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Submission to the Joint Oireachtas Committee on Communications, Climate Action and the Environment

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Introduction

The Irish Offshore Operators' Association (IOOA) wishes to make a submission to the Joint Oireachtas Committee on Communications, Climate Action and the Environment in the context of the Committee's examination of the Petroleum and Other Minerals (Amendment) (Climate Emergency Measures) Bill 2018.

In this document, we introduce Committee members to IOOA and provide an overview of the Irish and international energy context and the critical role that oil and gas have in Ireland, and the view on the future outlook for the energy sector in Ireland. We believe this information is relevant to the consideration of the aforementioned Bill, and we trust it will be useful to the Committee.

We are available to discuss the content of this submission, and to share further detail with the Committee in the weeks ahead, should that be of interest to Committee members.

About IOOA

IOOA (www.iooa.ie) is the representative organisation for the Irish offshore oil and gas exploration and production industry. Our 14 current members, holding authorisations for oil and gas exploration in the Irish offshore, are a mix of large, medium and small Irish and international companies. Our member companies are: AzEire Petroleum, Cairn Energy PLC, ENI UK Ltd., Europa Oil & Gas, ExxonMobil International Ltd., Faroe Petroleum, Nexen Petroleum UK Ltd., Providence Resources P.l.c., PSE Kinsale Energy, Serica Energy, Shell E&P Ireland Ltd., Equinor (formerly Statoil), Vermilion Energy, Woodside Energy (Ireland) Pty Ltd.

Our international networks facilitate the sharing of global best practice and IOOA acts as a forum for discussion and industry interaction. Our members have a long (40+ years) history of investment in Irish offshore oil and gas exploration and development, having spent in excess of €3 billion in exploration alone, with no financial risk or exposure to the State.

IOOA members play an important role in Ireland's economic development, energy policy and energy security. We work with all relevant stakeholders in the environmentally-responsible development of Ireland's economy through the offshore activity and in supporting further economic recovery and development, underpinned by security of an affordable energy supply. We are involved in running conferences, organising scientific workshops, making submissions to key national consultations, and producing robust analysis and scientific publications to inform debate on matters of relevant national importance to energy policy and security.

Global and national background

The world's energy demand is predicted to grow by approximately 30% between now and 2040. As the world transitions to low-carbon fuel sources, oil and gas will remain the most important energy sources globally throughout that time.

The world's population is projected to grow from the present 7.4 billion to 9.1 billion in 2040, with global energy demand predicted to increase by approximately 30% over the 22 year period[1]. International energy scenarios all show global energy demand rising faster than the growth of renewables supply.

Oil and gas provide more than half (57%) of the world's energy. According to the International Energy Agency's most likely energy scenario, oil and gas will remain equally important in year 2040. Globally, fossil fuels (oil, gas, coal) provide 86% of primary energy, with renewables providing less than 4%[2].

Fossil fuels account for 92% of Ireland's primary energy requirements, of which almost 71% is imported[3] (Appendix 1). From 2015 to 2016 gas demand rose by 10% with gas now supplying more than 26,000 businesses and almost 654,000 homes throughout Ireland[4]. Due to naturally varying baseload of renewable energy sources gas is a vital backstop and growing part of the energy mix. Currently approximately 55% of Ireland's gas requirements are supplied by the Corrib gas field which resulted in our annual energy import bill dropping from €4.6 billion to €3.4 billion in 2016[3]. Approximately 8% of Ireland's energy requirements are met from renewable sources[3]. While growth in renewable energy is significant, other energy sources, particularly gas, will be required in Ireland and all developed countries that value energy security and supply reliability during the coming decades to provide the necessary base load backup for intermittent renewable energy sources such as wind and solar.

Energy Security

Ireland is very vulnerable to an interruption on energy supplies and energy security must be front of mind, particularly in the context of Brexit.

Our geographical location at the edge of Europe makes Ireland extremely vulnerable to potential interruptions in energy supplies.

Europe imports 75% of its oil and 50% of its gas requirements[5]. The UK, through which Ireland imports almost half our current gas requirements, imports more than 1 million barrels of oil equivalent per day to meet its needs, and UK energy import dependency, currently at 36%, is anticipated to reach 55% by 2030.

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[1] *World Energy Outlook 2017.* International Energy Agency. https://www.iea.org/weo2017/

[2] BP Statistical Review of World Energy 2017. http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html

[3] *Energy in Ireland 1990-2016. 2017 Report*. Sustainable Energy Authority of Ireland (SEAI). 88 pp. https://www.seai.ie/resources/publications/Energy-in-Ireland-1990-2016-Full-report.pdf

[4] Gas Networks Ireland. *Systems Performance Report 2016.* 72 pp. https://www.gasnetworks.ie/corporate/gas-regulation/system-operator/publications/GNI_Peformance-Reports_Systems_2016_Final.pdf

[5] IOGP Global Production Report 2018. International Association of Oil & Gas Producers . 33 pp. https://www.iogp.org. 33 pp.

Until recently, the Kinsale Head gas field stored some strategic gas supplies (capacity of 230 million cubic metres). This facility will be decommissioned soon, further increasing the exposure to supply interruptions. Ireland will then not hold any contingency gas reserves. This further highlights the need for an active exploration sector to provide indigenous supplies.

Furthermore, gas from the Corrib field currently provides a significant element of protection against interruption to imported gas supplies through the gas interconnector to the UK but a replacement will be required in the coming years as Corrib depletes. Ireland's offshore acreage, through continuing exploration activity, has the potential to enhance Ireland's energy security, providing affordable energy and economic benefits to Ireland, while playing an important role in the transition to a lower carbon future.

Contribution to the Economy

Offshore exploration and development has benefitted local and national economies, delivering important employment opportunities and development in coastal regions.

Irish natural gas has transformed the energy and economic landscape of Ireland, being the catalyst for the national gas grid, and having considerable downstream impacts in terms of jobs and value add-ons to regional economies. Kinsale Energy spends around €30 million annually in the local Cork economy. From 2006 to 2015, and throughout the worst period of the recession in Ireland, the Corrib Gas project sustained more than 1,000 full-time jobs through the construction phase. Over €1 billion was spent directly with Irish companies (in excess of 300 Irish contracting companies) during the project. There are 150 direct long-term jobs, not including indirect employment, in Erris for the life of the field. Ten towns in Co. Mayo and Co. Galway have already been connected to the national gas grid as a result of the Corrib project. Local infrastructure has been upgraded as a result of Corrib with over €21 million invested in roads in north Mayo. The Corrib project is estimated to contribute €6 billion to Ireland's GDP over its lifecycle.

In addition to the economic, social investment (e.g., scholarships) and infrastructural rewards, significant benefits accrue to the local economy from offshore exploration. In 2011, as a result of offshore drilling, in excess of €3 million was generated in business-related activity in Donegal. Oil and gas exploration and development in the Irish offshore provides significant opportunities to Irish-based companies to benefit and grow their business and also to expand their operations internationally.

Oil and gas exploration and development has the potential to enhance Ireland's economic development underpinned by security of affordable energy. It can bring substantial benefits in terms of foreign direct investment, jobs and income to coastal regions away from the main urban centres.

The energy transition

The energy transition requires global collaboration, unprecedented levels of innovation and careful planning – there are opportunities for industrial development synergies to support the transition in an effective and realistic manner.

The global climate challenge can only be met realistically and effectively through the implementation of a planned transition involving the collaboration of governments, industry, communities and individual citizens. The technological-leading countries, in particular, must work with the developing world to support efforts to move to more efficient forms of energy with lower

CO_2 emissions. Such actions in the developing world, where most of the energy growth and greenhouse gas emissions will occur in the coming years, are critical to making a real difference in lowering emissions. The transition also needs the deployment, at scale, of innovative technologies such as Carbon Capture and Storage (CCS) and the implementation of fiscal tools such as carbon pricing mechanisms.

Many of the renewable energy forms are at an early stage of development (e.g., wave energy), and some are inherently intermittent, and therefore need to be supplemented by more reliable energy forms such as gas and oil. There is a requirement for a combination of the replacement of high GHG-emitting fossil fuels, such as coal, with a range of renewable energy forms, including solar, wind, geothermal and biomass energy, together with the deployment of technologies to capture GHG emissions on a large scale to enable the continued use of cleaner forms of fossil fuels (e.g., gas) over a considerable transition period. Natural gas, in particular, will play a major role in substituting for other higher greenhouse gas-emitting energy forms, while oil will continue to be important in the medium term for international transport in particular (e.g., fuelling aircraft and ships) as well as non-burning uses such as petrochemical and other feedstocks and lubricants.

It is essential for Ireland, with a small and relatively isolated energy system, to identify the appropriate energy mix that will guarantee reliability, security and affordability, and ensure that it remains competitive in the transition period.

Greenhouse gas emissions

Any proposals should consider whether an impact on greenhouse gas emissions will result.

Ireland produces approximately 1.4% of EU emissions[6]. The largest contribution of Ireland's emissions (33%) comes from the agriculture sector, with the transport sector at 19.8%, the energy industries sector at 19.7% and the residential sector at 10.1%[7]. It is important to consider, with any proposals, what the emissions impact will be. IOOA would proffer that the importation of substitute fuel replacements in the future could potentially lead to an increase in greenhouse gas emissions.

[6] http://ec.europa.eu/eurostat/statistics-explained/index.php/Greenhouse_gas_emission_statistics

Appendix 1

Key Energy Statistics for Ireland

Based on SEAI Energy in Ireland 1990-2016 Report (2017)

Major USES for primary energy (%)

Heating	**32.5%**
Electricity	**33.5%**
Transport	**34.0%**

Major SOURCES for primary energy

Oil	**48.0%**	**100% imported**
Gas	**29.4%**	**45% imported**
Coal	**9.5%**	**100% imported**
Peat	**5.1%**	**n/a**
Renewables	**8.0%**	**n/a**

Fossil fuels account for 92% of Ireland's primary energy Requirements of which almost **71%** is imported

Energy Use by Sector: ELECTRICITY

Gas	**48.5%**
Coal	**22.9%**
Peat	**10.8%**
Oil	**1.7%**
Renewables	**15.6%**
Wastes	**0.5%**

Fossil fuels account for 84% of Ireland's energy consumption for electricity generation

Energy Use by Sector: HEATING

Oil	**42.5%%**
Gas	**40.3%**
Peat	**4.6%**
Renewables	**6.2%**

Fossil fuels account for just over 93% of Ireland's heating requirements

Energy Use by Sector: TRANSPORT

Oil	**97.5%**
Renewables	**2.4%**
Electricity	**0.1%**

Fossil fuels account for almost 98% of Ireland's transport requirements