term view and to focus more on established details than the development of the future energy system as a whole. The CRU may need to consider, for aspects such as the entry process, supplier obligations and reporting requirements, whether established processes are still serving a function to facilitate market activity and protect customers; updating to freer, more "future-proof" procedures may pay off in the long run.

[1] ESB generation, networks and supply (Electric Ireland) business are ring-fenced from each other as a market power mitigation measure.

MARKET OVERVIEW

Introduction

The island of Ireland comprises the Republic of Ireland, which has a population of 4.8 million people, and the province of Northern Ireland, which is part of the United Kingdom and has a population of 1.9 million people. The two jurisdictions now have a common wholesale electricity market but different retail markets. This report focuses on national barriers in the Republic of Ireland ("Ireland" throughout this report), which to some extent are shared across the Island of Ireland. Northern Ireland is addressed, in part, in the parallel report for Great Britain.



Ireland has an extremely interesting competitive retail market history, being the only electricity market in Europe to have applied a price-to-beat (see below), kick-starting its market almost over-night from a sleepy space with one key player to (temporarily) the world's most active retail energy market with one of the lowest levels of incumbent market share. It has since calmed down but remains a healthy level of activity (for both electricity and gas) - albeit with a significant degree of status quo - backed by an innovative and environment-customer-competition-focused regulator. Incumbency and bundling appears to remain a key issue, however, something which has been addressed (and much more is planned), but arguably with more still to be done.

Background

The Ireland electricity market has been open to competition for larger businesses since February 2000 and has been fully open to competition in all market segments since 2005. The retail gas market was opened in phases culminating with all customers having competitive choice in 2007.

Prior to restructuring, Ireland was supplied with electricity by a vertically integrated monopoly owned by the government, the Electricity Supply Board (ESB). In 2006 it was divided into ESB Networks, a DSO which served the whole of Ireland and owned the transmission; ESB Powergen, a generator; Electric Ireland, a retailer; EirGrid, the Transmission System Operator; and ESB International. Subsequently Eirgrid bought both the system operator and the transmission in Northern Ireland.

Before liberalisation, gas was supplied by Bord Gáis which was a vertically integrated monopoly owned by the government. It was split into Gas Networks Ireland, which owns and operates all of the high and low pressure networks and is both TSO and DSO; and Bord Gáis Energy, which is a retailer and was subsequently sold by the government along with the power generator it owned.

The regulator was initially established as the Commission for Electricity Regulation in 1999. The functions of the organisation along with its name were expanded to include natural gas regulation by the Gas (Interim Regulation) Act, 2002 – the regulator's name was changed to the Commission for Energy Regulation. In 2013, the regulator's functions and duties extended to include water regulation (Water Services Act 2013) and its name was changed in 2017 to the Commission for Regulation of Utilities (CRU).

The Single Electricity Market (SEM) was established in 2007 when the wholesale electricity arrangements of Ireland and Northern Ireland were combined. It is regulated jointly by the CRU and the Utility Regulator and operated jointly by the Irish and Northern Irish TSOs. New arrangements for the SEM went live on 1 October 2018 and introduced multiple markets or auctions, each spanning different trading time frames, with separate (although related) clearing and settlement mechanisms, covering both energy and non-energy commodities. The SEM consists of two ex-ante energy markets (day-ahead and intraday), a balancing market, two markets for financial instruments (forwards market, financial transmission rights), and a market for capacity remuneration.

Market structure

DSOs & state of unbundling

There is only one DSO for electricity in Ireland, ESB Networks. ESB Networks also owns the transmission and the distribution networks (including in Northern Ireland), but the TSO EirGrid operates the transmission network. Both EirGrid and the Northern Irish TSO SONI are owned by EirGrid plc, which also (through a partnership of SONI and EirGrid) acts as the Single Electricity Market Operator (SEMO), i.e. runs the all-island wholesale market for electricity. The SEM operates centralized dispatch based on stacking generator's offers. ESB Networks and Electric Ireland, the incumbent supplier, are legally unbundled but remain co-owned by ESB Group.

Generation & interconnections

All generation from plants at or above 10 MW must bid into the SEM wholesale market (participation below that is voluntary), as well as all consumption. No bilateral trades are allowed on the spot market. The SEM is considered to have increased competition, efficiency and security of supply in wholesale. Futures, however, are traded bilaterally; there is no physical forwards market.

In 2019 there was 7.6 GW of dispatchable capacity in Ireland, including interconnectors with Great Britain, 540 MW of demand-side response, and 216 MW of hydro (in addition to almost 300 MW of pumped storage). In addition, in 2019 there was an estimated 4.3 GW of non- or partially-dispatchable plant, mostly wind (3.7 GW installed capacity in 2018). There are two interconnectors with Great Britain - the Moyle Interconnector with Scotland, and the East West Interconnector with Wales – and several new cross interconnectors are planned both to Great Britain (Greenlink and MAREX Organic Power Interconnector) and to France (Celtic Interconnector).

Until the end of 2015 Ireland imported about 95% of all gas requirements from Scotland via two subsea interconnectors, and Northern Ireland had a further interconnector with Scotland. Now, Ireland gets about 60% of its gas from the Corrib offshore gas field to the west of Ireland which is operated by Shell Exploration & Production (Ireland).

State of retail competition – Past and Present

Past

After the initial wave of switching activity among larger energy users following market opening in 2000, there was a slow but steady level of switching only within business markets with ESB losing approximately 4% of business consumption per annum during the period 2002-2008. Both Bord Gáis Energy and Airtricity had both been active in this business market for a number of years but had only built up relatively small (yet nevertheless significant customer bases), mainly in the SME markets.

In 2009, the Irish regulator set what was effectively a price-to-beat regulated price level on ESB in the residential electricity market, meaning its price was regulated at a level that enabled substantial discounts from competing suppliers. ESB was furthermore prevented from providing offers to customers below the regulated price.

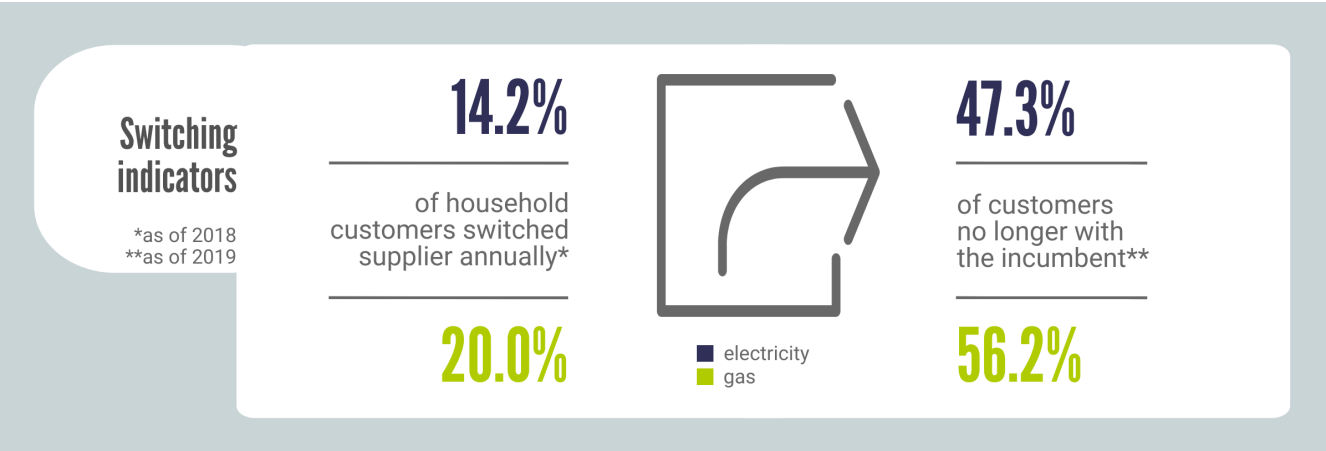
Subsequently, following the arrival of two key new entrants into the residential electricity market in February 2009, Bord Gáis Energy (the Incumbent Irish Gas Provider) and Airtricity, the market finally became active, resulting in

the electricity incumbent ESB losing large numbers of retail customers. In fact, the entry of Bord Gáis Energy and Airtricity into the domestic market in 2009 transformed the competitive landscape not only in the domestic market, but also in the business market where it had a major knock-on effect on business awareness of supplier switching options.

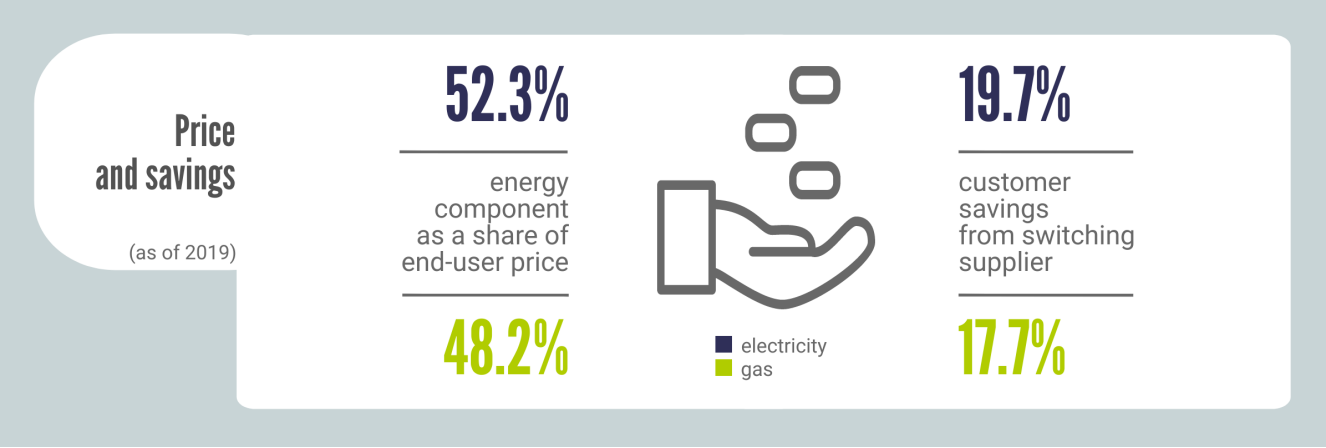
In 2010 It was decided by the Regulator that ESB had to reduce its market share to 60% or less in the domestic market along with rebranding of the ESB supply business to Electric Ireland, and to 50% or less in each of the business market segments, prior to the price deregulation. Following the fulfilment of that reduction, full price-deregulation of the electricity market occurred on the 4th April 2011 and a significant advertising campaign by ESB, ESB started to stem the customer losses, then winning back more and more customers, to a point where they were even winning more than they were losing and regaining some market share. A market share status was subsequently broadly achieved in the market, the switching rate slowed to a steady level and competition generally calmed down. The slowdown was also driven by a proliferation of offers and new products that had resulted in a certain amount of customer confusion and switching fatigue; the end of the regulated tariff leading to some customer confusion driven by a lack of benchmark (prices were benchmarked against the suppliers own standard rate rather than the regulated tariff); and a shift from the highly effective but disliked door to door to channel traffic online or via other channels such as inbound tele-sales. With Bord Gáis Energy remaining regulated in the residential gas market), however, switching in the residential gas market overtook that in the electricity market, driving also a growth in dual fuel. The market consequently appeared to reach a form of healthy competitive maturity, with few additional market entrants and a relatively stable switch rate.

Present

There are 2.08 million residential electricity customers and 0.67 million residential gas customers in Ireland. In 2019 there were nine suppliers in the residential electricity market and seven suppliers in the gas market; in 2018 six sold both fuels (29% of those who switched chose dual fuel), five were electric only, and one was gas only. At least one new market operator has entered the electricity market every year, except for 2010 and 2011, whereas the gas market has seen new entrants entering at a rate of only c. one every other year. One new supplier entered the residential gas market in 2018. Most recent new entries have been through acquisitions rather than new companies establishing. In the residential electricity retail market, HHI is 2970 and in gas it is 2770, indicating that the market remains reasonably concentrated.



Switching rates in Ireland are relatively high. In 2018 the switching rate was 14% for residential customers in electricity and 20% in gas; in addition, 9% of electricity users and 9% of gas users renegotiated their contract with their current supplier. Consequently, the market shares of the ex-monopoly retailers Electric Ireland and Bord Gáis Energy had decreased to 53% and 44% in 2019 respectively. According to the CRU, over the last four years a customer who switches or renegotiates could have saved EUR 1097 as an electricity customer, EUR 704 as a gas customer and EUR 1696 as a dual fuel customer.



End-user electricity costs in September 2019 consisted of 38.2% wholesale costs, 30.8% network costs, 15% supply costs, 4.1% Public Service Obligation (PSO) levy, and 11.9% VAT. The PSO provides money to subsidise renewables and peat generation. A typical gas bill in September 2019 consisted of 27.3% wholesale costs, 31.3% network costs, 24.5% supply costs, 5% carbon tax, and 11.9% VAT[2]. Most offers to attract new customers are framed as discounts off standard unit prices, and contracts are mostly fixed term for 1 or 2 years. When this expires, most customers are moved by default to more expensive standard rate tariffs. Suppliers tend to have relatively few tariff offers.

Regulatory market characteristics

Price regulation in household electricity was removed in the Irish market in 2011 and in household gas in 2014. In order to act as an energy supplier, companies must obtain a license from the regulator and apply to participate in the balancing market (SEM), along with several other registrations (see Appendix 1: Processes, section 12: Licensing, registrations & contracts). Customers receive a single bill from the supplier including network charges and has no direct relationship with the DSO.

The political and regulatory environment is innovative, environment and consumer-focused and favourable to competition in the energy market. Regulatory changes have included some very targeted and proactive requirements to facilitate newcomers displacing the incumbent.

[2] The chart showing prices and savings represents values for 2019 in general.

Recent updates to the SEM, which became the ISEM (Integrated Single Electricity Market) in 2018, are intended to pave the way to allow more flexible access to the markets, as well as immediately opening trade to a wider European electricity market. The political energy strategy has in recent years emphasised the energy transition, especially a move to more renewable generation (wind in particular) with the associated developments required in grid flexibility, but domestic gas extraction also continues to be favoured for reasons of energy independence.

Context for aggregation/demand response

Consumption may bid into the balancing electricity market, with possibilities for Demand Side Units and Aggregated Generation Units (composed of on-site generation units) to register and offer demand flexibility to the TSO Control Centre. On the regulator's initiative, the DSO has been rolling out smart meters since 2019, including gas, with goal of 250k meters during 2019-2020 and 500k/a more for four years after 2020, reaching a completion total of c. 2¼ million by the end of 2024. This will have put in place essential infrastructure for end-user DR. However, the market for demand-side management is far from mature in Ireland (see barriers in the following section).

Currently for end-users, the only type of dynamic pricing in Ireland is day/night pricing in electricity. Pilots are currently underway to test customer's engagement with different types of demand response. Only one supplier (Electric Ireland) has piloted a feed-in tariff for household customers with micro-generators, but this scheme is now closed to new customers. The regulator sees a clear opportunity in these aspects for suppliers to provide innovative tariffs and services.

BARRIERS

The European Barriers to Entry and Competition in Retail Energy Markets project has researched barriers across 30 European markets. From this research, barriers to entry have been identified and grouped into four over-arching pan-European barriers' blocks.

Over-arching pan-European barrier blocks

Barrier Blocks		
	1	Regulatory disincentivisation
	2	Market inequality
	3	Operational and procedural hinderance
	4	Customer inertia

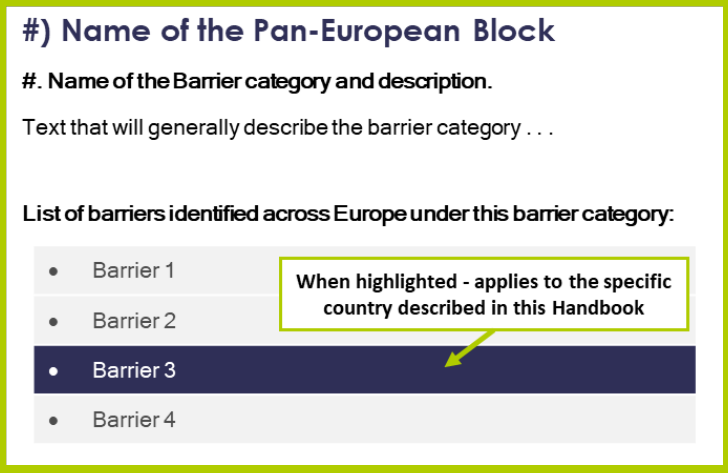
Description of the four-over-arching pan-European barrier blocks:

1. **Regulatory disincentivisation:** barriers arising as a consequence of the general regulatory framework of the natural gas and electricity retail markets. We address the impact of price regulation, burden (-sharing), regulatory unpredictability and access to innovation. All these items may disincentivize competition within the natural gas and electricity retail markets, as well as entrance by new suppliers.
2. **Market inequality:** barriers arising from an uneven playing field for different types of suppliers. Often, certain market players already have a competitive advantage by being very close to the formerly integrated DSO (or still being vertically integrated in case the de-minimis rule applies), controlling a large amount of generation capacity or having a large market share. If market rules do not prevent this, such players can exercise their market power to treat other market players in a discriminatory way, creating market barriers. We examine issues related to unbundling, historical roles and access to market mechanisms.
3. **Operational and procedural hindrances:** barriers arising as a consequence of the complexity and national/regional differences in standards and procedures in different process areas, affecting how easily new entrants can enter and operate in the energy retail market. We look at issues and differences in licensing, signing up and operations compliance, as well as data access, processes and data management from the suppliers' point of view.
4. **Customer inertia:** barriers arising due to customer behavior and attitude. For the energy market to function, end-users must be willing and able to switch supplier. If customers do not switch supplier, suppliers need not worry about losing customers, so there is no incentive for suppliers to improve their services, minimize prices or innovate to compete for customers. We examine barriers related to customer inactivity or disinterest in the energy markets.

Within each of these high-level blocks are contained sub-categories, which are also mostly pan-European in nature. Each of these sub-categories contain the specific barriers which relate to individual markets as described in the following chapter. Altogether, we identified 45 barriers, most of which broadly across Europe. Only a selection of them apply to the Irish case as reported in the following chapters of this handbook.

HOW TO READ AND INTERPRET THE FOLLOWING SECTIONS

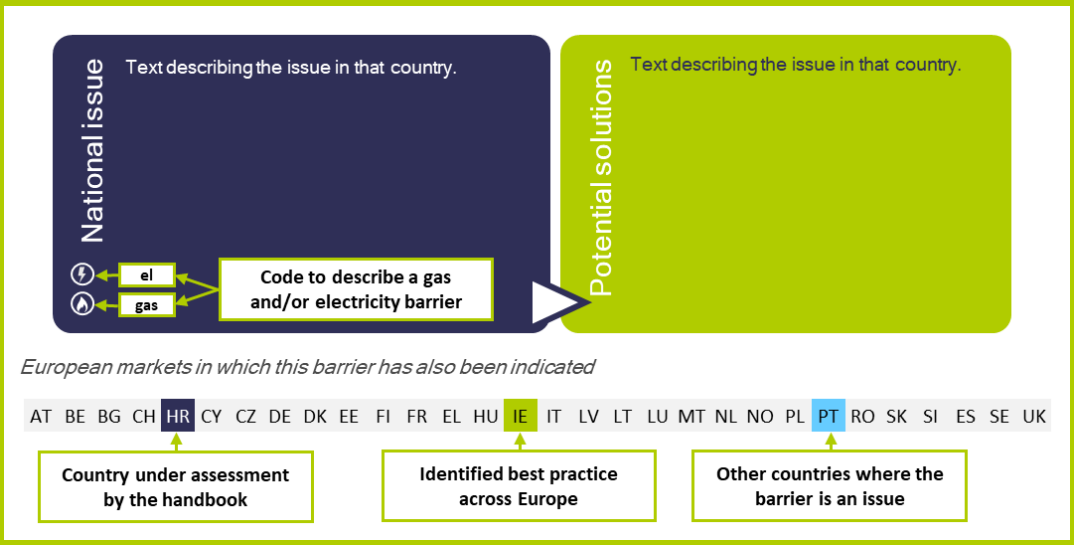
Each of the following four chapters explores one of the four pan-European blocks of barriers and report how each sub-category barrier apply to Ireland. When a barrier applies to Ireland, it will be highlighted in the table following a general description of the barrier itself as shown in the example below:



As shown in the figure above, the table lists all the barriers we have identified in Europe within the specific barrier category. **Only when a sub-category barrier is highlighted in the table does it mean that suppliers raised it as a barrier, and it is a prevalent issue in Ireland.**

Highlighted sub-category barriers are then briefly described following a twofold methodology which

- reports what the suppliers are experiencing in the market as a national issue and
- suggesting potential solutions to the problem as depicted in the figure below.



At the end of each chapter, Ireland's performance within the category, according to quantitative indicators, is then presented.

For additional market context, please see Appendix 1: Processes, which gives a high-level graphical overview of the most critical steps involved in establishing and operating as a supplier in the national market.

1) Regulatory disincentivisation

Within regulatory disincentivisation, barriers across Europe have been sub-categorised into four areas encompassing 17 specific barriers[3]:

1. **Price regulation.** Regulated prices usually refer to regulation or control of end-user's prices by a public authority, usually the National Regulatory Authority (NRA). Price regulation can take different forms, such as setting or approval of prices, price caps or various elements of these. In Europe, there still exist Member States which have maintained end-user regulated prices during the market opening process and after, in the intention of protecting households or even non-household customers from significant increases in energy prices, especially in a context of limited competition. In some cases, this regulation has led to below cost prices and to low margin to cover the supplier activity risk, discouraging investments and the emergence of newcomers.
   According to CEER[4], 14 European countries out of 27 answering a recent CEER survey have price intervention in electricity for household consumers. Where regulated prices remain, NRAs tend to consider them as a significant barrier to entry for alternative suppliers. All Member States, where NRAs consider regulated prices as a significant barrier, are planning to remove them, at least for non-household customers. Across Europe, the following specific barriers related to price regulation were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Ireland:

   - Price regulation discriminates against certain suppliers.
   - High penetration of price regulation
   - Low margin of regulated offer (margin squeeze)

2. **Burden sharing.** Energy suppliers across Europe are often required to collect payments for services not part of their business, or to provide other services such as services related to energy efficiency, or to manage assets such as those of the metering system. These requirements can pose a barrier for suppliers' operation on the retail market by raising their costs and distracting focus from their core business and might deter entry into the retail market by newcomers. Across Europe, the following specific barriers related to "burden(-sharing)" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Ireland:

   - Obligation to collect tariffs unrelated to energy on behalf of others.
   - Obligation to keep a minimum-security stock as a gas reserve

3. **Regulatory unpredictability.** The establishment of an internal natural gas and electricity market in the European Union is an ongoing process. European legislative packages are boosting this process, making

[3] Please note: these definitions are Europe focused, not specific to Ireland. Highlighted barriers have been identified as country specific.
[4] Monitoring Report on the Performance of European Retail Markets in 2018. CEER Report 4 November 2019.

market regulation evolve rapidly. Transposition of regulation into the national regulatory frameworks is not always smooth and NRAs' actions are sometimes unpredictable. This leads to uncertainties for suppliers related to unclear and unknown future developments of the regulatory framework, including the attitude of the institutions that regulate the retail market and oversee market operation and organization. This uncertainty is a barrier that impacts suppliers' business, preventing their entrance in the market, making strategic business planning difficult or forcing them to adopt different approaches during operation. Across Europe, the following specific barriers related to "unpredictability of regulatory framework" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Ireland:

- Suppliers face uncertainty because of a newly liberalized regulatory environment or uncertain future development of the regulatory framework
- Uncertainty caused by industry actors influencing legislation, e.g. incumbent or associations shape legislation
- Uncertainty regarding future regulatory developments, especially in the field of digitalization and new technology
- Attitude of authorities hinders development of the market
- Uncertainty regarding environmental obligations and non-renewable generation capacity

4. **Access to innovation.** Most European energy market are currently designed based on practices as they were during the period of national monopolies by what today are incumbent suppliers. Allowing suppliers and new entrants to be innovative depends not only on the opportunity to compete on prices, but also to diversify, welcoming new products, market actors and business models. When national regulatory frameworks do not take into account innovation in the retail market (regarding e.g. availability and functionality of smart metering, the possibility of flexible contracting and tariffs, or whether the demand side can bid in the balancing system), this may pose a barrier for new market entries, particularly more modern players. If new entrants are to be enabled in order to increase the level of competition in the retail market, regulations must accommodate future developments on the energy markets, especially considering that in the future new entrants may not only be electricity and gas suppliers but also act as aggregators or energy service companies (ESCOs). Across Europe, the following specific barriers related to "innovation-friendliness" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Ireland:

- Data protection issues
- Lack of incentivisation for novel pilot projects or post-pilot market rollout
- Lack of data for innovative product development
- No fit between new business models and existing regulation/obligations
- Missing flexibility in tariff structures
- Missing information and incentives for demand-side grid management
- Market structures do not incentivize novel products (missing perceived value)

1.1 Description of regulatory disincentivisation barriers in Ireland: Price regulation

No prices are not regulated in Ireland, hence no barriers regarding price regulation were identified in this market.

1.2 Description of regulatory disincentivisation barriers in Ireland: Burden (-sharing)

Obligation to collect tariffs unrelated to energy on behalf of others. In the research this barrier was indicated as an issue in Ireland. Energy suppliers are tasked with providing energy efficiency services, which can decrease their revenue stream.

National issue

Suppliers in Ireland are obliged to help their customers save 20% of their energy. This is expensive to implement, particularly for smaller companies with less in-house expertise and less access to economies of scale. Essentially, energy companies are delivering social policy, which ends up an inefficient way to address the fundamental issue of customer access to energy efficiency. This requirement in effect cannibalizes a supplier's revenue and hence is likely to have impacts on the traditional supplier business model.

Potential solutions

The amount of savings required has recently been adjusted to the size of the company in terms of market share, evening the playing field somewhat. However, this adjustment could be made more fair by using more up-to-date market share statistics than the current 2-year-old information, in which time customer numbers and mix could have changed substantially. More fundamentally, however, this is a social objective that would more efficiently be addressed through a centralized implementation of social policy, rather than being distributed to individual market players. Similar challenges exist for example in in Great Britain.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

1.3 Description of regulatory disincentivisation barriers in Ireland: Regulatory unpredictability

In addition to specific barriers described below, our studies of the Irish market indicate a potential risk from the United Kingdom (including Northern Ireland) leaving the EU. If the UK leaves the EU market without a deal the SEM will become an isolated market. While it will continue as now, the day ahead market will no longer be cross border but according to Eirgrid[5] will continue as a local day ahead market. Trade in gas will not be affected. The

[5] Brexit Update, 16 February, 2019.

UK's future trading relationship with the EU, and the level of harmonization of the energy systems, remains unclear at the time of writing.

Attitude of authorities hinders development of the market. In the research this barrier was identified as an issue in Ireland. The regulator is in some cases perceived to be focussed on shorter-term metrics, rather than taking a whole-system approach, despite the CRU's explicit aim to be a principles-based regulator. This atmosphere can discourage new entrants and novel developments, especially as these metrics tend to favour the incumbent.

National issue

Suppliers are increasingly concerned that the regulator's mindset will not effectively support market development into the future, as the regulator is felt to favour short-term control over a longer-term view for how the market needs to change. This is linked with the regulator tending to seek tight control of the market and its outcomes (see also section 3.1). Emphasis so far has been on minimizing market disruption, yet the energy transition demands a degree of market disruption. Another aspect raised as an issue for market development is the regulator's focus on switching rates, which are known to reflect a mix of high switching by an active customer segment and complete inactivity by c. 40% of the market who remain with the incumbent. Suppliers also indicated that the regulator faces insufficient expert oversight or accountability, with the associated risk of not performing to maximum efficiency.

The NI regulator was felt to have a similarly narrow view, with a near-exclusive focus on prices that does not support forthcoming changes to the energy system and market.

Potential solutions

In comparison to other European countries, this is a relatively minor issue: the CRU is competition-focused and believes in the value of a functioning retail market, and are perceived as wanting to help and being easy to work with. CRU aims to use behavioural, not structural, changes to encourage market development, i.e. not setting hard boundaries/targets but instead making processes support this. Nonetheless, a wider, more holistic view of the evolving energy system could serve both to ensure suppliers that the market is developing, encouraging innovation, and to design developments that would future-proof the market rather than simply meeting current short-term aims for customer churn, market shares and prices (see section 4.1). In parallel, a greater focus on the inactive customer segment, rather than switching rates, might pay off by increasing whole-market activity.

While the fundamentals of the Third Energy Package have been well implemented in Ireland, market players expressed the opinion that it is not clear if the CRU is on the right path to a dynamic energy system/market as envisioned by the Clean Energy Package. Adapting regulatory attitude to align with this vision would be welcomed by market actors.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

1.4 Description of regulatory disincentivisation barriers in Ireland: Access to innovation

Lack of incentivisation for novel pilot projects or post-pilot market rollout. In the research this barrier was raised as an issue in Ireland. While innovation funding exists, difficulties accessing these financial incentives can be a major barrier for conducting pilots in DR and other novel technologies, as the piloting firm then bears all the risk for this experimental work.

National issue

The network operator provides funding for innovative projects, but this funding is hard to access. Moreover, there is a feeling that this innovation tends to be channeled to the incumbent. This limits suppliers' willingness to pursue novel projects. In parallel, suppliers feel constrained in their competition by the DSO not sharing their innovations more widely.

Potential solutions

Suppliers have raised this issue with the regulator in preparation for the next price control review; provided the authorities are willing to act on this input, this barrier should soon be alleviated. The CRU is already seeking feedback on the issue of apparent incumbent favouritism in order to take effective steps to solve it. In addition, openness requirements could be placed on the DSO to ensure all suppliers are aware of what innovations are underway in which areas.

An example model favoured by suppliers would include a centralized innovation funding source, administered but not owned by the DSO, that would ensure that incentives and findings are shared.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

FINLAND BEST PRACTICE CASE: Incentivizing novel projects

Finland was raised by respondents as the best example among the Nordic countries of authorities encouraging pilot projects in novel services/products. The high opinion was mainly due to the practice of encouraging post-market roll-out of the service/product upon project completion. This raises market players' confidence that the authorities take seriously the need for integrating novel players into the system, and the potential for soon becoming commercially active naturally acts as a strong attraction for companies to get involved in such pilots. Encouraging participation in this way benefits the energy system by making it more likely that projects and players providing crucial new developments will be found. Under the Finnish approach, with good opportunities for suppliers to cooperate with the TSO, flexibility development happens through pilots. Indeed, Finland's energy system is felt to be the most conducive (at least in the Nordics) for products such as DR and aggregation, indicating that lessons have been learnt effectively from pilots.

Lack of data for innovative product development. In the research this barrier was identified as an issue in Ireland. Smart meters open up opportunities for novel demand-side and aggregation services that rely on almost real-time consumption data. However, for this data to meet its full potential in matching balancing product bids and acting on wholesale markets, it must be of sufficient quality and timeliness.

National issue

The lack of infrastructure, notably smart meters, necessary for implicit demand response poses a barrier to developing and rolling out novel services.

The smart meter roll-out currently risks a significant economic loss as there is no requirement for data in sufficiently close to real time to be useful for product development or trading (see also section 3.2). Smart meter data will only be available at daily resolution, even for half-hourly metered customers (unless customers opt in to higher resolution), which is not sufficient to e.g. integrate demand response or microgeneration with balancing markets. Smart meter roll-out is calculated according to market share, such that the incumbent will receive a much greater absolute number than any other supplier, enabling them to capitalize first on any novel services enabled by the new technology (see also section 2.1). Moreover, strict controls are expected around what suppliers can do within the transition to smart metering, e.g. limiting the number of tariffs they may offer. In addition, some aspects of regulation remain unclear despite systems being expected to begin operations this year.

Potential solutions

Rolling out smart meters, started in 2019 and expected to be completed in 2024, provides a huge opportunity for data to support innovative products for the future, flexible energy system. However, current data sharing proposals (see section 3.2 for details) severely limit the possible uses of this data in supporting new product development. For smart meters to meet their full market potential, protocols for data handling and access are well-designed to be timely, sufficiently high resolution, accurate, and with equal access for all market players. Moreover, if roll-out plans had accounted for e.g. geographic distribution rather than supplier market share, it may have opened up better opportunity for novel services sooner.

European markets in which this barrier has also been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK
■	■	■		■	■	■	■		■	■		■	■	■		■				■			■		■	■	■

No fit between new business models and existing regulation/obligations. In the research this barrier was indicated as an issue in Ireland. Regulator requirements designed for traditional suppliers do not always make sense for innovative players who are nonetheless bound by them. Unclear current regulation around demand response aggregation, such as missing role definitions, makes it challenging for novel services to enter and grow. Regulatory frameworks need to provide a stable environment for new business models to grow and develop.

National issue

New business models and solutions do not always fit into existing regulatory and system frameworks, in part because the regulatory requirements are very specific (see sections 1.3 and 3.1). For example, a recent new entrant with an "all-you-can-eat" supply model faced serious difficulties aligning with the market guidelines, which had not anticipated such a model and hence included inappropriate requirements.

The roles of market participants in demand-side aggregation are also unclear, e.g. which activities suppliers, the DSO and the BRP may undertake. Hence, aggregators lack a regulatory and market framework, making access to the market difficult.

Potential solutions

This issue is linked with the regulator's approach generally being focused on detail rather than a whole-system view (see section 1.3). It is undoubtedly a challenge to set market rules that secure a functioning market for customers while also allowing playing room for novel providers. Exit interviews with suppliers who choose to leave the market could illuminate areas where unnecessarily strict regulation contributed to that decision.

As the energy system evolves, however, new clear rules must also be established to define what different parties may and may not do in terms of providing flexibility.

European markets in which this barrier has also been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

Missing flexibility in tariff structures. In the research this barrier was raised as an issue in Ireland. The potential of tariff structures to be flexible can encouraging customers to consume when it is cheaper, for example through differentiated time-of-use tariffs. Rigid or flat structures, which are defined by regulation, hinder new and innovative demand-shifting offerings on the market.

National issue

Current grid tariff structures were felt to unfairly allocate costs among users and not adequately reflect network congestion, security etc. This hinders demand aggregation and other innovation as it removes a key economic incentive for more dynamic consumption. Linked to this, flat charges can blunt price signals for end-users, reducing their interest in participating in demand-side management (see section 4.1). Even as the smart meter roll-out will in theory enable higher-resolution settlement of consumption (but see section 3.2), use of system charges will continue to be profiled and settled bimonthly, reducing customers' potential to benefit from shifting consumption.

Potential solutions

Making grid tariffs more dynamic is a complex challenge. Peak capacity prices can be seen as essential for renewable investment decisions. From a suppler perspective, though, flat tariffs are more risky (especially without a futures market) and if Ireland achieves its goal of 70% renewables by 2030, near zero marginal cost of renewables may lead to low wholesale costs (grid tariffs, taxes and policy costs would dominate the energy bill, reducing benefits from switching). Time-of-use tariffs would have to be carefully thought out to ensure fairness for customers less able to be flexible, but increased use of price signals and / or capacity based components is arguably important to shift consumption, reduce investment costs, support flexibility-based consumer models and allow suppliers to manage risk.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

LATVIAN BEST PRACTICE CASE: Grid tariff flexibility

Inflexible tariffs can **no longer pose a barrier** to innovative products in Latvia, as recent regulatory changes enabled networks to charge more dynamically for distribution. In 2016 **differentiated distribution tariffs** were introduced for electricity market, which have been shown to **reduce end-user costs**. In 2019 differentiated distribution tariffs were introduced in natural gas market. Through these tariffs, end users are incentivised to decrease their connection capacities if appropriate, reducing their distribution costs and freeing up system capacity both for security and efficiency of supply and new connections.

Missing information and incentives for demand-side grid management. In the research this barrier was raised as an issue in Ireland. Grid operators could reduce outlay on network expansion by instead procuring demand reduction or storage services to aid grid control. However, a support scheme built around CAPEX (infrastructure investment) rather than OPEX (procuring novel services) incentivizes building rather than utilizing flexibility services.

National issue

CAPEX-based incentives were reported to limit the DSO's interest in and potential to procure flexibility from the market.

Potential solutions

As part of ongoing market reforms to encourage flexibility, the regulator should consider updating the DSO incentives system to more effectively allow development to keep pace with the future, flexible energy system. This could include supporting the DSO in procuring services such as storage or demand-side control from market participants, rather than only in expanding grid hardware.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

Market structures does not incentivize novel products (missing perceived value). In the research this barrier was indicated as an issue in Ireland. Without an existing demand and/or mindset for novel services such as DR both among customers and at the regulator, new entrants face the barrier of establishing the entire market before they can act in it.

National issue

Missing perceived value of novel products was considered a barrier to innovation in both electricity and gas. This is partly a result of the regulator's perceived short-term focus, especially on price (see section 1.3), which reduces playing room for companies to differentiate. In order to finance the energy transition and provide novel services, investment is needed either in terms of new entrants or innovation by established companies. For example, the market for demand aggregation was note considered to be attractive yet, with limited potential for assets related to demand side aggregation and hence an unwillingness to invest in them.

Potential solutions

The issue of a non-yet-existing market is difficult to address directly at a regulatory level, but by removing other barriers discussed in this section and allowing the demand-side market to mature effectively, its perceived value is likely to increase quite quickly.

A shift in regulatory approach may contribute to this market shift, to consider what are reasonable margins and timescales for them to enable companies to make the necessary investments. This could open up a future where suppliers compete on more things than price, if their margins allow investment in other services.

European markets in which this barrier has also been indicated

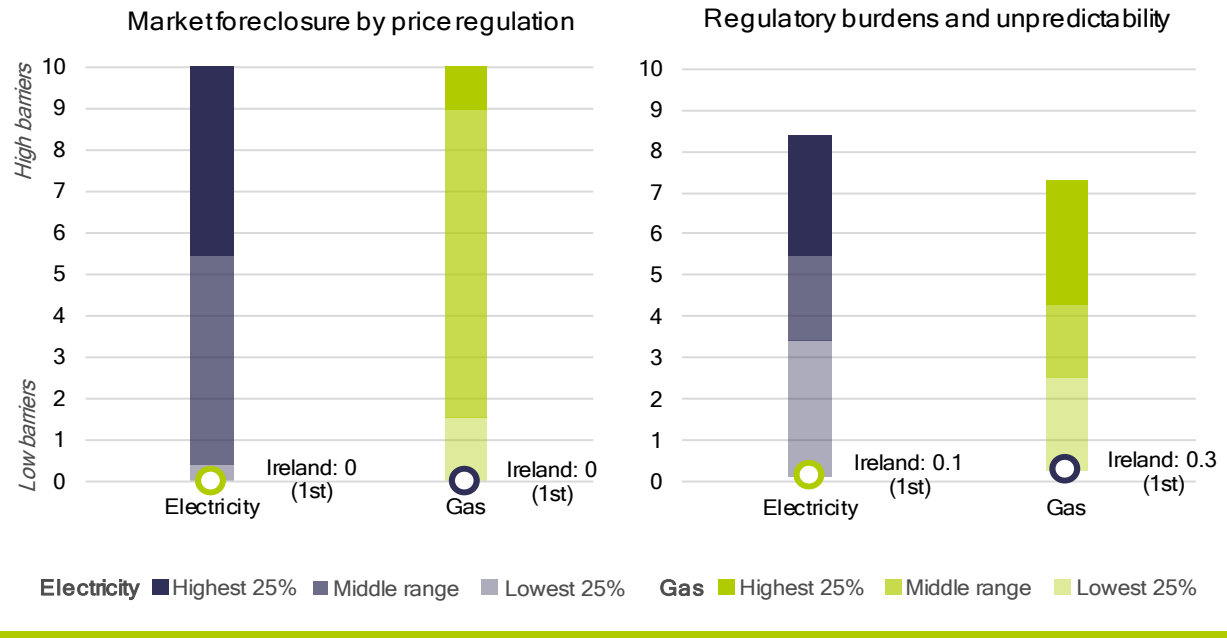
AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

1.5 Ireland's performance in this barrier category

The following figure shows quantitative indicators of how far regulatory disincentivisation acts as a barrier in this market. The values for Ireland are shown against the range across all analyzed countries. These scores contribute to the performance index. The performance indicators of regulatory disincentivisation are the following:

- **Market foreclosure by price regulation:** The index consists of two sub-indicators, the penetration of price regulation (among residual customers), and the mark-up of the regulated offer. A high score is attributed if a high share of customers is supplied at regulated price, and the mark-up is significantly lower than the average mark-up in the competitive markets.
- **Regulatory burdens and unpredictability:** The index consists of two sub-indicators. Regulatory burdens reflect the non-energy share of the energy bill in an average household, which are regulated (taxes, network fees). Regulatory unpredictability was measured via the related question in the supplier survey conducted for this project. A high score is attributed if the share of the non-energy elements is high, and if survey respondents scored the question highly (as an important barrier).

Performance indicators



Ireland was ranked 1st across Europe in both regulatory index categories, for electricity and gas.

2) Market inequality

Within market inequality, barriers across Europe have been sub-categorised into two areas encompassing 8 specific barriers[6]:

1. **Unbundling and market power.** In order to facilitate better competition and improve performance of the individual parts of the energy companies, the Energy Directives introduced rules for legal, functional and accounting unbundling between DSOs and supplier. Although legal unbundling has been implemented throughout all EU member states, barriers arising from vertical integration can still be observed in many markets, raising the question if the required level of unbundling is sufficient in order to meet the goal of a fair and competitive retail market. Companies serving less than 100 000 customers are only obliged to implement accounting unbundling.

   In order to avoid confusion among end customers between the separate parts of integrated energy businesses, brand unbundling has been a focus area for NRAs over the last years. Nevertheless, in several EU countries, the difference in the branding of the supplier and the DSO is perceived as

[6] Please note: these definitions are Europe focused, not specific to Ireland. Highlighted barriers have been identified as country specific.

insufficient. Strategic and unfair advantages for incumbent suppliers around transparency, pricing and access to information and data occur in most of the European countries studied. Access to production capacities can also be limited for small suppliers if market players with a large generation portfolio can withdraw production capacity from the accessible markets. Balancing and ancillary services markets can also be distorted as they are often still designed to mainly benefit large-scale generation, discriminating against smaller market participants. Across Europe, the following specific barriers related to "unbundling and market power" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Ireland:

- Lack of brand unbundling
- Discriminating, strategic behaviour of incumbent, and obstruction of other market players.
- Strategic, unfair advantage of vertically integrated market players and lack of transparency.
- Limited or biased access to production.
- Discrimination against new and small market players in capacity and ancillary services markets.

2. **Equal access to and maturity of wholesale market.** The wholesale markets present one of the most important sources for energy procurement for all market participants. New and small suppliers tend to have weaker bargaining position in bilateral negotiations, which occurs higher sourcing costs, therefore leading to a competitive disadvantage. Access to a well-functioning wholesale market (an energy exchange) therefore enables smaller suppliers to buy energy for competitive prices.
   Barriers related to the wholesale market can arise by discriminatory market platform access and the absence of any viable alternative. Furthermore, a lack of available products and low liquidity can both lead to an increase in risk, disadvantaging small market participants substantially more than large, established suppliers. Across Europe, the following specific barriers related to "equal access to and maturity of wholesale market" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Ireland:

- Discriminatory market platform access (standards, guarantees, etc.)
- Low liquidity in the wholesale market
- High price or volume risk in energy procurement

2.1 Description of market inequality barriers in Ireland: Unbundling and market power

Discriminating, strategic behaviour of incumbent, and obstruction of other market players. In the research this barrier was identified as an issue in Ireland. The incumbent is able to use tactics in pricing, customer access, branding etc. not available to new entrants or new entrants. This can especially disadvantage suppliers with no established relationship with customers and only a limited customer base to draw data from.

National issue

Electric Ireland still has over 52% (2019) Irish household electricity customers, many of these customers - more than among new entrant suppliers - are inactive and paying higher prices on standard contracts from which they have never switched (see "Legacy customers" box in section 4.1). These legacy customers likely bring in revenue and margins for Electric Ireland beyond which is possible for other suppliers that have only active (have switched) customers. This additional resource could be leveraged to retain existing customers (while other suppliers must invest much more in gaining customers) - Electric Ireland has never had to win most of its customers.

In a market where there is no futures market, ESB / Electric Irelands natural hedge of wholesale risk against the group's own generation (see section 2.2). can also be seen as a significant potential advantage. New entrants and suppliers without substantial generation must take significant wholesale risk.

Although ESB and Electric Ireland are brand unbundled, this has arguably not been sufficient to prevent customers from perceiving these established players as the same company (see also the following barrier).

A minor additional issue of market power arises from Electric Ireland, as the incumbent, being the only supplier able to include energy benefits for vulnerable customers as bill credit, which is preferred by customers.

Potential solutions

Electric Ireland's very steady market share at the maximum they are allowed could be an indicator that their incumbent position advantages them somehow - even if only by requiring them only to retain, not more expensively gain, customers (see "Legacy customers" box below). A more detailed examination of this issue could shed light on whether any market skews do indeed contribute to Electric Ireland's continued dominant position. They are seen by competitors as good at what they do, not successful only because of their historical position, but incentives for them to act as a commercial rather than public service company would be welcomed by the market. In the wholesale market, however, ESB's market share has dropped to just above 30% since deregulation, indicating more efficient market widening here.

The issue of energy support as bill credit could be solved by allowing either all or no suppliers to offer this payment method, to even the playing field. More radically, the government could put the procurement of this energy out to tender, rather than always sourcing from ESB, removing Electric Ireland's direct link to the subsidy.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

Strategic, unfair advantage of vertically integrated market players and lack of transparency. Although it is difficult to evidence, and there are rules against many aspects of such behaviour, suppliers nevertheless identified this barrier as an issue in Ireland. Linked with the above, the single DSO is co-owned with the incumbent, dominant supplier. This might give the incumbent advantages in marketing, wholesale and the potential for cross-subsidisation from the network to the supply side.

National issue

Both the DSO, ESB Networks, and the incumbent supplier, Electric Ireland, are owned by the same group, ESB Group. This leads to issues ranging from advantages in wholesale (see section 2.2) to access to intra-group information flows that can give the supplier company a market insight advantage over non-integrated players. Informal communication channels within the group are hard to break, leading to other suppliers being reluctant to bring innovations to ESB Networks in case it benefits Electric Ireland, a competitor supplier. However, the **major consequence for the market is the potential for cross-subsidisation** between distribution and supply within the group, especially given Electric Ireland's access to capital from inactive customers (see above). This allows Electric Ireland to e.g. run loss-making pilots, as done in micro-generation, to gain a first-mover advantage in new openings in the market. No other suppliers would be able to commercially justify such a tactic. Moreover, the ESB group was felt by some to retain something of a public sector mentality, making decisions that are not always in keeping with corporate role, including emphasizing minimizing cost over quality of service and risk-aversion around new technologies. Moreover, ESB advertises its role (unlike the gas DSO) in a way that can be interpreted as linking to end-user supply and other services. Currently the incumbent benefits from ESB Networks' advertising expenditure. ESB Networks has also received government funding for pilot projects such as a public e-vehicle network, which has now reverted to the ESB Group, which in effect gives ESB a presence on the retail market.

Also arising from this integrated corporate structure, Electric Ireland is concerned to maintain a strong lobbying voice as it is their sister company ESB Networks that will be blamed by customers if any developments do not work.

Potential solutions

Regulations already exist to minimize the effects of vertical integration, e.g. within the group, each company is ringfenced to guard against cross-subsidisation. Oversight by the CRU aims to ensure there are no unfair information flows, and the corporate structure of the ESB group reflects this. However, informal communications channels, such as employees changing position between supplier and DSO within the group, makes information flows difficult to define. As in other markets where incomplete DSO unbundling affects market functioning, two potential courses of action could further remedy the issue. On the one hand, stricter regulation around transparency of accounting, communication etc. could prevent abuses of this advantaged position, involving limited initial investment but high ongoing costs of oversight. A more radical, but arguably more long-term effective approach would be to require full ownership unbundling for DSOs, removing any potential for the DSO or supplier to prioritise economic benefit for the holding group over quality of service. Stricter requirements on DSO advertising, e.g. preventing the DSO from hosting web links to the supplier co-owned by the same group, could also serve to reduce customers' perceived coupling of ESB with Electric Ireland.

This is to some extent linked with the regulator's approach to disruptive novel technologies (see section 1.3). An assessment of Electric Ireland's advantage in such pilots could increase the market's optimism that smart meters and other aspects of the energy transition are welcome.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU **IE** IT LV LT LU NL NO PL PT RO SK SI ES SE UK

GREAT BRITAIN BEST PRACTICE CASE: Unbundling of DSOs and supply businesses

Great Britain provides an example of well-functioning separation between distribution and supply. Ten of the 14 electric DNOs (distribution network operators) are free standing companies, while 4 are part of groups that include generation and supply businesses. Of the 4 companies that distribute gas, only 1 is part of a group that also owns a gas supply business. The companies that have generation or gas supply affiliates are effectively unbundled. In this study, we found no evidence of incomplete unbundling presenting a problem in Great Britain. DNOs are prohibited from providing end-user services, they are invisible to the customer, and no suppliers in the study had experience of the supplier/DNO relationship being exploited.

Discrimination against new and small market players in capacity and ancillary services markets. In the research this barrier was raised as an issue in Ireland. The balancing landscape remains focused on large-scale generation, excluding smaller-scale generation or demand-side bids from participating in balancing markets as they cannot meet the product requirements.

National issue

Although Ireland's competitive environment was felt to be relatively fair to demand response and aggregation, several issues were raised around access to the ancillary services. Both market access conditions, product definitions and system management (e.g. re-dispatch) were felt to favour large-scale generation while excluding innovative and decentralised solutions. For example, pre-qualification for some balancing products was prohibitive, and there are limitations to pooling different flexibility resources are limited.

Potential solutions

A revised market for aggregation/DR, part of the ISEM, is currently in its infancy, although market players report that little direction has been provided at this point. Continued development of this platform, particularly in consultation with market players to ensure ideal functionality, will address this barrier to a large extent.

European markets in which this barrier has also been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

FINLAND BEST PRACTICE EXAMPLE: Consumption bids in balancing

Several respondents active in aggregation and demand response expressed satisfaction at how Finland has redesigned balancing products to make them amenable for demand-side bids, complemented by its market-centric approach to DR. This indicates a willingness to let flexibility play a bigger part in the evolving energy system. Indeed, Finland's attitude to DR is positive and flexible, with respondents feeling that Fingrid is easy to work with and open to novelties. Many of the market structures for DR are an example of how to incorporate demand-side flexibility into the energy system. Some products are necessarily constrained by e.g. fast response times or minimum bid size due to their function, which make them difficult for DR providers to fulfill. However, open-minded amendments such as allowing pooling of loads, enabling step-wise activation or reducing minimum bid size where possible have opened up several products to DR. Developments remain ongoing, e.g. imbalance settlement for aggregators is currently under discussion. Progressive changes at the consumer end have also helped open the aggregation market in Finland, for example allowing 3rd party providers to access customers. Market players reported that the other Nordic countries are now developing in the same direction that Finland already has done, in this and other DR and novelty-related aspects.

2.2 Description of market inequality barriers in Ireland: Equal access to & maturity of wholesale market

Low liquidity in the wholesale market. In the research this barrier was identified as an issue in Ireland. While the spot market appears liquid, the forward market is less so. Despite the potential for bilateral trades, a lack of liquidity in the wholesale market is a barrier to operation as it leads to higher prices and risks, and therefore increases sourcing costs.

National issue

Although the SEM appears highly liquid, newer entrants are concerned that this does not reflect the trading reality. To mitigate their market power, the ESB Group - which owns both the DSO, the incumbent Electric Ireland, and the majority of generation - is required to sell part of its generation through price-controlled "directed contracts". However, smaller volumes are traded on pre-bond platforms where prices often are much higher. There is concern that ESB Networks is selling to its supply sister company Electric Ireland at higher prices to keep capital within the group, avoiding the requirement to pay part of their profits to the government. Only the incumbent can afford to take this approach thanks to their higher margins (see section 2.1), disadvantaging smaller or newer players by increasing their risk.

Potential solutions

The bundling of generation with supply need not be an issue in itself, as the possibility to hedge against one's own small-scale production is valued by producers and does not of itself have negative impacts for customers.
However, in this case the incumbent essentially has access to a financial instrument unavailable to other suppliers as a result of within-group cross-subsidisation (see section 2.1). Stricter unbundling or transparency requirements could help solve this. A more fundamental shift, which would even the playing field for all actors, would be to revise the directed contract system, requiring all trade to be on the open market, increasing its liquidity.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU **IE** IT LV LT LU NL NO PL PT RO SK SI ES SE UK

High price or volume risk in energy procurement. Related to the previous point, in the research this barrier was identified as an issue in Ireland. A lack of hedging opportunities due to the absence of a full futures market, which would allow companies to insure against wholesale price fluctuations, increases risks for market participants due to the difference in time and volume between procurement and billing.

National issue

There is a price risk in energy procurement arising as a result of there being poor hedging opportunities - there is no physical forwards forward market, or hence price curve, although futures are traded OTC. This is linked with the integration of the ESB group, which owns the majority of generation, especially base load coal as opposed to the generally intermittent renewable generation owned by other players. This enables its supply company, the incumbent to hedge more effectively against its own generation - only ESB can sell long. This large-scale hedging opportunity is not available to other market players.

Potential solutions

Futures/forwards markets have been under discussion, although have recently received less attention. These development processes should be continued, also including market players in discussions.

European markets in which this barrier has also been indicated

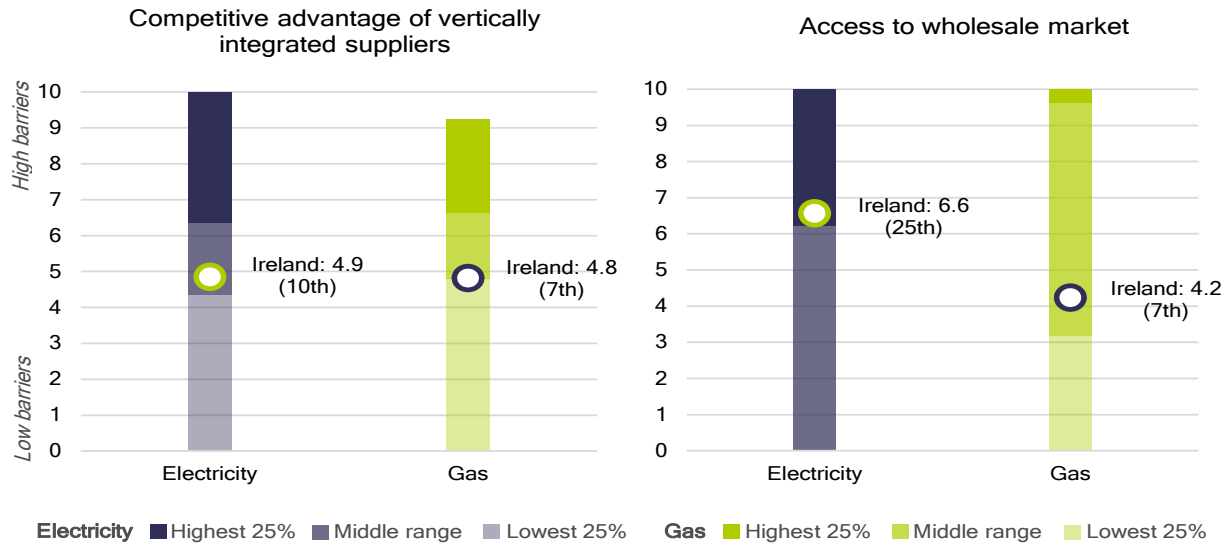
AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

2.3 Ireland's performance in this barrier category

The following figure shows quantitative indicators of how far market inequality acts as a barrier in this market. The values for Ireland are shown against the range across all analysed countries. These scores contribute to the performance index. The performance indicators of market inequality are the following:

- **Competitive advantages of vertically integrated players.** The index consists of two sub-indicators, the market share of vertically integrated suppliers (on the residential competitive market), and the strictness of DSO unbundling. A high score is attributed if the vertically integrated suppliers have a high aggregated market share, and the unbundling regime is not very strict (brand unbundling is not in force, high share of local, integrated companies).
- **Access to wholesale market.** The indicator measures the accessibility of the wholesale market by quantifying the liquidity of wholesale markets. High score is attributed if the traded volume is relatively low compared to the consumption of the country (churn rate). Traded volume includes volumes that are traded at hub as recorded by brokers (OTC) or exchanges and does not include 'contracted' (LTC or other bilateral deals) volumes which are conducted 'off market'.

Performance indicators



Ireland was ranked reasonably well at 10th (electricity) and 7th (gas) for vertical integration. Access to wholesale electricity was ranked lower for electricity (25th) but well for gas (7th).

3) Operational and procedural hindrances

Within operational and procedural hindrances, barriers across Europe have been sub-categorised into two areas encompassing 13 specific barriers[7]:

1. **Sign-up & operations compliance.** Sign-up, licensing or registration, along with other administrative requirements or system establishment such as arranging contracts with relevant stakeholders (TSOs, DSOs, BRPs) are among the first steps that a new supplier undergoes to enter and operate in a retail energy market. To deliver natural gas or electricity to final consumers in Europe, an energy supplier usually needs to be registered to a certain institution list, or to proceed with a notification, or follow a process to grant a licence. Entrance processes for suppliers often requires commitments such as a minimum standard of customer service obligations, requirements on service quality, to provide financial guarantees or to have a communication system in place.

   In most responding NRA countries, suppliers need to register and make contracts with certain stakeholders (mainly TSOs and DSOs) to procure the access to the energy grid: transport capacity, balancing. This procedure can be very different from a country to another. Accessing wholesale markets

[7] Please note: these definitions are Europe focused, not specific to Ireland. Highlighted barriers have been identified as country specific.

and balancing may also require a license or prior agreement/registration with the market operator. In some markets, business processes to enter and operate in the retail market can be extremely detailed and burdensome. The lack of a functioning national wholesale market may also hinder the entrance of retail companies that are not vertically integrated. Across Europe, the following specific barriers related to "sign-up & operations compliance" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Ireland:

- Poor availability of information for market entrants & active participants
- Heavy administrative process for entry (registration / licensing)
- High financial requirements (incl. long working capital cycles) and forced risk during operations
- Excessive reporting requirements during operations
- Excessive information requirements around billing and energy labelling
- Highly complex or country-specific systems & processes
- Regional differences or differences between DSOs within a country
- Cumbersome or biased switching process
- Unduly burdensome environmental obligations
- Unduly burdensome or insufficiently regulated market exit

2. **Data access & processes.** Data access and management refers to the processes by which data are sourced, validated, stored, protected and processed and by which it can be accessed by suppliers or customers. In a well-functioning energy retail market, it is important that the information required to operate in the market is available to newcomers (subject to applicable legislation on data protection). This may include information on, for example, individual consumption or more specific meter details. This data is required in order for suppliers to carry out their market role, such as initiating a switch, or billing a customer. A standardized approach to the provision and exchange of data creates a level playing field among stakeholders and helps to encourage new, challenging market actors to enter the market. In order to avoid data management and access processes acting as a significant barrier to entry, Member States' initiatives to standardize data format and processes, including investments in data hub infrastructure, have the potential to make a positive impact. Across Europe, the following specific barriers related to "data access & processes" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Ireland:

- Lack of data hub
- Complex, heterogenous IT infrastructure and/or low level of digitalisation
- Missing access or poor quality of operations-critical data

3.1 Description of operational and procedural hindrances barriers in Ireland: Sign-up & operations compliance

Heavy administrative process for entry (registration / licensing). In the research this barrier was indicated as an issue in Ireland. The processes required to enter the market are time-consuming and uncertain, which presents a barrier in terms of the time and money that new entrants must invest before they can begin operations.

National issue

The Irish entry process was raised as being unpredictable in terms of time to completion, with associated risks around maintaining cash flow between beginning the entry process and starting operations. Contributing to this, the relevant authorities were felt to face little accountability for not meeting their own estimates around time and cost of entry, increasing uncertainty in the process.

In addition, entry rules were felt to be very prescriptive, with little principles-based justification, and unnecessarily focused on technical requirements at the cost of more meaningful checks. The purpose of the current process was not clear to suppliers, who also felt that the regulator lacked understanding for the business risks of a drawn-out entry process, during which the company must be fully functional and ready to start operations upon sudden approval, yet with no revenue.

Together, this all means that the entry process requires a major investment (minimum go-live time is c. 9-12 months in practice) and can be off-putting for suppliers considering entry.

Potential solutions

If the regulator and other licensing/ registration authorities were to be bound by explicit schedules for dealing with applications, market players might feel more confident embarking upon the process. The entry process should be allowed to evolve in pace with market developments, e.g. more and/or novel entrants. As with operational and reporting requirements (see section 3.1), suppliers are more willing to meet them if they understand the reasons behind them; more information for new entrants could thus improve their impression of the entry process (see also section 1.3). Suppliers expressed a wish to see an entry process more focused on the customer experience that a new supplier will provide; technical aspects were seen as possible to delegate through e.g. the already CRU-accredited billing agents.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

High financial requirements (incl. long working capital cycles) and forced risk during operations. In the research this barrier was indicated as an issue in Ireland. High financial requirements, such as securities, as well as long working capital cycles, can present a barrier due to the amount of capital that must be set aside. These prevent the affected capital from being used to support business operations, which could prevent companies (especially smaller, newer players) from competing effectively.

National issue

Two financial barriers were raised as important by respondents: a long working capital cycle, such as cash flow being tied up and hence limited, and high requirements during operations, such as bank guarantees.
Another aspect of risk is that suppliers have little regulatory protection in disputes between market actors. Hence, suppliers are liable for full costs of issues arising from DSO mistakes e.g. incorrect readings, even those costs due to the DSO. For example, in the case of incorrect imbalance statements, the supplier is liable for putting up large securities until the data has been confirmed several weeks later.

Potential solutions

These issues impact smaller suppliers (generally new entrants) harder because they are treated as posing the same system risk as a large supplier, despite their much smaller customer base. Reviewing these requirements to reflect the actual grid risks of particular suppliers' imbalances could be a route to evening the playing field here.

European markets in which this barrier has also been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

Excessive reporting requirements during operations. In the research this barrier was indicated as an issue in Ireland. Excessive reporting requirements to the NRA and other authorities cause high administrative costs to suppliers, particularly for small suppliers. If suppliers cannot see how this reporting is necessary to protect customers or benefit the market, it is perceived as a barrier.

National issue

Market reporting requirements were felt to be unduly onerous, with c. 25 metrics required monthly or quarterly. This requires either a large up-front investment in automation or ongoing outlay on compiling the figures manually, neither of which are easily available to smaller suppliers. This means smaller suppliers are frequently late with reporting, delaying data compilation and release by the CRU to the extent that it is no longer useful market information, which in turn reduces suppliers' belief that this level of reporting serves any beneficial function for the market. Further, standards around reporting on retail vs. regulatory matters are not aligned even though many of the fundamentally same metrics are used in both, which feels to suppliers like unnecessary duplication.

Strict regulations also surround advertising, such as requiring an estimated annual bill (which is not always meaningful for new business models; see section 1.4), much regulatory information (to the extent that suppliers can no longer use shorter-format advertising channels), and specifying the units in which prices must be shown. At the same time, however, the incumbent has been allowed to advertise savings over an unrealistically long time period, essentially encouraging non-switching, based on unrealistic assumptions around customer behavior.

Potential solutions

Based on responses across Europe, suppliers are willing to engage in detailed reporting provided that they see the value of it for the market. Hence, it would be beneficial to reach a balance where the information flow is sufficiently high to be informative, yet low enough to be manageable both by suppliers and the regulator itself. This appears already to be in progress in this case, with the CRU signaling that fewer or less metrics will be required. Moreover, reporting requirements should be designed so as to ensure that economies of scale do not skew the market in this respect, i.e. take account of the ability of larger companies to automate and hence reduce expenditure on these processes.

The example around advertising illustrates that market activity may benefit from the CRU placing less emphasis on detailed regulations in favour of a more holistic view (see section 1.3).

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

Cumbersome or biased switching process. Rather than being a barrier, in the research Ireland was indicated as a positive example, where issues present in other countries have been addressed in a way that supports fair market functioning. In other markets, switching can difficult for the suppliers due to the amount of information that must be provided, the time it takes, permissions that must be sought, complex technical systems etc. Existing suppliers may be advantaged by being the default supplier if the switch is not completed and may get warning for pre-emptive win-back.

IRELAND BEST PRACTICE CASE: Switching and win-back functions well despite DSO integration

The central messaging centre in Ireland is well designed, requiring timely messaging of switches and with fair access to that information for all players. Switching messages must be sent only after a customer signs a new contract, but within four days. Win-back may only start after this and is restricted to a 10-day window. Hence, despite there not being a centralized data hub that includes data storage as well as messaging, access to information and the opportunities arising from it are considered equal across market players. Other industry processes were felt to be similarly well-developed and fair.

European markets in which this barrier has been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

3.2 Description of operational and procedural hindrances barriers in Ireland: Data access & processes

Missing access or poor quality of operations-critical data. In the research this barrier was identified as an issue in Ireland. It is not yet clear whether data from smart meters, currently being rolled out, will be governed by market-optimal requirements around aspects such as timeliness and data formats. Without sufficiently high-resolution and timely data provision, the full potential of smart meters to allow consumption to act on wholesale and balancing markets will not be met.

National issue

Data being hard to access was felt to be a particular problem for demand-side services, including aggregation. It was raised by respondents that data was insufficient both in terms of real-time information for consumers and for market players. Further, this lack of data makes other market participants (e.g. system operators) under-estimate the value of flexibility.

The current smart metering program will require data only at a daily resolution, delivered the following day ("day + 1") and aggregated bimonthly for third parties. Customers will be able to voluntarily opt in to sharing half-hourly data. Uptake of this likely depends on customer education in the value of flexibility (see section 4.1). If only a small proportion of customers choose to share half-hourly data (e.g. 15-20% as in the Netherlands), there will not be a large enough volume of fine-scale consumption data for suppliers to use directly on the markets.

Potential solutions

In order for smart meter roll-out to efficiently address the barrier of a lack of data, enough data needs to be made available to suppliers on a fine enough time scale; the proposed solution will not fulfil this. If data were made accessible to third parties more frequently, e.g. daily, this would already make the "day + 1" information much more valuable to market players.

Information campaigns to inform customers of the potential benefits of sharing their high-resolution data would likely contribute to more opting in. If issues of data security and anonymity are firmly addressed, there may even be a case for considering mandatory sharing on a finer time scale. As for information for market players, they would welcome more active consideration of and communication around demand-side opportunities from the CRU (see section 1.3).

European markets in which this barrier has also been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

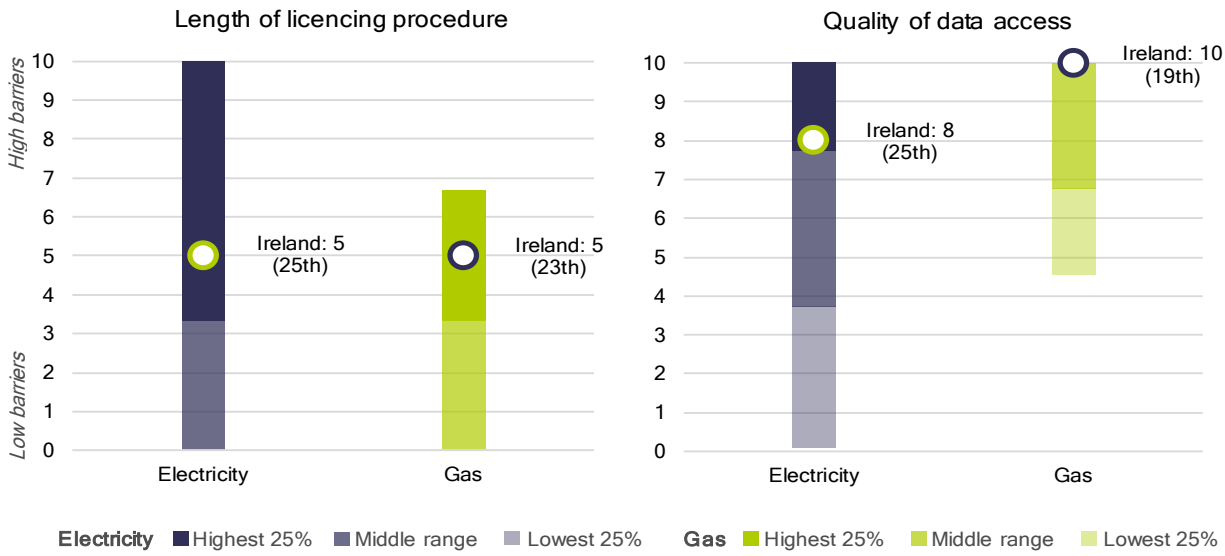
3.3 Ireland's performance in this barrier category

The following figure shows quantitative indicators of how far operational and procedural hindrances act as a barrier in this market. The values for Ireland are shown against the range across all analyzed countries. These scores

contribute to the performance index. The performance indicators of operational and procedural hindrances are the following:

- **Length of licensing procedure.** The complexity of the licensing procedure is quantified using the legal deadline of the licensing procedure. A higher score is attributed the longer the regulator's authorization period, while a score of 0 is attributed if there is no licensing obligation in the country,
- **Quality of data access**. Barriers relating to the quality of data access are measured with a checklist indicator, which focuses on the DSO's practices regarding data collection and access provision to suppliers. A high score is attributed if the format of the data provision is not standardised, third party access is not available via website or data hub, and the smart meter rollout is small.

Performance indicators



Licencing procedures and data access are ranked relatively low in Ireland.

4) Customer inertia

Within operational and procedural hindrances, barriers across Europe have been sub-categorised into one area encompassing 6 specific barriers[8]:

1. **Customer orientation.** Whether customers want to or can engage with the market depends on a broad range of market characteristics, including how well authorities inform and support customers and how energy companies are viewed by the customer. For example, if there is no trusted central place to compare offers from different suppliers, customers may struggle to make an informed choice; or if customers perceive all energy companies as irresponsibly profit-driven, or providing a poor service, they may feel there is nothing to be gained from switching. Moreover, across Europe, most energy markets have been liberalized relatively recently (last 20 years, some only a few years ago), so for a considerable portion of customers the potential for them to engage may still feel unfamiliar. Across Europe, the following specific barriers related to "customer orientation" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Ireland:

• Lack of information regarding available offers and switching possibilities
• Low customer awareness or interest makes it difficult to attract customers
• Insufficient price signals for end-users
• Changing supplier is cumbersome or has little pay-off for the customer
• Consumers prefer status quo
• Lack of trust in new or foreign suppliers and in new technology

4.1 Description of customer inertia barriers in Ireland: Customer orientation

Lack of information regarding available offers and switching possibilities. In the research this barrier was indicated as an issue in Ireland. Comparison websites allow comparisons based on price (estimated annual bill) and allow customers to view green-only offers, but it is considered desirable to enable greater identification of differentiation through the comparison sites. Suppliers feel frustrated by their ability to differentiate, making it hard for customers to engage with the market on their own terms and for suppliers to effectively market other aspects of their offers.

[8] Please note: these definitions are Europe focused, not specific to Ireland. Highlighted barriers have been identified as country specific.

National issue

A minor issue in the market concerns the role and function of price comparison websites. These tend to take a very simplified, energy/price-only focus, based on the estimated annual bill, whereas the ideal future energy market will need more flexible platforms catering to better informed customers where suppliers can also display offers such as loyalty point schemes. There is also some inflexibility in how offers are displayed and accessed, for example de-prioritising those offers that cannot be entered into directly on the comparison site (while signing contracts through the supplier's own website is a more sustainable model for suppliers).

Potential solutions

The CRU could consider regulating what and how the privately-run comparison sites show in terms of offers; this seems justified given their large role in the market. Alternatively, the CRU itself could provide a fully neutral price comparison site, potentially funded through e.g. a small levy on market players; the regulator runs price comparison sites in several European countries, e.g. Sweden.
Article 14. In the Energy Directive addresses this point and so Ireland will need to address this when the directive is treansposed.

European markets in which this barrier has also been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

NORWAY BEST PRACTICE CASE: Customer information

Norway has one of Europe's highest switching rates, driven by an informed and interested customer base who have by a wide margin the highest household electricity consumption. DSOs must provide customers with neutral information on how to choose a retailer which is available in the network area, and information about the national price comparison web site. The national price comparison website Strompris.no ranks contracts according to their estimated total cost and is monitored by the regulator to ensure that prices there reflect those on the suppliers' own websites. NVE also publishes a weekly online view of retail market prices. Underlying this, the focus of the market on similar products (open-ended spot-linked contracts) makes it easier for customers to compare offers between suppliers as there are fewer variables to account for. In addition to information on available offers, the authorities actively provide plentiful information on how and why to switch, and the switching process is easy and fast for the customer.

Low customer awareness or interest makes it difficult to attract customers. In the research this barrier was identified as an issue in Ireland. A large proportion of customers are not well informed about or motivated to use their opportunities to participate in the market and remain with the incumbent despite substantial potential savings available from switching. This barrier also prevents uptake of novel services such as DR, as the benefits are difficult to promote to customers who do not already value energy or their role in the market.

National issue

Although Ireland has one of Europe's highest switching rates, this is concentrated to a relatively small market segment. A study by the regulator found that customers were poorly aware of alternative smaller suppliers, and a majority of customers are not aware of what they are paying and therefore how switching could reduce their bill. Online comparison tools tend to exclude groups such as older customers who are also less active. Hence, only active customers are benefitting from competition-driven near-cost prices. This effectively creates a two-tier market, in which c. 40% of market have never left the incumbent and tend to be on substantially more expensive standard contracts. Indeed, the regulator has found that the current structure of offers (standard contracts vs. fixed term discounted offers) means that customers need to continuously engage with the market to benefit from the most competitive offers available. The DSO's advertising activities (see section 2.1) were felt to further increase customer inertia by linking the incumbent supplier with the entire electricity network, implying security of supply or comfort advantages over new entrants.

A lack of customer awareness was raised in particular as hindering customer participation in demand response. Customers were felt to be unaware of their DR options, and because of limited experience with DR to mistrust the technology and that comfort levels would not be affected.

Potential solutions

The most common reason (over half of non-switchers) for not switching was satisfaction and trust in their current supplier, which can be seen as a success of the market. However, many of these customers are poorly aware of their potential role and benefits as active market participants (see "Legacy customers" box below). Suppliers are already required to prompt their customers upon contract expiry, and then annually for customers who have not switched for more than 3 years. Suppliers suggested that notifications from the CRU or government for customers who have never switched could encourage engagement; receiving such prompts from neutral parties could increase customer trust in the market and switching process.

However, it appears that the underlying driver of customer inertia is a lack of understanding of how the electricity system and market works (see "Legacy customers" box below). Hence, a powerful way to address this barrier would be education/information campaigns by a neutral actor (TSO or regulator) to explain how the market works, how end-users can act in it, and what the benefits are for them and the system. This is particularly important with respect to engaging customers in demand response.

In line with this, CRU's communications team has arranged a campaign ('Switch On' campaign) to reach-out to inactive consumers and encourage them to avail of the benefits of competition.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU **IE** IT LV LT LU NL NO PL PT RO SK SI ES SE UK

"Legacy customers" as a key to developing the Irish market

Customers who have never switched and remain with the incumbent – legacy customers – make up c. 40% of the Irish household market. Respondents suggested that fixing this issue could be a key intervention to free up the market: once legacy customers no longer skew the market, many incentives or means for unfair strategic behavior (e.g. cross-subsidisation to finance customer retention) by the incumbent would cease to exist. Many of these legacy customers are inactive and pay high prices on standard contracts that they have never switched from, giving Electric Ireland a capital advantage unavailable to other suppliers (linked with market power issues around the role of the incumbent; see section 2.1). Moreover, among the incumbent's customers, a greater proportion are likely to be inactive than among new entrants, given that new entrants' customers must already have switched at least once, and hence are likely easier to retain.

Legacy customers' inactivity can be connected with a lack of understanding of how the market functions (see above), leading to mistrust of any supplier other than Electric Ireland. Here again, the incumbent's historical association with the DSO (see section 2.1) leads customers to perceive that they are more reliable in terms of security of supply, despite suppliers having no role in reliability. ESB (the DSO) has always been there so customers trust their role, system control and performance; many legacy customers are thought not even to be aware that their supplier is no longer ESB but Electric Ireland. This image is perpetuated by ESB Networks' advertising strategy, which appears to imply that ESB is responsible for the end-to-end electricity system, including supply, and that Electric Ireland hence has a national role to play.

Given that the market share limit for the incumbent set by the CRU is fixed and met, it appears that only direct action would substantially change this situation. For example, customers could be moved to other suppliers e.g. by auction or by reassignment according to suppliers' market shares, as has been suggested for several other European countries, including Great Britain. However, such a top-down approach would probably be unpopular with customers and hence could ultimately reduce their willingness to participate in the market. Another potential fundamental solution is simply to increase customer education around the energy market (see barrier above), with information provided by a trusted, neutral source.

Insufficient price signals for end-users. In the research this barrier was indicated as an issue in Ireland. End-user prices vary little due to e.g. low wholesale volatility and a small energy component of the bill, decreasing economic incentives for users to participate in the market. However, even where price incentives are available, it seems they are not sufficient to activate inactive customers.

National issue

Price signals in the market were raised as a barrier to demand response and other innovation: low price variability in the market limits the economic value of flexibility for end-users. Demand-side aggregation was also raised as being hindered by flat taxes and charges making up a considerable proportion of the bill, reducing both immediate price signals to customers and the portion that they are able to influence through their behaviour.

These issues notwithstanding, it appears that conceptually, regardless of absolute price levels, price is not enough in itself to drive inactive users to the market. Discounts from standard tariffs amounting to > 300 euros of savings a year have not yet convinced 40% of customers to switch since liberalization. The size of discounts currently required if new entrants can hope to attract customers are so large that customers must be retained for years in order for the supplier to break even. A market based on fixed-term discounts also involves a price shock for customers upon discount expiry, which may reduce their willingness to engage further in the market.

Potential solutions

As above, a lack of information or understanding seems to be a fundamental cause of this barrier. Although within-tariff variability might be low, price differentials between suppliers' offers are substantial. If a 20-35% discount (as typically offered to new customers) is not enough to get customers to switch supplier, what else is holding back switching? Encouraging customers to achieve similar savings through behavioural change instead, i.e. DR, will be even more difficult. Education campaigns around potential benefits, supplier reliability etc. (see barrier above) could empower and hence encourage more customers to participate in the market. Moving the market away from being discounts-based could increase customer trust, but this would more likely be a question of market evolution rather than regulatory intervention.

Nonetheless, some element of within-tariff price variability seems to be essential to encourage flexibility for grid balance, as it is hard to envisage what other incentives would encourage the necessary end-user behavioural change.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU **IE** IT LV LT LU NL NO PL PT RO SK SI ES SE UK

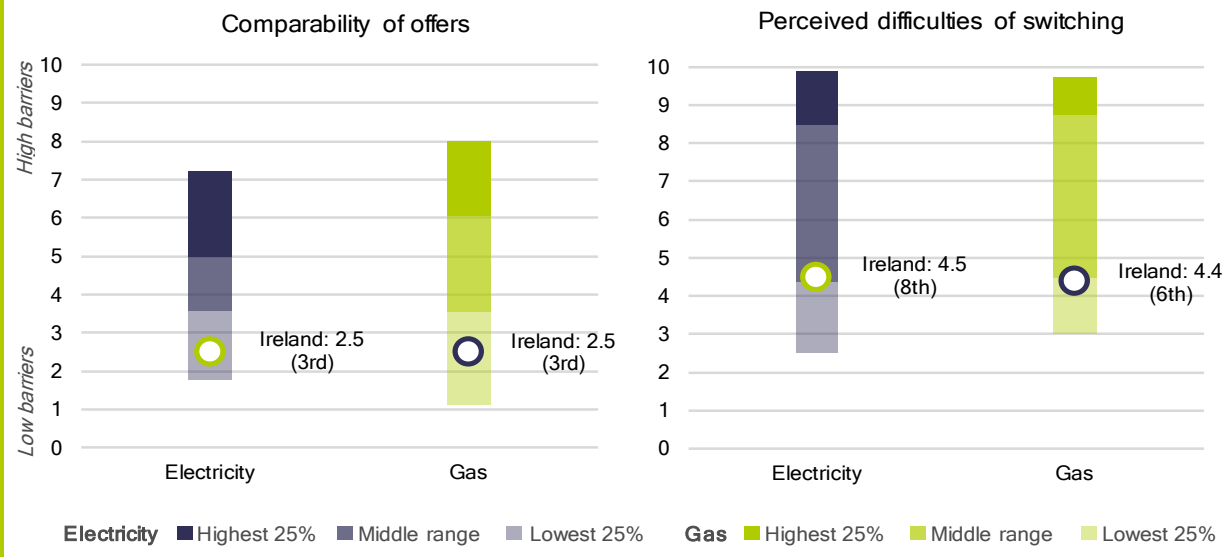
4.2 Ireland's performance in this barrier category

The following figure shows quantitative indicators of how far customer inertia acts as a barrier in this market. The values for Ireland are shown against the range across all analyzed countries. These scores contribute to the performance index. The performance indicators of customer inertia are the following:

- **Comparability of offers.** The index consists of two sub-indicators. The first measures consumers' ability to compare offers, based on a survey commissioned by the DG Justice and Consumers. The second is a checklist indicator which quantifies the availability of comparison websites, based on their number and functionalities. A high score is attributed if the consumers gave low scores for comparability, and there are no comparison websites in the country.
- **Perceived cost of switching.** Difficulties around the switching process are also measured based on DG Justice's survey. The indicator incorporates the experience and opinions both of customers who have switched, and also of those who have not because they faced obstacles or thought it might be too difficult.

A high score is attributed if a high share of consumers reported a bad experience of or poor opinion on the switching process, among all customers who considered switching.

Performance indicators



Ireland ranked highly on in terms of comparability of offers (3rd for electricity and gas) and well for perceived difficulties of switching (8th for electricity and 6th for gas).

5) Other

Other aspects of the market not directly related to its functions, as addressed above, may also impact suppliers' ease to enter and operate in the market. These relate to characteristics of the market that are not necessarily a barrier per se, but their impact on the energy retail environment could be minimized to benefit market function.

5.1 Description of other barriers in Ireland: Other

Small market or customer value. In the research this barrier was raised as an issue in Ireland, albeit marginal, with some caveats. A small population and average consumption (when electricity and gas are combined) clearly hinders potential value from the market. That said, electricity consumption per customer is above the European average and gross margins are relatively healthy (higher than neighbouring GB for instance), though not high. For a player with modest growth potential, the market can therefore be seen as presenting an attractive revenue and profit potential. Market size as a barrier could be ameliorated by closer harmonization of the Republic of Ireland and Northern Ireland market, and by increasing similarities with the GB market, making it even easier for entrants to compete in both markets.

National issue

Across the whole Island of Ireland, the small size of the gas market (only 600 000 customers) was raised as an issue, reducing customer potential by preventing suppliers from benefitting from economies of scale. Moreover, this small market limits the number of service providers for outsourcing activities such as balancing forecasting and sales/marketing - such services are uneconomic to provide in small market, and results in high costs to serve for suppliers, particularly smaller companies who have less expertise in-house.

Potential solutions

No solutions are suggested for this barrier.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

FINDINGS & RECOMMENDATIONS

As seen throughout this project, barriers to entry and operation can constrain the development and functioning of energy markets. Examples of such barriers identified in this project vary widely across EU countries, including issues as wide-ranging as the use of financial guarantees for access to wholesale markets, the presence of price regulation in the market, and burdensome licensing regimes, where the requirements are disproportionate to their protective function.

The electricity industry in the Republic of Ireland supplies 2.1 million customers while the gas industry supplies 670,000. Both industries started as vertically integrated monopolies owned by the government and have been split into their component parts with significant state ownership remaining. The Republic of Ireland shares a joint wholesale market (ISEM) with Northern Ireland, which is part of the United Kingdom. In 2018 there were nine suppliers in Ireland's residential electricity market and eight suppliers in the residential gas market, and switching rates are among the top five in Europe. Despite this activity, a number of key barriers still hinder new entrants or novel actors from entering or operating efficiently in the market.

A key concern was the strategic advantage of the incumbent, which was linked with its ownership bundling with the DSO. The incumbent electricity supplier has lost nearly half of its customers since liberalisation, more than half in the case of Gas and regulations exist to prevent abuse of its continued dominance. Nonetheless, there may remain numerous aspects such as informal channels for information flow and subtle messaging in advertising / branding by the DSO that favour the incumbent, although such behaviour can be very difficult to confidently evidence or quantify in significance. From our studies across Europe (notably Norway and Great Britain), it appears that requiring ownership unbundling is the only lasting intervention that could alleviate this issue, although in the mean-time a centralized and equal data hub can significantly improve fairness towards independent suppliers, at least in terms of data access.

Turning to the authorities, the regulator (CRU) was felt by some to focus on detail and short-term goals, with suppliers concerned that the CRU will therefore not effectively support future market development. There is substantial evidence to indicate a long-term view by the CRU (for instance CRU have identified a programme of work to facilitate new business models in the space of energy communities/prosumers - Roadmap to Clean Energy Package Implementation; and a current strategic plan in which among other areas emphasises a vision of a sustainable low carbon future with empowered customers), but it would arguably be valuable to cultivate a longer-term mutual understanding of the longer-term view with stakeholders, especially regarding how the market needs to change to support the future energy system. This attitude is linked with regulatory requirements being very specific, to the point that new business models and solutions may not fit into existing frameworks and hence not be able to act in the market, and the entry process being regarded as unnecessarily detailed and hence unpredictable. Freeing up requirements, or otherwise "future-proofing" them to ensure they allow for as-yet unestablished products or business models, could allow a faster development of the energy markets towards a more flexible future.

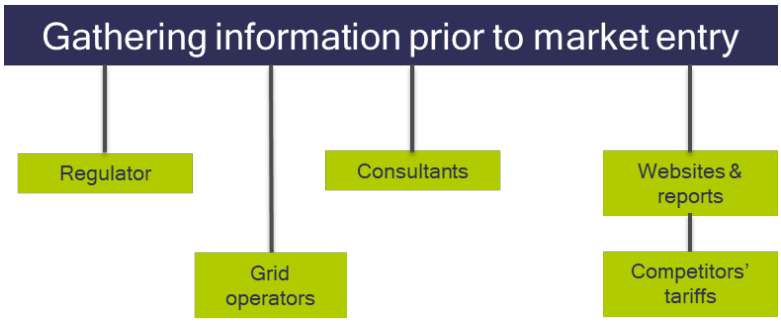
Another key area of supplier concern was around smart meters: the progress of the roll-out but more importantly whether the data availability (the responsibility of the Data Protection Commission, not CRU) will be sufficient to support the full potential market contributions that the smart meters can enable. The smart meter roll-out currently risks a significant economic loss because data is planned only to be available by default at daily resolution and shared bimonthly, whereas data must be practically real time to be useful for product development or trading. If possible, revising decisions so as to make standard smart data available more frequently and at finer resolution would significantly improve market actors' ability to harness the full potential of smart metering. Allowing end-user loads to trade on the markets will also require reforms to the balancing markets, which were felt to discriminate against new and small market players who cannot meet the product requirements designed for large-scale generation. In other European countries (e.g. Finland), successful steps have already been taken to improve access for smaller generators/loads and aggregators in ancillary services.

While the spot market appears liquid, the absence of a futures market is a substantial barrier to operation as it leads to higher prices and risks and therefore increases sourcing costs, particularly for smaller players. Discussions are underway to introduce an explicit futures market to equalize access to hedging for all market players, regardless of access to generating assets. In the meantime, liquidity of the forward market could be improved by requiring ESB PowerGen to auction more capacity.

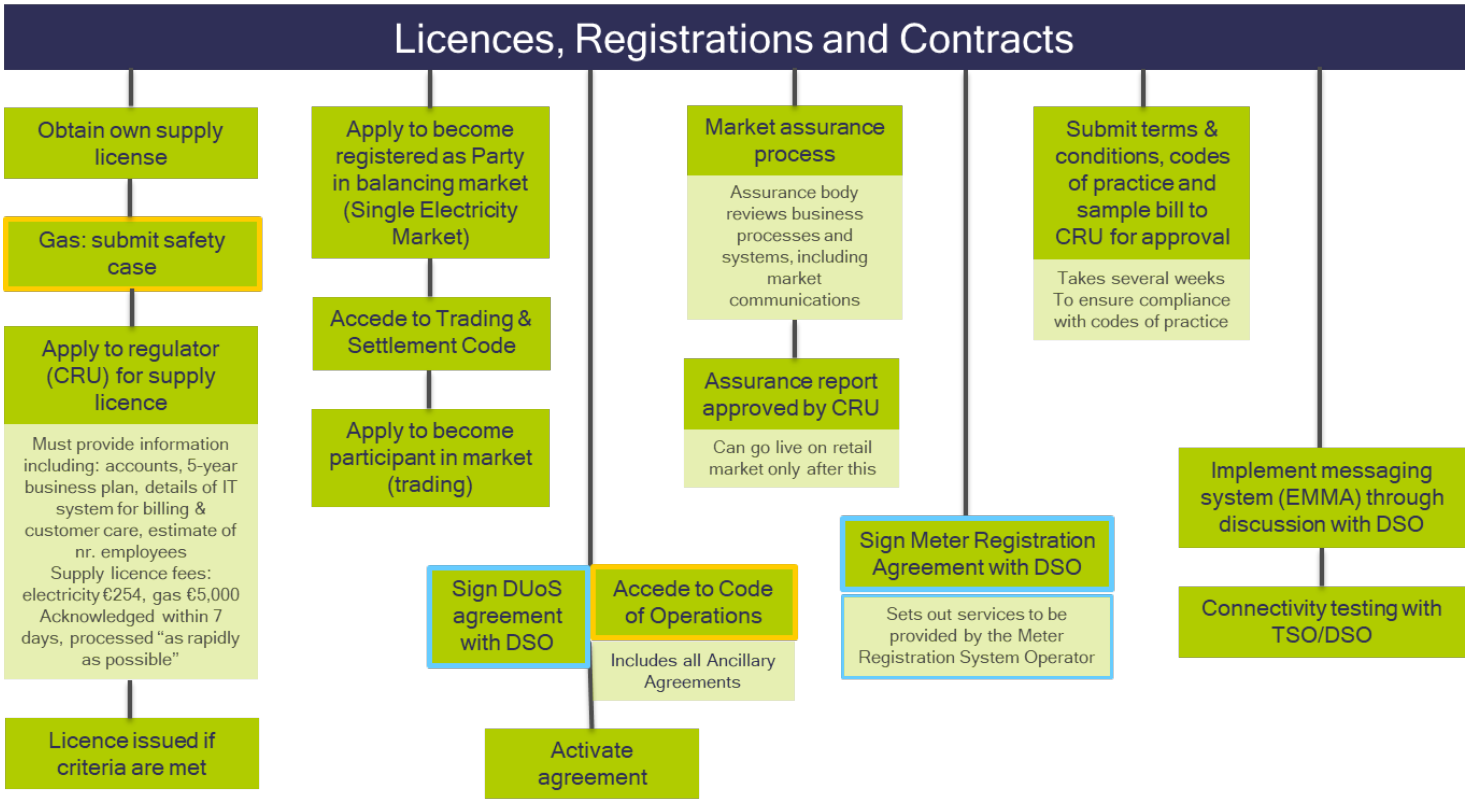
APPENDIX 1: PROCESSES

This section describes market processes in energy retail in Ireland. This provides context for the market barriers described above by giving a high-level overview of the most critical aspects involved in establishing and operating as a supplier in the national market. The stages of market entry and operation are described in sequence, each with an illustration ("process map") showing that stage's various processes together with comments/details on market specifics.

1) Information gathering before market entry



2) Licences, registrations and contracts

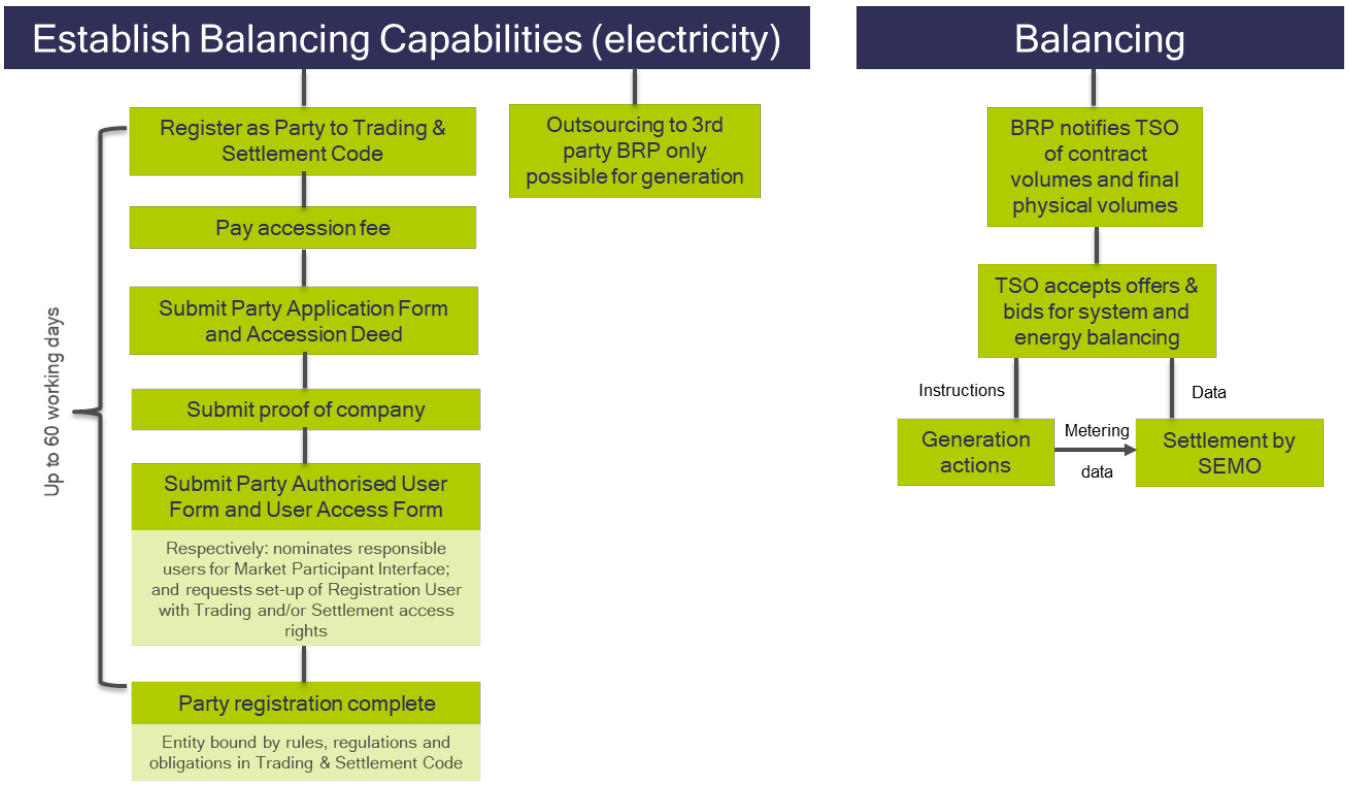


Further comments

For gas, the safety case must be submitted and approved by the CRU Gas Safety Framework Team.

The market assurance process in gas (review of commercial/admin and IT systems to check compatibility) is conducted by an external provider. Gas entrants must also undergo cross-participant testing with an established supplier. The market assurance process results in a report on market readiness that acts a recommendation for the CRU, who has the final say.

3) Balancing

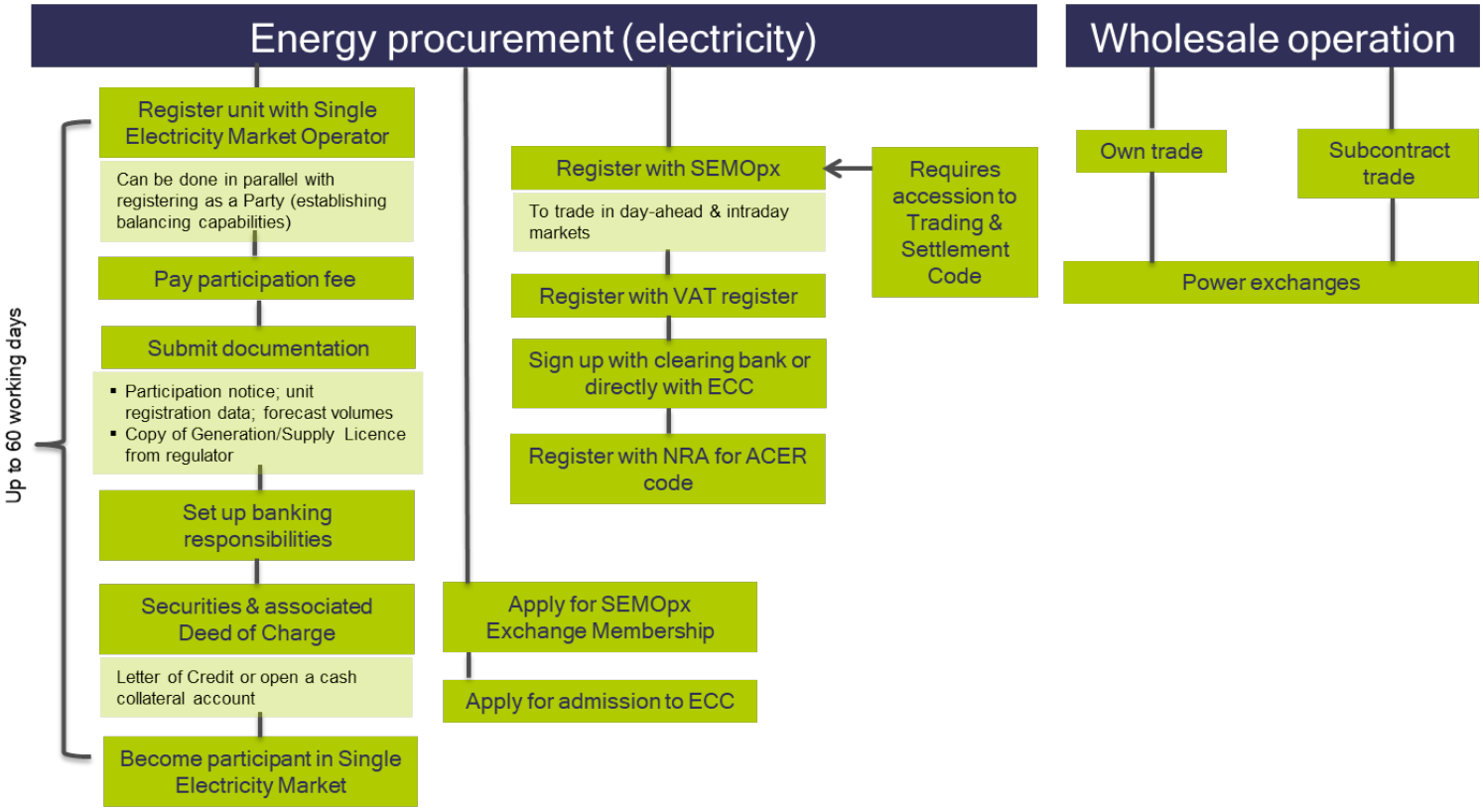


Further comments

Establishing access to the market operator and balancing codes costs c. EUR 3,654, plus EUR 152 for each unit (all metering points included in one balancing group) to participate in the SEMO, and in addition VAT and additional variable charges.

For gas, there is no comparable marketplace to the SEM; instead, there is a Balancing requirement within the Code of Operation for daily balances

4) Wholesale

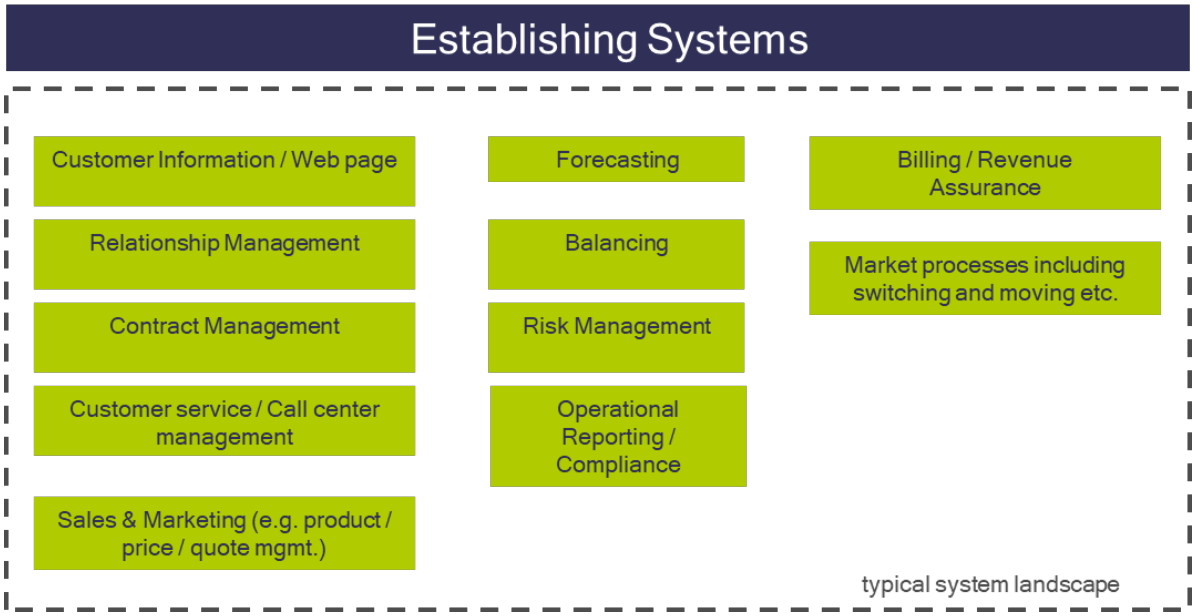


Further comments

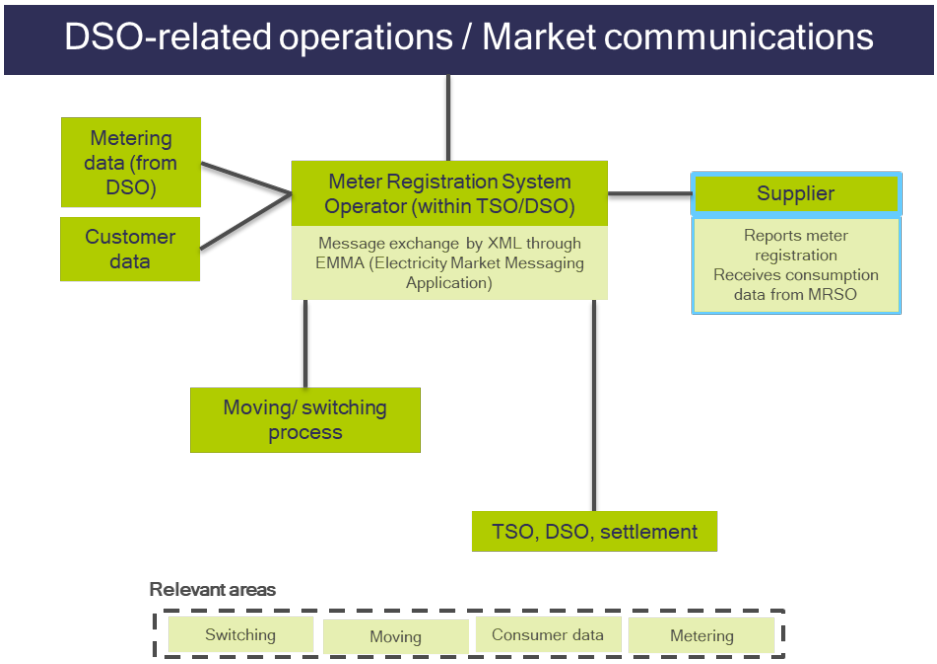
Bilateral trading or over-the-counter deals are not allowed in the Irish SEM.

For gas, there is no comparable marketplace.

5) System landscape



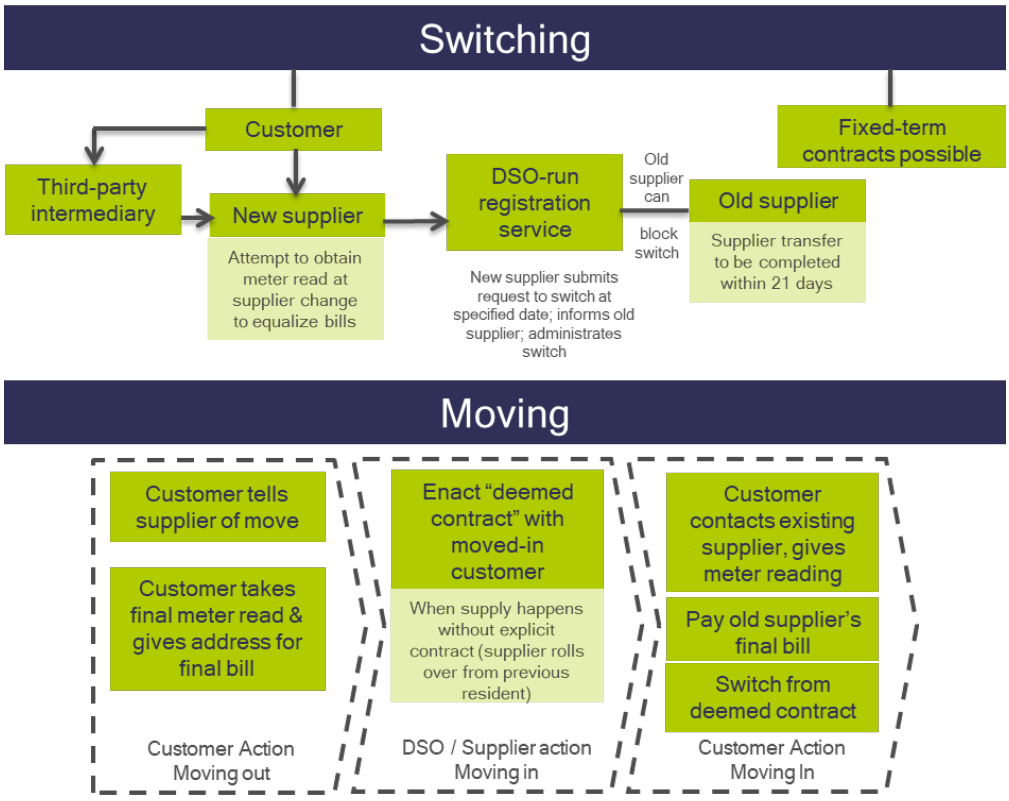
6) DSO-related operations & market communications



Further comments

There is no central data hub. Data for reporting is consolidated from the CRU, Meter Registration System Operator (MRSO), ESB Networks, and Gas Networks Ireland (GNI). Suppliers have additional reporting requirements to the Sustainable Energy Authority of Ireland, IEA & Eurostat.

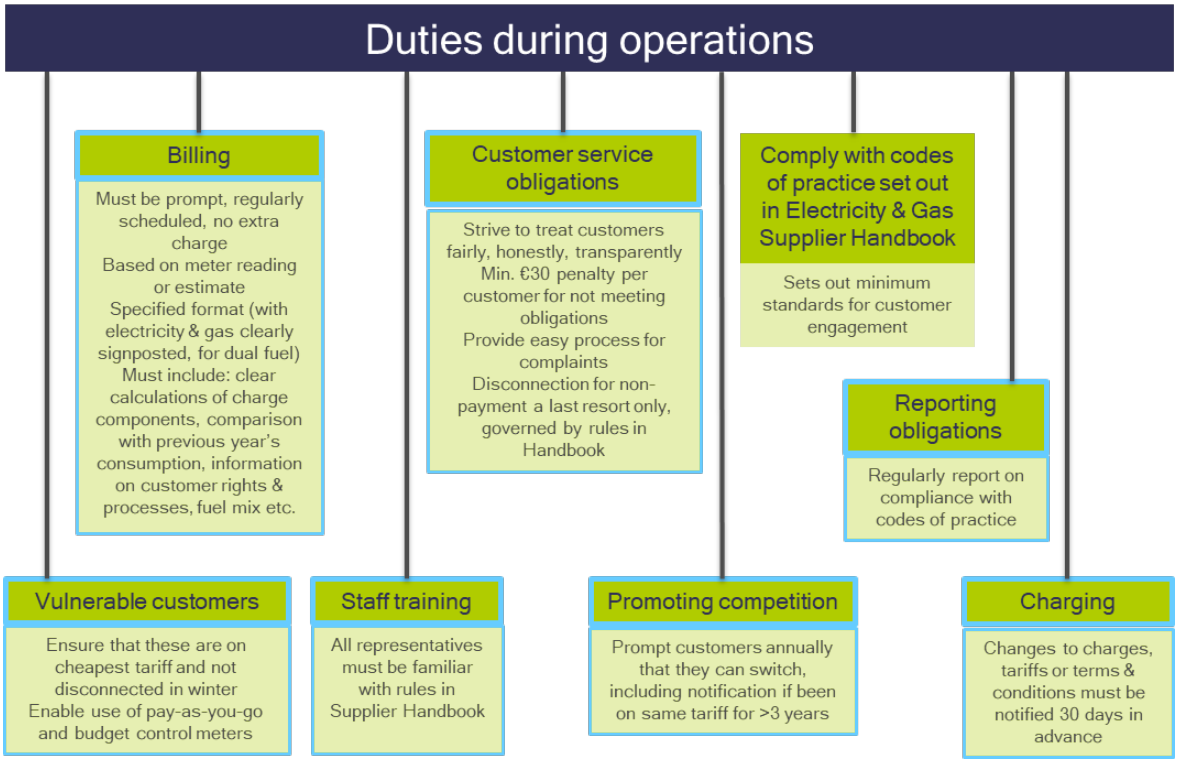
7) Customer switching & moving



Further comments

- Switching rates increased significantly in Q3/2018 as a consequence of altered regulations that required suppliers to send 30 days notice when nearing end of contract, and to customers on the same contract for more than 3 years
- There is a 14-day cooling-off period for new contracts.
- Long-term indebted customers are identified on the information system but their existing supplier can't prevent them from leaving. The new supplier is free to decide whether to accept such customers.

8) Operational obligations/duties

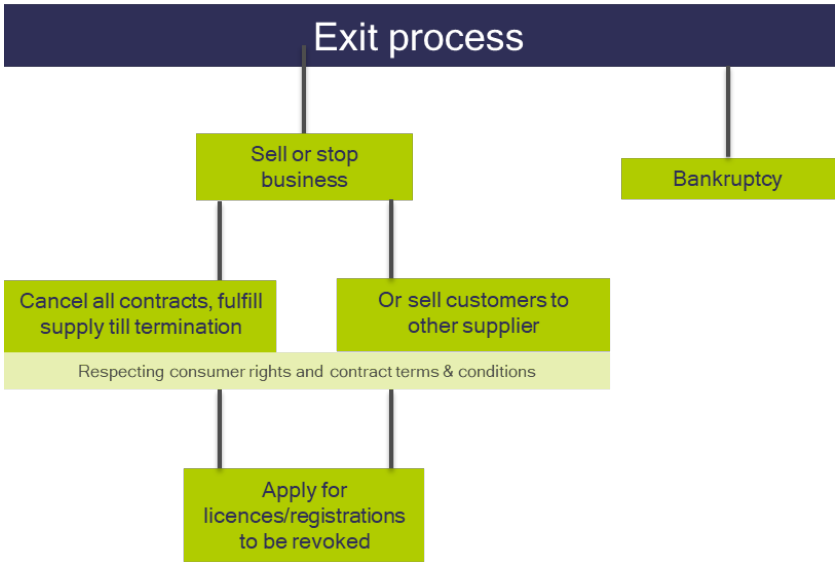


Further comments

Marketing/advertising is also covered by codes of practice, specifying information such as what must be included in advertisements (e.g. estimated annual bill on offer, reference to extra fees etc.), ways in which customers may be contacted etc.

For older and certain vulnerable customers, the government provides a Free Electricity Allowance (FEA) and Natural Gas Allowance. The Natural Gas Allowance can either be paid as credit on a customer's gas bill or as a cash equivalent, for any supplier. For electricity, currently only customers of Electric Ireland receive the FEA through credit, which is automatically applied to the customers' bill. Other suppliers do not receive the allowance such that they can credit it to customers' bills; customers receive a cash equivalent of the FEA instead.

9) Market exit



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