



Ibec Submission to the Green Paper on Energy Policy in Ireland

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Introduction - the context of the Ibec position

Ireland's economic outlook has changed dramatically since the DCENR last published an overarching national energy policy framework. Back in 2007, much of the emphasis was on ensuring security of supply and market liberalisation. In 2014, the issues of cost competitiveness and the roll-out of vital energy infrastructure have risen to the top of the business community's agenda. As European Union (EU) discussions progressed on the level of ambition for the 2030 climate and energy framework, the focus intensified on the potential effect of these targets on our ability to compete internationally.

Ibec hosted a series of thematic Green Paper Roundtables in October/November 2013 – they focused on Security of Supply & Infrastructure, Climate & Energy Efficiency, Regulation & Competitiveness, and culminated with Transport & Innovation. These roundtables spanned the breadth of the Ibec membership, including energy suppliers, generators, network operators, service providers and energy users. At a time when the goalposts themselves have been shifting, the following core themes echoed throughout the sessions:

- the need for a co-ordinated response across Government Departments;
- the need for robust Regulatory Impact Analyses for regulatory decisions and Cost Benefit Analyses for policy proposals;
- overcoming barriers to the timely delivery of vital energy infrastructure;
- the need for greater policy emphasis on maintaining national energy cost competitiveness while striving to meet EU-mandated targets on renewables, efficiency and greenhouse gas emissions;
- developing a cost-effective set of incentives and obligations to meet same targets;
- encouraging the beneficial exploitation of indigenous resources, both renewable and fossil;
- capturing a larger share of EU and national funding for R&D projects with commercial potential.

The basis of our submission therefore lies in the roundtable discussions. They provided an opportunity to debate the merits of current and proposed policies, and served as a forum to facilitate shared understanding of the various interests within the Irish business community. Ibec represents Irish business; home grown, multinational, big and small, spanning every sector of the economy.

Energy is a public good and a vital enabler of economic growth. Policymakers face the significant challenge of balancing energy security, energy competitiveness and sustainability. They must ensure such policies assist in the delivery of job retention, facilitate job creation and attract investment. With this in mind, Ireland must proceed cautiously and with an eye to maintaining our energy cost competitiveness, particularly compared to other EU member states. Ibec welcomes the publication of the *Statement of Government Priorities 2014 – 2016*, and the commitment to ensure that any “additional climate change and renewable energy targets for Ireland are fair and realistic, and take appropriate account of our particular national circumstances and economic challenges”. The promise of competitiveness-proofing new energy subsidies through cost-benefit analysis is also a positive development.

Key recommendations and observations

Priority 1: Empowering Energy Citizens

- The active involvement of the citizen in energy policy development is crucial to its success.
- Commission for Energy Regulation (CER) consultations can be technically complex and difficult to follow. There is a need for targeted and accessible consultation processes based on Regulatory Impact Analyses.
- The benefit of Smart Metering technology must be realised: the Time of Use tariff will result in cheaper electricity bills for responsive residential customers. The reduction of demand at peak times will undoubtedly bring indirect benefits for the business community.
- The Government must remove legislative barriers to the most cost effective compliance with national policy objectives.

Priority 2: Markets & Regulation

- The CER must ensure that our wholesale prices do not unduly diverge from those in Britain whenever indigenous sources come on stream. It is important that network costs do not drive a wedge between GB and the Irish wholesale price.
- Ireland's relatively high electricity costs must be addressed by means of a targeted relief mechanism operating alongside the market.
- DCENR should play a more active role in the on-going discussions on the I-SEM design.
- DCENR should conduct an impact analysis on the various transposed articles of Energy Efficiency Directive (EED), especially those with cost implications for industry.
- The implementation of the EED should not inhibit other policy goals such as the roll out of biomass or the electrification of heat and transport systems.
- A review of the regulatory framework review should include the cross-border governance and the accountability of SEM Committee decisions. It should also include the development of an appeals mechanism to function as a cost-effective alternative to Judicial Reviews.

Priority 3: Planning and Implementing Essential Energy Infrastructure

- Infrastructure should be selected and timed to balance security of supply and cost. Projects should be prioritised according to the impact they have on reducing Ireland's cost base (which remains high in many areas), enhancing the economy's productive capacity by removing bottlenecks or expanding infrastructural capacity to facilitate demographic change.
- Sustained and explicit Government support for key infrastructure projects, policy guidance on public participation and the publication of a streamlined inter-departmental strategy on infrastructure development is necessary to ensure projects are delivered in a socially acceptable, timely and cost effective manner.
- Investment in grid should be proportionate to demand growth projections and reflect the reality of renewable energy projects' out-turns. Moreover, in considering the potential benefit of future electrical interconnection, it is important to understand the possible adverse impacts on utilisation of gas infrastructure and gas-fired balancing generation.
- Political leadership is necessary to secure public support and deliver strategic energy projects of national importance. The higher financial and technical costs associated with the potential under-grounding of grid would add further costs for the end-user, disproportionate to the social and environmental benefit.

- The Strategic Infrastructure Act should be amended to include priority projects such as large-scale renewable energy projects.
- The Department of the Environment, Community and Local Government (DECLG) should issue guidance to planning authorities on the investment potential of projects - economic considerations should be considered in planning decisions.
- The regulation of development on the Foreshore is a critical issue in need of reform. Greater interaction between planning authorities, the DECLG and the EPA is necessary.
- The potential for joint oral hearings on specific projects involving a number of granting authorities should be examined.
- An Bord Pleanála guidelines for oral hearings should be put into statutory legislation.

Priority 4: Ensuring a Balanced and Secure Energy Mix

- Decisions aimed at reducing dependence on certain fuel sources, or indeed incentivising the deployment of others, should not be done at the expense of jobs in Ireland's manufacturing industries.
- Government policy must be underpinned by a cost-benefit framework based on structured and rigorous regulatory impact assessments. The substantive elements of regulatory decisions must be subject to a non-judicial appeals mechanism.
- The acute vulnerability of Ireland to an unplanned event at Whitegate Oil Refinery or Dublin Port needs to be addressed. Security of supply considerations for liquid fuels must be balanced with the most logistically sensible arrangement.
- The shift to natural gas and biogas for commercial fleets and the public transport sector would be greatly aided by supportive excise treatment, for example by the non-application of the European Energy Taxation Directive minimum rates for a period of 10 years.
- The failure of the gas infrastructure – even for a relatively short period - could have very serious consequences to Ireland.

Priority 5: Putting the Energy System on a Sustainable Pathway

- The existing target of 800 MWe installed CHP by 2020, which underpins Ireland's NEEAP, will not be met. A coherent and cost effective strategy is therefore necessary to incentivise fossil-fuel fired CHP and biomass/anaerobic digestion (AD) deployment.
- Compliance cost issue is likely to be a bigger problem for Ireland than for other EU member states. In order to ensure the most cost-effective and economically efficient realisation of non-ETS GHG targets, the Government should consider the optimal rather than minimal purchasing of statistical transfers from other member states.
- The Government should consider the merit of exchequer grants from ringfenced carbon taxation revenues to meet our ambitious energy efficiency objectives and protect the viability of energy-intensive industries.
- The EU ETS must be reformed to fund the required decarbonisation of the energy sector.
- Ireland's unique emissions profile highlights the sheer scale of the 2030 challenge – Ireland's EU negotiators should therefore resist accepting a 2030 national reduction target that is arbitrarily linked to relative *per-capita* GDP.
- All efforts must be made to ensure that our non-ETS obligations can be realised in the most cost-effective manner. Given Ireland's unique emissions profile, agricultural emissions should be dealt with as a sector at EU level.
- Ibec is concerned about the potential for energy savings targets to interfere with the decarbonisation agenda or hinder economic growth. The Government would be wise to consider the potential tensions between energy efficiency and carbon saving obligations.

Priority 6: Driving Economic Development

- Government must continue to invest in energy research and development. There needs to be greater involvement of industry in the research prioritisation exercise in order to better shape the forthcoming funding calls as well as identify areas to be supported by successor initiatives. This is particularly acute due to the level of ambition in the EU's 2030 climate and energy proposal, and the likely implications for Ireland's share of any burden.
- Government should develop an integrated framework to support investment in energy research, development and innovation in line with national and European objectives. Such a strategy should clearly incorporate measures to support commercial investment as well as mechanisms that will support R&D activities through the development and/or application of technologies, providing test-bed capabilities or trialling of 'green economy' concepts by the research and industry community.
- Ireland needs to take advantage of the opportunities that Horizon 2020 presents to the energy sector. A coordinated strategy should be developed by the European Advisors responsible for energy to allow Irish energy companies successfully position for upcoming funding opportunities.
- Companies should be encouraged to source international funding to support research, development and innovation in Ireland. This will require support through targeted training initiatives to identify, track and secure internationally available funds.
- The Office of Government Procurement, through the utility category council, should regularly engage with energy providers in order to develop the appropriate go-to-market strategies for energy procurement, taking into account customers' requirements, market dynamics and the savings required. The list of the membership of the utility category council and the procurement category lead should be published.

Priority 1 - Empowering Energy Citizens

The involvement and active participation of Irish citizens in the development of energy policy is crucial to its success. Ensuring citizens are central to debates on the future direction of energy policy requires a lot of effort but is arguably the best way to empower consumers to take control of their consumption and facilitate social acceptance of fit for purpose infrastructure. One of the International Energy Agency's key recommendations in 2012 stressed the need for Government to foster the understanding on the need for new infrastructure, and the reasoning behind it. It explicitly noted the need for the Government to enhance public awareness of the associated benefits in terms of security of supply, sustainability as well as improving cost competitiveness.

Early stage engagement with local communities is critical to building awareness of energy issues and gain support for infrastructure. A recent report by the National Economic and Social Council (NESC) points to a number of tools for better community engagement and a participative process that can ensure that local value is identified and shared in an equitable and transparent manner.¹ Their suggestions include shared ownership, community benefit schemes, energy efficiency measures and a range of options for discussion at community level may make some headway to stave off what appears to have been a marked shift in the mind-set of the energy citizen. At a time when huge investment is required in Ireland's energy infrastructure, development is increasingly viewed with suspicion by a growing number of citizens.

Engaging the business consumer

The sheer technical complexity of the policy area highlights the need for improved, tailored information: this is crucial if a broad understanding of issues is to be achieved. At a time when even the most energy intensive industries find it challenging to wade through the lengthy consultation documents, all efforts must be made to increase transparency and visibility of information, and to ensure the consultation process is accessible to those affected by the breadth of the decisions. Empowering the energy citizen depends upon effective communication from our decision makers. The recently published CER decision on the PSO Levy for 2014/15 is a stark example of how certain regulatory decisions can alienate or confuse consumers.² This particular decision fails to adequately explain why there should have been two consecutive years of percentage increase in the allocation of PSO cost burden to industry. Ibec does not wish to discuss the mechanisms for allocating the burden between the different categories of customers in this submission. However, we would have serious doubts as to whether this is a true reflection of what is actually happening.

In order to engage the consumer, decisions must be based on Regulatory Impact Analyses, underpinned by solid reasoning and step by step analysis. Ibec would urge that each and every policy decision is competitiveness-proofed. The maintenance of a competitive and effective market is imperative: energy costs remain an on-going challenge in restoring our international competitiveness, securing inwards investment and protecting our existing jobs. Large energy users need to see the balance between the three pillars and how these decisions are made.

A number of measures have the potential to remedy the price differential with our international competitors. This will require a complementary policy framework to steer a cost-effective pathway through this transitional phase.

¹ NESC, *Wind Energy in Ireland: Building Community Engagement and Social Support*, June 2014

² CER, Public Service Obligation Levy 2014/2015, CER14/361

Smoothing the pathway for the domestic consumer

There should be no missed opportunities. Smart Metering offers the potential to convey information and price signals to domestic customers on which they can base consumption decisions. Alerting customers of the higher cost of electricity at peak times and reducing demand at peak it will not only reduce costs for the domestic consumer, but could also indirectly assist the business community. These benefits could be enhanced if, for example, suppliers had timely access to the necessary information, subject to the privacy and data protection requirements, thereby enabling them to design tariffs relevant to customer needs.

There are barriers preventing the most cost effective compliance with national regulations. For example, the building regulations may prevent the most suitable and cost effective electrification of heat. Technologies such as smart electric thermal storage and heat pumps will result in energy saving and reduce carbon; however their take-up may be stifled by payback periods. With part of the benefit realised though carbon savings, the potential effectiveness of exchequer grants to drive projects of scale in the residential market must be carefully considered.

Summary

- The active involvement of the citizen in energy policy development is crucial to its success.
- Commission for Energy Regulation (CER) consultations can be technically complex and difficult to follow. There is a need for targeted and accessible consultation processes based on Regulatory Impact Analyses.
- The benefit of Smart Metering technology must be realised: the Time of Use tariff will result in cheaper electricity bills for responsive residential customers. The reduction of demand at peak times will undoubtedly bring indirect benefits for the business community.
- The Government must remove legislative barriers to the most cost effective compliance with national policy objectives.

Priority 2 - Markets, Regulation and Prices

The impact of wholesale and retail supply completion on electricity and gas prices

The progressive, intensively regulated opening of electricity and gas retail markets over the past several years has certainly brought more choice to end-users, domestic and commercial. However, it is unclear how much downward pressure this process has exerted on energy prices, compared to a counterfactual scenario in which these markets were simply opened to competition in a 'big-bang'.

For example, during the initial phase of liberalisation, CER typically obliged the incumbent supplier to offer regulated prices at levels sufficiently high for new suppliers to be attracted into the market. The idea was that competition between suppliers would be accelerated, and that the market would ultimately deliver lower retail prices and a better service offering than would have transpired simply through market forces. The underlying principle was sound, but Ibec is not aware of any Regulatory Impact Analysis (whether ex ante or ex post) to quantify the cumulative net benefit to energy users.³ There is some evidence to suggest that supply margins in the Irish electricity market are currently lower than those prevailing in the British (BETTA) market, but this may be due to other factors, such as greater transparency of wholesale prices. In any case, retail supply margins represent only a small component of the prices that end-users pay.

Irish wholesale gas prices remain closely correlated to those in Britain, which has a reasonably liquid and competitive traded futures market and spot market. The CER therefore needs to ensure that our wholesale prices do not unduly diverge from those in Britain whenever indigenous sources come on stream. It is important that network costs do not drive a wedge between GB and the Irish wholesale price. For gas users in the Republic of Ireland, therefore, the regulatory treatment of gas interconnector costs is arguably a more pressing issue than the establishment of all-island retail trading arrangements.

Wholesale prices in the Single Electricity Market do not correlate closely with those in Britain, despite significant additional HVDC interconnection being commissioned in recent years. The SEM has functioned well in terms of encouraging new entrants, and in facilitating the roll-out of renewables. However, in recent years it has also resulted in some of the highest wholesale electricity prices in the EU. This is partly the natural consequence of highly inflexible bidding rules applying to all generators in the market. As noted above, there is clearly a correlation between the wholesale gas price and the wholesale price of electricity: the sensitivity of the market to gas prices along with a number of additional factors have resulted in higher than average EU prices.

Ireland has a different fuel mix and/or market structure when compared to other member states. The international competitiveness of energy-intensive manufacturing companies located in Ireland is further frustrated by the fact that some fossil-fired plants (such as gas-fired plants) in other member states are heavily loss making. This is obviously not sustainable, but in the meantime Ibec believes that this problem urgently needs to be addressed by means of a targeted relief mechanism operating alongside the market.

A substantial number of member states across the EU have such measures in place to compensate large energy users for indirect costs associated with climate and energy policies. As outlined in the Ibec Pre-Budget Submission 2015, Ibec recommends the

³ This is not a criticism of the process, but more so a suggestion that consumer engagement could be enhanced with systematic impact analyses.

development of a financial instrument to assist energy-intensive firms facing international competitiveness pressures at times when Irish electricity costs are higher than the EU average. In the absence of a more suitable methodology, the criteria for site eligibility should be the same as that previously applied by EirGrid to the Large Energy User Rebate in 2011. This was determined on the basis of connection voltage. LEU customers are those connected at 38kV or above, many of whom are SMEs. However, Government could explore possible alternative criteria, provided that this did not delay implementation.

The Revenue Commissioners reported the collection of €353 million in carbon tax in 2012. We envisage that a small portion of this would need to be set aside. The proposed mechanism would be targeted and conditional. The proportion of this money disbursed in each year could be varied at the discretion of the CER, and only distributed to qualifying firms when Irish industrial electricity prices exceed the published EU average by €10 per MWh. The *Statement of Government Priorities 2014 – 2016* underlines the need to improve energy cost competitiveness and commits to conducting a cost-benefit analysis of all energy subsidies. Our proposal should be subject to such analysis.

Adapting the single electricity market to comply with the European Target Model

It remains to be seen whether (as previously suggested by the International Energy Agency's Review Team) the SEM rules could be progressively relaxed as the market matures. The potential future role of Directed Contracts should also be reviewed in the context of market reform, particularly if the I-SEM arrangements were to render them less necessary than hitherto. It remains unclear whether this will prove to be the case.

Ibec will be responding separately to the I-SEM consultation by the Regulatory Authorities. However, it is worth noting that some of our members have expressed concerns about aspects of the proposed design. We would also question whether the preliminary cost benefit analysis is sufficiently detailed, and whether it adequately considers the distributional effects under different interconnector flow assumptions.

Remit of the DCENR, CER and SEM Committee

The Green Paper states that the electricity market integration should be achieved at least cost and with maximum benefit to Irish end-users. Given that the final I-SEM design decision is to be formally signed off by the DCENR and DETI, we would strongly encourage DCENR to play a more active role in the on-going discussions. We would also encourage the DCENR to conduct an impact analysis on the various transposed articles of Energy Efficiency Directive (EED), especially those with cost implications for industry. We are concerned that it may be unnecessarily costly for energy suppliers because it introduces a number of supplementary policy objectives including the cost-effective achievement of energy savings, promotion of the Green Economy, and the alleviation of fuel poverty. Furthermore the EED must be implemented in a way that does not lead to adverse consequences, such as inhibiting other policy goals for example the roll out of biomass, or the electrification of heat and transport systems.

The CER's remit in respect of energy markets has switched from retail price regulation towards price monitoring. Arguably this is more, rather than less, resource-intensive. However, the CER has for some time been operating under considerable resource constraints. This has occasionally manifested itself in somewhat rushed consultations with unsatisfactory Regulatory Impact Analyses. Our members would therefore welcome the provision of additional expertise dedicated to energy markets and network tariffs.

The I-SEM project currently consumes only a small portion of the CER's resources. Ibec therefore does not see any need to for DCENR to scale back or defer its planned review of the Irish energy regulatory framework. Additional resources may however need to be co-opted into DCENR itself. Ideally, the scope of the regulatory framework review should include the cross-border governance and the accountability of SEM Committee decisions. It could usefully also include the development of an appeals mechanism to function as a cost-effective alternative to Judicial Reviews. Any such mechanism would, of course, need to be carefully structured so as to discourage frivolous or vexatious interventions, taking the materiality of such applications into account.

Ownership, operation and development of transmission networks

The Green Paper makes reference to European Commission communication COM (2013)2169 dated July 2013, which approved the current TAO/TSO arrangements subject to DCENR implementing various recommendations. We appreciate that the DCENR will need to take action on these within a 'reasonable period'. EirGrid and ESB Networks have been working on a collaborative basis to ensure the current arrangements work as well as is practicable in the meantime.

Summary

- The CER must ensure that our wholesale prices do not unduly diverge from those in Britain whenever indigenous sources come on stream. It is important that network costs do not drive a wedge between GB and the Irish wholesale price.
- Ireland's relatively high electricity costs must be addressed by means of a targeted relief mechanism operating alongside the market.
- DCENR should play a more active role in the on-going discussions on the I-SEM design.
- DCENR should conduct an impact analysis on the various transposed articles of Energy Efficiency Directive (EED), especially those with cost implications for industry.
- The implementation of the EED should not inhibit other policy goals such as the roll out of biomass or the electrification of heat and transport systems.
- A review of the regulatory framework review should include the cross-border governance and the accountability of SEM Committee decisions. It should also include the development of an appeals mechanism to function as a cost-effective alternative to Judicial Reviews.

Priority 3 – Planning and Implementing Essential Energy Infrastructure

Policy framework

A range of EU directives and regulations on climate change mitigation, promotion of renewable energy sources and completion of the internal energy market are driving strategic infrastructure investments on the island of Ireland, both by network operators and by private sector developers. Such projects are typically funded by end-users rather than by the exchequer. However, the risk-evaluation and subsequent selection of projects by developers is heavily influenced by energy policy decisions (e.g. renewable energy feed-in tariffs) or by regulatory decisions with commercial implications (e.g. allowed network charges, terms for connection offers, wholesale market bidding rules, dispatch principles and constraint/curtailment rules).

Projects should be prioritised according to the impact they have on reducing Ireland’s cost base (which remains high in many areas), enhancing the economy’s productive capacity by removing bottlenecks or expanding infrastructural capacity to facilitate demographic change. Infrastructure should be selected and timed to balance security of supply and cost. Sustained and explicit Government support for key infrastructure projects, policy guidance on public participation and the publication of a streamlined inter-departmental strategy on infrastructure development are necessary to ensure all projects are delivered in a socially acceptable, timely and cost effective manner.

Table 1: Summary table of project selection priorities

Criterion	Key issues
Current and future demand for infrastructure	Population growth Existing bottlenecks Export growth
Short-term economic impact	Labour intensity of project Proportion of employment in Ireland Time to get project on stream Completion of a larger project
Optimising benefit of existing infrastructure	Completion of networks and networked projects Remedying design flaws in existing infrastructure Preventing obsolescence of infrastructure projects already completed
Availability of external finance	Public-private partnerships European Investment Bank funding Reputational cost of project abandonment Capacity of the private sector to deliver the project
Medium to long-term needs of the economy	Impact on Ireland’s cost base Improves productive capacity of the economy Investment in areas of strategic economic importance
National, EU & International obligations	In line with new national NSS Meeting Ireland’s environmental/energy targets EU legal requirements

Energy infrastructure development

Ibec in its recent submission on the Capital Expenditure Programme 2015-2020 identified a number of criteria for selecting infrastructure projects (see table 1). Investment in strategic infrastructure may also be necessary to facilitate Ireland's compliance with binding national, EU and international obligations and targets to 2020. Ireland faces significant challenges in the energy area that require existing investment programmes to be maintained and in some instances expanded. Failure to meet these obligations may have the immediate impact of significant fines for the state, with long-term reputational and possible environmental damage.

Electricity

EirGrid's electricity transmission network investment programme, as outlined in *Grid 25*, aims to maintain system security on the island while facilitating a rapid expansion of wind generation capacity. Recent experience illustrates, however, that the progress of urgently-needed projects can be frustrated by local objections, despite the provisions of the Strategic Infrastructure Act. Investment in grid should be proportionate to demand growth projections and reflect the reality of renewable energy projects' out-turns. Moreover, in considering the potential benefit of future electrical interconnection, it is important to understand the adverse impacts on gas infrastructure and gas-fired balancing generation.

Vital infrastructure projects, such as the North-South Interconnector, will not only facilitate security of supply but will bring cost savings for all electricity consumers. The ongoing consumer cost associated with the resulting network constraints plus the increased cost of capital for energy infrastructure stemming from continued delays poses significant economic costs that Ireland can ill-afford. The higher financial and technical costs associated with the potential under-grounding of grid would add further costs for the end-user, disproportionate to the social and environmental benefit. Overall, political leaders would be wise to remember a balanced and prudent approach to developing our energy infrastructure is required in order to contain the network component in end-user tariffs.

European heads of state are set to discuss a European Commission proposal of a 15% power interconnection target in its proposals on enhancing energy security.⁴ Currently, member states' interconnection averages 8% of their installed production capacity. With greater impetus on interconnection at the EU level, policymakers should seek to yield net consumer benefit, with costs borne according to the principle of *cui bono*. Any proposed interconnection in the interest of the public good and funded on a regulatory asset basis must be based on sound economic principles and underpinned by cost benefit analysis on a case by case basis. Greater European market integration should not disproportionately burden either interconnected party from a cost perspective. With this in mind, policymakers must ensure that Irish based consumers receive a net benefit.

Gas

The International Energy Agency's (IEA) Ireland 2012 Review identified improved security of gas supply as a key policy issue for Government. Gas accounts for 30% of Ireland's primary energy consumption.⁵ Conventional gas-fired generators on the island will continue to play a vital role in providing baseload and mid-merit generation as well as spinning reserve and other ancillary services. A complementary infrastructure is therefore necessary to facilitate the flexibility our energy system requires. This could be delivered by a range of strategic infrastructure, including new indigenous sources or storage reservoirs. The monetization of such projects could involve complex regulatory decisions, possibly in multiple jurisdictions,

⁴ European Council Conclusions, 26/27 June 2014, EUCO 79/14

⁵ SEAI, *Energy in Ireland 1990-2012*, 2013 Report

for which a robust framework remains to be put in place. Similar issues are also potentially relevant for investment in infrastructure for other transport and heating fuels, whether fossil or biomass.

Oil

Oil has long been a significant input to Ireland's energy mix and will continue to do so for a considerable time to come. Ireland's primary energy mix continues to be dominated by oil (45%) and 57% of final energy demand.⁶ Our supply depends on one oil refinery delivering one third of demand with the balance of supply imported from the UK and elsewhere in Europe. The challenges facing Europe's oil refining industry has implications for Ireland. Falling demand, increasing legislative pressures and competition from refineries outside the EU that do not face the same legislative constraints is having an adverse impact. As diversity of natural gas and electricity, including indigenous supply are key aspects of Ireland's energy policy, likewise for oil this diversity can be achieved through indigenous refining and product importation infrastructure. Policies to encourage these options will assist in the objective of security of supply. Considerable progress has been made in locating physical oil stocks in Irish jurisdiction or on the island of Ireland. Continuing this progress with strategic oil stocks is a positive factor for oil security but the resilience of supply rests with the commercial oil companies operating in the state. Given the vital role of commercial companies in maintaining the strategic oil infrastructure, policies must include measures to protect the infrastructure and encourage on-going investment.

What is needed?

A new National Spatial Strategy is urgently needed and should lead to more effective regional development. The new strategy needs to take into account the current economic context and prioritise development initiatives for most effective growth. The current strategy covering the period 2002-2020 has failed to provide its stated objective of achieving a better balance of social, economic and physical development across Ireland, supported by more effective and integrated planning. The new National Spatial Strategy should provide long-term clarity and certainty for business and citizens when making important decisions on where to locate particularly with regard to economic and infrastructural development.

The Strategic Infrastructure Act is widely regarded by many of our members as best practice, but a number of measures would assist in the timely development of vital infrastructure. The existing structure of the planning regime in Ireland has significant financial and resource implications for those charged with its delivery. There needs to be political leadership on community acceptance for major projects, underpinned by a collaborative planning approach. Unnecessary delays due to the planning delays typically add up to a year to the procurement process for a project. The planning process should therefore be reformed to take into account economic and strategic considerations. There must be greater certainty in the expected planning process timelines (e.g. set timelines should be adhered to), transparency around the entire planning process and better interaction between the myriad of bodies involved in granting approval to commence construction of strategic infrastructure. The planning process should not be a source of additional risk for much needed infrastructure projects.

Government is in the process of taking a number of steps to address problems with the planning process. It is to introduce a new Planning Bill and is committed to establishing the Office of the Planning Regulator, which will carry out independent appraisal of all relevant statutory plans (e.g. local area plans, development plans, regional planning guidelines etc). An Bord Pleanála (ABP) has also improved its timeliness with regard to decision making

⁶ SEAI, *Energy in Ireland 1990-2012*, 2013 Report

through the appointment of additional board members and by implementing reduced quorums. ABP is currently reviewing mechanisms to improve the Strategic Infrastructure process. It has also been designated Ireland's competent authority for planning and permitting projects of common interest under the EU's Trans-European Energy Infrastructure programme. Nevertheless, a number of process rigidities constraining infrastructure delivery remain.

What reforms are necessary?

The Strategic Infrastructure Act should be amended to include priority projects (it was amended in 2010 to include large healthcare facilities) such as large-scale renewable energy projects etc. For example, as recommended in the IEA's 2012 Review, Government should further enhance the consultation, planning and consenting process, with an emphasis on balancing the concerns of local communities with the economic, social and security benefits of proposed critical energy infrastructure projects. The availability of critical services has a major impact on the ability to provide adequate infrastructure. The provisions of supporting infrastructure should be prioritized where it is resulting in delays in major projects.

While the Strategic Infrastructure Act allows important projects to be fast-tracked through the planning system once they are designated, the designation process itself is slow and requires review. Owners/operators of facilities listed in Schedule 7 of the Planning Acts should be specifically consulted with respect to any such review, to gain an understanding of the, albeit unintended, consequences of this statutory procedure.

It is vital that proposals that may bring investment are processed as quickly as possible. The Department of the Environment, Community and Local Government (DECLG) should issue guidance to planning authorities on the significance of potential projects that should be accorded to economic considerations in the making of planning decisions (this is the case in Northern Ireland for example).

The regulation of development on the Foreshore is a critical issue in need of reform. Greater interaction between planning authorities, the DECLG and the EPA is necessary. Progress on the Maritime Area and Foreshore (Amendment) Bill has been very slow to date. The current framework does not enable the full economic potential of our marine resources in foreshore licensing.

The development of vital energy infrastructure would benefit from the rationalisation during the planning process. ABP guidelines for oral hearings should be put into statutory legislation. In order to streamline the process, the potential for joint oral hearings on specific projects involving a number of granting authorities (e.g. ABP, EPA etc) should be examined in tandem with the introduction of a single competent authority for all consents, including planning, foreshore.

In conclusion, the acknowledgement of a 'social licence' being needed by energy infrastructure developers should not entail acceptance of unduly burdensome planning procedures or vexatious delaying tactics by other stakeholders.

Summary

- Infrastructure should be selected and timed to balance security of supply and cost. Projects should be prioritised according to the impact they have on reducing Ireland's cost base (which remains high in many areas), enhancing the economy's productive capacity by removing bottlenecks or expanding infrastructural capacity to facilitate demographic change.

- Sustained and explicit Government support for key infrastructure projects, policy guidance on public participation and the publication of a streamlined inter-departmental strategy on infrastructure development is necessary to ensure projects are delivered in a socially acceptable, timely and cost effective manner.
- Investment in grid should be proportionate to demand growth projections and reflect the reality of renewable energy projects' out-turns. Moreover, in considering the potential benefit of future electrical interconnection, it is important to understand the possible adverse impacts on utilisation of gas infrastructure and gas-fired balancing generation.
- Political leadership is necessary to secure public support and deliver strategic energy projects of national importance. The higher financial and technical costs associated with the potential under-grounding of grid would add further costs for the end-user, disproportionate to the social and environmental benefit.
- The Strategic Infrastructure Act should be amended to include priority projects such as large-scale renewable energy projects.
- The Department of the Environment, Community and Local Government (DECLG) should issue guidance to planning authorities on the investment potential of projects - economic considerations should be considered in planning decisions.
- The regulation of development on the Foreshore is a critical issue in need of reform. Greater interaction between planning authorities, the DECLG and the EPA is necessary.
- The potential for joint oral hearings on specific projects involving a number of granting authorities should be examined.
- An Bord Pleanála guidelines for oral hearings should be put into statutory legislation.

Priority 4 – Ensuring a Balanced and Secure Energy Mix

Developing an effective energy policy for Ireland highlights the tripartite challenge facing policymakers in balancing energy security, energy competitiveness and sustainability. The impacts of these energy policy decisions have long-term, cross-sectoral impacts on economy and society. Therefore any decisions aimed at reducing dependence on certain sources, or indeed at incentivising the deployment of others should not be done at the expense of Ireland's manufacturing industries. Other EU member states have recognised the competitiveness challenge faced by their energy-intensive firms as a result of energy policies, and have responded by putting schemes in place to offset such costs. Energy policy choices and the associated pathway must not adversely affect the competitiveness of Irish industry competing in international markets.

Policy and regulatory framework

Energy is a capital intensive sector. Government and regulators should ensure that future regulatory and policy decisions do not adversely impact the cost of capital and the resulting price for the end-user. As noted in the previous section, political leadership and streamlined regulation will provide certainty for society, business and potential investors.

This will attract investment at a reasonable cost of capital whilst not burdening consumers with inappropriate or unnecessary costs. On the regulatory front, government policy must be underpinned by a cost-benefit framework based on structured and rigorous regulatory impact assessments. Decision-making must be based on transparent reasoning, reinforced by the principle of proportionality. Substantive elements of regulatory decisions must be subject to an equitable appeals mechanism.

A number of challenges require robust legislative and regulatory guidance, these include: EU mandated national targets, the development of timely delivery of vital energy infrastructure, encouraging the exploitation of indigenous renewable and fossil resources and the redesign of electricity and gas markets in accordance with the European target models. The transition to new arrangements should provide an enduring solution that is able to adapt to further change. A piece-meal approach would create the potential for regulatory uncertainty and sub-optimal outcomes leading to unnecessary costs and obstacles to investment.

Energy policy to date would suggest it is the Government that directs policies in terms of fuel mix, market design and energy security.

Coal

In recent years, coal power generation capacity was upgraded with potential for significant life extension. Coal-fired generators accounted for 25% of total electricity generation in 2012.⁷ The EU ETS was designed to reduce emissions (via the cap), to do so cost effectively (via trading) and as a consequence of the price established by trading, inform operational and investment decisions. It is based on a market mechanism that provides participants with freedom as to the best way to achieve their objectives.

Other jurisdictions are leaning towards emissions performance standards for new generation that would effectively preclude unabated coal generation. We appreciate the sentiment behind it, but it does appear to be a form of double regulation if implemented alongside the ETS. Whilst this does not seem likely to occur in Ireland, the decision on the replacement of

⁷ SEAI, *Energy in Ireland 1990-2012*, 2013 Report

coal generating plants should be a commercial decision for their owners, rather than a policy decision. The economic calculation will be contingent on the expected future market design.

Renewable energy

The *Strategy for Renewable Energy: 2012-2020* recognises many of the challenges that arise in developing a high-level of renewable electricity and integrating it into the Irish electricity system, but it fails to address coherently the core issue of public acceptance of the strategy being pursued.⁸ A much deeper level of engagement, underpinned by a whole of Government approach, will be required for the general public to become more supportive. The lack of a consistency between planning policy objectives is also creating a barrier to the delivery of renewable targets.

Ibec welcomes the recent announcement of a forthcoming national Bioenergy Plan. Renewable energy sources for the heating and cooling sector is the most challenging trajectory in the National Renewable Energy Action Plan. Measures such as the introduction of a Renewable Heat Incentive (RHI) scheme should reduce the barrier to the achievement of the RES-H target.

Oil

As noted in the previous section, oil accounts for 45% of Ireland's primary energy mix and 57% of final energy demand.⁹ While oil represents a significant input into the energy mix, it receives very little attention in the policy space. The Green Paper asks for options to incentivise switching to lower-carbon heating fuels. While we are aware of innovative improvements in heating that will displace oil in the long-term, Ireland will be highly dependent on oil for the foreseeable future.

All of Ireland's petroleum products requirements are either supplied by the Whitegate Oil Refinery or by product imports from other countries (principally GB). 70% of the latter are moved through Dublin Port. Thus it would appear that Ireland would be extremely vulnerable if, for whatever reason, either the Whitegate refinery or Dublin Port were to become inoperable. The just-in-time nature of products distribution and lack of commercial storage in Ireland suggests that significant shortages of all products would emerge within a relatively short period. It is difficult to see how any unplanned event that prevented either the operation of the Whitegate Refinery or product imports through Dublin Port could be accommodated or alternative replacement facilities could be made available in the short term. Additional imports could be moved through the new deep water terminal at Shannon Foynes, but the availability of the existing road tanker fleet would make distribution extremely challenging. Thus, Ireland would seem to be largely dependent on only two facilities for its physical oil product supply at this time, both of which have to operate at a high levels to supply the market and neither of which can be substituted. There is very little onshore commercial stock to provide back-up in the event of unplanned unavailability.

NORA (the National Oil Reserve Agency) has moved a significant portion of its oil stocks onto the Island of Ireland. However these stocks are held under international obligations and are not available as an insurance policy against poor infrastructure and a lack of commercial storage.

The acute vulnerability of Ireland to an unplanned event at Whitegate Refinery or Dublin Port needs to be addressed. Security of supply considerations must be balanced with the most logistically sensible arrangement. For example, a cost benefit analysis should be conducted

⁸ DCENR, *Strategy for Renewable Energy: 2012-2020*, May 2012

⁹ SEAI, *Energy in Ireland 1990-2012 (2013 Report)*

on the merits of developing an exchequer funded central depot to supply plants. It would be worthwhile to investigate the availability of existing storage capacity (i.e. ports, refineries) to fulfil that role.

Gas

Government policy should promote a competitive gas supply mix based on indigenous and imported sources of gas, recognising that security of supply is improved by diversity of supply and subject to an appropriate regulatory framework. Ibec recognises that EirGrid's 'DS3' project is an important element in ensuring that the electricity system continues to operate reliably in the future. However, other complementary measures may be needed to ensure that the market can deliver the necessary investment in non-renewable balancing plant. Gas is seen as a flexible fuel in the power generation process, and its ability to be a carrier for renewable energy in terms of blending is widely recognised.

Natural gas plays a considerable role in both the electricity and heating sectors today and the role could be extended to the transport sector, through the use of either Compressed Natural Gas (CNG) or biomethane. The proposal for a Directive on the deployment of alternative fuels infrastructure instructs each Member State to adopt a policy framework for the market development of the necessary infrastructure. It sets out a series of targets for an appropriate number of natural gas refuelling points during 2025-2030.¹⁰ There are a number of CNG refuelling stations in Belgium and France, while a UK based company is developing a commercial refuelling infrastructure model. In Ireland, the shift to natural gas and biogas for commercial fleets and the public transport sector would be greatly aided by supportive excise treatment, for example the non-application of the European Energy Taxation Directive minimum rates for a period of 10 years.

Asides from the development of the network infrastructure to facilitate the deployment of natural gas in transport, a number of Ibec members who current use other fuels are constrained from using gas as the network is not available.

At this time, Ireland imports some 95% of its gas through two pipelines that link into the GB national gas transmission system at Moffat in Scotland. A third pipeline runs from Scotland to Northern Ireland. A single failure at this point could interrupt all supplies to the island of Ireland. Moreover, there are other potential areas of the system that make it extremely vulnerable to unplanned events. Other than linepack in the Irish gas transmission system and storage at South West Kinsale (which has very low deliverability rates compared with Irish demand), there is effectively no gas storage on the island.

In 2012, Ireland generated about 49% of its electricity by gas.¹¹ At periods of low wind availability, this would rise significantly. Thus Ireland would be extremely vulnerable to any failure of the gas infrastructure – even for a relatively short period. Any Low Probability High Impact event could have very serious consequences to Ireland and could, at the extreme, result in widespread electricity shortages and a lack of gas for central heating during the winter.

This vulnerability has been understood for a number of years. In 2012, the ESRI estimated the cost of natural gas outages in Ireland. According to the study, losing gas-fired electricity would cost 0.1–1.0 billion euro per day, depending on the time to the week, the time of year and rationing. If gas-fired electricity is unavailable for three months, the economic loss could be up to 80 billion euro. The costs of a 90 day gas disruption in Ireland would far outweigh

¹⁰ European Commission, Proposal for a Directive of the European Parliament and of the Council on the deployment of alternative fuels infrastructure, COM 2013/18

¹¹ SEAI, *Energy in Ireland 1990-2012*, 2013 Report

the cost of investing in a 90 day storage facility.¹² In practice, this issue could be addressed by storage or more secure interconnection; in either case a cost benefit analysis is required.

Indigenous

Peat continues to be an important native energy source contributing to our energy security and accounting for 53% of total indigenous energy production in 2013¹³. While peat remains one of the cheapest fossil fuels for power generation in Ireland, its carbon intensity is higher than that of bituminous coal. In this regard, the Green Paper acknowledges government policy and the work done in transitioning existing peat generation assets to co-firing biomass units capable of generating *dispatchable* RES-E. The existing stations delivered over 6% of the island of Ireland electricity demand in 2013¹⁴. The policy of successfully transitioning to biomass co-firing at peat generation plants is to be encouraged. However misalignments between agriculture, waste management policy (that can create indigenous biomass supply) and energy policy (that creates biomass demand) need to be addressed.

Energy security is inextricably linked to international resource investment: greater regulatory certainty on the associated tax regime for petroleum and natural gas extraction will assist in attracting investment. Ireland is fortunate to have indigenous supplies of gas coming on stream next year. However, the government must address as a matter of urgency the damage to Ireland's international reputation as a good place for energy resource investment.

Summary

- Decisions aimed at reducing dependence on certain fuel sources, or indeed incentivising the deployment of others, should not be done at the expense of jobs in Ireland's manufacturing industries.
- Government policy must be underpinned by a cost-benefit framework based on structured and rigorous regulatory impact assessments. The substantive elements of regulatory decisions must be subject to a non-judicial appeals mechanism.
- The acute vulnerability of Ireland to an unplanned event at Whitegate Oil Refinery or Dublin Port needs to be addressed. Security of supply considerations for liquid fuels must be balanced with the most logistically sensible arrangement.
- The shift to natural gas and biogas for commercial fleets and the public transport sector would be greatly aided by supportive excise treatment, for example by the non-application of the European Energy Taxation Directive minimum rates for a period of 10 years.
- The failure of the gas infrastructure – even for a relatively short period - could have very serious consequences to Ireland.

¹² Leahy, Devitt, Lyons, & Tol, “*The cost of natural gas shortages in Ireland*”, 2012.

¹³ SEAI “*Ireland's Energy Balance 2013*”

¹⁴ CER, “*Fuel Mix Disclosure and CO₂ Emissions 2013*”, CER/14/297

Priority 5 - Putting the Energy System on a Sustainable Basis

The Green Paper notes that the shift to cost effective sustainable energy lies in the promotion of energy efficiency, the development of renewable energy and the progression of smart grid technologies, while recognising the trade offs between the objectives of competitiveness, security of energy and sustainability. An overarching strategy is necessary to inform Ireland's efforts in meeting energy efficiency, climate change and renewable energy objectives in a cost-effective, timely and coherent manner

The EU's current energy and climate infrastructure does not sufficiently address the "Energy Trilemma" – the 2030 climate and energy framework presents an important opportunity to provide clarity, based on realistic and evidence-based objectives that permit the required flexibility to meet targets in a cost-effective manner. It is important that the current challenges are fully debated in advance of final agreement by EU heads of state on the 2030 framework in October 2014.

Challenges in the implementation of the current framework

Targets

A range of national policy instruments and government strategies underline the critical and growing component of renewable energy supply to Ireland's energy mix from 2020 and beyond. However, renewable targets will not necessarily make an impact on our non-ETS greenhouse gas reduction targets, which are arguably the most ambitious in the EU.¹⁵

Ireland's legally binding RES target of 16% total final energy consumption from renewable sources will contribute to the achievement of the overall goal of the EU of 20% by 2020. Member States must achieve their individual target across three sectors (electricity, heat and transport). Ibec supports the achievement of Ireland's 16% target in an effective, coherent and economically rational manner. However, the significant effort to meet the legally binding target of 16% should not be underestimated – achievement of the sub-targets for renewable heating and renewable transport energy in the National Renewable Energy Action Plan (NREAP) will require additional measures to those currently planned.

	2009	2010	2011	2012	Target
RES-E	13.7	14.9	17.6	19.6	40
RES-T	1.9	2.4	2.4	2.4	10
RES-H	4.2	4.3	4.7	5.2	12
% of renewable consumption across 3 sectors	5.1%	5.6%	6.5%	7.1%	16%

Source: NREAP

The NEEAP (National Energy Efficiency Action Plan)/NREAP scenario as modelled by SEAI sets a challenging course with a full implementation of the all measures contained in the NEEAP; 4000MW of renewable electricity; 200,000 electric vehicles; around 400 million litres of biofuel sales, as well as the delivery of ktoe of renewable heat.¹⁶ DCENR's recent announcement of a proposed exchequer-funded Renewable Heat Incentive (RHI) scheme (as part of its forthcoming Bioenergy Strategy) is a welcome development for "larger commercial and industrial installations" outside of the ETS. The Strategy will also hopefully provide a framework to address the incentives that exist in neighbouring jurisdictions. While we look forward to the publication of the national Bioenergy Plan, it is important that

¹⁵The Effort Sharing Decision (406/2009/EC) set the non-ETS target on the basis of member states' relative wealth (measured by Gross Domestic Product per capita). Ireland received a 20% emissions reduction target by 2020 (from 2005 levels)

¹⁶ DCENR, *National Energy Efficiency Action Plan – Second Progress Report*, May 2014

coherent and cost effective policies are in place to incentivise fossil-fuel fired CHP and biomass/anaerobic digestion (AD) CHP if the target of 800 MWe by 2020 of installed CHP is to be met.

Because of the NREAP's emphasis on RES-E, the highest penetration of renewable energy will be in the EU ETS sector. It is therefore quite likely that we will have a shortfall against our non-ETS greenhouse gas (GHG) target for 2020 even if the RES and energy efficiency targets are fully met. In order to ensure the most cost-effective and economically efficient realisation of non-ETS GHG targets, the Government should consider the optimal rather than minimal purchasing of statistical transfers from other member states.¹⁷ In order to optimise the quantity of such purchases, it would be helpful to have a review body with technical and economic expertise to conduct Cost-Benefit analyses. Conceivably this role could be fulfilled by the Expert Advisory Body envisaged in the DECLG's Climate Bill.

Competitiveness

Eurostat data for the second semester of 2013 confirms that large energy users in Ireland are already subject to some of the highest retail electricity prices in the European Union. The competitiveness challenge faced by some of our exporting firms is further intensified as a number of Member States in the EU have compensatory schemes in place for their energy-intensive firms to offset some of the costs associated with national climate and energy objectives. Irish based industry simply cannot afford for energy policy to drive and fund Government policies on 'cleantech' industrial policies or social welfare. Ireland has ambitious energy efficiency policy and a national target of 20% energy savings by 2020. The first phase in the transposition of the Energy Efficiency Directive, the Energy Efficiency Obligation Scheme, obliges energy suppliers to fund the achievement of energy savings by end-users.¹⁸ The scheme also aims to address the elimination of Fuel Poverty and also promotes the creation of "green" jobs in targeted sectors of the economy. While these are worthwhile objectives, the legislation contravenes the principle of least-cost delivery of the target of energy savings. We caution over expectation to the scale of energy saving opportunities, and the costly "buy-out" prices for some sectors which will most likely be passed on to consumers.

With this in mind, the government should resist from ruling out a return to grant aid in the future. Certain sectors are suited to grant aid and deliver efficiencies. Since 2009, the Better Energy Homes and Warmer Homes schemes upgraded over 250,000 homes, and the Better Energy Work Programme delivered 340 projects.¹⁹ If the alternatives to grant funding (Energy Efficiency Fund and 'Pay As You Save') fail to provide adequate progress to our 2020 targets, a revised approach may be required. There are a number other measures which could support the Better Energy objectives, including:

- A regulated minimum BER rating for rental property
- A property tax discount and tax credits
- Low cost finance and programmes to assist Irish based companies apply for EU funding.

The limited scale of energy savings opportunities, and the costs associated with these savings run the risk of increasing energy costs. Therefore, Ibec would ask DCENR to

¹⁷ The European Commission stated in its "*Analysis of options beyond 20% GHG emission reductions: Member State result*" (SWD 2012/5 final) that those member states that underachieve their targets are assumed to acquire excess emission allocations from Member States that overachieve their target.

¹⁸ *Energy Efficiency Obligation Scheme Regulation*, Statutory Instrument 131 2014.

¹⁹ SEAI, *Ireland's Sustainable Energy Supply Chain Opportunity*, 2014.

consider the merit of exchequer grants from ringfenced carbon taxation revenues. To do otherwise is regressive and has the potential to damage competitiveness.

European Union's 2030 framework for climate and energy

Climate policy

A GHG emissions reduction target is the most appropriate policy measure if the primary objective is decarbonisation. The deployment of renewable technologies and energy efficiency measures are simply means by which to achieve climate change mitigation. Energy efficiency investment is often presented as a 'no regrets' option. However, caution is needed where mandatory targets are imposed or where energy savings objectives are conflated with social objectives. Moreover, the amount of renewables investment mandated by RES targets may or may not coincide with the optimal approach for cost-effective GHG reduction. Ireland's economic interests should not be further damaged by uncoordinated policy initiatives that unnecessarily add costs.

The EU's 2030 policy framework for climate and energy includes the 40% reduction of GHG emissions relative to 1990 levels at the core of the proposal. It suggests a 27% binding EU level renewable energy target.²⁰ The proposal is accompanied by an Impact Assessment that sets out the analysis underpinning the targets. The climate and energy targets are based on a reference scenario prepared by the European Commission that takes into account a series of forecasts and assumes a full implementation of policies adopted by 2012.

According to the assumptions used in the Commission's Impact Assessment, the resulting projections show a decline in total GHG emissions of:

- 24% in 2020;
- 32 % in 2030;
- 44 % in 2050.

The European Commission considered that the most cost-effective way to achieve the objective of 80-90% GHG reductions by 2050 would be to set the target at 40% without international offsets which means all efforts to reduce emissions have to take place within the EU.²¹ The EU Low Carbon Roadmap highlights the importance of the ETS in driving low carbon technologies into the market and the need for a sufficient and long-term carbon price signal. If renewable subsidies are to be phased out after 2020, it is crucial that the EU ETS is reformed to fund the required decarbonisation of the energy sector. The current framework is underpinned with parallel measures on carbon leakage to protect those energy-intensive industries that are at threat from international competition. Given that the purpose of a reformed EU ETS is to provide the necessary financial incentives (i.e. higher CO₂ prices) to pursue decarbonisation, an exchequer funded scheme should be created to assist eligible energy-intensive firms at times when electricity costs exceed the European average by €10MWh or more.²² A number of other member states introduced national schemes to offset the indirect costs associated with climate and energy policies. Employment in established industries must be protected in the event of increasingly uncompetitive electricity costs.

²⁰ European Commission, A policy framework for climate and energy in the period from 2020 to 2030, COM(2014)15.

²¹ European Commission, A Roadmap for moving to a competitive low carbon economy in 2050, COM(2011) 112 final.

²² Visit [www.lbec.ie/IBEC/Press/PressPublicationsdoelib3.nsf/vPages/Newsroom~budget-2015-tax-less,-invest-more---lbec-06-07-2014/\\$file/lbec+Budget+2015+submission.pdf](http://www.lbec.ie/IBEC/Press/PressPublicationsdoelib3.nsf/vPages/Newsroom~budget-2015-tax-less,-invest-more---lbec-06-07-2014/$file/lbec+Budget+2015+submission.pdf)

Under the terms of the 2030 framework proposal, the sectors covered by the EU ETS would have to reduce emissions by 43%, while emissions from the non-ETS sectors would have to reduce by 30% compared to 2005 levels. The European Commission intends these targets should be shared equitably between member states.²³ Ireland's unique emissions profile highlights the sheer scale of the 2030 challenge – the Environment Protection Agency's non-ETS 2030 projections for the combined contribution of the agriculture and transport sectors is 80%. The *With Additional Measures Scenario* points to significant growth in emissions from the transport sector between 2020 and 2030, predicting an increase to the non-ETS emission total from 30% in 2020 to 36% in 2030.²⁴ University College Cork's Energy Policy & Modelling Unit modelling (PRIMES 40/80 Scenario) resulted in a very large gap relative the European Commission's findings upon which they based their proposal for a 2030 climate and energy policy framework.²⁵ Ireland's EU negotiators should therefore resist accepting a 2030 national reduction target that is arbitrarily linked to relative *per-capita* GDP.

Agriculture

Ireland provides the ideal location to produce high quality food of low carbon intensity within the EU. The current target for the Irish non-ETS sector perversely penalises this opportunity. All efforts must be made to ensure that our non-ETS obligations can be realised in the most cost-effective manner. Agricultural emissions should be dealt with as a sector at EU level similar to the EU ETS. Land-use, land-use change and forestry (LULUCF) should be included in the GHG reduction target.²⁶ If agreement is reached in treating agricultural GHG emissions in a different way post-2020, it will have implications for the level of emission reductions by other sectors of the Irish economy. This must be considered in developing national energy and climate policies.

Energy Efficiency

The European Commission proposed an ambitious energy efficiency target of 30% by 2030.²⁷ This follows the review of the Energy Efficiency Directive and reflects the National Energy Efficiency Action Plans of the EU member states. While the energy efficiency agenda has been reinvigorated by security of supply concerns and the desire to reduce energy imports, Ibec would caution the potential for energy savings targets to interfere with decarbonisation policy instruments or hinder economic growth. Policymakers would be wise to consider the potential tensions between energy efficiency and carbon saving obligations. For example, the Communication from the Commission pays special attention to the non-ETS sectors for additional measures to improve energy efficiency, notably buildings and related products.²⁸

Furthermore, as noted by BUSINESSEUROPE, increasing energy efficiency has always been viewed as diminishing the amount of energy needed for the same process or product, such as increasing energy productivity. On the contrary, an absolute reduction of energy consumption would provide the wrong incentive to “consume less” and risk capping future growth prospects instead of “being more efficient”.

²³ European Commission, Commission Staff Working Document, Impact Assessment, A policy framework for climate and energy in the period from 2020 to 2030, SWD(2014)15.

²⁴ Environmental Protection Agency, *Ireland's Greenhouse Gas Emission Projections, 2013-2030*, May 2014.

²⁵ The EU PRIMES Ref scenario is used by the European Commission in their 2030 Impact Assessment as a reference point to measure the level of 2030 policy ambitions.

²⁶ LULUCF covers greenhouse gas (GHG) emissions into and removal of carbon from the atmosphere resulting from soils, trees, plants, biomass and timber.

²⁷ European Commission, *Energy Efficiency and its contribution to energy security and the 2030 Framework for climate and energy policy*, COM (2014) 520 final

²⁸ *Ibid*

While the European Commission has prioritised the development of the business case for investment by the private sector, it does not discount the potential for public funding of energy efficiency objectives.

Summary

- The existing target of 800 MWe installed CHP by 2020, which underpins Ireland's NEEAP, will not be met. A coherent and cost effective strategy is therefore necessary to incentivise fossil-fuel fired CHP and biomass/anaerobic digestion (AD) deployment.
- Compliance cost issue is likely to be a bigger problem for Ireland than for other EU member states. In order to ensure the most cost-effective and economically efficient realisation of non-ETS GHG targets, the Government should consider the optimal rather than minimal purchasing of statistical transfers from other member states.
- The Government should consider the merit of exchequer grants from ringfenced carbon taxation revenues to meet our ambitious energy efficiency objectives and protect the viability of energy-intensive industries.
- The EU ETS must be reformed to fund the required decarbonisation of the energy sector.
- Ireland's unique emissions profile highlights the sheer scale of the 2030 challenge – Ireland's EU negotiators should therefore resist accepting a 2030 national reduction target that is arbitrarily linked to relative *per-capita* GDP.
- All efforts must be made to ensure that our non-ETS obligations can be realised in the most cost-effective manner. Given Ireland's unique emissions profile, agricultural emissions should be dealt with as a sector at EU level.
- Ibec is concerned about the potential for energy savings targets to interfere with the decarbonisation agenda or hinder economic growth. The Government would be wise to consider the potential tensions between energy efficiency and carbon saving obligations.

Priority 6 – Driving Economic Opportunity

Energy is a public good and a vital enabler of economic growth. Developing an effective energy policy presents policy makers with the significant challenge of balancing energy security, energy competitiveness and sustainability, while ensuring such policies assist in the delivery of job retention, complement job creation and stimulate investment. Policymakers must be acutely aware of the **net cost** of job creation programmes. Energy policy should complement industrial policy objectives: energy consumers cannot afford to foot the bill of industrial policies that should be financed through exchequer revenues.

The national response to energy efficiency, climate change and renewable energy objectives will present societal, environmental and commercial opportunities for some. However, cost effective solutions must be competitiveness proofed, based on robust regulatory impact analyses and underpinned by stakeholder engagement. The key to driving economic opportunity and employment growth lies in further developing Ireland's R&D base, facilitating the commercialisation of research, nurturing business networks to enhance convergence and equipping Irish industry to compete for European and international funding.

Innovation

Ireland has taken significant steps over the past fifteen years in terms of becoming a more knowledge-based and innovation-intensive economy. According to 2014 Innovation Union Scoreboard, Ireland remains an *innovation follower* but it recognised the progress that the country has been making in terms of international scientific co-publications, license and patent revenues from abroad, population with tertiary education, employment in knowledge intensive-services and knowledge-intensive services exports. Future improvement will largely depend on our ability to maintain favourable framework conditions.

Government funding for R&D

Ireland should strive to join the ranks of European innovation leaders. While Ireland had originally signed up to meeting the ambitious European target for total R&D expenditure to reach 3% of GDP by 2020, we are now committed to a revised R&D investment target of 2.5% GNP (equal to 2.0% of GDP) by 2020. Ireland has a reported annual spend of 1.17% of GDP on R&D for 2011; the EU average being 1.26% and Finland reporting the highest spend at 2.67% of GDP. Our innovation target for 2020 will be achieved by both public and industry direct contributions, and it also assumes that industry's total investment will represent approximately two-thirds of total expenditure.

Since the launch of the Strategy for Science, Technology and Innovation in 2006, the focus of Government has been on imbedding high-value activity in Ireland and improving the chances of successful commercialisation of R&D. For example, Science Foundation Ireland's remit was extended to include energy research, which saw the funding of three Strategic Research Clusters:

- Solar Energy Conversion;
- Information & Communication Technology for Sustainable and Optimised Building Operation;
- The Electricity Research Centre.

Technology Centres (previously called Competence Centres) are collaborative entities established and led by industry. They are resourced by highly qualified researchers associated with research institutions who are empowered to undertake market focussed strategic R&D for the benefit of industry. Generally, the Centres are based in a University with support from partner colleges to deliver on the research needs of the companies. This is a joint initiative between Enterprise Ireland and IDA Ireland allowing Irish companies and

multinationals to work together in these centres. Of the 15 existing industry-led Technology Centres Programme three are in the energy sector:

- Technology Centre for Biorefining and Bioenergy;
- Energy Research Centre;
- International Energy Research Centre.

Current priority areas

The Research Prioritisation Exercise set out the rationale for continued public investment in science, technology, innovation and identifies measures to improve the efficiency of the Irish innovation landscape. The exercise is in essence Ireland's national smart specialisation strategy. It has established a clear business case for investing in fourteen targeted areas and stressed the importance of maintaining public investment, albeit in a more efficient and targeted manner. Action plans have been developed for each area. Of the targeted areas, there are two specific thematic areas for energy research:

1. Marine Renewable Energy;
2. Smart Grids & Smart Cities.

Energy research also features indirectly in the following areas:

- Sustainable Food Production and Processing;
- Manufacturing Competitiveness;
- Processing Technologies/Novel Materials;
- Data Analytics Management, Security & Privacy.

In February 2013, resulting for the prioritisation exercise, it was announced that the Centre for Marine Renewable Energy Ireland (MaREI) was selected by Science Foundation Ireland to be one of seven world class research centres of scale. With 47 industry partners, the research centre will develop the science and technology required by industry to generate energy from wave, tidal and floating wind devices and to act as a catalyst to Ireland establishing sustainable, secure, profitable energy supply both at home and for export. It will also address education and training requirements for the next generation of engineers and scientists for the marine renewable energy industry.

Government has also published a new framework to monitor the impact of public R&D investment in broad terms and the implementation of research prioritisation exercise in the fourteen priority areas. Emphasis is firmly placed on output measures. The national expenditure targets will balance scientific excellence with impact in order to improve the chances of successful commercialisation of R&D conducted in Ireland. Targets include increasing levels of co-funding by industry publicly performed R&D, increasing the number of start-ups, broadening the base of research performing enterprise, and greater employment of researchers by the enterprise sector. Other improvements currently underway include measures to improve the availability of skills and people, as well as regulatory reforms (e.g. intellectual property and technology transfer).

Given the objective of national research prioritisation exercise is to establish the platform for investing in areas where Ireland has clear strengths, there needs to be greater interaction with industry. Interaction tends to be confined to representatives of Government and the State Agencies and addresses broad thematic areas, of which energy is one. The Research Prioritisation Action Group (R-PAG) through its secretariat should facilitate regular direct interaction with industry. This would help shape calls under the lifetime of the current exercise as well as identify areas to be supported by successor initiatives. This is particularly acute in the energy sector, which is currently developing a vision out to 2030.

Commercialisation of research

The commercialisation of publicly-funded research will be assisted by the establishment of Knowledge Transfer Ireland, ensuring that all enterprises, from small businesses to multinationals, get appropriate access to intellectual property arising from such research. The roll-out of the intellectual property protocol will result in a more user-friendly system for industry to identify, commercialise and exploit State-funded intellectual property. It will be predictable and consistent. Ibec particularly welcomes the online tool operated by Knowledge Transfer Ireland to help companies easily locate expertise in Irish academic institutions. Just knowing who to make that initial connection with is a problem that many companies face. This new mechanism will help companies find the relevant first point of contact within the HEIs, which can help them identify, access and engage with relevant world-class research and expertise available.

In terms of technology transfer and commercialisation, knowledge transfer should be the priority. We should remember that the innovation value we create is the most significant output. True innovation occurs at the point of application and can rely as heavily on human capital as an input as well as the commercialisation of intellectual property. This will allow us to develop real competitive strength in research and development while also creating a dynamic enterprise culture that begins to drive value creation in the economy. This is a far broader concept than being able to convert such public investment into commercialised products and services. It takes into account elements such as industry-academic collaboration, private sector investment and ultimately private sector job creation for skilled graduates.

Innovation support schemes: how should Ireland position itself?

There are a number of schemes available that support talent acquisition and development to boost innovation capacity in companies. R&D supports on offer from agencies such as Enterprise Ireland or the IDA will allow companies to acquire consultancy or mentoring advice. In terms of direct human capital investment, there are specific schemes that match companies with talented researchers operated by the Irish Research Council (e.g. Enterprise Partnership Scheme; the Employment Based Postgraduate Programme and the ELEVATE Postdoctoral Programme). Ibec welcomes the planned expansion of the Irish Research Council's employment-based schemes. Science Foundation Ireland is also developing an Entrepreneurial PhD programme.

Government's focus on innovation policy has led to the development of a range of national innovation-support programmes by national and regional innovation support agencies targeted specifically at industry. These include both direct (e.g. grants) and indirect supports (e.g. taxation). There has been a lack of clear information on the wide range of assistance available and a perception that it is difficult to access these supports. In May 2014, Government launched the *Supporting SMEs Online Tool*, which is a central portal that provides information on all national and local enterprise supports, as well as guidance and advice on various aspects of starting a business. However, there is the need for

Given the interdependencies of the energy sector, Government needs to give careful consideration of the mechanisms available to support research in Ireland, especially in the key area of demonstration and deployment. Previous action plans for jobs included specific measures that would support productive investments in R&D, clean technology, infrastructure energy efficiencies and renewable energy. However, these measures lack the necessary interconnectedness to bring these areas together and responsible Government departments/agencies to adequately foster the development of 'green infrastructure', which requires:

- Specific investment supports;

- Measures to support R&D (basic, applied and application of existing technologies);
- Measures to encourage and support incremental innovation for Ireland's benefit. Partnerships such as the National Digital Research Centre and the Dublin Business Innovation Centre important facilities for supporting innovation in the indigenous sector.

Ibec looks forward to forthcoming publication of the National Bio-energy Strategy. It will undoubtedly inject momentum into this renewable energy technology, and provide a firm basis for further research into biogas. Ireland's large agricultural industry corroborates the viability of developing demonstration scale anaerobic digestion, and the production of the biomethane for injection into the gas distribution main. With this in mind, the Government should develop an integrated framework to support investment in innovative energy projects in line with national and European objectives. Such a strategy should clearly incorporate measures to support commercial investment as well as mechanisms that will support R&D activities through the development and/or application of technologies, providing test-bed capabilities or trialling of 'green economy' concepts by the research and industry community. State resources should be leveraged to ensure Ireland meets its future energy and environmental commitments as well as ensuring Ireland has access to a secure, competitive and sustainable energy.

Horizon 2020

Horizon 2020, the new EU framework programme for research and innovation funding, has an overall budget of €79 billion. It is the largest EU R&D funding programme yet, with a 30% increase on the previous initiative. Ireland needs to take full advantage of the opportunities that this programme presents. There will be significant opportunities for Irish-based companies of all sizes to access grants to support R&D, especially in the energy sector. This includes: increased funding lines for SMEs under the programme, along with new instruments as well as access to risk finance (debt & equity facility). The administrative burden has been reduced compared to previous programmes.

Horizon 2020 is arranged around three following pillars:

- Excellent Science including funding for the European Research Centre, Marie Curie Actions, vital infrastructures and future and emerging technologies. This pillar will underpin the foundation of tomorrow's technologies, jobs and well being, as well as supporting measures to develop, attract and retain research talent and giving researchers access to world-class infrastructure;
- Industrial Leadership is the truly innovative element of the programme as it contains specific supports for SMEs and for enabling industrial technologies such as nanotechnologies, biotechnologies and ICT. This pillar will enable Europe to attract more private investment in research and innovation through strategic investments in key technologies, whilst widening the pool of SMEs leading to jobs and growth;
- Societal challenges will ensure that research is directed at areas of most concern to citizens and business such as health, climate, food, security, transport and energy. An outcomes-based approach will be taken to activities under this pillar.

Ibec welcomed the ambitious national target for securing funding of €1.25 billion from this programme. We now need to ensure that the high level of engagement that the programme seeks to encourage by companies is quickly realised and developed over its lifetime.

Cross-border collaboration will bring real benefits to the whole island of Ireland. For example, cross-border linkages in energy research would result in better co-ordination of work (to avoid duplication etc) and will better address areas where the island of Ireland would have a distinct advantage (e.g. renewable energy). Horizon 2020 can also be a

strategic driver for achieving greater north/south research collaboration. Successful EU funding applications must have at least three legal entities (defined as organisations or individual researchers as above) must participate, each of which is established in a member state or associated country, and no two of which are established in the same member state or associated country. Thus, through increases collaboration, applications from research institutions from both sides of the border can be considered as being from two member states. This could significantly increase Ireland's success-rate in securing EU research funding

Ireland now needs to take full advantage of the opportunities that these programmes present. We need to ensure adequate Irish representation on the committees in shaping the design and themes of calls for proposals. An ambitious target should be set for securing funding from these initiatives. Also, while support measures are currently available for applicants to pursue certain EU R&D grants, we need to ensure that the national support network for Horizon 2020 will enable the high level of engagement that the programme seeks to encourage.

A coordinated strategy should be developed by the European Advisors responsible for the relevant energy to allow Irish energy companies to successfully position for upcoming funding opportunities. This will encompass early communication of upcoming opportunities, partner identification; proposal submission support; training assistance; on-going support on legal, contractual and IPR issues (for successful participants); on-going advice and support on next steps.

Actively targeting and securing international sources of funding may require a targeted programme of up-skilling individuals to identify, track and secure internationally available funds. A strategic approach will be needed (e.g. before publication of calls etc) that will allow Irish entities to successfully pursue potential funding opportunities.

Other areas that should be addressed in the Energy White Paper

Public procurement: The new Office of Government Procurement (OGP), within the Department of Public Expenditure and Reform, will centralise the procurement of common goods and services. Procurement has evolved into a professional business discipline over the last decade in particular and the move by the Government will concentrate, develop and leverage that expertise across the public service. The National Procurement Service ceased to exist on 1 January 2014, with its functions and contracts (e.g. energy) being transferred to the new office. Framework contracts will be a key tool utilised by the OGP to achieve the objective of greater centralisation and aggregation of public expenditure. In order to develop a comprehensive and holistic sourcing strategy, a number of category councils are being established to coordinate specific spending areas. One of which will be for utilities and the sourcing priority will be energy.

The Utility category council will consist of individual public servants from the Departments and agencies that have the largest energy spend and will be chaired by an overall procurement category lead. The Council be charged with conducting a full needs analysis for the public sector and then develop appropriate go-to-market strategies for energy procurement, taking into account customers' requirements, market dynamics and the savings required. Regular market engagement and sense checked market methodologies will be key to achieving the stated goals of the OGP. The list of the membership of the category council and the procurement category lead should be published.

Summary

- Government must continue to invest in energy research and development. There needs to be greater involvement of industry in the research prioritisation exercise in order to better shape the forthcoming funding calls as well as identify areas to be supported by successor initiatives. This is particularly acute due to the level of ambition in the EU's 2030 climate and energy proposal, and the likely implications for Ireland's share of any burden.
- Government should develop an integrated framework to support investment in energy research, development and innovation in line with national and European objectives. Such a strategy should clearly incorporate measures to support commercial investment as well as mechanisms that will support R&D activities through the development and/or application of technologies, providing test-bed capabilities or trialling of 'green economy' concepts by the research and industry community.
- Ireland needs to take advantage of the opportunities that Horizon 2020 presents to the energy sector. A coordinated strategy should be developed by the European Advisors responsible for energy to allow Irish energy companies successfully position for upcoming funding opportunities.
- Companies should be encouraged to source international funding to support research, development and innovation in Ireland. This will require support through targeted training initiatives to identify, track and secure internationally available funds.
- The Office of Government Procurement, through the utility category council, should regularly engage with energy providers in order to develop the appropriate go-to-market strategies for energy procurement, taking into account customers' requirements, market dynamics and the savings required. The list of the membership of the utility category council and the procurement category lead should be published.

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