SECTORAL REGULATION

STUDY TO IDENTIFY CHANGES TO SECTORAL REGULATION TO ENHANCE COST COMPETITIVENESS

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Executive Summary

Sustainable improvement in cost competitiveness is one of the key areas of action in the Action Plan for Jobs 2012. In particular it highlights the need to do more to ensure that the improvements in our competitiveness are lasting and structural. The Action Plan for Jobs 2012 requires Forfás to undertake a study to identify changes in the operation of sectoral regulators that would enhance cost competitiveness.

The focus of this study is on improving cost competiveness, however that does not mean delivering infrastructure services at the lowest cost today. While reducing prices as low as possible today may seem an attractive proposition, it could ultimately lead to higher costs for end users. The core function of the sectoral regulators should be ensuring that end users (business and residential) have access to quality services at the least cost, both now and in the future.

Sectors Included

A range of regulated sectors have been identified for inclusion in this study. The key criteria for inclusion are their importance as direct input costs for enterprise and the presence of sectoral regulation/ regulators. The sectors examined have been chosen on the basis that they are either already subject to independent economic regulation (energy, telecoms and aviation) or are due to be regulated in the near future (water and rail). While there is no independent sectoral regulator for the waste sector, the Department of the Environment is responsible for the economic regulation of the sector.

While these costs account for a relatively small proportion of the total cost base for most firms, they remain an important determinant of overall competitiveness – utilities account for between 3.5 per cent and eight per cent of total location sensitive, non-labour costs for a sample range of firms (section 1.3). Of course, the importance of various costs will differ significantly by individual firm and by sector. For example, broadband costs will be important for the services sector while energy and water are key input costs for the food and pharmaceutical sectors.

Methodology

As required under the Action Plan for Jobs, Forfás consulted widely in undertaking this project; we engaged in two comprehensive rounds of consultations with regulators, relevant Government departments, regulated firms (both incumbents and other market players), representative organisations, academics, and the European Commission (details of who we consulted are included in appendices 1 and 2). Forfás also carried out an extensive literature review and benchmarking exercise to inform the study's findings and recommendations.

Role of Regulation versus Policy

The study differentiates between the role of policymakers and regulators:

- Policymakers set policy goals, decide on regulatory structures and provide general guidance on the required policy outcomes;
- Regulators implement the policy decisions.

To determine the role of sectoral regulation in improving cost competitiveness, the study first assesses the drivers of cost competitiveness in each sector (section two of the sectoral chapters – chapters 3-8). One of the main findings of this assessment is that in many cases policy actions will have a more significant impact on cost competitiveness than regulatory changes. This is partly because relatively few prices in Ireland are subject to price setting regulation (i.e. where the regulator sets or approves the price that customers pay, or sets wholesale prices).

There are, however, a number of areas where changes to the operation of the sectoral regulators could have a real and positive impact on cost competitiveness. These fall into two broad categories: (1) sector specific regulatory issues and (2) regulatory issues that are common across a number of sectors. The sector specific regulatory issues that require action are detailed in section four of each of the sectoral chapters (chapters 3-8). The main cross-cutting issues relate to the focus of regulatory mandates, how effective the regulator is in delivering on its mandate, the enforcement powers and sanctions available to the regulator, and the efficiency of the appeals process (chapter 9).

Responsibility for implementing the actions identified in this report rest primarily with the sectoral Government departments, the sectoral regulators and central Government departments such as the Departments of the Taoiseach and Public Expenditure and Reform.

Cross-cutting Regulatory Issues and Recommendations

Effective economic regulation is central to economic competitiveness. To ensure effective economic regulation, countries need to develop clear and consistent objectives, which then need to be applied and assessed to ensure that the objectives are being met. In the main, economic regulation objectives are applied through the mandates of the sectoral regulators; performance measurement is critical to assess if the objectives are being met and enforcement measures are required to ensure compliance with regulatory obligations and market rules.

Best practice economic regulation

While the focus of this study is on improving cost competitiveness, there is a wider economic regulatory context which is the responsibility of the Department of the Taoiseach. While the broad principles of good economic regulation are unlikely to change significantly, it is important to periodically review the actions identified to deliver on those principles and to ensure that they are imbedded into the operation and practice of all regulators and Government departments (section 9.1).

Recommendation:

- Prepare a new Government statement on economic regulation which reviews the principles underpinning Irish economic regulatory policy and the actions required to apply them in practice. The implementation of these actions should be monitored on an annual basis and progress should be reported to the Cabinet Committee on Economic Recovery and Jobs.

Mandates

Best regulatory practice demands that the mandates of sectoral regulators are clear, consistent and provide certainty. In Ireland, as in many other countries, the functions of the sectoral regulators have evolved over time with new functions being added either to deliver EU or national policy objectives. Periodic reviews of the mandates of the sectoral regulators are therefore required (section 9.2.1). However given the importance of regulatory certainty for efficient investment and well-functioning markets, it is critically important that the frequency of those reviews does not lead to uncertainty, which would inevitably result in higher costs for end users. A fundamental element of regulatory certainty is the independence of the regulator. Another challenge facing governments in setting regulatory mandates is creating flexible frameworks that anticipate and respond to conditions as markets evolve.

Sectoral regulators have diverse and sometimes conflicting objectives. The lack of clarity on how to weight different functions could lead to suboptimal regulatory decisions. The core function of the sectoral regulators should be ensuring that end users (business and residential) have access to quality services at the least cost, both now and in the future (section 9.2.2). This requires that a hierarchy of regulatory objectives be developed.

Given that sectoral regulators' mandates extend beyond economic regulations, consideration also needs to be given to streamlining their mandates; in particular to how best to accommodate any ancillary functions that are removed to other Government departments or agencies. Where streamlining mandates is not possible, the existing legislation for each sectoral regulator should be consolidated (section 9.2.3). This should be done in a way that does not place an undue burden on relevant departments.

Recommendations:

- Review the mandates of the sectoral regulators every five to seven years to ensure that they are clear and consistent;
- Prioritise the functions of the sectoral regulators – each should have as its primary objective to promote consumer interests (business and residential);
- Clearly define "consumer interests" in legislation as providing end users (business and residential) with sustainable competitively priced access to quality services;
- Consider streamlining mandates and moving ancillary functions (e.g. consumer rights/safety/ licensing) to the parent department or to another state agency; and
- Consolidate existing legislation at an appropriate time for each sectoral regulator.

Effectiveness

Putting clear and consistent mandates in place is not by itself sufficient to deliver effective economic regulation. Sufficient resources and expertise need to be allocated to implement the mandates and put in place an assessment process to determine if the activities of the sectoral regulators are delivering the required outcomes. The regulators are broadly funded by industry, and industry has expressed concern that inadequately resourced regulators could lead to poor or delayed decision making which ultimately leads to higher costs for enterprise. The Programme for Government proposes to rationalise regulators to strengthen consumer regulation and promote the consumer interest. From a cost competitiveness perspective, however, the cost of resourcing the regulators as a proportion of total expenditure in each of the sectors regulated is relatively low (appendix 5).

Government departments also need to have the capacity in-house to provide the required regulatory governance and to set appropriate targets and assess the outcomes achieved by the regulators (section 9.3.1).

To ensure that sectoral regulators and their departments have a shared understanding of the goals and objectives that they are working towards, they need to agree predefined targets and outcomes against which performance should be assessed – while recognising that policy makers and/or regulators do not have full control over all outcome metrics (section 9.3.2).

Recommendations:

- Ensure the sectoral regulators are adequately resourced to deliver on their mandates;
- Ensure the sectoral Government departments have the regulatory governance capacity in-house to set appropriate targets and assess the outcomes achieved by the regulators;
- Develop a consistent performance measurement process across the sectoral regulators - departments and regulators must agree predefined targets and outcomes that are quantifiable and easy to measure; and
- Benchmark cost competitiveness performance in regulated markets as set out in section 9.3.2.

Enforcement

In the context of regulation, enforcement essentially encompasses all of the tools available to compel observance of or adherence to a set of market rules. At a high level, a broad range of different powers and sanctions are available to the regulators examined, leading to a somewhat fragmented enforcement regime. There is certainly merit in considering standardising enforcement regimes across all of the regulators, as well as ensuring that the powers and sanctions available complement those of the Competition Authority.

The key enforcement measures that need to be examined include operational tools such as binding undertakings and rewards for compliance (section 9.4.1), and sanctions like step-in rights (section 9.4.2).

Recommendations:

- Undertake an investigation into the pros/cons and practicality of providing sectoral regulators with the power to agree binding undertakings with regulated entities; and
- Conduct an examination of step-in rights for economic regulators to identify and understand best international practice and to determine the applicability of such powers to Irish circumstances.

Appeals processes

One of the most important pieces in the regulatory jigsaw is the appeals process; regulated entities (whether citizens or enterprises) need access to a review process to ensure that regulatory rules are applied and enforced in a systematic and fair manner. Such a process ensures that regulators are held accountable for their actions and decisions and provides for a degree of quality control. Accountability is particularly important given the high costs that can be imposed on industry and/or consumers as a result of poor or inefficient regulation.

As a general rule, accessible and equitable appeals procedures that balance rights of appeal with the need for speedy action, in a fair manner should be available in each of the regulated sectors. Distinction should be made between appeals on process (i.e. on technical grounds) and appeals on merit (i.e. on the substance of the decision) (sections 9.5.1 and 9.5.2).

Recommendations:

- Ensure all regulatory decisions which come before the Courts utilise a process similar to the Commercial Court's case management system to expedite the appeals process and to minimise costs; and
- Ensure parties subject to economic regulation have the right to appeal decisions of the regulator to the Courts on the merits of the decision, in addition to the current right to judicial review.

Other cross-cutting issues

The report also considers a number of other important issues that are common across sectors. Accountability (section 9.6) and transparency (section 9.7) are among the key principles underpinning best regulatory practice internationally. The role of the EU on sectoral regulation also needs to be considered given the pervasive influence it has across the sectors examined in the study (section 9.8).

Recommendations:

- Scrutinise the performance of the sectoral regulators against the agreed targets and outcomes on an annual basis;
- Review the provisions in the legislation for the relevant Minister to issue policy directions to their sectoral regulators to ensure that a consistent approach is adopted in terms of the process;
- Publish explanatory notes in plain English on key consultations and decisions of relevance to consumers (business and residential); and
- Take a proactive approach to shaping EU legislation and ensure that there is discretion for member states, particularly smaller states, to determine how best to apply changes to the EU regulatory framework in a national context.

Chapters 3 to 8 set out the sector specific regulatory issues that require action.

1. Overview

1.1 Introduction

Regulation is the means by which society's priorities can be safeguarded in the operation of economic markets. Regulation by or on behalf of the State plays an essential role in ensuring that economic activity by individual economic actors is consistent with wider national policy objectives, including consumer protection, environmental quality, provision of essential services, competition and health and safety. Regulation can be expressed through primary or secondary legislation, and through the activities and determinations of sectoral regulators[1].

Cost competitiveness is one of the key determinants of every firm's success – particularly firms that compete in international markets and against foreign firms in their home market. Notwithstanding the cost competitiveness gains made since 2008 as highlighted in recent Forfás and NCC reports, a range of business inputs remain relatively expensive compared to other jurisdictions[2]. High levels of unemployment and excess property suggest that the price adjustment is occurring too slowly.

With this in mind, the Action Plan for Jobs 2012 contains a range of actions designed to enhance Ireland's cost competitiveness[3]. In terms of domestically driven costs, there are concerns that recent price falls in Ireland are largely a cyclical response to the Irish and international recession (i.e. reduced demand, spare capacity), rather than a response to structural changes in the Irish economy. While weak economic growth continues to moderate inflation in Ireland, structural or policy induced changes are necessary to ensure that prices do not escalate and erode competitiveness when the Irish economy returns to stronger growth. In recognition of this, the Action Plan for Jobs 2012 emphasises the need to embed structural reform across a range of sectors that can deliver improvements in competitiveness that will not be quickly eroded once the economy recovers.

1.2 Objectives

The Action Plan for Jobs 2012 requires Forfás to undertake a study to:

Action 1.31	**Identify changes in the operation of sectoral regulators that would enhance cost competitiveness**		
	Steps Necessary for Delivery	*Timeline*	*Responsible Body*
	Benchmark and consult to inform the development of actions to improve sectoral cost competitiveness for Government consideration	Q4 2012	Forfás

1 It is important, however, that regulation should not place an unnecessary burden on business activity. Inappropriate or excessive regulation can increase costs for business and impair competitiveness.

2 National Competitiveness Council, Ireland's Competitiveness Scorecard 2012, Forfás, 2012; and Forfás, Costs of Doing Business in Ireland 2012 (unpublished)

3 The Action Plan for Jobs 2012 is available at: http://www.djei.ie/publications/2012APJ.pdf

The specific objectives of the project are to:

- Identify the regulated sectors that are important input costs for enterprise;
- Benchmark the relevant Irish costs vis-à-vis Ireland's key competitors and suitable comparator countries;
- Assess the drivers of costs (including the role of sectoral regulation) in the benchmarked sectors, particularly in cases where Irish costs have been found to be out of line with competitor norms;
- Examine the functions and structures of the sectoral regulators and their impact on cost competitiveness; and
- Develop recommendations to improve sectoral cost competitiveness.

1.3 Sectors Included

A range of regulated sectors have been identified for inclusion in this study. The key criteria for inclusion are their importance as enterprise costs and the presence of sectoral regulation/ regulators. The sectors examined herein have been chosen on the basis that they are either already subject to independent economic regulation (energy, telecoms and aviation) or are due to be regulated in the near future (water and rail). The waste sector is also included – at the time the study commenced, the new national waste policy had not been finalised, and so uncertainty surrounded the future regulation of the waste sector[4]. The Department of the Environment, Community and Local Government (DECLG) is responsible for the regulation of the waste sector. Many of these sectors are utilities[5]. Specifically, the sectors examined are as follows:

- Energy - electricity and gas;
- Telecoms – phone calls and broadband services;
- Transport - airport charges and rail freight[6];
- Waste management; and
- Water/waste water services.

The sectors included in this study reflect the requirement in the terms of reference to focus on direct input costs of relevance to enterprise. However, the price of several other goods and services are also regulated, for example, bus and taxi fares. While these do have an indirect impact on business costs (through for example the consumer price index), they were considered outside the remit of this project, which is focused on enterprise costs. Likewise

4 The new waste policy was published on the 25th July 2012.

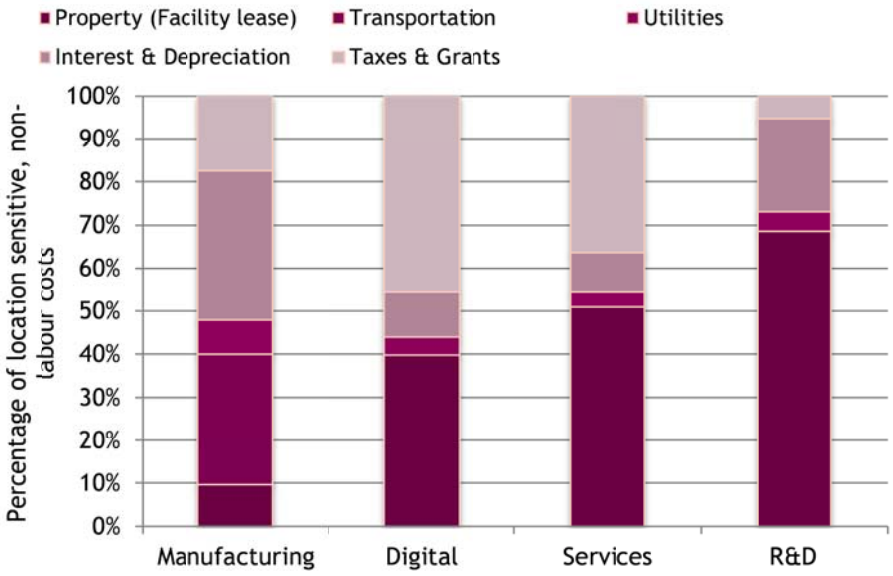
5 Financial services are not included within the remit of this study because a number of reviews of financial regulation have already been concluded. In addition, as noted in the Government's Statement on Economic Regulation, "the regulation of financial services is fundamentally different to other regulated sectors, with complex systems of organisation and financial services provision". For more detail, see Department of the Taoiseach, Government Statement on Economic Regulation, 2009.

6 Rail freight is included in this study because of the requirement to establish a separate body to determine rail access allocation and charging in Ireland, following the ending of Ireland's derogation in this matter in March 2013. As a result, track access will be regulated but rail freight prices to end users will not.

the regulation of the energy markets also affects consumer energy prices[7]. The cross sectoral findings and recommendations of this study will also be relevant to regulated consumer markets.

Looking at the Forfás' report on the Costs of Doing Business in Ireland 2012[8], it is clear that while utility costs account for a relatively small proportion of the total cost base for most firms, they remain an important determinant of overall competitiveness – accounting for between 3.5 and eight per cent of total location sensitive, non-labour costs for a sample range of firms (Figure 1.1)[9].

Figure 1.1: Overview of Location Sensitive Non Labour Costs for Enterprise, 2011



Source: KPMG Competitive Alternatives 2012, Forfás Calculations

Of course, the importance of various costs will differ significantly by individual firm and by sector. Furthermore, whereas labour costs and property costs, for example, are largely determined by the market, the State can have an impact on the price of utilities – whether

7 Looking at the Harmonised Index of Consumer Prices, inflation in Ireland has exceeded the euro area average for a range of consumer goods and services that have some degree of economic regulation – transport inflation in Ireland was 7.8 per cent in the year to September 2012 compared with 4.8 per cent in the euro area; the cost of housing, water, electricity, gas and other fuels increased by 5.6 per cent in Ireland over the same period compared with 4.1 per cent in the euro area; and the cost of communications fell by 2.7 per cent in Ireland but fell by 3.3 per cent in the euro area. For further details, see CSO, Consumer Price Index, November 2012.

8 This report was submitted to the Minister for Jobs, Enterprise and Innovation in Q3 2012 as required under the Action Plan for Jobs 2012.

9 For certain manufacturing subsectors of importance to Ireland, utility costs account for a larger proportion of location sensitive costs – accounting for 17 per cent of total non-labour location sensitive costs in the chemical sector and 12 per cent in the agri-food sector. Source: Forfás, Costs of Doing Business in Ireland 2012 (unpublished).

directly through policy, through its ownership of some utility providers, or through the actions and decisions of the regulators.

It is necessary to be cognisant of the rapidly evolving policy environment in many of the sectors examined in this report. While the policy landscape and regulatory frameworks for energy, telecoms and airports are relatively well established, a new energy policy framework will be developed shortly[10]. Significant policy and regulatory changes are imminent in the water[11] and rail[12] sectors. In addition, the new waste policy – published in July 2012 - will, have significant implications for the structure of the Irish waste management market. Implementation of the National Broadband Plan will have an important impact on the availability of competitively priced quality broadband services in the future. There is an opportunity to significantly shape the agenda in these sectors, and to engage with key stakeholders over the coming months to ensure that the competitiveness agenda is adequately reflected in the implementation of policy and regulatory decisions.

1.4 Methodology

Initially, Forfás undertook an extensive literature review of sectoral and economic regulation in Ireland. Sectoral regulation has been the subject of several reviews, statements and reports over the last decade, including (but not limited to):

- The Economic Intelligence Unit's (EIU) Review of the Regulatory Environment in Ireland (2009);
- EIU Review of Regulatory Appeals in Ireland (2009);
- The Government's Statement on Economic Regulation (2009); and
- The OECD's review of Better Regulation in Europe (2010).

Forfás has also engaged in a detailed benchmarking exercise of each sector. Drawing on the most up-to-date, internationally comparable data, this report provides a detailed overview of costs and other market-relevant data across all six sectors examined.

As required under the Action Plan for Jobs 2012, Forfás engaged in two comprehensive rounds of consultations with regulators, relevant Government departments, regulated firms (both incumbents and other market players) and representative organisations, and academics. We also met with relevant experts in the European Commission (EC). The first round of

10 Under action 1.14 of the Action Plan for Jobs 2012, DCENR is to initiate the preparation of the energy policy framework 2012-2030 by Q4 2012.

11 In January 2012, the DECLG published a position paper entitled "Reform of the water sector in Ireland" which sought views on the development of an implementation plan for the public water utility, and on the proposed approach to water charges and water metering. In response, a joint submission was made by the development agencies in February 2012. DECLG is currently finalising a detailed implementation plan for the transition of water services functions from the local authorities to Irish Water. The CER will be the economic regulator for water services while the EPA will continue in its role as environmental regulator.

12 The Government has taken a decision not to seek an extension of Ireland's derogation under EU legislation in relation to rail freight market access. Considerations are currently underway to determine how best to restructure Irish Rail in light of this decision.

consultations focused on identifying the cost drivers in each sector and agreeing the main themes that needed to be investigated further. The second round focused on the specific changes in the operation of sectoral regulators required to enhance cost competitiveness. A full list of consultations is provided in Appendices 1 and 2.

The primary focus of this study is on identifying actions to enhance cost competitiveness for enterprise in a sustainable fashion. Furthermore, while this study is focused on possible changes to the manner in which regulators currently operate in order to reduce costs for enterprise, during the course of Forfás' consultations, a number of parties have made repeated reference to the need to:

- Be cognisant of the other aspects of the regulators' mandates – cost competitiveness may not be their primary focus. It has been reiterated that while cost is important, other criteria such as quality, sustainability, reliability/security of supply, financial viability of the provider, etc. may be equally important to Government, the regulator and the consumer (business and residential).
- Separate policy related issues from regulatory issues – in many instances observers may not be clear on where the remit of national policymakers' ends and the remit of regulators begin. The situation is further complicated by EU obligations in both the policy and regulatory spheres (e.g. water quality regulations; binding energy targets for emissions and renewable energy). Essentially, while policymakers set out goals, decide upon structures, and provide general direction, regulators are usually tasked with implementing the decisions of policymakers, often with little discretion (as a result of either domestic or European legislative obligations).

1.5 Report Structure

This report is structured as follows.

- Chapter 2 provides the regulatory background and context for the study.
- Chapters 3-8 focus on each of the six individual sectors referenced above. These sectoral chapters include an analysis of Ireland's comparative cost performance; an assessment of the cost drivers (controllable and non-controllable); the role played by sectoral regulation in determining prices in Ireland; and the sector specific regulatory actions to enhance cost competitiveness.
- Chapter 9 builds upon the sectoral analysis and highlights a range of cross-sectoral actions designed to enhance Ireland's cost competitiveness.

2. The Regulatory Background

2.1 Introduction[13]

The State has assumed a role in certain sectors of the economy to offset the impact of "market failure". For example, the communications, energy and transport markets were traditionally regarded as prone to market failure because some or all of the industry constituted a natural monopoly. In Ireland and in many other countries, the traditional policy response to the natural monopoly problem was to nationalise the industry and extend the monopoly into the upstream production and downstream supply markets, thereby establishing State-owned, vertically-integrated, monopoly, public utility operators. Waste and water services were supplied by the local authorities in Ireland. Control through ownership, therefore, was considered necessary to prevent natural monopolies from exploiting their market power and charging excessive prices to consumers (business and residential).

In recent decades, reforms have been undertaken to address the perceived shortcomings of traditional structures and to improve the performance and efficiency of those industries. In part, this has been in response to the development of deeper capital markets and changes in technologies which have changed economies of scale. The reform process adopted in many countries had two broad elements:

- The introduction of competition into those parts of public utility industries where competition was possible. In some cases, this was accompanied by the privatisation of state owned enterprises and/or the state withdrawing for certain activities.
- The development of improved methods of regulating (and the establishment of dedicated regulators) where regulation was still required. On-going regulation was required in the case of the natural monopoly parts of the industry, while regulation of newly liberalised markets was also seen to be necessary in the short-run until effective competition emerged.

Regulatory developments in Ireland, and in other EU member states, have also been driven by changes in EU policy. This is particularly so in communications and energy.

2.2 Sectoral Regulation and Cost Competitiveness

In developing a range of regulatory actions to enhance cost competitiveness, it is necessary to first highlight a number of caveats:

13 Better regulation has long been a central focus of government policy. The entire regulatory agenda and assignment of responsibilities for delivery of that agenda, however, is currently undergoing a process of reform. Of particular relevance to this study is the Programme for Government commitment to "rationalise regulators to strengthen consumer regulation and promote the consumer interest". Given the multi-faceted nature of the regulatory agenda, Government is currently considering the allocation of responsibilities and functions across a number of Government departments. The key departments, from the perspective of this study, are the Department of the Taoiseach, which has primary responsibility for the better regulation agenda, including effective economic regulation, the Department of Jobs, Enterprise and Innovation, which is responsible for competition issues and reducing the administrative (red tape) burden for business, and the sectoral departments would have primary responsibility for sectoral regulation and the regulators under their remit.

- Relatively few prices in Ireland are regulated (i.e. where the regulator sets or approves the price that customers pay, or sets wholesale prices).
- Many factors other than the actions of the sectoral regulators have a major impact on price (e.g. policy decisions).
- In many sectors, factors over which Ireland has limited influence, at least in the short to medium term, are important determinants of price (e.g. small/dispersed population, the cost of borrowing on international markets, international fuel prices in the case of electricity generation).

Furthermore, the impact of the regulators themselves on final costs is limited for a number of reasons:

- Firstly, the cost of resourcing the regulators as a proportion of total expenditure in each of the sectors regulated is relatively small (Appendix 5).
- Secondly, the mandates of the regulators are largely determined by Government and/or the EU. Regulators must act in accordance with these mandates and their decisions are usually made in response to policy decisions taken elsewhere (e.g. the terms of the electricity PSO levy is set by Government; the EU determines which communications markets are to be regulated).
- Finally, in many cases, price determinations and the remedies available to the regulators (for example in instances of significant market power) are strictly defined in legislation (primarily emanating from the EC) and only allow for limited local interpretation (e.g. telecommunications).

2.2.1 Questions to be Addressed

Notwithstanding the caveats outlined above, there are a number of areas where we believe that changes to the manner in which the sectoral regulators operate would have a positive impact upon price. In structuring our research and consultations, Forfás set out to answer a series of thematic questions. These questions were cross-cutting in nature and generally applied to most of the sectors under consideration (summarised in Table 1).

Table 1: Thematic Questions

Mandates	Should greater importance be attached to consumer interests (particularly business) and/or competitiveness in each regulator's mandate? Should mandates be simplified so that the regulators have a primary objective? Would such a move have a positive impact upon price? Is there merit in periodically reviewing each of the regulators' mandates and/or consolidating relevant legislation?
Effectiveness	How effective are the regulators in delivering on their mandates, particularly in terms of driving efficiencies and reducing costs?

	How is performance measured? Is it sufficient? Are the regulators sufficiently resourced to fulfil their mandates? Are Government departments adequately resourced to oversee the work of the regulators?
Compliance	Are the powers and sanctions available to the regulators sufficient to ensure compliance? Do civil fines have a role to play in enhancing cost competitiveness?
Appeals	How can the appeals process be reformed to increase certainty (in terms of time and cost)? Should all regulatory decisions have a process to allow appeals on merit as well as judicial review (i.e. appeals on process)? Is a single cross-sectoral approach to regulatory appeals preferable to the current sector-specific approach?
Accountability	Are the sectoral regulators sufficiently accountable? How can appropriate performance indicators be developed across the various sectors when sectoral regulators have potentially conflicting objectives?
Transparency	Do regulators provide timely progress updates and information in relation to meeting objectives and on their decision making processes? Do consultation processes work for consumers or their representative bodies (particularly for business), the regulated firms, the regulators, and broader society? What role is played by ministerial directions?
European Dimension	How can Ireland protect cost competitiveness through engagement with the EU? Could a more cost-focused interpretation of EU legislation during transposition enhance Ireland's competitiveness?

3. Energy

A reliable and competitively priced supply of energy is critical for business and its ability to compete successfully in international markets. From a competitiveness perspective, the challenge facing Ireland is to improve long term cost competitiveness while delivering on Ireland's security of supply and environmental sustainability objectives.

3.1 Overview of the Irish Energy Market

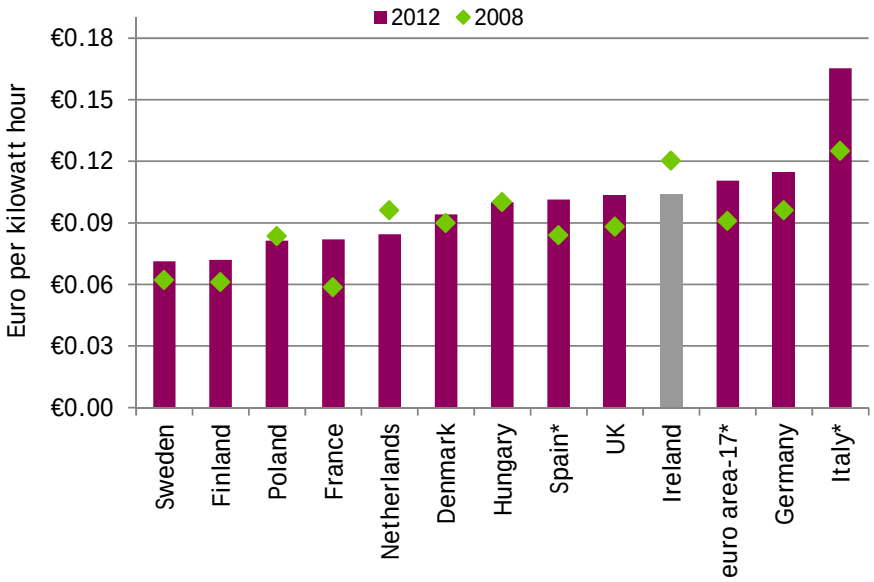
The Irish energy market has undergone significant change in the past decade. The all island electricity market – the Single Electricity Market (SEM) - was established in 2007 and the development of an all island gas market is well advanced (see section 3.3 for details of the all island energy markets).

3.1.1 Comparative Performance

In recent years, electricity and gas prices had been more competitive but some of the improvements have been reversed.

- Electricity: Ireland's competiveness performance deteriorated for both large energy users and SMEs since 2011. During 2011, electricity prices increased sharply mainly due to increases in the price of gas and the phasing out of the temporary rebate for large energy users. This reversed the competitiveness improvements experienced between 2008 and 2010 when the cost of electricity for large energy users in Ireland decreased significantly for business users.
  - In H1 2012, electricity prices for large users in Ireland were the eight most expensive in the EU-27 (compared with third in H1 2008 and 18th in H1 2011). Prices for large users in Ireland relative to euro area average deteriorated between H1 2011 and H1 2012; in H1 2012, prices were 6.1 per cent below the euro area average compared to 13.6 per cent below the euro average in H1 2011. In H1 2008, prices in Ireland were almost a third higher than the euro area average (Figure 3.1).
  - In terms of SMEs, Ireland was the fourth most expensive country in the EU-27 in H1 2012 (it was also fourth in H1 2008 and seventh in H1 2011). SME prices in Ireland were 29.4 per cent above the euro area average in H1 2008 but were marginally below it in 2011 (0.2 per cent). However, in H1 2012, SME electricity prices in Ireland were 6.2 per cent above the euro area average (Figure A1 in appendix 3).
- Gas: Industrial gas prices in Ireland in H1 2012 were the 14th most expensive in the EU-24 compared to the fourth most expensive in H1 2008 and eight in H1 2011. The significant improvement in Ireland's comparative performance is because gas prices here declined by one per cent between H1 2011 and H1 2012 but increased significantly in many EU countries; industrial gas prices increased by 63.1 per cent in Hungary, 34.1 per cent in Italy, 31.9 per cent in Estonia and 24.1 per cent in Spain. Industrial gas prices in Ireland were 9.1 per cent below the euro area average in H1 2012 (Figure 3.2).

Figure 3.1: Industrial Electricity Prices for Large Users (excl. VAT), H1 2008 v H1 2012[14]



Source: Eurostat

Figure 3.2: Industrial Gas Prices (excl. VAT), H1 2008 v H1 2012

Source: Eurostat

14 The asterix (*) denotes provisional data for S1 2012 (Eurostat database as of 28th November 2012).

3.1.2 Market Structure

The electricity market is made up of four segments:

- Generation – key players include ESB Group, SSE/Airtricity, Bord Gáis Energy, Viridian, Tynagh Energy; there are also a large number wind farms across the State[15];
- Transmission network – owned by ESB networks but managed and operated by Eirgrid;
- Distribution network – owned and operated by ESB Networks; and
- Retail – the key players in the business market are Electric Ireland (part of the ESB Group), Energia, SSE/Airtricity, Bord Gáis Energy and Vayu.

The establishment of the SEM has been a very positive development and has led to increased efficiencies in electricity generation and much greater transparency (particularly around the formulation of the wholesale electricity price). According to the International Energy Agency (IEA), the ESB Group accounted for 47 per cent of dispatchable generation capacity (excludes wind) in the all island market in 2010; it had a 56 per cent share of generation capacity in Ireland[16].

The opening of the retail electricity and business gas markets over the past decade has led to significant changes in the structure of the Irish energy market[17]. At the end of 2011, Electric Ireland accounted for 38 per cent of the business market, Energia had 29 per cent, SSE/Airtricity had 18 per cent and Bord Gáis Energy had 11 per cent (Figure 3.3). Electric Ireland's share of the residential market was 57 per cent at the end of 2011[18]. While switching levels in the business markets tend to be more erratic than in the residential market, reflecting seasonal and contractual factors, there was a noticeable increase in switching levels in the second half of 2011 when international gas prices started to increase sharply[19].

In terms of the business retail gas market, following the acquisition of Phoenix Supply by SSE/Airtricity in June 2012, there are seven players in the retail business gas market[20]. At the end of 2011, Bord Gáis Energy's share of the business retail market was 33 per cent, down from 65 per cent in 2008. Energia had 22 per cent, Vayu had 16 per cent, Gazprom had 11 per cent and Flogas had eight per cent. The combined Airtricity/Phoenix share was seven per cent while Electric Ireland had three per cent (Figure 3.3)[21].

15 In October 2012, SSE announced that it had completed the acquisition of Endesa's generation assets; Endesa, the Spanish-Italian utility bought 1 GW of capacity in 2008 when the ESB plants had to be sold. BG Energy's electricity generation and supply businesses are to be sold as part of the State assets to be disposed of.

16 IEA, Energy Polices of IEA Countries – Ireland 2012 Review, July 2012

17 The retail residential gas market is still regulated.

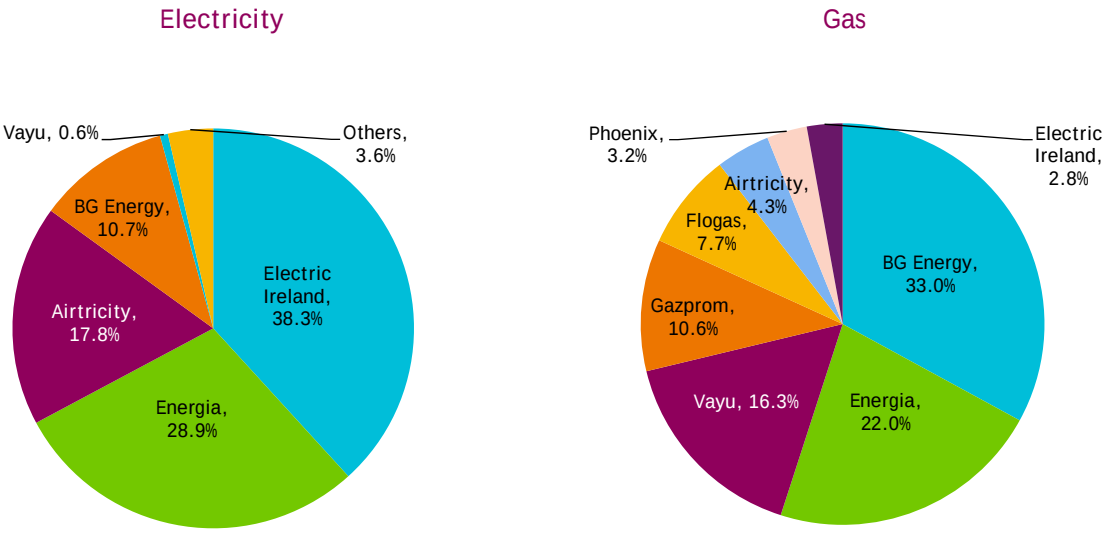
18 CER, Electricity and Gas Retail Markets Annual Report 2011 (CER/12/072), June 2012

19 Ibid.

20 See SSE website: http://www.sse.com/PressReleases2012/SSECompletesPhoenixAcquisition/

21 CER, Electricity and Gas Retail Markets Annual Report 2011 (CER/12/072), June 2012

Figure 3.3: Market shares of the business energy retail markets (as % of volume), 2011



Source: CER

3.2 Drivers of Costs

Some of the factors which affect Ireland's energy costs competitiveness are outside of Ireland's control (e.g. reliance on imported fossil fuels) but there are a number of important cost drivers within its control. This section sets out the key non-controllable and controllable energy cost drivers.

3.2.1 Non-controllable Drivers

- Fuel costs: Ireland is heavily reliant on fossil fuels and imports around 90 per cent of its energy needs. As a result, energy costs in Ireland are significantly determined by international fuel prices, particularly gas. In 2010/11, 61 per cent of the average SME's electricity bill was made up of generation costs, a large part of which is accounted for by fuel (Figure 3.4)[22]. In 2010, 61.4 per cent of electricity in Ireland was generated from gas, compared to 36.8 per cent in 2000 and 40.1 per cent in 2005[23]. Gas's share of electricity generation is expected to continue to increase as more renewable energy comes on to the grid (due to the intermittency of wind generated capacity)[24]. In its recent review of the Irish market, the IEA looked at electricity prices in other countries with a similar fuel mix and found that electricity prices in these countries was also higher than the IEA average and followed a similar trend to prices in Ireland over the last two decades[25].

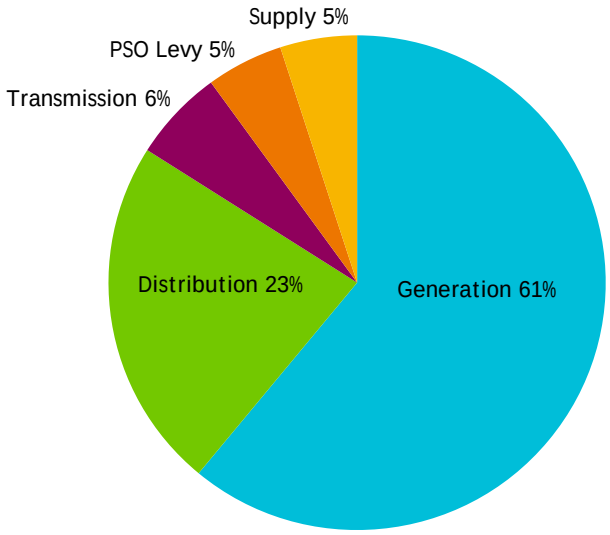
22 CER, Understanding Your Electricity Bill, October 2010

23 Sustainable Energy Authority of Ireland, Energy in Ireland, Various Years

24 IEA, Energy Polices of IEA Countries – Ireland 2012 Review, July 2012

25 Ibid.

Figure 3.4: Component parts of a sample SME electricity bill 2010/2011



Source: CER

There is also greater volatility in the price of gas generated electricity than in hydro or nuclear generation where the costs are fixed. Only about half the cost of gas generated electricity is fixed which means that Ireland is more exposed than many of its competitor countries to price volatility. Given the limited potential for additional hydro generation and the regulatory ban on nuclear power, this dependence on fossil fuels for energy and the exposure to price volatility is likely to continue in the medium term even with significant increases in wind energy.

- Small size: Ireland's small size, dispersed population and geographic location also have an adverse impact on costs in network industries like electricity and gas. For example, per head of population, Ireland needs more wires than in many other countries to ensure a safe and secure supply of electricity, which puts upward pressure on the unit price of electricity. In Ireland there are 84 metres of distribution lines per customer compared to 49 metres per customer in Britain[26]. The IEA also highlighted Ireland's size as a key factor in its analysis of why electricity prices here are higher than the IEA average. It states that smaller markets and smaller generation plants induce higher costs as only lower economies of scale are possible.
- EU dimension: The lack of harmonised policies in regional EU electricity markets is likely to lead to market distortions - e.g. member states offering different supports for renewable energy; the carbon price floor in the UK, which has implications for the all island market.
- Cost of capital: The energy sector is capital intensive. The cost of capital for network and generation investment is higher because of the economic uncertainty in Ireland and the euro zone. The cost of capital allowed for electricity network investment for the period 2011-2015 was 5.95 per cent compared to 5.63 per cent for the preceding

26 CER, Factsheet: Electricity Network & Charges, July 2010

review period 2006-2010[27]. The allowed cost of capital allowed for gas transmission investment is 6.39 per cent for the review period 2012-2017, compared to 5.2 per cent for the previous review period[28]. The degree to which Ireland can restore its financial reputation and return to capital markets may lower the cost of capital to Irish based utilities[29]. However, the presence of a credible and stable long term energy policy also plays a key role in minimising risk.

3.2.2 Controllable Drivers

Ireland's energy costs are also influenced by domestic decisions, including:

- Regulatory framework: In terms of price regulation, only network charges are now regulated[30]. The regulator also plays a role in ensuring effective competition in the electricity and gas retail markets and the SEM Committee is responsible for the all island electricity wholesale market (see section 3.3 for more details).
- Domestic subsidies: There are subsidies for electricity generated from peat (which increases carbon emissions) and renewable energy (which reduces emissions). There has been a substantial increase in the Public Service Obligation (PSO) levy for 2012/13[31]; it has increased by 30 per cent to €132 million[32]. The subsidies to peat generation have increased from €40.4 million in 2011/2012 to €52 million while the renewable supports (mainly wind) are up from €35.8 million to €56 million[33]. The Commission for Energy Regulation (CER) attributes the significant increases to the rise in the quantity of electricity generation subject to PSO support and a lower wholesale electricity price in SEM in 2012/13[34]. In its recent report on the Irish energy market, the IEA recommended decreasing incentives for specific technologies over time to ensure market competitiveness[35];

27 CER, Decision on 2011 to 2015 Distribution Revenue for ESB Networks (CER/10/198), November 2010; and Decision on TSO and TAO Transmission Revenue for 2011 to 2015 (CER/10/206), November 2010. Given the significant uncertainty prevailing when the cost of capital for the period 2011-2015 was set, it is to be reviewed midway through the review period.

28 CER, Decision on October 2012 to September 2017 Transmission Revenue for Bord Gáis Networks (CER/12/196), November 2012. The proposed cost of capital in the May consultation paper (CER/12/058) was 6.7 per cent. The cost of capital is to be reviewed annually.

29 In recent months, there has been an improvement in the cost of refinancing for the semi state energy companies. In November 2012, ESB sold €500 million of seven-year bonds at a competitive interest rate of 4.375 per cent; it was 12 times oversubscribed. In September 2012, it borrowed €600 million, but over five years at 6.25 per cent. Bord Gáis Energy's €500 million bond issue, also in November 2012, was 13 times oversubscribed and it will pay 3.625 per cent on the bonds over five years. The rate is significantly lower than the 5.75 per cent for its last bond sale in 2009. Source: The Irish Times (various articles).

30 Residential retail gas prices are also regulated by the CER but are not relevant for this study which focuses on business costs.

31 The PSO levy is designed to recoup the additional costs incurred in meeting Government obligations to purchase electricity from sustainable, renewable, and indigenous sources such as wind and peat.

32 When the subsidy per MWh is greater than the wholesale price per MWh, the cost of the subsidies is passed through to electricity customers.

33 Aughinish Alumina (160MW) and Tynagh (400MW) also receive support (€25m) under the PSO levy. For details, see: CER, Public Service Obligation (PSO) Levy for 2012/13 – Decision Paper - (CER/12/121), August 2012

34 A lower forecast wholesale price means that less revenue will be earned from the market by the PSO plant, thus resulting in a higher PSO levy.

35 IEA, Energy Polices of IEA Countries – Ireland 2012 Review, July 2012

- Planning delays: Significant energy infrastructure investment has been made and more is planned to support the development of the network to connect renewable electricity and customers. The 2007 Energy White Paper committed to delivering the North-South electricity interconnector by 2011; the interconnector is not now expected to be completed before 2017. Delays in completing the North-South interconnector are negatively affecting the efficient functioning of the SEM and are estimated to be costing approximately €20-30 million per annum, which means higher costs for Irish electricity consumers (business and residential)[36];
  - Following much debate on whether high tension cables should be placed underground or overhead, Government issued a policy statement in July 2012 which reiterates the strategic importance of energy infrastructure investment to meet future economic and social goals[37]. Placing high-tension transmission lines overhead, as opposed to underground, provides a technically superior solution at a fraction of the cost to all energy users[38]. The policy statement provides clarity for planning authorities to ensure the timely delivery of that infrastructure while also addressing social acceptance issues[39].
- Structural issues: While competition has increased both in the electricity generation and supply markets in recent years, the IEA review raised concerns about the level of State involvement in the energy market and the need for further market reform to increase competition[40]. Given the prominent role of the State in the sector, policy decisions rather than regulatory actions can promote/inhibit the further development of competition:
  - *Generation:* In particular, ESB retains a significant share of the price setting generation plant (i.e. the plant that determines the price of electricity) in the SEM. While the Government has announced that it plans to sell some of ESB's non-strategic electricity generation capacity as part of the sale of State assets, it is not clear at this stage if the critical price setting ESB plant is to be divested.
  - *Supply:* The full liberalisation of the electricity retail sector in 2011 is also resulting in a reduction in supplier concentration. However, depending on who purchases the Bord Gáis Energy assets, the supply market may become more concentrated.
  - *Networks:* Energy networks are natural monopolies. As highlighted by the IEA, an important advantage of full ownership unbundling of the grid is that it would guarantee the independence of the transmission system operator, which would help

36 Speech by the Minister for Communications, Energy and Natural Resources at the Energy Ireland conference, June 2011.

37 DCENR, Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure, July 2012

38 Eirgrid estimated the incremental cost of using underground cables to strengthen the transmission grid would be €6 billion — costs that would be borne by all customers. See also section 3.1 of the Forfás report, Review of Energy Competitiveness Issues and Priorities for Enterprise, December 2011

39 The Action Plan for Jobs 2012 required Government to develop an awareness campaign by Q2 to highlight the implications of delays in rolling out infrastructure for regional development and local job creation. The awareness campaign will be largely based on the public confidence building measures already devised by EirGrid in relation to progressing GridLink and GridWest.

40 The recent IEA review recommended that Ireland should continue to review the electricity market both in terms of the depth of State involvement in the sector and also the unbundling of the incumbent's vertically integrated assets, in line with EU legislation. The 2011 OECD Economic Survey of Ireland made similar recommendations, in particular it recommended that some of ESB's price setting generation plant should be divested to reduce ESB's dominance and increase competition.

foster further competition. It was announced in 2011 that ownership of the electricity grid is to remain with ESB Networks[41].

- Company cost structures: The cost structures of the energy companies in each of the market segments also influence the costs of the services provided. Energy companies, both regulated and unregulated, need to ensure that they are taking all necessary steps to improve efficiencies and reduce costs.
- Energy use: Reducing energy use is one of the most effective ways for companies to cut energy costs. Significant progress in improving energy efficiency has been made by business, particularly large users under the Large Industry Energy Users Network and the Sustainable Energy Authority of Ireland programmes for SMEs[42].

3.3 Role of Sectoral Regulation

The CER is the regulator for the electricity and natural gas sectors in Ireland (see Appendix 3 for more detail). The CER was set up under the Electricity Regulation Act 1999 and its role and functions have been expanded over time. Its key objectives are to act in the interests of consumers to ensure that[43]:

- The lights stay on;
- The gas continues to flow;
- The prices charged are fair and reasonable;
- The environment is protected; and
- Electricity and gas are supplied safely.

The CER works within the framework of national and EU energy policy which aim to create a single European electricity market that best meets the needs of Europe's energy consumers.

Since November 2007, electricity generation on the island of Ireland is traded through the SEM, a centralised, gross mandatory pool market, into which all electricity generated must be sold, and from which all wholesale electricity for consumption must be purchased. This market structure, in which all key generators and suppliers must participate, differs from most other European markets in which most trade takes place bilaterally between generators and suppliers. The SEM Committee, consisting of the CER, the Utility Regulator (Northern Ireland) as well as an independent member (who also has a deputy), is the decision making authority on all SEM matters[44].

41 The decision will have to be certified by the SEM Committee (see the Guidance Paper on TSO Certification Ireland - SEM-12-005) and the European Commission (see Commission Staff Working Paper on certification of TSO of networks for electricity and natural gas in the EU – SEC (2011) 1095 final).

42 In 2011, the State agencies published a brochure providing information outlining what supports are available to businesses in relation to energy efficiency, water conservation, waste prevention and clean technology: http://www.forfas.ie/publication/search.jsp?ft=/publications/2011/title,8202,en.php

43 See CER website: http://www.cer.ie/en/about-us-overview.aspx

44 It was established under the Electricity Regulation (Amendment) Single Electricity Market) Act 2007 (section 9BC).

The establishment of the SEM has been a very positive development for Ireland. It has brought many benefits from a competitiveness perspective. Most notably, it has led to increased efficiencies in generation and greater transparency in the electricity market as well as incentivising investment in new generation capacity and increasing competition. This has led to more transparent and competitive prices for enterprise as well as significant improvements in security of supply. Changes to the SEM will be required to comply with the requirements of the single EU electricity market (section 3.4).

The electricity price is made up of the following components:

- Network (transmission and distribution) charges – the electricity network infrastructure is vital to maintain the security and quality of electricity supply to customers, to assist in Ireland's economic growth and job creation, particularly across the regions, and to meet Ireland's ambitious renewable targets. New investments in network lines to maintain Ireland's high-quality electricity supply are a key networks cost driver. Network charges are determined by the CER (section 3.3.1). The cost of capital is also an important cost driver (section 3.2.1);
- Wholesale price (including cost of fuel and capacity payment mechanism) – the cost of fuel is driven by international prices while the objectives of the capacity payment mechanism (payment to support security and continuity of supply for electricity customers) are set in legislation and implemented by the CER[45];
- PSO levy – The policy and terms and conditions associated with PSO levy supported generation are mandated by Government and approved by the EC[46]. The CER has no control over the level of the PSO levy – it calculates the levy in accordance with the relevant legislation[47]; and
- Supply cost - the electricity retail market was fully deregulated in April 2011.

The gas price is made up of the following components:

- Fuel price, which is determined by UK gas prices;
- Cost of transporting gas across the interconnector – following a recent decision by the CER, a new pricing model will come into effect in October 2014[48];
- Network (transmission and distribution) charges – determined by the CER but the cost of capital which is largely outside of Ireland's control, is also an important factor; and
- Supply cost - all business gas retail prices were deregulated in October 2011.

45 Since November 2007, electricity generation is traded through the SEM. The bidding rules are set, monitored and enforced by the SEM Committee.

46 The Action Plan for Jobs 2012 required DCENR to undertake a review of the peat public service obligation to reduce costs while ensuring security of supply and meeting any legal commitments. According to the Q3 progress report, the review has been completed and is being considered by DCENR.

47 The relevant legislation is the Electricity Regulation Act 1999 (Public Service Obligations) Order 2002 (S.I. No. 217 of 2002) and particular terms of the various PSO schemes.

48 See CER/12/087 for details.

The two regulators (CER and the Northern Irish regulator) are working together to establish All-Island Common Arrangements for Gas (CAG) whereby all stakeholders can buy, sell, transport, operate, develop and plan the natural gas market on an all-island basis.

In determining where changes to how the sectoral regulators operate could improve energy cost competitiveness, we look at both the impact of price regulation and the wider regulatory framework on energy costs.

3.3.1 Price Regulation

In terms of price regulation, the two key issues are network charges and the capacity payment mechanism.

- Network charges: The CER estimates that networks charges accounted for 29 per cent of an SME's electricity bill in 2010/11; the share is lower for large users, approximately 20 to 25 per cent (Figure 3.4).
  - Every five years the regulator reviews the non-fuel costs allowable for electricity and gas transmission and distribution networks, in line with legislation.
  - In summer 2010, the CER carried out a major review of the electricity network charges to apply for the period 2011-2016[49]. The amount of money that the network companies can collect from electricity customers for the following five years is set at a level that would allow a well-run business to fund its activities. It is set by examining the specific underlying costs of the relevant network company and benchmarking it against best international companies in this field. The network companies are incentivised to operate efficiently, to make cost reductions, and to provide high levels of customer service[50].
    - As a result of that review, the networks cost component of the electricity bill was reduced by 45 per cent for large energy users from 1st October 2010. Some of this reduction was due to a decrease in the allowed costs that could be passed through to electricity customers but the main factor was a Government decision to rebalance network charges in favour of large energy users from the 1st October 2010. Distribution charges for SMEs fell by an estimated 11-20 per cent.
    - Each year the allowed revenue is refined in an annual review that updates a range of assumptions. According to the Third Progress Report on the Action Plan for Jobs 2012, this process has been completed for the 2012 – 2013 period[51].

49 CER, Decision on 2011 to 2015 Distribution Revenue for ESB Networks (CER/10/198); and CER, Decision on TSO and TAO Transmission Revenue for 2011 to 2015 (CER/10/206), November 2010

50 The allowed capital expenditure for the transmission network over the five year period is €1.45 billion (Eirgrid requested €2.1 billion) and €2.31 billion for the distribution network (ESB Networks requested €2.66 billion). The CER also requires ESB Networks and EirGrid to introduce efficiencies in operational costs. For ESB Networks (distribution), operating costs approved for 2015 are (in real terms) €25.2 million or 10.6 per cent less than those approved for 2010 (and €37.4 million or 14.9 per cent less than those approved in 2006). The total approved for the five year period represents a €146.4 million or 11.9 per cent reduction relative to that requested by ESB Networks. For the transmission network, the total operating costs approved for the 2011 to 2015 period is €719 million, a reduction of €183 million relative to the €902 million approved for the previous five year period.

51 Department of Jobs, Enterprise and Innovation, Action Plan for Jobs 2012 – Third Progress Report, October 2012

  - The review of the gas network allowable revenues for the period 2012 to 2017 was published in November 2012 and approved a lower level of capital and operational spending for the period than requested by Bord Gais Networks[52].

- Capacity payment mechanism – the objectives of the capacity payment mechanism (part of the SEM) are set down in legislation and the two regulators (north and south) are responsible for its implementation[53]. Under the capacity payment mechanism, generators are paid capacity payments for providing available generation capacity to the market. The money is sourced from capacity charges levied on all suppliers that purchase energy from the SEM pool (see also section 3.4.4).

3.3.2 Wider Regulatory Framework

In terms of the wider regulatory framework, the sectoral regulators do have a role in monitoring competition and enforcing remedies in the event of dominance or market power abuses in the deregulated markets. The SEM Committee monitors the SEM and ensures that there is no abuse of market power in the wholesale generation market. Recent work by the ESRI found that the price of electricity in Ireland (unlike in Britain) broadly reflects the long run marginal cost of production, which is necessary to ensure future energy security[54].

However, the EU commitment to implement a single European electricity market by 2014 will require changes to the SEM[55]. The establishment of the SEM has brought many benefits from a competitiveness perspective, including more transparent and competitive prices for enterprise. The way in which the EU target model is implemented in the all island electricity market will have significant implications for Ireland's future energy competitiveness. The CER is responsible for monitoring the retail electricity and gas markets and ensuring compliance with market and competition rules. The EU Third Package provides for additional powers for national regulators to ensure compliance with market rules[56].

52 The allowed revenue for the gas transmission network for the 2012-2017 period is €998.5m – Bord Gais Networks sought revenue of between €1,092m and €1,176m, based on its proposed weighted average cost of capital (WACC) of 6.49 to 7.75 per cent. The WACC approved by the CER was 6.39 per cent. For more details see: CER, Decision on October 2012 to September 2017 Transmission Revenue for Bord Gáis Networks (CER/12/196), November 2012

53 The key objectives of the capacity payment mechanism are to ensure adequate capacity, system reliability, price stability, fairness and to provide efficient price signals for long term investments. The regulators (north and south) undertook a review of the capacity payment mechanism in 2011/2012 – for details see: http://www.allislandproject.org/en/cp_current-consultations.aspx?article=31822151-f6da-4f5a-9fba-61739dd35f98

54 ESRI, A Review of Irish Energy Policy; Research Series Number 21, 2011

55 In the SEM, all electricity generated must be sold into a gross market pool and all wholesale electricity for consumption must be purchased from that pool. Most other EU member states operate bilateral markets (contracts between electricity generators and suppliers). Ireland has until 2016 to comply with the EU target model.

56 The Third Energy Package is a set of legislative measures intended to further open up the gas and electricity markets in the EU. Among its main provisions are ensuring: a high standard of customer protection; structural separation between transmission activities and production/supply activities of vertically integrated companies; stronger powers and independence of national energy regulators and new tools to harmonise market and network operation rules at pan-European level.

3.4 Key Energy Regulatory Issues and Recommendations

The main drivers of electricity costs are international fuel prices, particularly the volatility in gas prices, Ireland's small and dispersed population and a higher cost of capital. While the generation element (of which a large part is fuel) accounts for about 60 per cent of the price of electricity for an average SME, it is not possible to quantify the impact of the other non-controllable factors on electricity prices. But what we can say is that the factors within Ireland's control which influence the cost of electricity to business and residential users are significant and need to be addressed in the new energy policy framework[57].

While the focus of this study is on identifying changes to the operation of sectoral regulators to improve cost competitiveness, Forfás' research and its stakeholder consultations (national and international) indicate that addressing a number of key policy issues is likely to have a greater impact on Ireland's energy cost competitiveness. Among the key policy issues that need to be addressed in the new energy policy framework are revising the levels and duration of price supports for renewables; discontinuing supports for peat unless there is a clear economic rationale for maintaining them; further reform of the energy market structure and a continued focus on reducing energy use[58].

The key energy specific regulatory actions to improve cost competitiveness are discussed below while the main cross-cutting regulatory issues and actions are set out in chapter 9.

3.4.1 Mandates

While the issue of mandates is a cross-cutting one (section 9.2), there are a number of issues specific to the energy sector, hence its inclusion here.

Good regulatory practice requires periodic reviews of the mandates of the sectoral regulators to ensure that they are clear and consistent. The CER has a number of wide ranging objectives, and potentially conflicting objectives. For example, it is required to ensure security of energy supply, protect the environment and ensure cost competitiveness. The lack of clarity on how to weight different functions could lead to suboptimal regulatory decisions. Greater clarity on how to prioritise various functions exists in other markets (e.g. energy and water in the UK)[59].

Electricity regulation differs from other sectors as there is also an all island statutory regulator – the SEM Committee, which is responsible for the all island electricity market. The mandate of the SEM Committee also differs from that of the CER and other sectoral

57 Under action 1.14 of the Action Plan for Jobs 2012, DCENR is to initiate the preparation of the energy policy framework 2012-2030 by Q4 2012.

58 For more detail on the key energy policy actions to improve cost competitiveness, see section 6.6 of Forfás, Cost of Doing Business in Ireland 2012.

59 The principal objective of the Gas and Electricity Markets Authority, which was established by the Utilities Act 2000 to regulate the gas and electricity industries in Great Britain, is to protect the interests of consumers in relation to electricity or gas by promoting effective competition.

regulators; its objectives and functions are prioritised under the Electricity Regulation (Amendment) Single Electricity Market) Act 2007 (section 9BC).

The principal objective of the SEM Committee in carrying out its functions *is to protect the interests of consumers of electricity in the State and Northern Ireland supplied by authorised persons, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the sale or purchase of electricity through the Single Electricity Market.* The same principal objective applies to the CER in giving effect to any decision of the SEM Committee and to the Minister in carrying out his/her duties which are likely to materially affect the SEM.

The SEM Committee, the CER and the Minister, in meeting their principal objective, must also have regard to a range of other issues. These include meeting all reasonable demands for electricity on the island; ensuring that authorised persons are able to finance activities required under the Act; ensuring transparent pricing; promoting efficiency on the part of authorised persons and securing a diverse, viable and environmentally sustainable long term energy supply.

As highlighted in section 9.2, there is a lack of consensus on what is meant by consumer interests and Forfás puts forward proposals to address this. To ensure consistency of approach in the mandates of the CER and the SEM Committee, consideration should be given to reviewing the mandate of the SEM Committee. Forfás acknowledges that this is more complex as it requires the agreement of two jurisdictions and changes to legislation in both. That said, the market integration project to ensure that the all island market complies with the single EU electricity market obligations provides a timely opportunity to address this issue as any changes to the SEM Committee mandate would require legislation changes in both jurisdictions.

Key cross-cutting issues and recommendations relating to mandates are discussed in detail in section 9.2.

3.4.2 Effectiveness

One of the key issues from a cost competitiveness perspective is ensuring that the regulators are rigorous in driving efficiencies and reducing costs in regulated markets. As previously mentioned, the electricity generation and supply markets and the gas retail markets for business have been liberalised. The role of the CER in regulating network charges was outlined in Section 3.3.1.

The main challenge facing the regulator in its review of network charges (either electricity or gas) is striking an appropriate balance between providing for an efficient level of investment in upgrading the networks and minimising the costs to end users. The 2010 electricity network reviews were a significant step in delivering long-term improvements in cost competitiveness for electricity customers by providing strong incentives for ESB Networks to find efficiencies across all areas of its business. However, as highlighted by the IEA in its

recent review of the Irish energy market, the Government needs to "ensure that in the five-year review process, the CER focusses on scrutinising past and future performance to ascertain that relevant expenditure is efficient, with strict cost control and appropriate incentives in place".

The Action Plan for Jobs 2012 included an action for the CER and DCENR to ensure that the cost savings targets set out in the five year review of allowable electricity network costs were met. It was to be done as part of the CER's annual review of network tariffs which requires a full explanation on all items which deviate from that which was forecast in the five year review. According to the Third Progress Report, this process has been completed for the 2012 – 2013 period. It is vital that DCENR ensures that the CER is rigorous in driving efficiencies and reducing costs in the electricity and gas networks.

It is also important that the energy network companies are incentivised to exploit technological developments that will reduce the cost to end users of the significant investment required over the coming years. In 2011, Eirgrid announced that the Grid25 project could be delivered at a cost 20 per cent lower than previously estimated through technological developments and the refining and optimising of grid projects[60].

Measuring the performance of the regulators is key to assessing their effectiveness in carrying out their functions. The CER publishes an annual work plan, which sets out the high level tasks for the year ahead. It also sets out the specific objectives and targets[61]. As recommended in the 2009 Government Statement, the CER, in consultation with DCENR, agreed key performance indicators (KPIs) in its 2012 work plan and has committed to reporting on the outcomes in its next annual work plan. Of relevance to this study, the CER identified two KPIs to monitor competition in the retail electricity and gas markets:

- Total number of domestic (residential) electricity and gas customers who switched supplier, annually from 2009 to 2012; and
- The number of electricity and gas customers who switched supplier, annually from 2009 to 2012, by customer type (residential, business and large energy user) and the resulting market shares of the suppliers.

This is a very positive development and one that needs to be built on. A consistent and quantifiable approach to performance measurement is required across the sectoral regulators. The important performance indicators from a cost competitiveness perspective are set out in section 9.3.

60 According to Eirgrid, the use of high-temperature-low-sag (HTLS) conductors for upgrading lines will lead to significant cost reductions and improved delivery times for projects using this new conductor type. The refining and optimising of projects through more detailed studies carried out in the implementation of Grid25 have led to greater definition on scope and in some cases better solutions. The five per cent reduction in electricity demand since 2005 was also a contributing factor as a small number of projects have been postponed pending future review. See Eirgrid's press release, "Eirgrid announce major reduction in the cost of delivering Grid 25" in April 2011.

61 For details of the CER's annual work plans, see: http://www.cer.ie/en/about-us-overall-work-programme.aspx

In the course of the Forfás consultations, many stakeholders highlighted their concerns for future investment and cost competiveness because of resource constraints in the sectoral regulators but it was particularly an issue for industry stakeholders in the energy sector. To ensure efficient investment and a well-functioning energy market, decisions need to be timely and the underpinning analysis rigorous and liberalised markets need to be properly monitored to ensure that competition rules are being complied with. The regulator needs to be adequately resourced to deliver on its mandate (section 9.3).

As highlighted in the 2009 Government Statement on Economic Regulation, ensuring that Government departments have the capacity in-house to provide effective regulatory governance oversight is critical to drive efficiencies in energy network investment (Section 9.3.1).

3.4.3 Re-design of SEM

The regulators (north and south) are currently considering the options to transition the SEM to meet the EU single market requirements[62]. This will have significant implications for the all island electricity market. While member states have committed to implementing a single European electricity market by 2014, Ireland has until 2016 to comply. The move to the single European electricity market is likely to require significant and costly changes to the all island electricity market.

Ireland must take all possible measures to ensure that the positive aspects (e.g. transparency, cost reflective wholesale prices as outlined in section 3.3) of the SEM are retained while ensuring compliance with Ireland's EU obligations to implement the target model. Forfás acknowledges that this will be very challenging.

From a cost competitiveness perspective, the main principles that should underpin the implementation of the European target model for the single electricity market are:

- Ensuring a transparent wholesale market – one of the key advantages of the SEM for enterprise, particularly large, sophisticated users, is the transparency it provides on wholesale price trends, allowing them to negotiate more effectively with their suppliers and giving them a choice of electricity products, e.g. pool-price-pass-through tariff;
- Ensuring the price of electricity is cost reflective and that measures to mitigate market dominance are in place and rigorously enforced;
- Promoting competition in the generation and supply markets, in particular, it should continue to facilitate new entry by small players that may not be active in both generation and supply;

62 The SEM Committee published a consultation paper on implementing the European electricity target model in SEM in January 2011 (see SEM-12-04). It addressed the issues raised by respondents, along with its decisions on a number of issues and its recommendations to the two Government departments (north and south) on the next steps in the process, in a proposed decision paper in November 2012 (SEM-12-105a).

- Continuing to support investment in cost effective renewable capacity to meet Ireland's EU commitments;
- Incentivising investment in new, efficient plant, especially flexible plant (to complement the increasingly large amounts of wind capacity on the system) while also encouraging the closure/upgrading of any remaining old, inefficient plant; and
- Ensuring that the rules deliver efficient use of the interconnectors and do not result in unnecessarily higher costs for consumers (business and residential).

Ireland needs to ensure that any changes to the market design that are required to deliver the single European electricity market also deliver efficiencies (i.e. least-cost electricity to business and residential consumers). Developing an integrated European electricity market will require significant additional interconnection, which will also have cost implications for end users. The high level principles for the re-design of the market that the SEM Committee is recommending to the two departments (north and south) include delivering electricity at least cost to the consumer, minimising the costs of participating in the wholesale market and promoting competition between participants and incentivising investment[63].

3.4.4 Capacity Payment Mechanism

The capacity payment mechanism has played a key role in incentivising new investment in generation capacity when needed, particularly in the past when Ireland had a very tight generation capacity margin, a lot of old, inefficient plant and a growing demand. In addition, other countries across Europe, including Great Britain, are considering introducing such a measure to promote investment in timely replacement plant over the next decade.

The work currently underway to ensure the SEM complies with EU market integration obligations provides an ideal opportunity to review the design of the capacity payments mechanism to ensure that it incentivises investment in the type of generation capacity required to deliver security of supply in the longer term while minimising the impact on costs for energy users. As highlighted in the IEA's review, the capacity payment mechanism is designed to reward generation availability not flexibility[64]. With increasing amounts of intermittent generation (i.e. wind) on the system, more flexible generation capacity will be required to ensure the effective functioning of the SEM. The IEA recommends refining the criteria for capacity payments to encourage the development of additional flexibility in the SEM[65].

According to Forfás' consultations, the existing mechanism tends to over compensate wind and under reward flexibility (i.e. plants that can be powered up quickly when other generation capacity becomes unavailable at the last minute). This is because of the way the price is calculated.

63 SEM Committee, Implementation of the European Target Model for the SEM – Next Steps Proposed Decision Paper (SEM-12-105a), November 2012

64 When the capacity payment mechanism was designed in the mid-2000s, there was very limited spare electricity generation capacity on the Irish system, hence the focus on increasing generation capacity.

65 IEA, Energy Polices of IEA Countries – Ireland 2012 Review, July 2012

Since the existing mechanism was introduced, the capacity payment model has evolved internationally. Ireland needs to learn from recent international developments (e.g. New England), and revise the capacity payment mechanism in the all island market to encourage investment and to deal with intermittency.

The capacity mechanism needs to provide certainty for investors, offers electricity customers value for money and delivers the flexible generation capacity required to support an increasing amount of wind on the system. Ireland may have to await developments at European level before making a firm decision on how to proceed. Policy certainty is critical to the effectiveness of the capacity mechanism as a signal to investors. Ireland needs to avoid making multiple changes to its design and implementation.

4. Telecommunications

The availability of competitively priced telecommunications services is critically important for enterprise; delivering advanced broadband speeds is the top infrastructure investment priority for enterprise and competitiveness[66]. Advanced broadband services are crucial to achieve the productivity growth necessary to improve competitiveness, ensure Ireland captures new opportunities for entrepreneurship and jobs across all sectors and to support regional development.

4.1 Overview of the Irish Telecoms Market

According to the 2011 ComReg survey on ICT use by SMEs, nearly all businesses (98 per cent) use fixed line services and the internet, while 94 per cent have broadband and 80 per cent subscribe to mobile phone services[67]. Almost three in every five SMEs (58 per cent) subscribe to more than one service as part of a bundled offering.

4.1.1 Comparative Performance

While the cost of a business basket of calls (excluding line rental) in Ireland compares favourably with competitor countries, mobile calls and broadband services are more expensive[68].

- *Fixed line call prices*: Of the ten countries benchmarked, Ireland has the cheapest basket of fixed line business calls (Figure A2 in appendix 3).
- *Mobile call prices:* Mobile voice traffic accounted for 65 per cent of total voice minutes in the second quarter of 2012[69]. The monthly cost of a high usage mobile package in Ireland was the seventh most expensive among the euro area countries benchmarked and was 9.1 per cent above the euro area average in March 2012 (Figure A3).
- *Broadband prices:* While Ireland had the third fastest business broadband service of the benchmarked countries, it was relatively more expensive than many of the benchmarked countries (Figure 4.1)[70]. Businesses in Poland pay €332 per annum for a 150 Mbps service compared to €960 for a similar service in Ireland (though the upload speed offered in Ireland is higher than that in Poland). Finland and Portugal offer services of 205 Mbps at an annual cost of €630 and €716 respectively. In terms of business DSL services (the most widely available broadband service), the fastest speed available in Ireland is similar to that available in many of the benchmarked countries

66 Forfás defines advanced broadband services as services offering download speeds of 100 Mbps or more, with significantly higher upload capability (including the widespread availability of symmetric services for enterprise) and low latency (speed of response of the system to the user).

67 ComReg, ICT Usage Among Business Consumers, December 2011

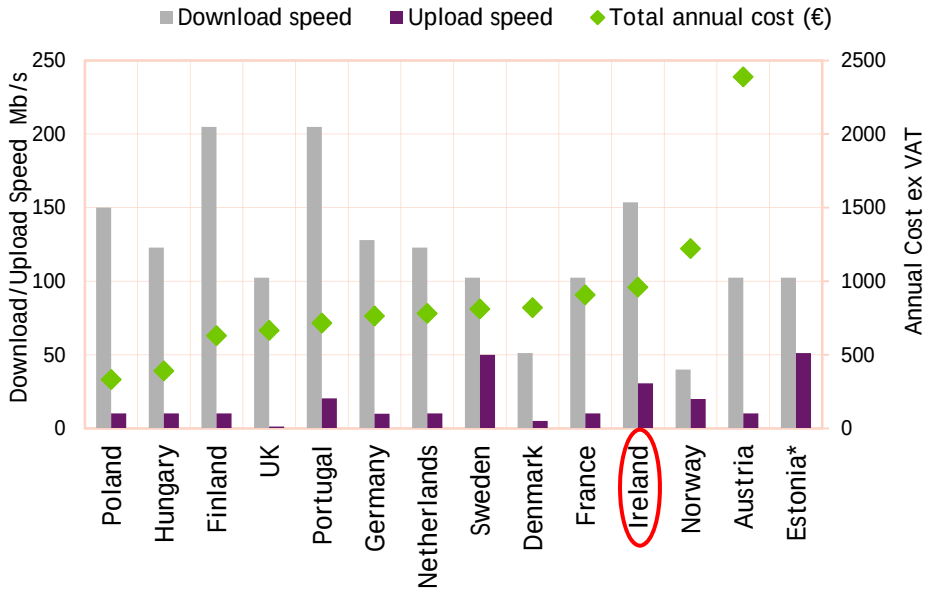
68 Some businesses, especially larger ones use dedicated services such as Ethernet and leased lines services, typically on bespoke terms. Due to the customised nature of the contracts for these services, it is very challenging to compare and benchmark with accuracy. According to ComReg, there have been significant reductions in the wholesale price for leased lines and Ethernet services over the past two years – for example the wholesale price of NGN Ethernet leased lines products has declined by 75 per cent.

69 ComReg, Quarterly Data Report Q2 2012, September 2012

70 For details of what is included in the Teligen dataset, see Appendix 3. The Irish operators covered by Teligen are Eircom, UPC, Vodafone, Digiweb and Imag!ne.

but Ireland was relatively more expensive than many of the benchmarked countries (Figure A4).

Figure 4.1: Annual Cost of the Fastest Business Connection (excl. VAT), September 2012[71]



Source: Teligen

4.1.2 Market Structure

The telecoms markets, particularly the broadband market, have become more competitive in recent years:

- Mobile telephony: There are four mobile network operators providing mobile telephony services. Vodafone remains the largest player with 41.6 per cent of the market (excluding mobile broadband) in Q2 2012 but its share has declined since Q2 2007, when it was 45.3 per cent. O2 has 29.1 per cent (down from 33.8 per cent in 2007), the eircom group has a 20.6 per cent market share compared to meteor's share of 18.1 per cent in 2007. The mobile operator, 3, has seen its share increase from 2.8 per cent in 2007 to 5.3 per cent in Q2 2012. There are also a number of MVNO operators in the Irish market[72]. The largest one is Tesco with a 3.1 per cent market share in Q2 2012 (Figure A5)[73].
- Fixed broadband: The fixed broadband market (excluding mobile broadband) has undergone significant change since ComReg started publishing market shares in 2009. In Q2 2009, Eircom had a 53 per cent share but by Q2 2012 that had declined to 42.5 per cent while UPC's share had doubled to 26 per cent over the three year period.

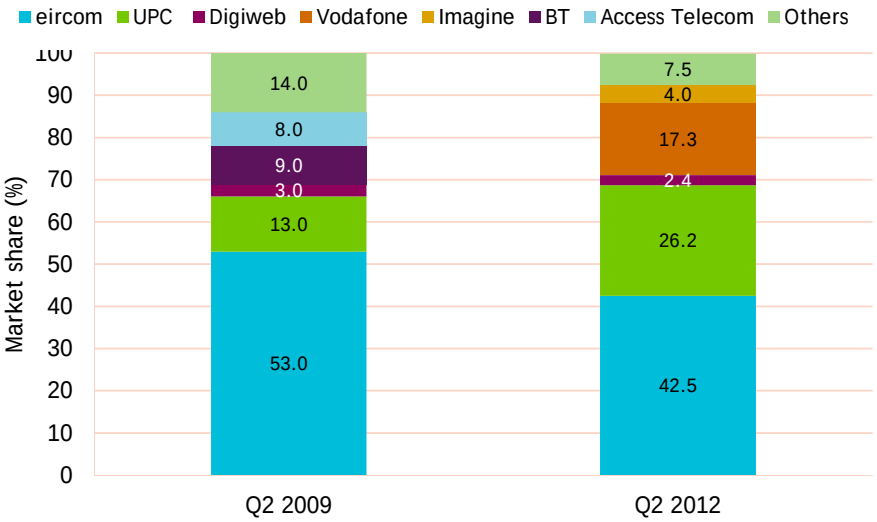
71 Countries are ranked on price (from the lowest to the highest). The asterix (*) refers to the fact that the cost for Estonia (€7,561 per annum for the service offered) is not included in the chart.

72 A mobile virtual network operator (MVNO) is a wireless communications services provider that does not own the radio spectrum or wireless network infrastructure over which it provides services to its customers. An MVNO enters into a business agreement with a licenced mobile network operator to obtain bulk access to network services at wholesale rates, then sets retail prices independently.

73 ComReg, Quarterly Data Reports, Various Quarters/Years

Vodafone now has a 17.3 per cent share, Imagine's share is four per cent and Digiweb has 2.4 per cent (Figure 4.2)[74].

Figure 4.2: Fixed Broadband Market Shares, Q2 2009 v Q2 2012



Source: ComReg

- Mobile broadband: According to the EC, mobile broadband penetration in Ireland was 60 per cent as of January 2012 compared to the EU average of 43.1 per cent[75]. The largest mobile broadband player is 3 with a 33 per cent share, followed by Vodafone with 28.1 per cent, O2 with 27.7 per cent and the eircom group with 11.3 per cent[76].

The quality of the broadband services available to Irish businesses compared to their EU counterparts is a concern. While Ireland has average overall coverage and better than average rural coverage of standard and mobile (HSPA) broadband, the EC found that the availability of next generation access (NGA) services lagged the EU average and coverage is focused on the Dublin area[77]. In 2011, 35.6 per cent of the country had next generation access (NGA) services compared with an EU average of 49.8 per cent[78].

74 Ibid.

75 European Commission, Ireland 2011 Telecommunications Market and Regulatory Developments, June 2012

76 ComReg, Quarterly Data Report Q2 2012, September 2012

77 EC, Broadband coverage in Europe in 2011: Mapping progress towards the coverage objectives of the Digital Agenda, November 2012

78 NGA services include VDSL, fibre and Docsis 3 cable.

4.2 Drivers of Costs

Some of the factors which affect Ireland's telecommunications costs competitiveness are outside of Ireland's control but there are a number of important cost drivers within its control. This section sets out the key non-controllable and controllable telecommunications cost drivers.

4.2.1 Non-controllable Drivers

- Ireland's small size, dispersed population and geographic location have an adverse impact on broadband costs. Urbanisation and population density are crucial determinants of the economic case for investing in broadband infrastructure. Ireland has a relatively low proportion of people living in urban areas; 62 per cent in 2009 compared to the OECD average of 77 per cent. Some of the best-performing countries in terms of broadband take-up, such as Denmark and the Netherlands, have very high proportions of their populations living in urban areas[79].

4.2.2 Controllable Drivers

- Regulatory framework: ComReg regulates wholesale prices for mobile calls and broadband products as provided for under the EU regulatory framework[80]. The process and remedies are set down in the EU legislation but there is some limited discretion for member states in how the markets are regulated.
- Policy certainty: The recent publication of the National Broadband Plan sets out Ireland's policy objectives and targets for the delivery of advanced broadband services in Ireland and provides clarity to market players and potential investors of the policy framework in Ireland to 2020.
- Network investment: Significant investment in upgrading the Irish broadband infrastructure is required at a time when the on-going global economic uncertainty makes raising capital more expensive. While UPC has invested significantly in upgrading its cable networks in the main urban centres, businesses, particularly SMES, in a large number of medium sized towns do not have access to competitively priced advanced broadband services. The recent Government commitment to leverage private and public investment to deliver broadband download speeds of 70 Mbps to 50 per cent of the population and a minimum of 30 Mbps available to all areas by 2015 is a welcome decision[81]. A number of service providers have announced plans to invest in advanced broadband services. According to the report of the Next Generation Broadband Taskforce, eircom plans to rollout fibre to the cabinet or to the home to over a million premises by 2015[82]. ESB recently announced that it is seeking a joint venture partner

79 See Figure 4 in Forfás, Ireland's Broadband Performance and Policy Priorities, November 2011

80 The seven markets are listed in the annex of this EC recommendation on relevant markets: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:344:0065:0069:EN:PDF. Member states can make a case to regulate other markets but the final decision on whether the market can be regulated rests with the EC.

81 DCENR, Delivering a Connected Society – A National Broadband Plan for Ireland, August 2012

82 See DCENR, Report of the Next Generation Broadband Taskforce, May 2012. In October 2012, eircom announced that by the end of 2013, over 750,000 premises will have access to fibre powered broadband http://pressroom.eircom.net/press_releases/article/eircom_Announces_Full_Year_Results_30_June_2012_/

to develop a fibre optic cable network using its existing infrastructure[83]. Sky has entered into a wholesale deal with BT Ireland that will allow it to offer broadband services in addition to its television services[84]. Following the completion of the spectrum auctions, the mobile operators have also announced significant investment in 4G services[85].

- Planning: Delays in planning processes (e.g. in relation to mobile masts and road openings for fixed broadband) have significant knock on effects in terms of the cost of delivering infrastructure.
- Company cost structures: The cost structures of the telecoms companies in each of the market segments also influence the costs of the services provided. Telecoms companies, both regulated and unregulated, need to ensure that they are taking all necessary steps to improve efficiencies and reduce costs.

4.3 Role of Sectoral Regulation

ComReg is the statutory body responsible for the regulation of the electronic communications sector (telecommunications, radio communications and broadcasting transmission) and the postal sector.

- It is responsible for promoting competition, protecting consumers and encouraging innovation in the electronic communications markets.
- It is responsible for implementing the EU electronic communications regulatory framework in Ireland.

4.3.1 EU Regulatory Framework

The EU communications regulatory framework is the most developed and the most prescriptive of the sectors examined in this report. Therefore in order to understand the Irish regulatory regime and how it can be enhanced, it is important to first examine the wider European context within which it must sit.

The overarching objectives underpinning the European regulatory framework are that regulation should be temporary with a view to transitioning to a system of ex post competition law and that regulation should be limited to addressing key bottlenecks only. The regulatory framework sets out which electronic communications markets (calls and broadband products) are regulated, the process for undertaking the market reviews and the remedies that can be applied if a finding of market dominance is made.

83 E-tenders website, September 2012

84 http://www.siliconrepublic.com/comms/item/28529-sky-broadband-and-sky-talk

85 The spectrum auctions raised almost €482 million in upfront fees for the State, with a further €373 million due in on-going spectrum usage fees due between 2013 and 2030. Vodafone is to invest more than €500 million in its network over the next five years while O2 committed a further €200 million in investment over the next three years to provide the 4G services. Source: http://www.irishtimes.com/newspaper/finance/2012/1116/1224326666045.html

Under the revised EU Communications Framework Directive (transposed into Irish law in 2011):

- National regulators (ComReg) are required to analyse seven markets (as set out in the EC Recommendation annex). While the regulator can identify additional markets nationally to regulate, the EC determines whether that market should be regulated in that particular member state (i.e. EC approval is required).
- When the market analysis is completed, the findings and proposed remedy measures must be notified to the EC and other national regulators. The EC assesses the regulatory measures (particularly the definition of markets and the assessment of significant market power (SMP)) within a one month (phase one) period.
- Provided that the notified measures do not raise "serious doubts" as to its compatibility with EU law, the EC may decide to comment. Regulators should take account of any comments received before adopting the draft measure in question.
- If the EC expresses "serious doubts", its investigation period is extended by two months (phase two) and the national regulator cannot adopt the proposed measures. During phase two, the EC examines the case in detail and invites interested parties to comment on it. The EC carefully considers the views of all stakeholders (other telecoms regulators and industry players).
- At the end of phase two, the EC may withdraw its serious doubts and make comments; the regulator may adopt the draft measure once it has taken utmost account of any comments received from the EC. Alternatively, the EC may require the regulator to withdraw its proposed measure. The regulator may withdraw its draft measure at any time during either phase one or two[86].

The EC reviews the lists of product and service markets to be regulated on a regular basis. It is currently undertaking such a review and is seeking inputs from interested parties by the 8th January 2013[87].

4.3.2 Price Regulation

As mentioned above, ComReg primarily regulates wholesale prices as provided for under the EU regulatory framework, thus facilitating and encouraging competition at the retail level. Where competition problems in retail markets cannot be resolved by effective wholesale regulation alone, ComReg can take direct action to safeguard retail prices (e.g. current caps for fixed line rental).

- ComReg sets the mobile termination rates[88]. While the average mobile termination rates in Ireland declined significantly from 9.5 cent in July 2009 to 4.6 cent in October 2011, they remained above the EU average of 3.87 cent[89]. Earlier this year, ComReg

86 European Commission, Telecoms: How the Article 7 Consultation and Notification Mechanisms Works: Frequently Asked Questions, June 2010

87 http://ec.europa.eu/digital-agenda/en/news/public-consultation-revision-recommendation-relevant-markets-2007879ec

88 Termination rates are the charges one telecommunications operator charges to another for terminating calls on its network.

89 European Commission, Ireland – 2011 Telecommunication Market and Regulatory Developments, June 2012

consulted on changes to the mobile termination rates in Ireland and has approved a maximum rate of €1.04 from 1st July 2013[90].

- The wholesale price of some broadband offerings is regulated, e.g. access to the incumbent's local loop[91]. The total average monthly cost for full local loop unbundling (LLU) in Ireland - €13.22 - is among the highest in the EU (the monthly average cost for full LLU across member states ranges between €5.30 and €14.40)[92].

4.3.3 Wider Regulatory Framework

Competition in the Irish broadband market, both fixed and mobile, has increased in recent years. However, although cable's share of the fixed broadband market has increased significantly to 24 per cent, DSL continues to be the most common broadband technology with a market share of 67 per cent. As of January 2012, eircom was the leading DSL provider with 65.4 per cent of the DSL market. Only 5.4 per cent of new entrants' DSL lines were fully unbundled in Ireland in January 2012, compared to the EU average of 69.1 per cent. Infrastructure competition in fixed broadband is limited outside the cable areas and the MAN towns. However, in the MAN towns, many SMEs are not able to afford the cost of connecting to the MAN[93].

4.4 Key Issues and Recommendations

The key issue from a cost competitiveness perspective is to ensure that Irish businesses are getting high quality broadband services on a par with their international competitors. While Ireland's dispersed and small population makes the provision of competitively priced communications services more challenging, there are a number of factors within Ireland's control which influence its cost competitiveness.

Although the regulatory framework has an important role to play in facilitating investment and innovation and improving cost competitiveness, the timely implementation of the National Broadband Plan will have a much more significant impact on the quality and cost of services available to Irish enterprise. In the first instance, the actions to remove barriers to investment need to be prioritised to enable the private sector to invest. Secondly, if Ireland is to meet the targets set out in the plan, DCENR must progress the process for State intervention in parallel[94].

90 For further details on the ComReg decision, see its November 2012 paper, Mobile and Fixed Voice Termination Rates in Ireland (ComReg 12/125).

91 The local loop is the last mile of the network connecting the customer to the local exchange. Local loop unbundling entails other operators to connect their own equipment to the incumbent's copper loop connecting final consumers to the local exchange.

92 European Commission, Ireland – 2011 Telecommunication Market and Regulatory Developments, June 2012

93 Forfás, Ireland's Advanced Broadband Performance and Policy Priorities, November 2011

94 While there can be no State intervention in areas covered by the National Broadband Scheme until the contract for that scheme expires in August 2014, actions identified in the National Broadband Plan to remove barriers to investment and to progress the State initiative can and must be progressed in the interim.

The scope for national changes to the operation of sectoral regulation in communications is determined by the EU regulatory framework. Therefore, any proposed changes to the operation of communications regulation will need to be considered in the context of the EU framework. Forfás research and stakeholder consultations have highlighted a number of areas where changes to the operation of the sectoral regulator could have a positive impact on cost competitiveness. Cross-cutting regulatory issues and actions are discussed in chapter 9. Regulatory issues specific to the communications sector are discussed below.

4.4.1 Effectiveness

Driving efficiencies and reducing costs to end users in regulated markets is critical. The European regulatory framework determines which electronic communications markets are regulated and what remedies can be imposed (for details of the market analysis process, see section 4.3.1). The EC has power of veto over any proposals made by national regulators which it has used in a small number of cases since 2003[95]. For example, in 2006, the EC issued a decision requiring the Polish regulator to withdraw its draft measures for regulating retail access services on the basis that the regulator had failed to justify why it intended regulating broadband access services.

One of the main objectives of the market review process is to ensure a more consistent and efficient application of remedies across the EU single telecoms market. In the communications sector, national regulators can and do share relevant information to inform their cost models and benchmarking and pricing decisions via the Body of European Regulators of Electronic Communications (BEREC) (section 9.8). Access to comparative costs data would enable more effective performance measurement (section 9.3).

ComReg, like other sectoral regulators, is funded in part by a levy imposed on industry (which is provided for under the Communications Act 2002). In the course of the Forfás consultations, many stakeholders highlighted their concerns for future investment and cost competiveness because of resource constraints in the sectoral regulators. The EC also raised concerns about the implications of the moratorium on staff recruitment for ComReg's ability to comply with its obligation to perform timely market reviews in its most recent review of the Irish telecoms market[96]. The regulator needs to be adequately resourced to deliver on its mandate (section 9.3).

4.4.2 Pro-investment Regulatory Framework

The regulatory framework needs to incentivise investment in advanced broadband services, promotes competition and reduces rollout costs. In September 2010, the EC published its

95 European Commission, Telecoms: How the Article 7 Consultation and Notification Mechanisms Works: Frequently Asked Questions, June 2010

96 In particular, the EC highlighted the need for ComReg to prioritise the completion of the market review for voice call termination on mobile networks and ensure that mobile termination rates are regulated in accordance with the EC obligations, instead of relying on voluntary commitments. By the time the EC review was published in June 2012, ComReg had issued a consultation paper and has since published its decision. European Commission, Ireland – 2011 Telecommunication Market and Regulatory Developments, June 2012

recommendation on regulated access to Next Generation Access (NGA) Networks, which seeks to ensure a consistent regulatory approach across member states to promote investment in advanced broadband infrastructure to meet the Digital Agenda targets[97].

The recently published National Broadband Plan highlights that effective regulation of high speed broadband services by ComReg will play a key role in facilitating innovation and promoting efficient investment by the commercial sector in new and enhanced infrastructure. The National Broadband Plan requires ComReg to consider any provisions in the regulatory framework which could impede it in prioritising the provision of next generation broadband infrastructure on a commercial basis. This review needs to be completed quickly and the findings published for consultation.

The regulatory framework must also facilitate the early rollout of new technologies and services in Ireland (e.g. 4G services) so that any productivity gains or cost savings can be realised by Irish businesses at the earliest opportunity and they are not a disadvantage relative to their competitors. The completion of the spectrum auctions in late 2012 is an important development[98]. Many other EU countries have also allocated the spectrum for 4G services while the UK auction is to take place in early 2013[99].

The EC recently decided to mandate the flexible use of a number of spectrum bands to facilitate advanced wireless technologies like LTE spectrum (Long Term Evolution), by 30 June 2014 at the latest[100]. This means that the EU will have twice the amount of spectrum available for high speed wireless broadband that the US has. The EC has also flagged further changes to spectrum use to deliver on the Digital Agenda targets to bring high speed services to all at competitive prices. Ireland and ComReg need to ensure that the regulatory framework enables service providers to invest in and deliver new advanced wireless technologies to Irish consumers (particularly businesses) at the earliest opportunity.

97 European Commission, Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (2010/572/EU), September 2012

98 ComReg, Frequency Arrangements and Results of the Multi-Band Spectrum Auction Process – Information Notice (ComReg 12/131), December 2012

99 EE launched 4G services in 11 UK cities in October 2012.

100 European Commission, Commission Implementing Decision C(2012) 7697, November 2012; for press release and document links, see: http://europa.eu/rapid/press-release_IP-12-1170_en.htm

5. Transport - Aviation

The focus of this section is not on the entire aviation sector. Rather, the focus is on regulated airport charges, and in particular on airport charges at Dublin airport and aviation terminal services charges at Dublin, Cork and Shannon airports[101]. Costs accounted for by regulated charges represent a relatively small proportion of total airfare costs for consumers.

5.1 Overview of the Airport Market

There are three corporatized airports owned and managed by the Dublin Airport Authority (DAA) in Ireland- Dublin, Cork and Shannon. The DAA is a commercial state-owned company. On the 3rd December 2012, the Government confirmed that it has decided to grant Shannon Airport full independence from Dublin Airport Authority from 31st December 2012 and merge the airport with a restructured Shannon Development to form a new, publicly-owned, commercial entity in 2013. In addition, there are six regional airports – West Ireland Knock, Kerry, Waterford, Galway, Sligo and Donegal Airports[102].

DAA airports cater for 96 per cent of all passenger traffic in Ireland, with Dublin alone accounts for 82 per cent of this traffic[103]. In terms of competition, while Cork and Shannon are in competition with the other regional airports, Dublin Airport is primarily in competition with other European Airports rather than with domestic airports (at least from the perspective of the airlines).

5.1 Comparative Performance

Airport charges at Dublin Airport have changed significantly in recent years. The price cap has increased from €4.81 in 2005, to €6.20 in 2006, €7.39 in 2009, and €9.31 in 2010[104].

Airport charges are not easy to compare, since airports differ considerably in the facilities provided and they offer various incentives and reductions in charges to attract business. While limited comparable data on airport charges is publicly available, data presented at a recent aviation conference by the DAA indicates that the average revenue per passenger at Dublin Airport was lower than the average of 22 other European airports and Dublin was ranked mid table[105].

101 The cap on airport charges at Dublin Airport also operates as a cap for charges at the other airports.

102 Galway and Sligo no longer operate scheduled services.

103 Booz & Co, Options for the Future Ownership and Operation of Cork and Shannon Airports – Prepared for the Department of Transport, Tourism and Sport, December 2011

104 http://www.aviationreg.ie/regulation-of-airport-charges-dublin-airport/compliance-papers.123.html

105 Based on data from the Airports Council International's key performance indicator project, which was included in the DAA presentation at the Conference on Aviation Policy for Ireland on the 3rd December 2012 – see: http://www.iaa.ie/media/O.Cussen-DAA-3rdDec20121.pdf

A challenge common across countries is the difficultly in accurately benchmarking airport performance on a comparative basis[106]. The Australian Productivity Commission has undertaken significant benchmarking work in this area and has noted that "across airports, 'apples-to-apples' comparisons are difficult to engineer, and, in their absence, interpretations are challenging"[107]. This is often a result of location-, geographic- or configuration-specific reasons, unrelated to airport efficiency per se. The 'joint-product' problem also poses difficulties in airport benchmarking – it is often not possible to disentangle the impact of various functions on overall efficiency. Nevertheless, despite these complications, the Australian analysis has concluded that benchmarking three aspects of airport performance is necessary to evaluate the regulatory regime, namely:

- Productivity (whether services are being produced at minimum cost);
- Prices and profits (and whether the airports are making use of market power by allowing costs to rise while protecting their profit margins); and
- Quality.

5.2 Drivers of Costs

As with other sectors, some of the factors which affect airport charges are outside of the Government's control. Other elements are within either domestic policy or regulatory control.

5.2.1 Non-controllable Drivers

- Ireland's geographic location and island status.
- Ireland's small market size.
- The Irish Aviation Authorities Air Traffic Control "en route (overflying) airspace charges" are determined as part of a Europe-wide process facilitated by Eurocontrol[108].

5.2.2 Controllable Drivers

- At present Ireland enjoys few economies of scale. There are eight airports in Ireland and three in Northern Ireland, serving a combined population of 6.4 million people. The regional airports have relatively small catchment areas due to Ireland's spatial patterns. Booz & Co. noted that as a result of Ireland's crowded airport landscape, regional airports rely on a mix of funding which includes grants from local or regional authorities, central Government and European bodies to survive[109].

106 Access to detailed management accounts from individual airports is required to benchmark costs, rather than the published accounts which combine a range of costs for a mix of services.

107 Unfortunately, Irish data is not captured in the work of the APC. See Economic Regulation of Airport Services, Productivity Commission Inquiry Report, No. 57, 14, Australian Productivity Commission, December 2011

108 Aircraft are charged for the services they receive as they transit Irish airspace, namely air traffic control and HF communications charges. This income amounts to approximately 75 per cent of the IAA's total revenue. The IAA's Terminal Air Traffic Control charges are independently set by the Commission for Aviation Regulation. The determination is made on a five year basis and regularly reviewed.

109 Booz & Co, Options for the Future Ownership and Operation of Cork and Shannon Airports – Prepared for the Department of Transport, Tourism and Sport, December 2011

- The dominance of Dublin airport has implications for competition – the awarding of the right to operate Terminal 2 (T2) to the Dublin Airport Authority (DAA) which is a State owned company already operating Terminal 1, for instance, has not fostered competition.
- The lack of competition in airport management may also be having an impact on the efficiency of airport management, with subsequent implications for costs.
- Prices are also driven by the mandate of the Commission for Aviation Regulation (CAR) and the requirement to deliver a return on investment for the DAA.
- The cost structures of the airports also influence the costs of the services provided. Airports, both regulated and unregulated, need to ensure that they are taking all necessary steps to improve efficiencies and reduce costs.

5.3 Role of Sectoral Regulation

The CAR regulates certain aspects of the aviation and travel trade sectors in Ireland. It was established in February 2001 under the Aviation Regulation Act, 2001. The 2001 Act was subsequently amended by the State Airports Act, 2004 and the Aviation Act, 2006.

The CAR is an independent public body under the auspices of the Department of Transport, and is accountable to the Houses of the Oireachtas[110]. The principal function of the CAR is in the area of price regulation (i.e. setting the maximum level of airport charges at Dublin Airport and aviation terminal services charges at Dublin, Cork and Shannon airports). The CAR has no power to regulate other charges, including car park charges at airports, and more generally non-aeronautical charges (except those levied for access to installations needed for ground handling services at Dublin, Cork and Shannon airports). The Irish Aviation Authority (IAA) separately charges airlines for en-route air navigation services, but the level of these charges are not subject to regulation by the CAR. The CAR has no role in setting charges at Knock, Kerry, Galway, Waterford, Donegal or Sligo airports.

In addition to the functions listed above, the CAR is responsible for:

- Discharging Ireland's responsibilities for schedule coordination/slot allocation at Irish airports and the appointment where necessary of a schedules facilitator/slot co-ordinator.
- Licensing the travel trade in Ireland, and granting licences to both tour operators and travel agents[111].
- Approving ground handling services providers under regulations implementing EU legislation.

110 The CAR is required under Section 26 of the Aviation Regulation Act 2001 to prepare and submit an annual report to the Minister, who arranges for it to be laid before the Houses of the Oireachtas, after which the reports are published.

111 As part of this function, the CAR administers a bonding scheme to reimburse consumers in the event of a travel agent collapse.

The analysis below looks separately at the CAR's role in price regulation and its role in determining the wider regulatory environment within which airports operate.

5.3.1 Price Regulation

Airport Charges

Airport charges are only regulated at Dublin Airport. For regulatory purposes, airport charges are runway landing and take-off charges; aircraft parking charges; charges for the use of an air bridge; and passenger processing charges. The CAR sets a price cap limiting the total revenues per passenger that the DAA can collect from airport charges at Dublin airport. When setting the price cap the CAR has three statutory objectives:

- The efficient and economic development of Dublin Airport;
- The ability of the Dublin Airport Authority to operate in a financially viable manner[112]; and
- The protection of the interests of users and potential users of the airport.

To date CAR has chosen to employ price-cap regulation, applied to a single till[113]. Price-cap regulation is a form of incentive regulation. CAR announces in advance a cap on the total revenues per passenger that the DAA may collect. This cap lasts for a period of four or more years. If the DAA can successfully reduce its costs below the level of the cap, the airport operator keeps the value of these savings until the cap is reset. The most recent review of airport charges was completed in 2009[114]. At the time of the next price cap, the CAR will consider the level of costs that the airport operator was able to realise when setting the next price cap. Consequently the airport operator and users share the benefits of any cost savings that the DAA is able to realise. The incentives for the airport operator to realise costs savings ultimately should benefit users as well as the airport.

Aviation Terminal Service Charges

The CAR is also responsible for setting a price cap limiting the total revenues that the IAA can collect from aviation terminal services charges (ATSCs) at Dublin, Cork and Shannon airports.

ATSCs are air traffic control charges relating to the provision of air terminal services for landing and departing aircraft from Dublin, Cork and Shannon airports. The IAA separately

112 Note that in 2009, the CAR finalised its approach to the DAA's investment plan which was implemented in the 2009 price determination. That determination was also the first to create an explicit link between the level of the price cap and the quality of service provided at Dublin airport. Since 2009, should the DAA fail to meet various service quality targets, the annual price cap may be lower by as much as 4.5 per cent. The CAR monitors compliance with the quality targets, and adjusts the price cap as necessary.

113 Under the single till principle airport activities (aeronautical and commercial) are taken into consideration to determine the level of airport charges. By contrast, only aeronautical activities are taken into consideration under the dual till principle. Airport charges derived using the single till approach are therefore likely to be lower than they would under a dual till because of the sharing of profits generated by commercial activities.

114 http://www.aviationreg.ie/regulation-of-airport-charges-dublin-airport/2010-airport-charges.122.html

charges airlines for en-route air navigation services, but the level of these charges are not subject to regulation by the Commission.

When setting a cap on the charges that the IAA may levy, the CAR's aim is to facilitate the development and operation of cost-effective terminal services that meet international standards. In doing so, the CAR has regard to a number of factors, including the charging principles of the International Civil Aviation Organisation and of Eurocontrol, the level of investment needed to meet current and prospective needs of airlines, and the efficient and effective use of all resources by the IAA.

Similar to the approach taken in relation to airport charges, the CAR employs price cap regulation with respect to ATSCs. The provisional price cap for aviation terminal services at Dublin, Cork and Shannon airports in 2012 is €160.24 per terminal service unit.

Table 2: Summary of Regulated Price Caps, 2012

Type of Price Cap	2012 Provisions Price Cap
Airport charges at Dublin airport	Should not exceed €10.76 per passenger at Dublin
Aviation terminal services charges (ATSCs) at Dublin, Cork and Shannon airports	Should not exceed €160.24 per terminal service unit

Source: CAR Website

Other Charges

In addition to these two pricing functions, the CAR also has to approve charges airports levy on airlines to fund services for passengers with reduced mobility and has to approve any changes to the fees charged by the airport authorities at Dublin, Cork and Shannon airports for access to installations needed to provide ground handling services. These charges are summarised in Table 3, below.

Table 3: CAR Summary of Approved Charges

Type of access charge (ATI)	Approved ATI charges as of 6th July 2012
Dublin Airport annual check-in desk fee Flexible hourly rental check-in desk	Annual fee: €25,194 per desk per annum Hourly rental: €30 per hour (or part thereof)
Shannon Airport annual check-in desk fee Flexible hourly rental check-in desk	Annual fee: €9,515 per desk per annum Hourly rental: €23 per hour (or part thereof)

Cork Airport annual check-in desk fee Flexible half-hourly rental check-in desk	Annual fee: €13,180 per desk per annum Hourly rental: €5.27 per hour (or part thereof)
Common User Terminal Equipment (CUTE) fees at Shannon Airport	€0.30 per embarking passenger
CUTE fees at Cork Airport	€0.24 per embarking passenger

Source: CAR Website

5.3.2 Wider Regulatory Framework

The CAR is also designated as Ireland's Independent Supervisory Authority for the purposes of the Airport Charges Directive (Directive 2009/12/EC), responsible for ensuring parties comply with their obligations regarding consultation about airport charges and service quality and the provision of information (i.e. the Directive sets common principles for the levying of airport charges at EU airports)[115]. This directive came into force in 2011. As Ireland already had a regulatory mechanism for governing airport charges, the CAR's role as the Independent Supervisory Authority is relatively limited.

5.4 Key Issues and Recommendations

Once again, it is important to note that this study is concerned primarily with the portion of costs that are regulated. A range of other factors also determine the final price of air fares (e.g. fuel, consumer demand, competition between airlines).

It is also important to note the evolving policy backdrop in the aviation sector – the Minister for Transport, Tourism and Sport has announced the development of a first national aviation policy, designed to expand the Irish aviation industry, make it more competitive, and tackle barriers to growth. Consultations on the strategy will take place with the industry throughout 2013 with the aim of publishing a policy framework in early 2014. The second major development in the sector is the aforementioned decision to grant Shannon Airport full independence from the DAA[116].

5.4.1 Mandates

In relation to CAR's mandate, the existence of several (often) competing objectives can create tension – whereas the DAA is primarily interested in the 'financial viability' aspect of CAR's objectives, airlines are often more focused on elements of the mandate relating to cost (i.e. in relation to airport charges, Section 33 (2) G of the Act states that in making a

115 See http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:070:0011:0016:EN:PDF

116 According to a DAA press release, DAA does not expect the effect of this restructuring to be material to the group's financial position. See www.daa.ie/gns/media-centre/press-releases/12-12-03/DAA_Statement_Re_Shannon_Separation.aspx for further details. The Government's press release relating to the decision is available at: www.dttas.ie/pressRelease.aspx?Id=683.

determination, CAR "shall have regard to the cost competitiveness of airport services at Dublin Airport"). Potential for conflict with the promotion of consumer interests also exists.

A simpler mandate, containing a single objective – or a mandate providing a hierarchy of objectives – would simplify CAR's role and could lead to greater accountability. In the UK, the Civil Aviation Authority is currently preparing for a new economic regulatory framework which is primarily focused on "the interests of present and future passengers and those with rights in cargo"[117].

5.4.2 Effectiveness

As noted above, airport charges are not easy to compare, since airports differ considerably in the facilities provided and they offer various incentives and reductions in charges to attract business. Limited comparable data on airport charges is available in Ireland and internationally. It is recommended that the regulator endeavours to benchmark Ireland's comparative performance (section 9.3.2).

5.4.3 Appeals

Under Section 40 of the Aviation Regulation Act, the Minister can establish an appeals panel in response to a grievance concerning a CAR determination relating airport or aviation terminal service charges. A number of concerns have emerged in relation to the appeals process employed in this sector. These relate to concerns over procedures (each appeals panel can establish its own procedures), timescales and the non-binding nature of appeals panel decisions. The merits of a more standardised, timely appeals process (across all regulated sectors) is considered in chapter 9.

117 Civil Aviation Authority, Review of Price Regulation at Heathrow, Gatwick and Stansted Airports – Policy Update, May 2012

6. Transport – Rail Freight

Although rail freight accounts for a very small percentage of freight moved within the State, given that it is an area where regulation will have to be introduced in the short term (including decisions on how the cost of accessing the network will be determined), there is merit in looking at the principles that should apply.

6.1 Overview of Rail Freight Market

Rail passenger services in Ireland are operated by Iarnrod Éireann (IÉ) (which is a wholly owned subsidiary of CIE, and fare increases must be approved by the Minister for Transport). Iarnrod Éireann is also the only Freight Operating Company operating in Ireland. In addition, IÉ operates Timber Trains (from Ballina to Waterford Port and from Westport to Waterford Port) and a Tara Mines train (Navan to Dublin Port) on behalf of freight customers.

It is also worth noting that a number of "freight forwarding" companies provide services in Ireland but that these services are all contract services that IÉ provides to customers, with IÉ supplied locomotives, wagons and drivers. Currently there are no "Open Access" Freight Service providers on the network[118].

6.1.1 Comparative Performance

- Rail freight prices are determined currently by individual contract pricing with Iarnrod Éireann freight customers. Track Access Charges, based on gross tonnes/kilometre, also apply to these contracts.
- Rail freight is not subvented in Ireland.
- Irish Rail is required to publish access charges under the Directive 2001/14/EC, which are available on the Irish Rail website[119]. Any rail freight operator seeking to operate rail freight services in Ireland would currently be subject to such charges.
- Between 2005 and 2010 rail services prices for freight have increased more slowly than in comparator countries.

6.2 Drivers of Costs

As with other sectors, the analysis below divides costs between those costs that are controllable domestically, and those that are outside of domestic control.

118 The two freight forwarding companies are: DFDS Chartered Container Liners from Ballina - Waterford Port (Belview); and International Warehousing and Transport Chartered Liner from Ballina - Dublin Port (North Wall), which started in September 2009.

119 http://www.irishrail.ie/media/AccessChargingPerformanceRegime1.pdf

6.2.1 Non-controllable Drivers

- Ireland's small size (both in terms of geographic and market size) means economies of scale are difficult to achieve in a rail context[120].
- Ireland's dispersed population – the absence of major centres of population - also adds to costs (replicating findings from most network services).
- International fuel prices.
- Ultimately, road freight prices are the primary control on rail freight prices – and the significant investment over recent years in the road network has made road freight more competitive.

6.2.2 Controllable Drivers

- While the availability of the network for freight purposes is not a major driver of costs, network availability is an issue on the Dublin suburban section of the rail network (between Howth Junction and Grand Canal Dock).
- There is a good deal of capacity available during the night time period. Network capacity for freight, however, is constrained by the axle load limitations (see below).
- Availability, capacity and quality of appropriate rolling stock – much of the existing freight stock in Ireland is relatively old and there is very limited capacity available for additional services[121].
- There are a number of factors reducing the efficiency of rail freight services in Ireland, including:
  - The continued existence of manned level crossings – there are 59 manned level crossings on the network. This adds to costs and limits the potential for moving freight at night. In terms of cost, the cost associated with these manned level crossings applies equally to all rail freight operators and so does not affect the rail on rail competiveness; it does, however, have a bearing on inter-modal competiveness.

    It is also important to note that engineering maintenance is generally carried out at night – running freight at night could, therefore, restrict this activity;

120 Rail access plays a limited role in the movement of freight within the State. A study of the European rail freight market found that rail freight transportation is only a viable alternative to road over distances longer than 150km. See Forfás, Assessment of Port Services Issues for Enterprise, January 2009. Small geographic size and market size do not necessarily imply an inability to achieve economies of scale. In the UK, National Power PLC (the largest of the privatised UK electricity generating companies) having restructured its own business, and seeking to achieve further cost reductions, decided to develop its own rail business in 1992 in order to secure a reliable and cost-effective delivery of fuel. Despite relatively small transport distances, the bottom-line benefit derived from the investment was a reduction in the transport cost of coal from £3.02 per tonne under the coal carriage agreement with British Rail to £1.68 per tonne. The project paid for itself in less than two and a half years.

121 The current situation is that the legacy freight rolling stock assets are owned by Iarnród Éireann. However, many rail freight operations now lease rolling stock or procure their own specialised wagons. In North America, for example, the vast majority of rail freight wagons are privately owned. Furthermore, the transport efficiency (payload tonne per unit length and payload: tare ratio - tare weight is the weight of a vehicle/container when it is empty) are important features that a competitive operator would seek to maximise. For a given train payload, the number of wagons required will differ depending on the payload per wagon – this drives capital cost.

- Restrictions on freight train speeds, and weight restrictions which are lower than are necessary from a safety perspective lead to time delays and add to costs as a result of the need to run additional trains (e.g. an 18.5 tonne axle load limits a 4-axle wagon to 74 tonne gross; but a 25 tonne axle load would give 100 tonne gross). On the other hand, if higher speeds and axle loads were to be introduced, then infrastructure improvements (particularly bridge strengthening for higher axle loads) would be required[122].
- The high proportion of single line track and passing loops that are too short to accommodate longer trains also add to costs. The extension of passing loops is a relatively low cost solution to the question of track capacity.

- Upon the ending of Ireland's derogation from elements of the 1st Railway Package (see section 6.3 below), the conditions for access to the rail network for freight services will change – it is not clear, however, if these changes will have a major impact upon costs.
- Company cost structures: The cost structures of the companies providing rail freight services also influence the costs of the services provided. Rail freight service providers need to ensure that they are taking all necessary steps to improve efficiencies and reduce costs.

6.3 Role of Sectoral Regulation[123]

Rail freight prices are not regulated in Ireland. At present, Iarnród Éireann is a vertically-integrated State railway company, and Ireland is the only country in the EU not to establish an independent body to regulate access to the network and capacity allocation (i.e. Ireland has retained a single operator which regulates, operates and maintains its mainline rail network).

The Government (and the UK Department for Transport, on behalf of Northern Ireland Railways) has taken a decision not to seek an extension of Ireland's derogation under EU legislation dealing with rail market access. The derogation will expire on March 14th 2013[124]. As a result, Ireland will have to comply with European rules set out in the 1st Railway Package. This will require the establishment of a separate body for access allocation and charging in situations where the Infrastructure Manager is also the same legal entity as a

122 Track wear is a function of load and the square of speed. With freight axle loads 50 per cent (or more) higher than passenger loads, the effect of higher speeds will result in increased track wear. Track wear can be reduced through the use of steerable bogies, but the adoption of such technology results in higher cost freight wagons. Note also that longer trains require higher traction power and although a 3,300 hp diesel-electric locomotive with high adhesion characteristics can handle a 4,000-tonne train; the operating speed will be low. Double heading of such locomotives, to increase train performance, would result in additional bridge stresses. Again there is a trade-off between infrastructure capacity, trailing load, traction power, and train performance.

123 Responsibility for approving public transport passenger fares currently rests with the National Transport Authority (NTA); responsibility for regulating the price of access to the rail network for freight services could be assigned to the NTA.

124 A characteristic of the derogation held by Ireland and the UK under Article 30 of the Directive 2001/14/EC is that if any other rail operator sought to apply for a licence to operate rail services (passenger or freight) in either jurisdiction it is open to the EU to reconsider the derogation. No such application to operate rail services has been received in either jurisdiction to date.

Railway Undertaking (train operator), as is currently the situation in Ireland[125]. In light of this, it seems likely that the independent body to be established to determine track access pricing and capacity allocation will in turn require oversight by an economic regulator[126]. In essence, track access will be regulated but rail freight prices to end users will not.

While it is important to ensure that the regulatory structure complies with EU requirements, greater competition, efficiency and transparency in the rail freight sector in Ireland will only be achieved if potential freight operating companies have access to sufficient motive power and rolling stock. The biggest barrier to a new entrant in the market is the cost of acquiring locomotives and wagons, and the unique Irish track gauge precludes transfer of equipment from other European operators without high cost modifications.

6.4 Key Issues and Recommendations

As the regulatory framework is currently under development in Ireland, there are few rail-specific regulatory recommendations at present. However, many of the areas considered in chapter 9 can apply to this sector. For example, ensuring that the new regulatory authority in rail is given a clear mandate with adequate resources is essential. Similarly, putting in place a robust system of performance measurement from the outset is recommended.

The changes currently being progressed in the rail freight sector relating to the establishment of a separate body for access allocation and charging will bring Ireland into line with the requirements of existing EU regulatory requirements. Deliberations, however, are already underway in relation to a 4th Railway Package and a directive is due to be approved by the European Commission in 2013 (and will subsequently be brought to the European Parliament and Council). While completion of the negotiation process is likely to be prolonged, it is important that policy makers in Ireland are actively engaged in these discussions to ensure that Irish interests are represented and that the regulatory structures which may be required as a result of the final directive are suitable from a competitiveness perspective for the Irish rail freight sector.

125 If the Infrastructure Manager is a separate legal entity from any Railway Undertaking, then it can set its track access charges and provide access to the network. However, the Infrastructure Manager would remain subject to regulatory supervision.

126 The NTA is directly involved in the funding/contract management of the Infrastructure Manager and the train operator and so may not be viewed as independent.

7. Waste Management

The availability of waste management services and the associated costs continue to be important competitiveness issues for enterprise in Ireland. Waste management in Ireland is in a transition phase - we are moving from an unsophisticated and one dimensional approach which is heavily dependent on landfill, to one which will better reflect and give effect to the waste hierarchy and the polluter pays principle.

The publication of the new national waste policy in July 2012 is a welcome development, particularly the re-commitment to the implementation of the waste hierarchy and the prioritisation of waste prevention and minimisation[127]. Reducing the amount of waste generated is the most effective way for businesses to reduce their waste management costs.

7.1 Overview of the Irish Waste Management Market

The Irish waste market has undergone significant change in the past decade, in particular the role of the local authorities in waste collection and waste infrastructure provision. Ireland's recycling performance has also improved considerably.

7.1.1 Comparative Performance

Since 2010, Irish landfill gate fees have fallen sharply as landfill facilities have had to compete for customers (both commercial and residential). In 2012, the average market rate for non-hazardous landfill was €35-45 per tonne (excluding the levy) compared to €112 in 2010. The landfill levy in Ireland has increased significantly in recent years, from €30 in 2010 to €65 in July 2012. Of the benchmarked countries, Ireland had the fifth highest landfill costs (including levies) in 2012 (Figure 7.1)[128].

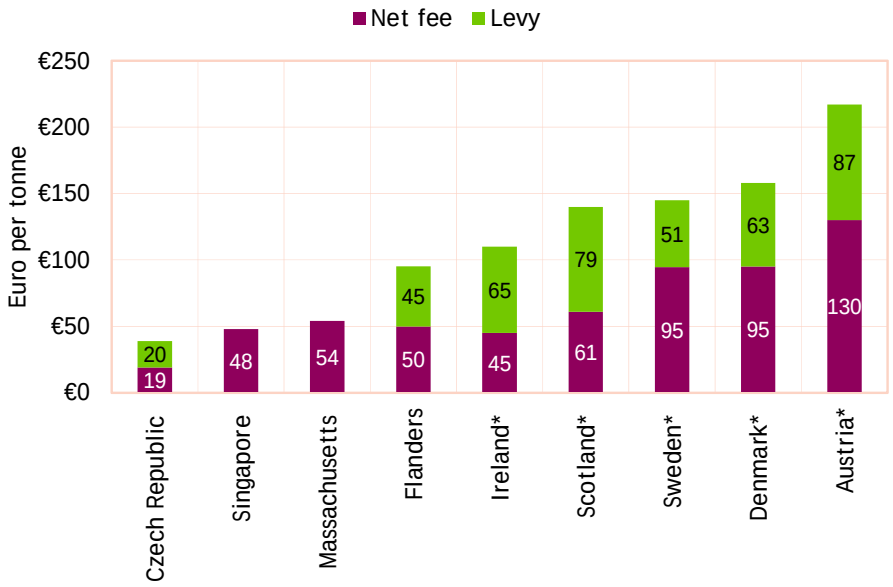
Ireland also had the third highest non-hazardous thermal treatment gate fees (including levies) in 2012 (Figure A6 in appendix 3)[129]. Gate fees differ in some countries for the biological treatment of food and green waste. In Ireland in 2012, gate fees for the biological treatment of food waste are €76 per tonne compared to €16 per tonne in Flanders and €50 per tonne in the Netherlands (Figure A7). Gate fees for green waste were €31 per tonne in Ireland in 2012.

127 Department of the Environment, Community and Local Government, A Resource Opportunity: Waste Management Policy in Ireland, July 2012

128 The average market rate for non-hazardous landfill was €35-45 per tonne (excluding the levy), or €100-110 (including the levy). Ireland's ranking is based on the upper end of the range.

129 While there are no levies on thermal treatment in Ireland, there are in Denmark and Flanders.

Figure 7.1: Landfill Gate Fees (incl. levy) for Non-hazardous Waste (€ per tonne), 2012[130]



Source: RPS Consulting

7.1.2 Market Structure

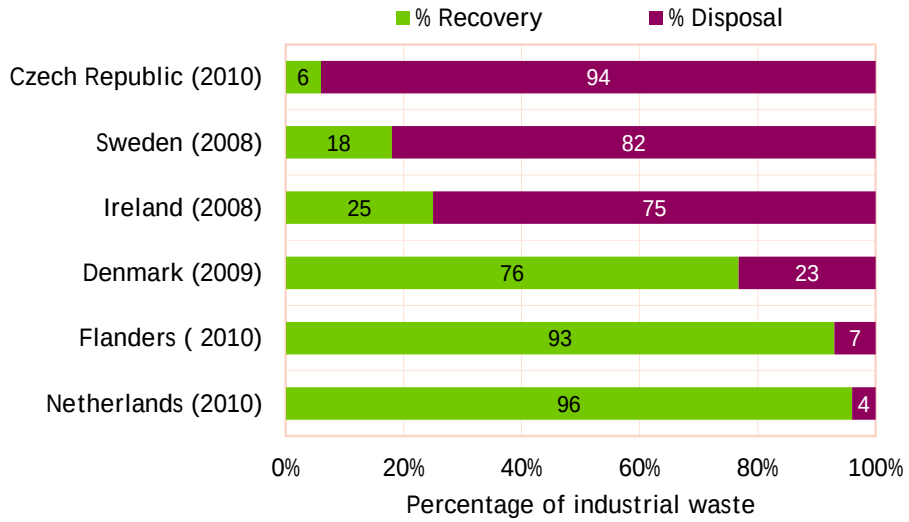
For the most part waste collections services, including municipal waste collection, are now provided by the private sector. In terms of waste infrastructure, the local authorities' role is by and large confined to bring banks and a few landfills – new infrastructure will be provided by the private sector. However, according to Forfás' consultations, the sector remains fragmented with many small companies operating in a narrow geographic market. This fragmentation is likely to be adding to costs for end users.

Landfill still dominates waste treatment in Ireland unlike many of Ireland's competitor countries. The latest data available for industrial waste treatment in Ireland is for 2008 when 75 per cent of waste went to landfill – this is a significant deterioration on the 2004 performance when 65 per cent of industrial waste was landfilled[131]. In comparison, only four per cent of industrial waste in the Netherlands was landfilled, seven per cent in Flanders, and 23 per cent in Denmark (Figure 7.2). In 2010, 58 per cent of municipal waste generated was landfilled compared to 65 per cent in 2005.

130 In some countries (those marked with *), there is a range of landfill fees - the upper limit is used in Figure 7.1. Net landfill fees in Ireland ranged from €35-45 per tonne and from €60-€130 in Sweden. The landfill levy in Flanders differs depending on if it's private or public landfill. The public landfill levy is used. The private landfill levy is €32 per tonne.

131 The EPA's National Waste Report 2008 attributed this to the exclusion from the 2008 dataset of large quantities of mining materials which were used as backfill or in other construction activities which had previously been reported as recovered.

Figure 7.2: Treatment of Industrial Waste, 2010 (or latest year available)



Source: RPS Consulting

7.2 Drivers of Costs

The sections below examine some of the principle drivers of waste costs in Ireland. As is the case for other sectors, some of the non-controllable drivers are determined by geographical circumstances, others by EU legislation.

7.2.1 Non-controllable Drivers

- In Ireland, as in other member states, the polluter pays principle is at the centre of waste management policy. This means that the generator of the waste is obliged to ensure that the waste is properly managed. In its application of the polluter pays principle, Ireland has imposed producer responsibility obligations on several sectors and waste streams, most notably packaging, waste electrical and electronic equipment and end-of-life vehicles. However, member states do have some discretion in terms of how they implement producer responsibility obligations.
- As with other services, Ireland's small size and dispersed population have an adverse impact on waste costs (e.g. waste collection routes are longer with higher unit costs).

7.2.2 Controllable Drivers

- The balance between economic and environmental goals: Ireland needs to ensure that national waste policy supports national competitiveness as well as environmental sustainability policy objectives. There are two important parts to this:
  - Ireland needs to implement EU environmental obligations in the most cost effective manner; and
  - When the EC is reviewing waste policy and setting new waste targets, Ireland's negotiating position must be informed by national competitiveness as well as

environmental considerations. New EU-wide waste targets are to be put in place by 2014.

- Regulatory and policy uncertainty: The waste policy agenda has been highly uncertain in Ireland in recent years which ultimately resulted in higher costs for consumers (business and residential):
  - The market structure in Ireland has developed in an ad hoc manner as public provision has declined and private provision has increased.
  - Limited waste management infrastructure options exist for Irish business compared with international competitors. This has led to an on-going heavy reliance on landfill – meaning that significantly increased landfill waste levies, in the absence of alternative waste management options, adversely affected most businesses.
  - It has created higher risks for investors and higher cost of capital investment for those building new infrastructure.
- Fragmented waste sector: The regional approach to waste policy and implementation has contributed to a very fragmented waste market and resulted in smaller scale facilities than would be the case if infrastructure planning was done at a national level.
- Company cost structures: The cost structures of the waste collection and infrastructure companies also influence the costs of the services provided. Waste companies need to ensure that they are taking all necessary steps to improve efficiencies and reduce costs.
- Competitive waste management costs in other EU countries influences both landfill and thermal treatment costs in Ireland. Since 2010, Irish operators are exporting an increasing amount of residual waste (both processed and unprocessed)[132].
- Planning delays: Lengthy delays in the planning process have had a negative impact on the timely delivery of cost competitive key waste management infrastructures. While there have been some improvements recently (e.g. application to extend the Indaver plant in Meath), the issue needs to be kept under review.
- Resource efficiency: In line with "user pays" principles, the more waste a company produces the more waste management costs. Reducing the amount of waste generated, therefore, is one of the most effective ways for companies to cut waste management costs[133].

7.3 Role of Sectoral Regulation

The last decade has seen huge change in relation to how waste is managed in Ireland. The regulatory regime imposed on the waste industry in this period has yielded significant and measurable improvements in environmental protection. Ireland has moved quickly from a position of almost total reliance on landfill for managing waste to a high level of recovery of certain recyclable materials. In order for Ireland to remain competitive and to attract inward

132 RPS Consulting.

133 In 2011, the State agencies published a brochure providing information on where businesses can go for assistance in relation to waste prevention, energy efficiency, water conservation and clean technology: http://www.forfas.ie/publication/search.jsp?ft=/publications/2011/title,8202,en.php

investment it is necessary to ensure that an integrated, competent and well-regulated waste management service sector is operated.

A range of regulatory and market based instruments have been utilised to achieve more sustainable waste management practices. These include increases in the landfill levy, source separated collection of bio-waste, pre-treatment and restriction of particular waste streams to landfill and producer responsibility initiatives for waste streams (e.g. packaging, waste electrical and electronic equipment).

The new national waste policy published in July 2012 commits to improving waste prevention and resource efficiency as crucial elements of a platform for sustainable economic growth[134].

7.3.1 Price Regulation

There is no price regulation in waste – apart from landfill levies which are decided by DECLG. The landfill levy was increased by €20 to €50 per tonne in September 2011 and to €65 per tonne from July 2012. A further increase to €75 per tonne is planned from July 2013. The primary function of the levy is to divert waste away from landfill to waste treatment options further up the waste hierarchy such as thermal and biological treatment. While it is important that Ireland reduces its reliance on landfill, increasing the landfill levy significantly in the absence of adequate alternative treatment options leads to higher costs for businesses.

DECLG is also considering introducing a packaging levy to drive waste reduction. No decision has yet been made on its implementation. The EU target for packaging recovery is 60 per cent by 2011. According to the EPA, Ireland has already achieved that target, recovering 70 per cent in 2009 and 74 per cent in 2010 (latest data available).

7.3.2 Wider Regulatory Framework

The new waste policy will have significant implications for the structure of the Irish waste management market. Of particular relevance to this study are the reduction in the number of waste regions and the regulation of the household waste collection market.

As mentioned above, Ireland previously had ten, somewhat arbitrarily decided, waste regions which acted as an impediment to the delivery of cost effective, commercially viable, sophisticated waste treatment options along the waste hierarchy. The commitment to reduce the number of waste regions to no more than three is therefore a positive development.

There has been much debate in recent years about the merits of competition for the market versus competition in the household waste collection market. The new waste policy has committed to maintaining the current market structure (i.e. competition in the market) but

134 DECLG, A Resource Opportunity: Waste Management Policy in Ireland, July 2012

the regulatory regime is to be significantly strengthened. The Competition Authority (TCA) is to closely monitor the household waste collection market[135].

7.4 Key Issues and Recommendations

While there is no separate independent regulator for waste management, nor is one required, all of the principles espoused elsewhere in this report on mandates, effectiveness, enforcement, etc. are equally relevant to this sector. As mentioned in the previous section, the Competition Authority is to closely monitor the household waste collection market to ensure that it is delivering for consumers. DECLG, as economic regulator for the waste sector, needs to monitor other segments of the market to ensure that they are delivering for businesses, particularly if the expected consolidation within the sector comes to pass and competition and choice is reduced.

The recent publication of the Government's new waste policy is particularly timely[136]. It sets out a number of guiding principles which will shape policy – placing prevention and waste minimisation at the centre of Irish waste policy; ensuring that Ireland extracts the maximum value from waste (whether through reuse, recycling or recovery); and using landfill only as a last resource. Attention must now focus on implementing the new waste policy. The timely delivery of new waste infrastructure is critical to achieving the wider national waste policy goals and also to enhancing waste management cost competitiveness. However, it will take time to deliver the necessary investment to provide a sufficient stock of alternate waste infrastructure to minimise Ireland's reliance on landfill.

The key actions to improve waste cost competitiveness are:

- Reduce the number of waste regions: The number of waste regions is to be reduced from 10 to no more than three in early 2013. This action is very welcome as it will create larger waste markets. New waste plans for the new waste regions that incentivise private investment in cost effective waste treatment options across the waste management hierarchy and improve Ireland's waste management performance need to be developed as a matter of priority.
- Reduce waste generation: The most effective way for businesses to cut their waste management costs is by reducing the amount of waste generated. The prioritisation of waste prevention in the new waste policy is therefore welcome. However, continued and enhanced efforts are required by Government departments, agencies, business representative associations and businesses themselves to ensure that businesses are fully aware of how best to exploit waste management reduction processes and technologies.
- Balance competitiveness and environmental goals: While improving Ireland's environmental sustainability is important, it must be done at least cost to Irish

135 A formal review of the household waste collection market, including a report by TCA, will be carried out in 2016, as part of the mid-term review of the waste policy, unless an earlier intervention is required to address market failures.

136 Department of the Environment, Community and Local Government, A Resource Opportunity: Waste Management Policy in Ireland, July 2012

businesses. In particular, the implications of obligations requiring separation of waste and increased recycling (e.g. new producer responsibility initiatives) on the bottom line of Irish businesses must be assessed; the same applies to any future increases in the landfill levy and the proposed levy on packaging.

- Engage at EU level: As Irish waste policy is increasingly determined by developments at EU level, Ireland needs to ensure that its negotiating position is informed by national competitiveness as well as environmental considerations. Of immediate concern are the new, more ambitious waste targets to be put in place by 2014. Ireland also needs to transpose and interpret legislation emanating from the EU in a manner that supports competitiveness.

8. Water and waste water

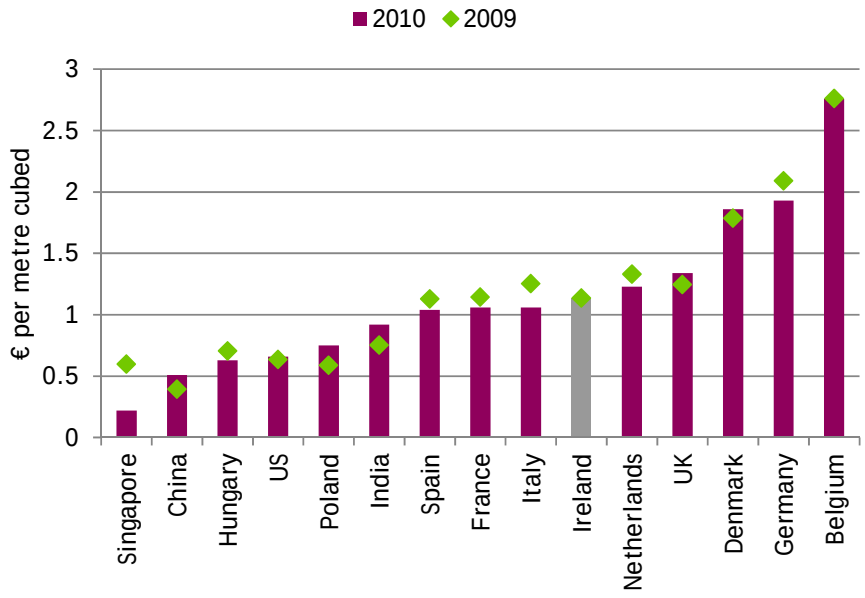
The provision of adequate and affordable water services is crucial to ensure the sustained growth and development of enterprise. Access to secure and competitively priced water supplies, at appropriate quality levels, is core to the delivery of these services.

DECLG is currently finalising a detailed implementation plan for the transition of water services functions from the local authorities to Irish Water. As the water services implementation plan was not available at the time of writing, this assessment focuses on broad issues.

8.1 Overview of the Water and Waste Water Market

- Of the 15 benchmarked countries, Ireland had the tenth lowest price for water services in 2010.
- The average cost of water services rose by 0.9 per cent in Ireland between 2009 and 2010. The average cost of waste water services in Ireland in 2010 was €1.26 per meter cubed - an increase of 4.2 per cent on 2009. This brought the average consolidated water services (water plus waste water charge) charge per metre cubed in Ireland to €2.31, an increase of 0.8 per cent on 2009.

Figure 8.1: Water costs per metre cubed, 2010



Source: EIU World Investment Service; DECLG

8.2 Drivers of Costs

Some of the factors which affect Ireland's water costs competitiveness are outside domestic control (e.g. EU obligations) but there are a number of important cost drivers within domestic control. This section sets out the key non-controllable and controllable water cost drivers.

8.2.1 Non-controllable Drivers

- EU obligations, particularly the application of the user pays principle and water quality standards, are key drivers of water prices. Water prices must be cost reflective.
- As with other services, Ireland's small size and dispersed population have an adverse impact on the costs of delivering water services.

8.2.2 Controllable Drivers

- Although there has been substantial investment in water and waste water infrastructure in recent years, significant further investment is required to (1) address expected water and waste water capacity deficits in a number of key urban centres; and (2) meet Ireland's EU environmental obligations on water and waste water quality. There are diseconomies of scale because water services are currently provided, and new water infrastructure is by and large procured, at local level.
- The relatively high levels of unaccounted for water (treated drinking water that is lost through the distribution network, largely via pipe leakage and illegal connections) add to the cost of water.
- There are huge operational cost savings to be made from reforming the water market. Achieving these potential savings will require significant reform including reform in working practices.
- Water charges collection rates in Ireland are significantly lower than those in the UK; only 53 per cent of water charges are collected in Ireland compared to 78 per cent in the UK[137].
- A future issue that will impact on water costs will be the limited water resources available to meet Dublin's future water needs. The issue of who pays the cost of transporting water from the Shannon to the Dublin region is a controllable factor and will be a matter for either Government policy and/or the regulator.
- Water use: Reducing water use is one of the most effective ways for companies to cut costs[138].

137 According to Ofwat, the water sector in England and Wales is carrying a debt burden of £1.6 billon on an industry turnover of £10.6 billon because of non-payment of water charges; this is significantly higher than in the energy sector, where the bad debt carrying cost is less than £1 billon on sector turnover of £25 billon. Source: Presentation by Ofwat at the IBEC Water Policy Conference in October 2012

138 In 2011, the State agencies published a brochure providing information on where businesses can go for assistance in relation to water conservation, energy efficiency, waste prevention and clean technology: http://www.forfas.ie/publication/search.jsp?ft=/publications/2011/title,8202,en.php

8.3 Role of Sectoral Regulation

Currently, enterprises pay the marginal cost for capital projects, that is, they pay the difference between the cost of providing water service infrastructure to domestic users (which is borne by the State) and the total cost of providing water services to all users. Water service charges are set by local authorities and vary considerably across the country. In 2011, the average consolidated charge (water and waste water per metre cubed) was €2.33.

Ireland is the only member of the OECD which does not currently charge domestic users directly for water services but domestic water charges are to be introduced in 2014.

Following a public consultation on water policy earlier in 2012, DECLG is developing a detailed implementation plan for the transition of water services functions from the local authorities to Irish Water, which will cover the legal, governance, organisational, human resources, financial, operations and regulatory issues that need to be addressed in the establishment of Irish Water.

8.3.1 Price Regulation

According to DECLG position paper on water, the CER is to become the economic regulator for water services while the EPA will continue in its role as environmental regulator.

Under the existing regime, water and waste water charges vary considerably across the country - from €1.49 per cubic metre in Kildare to €3.04 in Wicklow. Irish water prices (based on the average cost) are relatively competitive but comparable data is not available for waste water costs.

In light of the uncertainties that exist over how water charges will be calculated and applied in the future, it is difficult to determine at this point what the impact of the proposed changes to the delivery of water services will have on water prices for enterprise. It is likely that significant cost savings will emerge from efficiency savings which should be in part passed on to the customers. However, as businesses currently pay the marginal cost of providing water services, the new pricing framework may lead to upward pressures on costs for enterprise customers.

It still remains to be decided whether pricing will be determined at a national level or by River Basin Districts. In some countries there is one national unit price for water services (Scotland) while elsewhere water prices vary regionally (e.g. England/Wales and Germany).

The other issue that will have an impact on the regulated price will be the proposed free allowance for domestic users. The 'free allowance' will not be free – it will require a payment from the State to compensate Irish Water and/or higher charges on consumers who use more than the free allowance and/ or additional charges on business. A free domestic

allowance does not appear to be in line with the 'user pays principle' and does not encourage efficient water usage.

8.3.2 Wider Regulatory Framework

According to the DECLG position paper on water, there will be an economic regulator and an environmental regulator. Balancing different needs can become more challenging when more than one regulator is involved. Conflicts may arise for example where environmental regulations imply significant additional investment needs that will result in substantial price increases for users.

It will be important that the roles and responsibilities of the two regulators are clearly set out in Ireland's water policy and in legislation. In England and Wales, a memorandum of understanding has been developed between Ofwat and the Environmental Agency to provide clarity regarding roles and responsibilities and to avoid conflict between the two regulators[139]. It sets out how the regulators will work with one another.

8.4 Key Issues and Recommendations

While the focus of this study is on identifying changes to the operation of sectoral regulators to improve cost competitiveness, Forfás' research and its stakeholder consultations indicate that implementing the new water policy framework will have a greater impact on Ireland's cost competitiveness. In particular, Ireland needs to ensure that moving from the current regime, where water services are provided by 34 local authorities, to Irish Water leads to greater efficiencies and reduced capital and operational costs as potential economies of scale are exploited.

The new water regulatory regime will also play an important part in Ireland's future cost competitiveness. As the water services implementation plan was not available at the time of writing, for now Forfás highlights the key principles from a cost competitiveness perspective that should underpin water pricing and regulatory policy. These are that:

- All users should pay for water services (i.e. the user pays principle should be central to water pricing policy). While water is free, Ireland currently spends €1.2 billion per annum on treating and transporting water. Business collection rates also need to improve;
- Water and waste water charges should be fully cost reflective and passed on to all customers in a fair and transparent manner;
- Greater efficiencies in the delivery of water services are required – in particular, Ireland needs to bring operating, maintenance and capital into line with international best practice;
- A range of indicators to benchmark Ireland's performance against comparative international water services need to be developed to ensure cost competitiveness is embedded as a key objective of Irish Water;

139 www.environment-agency.gov.uk/static/documents/Research/eaofwatmou_1901043.pdf

- It will be important that while the Government sets water pricing policy, that the application of that policy is left to the regulator; and
- Cross-subsidisation of domestic water charges by enterprise should be avoided. In particular, Forfás is concerned that the introduction of a free allowance could lead to enterprise subsidising domestic water costs.

It is important that the development of the new water regulatory regime learns from Ireland's existing network regulation and from international water regulation experience. In addition, the cross-cutting recommendations outlined in chapter 9 should be applied to the development of the water regulatory framework.

9 Cross Sectoral Regulatory Actions

The previous chapters look at each of the sectors in some detail and highlight a number of sector specific actions to improve cost competitiveness. In this section, Forfás sets out the key cross-cutting issues that have arisen in the course of the stakeholder consultations and through the analysis undertaken. We identify practical/implementable and impactful actions to address them. We have also reviewed the relevance of the actions identified in the 2009 Government Statement on Economic Regulation from a cost competitiveness perspective[140].

As well as identifying actions to improve cost competitiveness, Forfás also highlights a number of issues that have arisen in the course of our work that have implications for the effectiveness of the wider economic regulatory regime in Ireland.

The chapter focuses on a number of themes:

- The mandates of the regulators;
- The effectiveness of the regulators;
- Compliance and enforcement regime;
- Appeals mechanisms;
- Accountability;
- Transparency; and
- Ireland's engagement with the EU.

9.1 Best Practice Economic Regulation

The availability of competitively priced world class infrastructure is essential to support economic growth and job creation. Given that significant parts of Ireland's infrastructure operate in regulated sectors, good economic regulation is a key enabler of infrastructure investment and competitively priced utilities.

The 2009 Government Statement on Economic Regulation recognised that effective economic regulation is central to economic competitiveness. To ensure effective economic regulation, countries need to develop clear and consistent objectives, which then need to be applied and assessed to ensure that the objectives are being met. In the main, the economic regulation objectives are applied through the mandates of the sectoral regulators; performance measurement is critical to assess if the objectives are being met and enforcement measures are required to ensure compliance with regulatory obligations and market rules.

Before addressing the issue of mandates, the objectives of Irish regulatory policy need to be considered.

140 Department of the Taoiseach, Government Statement on Economic Regulation, 2009

The Government's White Paper, Regulating Better, published in January 2004, set out six principles of good regulation[141]:

- Necessity: Is the regulation necessary? Can we reduce red tape in this area? Are the rules and structures that govern this area still valid?
- Effectiveness: Is the regulation properly targeted? Is it going to be properly complied with and enforced?
- Proportionality: Are we satisfied that the advantages outweigh the disadvantages of the regulation? Is there a smarter way of achieving the same goal?
- Transparency: Have we consulted with stakeholders prior to regulating? Is the regulation in this area clear and accessible to all?
- Accountability: Is it clear under the regulation precisely who is responsible to whom and for what? Is there an effective appeals process?
- Consistency: Will the regulation give rise to anomalies and inconsistencies given the other regulations that are already in place in this area? Are we applying best practice developed in one area when regulating other areas?

Given that the focus of this study is on improving cost competitiveness, it is outside the scope of the project to review the appropriateness of all of these principles in depth. It would be timely, however, to review these principles, with a particular focus on their relevance for the sectoral regulators. A number of countries including the UK (2011) and New Zealand (2012) have recently reviewed their economic regulation principles and practices to ensure they are supporting wider national policy objectives[142]. While the broad principles of good economic regulation are unlikely to change, it is important to periodically review the actions identified to deliver on those principles and to ensure that they are imbedded into the operation and practice of all regulators and government departments.

Recommendation: Prepare a new government statement on economic regulation which reviews the principles underpinning Irish economic regulatory policy and the actions required to apply them in practice. The implementation of these actions should be monitored on an annual basis and progress should be reported to the Cabinet Committee on Economic Recovery and Jobs.

Responsibility: Department of the Taoiseach, Government

9.2 Mandates

Best regulatory practice demands that the mandates of sectoral regulators are clear, consistent and provide certainty. In Ireland, as in many other countries, the functions of the sectoral regulators have evolved over time with new functions being added either to deliver EU or national policy objectives. For example, ComReg, in addition to the regulation of the

141 Department of the Taoiseach, Regulating Better - A Government White Paper setting out six principles of Better Regulation, January 2004

142 Department for Business Innovation and Skills, Principles for Economic Regulation, 2011; The Treasury of the New Zealand Government, The Best Practice Regulation Model: Principles and Assessments, July 2012

electronic communications sector, also has responsibility for postal services and premium rate services and spectrum licencing management (see chapter 4 for more detail). The mandate of the CER initially covered electricity regulation but it has been extended to include the regulation of the gas market as well as gas safety and gas installers (see chapter 3 for more detail). In addition, within its electricity regulation functions are potentially competing requirements – keeping the lights on, ensuring fair and reasonable prices and protecting the environment.

9.2.1 Reviewing Mandates

Good regulatory practice requires periodic reviews of the mandates of the sectoral regulators to ensure that they are clear and consistent. However given the importance of regulatory certainty for efficient investment and well-functioning markets, it is critically important that the frequency of those reviews does not lead to uncertainty, which would inevitably result in higher costs for end users. Regulatory uncertainty means greater risk for infrastructure investors, which results in a higher cost of capital for the end users. A fundamental element of regulatory certainty is the independence of the regulator.

As highlighted in a McKinsey study on regulation and competition, one of the challenges facing Governments in setting regulatory mandates is creating flexible frameworks that anticipate and respond to conditions as markets evolve[143]. This issue was also highlighted in the 2009 Government Statement which required departments to work with regulators to ensure that regulatory frameworks are sufficiently robust to respond to major shocks and changes in the market and wider economy.

Given the long lead times in infrastructure investment, the reviews should be undertaken every five to seven years. As changes to mandates would require primary legislation, from a practical point of view, the reviews could be coordinated with the transposition of EU directives to reduce legislative burden and also the risk of lengthy delays in passing new primary legislation. Reviews should also include a forward looking element to identify possible or anticipated changes in market conditions which could have implications for regulatory mandates or objectives.

While there is merit in considering best practice elsewhere when reviewing mandates, the aforementioned McKinsey study stressed the need for regulation to reflect the institutional/legal background as well as the stage of economic and infrastructure development of the specific country.

143 McKinsey, Regulation That's Good for Competition, McKinsey Quarterly 2005 – Number 2, 2005

Recommendation: Review the mandates of the sectoral regulators every five to seven years to ensure that they are clear and consistent.

Responsibility: Sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water.

The Department of the Taoiseach should have an oversight role to ensure consistency of approach across sectors.

9.2.2 Prioritising Functions

As mentioned above, sectoral regulators have many and diverse, sometimes conflicting, functions. At a minimum, the achievement of diverse objectives may require trade-offs. The lack of clarity on how to weight different functions could lead to suboptimal regulatory decisions (i.e. that do not deliver the outcomes envisaged by the sectoral departments when setting their mandates). Greater clarity on how to prioritise various functions exists in other markets. For example in the UK, Ofwat (water regulator) has primary and secondary objectives.

While the focus of this study is on improving cost competiveness, that does not mean delivering infrastructure services at the lowest cost today. While reducing prices as low as possible today may seem an attractive proposition, it could ultimately lead to higher costs for end users. Keeping prices artificially low in the short term means that the investment required to meet future needs will not be made, which will lead to shortages/capacity constraints and higher prices/lower quality services. For example, there was very little investment in electricity in Ireland in the 1990s as prices were kept artificially low. As a result, Ireland was reliant on inefficient, old and expensive to run plant to keep the lights on during the 2000s.

The core function of the sectoral regulators should be ensuring that end users (business and residential) have access to quality services at the least cost, both now and in the future. This mirrors the 2009 Government Statement which called for regulators to act as "champions of consumer interest". The stakeholder consultations undertaken by Forfás in the course of this study, however, highlighted the lack of an agreed understanding on what we mean by the term "consumer interests". Some understand protecting consumer interests to mean looking after consumer welfare and rights issues (e.g. e-billing; contractual arrangements).

Consumer interests should be clearly defined in the legislation setting out the mandates of each regulator as providing end users (business and residential) with sustainable competitively priced access to quality services. The issue of how to ensure the sectoral regulators deliver on that primary objective will be discussed in section 9.3.

The reference to "sustainable" competitively priced access to quality services should ensure that the sectoral regulators promote timely and efficient infrastructure investment as well as providing the appropriate signals to potential investors. All of the sectoral regulators also need to promote innovation to ensure that Irish businesses benefit from early access to

technological developments that deliver more sophisticated and cost competitive products and services (e.g. developments in broadband technologies and smart electricity grids).

Forfás is aware that, particularly in communications, the regulatory objectives are determined at EU level. Prioritising consumer interests (business and residential) as defined above is not inconsistent with ComReg's existing objectives to promote competition and encourage innovation.

Finally, with regard to mandates, concerns have been expressed as to whether regulators are sufficiently rigorous in driving down costs. For example, in terms of setting returns on regulated assets, it is challenging for regulators everywhere to validate the required level of investment and the costs of delivering agreed infrastructure. There are risks that regulated firms (given access to better information) will be tempted to gold plate investment or to deliver infrastructure at higher costs. In general, these higher costs either pass through to consumers (business and residential) or impact on the profitability of the company, reducing the potential dividend for its owner, which is often the Government. This represents a major challenge for regulators mandated to prioritise consumer interests.

Recommendation: Prioritise the functions of the sectoral regulators – each should have as its primary objective to promote consumer interests (business and residential).

Recommendation: Clearly define "consumer interests" in legislation as providing end users (business and residential) with sustainable competitively priced access to quality services.

Responsibility: Sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water.

The Department of the Taoiseach should have an oversight role to ensure consistency of approach across sectors.

9.2.3 Streamlining Mandates

It is evident from the review of the role of sectoral regulation in each of the preceding chapters that the sectoral regulators' mandates extend beyond economic regulations. For example, the CER has responsibility for gas safety and gas installers and CAR for licensing travel agents and tour operators. The role of some regulators in terms of protecting consumer rights has also been expanded.

Ancillary functions can divert the regulators' focus and, more importantly, resources from the core economic regulation functions. If this leads to delays in decisions on key economic regulatory issues or poor decisions, this could result in increased costs for customers. It also reduces the scope of activities and level of resources available to sectoral parent departments.

When reviewing the mandates of each sectoral regulator, consideration needs to be given to streamlining their mandates and how best to accommodate any ancillary functions that are removed in Government departments or agencies. In considering where those functions should be located, an important consideration would be whether the alternative body would have the required economic/technical expertise to deal with the mandate - for example centralising customer care lines and websites.

Where streamlining mandates is not possible, the existing legislation for each sectoral regulator should be consolidated to provide clarity and certainty for existing and potential market participants and other interested parties. As above, there may be merit in coordinating any consolidation of legislation with other required legislative processes (e.g. the transposition of EU directives) in order to reduce the burden incurred.

Recommendations: Consider streamlining mandates and moving ancillary functions (e.g. consumer rights/safety/licensing) to the parent department or to another state agency.

Responsibility: Department of Public Expenditure and Reform in consultation with the sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water.

Recommendation: Consolidate existing legislation at an appropriate time for each sectoral regulator.

Responsibility: The sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water.

The Department of the Taoiseach should have an oversight role to ensure consistency of approach across sectors.

9.3 Effectiveness

Putting clear and consistent mandates in place is not by itself sufficient to deliver effective economic regulation. Sufficient resources and expertise need to be allocated to implement the mandates and put in place an assessment process to determine if the activities of the sectoral regulators are delivering the required outcomes.

9.3.1 Resources

An adequately resourced regulator is critical to ensure regulatory certainty and cost effective investment and services. From a cost competiveness perspective, delays in decisions that increase investor risk or inadequate monitoring of market rules can lead to higher prices for business and residential customers. Effective economic regulation requires significant technical and economic expertise both in the sectoral regulators and their parent departments to produce the best outcomes for end users.

In the course of the Forfás consultations, many stakeholders, particularly industry stakeholders in the well-established regulated areas of telecoms and energy, highlighted their concerns for future investment and cost competiveness in those sectors because of resource constraints in the regulators. The 2009 Government Statement stressed the need for adequately resourced regulators "with the necessary range of qualifications, skills and experience at their disposal to effectively address the challenges ahead"[144]. This mirrors the recent IEA review of energy policy in Ireland which recommended that the "Irish Government should ensure that the regulator has the necessary resources needed to change or implement required regulatory measures[145].

While it is outside the scope of this study to assess if the level of resources is adequate across each of the regulators, such an exercise should be undertaken as part of the review of mandates (section 9.2). Any review of resources will also need to consider the commitment in the Programme for Government to rationalise regulators to strengthen consumer regulation and promote the consumer interest.

The sectoral regulators (CAR, CER and ComReg) are funded by a levy imposed on industry (see text box below). The amount payable to each regulator is set down in the legislation. In light of this, consideration needs to be given to exempting the sectoral regulators from the restrictions of the Employment Control Framework (ECF) if it is determined that insufficient resources are delaying or impeding efficient and effective regulatory decision making[146]. There is a precedent here – during the course of Forfás' consultations, it was pointed out that the Central Bank (another sectoral regulator) is not bound by the terms of the ECF. Although industry broadly funds the activities of the regulators, the non-pay implications of increasing employment in any of the regulators would need to be considered in any review of resources (e.g. the impact on pension liabilities).

Text Box - Funding the Regulators

Commission for Energy Regulation: Each year the CER imposes a levy on specified classes of natural gas and electricity undertakings for the purpose of meeting expenses properly incurred by regulator in the discharge of its functions under the Act. The legal basis for the levy is provided for in the Electricity Regulation Act 1999 and the Gas (Interim) (Regulation) Act 2002. The levy orders are published on the CER website[147].

Some additional income is generated through the CER's electricity and gas licensing operations, although this accounts for a small proportion of total income.

144 Department of the Taoiseach, Government Statement on Economic Regulation, October 2009

145 International Energy Agency, Energy Policies of IEA Countries – Ireland 2012 Review, July 2012

146 Multi-year "Employment Control Frameworks" were introduced in 2009 to manage the progressive reduction in staff numbers across all areas of the public service. The ECF caps the numbers employed in the public sector and can also lead to delays in filling vacancies in key posts.

147 For details of CER levy order see: http://www.cer.ie/en/about-us-legislation.aspx?article=dd84868e-8f4e-4647-ab40-ab5a97aed140

ComReg: For the providers of electronic communications services/networks, a levy of 0.2 per cent of relevant turnover is imposed, as per the Communications Act 2002[148]. The 'relevant turnover' for the purpose of determining the levy payment will be the turnover excluding VAT in respect of the provision of electronic communications services or networks.

Organisations whose 'relevant turnover' is less than €500,000 in any levy year will not be subject to the levy. However once the 'relevant turnover' exceeds €500,000 they will be required to pay the levy.

ComReg also generates revenue from licencing activities and through spectrum management.

Commission for Aviation Regulation: Under the Aviation Regulation Act 2001, CAR makes regulations imposing a levy "to meet but not exceed the estimated operating costs and expenses of the Commission, to be paid each year [...] on such classes of undertakings as may be specified by the Commission in the regulations[149].

A small proportion of total income is generated through licence fees.

Further details on the income of each regulator are available in the relevant annual reports.

As well as ensuring that the sectoral regulators are adequately resourced, sectoral Government departments also need to have the capacity in-house to set appropriate targets and assess the outcomes achieved by the regulators. The need to build regulatory governance capacity within sectoral departments was also highlighted in the 2009 Government Statement. It recommended that this be done through formal training, support for attaining relevant qualifications and enhancing opportunities to build expertise through for example lateral transfers/secondments between regulators and departments. Forfás acknowledges that this is challenging at a time of resource constraints across the public service.

In addition to scrutinising the performance of sectoral regulators, Government departments need to enhance their regulatory expertise so that they can effectively negotiate changes to EU regulatory frameworks. More and more the national regulatory policy is determined by the EU framework (section 9.8).

148 ComReg, Communications Act 2002 Levy Order – Compliance Guidelines (Section 30) (Amendment Levy Order 2003) - Compliance Guidelines (03/88R), October 2003; Communications Regulation Act 2002

149 For details of how the levy is calculated, see http://www.aviationreg.ie/about-the-commission-for-aviation-regulation/the-levy.246.html

Recommendation: Ensure the sectoral regulators are adequately resourced to deliver on their mandates. A review should be undertaken to:

- Assess the adequacy of resource levels within each of the regulators.
- Review the inclusion of the sectoral regulators in the Employment Control Framework given that they are funded by industry.
- Examine who pays the pension bill of the sectoral regulators – the industry or the State – and consider the implications for the exchequer if regulators were to employ additional staff.

Responsibility: Department of Public Expenditure and Reform in consultation with the sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water.

Recommendation: Ensure the sectoral Government departments have the regulatory governance capacity in-house to set appropriate targets and assess the outcomes achieved by the regulators.

Responsibility: Department of Public Expenditure and Reform in consultation with the sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water and waste.

9.3.2 Performance Measurement

One of the five central themes of the Government's Public Service Reform Plan is a strong focus on implementation and delivery[150]. An assessment process to ensure that the sectoral regulators are delivering for consumers (business and residential) is required. The 2009 Government Statement recommended that all regulators should be formally required to produce annual output statements as a mechanism to measure progress in achieving the goals set out in their statements of strategy. It also required sectoral Government departments to agree appropriate performance indicators in consultation with the regulators and report on performance annually.

Up until very recently, the regulators reported on outputs rather than outcomes. However, regulators have identified some indicators against which they measure performance but there is no consistency of approach. As mentioned in section 3.4, the CER, in consultation with DCENR, agreed key performance indicators (KPIs) in its 2012 work plan and has committed to reporting on the outcomes in its next annual work plan. ComReg publishes an annual output statement in line with the Department of the Taoiseach's 2008 report, *Transforming Public Services*[151]. CAR also publishes an output report in its annual report[152]. KPIs were also

150 Department of Public Expenditure and Reform, Government Statement – Public Sector Reform Plan, November 2011

151 ComReg's Output Statement for the year to the end of June 2012 is available at: http://www.comreg.ie/_fileupload/Output%20Statement%20ye%20300612(1).pdf

152 CAR annual reports are available at: http://www.aviationreg.ie/about-the-commission-for-aviation-regulation/annual-report.107.html

included in its 2011 annual report but they relate mainly to its licensing and customer protection functions.

Clearer and prioritised mandates as recommended in section 9.2 would support more transparent performance measurement. To ensure that sectoral regulators and their departments have a shared understanding of the goals and objectives that they are working towards, they need to agree predefined targets and outcomes against which performance should be assessed – while recognising that policy makers and/or regulators do not have full control over all outcome metrics. Effective performance measurement depends on how well outcomes can be measured, in particular those outcomes that are controllable. Sectoral departments and regulators need to identify indicators and milestones that are easy to quantify. This will be easier to do for some of the regulators' functions than for others, including the area of most relevance to this study – Ireland's cost competitiveness performance.

The performance indicators to measure cost competitiveness performance should:

- Measure the services of relevance to business in each sector (i.e. the costs benchmarked in this study);
- Benchmark Ireland's performance against that of key competitor countries for trade and investments as well as a selection of comparator countries – the selection of countries used in Forfás and NCC benchmarking studies; and
- Use VAT exclusive prices that are not adjusted for purchasing power parity.

In addition, in a study on regulation and competition, McKinsey stressed the need for regulation to reflect the institutional/legal background as well as the stage of economic and infrastructure development of the specific country. Benchmarks, therefore, should be tailored to the local environment since they can drive very different regulatory outcomes[153]. The various EU regulatory bodies (e.g. BEREC, ACER) could prove valuable in providing European-wide comparator data (section 9.8).

Recommendation: Develop a consistent performance measurement process across the sectoral regulators - departments and regulators must agree predefined targets and outcomes that are quantifiable and easy to measure.

Responsibility: Sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water - and their regulators (CER, ComReg and CAR).

The Department of Public Expenditure and Reform should have an oversight role to ensure consistency across sectors and with the wider public sector reform agenda.

153 McKinsey & Co., Regulation That's Good for Competition, McKinsey Quarterly 2005 – Number 2, 2005

Recommendation: Benchmark cost competitiveness performance on the basis set out above.

Responsibility: Sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water - and their regulators (CER, ComReg and CAR), in consultation with the Department of Jobs, Enterprise and Innovation and Forfás.

9.4 Compliance and Enforcement

In the context of regulation, enforcement essentially encompasses all of the tools available to compel observance of or adherence to a set of market rules. An effective enforcement regime requires a range of tools and techniques including operational tools (including advice), sanctions, and methods designed to incentivise appropriate behaviour. An effective enforcement regime is also proportionate, fair and transparent.

At a high level, a broad range of different powers and sanctions are available to the regulators examined, leading to a somewhat fragmented enforcement regime. There is certainly merit in considering standardising enforcement regimes across all of the regulators, as well as ensuring that the powers and sanctions available complement those of the Competition Authority. At the same time, certain enforcement measures may be more appropriate than others for particular sectors – for example, in the area of waste, it will be important that a comprehensive inspectorate regime is put in place (i.e. coordinated, targets intelligence based inspections) to ensure compliance with dumping regulations; such a regime is not required in the energy or telecoms sector.

The OECD has previously recommended that steps be taken to collect and centralise data on what is already being done by departments and agencies in relation to compliance and enforcement[154]. The purpose of such an exercise is to establish a strategic picture of trends and potential issues. Such a move would be particularly valuable in relation to the sectoral regulators given the diverse range of powers, procedures and tools available at present.

Based on the themes emerging from Forfás' consultations and an extensive literature review, the following issues require more detailed consideration:

- Operational tools – binding undertakings and rewards for compliance;
- Effective sanctions - civil fines; and
- Step-in rights.

9.4.1 Operational Tools

Binding Undertakings

While regulators have recourse to the courts in some instances, such an approach is not always the most satisfactory approach, due to the nature of the offence (it may be too

154 OECD, Better Regulation in Europe: Ireland, 2010

serious to be dealt with through a simple warning but not serious enough to justify the time and cost implications of prosecution through the courts).

The use of "undertakings" between the regulator and regulated companies can be used to bridge this gap. Undertakings are a flexible sanction that allows regulators to tailor their enforcement response to individual circumstances or individual companies. Conditions that form part of the undertaking are specifically designed to be proportionate to the underlying breach. This approach can be used to (i) address the needs of several parties involved in, or affected by, the wrongdoing as well as (ii) correcting and preventing breaches and their underlying causes, and (iii) can represent a cost-effective and relatively efficient mechanism for resolving issues of regulatory non-compliance.

Undertakings can be particularly valuable in cases where a financial penalty or criminal conviction is likely to be absorbed by the business and so provides little incentive for the firm to change behaviour.

In general (based on models used in the UK for example), the content of an undertaking is proposed by the enterprise considered to be in breach of an aspect of the regulatory framework – meaning the enterprises can help to shape the regulatory solution and so, take ownership of the process. Thereafter, it is up to the regulator to consider and to approve the proposed undertakings if they are so minded. Undertakings require careful monitoring to ensure that the terms and conditions are met, and should also set out the consequences of non-compliance. It is also important that undertakings are transparent in order to ensure that customers, competitors and other market players have full information on agreements reached[155].

At present in Ireland, where the regulators have power to agree an undertaking with a regulated firm, they cannot put a binding undertaking in place. For example, ComReg does not have a statutory power to obtain binding undertakings from regulated entities. Such undertakings can be made orders of the court in respect of competition matters and the Department of Jobs, Enterprise and Innovation has indicated that this power will also be granted to ComReg in planned competition legislation (for competition matters as distinct from EU Telecoms Framework matters), analogous with those recently provided to the Competition Authority in July 2012[156]. Extending ComReg's powers to wider regulatory issues

155 The Enterprise Act 2002 in the UK represented a major overhaul of competition law and sets out requirements for public consultation in relation to the agreement of undertakings.

156 The proposed new ex-post competition powers, if provided in the forthcoming Consumer and Competition Bill are limited to ex-post competition matters only and not ex-ante regulatory matters. The telecoms ex-ante regulatory powers, however, would not be similarly increased. In the context of ComReg's ex-ante powers, ComReg can accept undertakings in the context of forbearance from litigation but undertakings can only be made an order of the court if that litigation has commenced and the parties agree. The power to accept undertakings in the context of the ex-ante regime could be broadened, for instance to situations where litigation had not commenced.

would be very useful in shaping the design and development of important new market developments, including advanced broadband services[157].

Recommendation: Undertake an investigation into the pros/cons and practicality of providing sectoral regulators with the power to agree binding undertakings with regulated entities.

Responsibility: Sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water in consultation with the Department of the Taoiseach and the Department of Jobs, Enterprise and Innovation[158].

Rewards for Compliance

Effective enforcement is about more than ensuring that the sanctions for non-compliance encourage appropriate behaviour. As well as a "stick" (i.e. sanctions), the effectiveness of regulation can be enhanced using a "carrot" to incentivise and reward good behaviour.

This is not a new approach. As it currently stands, regulators already use financial incentives to reward compliance – the use of price cap models of regulation (i.e. RPI-X) are designed to provide financial incentives for efficiency (and for revealing that efficiency) by allowing the companies to retain the financial benefits of performance over and above that required by the regulator.

Other approaches that could be developed include:

- Reputational incentives: Measures of performance (e.g. league tables), when available to consumers in a transparent and easily accessible manner, can be a powerful tool in driving performance in a competitive market. In a competitive market, companies care about their reputation because it informs the behaviour of customers, competitors and suppliers as well as affecting profitability. This approach is currently used in the UK by, for example, the water regulator (Ofwat).

  As part of a "service incentive mechanism" (SIM), Ofwat aims to incentivise the companies to improve the quality of service and value for money they offer consumers by publishing detailed league tables setting out information about performance. This allows consumers and other stakeholders to identify those companies that offer the best and worst levels of service. In this way, it places a reputational incentive on the companies to do well[159].

157 Ofcom in the UK can obtain binding undertakings - under the UK Enterprise Act 2002 (Section 154), Ofcom can impose remedies, restrictions on conduct and structural remedies in lieu of a reference to the competition commission. Ofcom used this ability to take undertakings in relation to operational separation matters in relation to BT in 2005 - BT offered voluntary undertakings which Ofcom accepted. The undertakings are legal commitments. If BT breaches any of the undertakings, Ofcom can apply to the Court for an injunction to compel compliance.

158 Potential exists for the departments to work together or to appoint lead responsibility to one department.

159 Ofwat, Putting Water Consumers First – The Service Incentive Mechanism, March 2010

While the reputational approach will be a weaker motivating factor where competition is limited or does not exist at all, it is worth noting that service incentive mechanism has been designed in a manner that requires the 21 monopoly water companies in England and Wales to specifically address the needs of consumers[160].

- Procedural incentives: Regulatory risk differentiation or risk-based enforcement is a process used by a regulatory authority to systemically treat entities differently based on the regulator's assessment of the risks of the entity's non-compliance. Increased compliance requirements, for example, can be imposed on companies based on past performance (i.e. previous failures to comply). Again, such a model is used by Ofwat in the UK – while the same data collection requirements are imposed on every company, those with poor performance in a specific area may be required to report more frequently and in greater detail.

9.4.2 Effective Sanctions

Regulatory sanctions are an essential feature of a regulatory enforcement toolkit and are central to achieving compliance. Sanctions have a deterrent effect and demonstrate that non-compliance will not be tolerated. Effective enforcement underpinned by an adequate sanction regime ensures that non-compliance results in consequences that will put the violator in a worse position than those enterprises/individuals who have complied with their regulatory obligations.

A fully empowered regulatory enforcement regime is important in isolation. However, its real value lies in its placement within the wider regulatory framework - effective sanctions will often act as an inducement to compliance without the need to invoke the formal sanctions. In addition, other positive changes and improvements to the regulatory landscape may lose their value in application unless they are underpinned by an effective and credible system of deterrence.

A number of international studies have examined the role and importance of sanctions in economic regulation. The Macrory study in the UK concluded that a sanction should[161]:

i. Aim to change the behaviour of the offender;
ii. Aim to eliminate any financial gain or benefit from non-compliance;
iii. Be responsive and consider what is appropriate for the particular offender and regulatory issue, which can include punishment and the public stigma that should be associated with a criminal conviction;
iv. Be proportionate to the nature of the offence and the harm caused;
v. Aim to restore the harm caused by regulatory non-compliance, where appropriate; and
vi. Aim to deter future non-compliance.

160 Ofwat, Putting Water Consumers First – How can we Challenge Monopoly Companies to Improve?, 2010

161 Macrory, R.B., Regulatory Justice: Making Sanctions Effective, November 2006

The current regulatory sanctioning system, including both criminal sanctions and non-criminal sanctions, is a system that has developed over time and as such there are variations between the powers assigned to the various regulators. It is not clear that differences in enforcement regimes were developed in response to differing sectoral characteristics. There is, therefore, merit in bringing consistency into the sanctioning toolkits across the system[162]. There is also merit in reviewing the adequacy of criminal fines which the regulators can seek in the courts– for example, the maximum fine for criminal offences ComReg can seek in the courts for breach of the European Framework regulations is €5,000, and, since July 2011, the maximum they can recommend through the Director of Public Prosecutions (DPP) is €500,000. These restrictions offer a weak deterrence to offenders in cases where the commercial sums involved may be several million euros. It is worth noting that this represents a significant reduction in available penalties - previously the maximum fine for breach of European Framework Regulations (through the DPP) in many cases was up to €5 million or 10 per cent of turnover of corporate bodies prior to the reduction in 2011.

Civil Fines

The merits and practicality of introducing civil fines for breaches of competition law has been subject to significant debate in Ireland over the past decade or more. At present, under existing legislation, breaches of competition law which are considered "hard-core cartel activities" generally result in criminal prosecution[163].

The high burden of proof required in criminal cases (i.e. "beyond reasonable doubt"), however, can make it impractical to prosecute "non-hard-core cases" through the criminal system[164]. A civil case with its inherent lower standard of proof (i.e. on the balance of probabilities) may be a more appropriate vehicle for such cases.

It has long been proposed by a range of stakeholders that the ability to impose civil fines (through the courts) would be a solution to this difficulty[165]. Indeed, the Competition Authority has identified the absence of recourse to civil fines for breaches of competition law as a major gap in their armoury. A recent report notes that:

> "The absence of a provision for civil fines in the [2002 Competition Act] means that, in such cases [involving non-hard core infringements], the courts were (and remain) unable to impose any sanction on the parties for their involvement in the illegal activity concerned"[166].

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162 At present, for example, ComReg has competition powers concurrent with those of the Competition Authority. In the Government Statement on Economic Regulation, the Government committed to keeping open the possibility of extending such powers to other regulators based on the extent of competition in individual markets and experience gained in the communications sector.

163 Hard-core cartel activities include price-fixing, market sharing and bid-rigging.

164 Non-hard core infringements include agreements between competitors not related to price fixing, limiting output, bid-rigging or customer/market allocation; vertical restraints; abuse of dominance; it can be difficult to define a non-hard core infringement and it is extremely difficult to determine where the line between pro- and anti-competitive behaviour can be drawn

165 Civil fines are imposed by a court; administrative fines are imposed by a body other than a court.

166 FitzGerald, G., and McFadden, D., Filling a gap in Irish competition law enforcement: The Need for a Civil Fines Sanction, Competition Authority, June 2011

Similarly, it has been pointed out that while sectoral regulators in other jurisdictions (e.g. Ofwat in the UK) have the power to impose fines, their regulatory peers in Ireland do not in general have recourse to such a tool[167]. It is worth noting, however, that within the telecoms sphere, ComReg can seek to have civil fines imposed through the Courts for breaches of the regulatory framework, an option not available to the other regulators in Ireland[168], whilst the CER can impose fines on network operators as a result of their licencing conditions (but cannot seek to have fines imposed in relation to generation or supply).

While the introduction of a civil fines regime that could be applied across all of the sectors and regulated activities covered in this report appears like an administratively attractive option, such a regime is not practicable in the Irish case. First and foremost, the legal advice to Government has deemed the introduction of civil fines to be unconstitutional – specifically, civil fines would be in breach of Article 38.1 of the Irish Constitution (which provides that "No person shall be tried on any criminal charge save in due course of law") and Article 38.5 (which states that "…no person shall be tried on any criminal charge without a jury")[169].

In light of this, alternate approaches to enforcement – some of which are discussed herein (e.g. binding undertakings) – need to be considered[170].

Step-in Rights

The final area of enforcement which provoked significant comment during consultations centred on the merits of granting "step-in rights" to regulators. In essence, "step-in rights" would allow the regulator to intervene in the running of a licenced entity where serious or continuous breaches of the licence conditions occur – licences typically provide for a ring-fence around the regulated entity, and place special duties and obligations on the directors of the ring fenced licensed entity. In the event of failure, there is provision for the appointment of a special administrator who takes over the functions, sequestrates the revenues from bill paying and ensures the continuity of operations and investment.

167 The lack of civil fines was raised as a concern in the Memorandum of Understanding on Specific Economic Policy Conditionality which originally contained a commitment to introduce legislation to empower judges to impose fines and other sanctions in competition cases. Subsequent revisions to the MoU have weakened this commitment.

168 The European Communities (Electronic Communications Networks and Services) (Access) Regulations 2003, (SI No 305 of 2003) give power to the High Court to impose a financial penalty in the context of a civil proceeding (a motion to the High Court).

169 Minister Bruton has made references to the unconstitutionality of civil fines (based on advice received from the Attorney General) on several occasions, including in the Seanad Second Stage debate on the Competition (Amendment) Bill, 2011 on 8th March 2012 and at the Select Sub-Committee on Jobs, Enterprise and Innovation on 14th December 2011. Minister of State Perry made similar comments in the Dáil Report/Final Stage debate on the Competition (Amendment) Bill 2011 on 8th February 2012.

170 The Competition Authority for example has recourse to injunctions (i.e. a court ruling requiring a particular arrangement or behaviour to be terminated) and/or declarations (i.e. a court ruling that a particular arrangement or behaviour is unlawful).

The main concern with such an approach is the credibility of the "step-in" threat. If a sanction is not credible, it loses its force and so is unlikely to positively impact upon behaviour.

Secondly, the need for step-in rights may differ by sector. In the energy market in Ireland, the CER has designated Electric Ireland as the "supplier of last resort"; as a result, Electric Ireland has specific duties and obligations in the event of a supplier withdrawal or market failure (e.g. ensuring continuity of supply)[171]. This negates the need for the regulator being empowered with step-in rights.

Recommendation: Conduct an examination of step-in rights for economic regulators to identify and understand best international practice and to determine the applicability of such powers to Irish circumstances.

Responsibility: Sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water - and their regulators (CER, ComReg and CAR) in consultation with the Department of the Taoiseach[172].

9.5 Appeals Mechanisms

The final piece in the regulatory jigsaw is the appeals mechanisms which exist in the various sectors studied. In order to ensure that regulatory rules are applied and enforced in a systematic and fair manner, regulated entities (whether citizens or enterprises) need access to a review process. Such a process ensures that regulators are held accountable for their actions and decisions and provides for a degree of quality control. Accountability is particularly important given the high costs that can be imposed on industry and/or consumers (business and residential) as a result of poor or inefficient regulation (for more on accountability, see section 9.6). As noted by the EIU:

> "Regulatory errors impose costs. The lack of an effective appeals mechanism is likely to be more costly than any delays caused by appeals. Any delay resulting from an appeal is temporary, whereas bad regulatory decisions impose on-going costs".

The issue of appeals has already been examined in detail in a number of reports[173]. Based on a review of these reports, Forfás research, and the feedback from our consultations, it is clear that a wide variety of processes and rules govern regulatory appeals in Ireland. Each sector differs according to the types of appeals permitted and the manner in which these appeals are heard; indeed, there are regulatory areas where there is no scope for appeal

171 CER, Supplier of Last Resort in Electricity under the Single Electricity Market, Decision Paper CER/07/171, October 2007

172 Potential exists for the departments to work together or to appoint lead responsibility to one department.

173 For example, see Department of the Taoiseach, Consultation Paper on Regulatory Appeals, 2006; Economic Intelligence Unit, Review of Regulatory Appeals in Ireland, 2009; Department of the Taoiseach, Government Statement on Economic Regulation, October 2009

apart from judicial review. This creates inconsistencies in procedures and could be seen as creating a less than transparent environment.

As a general rule, accessible and equitable appeals procedures that balance rights of appeal with the need for speedy action, in a fair manner should be available in each of the regulated sectors. There is a distinction between appeals on merit (i.e. on the substance of a regulatory decision) and appeals on process (i.e. on the technicalities), with separate avenues being available for each type of appeal.

9.5.1 Appeals on Process

The current process of judicial review appears to offer an adequate response in the case of "appeals on process". Judicial review, heard by the High Court, is concerned primarily with:

- The process by which the regulator came to a decision (i.e. whether procedural fairness was observed);
- Whether there was an appropriate legal basis for the decision (i.e. legality and jurisdiction); and
- Proportionality.

Judicial review is not concerned with analysing the merits (or otherwise) of a particular regulatory decision (section 9.5.2 deals with appeals on merits). In addressing the impact of lengthy delays caused by judicial review proceedings, the EIU noted that a fast-track process has been established in the Commercial Court to hear judicial reviews of regulatory decisions. There is, however, no automatic right of entry to the Commercial List of the High Court, and so the decision to facilitate a judicial review of a regulatory decision before the Commercial Court is at the discretion of a judge[174]. It would be desirable that all judicial reviews relating to regulatory matters would be heard by the Commercial Court with the application of appropriate case management to expedite decisions. Given the independence of the courts system, it is at the discretion of the Courts to consider this.

9.5.2 Appeals on Merit

Providing for appeals on merit allows interested parties (e.g. regulated companies, other market players) to appeal the substance as opposed to the technicalities of a regulatory decision. Allowing for appeals on merit ensures that regulators are held accountable for the substance of their decisions and provides for a degree of quality control. While the process for judicial review is relatively straight forward, the approach taken to appeals on merit in

174 The Commercial Court is a division of the High Court and was established in 2004 to provide efficient and effective dispute resolution in commercial cases. It is governed by Order 63A of the Rules of the Superior Courts in particular. The Commercial Court deals with a range of business dispute types, including: Disputes of a commercial nature between commercial bodies where the value of the claim is at least €1 million; Proceedings under the Arbitration Act 2010 with a value of at least €1 million; Disputes concerning intellectual property; and Appeals from or applications for judicial review of regulatory decisions. The Court uses a detailed case management system that is designed to streamline the preparation for trial, remove unnecessary costs and stalling tactics, and ensure full pre-trial disclosure. The judge can adjourn proceedings for up to 28 days to allow resolution of the dispute through some form of alternative dispute resolution, such as mediation, conciliation or arbitration.

Ireland is much more complicated and varied. Table 4 below provides an update on the appeals mechanisms which exist in the areas of aviation, energy and telecoms.

Table 4: Current Mechanisms for Appeals on Merit

Commission for Aviation Regulation	The Minister for Transport Tourism and Sport may at the request of the relevant parties establish an appeal panel for determinations relating to airport charges or air navigation changes for terminal services. Appeals panels can refer issues back to the CAR but cannot substitute its decision for the determination of the CAR. It is notable that each appeals panel is established without reference to previous panels and so is free to determine its own procedures and rules.
Commission for Energy Regulation	In general, there is no avenue to appeal a decision of the regulator on merit (e.g. a pricing decision). Some exceptions exist, however. The Minister for Communications, Energy and Natural Resources can establish an appeals panel to hear and determine an appeal against a decision[175]: ▪ Refusing a licence, authorisation or consent; ▪ A modification or a refusal to modify a licence or give authorisation or consent. Decisions of regulators stand unless and until they are overruled on appeal.
ComReg	Affected parties can appeal a determination to the High Court. The majority of ComReg's decisions are appealable using the appeals mechanism set out in Article 4 of the Framework Directive and Part 2 of the implementing Framework Regulations[176].

The issue is further complicated by the existence of a substantial body of EU law - for example, in some sectors regulatory decisions must stand during the appeals process while conversely in others they do not.

175 For further details on the circumstances and procedures on appeals relating to the CER, see Section IV of the Electricity regulation Act 1999.

176 The conditions relating to appeals are set out in Article 4 of the Framework Directive (Directive 2002/21/EC of the European Parliament and the Council of 7 March 2002, as amended by Regulation (EC) No. 717/2007 of the European Parliament and of the Council of 27 June 2007, Regulation (EC) No. 544/2009 of the European Parliament and of the Council of 18 June 2009, and Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009 on a common regulatory framework for electronic communications networks and services) and Part 2 of the implementing Framework Regulations (European Communities (Electronic Communications Networks and Services)(Framework) Regulations 2011 S.I. No. 333 of 2011.

A more streamlined, homogenous appeals mechanism is required to deal with appeals on merit[177]. Little consensus emerged, however, during discussions with the various stakeholders on the type of reform required in this space. Where common views were attained, they primarily centred on the importance of principles such as fairness and transparency. There was also a degree of support for an appeals mechanisms that could provide more certain timeframes for decisions and more defined procedures – the impact of delayed decisions on investment decisions (as a result of increased uncertainty) was repeatedly alluded to.

In determining the most appropriate appeals mechanism, a number of considerations come into play:

- Regardless of the mechanism chosen, care must be taken to ensure that an unnecessary additional layer of bureaucracy is not added to appeals procedures – this is a particular concern given the primacy of the courts under Irish law – ultimately, regardless of the structures put in place, aggrieved parties will retain the right to challenge determinations through the courts and seek a judicial review[178]. In light of this, the establishment of an intermediary between the regulators and the courts risks simply adding to costs and delays in reaching a final decision (and could lead to "tactical" cases being taken in cases where delayed decisions would benefit the plaintiff).
- Robust procedures, strong case management and defined time lines are required to ensure that decisions are reached in an efficient manner.
- Adequate expertise – particularly in relation to appeals on merit - is required by the appeals body across a range of complex sectors.
- A consistent approach to appeals across sectors would enhance transparency.

The 2009 Government Statement "decided against the establishment of a single appeals body. In reaching this decision, regard has been had, in particular, to the efficiency of the Commercial Court and to the volume of appeals taken"[179]. This conclusion still has merit. Further investigation, however is required to determine if procedures can be established which would facilitate all appeals on merit relating to regulatory determinations to be brought before the Commercial Court.

To enable this, consideration should be given to developing mechanisms which could ensure that the Court has access to the requisite expertise to deal with complex economic and regulatory matters. The 2004 White Paper regulation noted that 'where regulatory decisions

177 It has been suggested that in the absence of a right to a satisfactory appeal on merit process, parties may attempt to use the judicial review process to challenge a decision. Whilst such an approach is unlikely to be successful, it can result in unnecessary delays and does not offer the same quality assurance as a dedicated appeal on merit process could.

178 Judicial review is a way for the High Court to supervise the lower courts, tribunals and other administrative bodies to ensure that they make their decisions properly and in accordance with the law.

179 See pages 8-9 of Department of the Taoiseach, Government Statement on Economic Regulation, October 2009. In contrast, the EIU report recommended "that a single, cross-sector panel is the most appropriate option for the economic regulators" – for further detail, see pages 170-171 of Economic Intelligence Unit, Review of Regulatory Appeals in Ireland, 2009

are referred to the courts, there are particular requirements of speed and expertise'[180]. An important precedent exists in this regard - in competition law cases, the Court is permitted to appoint an expert to assist in clarifying matters in respect of which the expert has skill and experience[181]. It is important to note, however, that such an expert does not make any decision in the case and serves only as an advisor to the Court in areas where the Court itself does not have sufficient knowledge or expertise. This approach would ensure that while the Court has access to the requisite expertise, it would not be in breach of Article 34.1 of the Irish constitution (which states that "justice shall be administered in courts established by law by judges appointed in the manner provided by this constitution").

Recommendation: Ensure that parties subject to economic regulation have the right to appeal decisions of the regulator to the Courts on the merits of the decision, in addition to the current right to judicial review.

Responsibility: Courts Service; Department of Justice and Equality

Recommendation: Ensure all regulatory appeals which come before the courts utilise a process similar to the Commercial Court's case management system to expedite the appeals process and to minimise costs[182].

Responsibility: Courts Service; Department of Justice and Equality

Text Box - Alternative Appeals Models

Over the course of numerous consultations, reference was made to the appeals role of the Competition Commission in the UK.

The Competition Commission is an independent public body which helps to ensure healthy competition between companies in the UK for the ultimate benefit of consumers and the economy. It conducts in-depth investigations into mergers and markets.

The Competition Commission also has functions under other legislation relating to regulated industries. While each regulatory regime has its particular features, the Competition Commission's task is essentially to rule on license modifications and price control reviews where there is disagreement between licensees and the regulator. The Competition Commission is not a regulator. It deals only with regulatory matters which are referred to it by other authorities, or the Secretary of State, or on appeal by a person affected by a regulator's decision.

The types of regulatory matters that the Competition Commission receives fall into the following broad categories:

- Licence modification references for water and sewerage, rail and air traffic services.

180 Department of the Taoiseach, Regulating Better - A Government White Paper setting out six principles of Better Regulation, 2004

181 This is provided for by Order 63B, Rule 23of the Rules of the Superior Courts. See The Rules of the Superior Courts (Competition Proceedings), S.I. No. 130 of 2005, 2005

182 The Commercial Court's case management system is designed to: streamline the preparation for trial; remove unnecessary costs and stalling tactics; and ensure full pre-trial disclosure. The average time from entry into the Commercial list to conclusion is 21 weeks.

- Appeals against modifications to conditions in gas and electricity licences.
- Non-licensable activities in the gas and electricity sectors.
- Appeals against energy code modifications.
- Appeals against price controls decisions in the postal services, gas and electricity sectors.
- References in relation to designated and non-designated airports.
- Price control references in the water and communications sectors.
- Access charge references in the railways sector.
- References about the regulatory practices of certain bodies

While Forfás believes that the Commercial Court is the most appropriate vehicle for the processing of regulatory appeals – Ireland has fewer sectoral regulators than the UK and so, there does not appear to be sufficient numbers of appeals at any one time to justify a dedicated body - there is merit in investigating the role and effectiveness of the Competition Commission in more detail, given the similar legal frameworks between the UK and Ireland.

Similarly, the role of the Competition Appeal Tribunal (CAT) in the UK is worth investigating. CAT is a specialist judicial body with cross-disciplinary expertise in law, economics, business and accountancy whose function is to hear and decide cases involving competition or economic regulatory issues.

One of CAT's defined roles is to hear appeals on the merits in respect of decisions made under the Competition Act 1998 (as amended by the Competition Act 1998 and other enactments (Amendment) Regulations 2004) by the Office of Fair Trading ("OFT") and the regulators in the telecommunications, electricity, gas, water, railways and air traffic services sectors. In broad terms, the authorities whose decisions may be appealed to the Tribunal are:

- The Office of Fair Trading
- The Competition Commission;
- The Secretary of State (in connection with public interest interventions under the Enterprise Act 2002);
- The Office of Communications;
- The Northern Ireland Authority for Utility Regulation;
- The Gas and Electricity Markets Authority;
- Water Services Regulation Authority;
- The Office of the Rail Regulator; and
- The Civil Aviation Authority.

9.6 Accountability

The Programme for Government proposed to "pin down accountability for results at every level of the public service". Clearer mandates and effective performance measurement, as proposed in sections 9.2 and 9.3 are essential to determine if the sectoral regulators are

delivering on their mandates. Scrutiny of performance across the regulators to ensure they are accountable should in the first instance be undertaken formally by the relevant Minister and his department. This will require adequate resources and expertise within each department to review the performance of the regulators against agreed targets.

The 2009 Government Statement highlighted the importance of Oireachtas scrutiny in examining the operations of the sectoral regulators. Better performance measurement (as recommended in section 9.3.2) will allow the Oireachtas to probe the sectoral regulators on progress on key functions and objectives.

The appeals mechanism also has a key role to play in ensuring accountability. Forfás is recommending that parties subject to economic regulation have the right to appeal decisions of the regulator to the Courts on the merits of the decision, in addition to the current right to judicial review (section 9.5).

The legislation for the three sectoral regulators – CAR, CER and ComReg – provides for the Minister to issue a policy direction to the sectoral regulator. While the ministerial directions can be useful when carried out in a transparent manner, the implications for regulatory independence and certainty need to be carefully considered. Regulatory uncertainty leads to higher investor risk, more expensive capital and ultimately higher costs for end users.

The legislation sets out in what cases the Minister can and cannot issue policy directions and the process to be followed to ensure transparency. While each regulator is bound by its establishing legislation to comply with the policy direction, the process differs somewhat across the sectors.

- ComReg: Under the Communications Act 2002, the Minister is required to provide a draft of the proposed direction to ComReg and also to publish it. The Minister must give the reasons for the proposed direction and allow interested parties not less than 21 days to make representations;
- CER: The Energy (Miscellaneous Provisions) Act 2006 requires the Minister to provide a draft of the proposed direction to the CER, the relevant Joint Oireachtas Committee and any other person the Minister deems appropriate as well as publishing it. The Minister must give the reasons for the proposed direction and allow interested parties not less than 30 days to make representations.
- CAR: The provision for policy directions in the Aviation Regulation Act 2001 is the least prescriptive of the three. The Minister may give general policy directions to CAR in the exercise of its functions.

Given that the provisions in the legislation for the Minister to issue policy directions to their sectoral regulators vary, Forfás recommends that they are reviewed and that a consistent approach is adopted in terms of the process (e.g. who to notify; the length of the consultation period). In the interests of enhanced transparency, consideration should also be

given to requiring Ministers to publish a report on any submissions received[183]. The revised provisions for policy directions should also be applied to the regulation of water and rail freight.

The 2009 Government Statement proposed to seek the views of the NCA and industry/ consumer panels or advisory councils on the draft income and expenditure estimates of the sectoral regulators each year. Careful consideration needs to be given to introducing any such measures as the independence of the sectoral regulators in carrying out their functions is critical to provide regulatory certainty for regulated parties and investors and ensure well-functioning markets and efficient investment.

Recommendation: Scrutinise the performance of the sectoral regulators against the agreed targets and outcomes on an annual basis

Responsibility: Relevant Oireachtas Committees; sectoral Ministers and departments.

Recommendation: Review the provisions in the legislation for the relevant Minister to issue policy directions to their sectoral regulators to ensure that a consistent approach is adopted in terms of the process (e.g. who to notify; the length of the consultation period). Consideration should also be given to requiring Ministers to publish a report on any submissions received. The revised provisions should also be applied to the regulation of water and rail freight.

Responsibility: Sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water.

The Department of the Taoiseach should have an oversight role to ensure consistency of approach across sectors.

9.7 Transparency

Transparency is one of the key principles underpinning best regulatory practice internationally (as per section 9.1). It is important that regulators operate in a transparent manner at all times and that decisions are reached in a manner free from inappropriate external influence. In terms of enforcement, it is imperative that where undertakings are agreed or sanctions are imposed, that they are done so in a transparent manner also.

The sectoral regulators (CAR, CER, and ComReg) consult on all regulatory decisions and publish detailed consultation and decision papers. However, the documents are often very technical and legalistic and not readily accessible to business and domestic customers. In many cases, formal regulatory consultations and decisions need to be technical and legalistic to ensure that industry players are clear on what precisely is being proposed or has been decided, and to reduce the risk of litigation. However, to ensure that the regulators deliver on their mandate to promote consumer interests, they should be required to publish

183 Such a provision exists under the Planning and Development (Amendment) Act 2010 for policy directions to regional authorities in respect of regional planning guidelines.

explanatory notes for information purposes on key consultations and decisions of relevance to consumers (business and residential). For example, in 2010, the CER published an information note on the impacts of customer credits for large energy users[184].

To ensure that the explanatory notes are easily accessible to all consumers (business and residential), the regulators, perhaps through the economic regulators' network, could work with the National Adult Literacy Agency (NALA). NALA provides professional services to help organisations remove literacy-related barriers to customers accessing their services[185]. Many of the regulators' consultations/decisions will not be of relevance to consumers (business and residential). In deciding when an explanatory note should be issued, sectoral regulators could consult with their line department.

The 2009 Government Statement proposed setting up industry and consumer panels to improve engagement between the regulators and end users. On the issue of industry panels (which are of most relevance to this study), large enterprise users do engage with the regulatory process through their business representative organisations (e.g. IBEC's Large Energy Users Group makes submissions to CER consultations of relevance to them). Ensuring SMEs have a voice in the regulatory process is more challenging. Limited resources, both in terms of time and people, is one of the biggest barriers to SMEs' capacity to engage with such initiatives. Managing industry panels (and consumer panels) would also be resource intensive for the sectoral regulators. Careful consideration, therefore, should be given before establishing such panels.

Many of the recommendations proposed earlier in this chapter will also improve transparency and enhance consumer engagement. The Forfás recommendation to give primacy to protecting consumer interests in the regulators' mandates will enhance the regulators' role as champions of the consumer (business and residential) interest (section 9.2). Forfás has put forward recommendations to improve performance measurement across the regulators and ensure the sectoral departments have the capacity to provide the required regulatory governance oversight (section 9.3). These recommendations will provide greater visibility to consumers – and Government – on how successful the regulators are in meeting their objectives.

Recommendations: Publish explanatory notes in plain English on key consultations and decisions of relevance to consumers (business and residential).

Responsibility: Sectoral regulators – CAR, CER and ComReg

184 CER, Bill Impacts of LEU (large energy users) Customer Credits to apply from the 1st October 2010, Information Note (CER/10/155), September 2010

185 This includes a plain English service, literacy awareness training, advice on workplace basic education programmes, recruitment and training policies. For more details see the NALA website: www.nala.ie

9.8 Ireland and the EU

As is obvious from this report, the EU has a pervasive influence across most of the sectors under consideration. While ultimately it is hoped that the economic regulatory footprint (both national and international) will diminish over time as markets become more competitive, it seems certain that sectoral regulation will have a significant impact upon the economic landscape for the foreseeable future. It is to be expected, therefore, that the EU will continue to determine much of the regulatory environment. For example:

- In relation to energy, the EU's commitment to implement a single European electricity market by 2014 will require changes to the all-island single electricity market. Likewise, regulatory powers in relation to market analysis and/or remedies are increasingly prescribed by the EU;
  - The increasing EU influence in energy regulation is reflected in the creation of the Agency for the Cooperation of Energy Regulators (ACER). ACER was established by the EU under the Third Energy Package to complement and coordinate the work of national energy regulators at EU level and work towards the completion of the single EU energy market for electricity and gas[186]. ACER can only issue binding decisions in a small number of specific cases[187].
- In terms of telecoms, the EC's electronic communications regulatory framework already sets out which electronic communications markets are regulated (as noted in chapter 4, the EC recently announced a public consultation seeking inputs to its review of the lists of product and service markets to be regulated on an ex ante basis); the process for undertaking the market reviews; and the remedies that can be applied if a finding of market dominance is made. These EU rules will shape Ireland's approach to regulation for years to come;
  - The Body of European Regulators for Electronic Communications (BEREC) was established as part of the telecom reform package and commenced its activities in January 2010. Its key function is to ensure that the application of the EU regulatory framework is consistent across member states. BEREC illustrates the degree to which the EU impacts upon national regulatory frameworks - national regulators and the EC have to take utmost account of any opinion, recommendation, guidelines, advice or regulatory best practice adopted by BEREC. Of particular relevance to this study is the formal role BEREC has in the reviews of the communications markets that are regulated across member states (the market analysis process is discussed in section 4.3)[188].

186 In particular, ACER plays a central role in the development of EU-wide network and market rules with a view to enhance competition. It coordinates regional and cross-regional initiatives which favour market integration. It monitors the work of European networks of transmission system operators, particularly their EU-wide network development plans. Finally, it monitors the functioning of gas and electricity markets in general, and of wholesale energy trading in particular. For more on ACER, see: http://www.acer.europa.eu/Pages/ACER.aspx

187 ACER can issue binding individual decisions on terms and conditions for access to and the operational security of cross-border infrastructure as well as on third party access and unbundling exemptions.

188 BEREC is made up of the heads of the 27 national telecoms regulators. BEREC's main tasks include: participating in consultations under the Single market consultation (Article 7) procedure; giving opinions on cross-border disputes; disseminating best practice, assisting NRAs, advising the Commission, the European Parliament and the Council, and assisting the institutions and the NRAs in their relations with third parties; delivering opinions on draft recommendations and/or guidelines on the form, content and

- In the railway sphere, the various EU Railway Packages set much of the regulatory context for rail freight in Ireland – for instance, European rules require changes to the current structure of Iarnrod Éireann and the creation of a separate body to determine capacity allocation and access charges for the rail network;
- European rules also shape much of the relevant regulation of the aviation sector – for example, the Directive on Airport Charges (Directive 2009/12/EC) establishes a common framework regulating the essential features of airport charges and the manner in which they are set;
- In the area of waste, much of the regulatory environment is determined at EU level – environmental targets agreed centrally must be met nationally: this requires that the domestic regulatory framework be designed in a manner that provides adequate incentives to ensure that these targets can be met (e.g. that levies are structured in a manner that supports the hierarchy of waste). This provides a crucial backdrop for the new national waste policy (see actions on this issue in section 7.4);
- Finally, in the area of water, EU rules require Ireland to implement the polluter pays principle and also define exactly what constitutes "water services". Again, this will be a major determinant of the newly emerging regulatory regime for water in Ireland.

The EU has played a driving role in encouraging Ireland to reform markets. Much of the progress achieved in recent decades would not have been possible without external commitments and support. However, given Ireland's geographic location and limited natural resources, it seems only natural to conclude that at times, EU-wide policies may not always take account of Ireland's particular requirements. It is essential that Ireland takes a proactive approach to shaping EU legislation – advocating an approach that takes Ireland's circumstances into account and ensuring that policies are appropriate for all member states. Ireland needs to ensure that there is discretion for member states, particularly smaller states, to determine how best to apply changes to the EU regulatory framework in an Irish context. Where EU Directives provide discretion to member states, Ireland needs to transpose them in a manner that takes account of national circumstances (e.g. size of the market and spatial patterns) and supports national policy objectives (e.g. improving competitiveness and supporting job creation).

The various European regulatory networks allow national regulators to share information to inform their cost models and benchmarking and pricing decisions. In the communications sector, national regulators can and do share relevant information via BEREC[189]. In relation to

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level of detail to be given in notifications, in accordance with Article 7b of Directive 2002/21/EC (Framework Directive); being consulted on draft recommendations on relevant product and service markets, in accordance with Article 15 of the Framework Directive; delivering opinions on draft decisions on the identification of transnational markets, in accordance with Article 15 of the Framework Directive; and delivering opinions on draft decisions and recommendations on harmonisation, in accordance with Article 19 of the Framework Directive.

189 BEREC has a Regulatory Accounting Expert Working Group as well as a Termination Rates Expert Working Group which meet regularly to facilitate discussion on costing methodologies, share best practice principles, etc. Close cooperation between national regulators, BEREC and the EC is an integral part of the EU regulatory framework for electronic communications. However, when developing cost models for particular communications markets many of the costs in question are local in nature, for example, the cost of construction, way leaves etc. Often the internationally comparable costs (e.g. technology) are relatively modest.

energy, there is a considerable degree of information sharing and benchmarking carried out by the Council of European Energy Regulators and ACER in a wide range of areas, including industry structures and cost comparisons[190]. The potential for information sharing is more limited in the aviation sector as there is no common airport regulatory framework; the EU airport charges directive only sets out general principles. Moreover, there are only two dedicated airport regulatory offices in the EU at the present time (the CAR and the Civil Aviation Authority in the UK).

Access to comparative costs information from other jurisdictions, as well as being useful to regulators in reaching pricing decisions, would provide a useful metric to measure the effectiveness of Irish regulators in driving down costs.

Recommendations: Take a proactive approach to shaping EU legislation and ensure that there is discretion for member states, particularly smaller states, to determine how best to apply changes to the EU regulatory framework in a national context.

Responsibility: Sectoral Government departments - DCENR for communications and energy; DTTAS for transport and DECLG for water.

190 The CER actively participates in such exercises and utilises the comparison information where appropriate. In addition, when carrying out its five year network reviews, the CER undertakes substantive benchmarking exercises for the relevant company against comparison companies in other jurisdictions to ensure that Irish companies are approaching what is considered to be the "efficiency frontier. This helps drive efficiencies in the regulated companies.

Appendices

Appendix 1: Stakeholder Consultations (Phase 1)

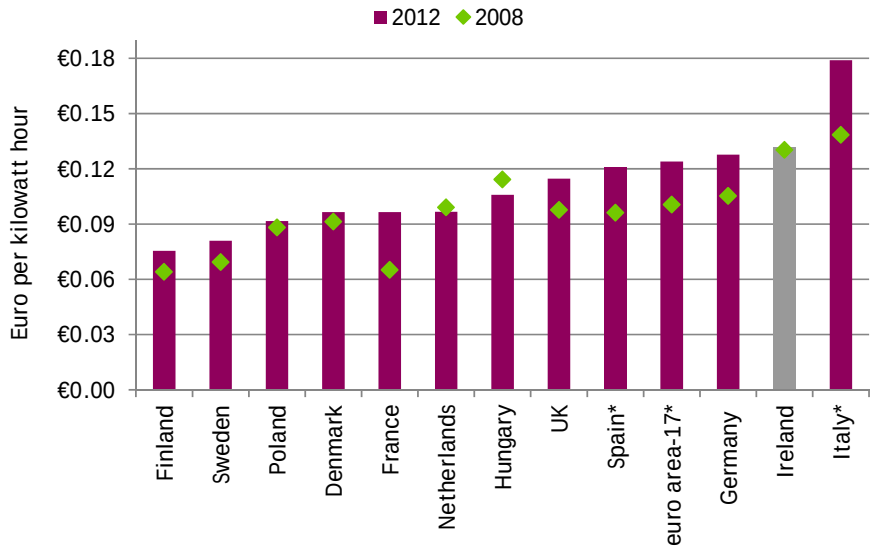
Commission for Aviation Regulation
Commission for Energy Regulation
ComReg
Department of Communications, Energy and Natural Resources
Department of the Taoiseach
DG Communications Networks, Content and Technology
DG Competition
DG Energy
DG Environment
ESRI
Single Electricity Market Committee – independent members
The Competition Authority

Appendix 2: Stakeholder Consultations (Phase 2)

ALTO - Alternative Operators in the Communications Market
Bord Gais
Commission for Aviation Regulation
Commission for Energy Regulation
ComReg
Department of Communications, Energy and Natural Resources
Department of Environment, Community and Local Government
Department of the Taoiseach
Department of Transport, Tourism and Sport
Dublin Airport Authority
eircom
ESB Networks
IBEC
NewERA
Professor Colin Scott
SSE Renewables
Telecommunications and Internet Federation

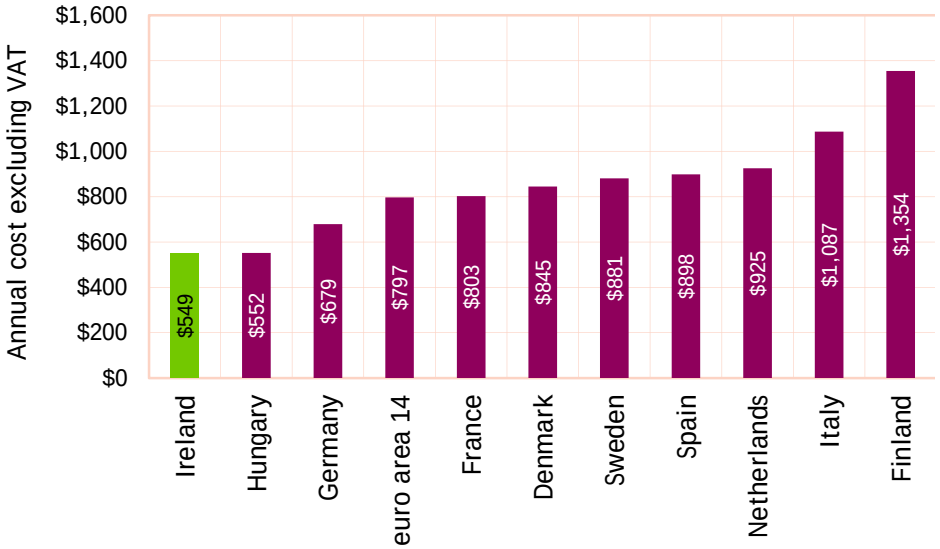
Appendix 3: Supplementary Benchmarking Charts

Figure A1: Industrial Electricity Prices for SMEs (excl. VAT), H1 2008 v H1 2012[191]



Source: Eurostat

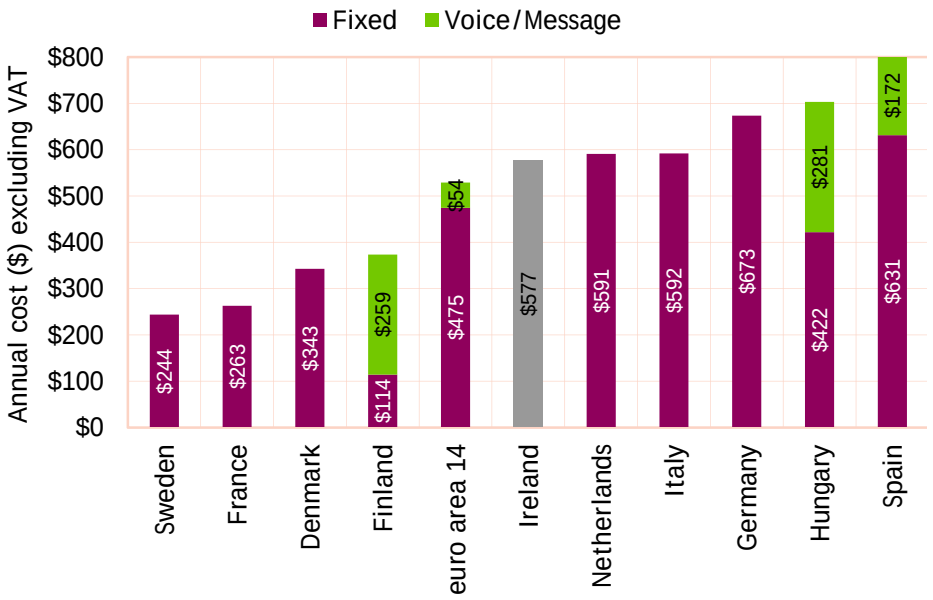
Figure A2: Annual Cost of Basket of Fixed Line Telephony Calls (excl. VAT), February 2012



Source: Teligen

191 The asterix (*) denotes provisional data for S1 2012 (Eurostat database as of 28th November 2012).

Figure A3: Annual Cost of Basket of Mobile Telephony Calls (excl. VAT), February 2012



Source: Teligen

Teligen Data

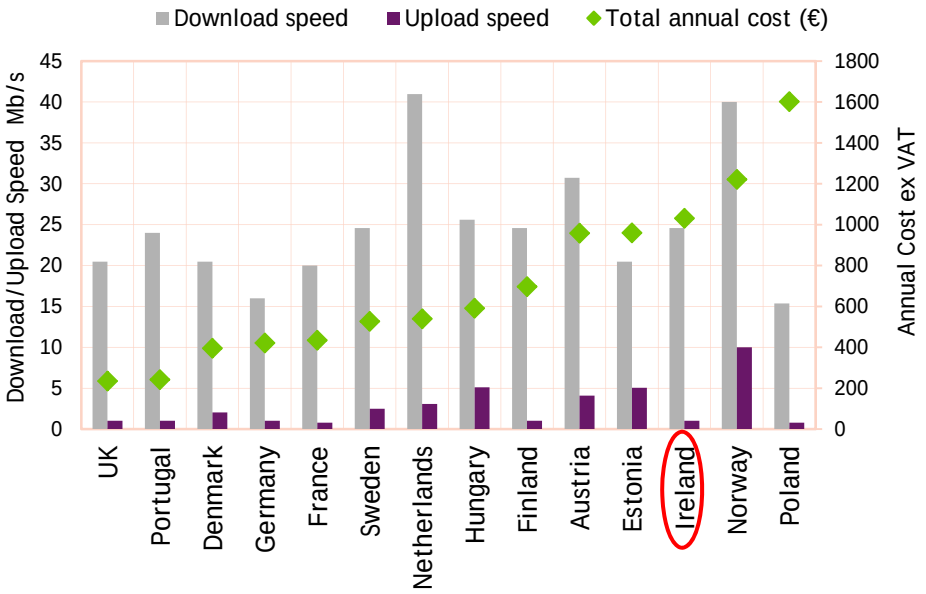
Forfás commissioned data from Teligen which provides details of the speeds and tariffs of broadband packages available to SMEs from the five leading operators in 14 different countries.

The data is collected using marketing materials available in the public domain, mainly websites. This database makes it possible to compare the range, speed and cost of broadband packages available to SMEs in different countries.

It is important to note that a number of limitations apply to this data;

- The data does not take into account the level of availability of the various packages offered. Some of the fastest packages available in each location are likely to be offered in a limited number of locations i.e. urban areas with high population density.
- The data was collected in September 2012. Any changes in the range of packages offered by operators since then will not be reflected in the data.
- As the data is collected largely from the websites of the five leading operators in each location, packages not advertised on their websites will not be captured.

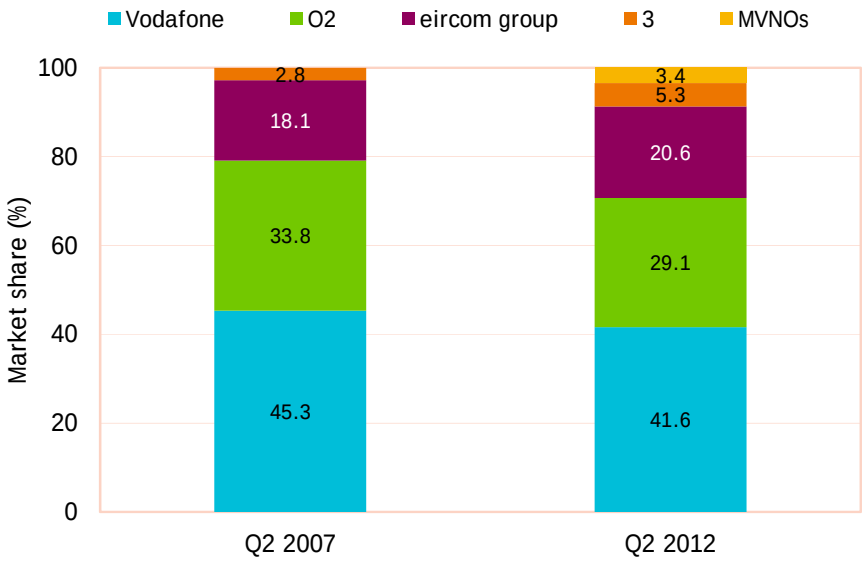
Figure A4: Annual Cost of Fastest Business DSL Service from the Incumbent (excl. VAT), September 2012[192]



Source: Teligen

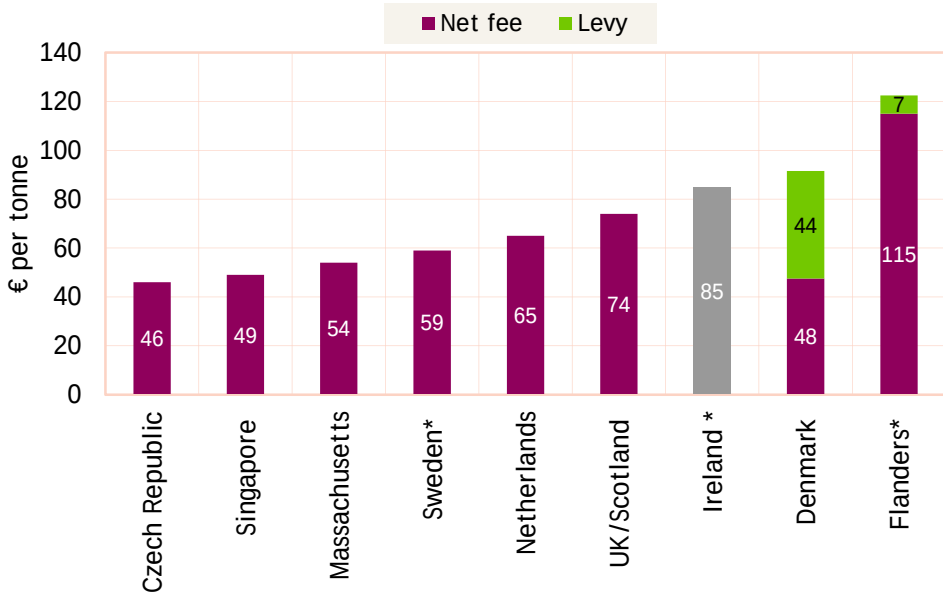
192 Countries are ranked on price (from the lowest to the highest).

Figure A5: Mobile Market Shares (excl. broadband), Q2 2007 v Q2 2012



Source: ComReg

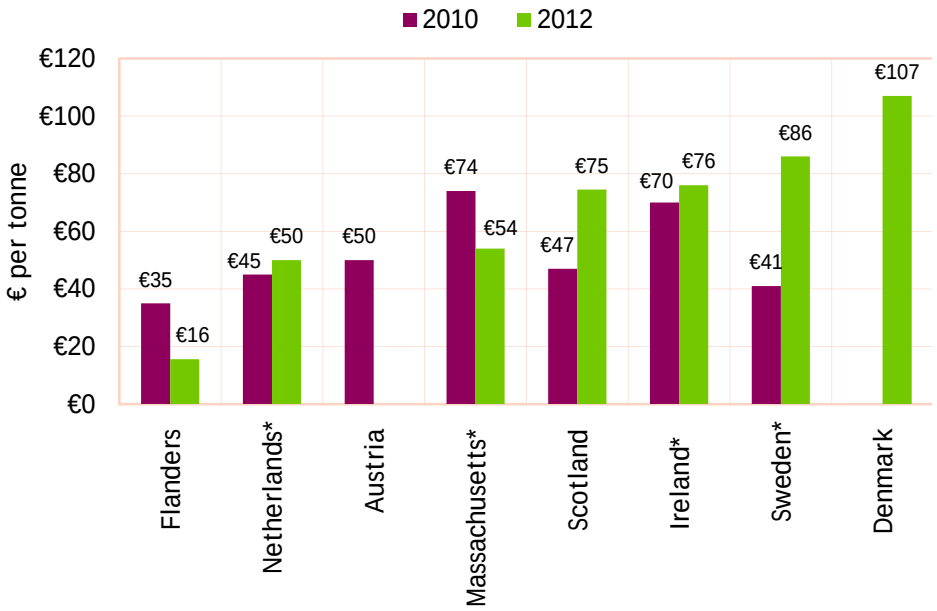
Figure A6: Non Hazardous Thermal Treatment Gate Fees (incl. Levy) in € per tonne, 2011/2012[193]



Source: RPS Consulting

193 In some countries (those marked with *), there is a range of thermal treatment fees - the upper limit is used in this chart. Both Norway and Sweden have removed their Incineration levies in the interests of competing against each other

Figure A7: Biological Gate Fees for the Treatment of Food Waste in € per tonne, 2010 v 2012[194]



Source: RPS Consulting

194 In some countries (those marked with *), there is a range of thermal treatment fees - the upper limit is used in this chart. Data for the Netherlands is for the anaerobic digestion of food and garden waste. 2010 data for Denmark was unavailable.

Appendix 4: Overview of Functions/Priorities of the Sectoral Regulators

Commission for Energy Regulation

The Commission for Energy Regulation (CER) is the regulator for the electricity and natural gas sectors in Ireland.

- It works within the framework of national and EU energy policy which aim to create a single European electricity market that best meets the needs of Europe's energy consumers.
- It was first set up in 1999 as the Commission for Electricity Regulation under the Electricity Regulation Act, 1999. Its functions along with its name were changed by the Gas (Interim Regulation) Act, 2002. Under that Act, its remit was expanded to include the regulation of the natural gas sector and the name was changed to the Commission for Energy Regulation.
- In addition, the functions and duties of the CER have been altered and expanded significantly by legislation transposing EU directives into Irish law and the introduction of new primary legislation, including the Energy (Miscellaneous Provisions) Act 2006, Electricity Regulation (Amendment) (Single Electricity Market) Act 2007 and the Petroleum (Exploration and Extraction) Safety Act 2010.

In 2006, the 1999 Act was amended to make provision for the Minister for Energy to issue policy directions to the CER, as follows:

10A.— (1) (a) In the interests of the proper and effective regulation of the electricity and natural gas markets and the formulation of policy applicable to such proper and effective regulation, the Minister may give such general policy directions to the Commission, as he or she considers appropriate, to be followed by the Commission in the exercise of its functions.

(b) Notwithstanding the generality of paragraph (a), such general policy directions may have regard to the following issues—

(i) Security of energy supply,

(ii) Sustainability of energy supply,

(iii) Competitiveness of energy supply, or

(iv) Such other matters which the Minister considers appropriate.

10A. — (2) The Commission shall comply with any direction given under subsection (1), and shall report to the Minister on the implementation (including the costs of such implementation) of any directions given under subsection (1) in the report prepared in accordance with paragraph 25(b) of Schedule 1 to this Act.

CER Priorities

The CER's most recent Strategic Plan is for the period 2010-2014. Its priorities for the period are to ensure that:

1. The lights stay on – secure electricity supplies in a stable competitive wholesale market;

2. The gas continues to flow – secure natural gas supplies with improved diversity of sources;
3. The prices charged are fair and reasonable – fully competitive retail markets with reduced regulatory intervention, delivering fair prices to customers;
4. The environment is protected – a cleaner energy sector playing its role in protecting Ireland's environment;
5. Electricity and gas are supplied safely – a world class natural gas and electricity public safety record; and
6. A top quality regulatory service – a standard bearer for best practice regulation and quality of service in the Irish public sector.

ComReg

ComReg is the statutory body responsible for the regulation of the electronic communications sector (telecommunications, radio communications and broadcasting transmission) and the postal sector. ComReg's remit covers all kinds of transmission networks including:

- Traditional telephone wire;
- Traditional television and radio;
- Radio Communications including fixed wireless;
- MMDS and deflector operators providing TV services;
- Mobile operators providing voice and data services;
- Licensing Framework for Satellite Services in Ireland; and
- Postal delivery network.

ComReg enables competition in the communications sector by facilitating market entry through a general authorisation to provide networks and services and by regulating access to networks so as to develop effective choice for consumers both business and residential.

The focus of regulation for the postal service in the partly liberalised market is the maintenance of the Universal Service Obligation (USO) and in ensuring that An Post prices are geared to cost.

Telecoms

ComReg monitors the retail and wholesale prices of any operator who has been designated as having significant market power on their network. This is to ensure compliance with regulatory obligations imposed following detailed analyses of those markets. Such obligations include price controls such as, Price Caps specifying how prices move over time, detailed reviews of actual costs incurred, and affordable pricing under the Universal Service obligations. Such pricing controls are generally to protect consumers from any harmful market power which could lead to excessive prices.

According to their most recent strategy, ComReg's objectives and strategies for the electronic communications sector are as follows:

- The promotion of competition is a vital component of effective regulation and ensures the availability of a range of products and services to consumers, which offer them choice, quality and competitive prices.
- A competitive electronic communications market offers benefits to consumers in terms of attractive and transparent pricing, a wide range of choice in terms of services and suppliers and high quality services and products.
- Internal market - the regulatory framework within which ComReg operates has been set at a pan-European level by the European Union and is based on the principles of technological neutrality, regulation only where necessary and the primacy of competition law.

Wholesale: ComReg is responsible for the review of wholesale prices charged by operators that are deemed to have Significant Market Power ("SMP") on their network. Once operators are designated through the ComReg market Analysis process of having "SMP", remedies are imposed on them, one of which is a pricing obligation. This obligation can take different forms such as retail minus control; cost orientation, a price cap etc. Examples of the network charges that ComReg currently regulate are as follows:

- Eircom network charges for the provision of calls by other operators;
- Wholesale line rental;
- Wholesale Broadband Access;
- Mobile termination rates;
- Local Loop Unbundling;
- Payphones;
- Leased Lines;
- Number Porting;
- Ancillary charges associated with the provision of wholesale network services by operators.

Postal

Under section 12 (1) of the Act, ComReg has a statutory objective to "promote the development of the postal sector and in particular the availability of a universal postal service within, to and from the State at an affordable price for the benefit of all users".

- While there is no explicit objective to promote competition, in ComReg's view the availability of competing postal services, as envisaged in European and National Legislation, is the best way of ensuring that the Universal Service provided by An Post is fully reflective of customer needs.
- ComReg's powers and functions are provided for in The European Communities (Postal Services) Regulations 2002 S.I. No. 616 of 2002 ("the Postal Regulations").

- Specific functions of ComReg under the Postal Regulations include setting quality of service standards for An Post, monitoring performance against this target, issuing directions to An Post regarding accounting procedures to be adopted in the preparation of its regulatory accounts, monitoring compliance with Tariff Principles and specifying features of the universal service that An Post is obliged to provide.
- Under separate powers An Post cannot increase prices for reserved universal services without ComReg's concurrence.

In relation to the pricing of universal postal services, ComReg has two separate powers:

- Firstly and in accordance with section 70(2) of the 1983 Postal and Telecommunications Services Act (as amended) An Post "shall not increase any charge under a scheme under this section relating to a postal service reserved for the company under Regulation 8 of the European Communities (Postal Services) Regulations 2002 (S.I. No. 616 of 2002) without the concurrence of the Commission for Communications Regulation". Since January 2006, only postal services weighing up to 50g are reserved to An Post.
- Secondly, while ComReg's prior approval is not required for services that fall outside the reserved area, An Post has a legal obligation to ensure that such tariffs are geared to cost, affordable, transparent and non-discriminatory, and ComReg has a legal responsibility to monitor An Post's compliance.

Commission for Aviation Regulation

The Commission for Aviation Regulation (CAR) regulates certain aspects of the aviation and travel trade sectors in Ireland. It was established in February 2001 under the Aviation Regulation Act, 2001. The 2001 Act was subsequently amended by the State Airports Act, 2004 and the Aviation Act, 2006.

- CAR is an independent public body under the auspices of the Department of Transport, and is accountable to the Houses of the Oireachtas. CAR is required under Section 26 of the Aviation Regulation Act 2001 to prepare and submit an annual report to the Minister, who arranges for it to be laid before the Houses of the Oireachtas, after which the reports are published.
- CAR is guided in its actions by legislation governing the areas that it regulates.
- The principal function of CAR is in the area of price regulation (i.e. setting the maximum level of airport charges at Dublin Airport and Aviation Terminal Services Charges at Dublin, Cork and Shannon Airports).
- CAR is responsible, under EU legislation, for discharging Ireland's responsibilities for schedule coordination/slot allocation at Irish airports and the appointment where necessary of a schedules facilitator/slot co-ordinator.
- CAR is also responsible for licensing the travel trade in Ireland, and grants licences to both tour operators and travel agents.
- CAR also licenses airlines and approves ground handling services providers under regulations implementing EU legislation.

Section 23 of the Aviation Regulation Act 2001 empowers CAR to make regulations providing for the imposition, on relevant undertakings, of a levy to meet those costs and expenses

properly incurred in the discharge of its functions. Section 23 states that a levy should meet, but not exceed, CAR's estimated operating costs and expenses. Given that CAR's estimated costs and expenses change annually, new regulations to provide for resultant changes to the levy must also be made on an annual basis. For more detail, see http://www.aviationreg.ie/_fileupload/Image/ABOUT_PUB_Levy1_CP9_2007.pdf.

Price Regulation

In relation to price regulation, CAR:

- Sets a price cap limiting the total revenues per passenger that the DAA can collect from airport charges at Dublin airport. The price cap must facilitate the efficient and economic development and operation of Dublin Airport which meet the requirements of current and prospective users; protect the reasonable interests of those users; and enable DAA to operate and develop Dublin Airport in a sustainable and financially viable manner.
- Sets a price cap limiting the total revenues that the IAA can collect from aviation terminal services charges at Dublin, Cork and Shannon airports.
- Has to approve charges airports levy on airlines to fund services for passengers with reduced mobility.
- Has to approve any changes to the fees charged by the airport authorities at Dublin, Cork and Shannon airports for access to installations needed to provide ground handling services.

Appendix 5: Cost of Regulating Key Sectors

Table A1 outlines the operating costs for each sectoral regulator over the past decade, while Table A2 outlines the size of each sector.

Table A1: Regulators' Operating Costs (€m)

	CAR	CER*	ComReg**
2002	3.6	6	12.9
2003	4	9.5	13.4
2004	2.9	7.2	16.2
2005	3.7	9.8	21.7
2006	3.9	12.9	18.7
2007	4.5	14.6	19.2
2008	3.6	10.8	22.5
2009	4.1	10.4	23.2
2010	2.8	9.9	22.9
2011	2.4	9.8	N/A

Sources: 2002 to 2007 – EIU report, 2008 to 2011 – annual reports of the regulators.

Notes:

* The CER was given statutory responsibility for the regulation of the gas market ion the 30th April 2002.

**ComReg's financial year end is the 30th June. The 2011 annual report was not published at the time this paper was drafted.

Table A2: Size of Key Sectors

Market (Year)	Value
Aviation	N/A
Energy	€5.35 billion (approximate turnover for electricity and gas markets)
Telecoms (2011)	€3.83 billion (total revenue)
Water (2010)	€715 million (opex) + €500 million (capex)

Sources: Telecoms – ComReg Q4 2011 Report; Water – DECLG Position Paper, Jan 2012

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Vacancy Overview 2011 EGFSN	February 2012
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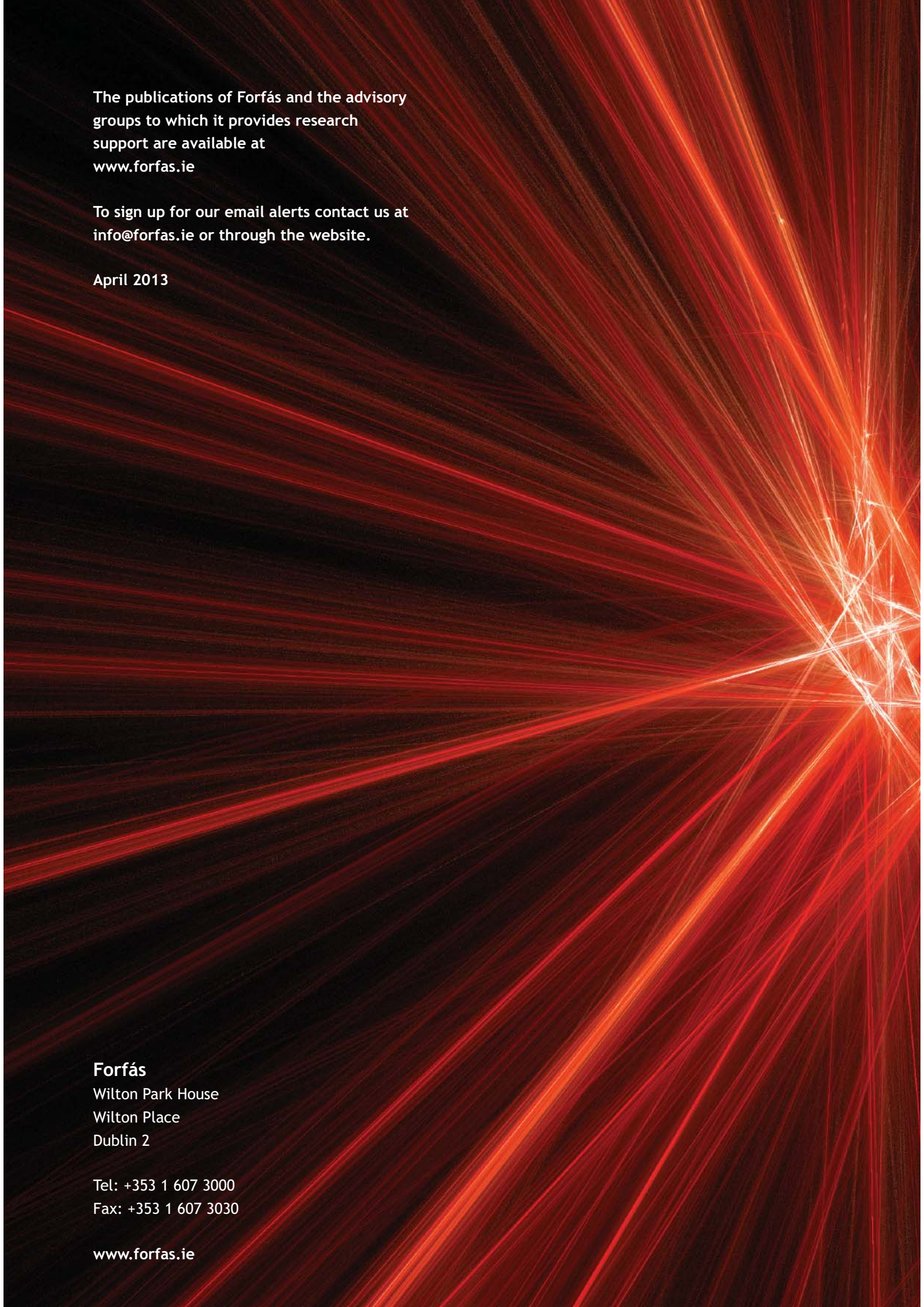
Ireland's Competitiveness Challenge 2011 NCC	January 2012
Strategy for Science, Technology and Innovation Indicators Forfás	December 2011
Review of Energy Competitiveness Issues and Priorities for Enterprise Forfás	December 2011



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