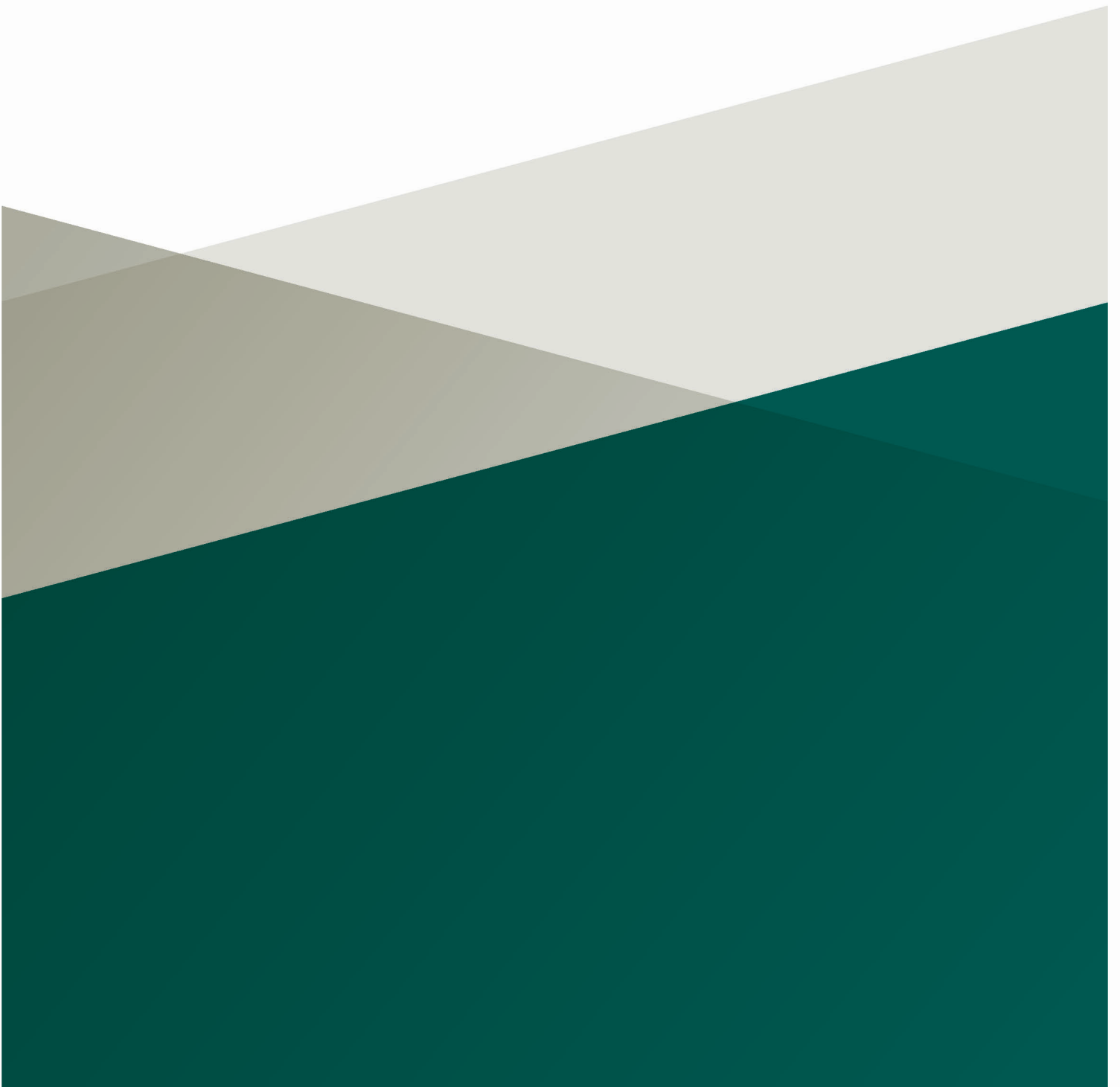




Policy Statement - Petroleum Exploration and Production Activities as part of Ireland's Transition to a Low Carbon Economy



Ministerial Foreword

The term “energy transition” is frequently used when we speak of energy and climate policy in the European Union. We are now living this energy transition in Ireland, for example through increasing use of renewable sources, replacing fossil fuels such as peat and coal in our electricity mix. Exploration and production of fossil fuels has over many years enhanced the energy security of this island and underpinned our growth and prosperity. This policy statement sets out the evolution of policy in this sector, during this period of energy transition.

The Climate Action Plan to Tackle Climate Disruption was published by Government in June this year. This far-reaching plan sets out over 180 actions, together with hundreds of sub-actions embracing every relevant sector: electricity, enterprise, housing, heating, transport, agriculture, waste, and the public sector. It puts Ireland on a trajectory to meet our 2030 target for carbon emissions, which is consistent with achieving net zero carbon emissions by 2050.

Natural gas is recognised as playing a critical role during this transition. A secure and stable energy supply is essential to underpin the continued functioning and future development of Irish society.

Following advice from the Climate Change Advisory Council, the Taoiseach announced in September that future exploration for oil should end, as it is incompatible with a low carbon future, and the focus should instead be on natural gas as a transition fuel. This is in line with the ambitions of the Climate Action Plan. The Policy Principles I announced in October provide confirmation of this strategy and set out the implications for current and future licence holders.

I welcome the clarity which this Policy Statement now provides in setting out how this policy will be put into practice. It also defines the strategic framework within which exploration policy sits and identifies future enhancements planned to the regulatory framework.

Ireland’s marine resource is one of the largest of any EU state, with the potential to provide significant opportunities to support a diverse economy, particularly in coastal communities at the edge of our seaboard. Now, more than ever, there’s a recognition that we need to protect and conserve our rich marine biodiversity and manage the available natural resources in harmony with surrounding ecosystems, whether they are biological or physical resources with, for example, energy generation potential.

This statement reaffirms the commitment by this Government to the continued role of natural gas in our transition to a low carbon economy.

Seán Canney

Minister of State for Natural Resources, Community Affairs and Digital Development

Contents

1	Introduction.....	4
2	Context for Offshore Exploration and Production – Ireland’s Energy Needs.....	5
2.1	Background.....	5
2.2	The Role of Natural Gas in the Transition to a Low Carbon Economy.....	7
3	Policy Context.....	10
3.1	Government’s Action Plan to Tackle Climate Breakdown/ Climate Action Plan	10
3.2	Climate Change Advisory Council.....	11
3.3	Energy Sustainability and Security Review	12
3.4	Harnessing Our Ocean Wealth	12
3.5	National Planning Framework / Project Ireland2040.....	13
3.6	Marine Planning Policy Statement (MPPS)	13
4	Petroleum Exploration/Production Policy as part of the Transition	14
4.1	Vision.....	14
4.2	Principles	15
4.3	Applications/authorisations prior to 23 September 2019	15
4.4	Future Licensing Applications	16
4.5	Technical Considerations.....	16
4.6	Onshore Licensing.....	17
5	Enhancing the Regulatory Framework	17
5.1	National Marine Planning Framework (NMPF).....	18
5.2	Marine Planning and Development Management (MPDM) Bill.....	18
5.3	Licensing Terms	19
5.4	Fiscal Terms	19
6	Long-term Role for Exploration – pathway to phasing out	20
Appendix A	Model for Offshore Exploration and Production.....	21
Appendix B	Progression of Authorisations	23
Appendix C	Current Regulatory Framework.....	25

1 Introduction

This policy statement seeks to clearly set out how natural gas is a critical component of the vision for energy in Ireland and the key role it plays in supporting the transition to a low carbon future.

The policy statement includes:

- The existing and future regulatory framework for licensing, including environmental assessment and the direction of travel in terms of the development management regime for offshore marine planning under the Marine Planning and Development Bill;
- The advice provided by the Climate Change Advisory Council underpinning this policy statement and its consistency with the Government's Climate Action Plan;
- The requirement to protect Ireland's energy security and the energy security rationale for natural gas, including:
 - The need for back-up capacity for renewable power generation via lower CO₂ emitting fossil fuels (natural gas);
 - The impact of the reduction of peat, coal and oil use on gas demand;
 - Our increasing reliance on imports given the decline of current indigenous supplies, also mirrored by a growing reliance at EU-level on imports (74% from outside the EU and growing).
- The economic and environmental benefits, during the decarbonisation process, of using indigenous over imported sources of natural gas in terms of lower carbon impact, employment and tax yield; and
- Formally notes that applications for authorisations in onshore areas will no longer be accepted.

2 Context for Offshore Exploration and Production – Ireland’s Energy Needs

2.1 Background

- Project Ireland 2040 estimates that the population of Ireland will increase by around one million people or by 20% over 2016 levels, to almost 5.7 million people by 2040. This will generate increased demands for secure, affordable and sustainable energy, to power Ireland’s homes, services and businesses.
- The energy policy 'trilemma' is the balancing of three energy objectives: energy security; access to energy; and energy sustainability. Providing secure, affordable and sustainable energy to households and businesses is the basis for a functioning society and a modern economy.
- The Climate Action Plan (CAP) sets out a vision for the future of energy in Ireland. This involves exiting coal and peat production, increasing the electrification in transport and heat sectors, quadrupling our renewable capacity by 2030, and moving to a net zero carbon position by 2050, which implies the removal of fossil fuels unless abated.
- In relation to the Government’s commitment to a very significant increase in the use of renewable energy in Ireland, our Offshore Renewable Energy Development Plan (OREDPA) has identified Ireland’s coast as one of the potentially most energy productive in Europe. A range of actions are set out in the CAP to intensify development of this sector and increase the availability of energy from renewable sources to meet national needs, with a target set of 70% renewable sources for electricity by 2030.
- Ireland has a higher dependence on fossil fuels when compared with the European average. Currently oil meets 48% of Ireland’s primary energy demand, with natural gas meeting 30% (see Figure 1).

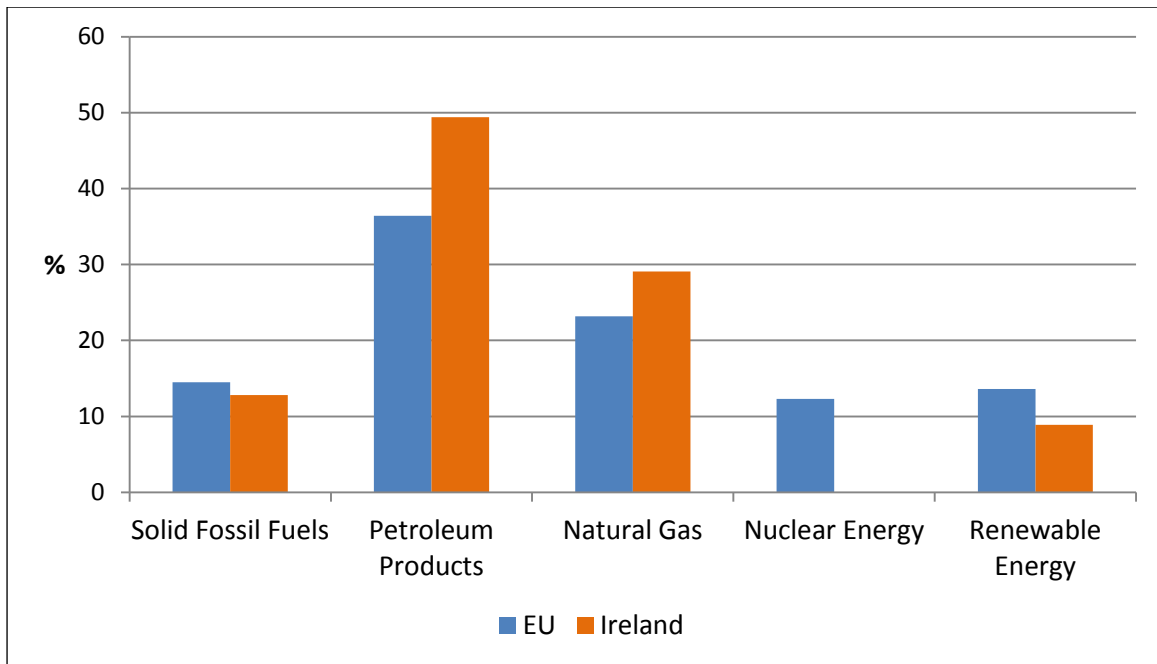


Figure 1 EU and Ireland Energy Mix, 2017 (Eurostat)

- Given Ireland’s existing dependency on energy from oil and gas, the ambitious timeframe required to ramp-up to 70% renewables, and the need for back-up energy supplies to be deployed when renewable sources are not available, decarbonisation of our energy supply will not be a one-off event. It is an evolving process that will take time and will require an orderly transition.
- In addition, we are dependent on the importation of the significant bulk of our energy requirement, meaning that our energy security position is an important consideration. Ireland’s overall import dependency reached 90% in 2006. It varied between 85% and 90% until 2016 when it fell to 69% and further to 66% in 2017, largely due to production from offshore Ireland’s Corrib gas field (see Figure 2).

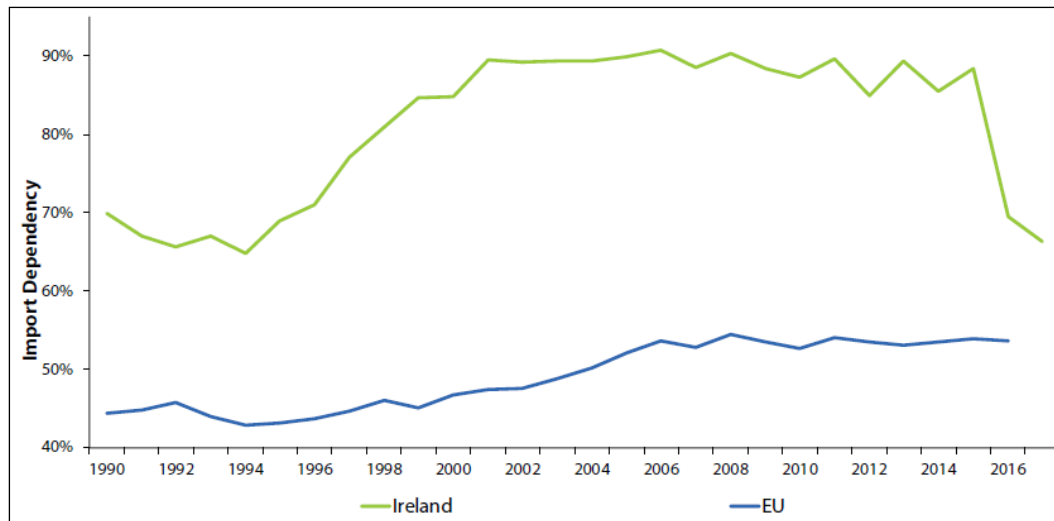


Figure 2 Import Dependency of Ireland and the EU (SEAI Energy in Ireland, 2018 Report)

- In the past, and currently, gas production in the offshore area makes a significant contribution to Ireland's overall energy requirements. For example, in 2017 Corrib gas met 63% of Ireland's (ROI) gas demand with a further 7% of indigenous gas delivered from the Kinsale Heads gas fields, which will shortly cease production. Corrib production is in decline and is projected to cease in approximately 2030. In the absence of any new indigenous gas discoveries offshore Ireland, we will again become reliant on imports for the majority of gas demand going forward.

2.2 The Role of Natural Gas in the Transition to a Low Carbon Economy

- Like Ireland, other countries such as France, New Zealand and Costa Rica have taken measures to curb or ban oil and gas exploration activity in their waters. However, the Irish context and, in particular, our dependency on imports is quite different. All three of these countries are largely energy self-sufficient with electricity generation from derived nuclear, large scale geo-thermal or hydro power – none of which are viable options for Ireland (noting, however, that geothermal may have an important role to play in future).
- In addition, given the variability in our climatic conditions, alternatives to wind and solar need to be available to ensure a stable and dependable supply of energy. Natural gas, as the lowest emitting fossil fuel¹, would appear to be the optimal back

¹ SEAI, Energy In Ireland 2018 Report, Emission Factors

up as we transition to reach 70% renewable electricity by 2030. This is in the context of a commitment to future cessation of peat-fired and coal-fired electricity generation, meaning natural gas is a key part of the energy mix that will underpin our ability to implement an ambitious transition in an efficient and secure manner.

- As part of their work to launch a strategic long-term vision for a climate-neutral economy by 2050, the European Commission modelled eight scenarios all of which are in line with the Paris Agreement. These scenarios show a continued need for gas out to 2050, though at significantly reduced levels.
- In their report entitled ‘Tomorrow’s Energy Scenarios Ireland 2019 – Planning our Energy Future’, Eirgrid identify a role for gas in their different electricity generation scenarios for the year 2040. This gas complements an electricity mix largely made up of wind power.
- Oil and gas exploration and production continue to be undertaken by other developed countries in Europe, including the UK, Denmark, Norway and the Netherlands. Denmark, a world leader in renewable energy, awarded exploration licences in 2016, with both Norway and the UK launching exploration licensing rounds in 2017. In the European region, 178 exploration wells were drilled in 2018, increasing slightly from 169 in 2017, and 137 in 2016, as compared with 1 well drilled in Ireland in 2019.
- The International Energy Agency recommended in its 2019 country report on Ireland’s Energy policies, that in relation to natural gas, Ireland should *“Ensure a stable and streamlined regulatory framework, and conduct regular licensing rounds, to encourage exploration activities and, subsequently, develop domestic reserves.”*
- Energy security relates to import dependency, fuel diversity and the capacity and integrity of the supply and distribution infrastructure. Ireland currently has a lack of import route diversity as we only import gas from the UK via the interconnectors to Scotland to supplement indigenous supplies.
- As a general rule the further afield gas is sourced from, the higher the emissions over the life-cycle of the gas will be. This is for the following reasons:
 - **Transport:** Energy is consumed to move the gas through pipelines in compressor stations. The longer the distance the more compression that is needed;

- **Fugitive emissions:** There is likely to be some small leakage of methane as the gas moves (primarily at compressor stations and valves). Again, the longer the distance travelled, the greater the amount will be;
 - **Production Practices:** it takes energy to produce oil and gas regardless of location. However, practices differ and the level of energy and subsequent emissions involved can vary significantly, with amounts typically higher in less developed countries when compared with Europe.
- Concerns have been raised by the International Energy Agency on Ireland's dependence on UK gas imports, particularly due to the high reliance on gas for electricity generation which stands at 50%. In a 2019 review of Ireland the IEA stated "*There is high reliance on a limited amount of gas infrastructure, raising concerns for security of gas supply in Ireland. This is independent of the future relationship between the United Kingdom and the European Union, following the vote of the United Kingdom to leave the European Union.*"
 - In tandem with this, the EU's import dependency for natural gas stands at 74%. Energy supplies are exposed to risks that include disruption from countries from which the EU import fuel, but also extreme weather, industrial hazards, cyber-attacks, terrorism and hybrid threats. Consequently, the security of energy supply is an integral part of Europe's Energy Union strategy, with the EU and its Member States actively progressing a range of policies to make the European energy system more resilient. This includes increasing electricity interconnection to improve the functioning and flexibility of national energy systems.
 - In recognition of this context, the Minister for Communications, Climate Action and Environment ("the Minister") will commission an Energy Sustainability and Security Review in 2020, which will examine how to ensure security of supply in the transition to a low carbon economy driven by the Climate Action Plan. While it appears that gas is the primary back-up for renewables at present (no coal, peat, biomass, nuclear or hydro), the source of that gas is critical, and diversification of sources must be considered for security of supply. However, the Energy Sustainability and Security Review will also consider the role that other technologies can play in the transition, including battery storage, pumped storage hydroelectric, the role of interconnection (both gas and electricity) and the possibilities for hydrogen and Carbon Capture and Storage (CCS).

- There are a number of clear benefits in using indigenous sources over imported sources:
 - there are energy security benefits as evidenced by the supply from the Kinsale and Corrib gas fields which have met a significant proportion of our indigenous needs;
 - it has a less harmful impact on the environment, as energy does not have to be moved over long distances, resulting in lower emissions; and
 - the State will get a tax return, which is up to 55% in the case of a commercial discovery under the most recent licensing terms.
- The available evidence demonstrates that natural gas will be a core part of our energy mix for some time to come.

3 Policy Context

Ireland's policy for petroleum exploration and production sits within a broader framework of policies relating to climate action, energy security, and the sustainable use of marine resources.

3.1 Government's Action Plan to Tackle Climate

Breakdown/ Climate Action Plan

- The Intergovernmental Panel on Climate Change's Special Report, Global Warming of 1.5°C, published in October 2018, confirmed that the international community has a limited window for real action to reduce emissions to ensure that current and future generations can live sustainably. In Ireland, the work of the Citizens' Assembly in delivering a report on climate change in 2018, demonstrated that there is a near consensus on the need for strong and early action to reduce Ireland's greenhouse gas emissions and to make Ireland resilient to future climate impacts.
- The recent report of the Joint Oireachtas Committee on Climate Action, *Climate Change: A Cross Party Consensus for Action* set out a strong menu of recommendations for policy action, building on the previous work of the Citizens' Assembly. This Report was endorsed in 2019, and a climate and biodiversity emergency declared by Dáil Éireann, leading to the development of an ambitious all

of Government Climate Action Plan. Against this changed policy background, strategies must be devised to reduce and manage climate change risks.

- The Climate Action Plan sets out the actions needed to deliver our 2030 climate targets with the prospect of net zero emissions by 2050 and delivery of 70% of our electricity from renewable sources by 2030.
- The Plan sets out the actions we need to take to cut our reliance on fossil fuels in electricity generation (including the elimination of coal and peat), heat, transport, industry and agriculture in Ireland. This will be challenging and take time. The actions chosen are those measures which cut emissions with the least burden on citizens and open up most opportunities.
- The Government is currently preparing a long term climate strategy with a perspective to 2050. It is anticipated that this long-term strategy will establish a new target for Ireland's greenhouse gas emissions in 2035, which should be consistent with the objectives of the Paris Agreement. The strategy will also set out sectoral pathways towards achievement of this 2050 target and assess the potential implications for fossil fuel demand in Ireland's economy over the period.

3.2 Climate Change Advisory Council

- Following publication of the Climate Action Plan in June 2019, Government sought advice from the Climate Change Advisory Council on the future of oil and natural gas exploration offshore.
- The Council noted that the Government's Climate Action Plan envisages a major shift away from oil combustion within heat and transport sectors towards renewables in the coming decade. They also recognised the advice provided by the IPCC in its fifth Assessment Report, and its 2018 Special Report on Global Warming of 1.5°C. These have provided compelling evidence that the combustion of the known global reserves of coal, oil and natural gas would result in warming well in excess of the 2.0°C target set out in the Paris Agreement.
- Therefore, the Council advised that the exploration for, and recovery of new offshore oil reserves, is not compatible with a low carbon transition.
- In relation to natural gas, they noted the combustion of the known global reserves of natural gas would not, of itself, exceed 1.5°C warming. It has been identified

internationally as an important transition fuel, as the global energy system switches from carbon intensive fossil fuels to low-carbon and renewable systems on the way to complete decarbonisation. They noted that the recovery of newly discovered gas reserves may lead to improved energy security, lower energy costs and facilitate reductions in greenhouse gas emissions during the transition to a low carbon economy. However, the recovery of natural gas reserves should be contingent on the associated deployment of decarbonisation technologies.

- On this basis, the Council advised that the continued exploration for, and extraction of new offshore natural gas reserves can be consistent with a low carbon transition.
- This advice was accepted by the Government, confirmed by the Taoiseach in his address to the United Nations Climate Action Summit on 23 September 2019 in New York.

3.3 Energy Sustainability and Security Review

- The Minister is initiating a major review into Ireland's energy sustainability and security which will:
 - Consider the optimal actions that need to be taken, in reaching 70% renewable electricity, to ensure Ireland's electricity system is backed up in a secure, safe and sustainable way.
 - Assess the role of gas during the transition, as the lowest CO₂ emitting fossil fuel, and consider how and from where it is sourced.
 - Review the role that other technologies can play in the transition, including battery storage, pumped storage hydroelectric, the role of interconnection (both gas and electricity) and the possibilities for hydrogen and Carbon Capture and Storage (CCS).

3.4 Harnessing Our Ocean Wealth

- Harnessing our Ocean Wealth, the first integrated marine plan for Ireland, was published in 2012. It highlighted that when Ireland's seabed area is taken into account, Ireland is one of the largest EU states with sovereign or exclusive rights over one of the largest sea to land ratios (over 10:1) of any EU State.
- This document set out a vision, high-level goals, and key 'Enabling' Actions to put in place the appropriate policy, governance and business climate to enable Ireland's

marine potential to be realised. The current and potential contribution of the petroleum sector to our society and economy is recognised as an integral part of this plan.

- The intention is to prepare an updated plan for the period ahead, which will reflect the value of our offshore resources in aiding the delivery of offshore energy at scale and the role for exploration and production of natural gas as part of the transition to a low carbon economy.

3.5 National Planning Framework / Project Ireland2040

- The National Planning Framework (NPF) is the Government's high-level, strategic plan for shaping the future growth and development of our country out to 2040. It is a framework to guide public and private investment, to create and promote opportunities for our people and to protect and enhance our environment. In relation to energy, the NPF recognises the energy trilemma and that Ireland must reduce greenhouse gas emissions while at the same time ensuring security of supply of competitive energy sources to our citizens and businesses.

3.6 Marine Planning Policy Statement (MPPS)

- Ireland's first Marine Planning Policy Statement (November 2019) provides for the preparation, adoption and review of statutory marine planning policy statements on six-yearly cycles. It reflects the comprehensive updating and renewal now underway of Ireland's marine planning system, setting out core principles to inform evolving marine planning and development management process.
- The Marine Planning Policy Statement:
 - Describes the existing components of Ireland's marine planning system;
 - Outlines a vision for the future development of our marine planning system;
 - Sets out the overarching policies and principles the Government expects marine planning bodies and other public bodies that engage with the marine planning system to observe (in terms, for example, of public engagement, transparency, governance, environmental assessment, climate action, social and economic benefit);
 - Sets out high-level priorities for the enhancement of the marine planning system in Ireland.

- The Marine Planning Policy Statement serves as a parallel to the 2015 Planning Policy Statement which underpins the operation of the entire land-planning system in Ireland.
- The Statement sets out a vision for marine planning as follows: *“A marine planning system with clear forward planning, development management and enforcement elements that promotes and sustains ocean health, and supports the sustainable (recreational) enjoyment, management and use of Ireland’s marine resource.”* The policy statement also sets out ten strategic principles to guide all marine planning activity – forward planning, development management and enforcement.

4 Petroleum Exploration/Production Policy as part of the Transition

- Ireland’s offshore is one of the largest in Europe and largely underexplored when compared with the waters of our European neighbours. Early exploration efforts viewed the petroleum geology of the Irish offshore as being comparable to that of the North Sea. However, industry perspectives as to the potential of the Irish offshore have been transformed in recent years, with new interest in the prospectivity of the Atlantic margins. It is only through active exploration for natural gas that the potential of the Irish offshore will be proven.

4.1 Vision

- Natural gas is a transition fuel with a key role to play in the period ahead as Ireland advances to decarbonisation and the realisation of our Climate Action Plan objectives in terms of renewable energy supply. Based on this position, the Government has the following vision for the future of natural gas exploration and production in the Irish offshore:
 - To sustainably develop Ireland’s natural gas resources in order to deliver significant and sustained benefits, including import substitution, fiscal return, national and local economic development and technology learning as a core part of the transition to a low carbon economy.
 - To provide enhanced security of supply for Ireland in the short and medium term while Ireland transitions to more decarbonised sources of energy.

- To ensure robust regulatory practices in exploration, production and ultimately decommissioning, meeting the highest environmental and safety standards, according to international best practice.
- To deliver maximum value to the state from exploration activities through managing effective, well monitored work programmes and collecting, maintaining, and providing access to a national database of technical data relating to hydrocarbon exploration.
- To encourage, enable and guide research initiatives directed at deepening knowledge of Ireland's offshore potential and to collaborate at both national and international level to underpin our understanding of the geology of Ireland's offshore basins.

4.2 Principles

- Following the Taoiseach's statement on 23 September 2019, the following principles in relation to petroleum exploration in the Irish Offshore were announced by Government on 30 October 2019:
 1. All future licensing rounds in the currently Closed² Area offshore (Atlantic Margin - 80%) will be for natural gas only and not oil.
 2. All new licence applications in the currently Open Areas (Celtic Sea and Irish Sea - 20% of total offshore area) will be for natural gas only and not oil, applicable from 23 September 2019.
 3. All applications and authorisations in place before the announcement was made will not be affected by the decision and can continue towards exploration and production for both oil and/or gas as per their existing terms.

All authorisations covered by 1 and 2 above are referred to as "natural gas" authorisations throughout this document.

4.3 Applications/authorisations prior to 23 September 2019

- All existing applications and authorisations in place before the 23 September 2019 can progress through the standard lifecycle stages for exploration, extraction and production of natural gas and/or oil. Such authorisations, as defined in the Petroleum

² A map showing the Open and Closed offshore areas is available in the Appendix.

and Other Minerals Development Act, 1960 ("1960 Act"), include Licensing Options, Exploration Licences, Lease Undertakings, Petroleum Lease and Reserved Area Licences.

- Compliance with work programme commitments form an essential part of the progression of authorisations.

4.4 Future Licensing Applications

- All future applications to be accepted in the Open Areas will be for natural gas exploration only.
- Any future licensing rounds in the Closed Area will be for natural gas exploration only. Between rounds, natural gas authorisations cannot be applied for in this area.
- Licensing rounds create a competitive environment that encourages applicants to devote manpower to investigate exploration opportunities, and then to bid robust work programmes in return for being awarded exploration acreage. The decision on the timing of any future licensing round is a matter solely for the Minister, and several factors will inform that consideration, including, inter alia, Ireland's energy requirements and EU energy policies on security of supply.

4.5 Technical Considerations

- There are complexities involved in focusing on natural gas exploration to the exclusion of oil and it is acknowledged that there is no single scientific method that can accurately predict whether gas or oil (or water) will be present below the seabed prior to drilling a well or indeed prior to the issuing of an exploration authorisation.
- All of Ireland's offshore basins contain both oil and gas, as demonstrated to varying degrees in wells drilled to date. Four commercial gas fields offshore Ireland have been discovered. The Corrib gas field in the Slyne Basin is sourced by a deeply buried Carboniferous coal, and Kinsale Head and surrounding gas fields in the North Celtic Sea Basin are sourced by bacterial processes, creating biogenic gas, mixed with deeper thermogenic gas sources. Current research indicates that the most likely remaining potential in undrilled parts of the basins will be from mixed oil-gas sources. In addition, there is ongoing research within the EU investigating the future potential for natural gas hydrates as an energy resource.

- Future authorisations will be for natural gas existing under the seabed in a gaseous or solid state³. This means that only natural gas that is found in these states may be authorised for production.

4.6 Onshore Licensing

- The Petroleum and Other Minerals Development (Prohibition of Onshore Hydraulic Fracturing) Act 2017 prohibits the exploration for and extraction of onshore petroleum by means of hydraulic fracturing. Given the international competition for exploration investment and increased understanding of geological risk, the focus of exploration efforts in Ireland will be on the more strategic offshore opportunities.
- The Minister will no longer accept applications for on-shore authorisations (including internal waters) for any form of conventional oil and gas exploration from the date of publication of this policy statement.

5 Enhancing the Regulatory Framework

- In terms of regulation, the Department's objective is to have robust, sustainable, transparent processes in place that fully meet all required standards. Relevant information is routinely posted on the Department's website, and this is kept under regular review, in order to maximise the level of information that can be made publically available.
- New environmental screening arrangements introduced during 2019 will be monitored to ensure their effective operation.
- The existing regulatory framework for petroleum exploration is set out in appendix 2. The Government is progressing an ambitious programme to update that framework.
- In the marine planning area, the Minister for Housing, Planning and Local Government is leading significant reform of policy and legislation. The objective is to develop an integrated, holistic marine planning system in Ireland that promotes and

³ Defined, with reference to the 1960 Act, as natural gas existing in strata at virgin subsurface conditions in a gaseous or solid state and its derivatives or constituent substances that are ordinarily produced from gas wells (including, without limitation, distillate, condensate).

sustains ocean health, and supports the sustainable enjoyment, management and use of Ireland's marine resource. This will benefit both the delivery of offshore energy at scale and exploration for natural gas.

5.1 National Marine Planning Framework (NMPF)

- The National Marine Planning Framework (NMPF) builds on the MPPS (see section 3.6) by outlining the Government's proposed approach to managing Ireland's marine activities and ensuring sustainable use of marine resources to 2040. This single framework, will bring together all marine-based human activities, and present its vision, objectives and policies for each activity. It outlines how they will interact with each other in an ocean space that is under increasing spatial demand.
- The finalised NMPF, expected to be adopted in late 2020, will be the key decision-making tool for Government departments, State agencies, regulatory authorities and policy makers for decisions on marine activities out to 2040.
- Petroleum features as a key sectoral component of this plan, with a number of policies set out that are aimed at supporting exploration and development activities, enhancing security of energy supply and ensuring best practice in regulatory activities. The finalised NMPF will reflect the Government decision regarding the future focus on natural gas only.

5.2 Marine Planning and Development Management (MPDM) Bill

- In July, 2019, Government approved the General Scheme of the Marine Planning and Development Management Bill, 2019. The Bill seeks to establish in law a new marine planning system, which is underpinned by a statutory MPPS and guided by the NMPF. This new marine planning system consists of forward planning, development consent and enforcement. This legislation which was formerly the Maritime Area and Foreshore (Amendment) Bill) will, inter alia:
 - Provide a statutory basis for the MPPS and updates the existing legislation on marine forward planning;
 - Provides for the definition of Ireland's Maritime Area that will extend from the High Water Mark to the outer limit of the State's Continental Shelf. The Maritime Area includes the:
 - sea and tidal areas of the internal waters of the State,

- Territorial Sea of the State,
 - Exclusive Economic Zone of the State, and
 - Continental Shelf of the State.
- Introduce a single State consent system for the Maritime Area whereby the Ministers for Housing, Planning and Local Government and Communications, Climate Action and Environment will assume responsibility for the State property consents;
- The granting of leave to apply for planning permission to An Bord Pleanála or Local Authorities for projects under their jurisdiction;
- Eliminate the unnecessary duplication of development management processes (including environmental assessments) for activities or developments that are currently assessed under both the existing foreshore and planning regimes;
- Introduce a single development management process for the Maritime Area within the planning system for certain activities or developments that come within the remits of the Ministers for Housing, Planning and Local Government & Communications, Climate Action and Environment including, oil and gas production and offshore renewable energy; and
- Provide for a comprehensive approach to marine planning enforcement, options for which are currently being examined.
- Consent procedures in the 1960 Act will be reviewed in the context of the proposed MPDM Bill.

5.3 Licensing Terms

- The Licensing Terms for Offshore Oil and Gas Exploration, Development and Production will be revised in light of the future focus on natural gas exploration only. Factors to support the transition will be examined as part of this revision, including evidence of diversification, efforts to reduce emissions/carbon footprint within applicant's operations and potential requirements regarding the landing of natural gas.

5.4 Fiscal Terms

- The majority of existing licences are now based on the 2015 fiscal terms enacted in the Finance Act 2015. These terms were designed to strike the necessary balance

between attracting what is considered high-risk exploration investment, particularly in the Atlantic frontier and maximising the return to the State from Ireland's natural resources.

- The terms result in a rate of tax between 25% and 55% depending on the profitability of the field. In addition, there is a requirement for a minimum Petroleum Production Tax payment at a rate of 5% of gross revenues in every year that a field is selling production. These terms provide a relatively high level of return, when compared with international competitors.
- The current fiscal terms will continue to operate but will be reviewed at the time of any future licensing round.

6 Long-term Role for Exploration – pathway to phasing out

- As set out above, decarbonisation is not a one-off event – it is a process.
- The Government is committed to ensuring that process is completed within the shortest timeframe possible. At the same time however, it is also committed to ensuring that the process is completed responsibly, having regard to our energy security needs.
- The available evidence demonstrates that natural gas must play a core part of our energy mix for some time to come. This sector has a continued role to play over the coming decades in the transition to a zero carbon future, until renewable energy sources are sufficiently developed to meet Ireland's energy needs.

Appendix A Model for Offshore Exploration and Production

- The Irish Offshore is divided into 'Open Areas' and 'Closed Areas'.
 - In Open Areas, namely the Celtic and Irish Seas, applications for licensing options or exploration licences may be made at any time.
 - In Closed Areas, such as the Atlantic Margin, applications for licensing options or exploration licences may only be made during a Licensing Round, once announced by the Minister. Licensing Rounds are subject to a Strategic Environmental Assessment, that includes a public consultation before they take place.

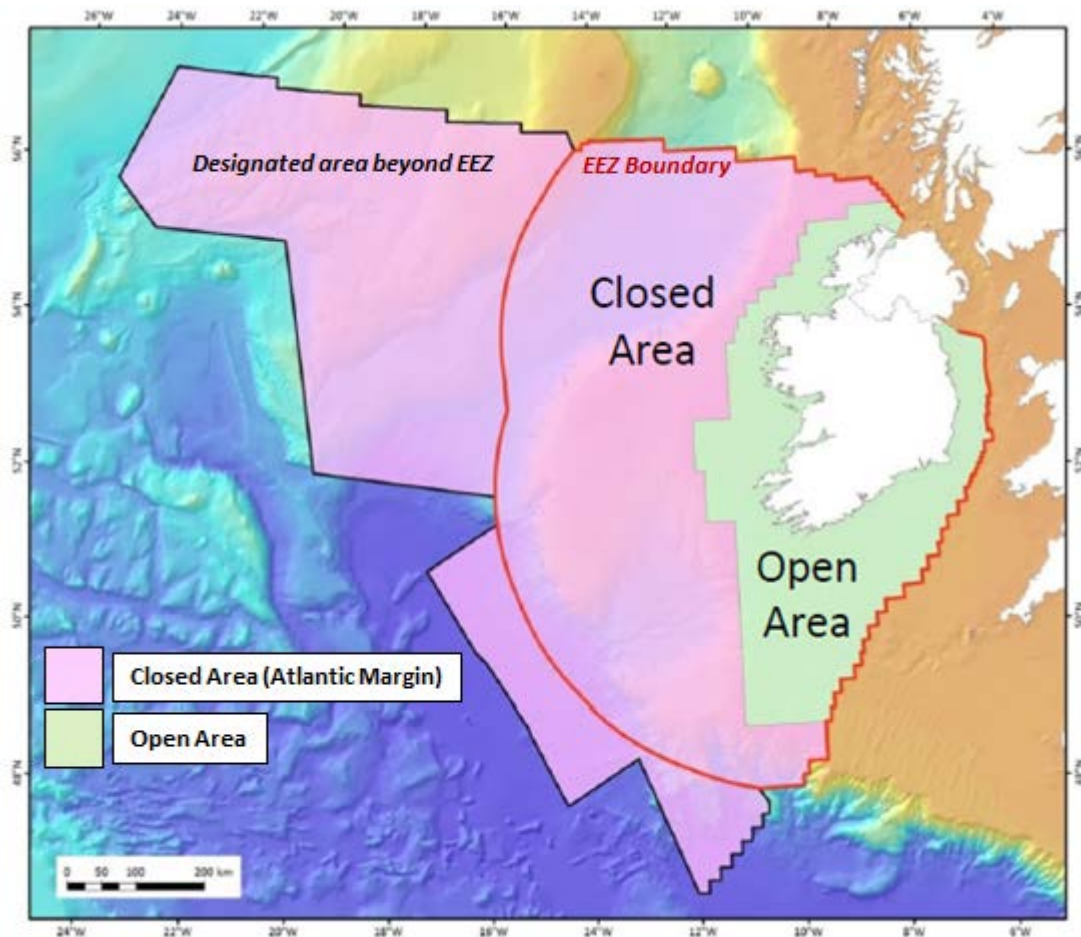


Figure 3 Ireland's Open and Closed Areas. (Note EEZ is Exclusive Economic Zone.)

- Ireland operates a concession system whereby, petroleum exploration companies are given an exclusive right to explore for petroleum within defined acreage offshore, through a licensing system which progresses from a licensing option to exploration licence and lease, in the event of a commercial find. Progression from Licensing Option to Exploration Licence and between the individual phases of an Exploration Licence is dependent upon fulfilment by the authorisation holder of work programme obligations.
- Industry carries the financial risk associated with such exploration and fiscal terms have been designed to strike the necessary balance between attracting the high-risk exploration investment necessary to prove the potential of the Irish Offshore and maximising the return to the State from Ireland's natural resources. The most recent tax terms deliver a higher share for the State from the most profitable fields and a minimum payment which would function like a royalty and would result in the State receiving a share of revenue in every year that a field is selling production.
- Open Areas such as the Irish and Celtic Seas allow applications for exploration licences and licensing options to be made at any time.
- In frontier areas, a different approach is taken to licensing. These areas are open for applications through licensing rounds which are held periodically. This has proven the most effective way to encourage industry to focus on new exploration opportunities in Ireland's Atlantic basins. Between rounds, exploration authorisations cannot be granted in these areas. Licensing rounds create a competitive environment that encourages companies to devote manpower to investigate exploration opportunities offshore Ireland, and then to bid strong work programmes in return for being awarded exploration acreage.

Current Status

- Since exploration began in the Irish offshore four commercial gas discoveries (Kinsale Head, Ballycotton, Seven Heads and Corrib) have been made. There have been no commercial discoveries of oil to date, though there have been discoveries of oil.

Appendix B Progression of Authorisations

A number of different authorisations that are issued by the Minister under the Petroleum and Other Minerals Development Act, 1960. These are as set out below.

1. **Petroleum Prospecting Licence (issued under Section 9 (1) of the 1960 Act).**

This is a non-exclusive licence giving the holder the right to search for petroleum in any part of the Irish Offshore which is not subject of a Petroleum Exploration Licence, Reserved Area Licence or Petroleum Lease granted to another party.

2. **Licensing Option (issued under Section 7 (1) of the 1960 Act).**

This is a non-exclusive licence giving the holder the first right, exercisable at any time during the period of the Option, to an Exploration Licence over all or part of the area covered by the Option.

3. **Exploration Licence (issued under Section 8 (1) of the 1960 Act).**

There are three categories of Exploration Licence:

- Standard Exploration Licence for water depths up to 200m;
- Deepwater Exploration Licence for water depths exceeding 200m
- Frontier Exploration Licence for areas so specified by the Minister

For Standard and Deepwater Explorations Licences the holder is obliged to carry out a work programme which must include the drilling of a least one exploration well in the first phase. For a Frontier Exploration Licence the holder must commit to at least one exploration well in order to proceed to the second phase. The area of an Exploration Licence shall be expressed in terms of blocks and/or part blocks of the Williams Grid.

4. **Lease undertaking (issued under Section 10 (1) of the 1960 Act).**

When a discovery is made in a licensed area and the licensee is not in a position to declare the discovery commercial during the period of the licence, but expects to be able to do so in the foreseeable future, the licensee may apply for a Lease Undertaking. This is an undertaking by the Minister, subject to certain conditions, to grant a Petroleum Lease at a stated future date. The holder of a Lease Undertaking is required to hold a Petroleum Prospecting Licence which will govern activities under the Lease Undertaking.

5. Petroleum Lease (issued under Section 13 (1) of the 1960 Act).

When a commercial discovery has been established it will be the duty of the authorisation holder to notify the Minister and apply for a Petroleum Lease with a view to its development.

6. Reserved Area Licence (issued under Section 19 (1) of the 1960 Act).

A Petroleum Lease holder may apply for a reserved area licence in respect of an area adjacent to or surrounding the leased area and which is not subject of an authorisation other than a Petroleum Prospecting Licence.

Terms and conditions, including environmental provisions, are attached to the above mentioned authorisations. These licensing terms provide the operational framework for exploration and production.

In addition Rules and Procedures for Offshore Petroleum Exploration Operations and Rules and Procedures for Offshore Petroleum Production Operations apply to all petroleum exploration, appraisal and production operations in the internal waters of the State, the territorial waters or in the designated areas of the continental shelf under Irish jurisdiction.

Appendix C Current Regulatory Framework

Overview

- Under the 1960 Act, all petroleum in the State is vested in the Minister.
- The Minister develops and maintains an appropriate policy and regulatory framework to underpin petroleum exploration and production activities, with the aim of maximising the benefits to the State. This involves the development of legislation, transposition of relevant EU Directives into domestic law, and the effective management and regulation of authorisations.
- In addition, the Department engages at national, EU and international levels to ensure that regulatory practices are in keeping with international best practice.
- The Department also supports research to enable greater understanding of Ireland's offshore and to ensure that regulation is based on high quality scientific data, particularly for frontier areas which are relatively underexplored.

Regulation of Authorisations

- The Licensing Terms for Offshore Oil and Gas Exploration, Development and Production 2007 apply to authorisations awarded after 1 January 2007 and set out the application requirements for authorisations as well as the non-fiscal terms on which each type of authorisation will be granted. The Licensing Terms indicate the 'terms on which the Minister is prepared to issue the various authorisations' and such conditions are generally afforded contractual status by incorporation into authorisations.
- The Rules and Procedures for Offshore Petroleum Exploration and Appraisal Operations, alongside the Rules and Procedures for Offshore Petroleum Production Operations, set out the rules and procedures that an operator of a petroleum authorisation must follow when carrying out oil and gas exploration, appraisal and production operations in the Irish Offshore.
- In considering new licensing applications or the progression of licences, the Minister takes account of the work programme proposed by the applicant; the technical competence and offshore experience of the applicant; the financial resources available to the applicant; the applicant's policy to health and the environment; and

previous performance by the applicant under any authorisations to which the applicant has been a party.

- In the interest of transparency and in accordance with Section 57 of the 1960 Act, the Minister is required to present to the Houses of the Oireachtas a six monthly report on Petroleum Exploration and Development in Ireland. This report sets out the particulars of all authorisations granted by the Minister that are current during the reporting period. This includes the amount of money relating to petroleum exploration and development collected by the Minister during the reporting period, and other information relating to petroleum exploration and development in Ireland. In addition an Acreage Report setting out the position of each authorisation. A Concession Map is published every quarter on the Department's website.
- The Department takes an evidence based approach to the evaluation of proposed work programmes for all authorisations. They are costed by applicants and where considered appropriate by the Department, a financial viability and capacity test is performed to provide assurance on the applicant's capability to carry out the work.
- In addition, the evaluation includes an assessment of the return to the State in terms of proposed data acquisition, interpretation of data and technical studies. Reporting requirements ensure that delivery of these work programme commitments are continually monitored by the Department.

Strategic Environmental Assessment

- The Strategic Environmental Assessment (SEA) Directive requires that an environmental assessment is carried out on certain plans and programmes which are likely to have significant effects on the environment. The aim is to promote sustainable development by the early integration of environmental considerations into any licensing activity.
- The Irish Offshore Strategic Environmental Assessment (IOSEA5), was carried out to assess any potential impacts associated with activities conducted under petroleum exploration and production authorisations within Irish offshore waters for the period 2015-2020. This involved public consultation with submissions and observations received considered as part of its preparation.
- IOSEA5 provides those working in and using the Irish offshore with an operational environmental baseline against which they can conduct their work and ensures the effective protection of the marine environment.

- A new assessment will be carried out in advance of any licensing activity beyond the term of the current IOSEA5.

Regulation of Activities under a Licence/Lease

- The Department is responsible for carrying out environmental screening and any environmental assessments determined as being required following screening, in accordance with the requirements set out in Directive 2011/92/EU, as amended by Directive 2014/52/EU (Environmental Impact Assessment Directive) and Directive 92/43/EEC (Habitats Directive) in respect of applications made to the Minister for permission to undertake 'activities' under an exploration licence or petroleum prospecting licence, or applications made to the Minister for the approval of the 'working of petroleum' under a petroleum lease.
- The European Communities (Birds and Natural Habitats) Regulations 2011 – 15, as amended (Birds and Natural Habitats Regulations) give effect to the Habitats Directive as a matter of Irish law and require, inter alia, that a public authority carry out screening for Appropriate Assessment (AA) of a plan or project for which an application for consent is received. An independent process is in place for AA screening assessments (and any required Stage 2 AA) in accordance with the Regulations, in respect of applications to the Minister for permission to undertake 'activities' under an exploration licence or petroleum prospecting licence, and in respect of applications made to the Minister for the approval of the 'working of petroleum' under a petroleum lease.
- On the completion of all required environmental assessments and after incorporating any suggested conditions which may be recommended, applications are evaluated by the Department. An evidence based approach is taken and recommendations are then made to the Minister regarding whether consent should be given for the activities applied for.