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Submission and Comments on Green Paper on Energy Policy in Ireland

Executive Summary

The geographical location of Ireland at the edge of Europe, combined with both Ireland's and the EU's status as a net importer of oil and gas, makes Ireland very vulnerable to potential interruptions in energy supplies. This has been heightened in recent months by the political instability in both oil and gas production and transmission countries. However, Ireland has a large offshore area with significant potential but continues to remain lightly explored. A small number of economic discoveries would transform Ireland from one of the most heavily energy import-reliant countries to self-sufficiency and potentially a net energy exporter. Success in oil and gas exploration has the potential to have a transformative effect on the country. The impact of the few producing fields to date demonstrates the potential of such success. Ireland requires a realistic mix of energy sources, especially those with a lower carbon footprint. Gas is clearly the fuel of choice to partner the growing renewable contribution in electricity generation. Gas and oil will continue to form a major component of our energy source in the coming decades. For that reason, as well as the significant benefits in jobs and services that will accrue from a thriving oil and gas industry, Ireland's energy policy should actively seek to embed encouragement and support for the exploration and development of our indigenous petroleum resources.

The Irish Offshore Operators' Association (IOOA) welcomes the opportunity to input to this consultation and will be happy to discuss these and other aspects relevant to energy policy, and to participate in any further consultations following review of the submission. We wish the Department every success in the formulation of an Energy White Paper that will shape the direction of Ireland's energy policy for the coming decade.

Introduction

IOOA, representing 16 multinational and national petroleum exploration companies who hold licences in the Irish offshore, welcomes the timely publication of the Green Paper on Energy Policy in Ireland. Our members have a long (40+ years) history of investment in Irish oil and gas exploration and development, resulting in a very significant and ongoing contribution to the Irish economy and to the energy infrastructure of the country.

The six priority areas and the 47 questions outlined in the Green Paper frame Ireland's energy challenge and highlight the key policy issues that will shape the pathway towards the goal of ensuring plentiful, secure and affordable energy in the coming decade. IOOA believes that Ireland's energy policy should have the encouragement and facilitation of the exploration and development of our natural energy resources as a central theme.

A vibrant Irish offshore oil and gas industry will underpin the first of the four key pillars identified in the Green Paper as shaping Irish energy policy: *"security of energy supply – self-sufficiency, reliability"*. While

our industry has an involvement in all six priority areas identified in the Green Paper, this submission focusses upon some key questions posed in:

- Priority 2 (Markets, Regulation and Prices),
- Priority 3 (Planning and Implementing Essential Energy Infrastructure), and
- Priority 4 (Ensuring a Balanced and Secure Energy Mix).

In setting the backdrop for addressing the questions, it is important to provide a summary of some of the major economic and infrastructural benefits that have already resulted from the Kinsale Head and Corrib gas discoveries. The submission then addresses some key questions posed in the Green Paper.

Benefits to date from oil and gas exploration and development

Over the past 44 years, since Irish offshore drilling commenced, the oil and gas exploration industry in Ireland has invested approximately €3 billion in exploration, largely through the drilling of 158 exploration and appraisal wells.

Kinsale Head & Satellite Fields:

While oil and gas have been encountered in many wells, only three gas fields (Kinsale Head and the nearby Ballycotton and Seven Heads) have been brought on stream while a fourth (Corrib) will produce first gas in 2015. These fields have had a major impact on the Irish economy. The Kinsale Head gas field (and associated satellite developments) has transformed Ireland, being the primary enabler for the formation of Bord Gáis Éireann and the gas pipeline infrastructure, creating a large number of jobs and stimulating significant industrial development in the Cork area. The national grid, Aghada and Poolbeg power plants and the NET fertiliser plant at Marino Point in Cork were all constructed on foot of the Kinsale Head development[1] and Kinsale Energy currently spends around €30 million annually in the local Cork economy. In addition, the Kinsale Head development has also had considerable downstream impacts in terms of jobs and value add-ons to the regional economy, including the cluster of chemical and pharmaceutical companies in Cork Harbour that grew out of the availability of gas from the Kinsale Head field. The gas field was also a catalyst for companies such as the PM Group (employs 1,850 people in over 30 countries in a wide range of sectors, primarily pharmaceutical, food processing and advanced manufacturing technology) and Mainport (employs 35 people in the Cork region and spends approximately €2 million in the local economy annually) to grow into global companies[1].

Corrib Field:

Since 2006, and throughout the worst period of the recession in Ireland, the Corrib Gas project has sustained more than 1,000 full-time jobs through the construction phase (more than 1,400 people at peak) in Co. Mayo. Of these, 58% are Mayo people, with more than 300 Irish contracting companies engaged on the project. There will be 175 direct long term jobs, not including indirect employment, in Erris for the life of the field. The economic benefit to the region and to Ireland has been enormous, with over €1 billion spent directly with Irish companies to date. The project will contribute €6 billion to Ireland's GDP over its lifecycle. Ten towns in Co. Mayo and Co. Galway have been connected to the national gas grid as a result of the Corrib project, with others planned for connection in the future. Local infrastructure has been upgraded as a result of Corrib with over €21 million being invested in roads in north Mayo.

[1] Pwc Report (2013). *Making the most of our natural resources. Oil and gas exploration in Ireland.*

In addition to the economic, social investment and infrastructural benefits from the gas development projects, there are significant local benefits to the economy from exploration and appraisal drilling. For example, as a result of Corrib-related drilling activity in the Slyne Basin, there were 214 offshore vessel movements in Killybegs with 620 additional flights at Donegal's Carrickfinn Airport and the industry generated €3 million in Killybegs during 2007[2]. In 2011, as a result of Corrib well work using a drilling rig, in excess of €3 million was generated in business related activity in Donegal. The main beneficiaries of this offshore activity were the port of Killybegs and Carrickfinn Airport but a total of 31 companies/businesses in Donegal shared some slice of the business generated. These businesses included taxi and road haulage, crane hire and stevedoring, freight, scaffolding, waste management, accommodation, electrical, refrigeration and welding services, chandlery and marine repair, pilotage, storage, office rental, portacabin hire, flights and ground works. Apart from the airport traffic which represents a considerable boost to Donegal International Airport, local hotels, taxis, coach services, accommodation and service providers and the hospitality industry benefited from the traffic generated.

Addressing the Priority Areas and Questions

The priority areas and the questions addressed below are those posed in the Green Paper and the question numbers are those which appear in the Green Paper.

Priority 2 – Markets, Regulation and Prices

Question 10. Is the regulator strongly enough positioned and resourced – financially and in terms of human resources – to deliver its regulatory decision-making and advice roles as set in its legislation, and thereby to contribute to the achievement of energy policy outcomes and regulatory certainty and stability in the Irish market?

In areas relevant to offshore petroleum (the Petroleum Safety Framework which came into force in December 2013), IOOA believes the CER should have staff with international experience of the industry rather than its reliance on a costly consultancy service based outside the country. This could be provided by the recruitment of experienced staff, by secondment of appropriate staff or by upskilling of some key existing personnel. The cost structure imposed on the petroleum industry (Petroleum Levy) to fund this aspect of the CER is a cause for concern and requires clear transparency and continuing regular discussion with industry.

Question 11. Is CER's legislative remit appropriate for the purpose of regulatory certainty and stability?

The current legislative remit of the CER is broad-ranging in the areas relevant to offshore petroleum safety. However, an area of concern that should be addressed is the large number of state agencies with overlapping responsibilities in the area of offshore petroleum exploration and production, e.g., the CER, the Department of Communications, Energy and Natural Resources, the Department of Environment, Community and Local Government, An Bord Pleanála. This makes for a very costly and complex regulatory system that requires simplification to ensure optimum regulatory certainty and stability. While progress has

[2] IOOA (2007). *Securing our energy future.*

been made recently in relation to permitting and regulation, the existing system is still perceived by the petroleum industry as cumbersome and difficult to navigate.

Priority 3 – Planning and Implementing Essential Energy Infrastructure

Question 17. How could the permitting and licensing processes for major energy infrastructure projects provide for greater collaboration and engagement with community stakeholders?

Question 18. Following the 'Government Policy Statement on the Strategic Importance of Transmission and Other Infrastructure' in 2012, what additional improvements could be made to the permitting and licensing processes for energy infrastructure projects to make them clearer and more efficient for project developers, the public, and other stakeholders?

Taking the above questions together, IOOA believes there is still too much uncertainty regarding regulatory procedures and timelines for major infrastructural projects, both on- and offshore. Such uncertainty hinders project planning and delivery, at an economic cost to both developer and the State and may actually divert investment away from Ireland. IOOA recognises that providing a satisfactory input to permitting processes for all stakeholder groups, including local communities, is essential, but would also emphasise that the economic and strategic drivers at a national level should be clearly enunciated, so that the balance of local and national choices and outcomes may be clearly understood.

In regard to Marine Planning, IOOA urges that the proposed Maritime Area & Foreshore legislation, which was the subject of consultation in late 2013, is enacted as quickly as possible. This is essential to provide clarity for the petroleum industry in relation to:

- Offshore petroleum exploration licensing, especially in the Foreshore region.
- Offshore production development, in particular the role of An Bord Pleanála.
- Offshore gas storage operations.

Question 20. Is Ireland's electricity and gas infrastructure – including, but not limited to, interconnection – sufficiently developed for Ireland to be able to achieve the benefits of European market integration at least cost? How should Ireland continue to improve electricity and gas interconnections in the context of this integration and its security of supply policy objectives? What additional steps could be taken to facilitate this improvement?

Ireland's gas interconnection infrastructure is limited. Both interconnectors that import gas into the Republic of Ireland share a common entry point at Moffat in Scotland, while the Scotland to Northern Ireland Pipeline (SNIP) also originates in Scotland. There is a resulting potential vulnerability to supply interruption from such geographically-limited entry points. The lack of an interconnection to England, Wales or mainland Europe (e.g., France) means that optimum security of supply policy objectives cannot be met. Such options need to be considered, together with the potential and capacity for two-way flow or export potential though current and future interconnectors.

Question 22. In light of continued reliance on oil to 2030 and beyond, what is the best approach to monitoring and ensuring the capacity of Irish oil infrastructure? What measures should be taken to facilitate the commercial future of oil refining in Ireland?

National and international projections suggest that oil will remain a critical component of the energy mix in Ireland for the coming decades. Key to addressing these questions of an Irish oil infrastructure and a refining capacity is the success of oil exploration and development in the Irish offshore basins. Until such time as oil is produced from the Irish offshore the question to be addressed is if Ireland should maintain a refining capacity, some/all of the costs of which are likely to fall on the state or whether to rely on imported refined oil stocks from other countries? With a successful oil production industry, this case for a commercial future becomes somewhat less difficult to make in terms of available feedstock. However, refining is costly and very many refineries, especially small ones, continue to lose money. Ireland is not strategically situated close to a large market and the additional freight and shipping costs of refined products would, in all likelihood, make a refinery in Ireland commercially uncompetitive.

Priority 4 – Ensuring a Balanced and Secure Energy Mix

Question 23. How can we reduce our high dependence on oil and gas?

Natural gas and oil comprise the vast bulk of Ireland's primary energy fuel (Fig. 1 of Energy Green Paper[3]) and most projections (e.g., Fig. 6 of Energy Green Paper[3]) show that globally they will remain the majority energy sources for several decades. Even the most optimistic combinations of projected growths for renewables and decreasing energy demands show clearly that gas and oil will continue to be vitally important to Irish energy. The key issues then are to work towards finding a sustainable mixture of energy sources and to reducing our high dependence on imported oil and gas. The latter can be achieved through the exploration and successful development of Ireland's offshore petroleum potential. This requires a vibrant indigenous petroleum sector. To ensure that this objective is achieved, Ireland requires:

- A competitively attractive fiscal regime,
- A supportive and welcoming business environment, and
- A clear and simple regulatory regimen that ensures regulatory certainty, transparency and stability.

Question 26. Given that Moneypoint will approach the end of its life by 2025, is there a role for coal in the future power-generation fuel mix, taking into account cost, security of supply and environmental issues? If coal generation does not continue at Moneypoint, what are the alternatives? Should options such as biomass or nuclear power be considered?

Coal, even more so than the other major fossil fuels, must be imported. As such there is an inherent security of supply issue, albeit less problematical than oil and gas in view of the more politically stable status of the host countries. The major drawback is an environmental one surrounding the emissions from coal-fired power plants. This could be ameliorated by the use of CCS (Carbon Capture and Storage/Sequestration), which may become more viable for both coal and also for oil if costs can be

[3] Department of Communications, Energy and Natural Resources (2014). *Green Paper on Energy Policy in Ireland*.

reduced. Key elements to be addressed with the implementation of CCS are the identification of a storage/sequestration site and the costs of capture, transport and storage. The discovery of further petroleum (especially gas) resources in Irish basins would provide an obvious (and cleaner) alternative to coal for Moneypoint power-generation beyond 2025.

Question 31. What options should we pursue to enhance oil, gas and electricity storage? Should we explore further the potential for additional oil stocks to be deployed as secondary fuel in the event of gas disruptions? What are the costs and benefits of delivering energy storage, and are there alternatives?

It is worth noting that currently Ireland imports all its oil and more than 95% of its gas. While the Corrib gas field, due to produce first gas in 2015, will mean that approximately 50-60% of Ireland's gas needs will be supplied locally for a few years, the gas supply vulnerability will increase again in another decade without further discoveries. The recent and ongoing political instability in the Middle East and in eastern Europe highlights the EU's, and even more so, Ireland's vulnerability to interruptions in supply. Lying at the very edge of Europe, we are at the end of a very long pipeline system and are likely to be among the first to suffer the effects in the event of an interruption to supply. There is an essential and urgent need to ensure adequate oil and gas reserves are in place, as the likelihood of such interruptions to supply increases due to the depleting indigenous reserves in the UK, Norway and our other neighbouring suppliers. Planning for the increased use of depleted Irish offshore gasfields (e.g., Kinsale Head, Ballycotton, Seven Heads and, in time, Corrib) for gas storage would appear to be essential as these fields are linked to existing infrastructure (e.g., national pipeline network). The strategic and security value of in-country storage should be reflected in a supportive tariffing and/or economic support regime. However, the obvious alternative to such energy storage is encouragement to explore, find and develop geographically diverse indigenous oil and gas supplies in the Irish offshore.

Ireland is still viewed as a high-risk frontier exploration region. The 2014 Wood Mackenzie report[4] on the Irish fiscal terms states *that, "despite recent encouraging signs of prospectivity, offshore Ireland remains a very high risk, very high cost province for exploration".* The benefits of delivering such indigenous supplies is obvious, both from a security of supply and from an economic wealth viewpoint and the costs to the State are very small – ensuring a competitively attractive fiscal regime and the availability of suitable geoscientific data to encourage further exploration.

Question 32. What further efforts are required to pursue indigenous development of hydrocarbons and ensure suitable conditions for development on the island to improve Ireland's security of supply position? What additional actions should we take?

IOOA is reassured to see, in section 4.2 of the Green Paper[3], the recognition that *"The Government's strategy of the exploitation of the State's natural hydrocarbon resources aims to maximise the level of exploration activity and increase the level of production activity, while ensuring a fair return to the State from these activities"* and that *"Mobile exploration investment is encouraged to locate in Ireland through an active and targeted promotion campaign, regular licensing rounds, support for petroleum research projects that deepen knowledge of the petroleum potential of the Irish offshore, and maintenance of an appropriate fiscal regime"*. It also mentions that *"successful exploration and production of our indigenous hydrocarbon*

[4] Wood Mackenzie (2014). *Review of Ireland's Oil & Gas Fiscal System*.

resources has the potential to deliver significant and sustained economic benefits to the country at both a national and local level, over an extended period of years. Unlocking this potential is an important focus for the Government and a promising source of opportunity for many regions throughout the country".

The economic, infrastructural and employment benefits of the existing gas fields to the economy have been highlighted in an earlier section. In comparison, in the UK, where exploration has been considerably more intensive and successful, the oil sector is the biggest industrial investor in the country, spending £317 billion (€383 billion) since North Sea oil production started four decades ago. It accounted for 15% (£6.5 billion) of corporation tax collected in 2012-2013 and employs 450,000 people directly and indirectly[5]. In addition, service ports of Aberdeen and Great Yarmouth have become hubs of excellence for the oil and gas industry, and supply products and services both regionally and internationally. Such success and rewards demonstrate the potential when a critical mass of exploration takes place and results are favourable. However, it should also be recognised that exploration entails significant financial risk, with the cost of the recent Dunquin (ExxonMobil 44/23-1) frontier exploration well drilled in 2013, and which and did not encounter commercial hydrocarbons, estimated in the order of $200 million.

The development of Ireland's indigenous oil and gas potential can only be realised through exploration drilling by the oil and gas industry. Ireland competes for mobile exploration investment in the same way it competes for foreign direct investment (FDI) in other more established onshore sectors. Therefore, Ireland is competing for oil companies' exploration funding with many other countries that have a lower actual or perceived exploration risk. Many countries offer attractive measures to reduce these risks for industry, and Ireland needs to do likewise to ensure competitively attractive fiscal terms, together with a supportive environment and an appropriately integrated and clear regulatory infrastructure. The recently-announced (June 2014) changes for future licences have provided a level of certainty regarding the fiscal terms, although the net effect of these changes has been to decrease the profitability of any new discoveries in Ireland and to make Ireland somewhat less attractive relative to our competitor countries. To some extent the actual effects of these changes may not be realised until the announced changes are fully implemented and tested. These decreases in profitability are coming at a time when licence areas further offshore in deeper waters are being offered. Some additional specific actions that could be taken to ensure optimum opportunities for encouragement of exploration and ultimately development include the following:

- Licensing rounds should be held frequently (ideally every two years) or on a rolling basis, with a consistent timetable for announcement of blocks, deadline for submissions and date of awards. The current Licensing Option policy should continue.
- The current 'Open Door' licensing policy for areas not involved in Licensing Rounds should continue.
- The recently completed DCENR/Eni regional seismic survey is a commendable initiative and is a useful model for application to other parts of the Irish offshore. Making these and other exploration data available to the industry quickly is imperative and will act as an encouragement to exploration.
- The reasons for the absence of most of the oil majors from Ireland should be sought. The results should provide valuable information on the perceived comparative risks of Irish offshore exploration and aid in formulating a strategy to encourage such companies to return as active players to Ireland's offshore sector.
- Exploration and permitting regulations should be consulted on with the industry in advance of being finalised and implemented.
- Consideration should be given to separating the elements of enterprise/promotion from those of permitting and of regulation. The former needs to address commercial issues as to why exploration

[5] Wood, I. (2014). *UKCS Maximising Recovery Review: Final Report.*

success is low (e.g., complex geology, immature application of new technologies, poor marketing opportunities), while the latter should provide a single integrated organization responsible for all regulatory aspects of oil and gas exploration and development (environmental, licensing and compliance).

- Ireland is very welcoming to new multinational companies considering investing in Ireland. In contrast there is a general feeling that the oil industry which, like other large corporations, invests in Ireland, does not receive a similar welcoming and supportive environment. The concept of a State agency (e.g., the IDA) acting as a facilitator or champion for supporting the industry should be considered.
- The active promotion of Irish offshore acreage should be intensified, working more closely with the industry. The initiatives and excellent efforts of the Ministers and officials of DCENR in recent years to promote the Irish offshore are acknowledged and applauded. IOOA would be very pleased to assist where appropriate in these efforts in the future.
- Consideration should be given to introducing a "small-fields" incentive to assist marginal discoveries being developed and boost indigenous production, e.g., in the Celtic Sea.

Overall, the goal of pursuing and stimulating exploration and development of indigenous hydrocarbons can be achieved by offering an internationally attractive, stable, transparent fiscal regime that is appropriate for the financial and geological risks taken by the petroleum industry. This should be supported by a simplified and integrated regulatory regime. The rewards to Ireland for success are the obvious economic benefits, as well the security of energy supply.

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