AECOM Delivering a better world

CHAPTER 04
Energy and Planning Policy

Shannon LNG Limited
August 2021

Shannon Technology and Energy Park
Environmental Impact Assessment Report

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4.1.1 Introduction

Taking account of recent developments in Ireland's response to climate change, including an objective for 70% of Ireland's electricity to come from renewable sources by 2030, the Proposed Development supports the resilient transition of Ireland's electricity system to renewables.

The Proposed Development consists of a new flexible 600 MW Power Plant and a natural gas import facility. The natural gas facility can protect Ireland in the event of a major gas supply disruption from the UK. The Power Plant addresses Ireland's looming shortage of conventional power generation. Natural gas will play an increasingly important role in Ireland's climate change plans as coal and peat-fired electricity generation is phased out and the amount of electricity from renewable sources increases.

The Proposed Development is aligned with European Union (EU) and Irish policy on energy and climate action as follows:

- Enhance Ireland's energy security: The Corrib gas field is rapidly depleting and it is predicted that Ireland will be reliant on UK imports from a single supply point for 90% of its gas by 2030. The impact of losing this single gas supply from the UK has been assessed by the Commission for Energy Regulation (CRU) as being 'disastrous' for electricity production in Ireland (CRU, 2020). The Proposed Development provides import route diversity and that can protect Ireland in the event of a supply disruption from the UK. It would also allow Ireland to comply[1] with the N-1 Infrastructure standard (see Chapter 03 – Need and Alternatives).
- Address power capacity shortfalls: EirGrid has forecast a shortfall in generation capacity of up to 570 MW by 2026 and advised that new additional gas fired conventional power plants are urgently required on the grid (EirGrid and Soni, 2020). The Proposed Development's 600 MW Power Plant can be delivered in a realistic timeframe to address the looming shortage. The Power Plant was successful in the recent Enduring Connection Policy (ECP 2.1) process and is preparing for an imminent grid connection offer.
- 70% renewables by 2030: Ireland's Climate Action Plan sets a target of 70% of electricity to be generated from renewable sources by 2030 (Department of the Environment, Climate and Communications (DECC), 2019). It also commits to an early and complete phase-out of coal and peat-fired electricity generation. The Climate Action Plan confirms that natural gas is the only long term reliable backup for intermittent wind generation for the foreseeable future[2].

4.1.2 Energy Policy (European Union) General Principles

The EU Member States are facing significant challenges in the field of energy, including issues such as increasing import dependency, limited diversification, high and volatile energy prices, growing global energy demand, security risks affecting producing and transit countries, the growing threats of climate change, decarbonisation, slow progress in energy efficiency, challenges posed by the increasing share of renewables, and the need for increased transparency, further integration and interconnection in energy markets. A variety of measures aiming to achieve an integrated energy market, security of energy supply and a sustainable energy sector are at the core of the EU's energy policy (EU, 2021).

In recognition of the challenges outlined above, the European Commission has directly given support to numerous member states to construct LNG facilities with a view to contributing to the security and diversification of energy systems. Examples include:

- Croatian LNG terminal at Krk Island; (Regulation (EU) 2017/ 1938 concerning measures to safeguard the security of gas supply);

[1] The National Preventative Action Plan 2018 to 2022 notes that Ireland fails to the N-1 Standard, meaning that after losing the single largest gas infrastructure the technical capacity of the remaining infrastructure cannot meet demand.
[2] The Climate action plan forecasts gas demand as far as 2040.

  - Commissioner Margrethe Vestager, in charge of competition policy, said: '*The new LNG terminal in Croatia will increase the security of energy supply and enhance competition, for the benefit of citizens in the region. We have approved the support measures to be granted by Croatia because they are limited to what is necessary to make the project happen and in line with our State aid rules.*'

- Klaipeda LNG terminal in Lithuania (European Commission (EC), 2013)
  - Commission Vice-President in charge of competition policy Joaquín Almunia stressed: 'The aid will reduce Lithuania's dependence on a single source of gas supplies and enhance its security of supply. By diversifying the gas supply sources, the terminal will also stimulate competition between gas suppliers, which in turn will benefit consumers.'
- LNG terminal in Cyprus (EC, 2020)
  - The terminal will also improve Cyprus' security of energy supply and diversification of imported energy sources and fuels by increasing energy reliability and flexibility and by giving the country access to the global LNG market.

4.1.2.1 General Policy Framework

The current EU policy agenda sets out to achieve the following targets by 2030:

- A reduction of at least 40% in greenhouse gas emissions compared to 1990 levels;
- An increase to 32% of the share of renewable energies in energy consumption;
- An improvement of 32.5% in energy efficiency; and
- The interconnection of at least 15% of the EU's electricity systems.

Table 4-1 Policy Publication

Provision/ Strategy	Published by	Topic
COM(2015)0080	EU Commission	Building an energy union that gives EU households and businesses a secure, sustainable, competitive and affordable energy supply.
COM(2016)0860	EU Commission	**'Clean energy for all Europeans' package (COM(2016)0860).** (EC, 2015). It consists of eight legislative proposals covering governance: 1. Governance of the Energy Union Regulation ((EU) 2018/ 1999); 2. Electricity market design (the Electricity Directive ((EU) 2019/ 944); 3. The Electricity Regulation ((EU) 2019/ 943); 4. The Risk-Preparedness Regulation ((EU) 2019/ 941)); 5. Energy efficiency (Energy Efficiency Directive ((EU) 2018/ 2002); 6. Energy Performance of Buildings Directive ((EU) 2018/ 844)); and 7. Renewable energy (Renewable Energy Directive ((EU) 2018/ 2001)). Rules for the regulator, the EU Agency for the Cooperation of Energy Regulators (Regulation (EU) 2019/ 942 establishing ACER) the Governance of the Energy Union Regulation, was finally adopted on 4th December 2019. Under the regulation, EU Member States need to establish 10-year integrated national energy and climate plans (NECPs) for the period from 2021 to 2030, submit a progress report every two years, and develop consistent national long-term strategies to meet the goals of the Paris Agreement.
(EU) 2019/ 504	European Parliament and of the Council	Introduced changes to the EU's energy efficiency policy and the governance of the Energy Union in the light of the withdrawal of the United Kingdom from the EU. It made technical adjustments to the

Provision/ Strategy	Published by	Topic
		projected energy consumption figures for 2030 to correspond to the Union of 27 Member States

4.1.2.2 The Internal Energy Market

The legislation and provisions around the internal energy market seek to create a fully integrated and well-functioning internal energy market for the purposes of ensuring affordable energy prices, secure investment for green energy, secure energy supplies and open up the least costly path to climate neutrality.

4.1.2.3 Energy Efficiency

Directive 2012/27/EU on energy efficiency established binding measures to help the EU reach its 20% energy efficiency target by 2020. The directive also introduced energy savings targets and many energy efficiency policies. In December 2018, the revised Energy Efficiency Directive (Directive (EU) 2018/2002) increased the overall EU target for 2030 to at least 32.5% (relative to the 2007 modelling projections for 2030). As part of the European Green Deal, the Commission proposed a review of the Energy Efficiency Directive and published its assessment roadmap on 3rd August 2020.

4.1.2.4 Renewable Energy

One of the agreed priorities of the May 2013 European Council was to intensify the diversification of the EU's energy supply and to develop local energy resources in order to ensure security of supply and reduce external energy dependency. With regard to renewable energy sources, including solar power, onshore and offshore wind, ocean and hydropower, biomass and biofuels, Directive 2009/28/EC of 23rd April 2009 introduced a 20% target to be reached by 2020. In December 2018, the new Renewable Energy Directive (Directive (EU) 2018/ 2001) set the EU's binding overall renewable energy target for 2030 at 32% at least.

4.1.2.5 Security of Supply – Natural Gas

In response to the crisis in Ukraine, Regulation (EU) 2017/ 1938 of the European Parliament and of the Council of 25th October 2017 sets out the requirements of Member States concerning measures to safeguard the security of gas supply. Regulation (EU) 2017/ 1938 requires Member States complete security of gas supply risk assessments and that adequate preventive action plans and emergency plans are developed to mitigate risk identified.

4.1.3 Energy Policy (Ireland)

4.1.3.1 The Department of the Environment, Climate and Communications (DECC)

The Department of the Environment, Climate and Communications (DECC) is responsible for a number of sectors, including energy[3]. Creating and implementing policies in order to protect and manage Ireland's energy supply is a key part of its role.

The DECC's energy portfolio comprises:

a. Electricity;

b. Gas;

c. Transport Energy;

d. Residential Energy Efficiency; and

e. Business and Public Sector Energy.

On its homepage, the Department states:

> '*Ireland is an energy importing economy, relying largely on gas and oil imports to meet its energy needs. At the same time, the effects of climate change are causing increasing disruption in our lives. The need to reduce our carbon emissions and our reliance on fossil fuels in all sectors of our society is becoming more urgent. It is the goal of the government to enable Ireland, within EU and*

[3] The other sectors being: communications; environment and climate action; natural resources and waste policy; and corporate affairs and strategic development.

global frameworks, to achieve a transition to a low-carbon, climate-resilient and environmentally sustainable economy.

By 2030, the government aims to meet the following targets:

- *70% renewable electricity;*
- *30% reduction in CO2 emissions; and*
- *32.5% Improvement in energy efficiency.*

This involves striking a balance between developing low carbon and renewable energy sources, ensuring a safe, secure and reliable supply of electricity, and maintaining a competitive and well-regulated energy market.

Electricity

Electricity makes up almost one fifth of our energy use in Ireland. Our main energy source for this is natural gas. The government is responsible for creating policy relating to the regulation of electricity markets. It is also the government's goal to achieve a reduction in Ireland's CO2 emissions. Electricity generation is currently responsible for a quarter of these. The government designs policy and supports schemes to achieve this, which promote renewable energy sources and support Ireland in its goal to reach national and EU renewable energy targets.

Gas

Energy in Ireland is generated from a number of different sources, both domestic and imported. Almost one third of our overall energy needs, and over half of our electricity, comes from natural gas. The government creates policy and legislation allowing for the liberalisation and regulation of the gas market in Ireland. It is also responsible for reviewing the potential and criteria for using more renewable sources of gas to achieve a reduction in Ireland's greenhouse gas emissions.'

4.1.3.2 Energy/ Fuel Use in Ireland

Transport, heat and electricity are the three key energy sectors in Ireland. The Sustainable Energy Authority of Ireland (SEAI) is the official source of energy data for Ireland, and it publishes an annual report Energy in Ireland. The latest report, published December 2020, presents the energy situation in Ireland at the end of 2019, as follows:

'**Main points for 2019**

Overall energy use in Ireland in 2019 was at almost the same level as in 2001, but CO_2 emissions from energy are down by almost one fifth, while the economy is one and a half times as large.

The 2020 report highlights the further reduction in CO_2 emissions intensity of electricity. Back in 2001, wind supplied approximately 1% of Ireland's electricity and coal 20%. The emissions intensity was 807 gCO_2/kWh, but in 2019, with coal generating less than 2% and wind 32%, the intensity is less than half at 324 gCO_2/kWh. The target of 40% of electricity from renewables sources was within sight at the time the annual report was published.

Demand for fossil fuels fell by 3% in 2019, to 12,774 ktoe, which was 17% lower than in 2005. Despite this progress, 87% of all energy used in Ireland in 2019 came from fossil fuels, with almost a half of all energy use from oil, mostly for transport.

Main trends in national fuel use for 2019

Oil continues to be the dominant energy source and maintained a 49% share of total primary energy in 2019. The share of oil in overall energy use peaked in 1999 at 60%. Consumption of oil increased by just 0.1% in 2019, to 7,193 ktoe, but was still 21% lower than in 2005.

Natural gas use increased by 2.0% in 2019, and its share of total primary energy increased to 31%. Natural gas use was 30% higher than in 2005.

Coal use decreased by 53% in 2019, and its share of total primary energy fell to 2.6% down from 10.5% in 2015. Since 2005, coal use has fallen by 80% (10.8% per annum). Most of the reduction has been in electricity generation.

Peat use fell by 8.3% in 2019 and its share of overall energy use was 4.3%.

Total Renewable energy increased by 10.3% during 2019. Hydro and wind increased by 28% and 16% respectively. Biomass use fell by 3.9% in 2019 and other renewables increased by 15%.

The overall share of renewables in primary energy stood at 11.2% in 2019, up from 10% in 2018.

Electricity

Ireland became a net importer of electricity in 2019 for the first time since 2015. Net electricity imports were 55 ktoe, making up 2.1% of electricity generation from just 0.4% of total primary energy.'

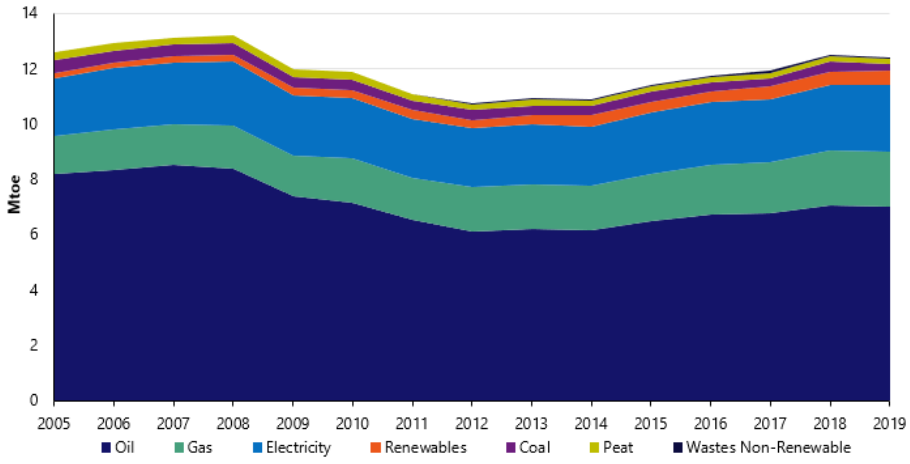


Figure 4-1 Final Consumption by Fuel, Ireland 2019 (SEAI 2020)

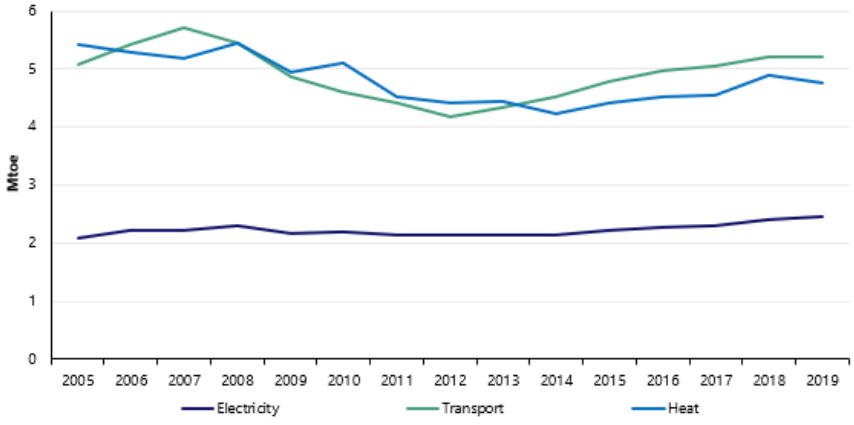


Figure 4-2 Final Energy in Heat, Transport and Electricity

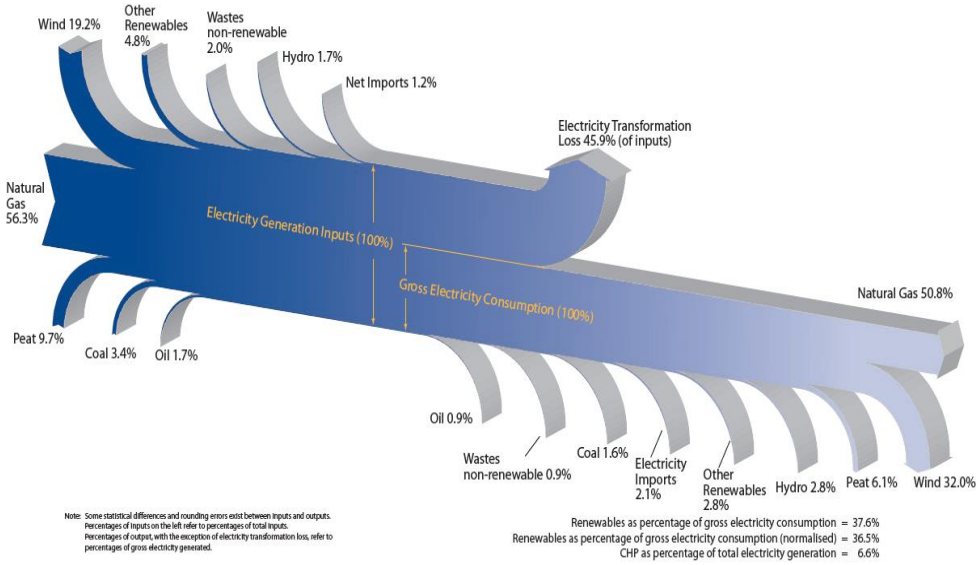


Figure 4-3 Flow of Energy in Electricity Generation, 2019 – Outputs by Fuel, Ireland 2019 (SEAI 2020)

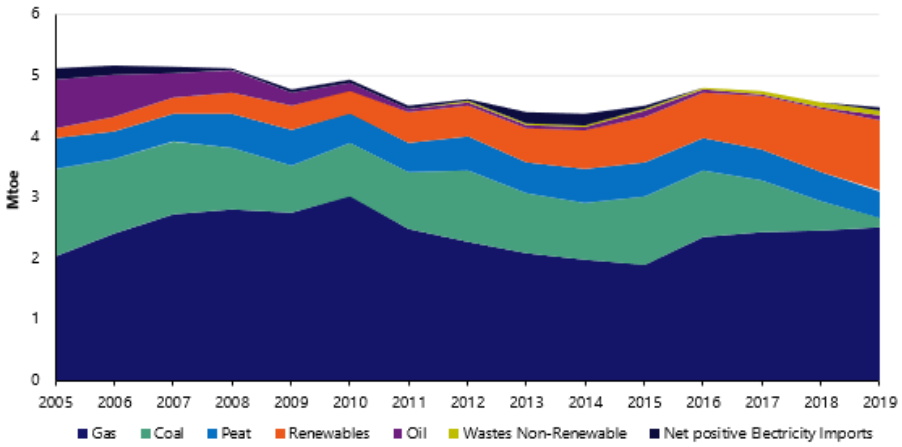


Figure 4-4 Primary Fuel Mix for Electricity Generation, Ireland 2019 (SEAI 2020)

Heat and transport account for approximately 80% of Ireland's energy use while electricity accounts for the remaining 20%. While Ireland continues to increase the availability of renewable electricity, this remains a relatively small part of Ireland's overall required energy mix.

4.1.3.3 Programme for Government 2020

The Programme for Government (Department of the Taoiseach, 2020) states that:

> '*As Ireland moves towards carbon neutrality, we do not believe that it makes sense to develop LNG gas import terminals importing fracked gas. Accordingly, we shall withdraw the Shannon LNG Terminal from the EU Projects of Common Interest list in 2021.*'

In relation to the Programme for Government, and its statements on 'fracked gas', it is noted that most of the LNG in the world is not sourced from fracked gas. Accordingly, the Proposed Development does not depend on fracked gas and the Applicant is confident that it can source gas from non-fracked sources to meet energy demand and ensure security of supply in Ireland.

4.1.3.4 Policy Statement on the Importation of Fracked Gas

On 18th May 2021 the Government issued a Policy Statement on the Importation of Fracked Gas. The Policy Statement stems from the in the Programme for Government noted in Section 4.1.3.3. The Policy Statement includes the following:

> '*The placing of a legal prohibition on the importation of fracked gas in national legislation has been considered and legal advice has been provided by the Attorney General. In the context of European Union Treaties and the laws governing the internal energy market, it is considered that a legal ban on the importation of fracked gas could not be put in place at this time.*
>
> *…*
>
> *Ireland imports much of its natural gas via the two interconnector pipelines from Moffat in Scotland, which provide the majority of natural gas currently used in Ireland. Given the level of fracked gas in the imports from Scotland is considered very low, the highest risk of fracked gas being imported into Ireland on a large-scale would be via liquefied natural gas (LNG) terminals, if any were to be constructed.*
>
> *The Minister for the Environment, Climate and Communications is currently carrying out a review of the security of energy supply of Ireland's electricity and natural gas systems which is focussing on the period to 2030 in the context of ensuring a sustainable pathway to net zero emissions by 2050*'.

The policy statement concludes with the following policy decisions:

> '*In order to implement the Programme for Government commitment that it does not support the importation of fracked gas, the Government has approved that:*
>
> - *Pending the outcome of the review of the security of energy supply of Ireland's electricity and natural gas systems, it would not be appropriate for the development of any LNG terminals in Ireland to be permitted or proceeded with;*
> - *The Government will work with like-minded European States to promote and support changes to European energy laws – in particular the upcoming revision of the European Union's Gas Directive and Gas Regulation – in order to allow the importation of fracked gas to be restricted; and*
> - *The Government will work with international partners to promote the phasing out of fracking at an international level within the wider context of the phasing out of fossil fuel extraction.*'

The Department of Communications, Climate Action and Environment awarded the contract for the security of supply review on 10th May 2021. The Minister has advised that he expects the review to be completed by the first half of 2022 (Houses of the Oireachtas, 2021).

Since October 2018, there have been seven separate security of supply reviews. These are discussed in Section 4.1.3.5. All these reviews have consistently identified the risks associated with Ireland's dependence on a single gas supply point from the UK, these are:

1. 20th July 2021, Government of Ireland, Draft National Risk Assessment Overview of Strategic Risks 2021/ 2022;
2. 26th March 2021, Government of Ireland, *National Risk Assessment for Ireland 2020;*
3. 11th November 2020, Commission for Regulation of Utilities (CRU), *Identification of National Electricity Crisis Scenarios for Ireland* (CRU/20/138);
4. July 2019, Government of Ireland, *National Risk Assessment – Overview of Strategic Risk*;
5. 15th June 2020, Department of Communications, Climate Action and Environment, *the National Energy and Climate Change plan 2021 to 2030;*
6. 2018, CRU, *National Preventative Action Plan Gas 2018 – 2022 Ireland*; and
7. October 2018, Department of Communications, Climate Action and Environment, CRU, GNI and EirGrid, *Long Term Resilience Study 2018*.

Additionally, the following studies confirm the energy security risks for Ireland and broadly support the need for gas import route diversity:

1. SEAI. *Energy Security in Ireland 2020 report*;
2. EirGrid's *Tomorrow's Energy Scenarios 2019 Ireland* (EirGrid, 2019);
3. The European Network of Transmission System Operators for Gas (ENTSOG);
4. EirGrid. *Ten year Network Development Plan (2020);* and
5. The International Energy Association (IEA) *'Ireland 2019 Review of Energy Policies of IEA Countries* (IEA, 2019).

In relation to the Policy Statement on the Importation of Fracked Gas, it is noted that most of the LNG in the world is not sourced from fracked gas. For context, all of the LNG required for the Proposed Development represents only 1% of the globally traded non fracked LNG. LNG is a globally traded commodity and there are 37 operational LNG terminals in Europe at present. Accordingly, the Proposed Development does not depend on fracked gas and the Applicant is confident that it can source gas from non-fracked sources to meet energy demand and ensure security of supply in Ireland.

Finally, on 6th July 2021, CRU Commissioner, Dr Paul McGown, testified to the Oireachtas Joint Committee on Environment and Climate Action that (Houses of the Oireachtas, 2021);

> '*When we talk about this diversity of supply we are being quite open. We have obligations around security of supply and we must consider all options. A relationship has been drawn between LNG and certain types of gas and I am not sure that this helps the overall discussion. LNG can be and could be natural gas. Another point on diversity of supply is the type of gas that is entering the system. We should also be considering what role indigenous biogas will have and what role blue hydrogen might have as we transition through a blended natural gas system to a system that might ultimately be decarbonised.*
>
> *There are many aspects to diversity of supply. I would neither rule in nor rule out that we might be discussing the role of LNG, but I emphasise that we should take the idea of fracked gas and separate it completely from the idea of LNG, to just consider LNG, if we are looking at that as a route for natural gas to ensure diversity and therefore security of supply.*'

4.1.3.5 Energy Policy to 2030, Transition to Low Carbon

The Government's Energy White Paper (DECC, 2015) outlined a transition to a low carbon energy system for Ireland by 2050. The White paper was a complete energy policy update, in which the Government set out a framework to guide policy and the actions that Government intended to take in the energy sector from then (2015) up to 2030. The paper took into account European and International climate change objectives and agreements, as well as Irish social, economic and employment priorities.

4.1.3.6 Climate Action Plan 2019

The Climate Action Plan, published in June 2019 (CAP 2019) (DECC, 2019), sets policies, measures and targets necessary for Ireland to achieve its 2030 emission reduction targets.

The CAP 2019 supports the adoption of a net zero carbon target by 2050 set at EU level:

> '*The Government supports the adoption of a net zero target by 2050 at EU level. The Climate Action*
> *Plan puts in place a decarbonisation pathway to 2030 which would be consistent with the adoption*
> *of a net zero target in Ireland by 2050. The Plan also commits to evaluating in detail the changes which would be necessary in Ireland to achieve this target. In 2014 Ireland adopted a National Policy Position for an 80% reduction in CO2eq. emissions by 2050 compared to 1990 levels for the electricity generation, built environment, and transport sectors. It also outlines an approach to carbon neutrality in the agriculture and land-use sector, including forestry, which does not compromise on national capacity for sustainable food production.*'

According to its Statement of Strategy 2016-2019, the high-level objective in respect of 'Climate Action and Energy' is to:

> 'E*nable the State, within EU and global frameworks, to pursue and achieve transition to a low-carbon, climate-resilient and environmentally sustainable economy, underpinned by a secure and competitive energy supply, in the period to 2050.*'

One of the stated objectives the CAP includes Increasing renewables from 30% to 70% by adding 12GW of renewable energy capacity and the closing of peat, coal and oil plants.

The 70% renewables target combined with the commitment to phase out coal and peat-fired electricity generation leaves natural gas as the primary back up to address intermittency in wind generation for the foreseeable future.

'Interim Climate Actions', published by the Government in 2021, refers to the new Programme for Government, published in June 2020, which outlined Ireland's updated commitment to a green post pandemic recovery, including a more ambitious climate target of an average 7% emissions reduction per year to 2030. The measures proposed in 'Interim Climate Actions' are intended to be used to drive continued delivery of climate action across all Government Departments and bodies, while the Climate Action Plan 2021 is being prepared for publication in summer 2021. A renewed National Development Plan is also due for publication later this year.

'Interim Climate Actions' 2021 formally replaces the Annex of Actions published as part of the Climate Action Plan, 2019, and will be subject to the same process of monitoring and reporting, including the publication of Quarterly Progress Reports. The purpose of 'Interim Climate Actions' 2021 is to maintain a whole-of-government focus on implementation and continue to progress new climate actions while the Plan to reach 7% per annum reductions is developed. Its stated objective is to ensure that planning and implementation go hand in hand.

4.1.3.7 Security of Supply

Ireland currently has two sources of natural gas. The year-on-year production from the country's only remaining producing natural gas field, the Corrib gas field, is currently declining, resulting in a growing reliance on imports via a single supply point from the UK through two gas interconnector pipelines. Ireland currently imports over 50% of its gas needs, and these imports are forecast to grow to over 80% by 2025 and 90% by 2030.

The Department of Communications, Climate Action and Environment has also noted in relation to energy policy (DECC, 2020a):

> '*Energy policy seeks to balance three core priorities – namely sustainability, security of supply and competitiveness. Secure supplies of energy are critical to support society and the economy. Ensuring the security of energy supply of our gas and electricity networks is a therefore a key priority.*'

As outlined in Section 4.1.3.2 in the last three years, from October 2018, there have been seven separate security of supply reviews. All these reviews have consistently identified the risks associated with Ireland's dependence on a single gas supply point from the UK, these are in chronological order:

1. October 2018, Department of Communications, Climate Action and Environment, CRU, GNI and EirGrid, *Long Term Resilience Study 2018*;
2. 2018, CRU, *National Preventative Action Plan Gas 2018 – 2022 Ireland*;
3. July 2019, Government of Ireland, *National Risk Assessment – Overview of Strategic Risk*;
4. 15th June 2020, Department of Communications, Climate Action and Environment, *the National Energy and Climate Change plan 2021 to 2030;*
5. 11th November 2020, Commission for Regulation of Utilities (CRU), *Identification of National Electricity Crisis Scenarios for Ireland* (CRU/20/138);
6. 26th March 2021, Government of Ireland, *National Risk Assessment for Ireland 2020;* and
7. 20th July 2021, Government of Ireland, Draft National Risk Assessment Overview of Strategic Risks 2021/ 2022.

Long Term Resilience Study.

The importance of energy security for Ireland is highlighted in the study commissioned by the Department of Communications, Climate Action and Environment, with support from the Commission for Regulation of Utilities (CRU), Gas Networks Ireland (GNI) and EirGrid, 'Long Term Resilience Study 2018'.

The Long Term Resilience Study 2018 published jointly by EirGrid and Gas Networks Ireland examined the long term security of supply position up to 2040. The report referred to the dependency on gas imports from the Moffat entry point in Scotland via onshore pipelines in Scotland and two subsea interconnectors having been reduced by the Corrib field production, but notes that as Corrib production declines, 'gas imports from Britain will once again represent the dominant source of supply'. Thus, Ireland could potentially have a high level of dependence on a single import route.

The report outlines a number of possible ways for Ireland to improve its security of supply position. These options include integration of bio-methane (renewable natural gas), LNG import terminals (fixed and floating options), further gas interconnection (e.g. to France) and permanent gas storage.

The Long Term Resilience Study 2018 concluded with a Key Recommendation to:

> '*Conduct a detailed cost benefit analysis for a floating LNG terminal. The most economically advantageous option to improve the resilience of Ireland's gas supply is a floating LNG terminal.*'

National Preventative Action Plan (Gas) for 2018 – 2022 Ireland

EU Regulation 2017/ 1938 mandates that EU Member States implement measures to safeguard gas security of supply. Consequently the National Preventative Action Plan (Gas) 2018 – 2022 Ireland was completed by the CRU in 2018. It noted that:

> '*The N-1 calculation removes the technical capacity of the single largest piece of gas infrastructure on a peak day with a view to determining whether the remaining gas infrastructure can meet 100% of peak day gas demand. To pass, the calculation must equate to 100% or more. Ireland failed the Infrastructure Standard meaning that after losing the single largest gas infrastructure the technical capacity of the remaining infrastructure cannot meet demand.*
>
> *It can be seen that the result of the N-1 calculation is 85%36 and that Ireland fails to meet the criteria (i.e. if the supply of gas via Moffat is partially disrupted Ireland will be unable to deliver sufficient gas from other entry points to meet total demand on a 1 in 20 year peak-day).*'

National Risk Assessment – Overview of Strategic Risks

The 2019 National Risk Assessment (NRA) identified, discussed and considered risks facing Ireland over the short, medium and long term. The National Risk Assessment plays an important part in the early identification of potentially significant risks that Ireland may face. While not intended to replicate or displace the detailed risk management that is already conducted within government departments and agencies, the National Risk Assessment does aim to provide a systematic overview of strategic risks that can form an important, and inclusive part of the overall process of risk management. In relation to security of gas supplies, ***Risk 5.2 Ensuring an affordable, sustainable and diverse energy supply*** was identified and noted:

> '*Ireland's situation as an island on the periphery of Europe renders it particularly vulnerable to disruptions to the supply or price of oil, gas or electricity which would have significant economic, social and competitive impacts. Such disruption could arise from natural disaster, economic trends or geopolitical change, such as Brexit, disruption to oil supplies in the Middle East, Russian sanction impacts on gas supplies and OPEC cuts. Brexit poses a particular risk as Ireland imports the vast majority of its energy requirements, oil, gas and transport fuels, from or via the UK. ……*
>
> *Ensuring an energy supply that is not only affordable, sustainable and diverse but also secure will be extremely important as pressure increases on the world's resources due to climate change and increased environmental concerns. There are also geopolitical implications contributing to this risk, with international relations and tensions, including increased pressure on global free trade agreements, creating doubt over the security and price of energy supply. In the last few years, the price of fossil fuels, particularly oil, have been more volatile, with*

international prices beginning to rise after a period of sustained low prices. This has been passed through to the consumer with price increases evident in the gas, electricity and transport fuel sectors.'

National Energy and Climate Change Plan 2021 to 2030

The Government's National Energy and Climate Plan (NECP) 2021-2030 was developed in accordance with Regulation (EU) 2018/ 1999 of the European Parliament and of the Council on the Governance of the Energy Union and Climate Action.

Article 4: (National objectives, targets and contributions for the five dimensions of the Energy Union) of the Regulation states the following:

'*Each Member State shall set out in its integrated national energy and climate plan the following main objectives, targets and contributions, as specified in point 2 of section A of Annex I: …*

(c) as regards the dimension 'Energy Security':

(1) national objectives with regard to:

— *increasing the diversification of energy sources and supply from third countries, the purpose of which may be to reduce energy import dependency,*

— *increasing the flexibility of the national energy system, and*

— *addressing constrained or interrupted supply of an energy source, for the purpose of improving the resilience of regional and national energy systems, including a timeframe for when the objectives should be met.*'

The NECP 2021-2030 states that:

'*Ireland's objectives are to maintain and, where necessary, facilitate the enhancement of resilience of the gas and electricity networks. Ireland is committed to maintaining the security of our energy system in the most cost-effective manner. Ireland is cognisant of the risks posed by the impacts of climate change to our energy security. The policies and measures set out under this plan, both in terms of mitigation and adaptation, serve to offset those risks. The impact of the wide range of policies and measures aimed at increasing energy efficiency will contribute considerably to ensuring security of our energy system. A review of the security of energy supply of Ireland's natural gas and electricity systems is being carried out. The focus of the review is the period to 2030 in the context of ensuring a sustainable pathway to 2050. Given the increasing dependence of electricity production on natural gas and the increasing dependence on imports from the UK, it is important that close co-operation on security of supply continues with EU Member States and the UK.*'

As peat and coal will no longer be part of Ireland's electricity generation mix by 2025, there will be an increased reliance on natural gas, thus reducing the diversification of Ireland's fuel mix and impacting on security of supply. The Plan forecasts that for the year 2025, natural gas will provide 52% of electricity in Ireland, with renewables 46%, hydro 1%, waste and back up oil the remaining 1% (National Energy and Climate Plan – DECC, 2020b). By 2040, the NECP forecasts gas generating 40% of electricity, with renewables supplying 58%. The NECP also forecasts that with increasing intermittent renewable generation, and increasing electrical demand, the amount of electricity produced from gas fired generation increases by 30% from 2025 to 2040.

One of the stated key policies and measures included in the NECP is the following:

'*Facilitate infrastructure projects, including private sector commercial projects, which enhance Ireland's security of supply and are in keeping with Ireland's overall climate and energy objectives.*'

The NECP notes Ireland's increasing energy import dependency on the UK with the decline of the Corrib gas field. Specifically, the NECP states:

'*Given Ireland's high and increasing reliance on gas for electricity, our low import route diversity, Ireland's relatively high dependence on imported gas, which is likely to increase as the Corrib gas field progressively depletes, and the potential increasing role of gas in the energy mix for*

heat, transport and power generation including as a back-up for intermittent power generation, our objectives are to:

- *Ensure the resilience of the gas network to a long-duration supply disruption, in the context of EU and national climate objectives. Actively participate in EU and regional initiatives to maintain and enhance security of supply including national, regional and EU co-operation on emergency planning and response for gas and electricity networks, including risk assessments, preventative plans and emergency plans;* and
- *Following the withdrawal of the United Kingdom from the EU, engage with our EU partners to put in place an EU/ UK framework for continued necessary regional co-operation between Ireland and the UK on matters related to gas and electricity security of supply, including emergency preparedness and response and solidarity in an emergency situation.*'

Identification of National Electricity Crisis Scenarios for Ireland

In accordance with Regulation (EU) 2019/ 941 on risk-preparedness in the electricity sector, the CRU, as competent authority, identified 23 national electricity crisis scenarios. (CRU, 2020) The work was completed in close cooperation with the Irish TSO (EirGrid). The report sets out information about each scenario. Based on the analysis completed to date, each scenario was given a score relating to the likelihood, potential impact, overall risk rating and cross-border impact rating.

One of the 23 scenarios was a curtailment of UK gas supply over a prolonged period (up to one month) from Moffat or full loss of supply (e.g. technical failure) for a shorter period. The NRA sets the likelihood as between 10 and 100 years, indicating that either possibility is 'unlikely' but the impact of the scenario is heavily influenced by wind power availability during the crisis. It would likely cause significant lost load for a prolonged period, thus it was rated as having a 'disastrous' impact and given an overall risk rating of 'major'.

National Risk Assessment for Ireland 2020

On the 26th March 2021, Government of Ireland published the National Risk Assessment for Ireland 2020. The Government noted: '*The National Risk Assessment has been developed following extensive consultations with all Departments and key Agencies and the input of subject matter experts. It identifies and assesses the likelihood and impact of key risks facing the State across a broad range of emergencies.'*

The National Risk Assessment provides a basis for establishing priorities for the mitigation of the key risks identified at national level and will inform Government decisions regarding resource allocation. The Minister added '*It is intended that publication of this document will enhance public awareness of the significant risks which the State faces and which are being addressed by colleagues across Government.*'

All Government Departments submitted a list of risks which, in their expert view, had the potential to trigger a national level emergency. A total of 16 key risks were approved as the Consolidated List of National Risks (2020) for assessment. 'Disruption of Energy Supply' was identified as one of the 16 key risks.

'Disruption of Energy Supply' was considered to have the highest possible level of impact at a 'very high impact'. This means it has an economic impact greater the 8% of annual budget and/ or a social impact with the 'community not being able to function without significant support'. It's likelihood of the risk was assessed to occur between 11 to 50 years.

The Risk assessment noted:

'***7.3.4. Disruption to Energy Supply (J)***

A secure, reliable and safe supply of electricity, gas and oil is critical to the economy and society.

……

Fifty percent of electricity generated in Ireland is from gas. Gas supply comes from two main sources, the Corrib gas field and the UK interconnector. The ESRI (2011) estimate that loss of gas fired electricity would cost the state up to €1 billion per working day. The Expert Focus

Group determined that disruption to the gas interconnector with the UK during a period of cold weather represented the reasonable worst-case scenario. The impact on electricity generation was deemed critical. There is a cross-border dependency with the UK as part of a Europe-wide integrated network stretching further east to Russia. This network is governed by EU Directives which will no longer apply to the UK after BREXIT. The governance of this cross-border dependency will therefore require further consideration during the lifetime of this NRA.'

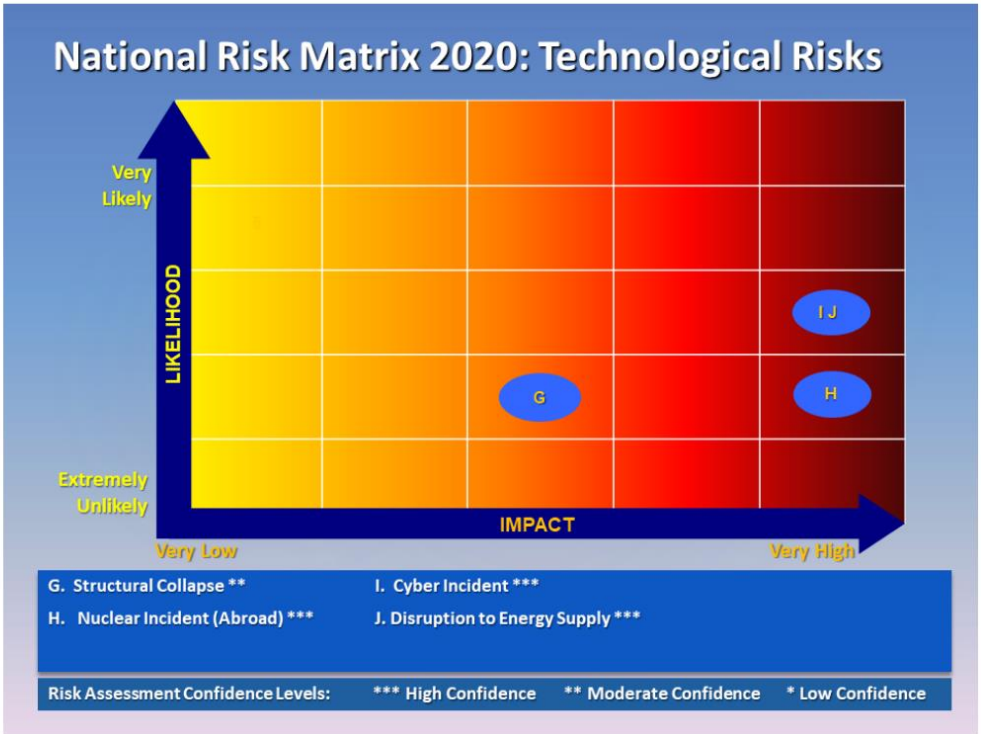


Figure 4-5 National Risk Matrix 2020 – Technological Risks

Draft National Risk Assessment Overview of Strategic Risks 2021/ 2022

On 20th July 2021, the Government of Ireland published the draft National Risk Assessment (NRA) Overview of Strategic Risks 2021/ 2022. Section 1.2 Overview of strategic risks - Economic risks noted:

'*In terms of energy-related risks, disruptions to the supply or price of oil, gas, or electricity could have significant economic, social or competitive impacts, and our geographic position renders us particularly vulnerable to such disruptions. Ireland imports the vast majority of its energy requirements from or via the UK.*'

4.1.3.8 Electricity

Electricity Generation and Grid Capacity

EirGrid as the system operator for the electricity grid together with SONI as the system operator of the Northern Ireland grid, have together published 'Shaping Our Electricity Future' 2030 in support of decarbonisation policies set by the Government of Ireland and the Government of the United Kingdom. This supports the target of no less than 70% electricity from renewable sources by 2030. The report examines the challenges this will pose to the system.

The report states that long term electricity demand in Ireland is increasing and is forecast to increase significantly due to the expected expansion of many large energy users. With this increase in demand, and the expected decommissioning of generation plant due to decarbonisation targets and emissions standards, it is expected that new capacity will be required.

The report further notes that there is sufficient renewable energy capacity in the connection pipeline to meet the Renewable Ambition by 2030. Over the 10-year transition, demand will increase, older high emissions capacity will exit the market (approximately 20% of portfolio), and generator outages will tend to increase as older capacity, that is set to be decommissioned, struggles to justify funding for maintenance. The orderly coordination of the retirement of fossil fuel capacity, synchronised with the development and energising of new renewable and clean dispatchable generation, and matching the increased consumer demand is key to mitigating the risk of potential supply shortfalls.

> '*As more weather-dependent renewable energy sources connect to the electricity system the greater the impact weather patterns will have on electricity production. Weather patterns vary over different timeframes, day-night and seasonal being two of the most well-known cycles. Weather also varies over a multi-day horizon due to continental-scale patterns. One of the most onerous of these for renewable energy production in Ireland are blocking anti-cyclones, whereby wind output is consistently low for multiple days to a week. During such times, the wind outputs in our neighbouring electricity systems, Great Britain and France, will also be affected by the same weather regime. To compound this challenge, such instances can be accompanied by a cold snap in winter.*'
>
> '*As more renewable generation penetrates the energy market over time, there will be a growing need to adapt capacity markets to ensure that generation adequacy standards continue to be met.*'

The situation as of the spring of 2021 is that:

> '*This winter we experienced a combination of factors such as zero/ low wind, low available interconnector support, poor plant performance and a cold snap resulting in record peak electricity demand. We expect the number of system alerts to increase over the coming winters as capacity exits and demand increases. We will be working with CRU and DECC to address these issues.*
>
> *Relative to the Generation Capacity Statement 2020-2029, a number of factors have exacerbated the adequacy position in Ireland over the last 12 months:*
>
> - *Forecasted new generation failed to materialise – new generation that was previously successful in the capacity market auctions has been withdrawn by the developer.*
> - *Delay in building new capacity – additional new capacity that was forecasted for delivery in 2022/ 3 has been delayed because of planning compliance, emissions audits and the global pandemic.*
> - *Emissions Limits – Fossil fuel generation has been excluded from the capacity market from October 2024 because the plant will exceed new EU emission limits. In the absence of having a capacity contract it is assumed that the plant seeks to close earlier than expected.*
> - *Increase in generation outages – the availability of a number of existing generators, including those plant expected to decommission in the coming years, has been lower than forecasted.*'

The report further predicts that:

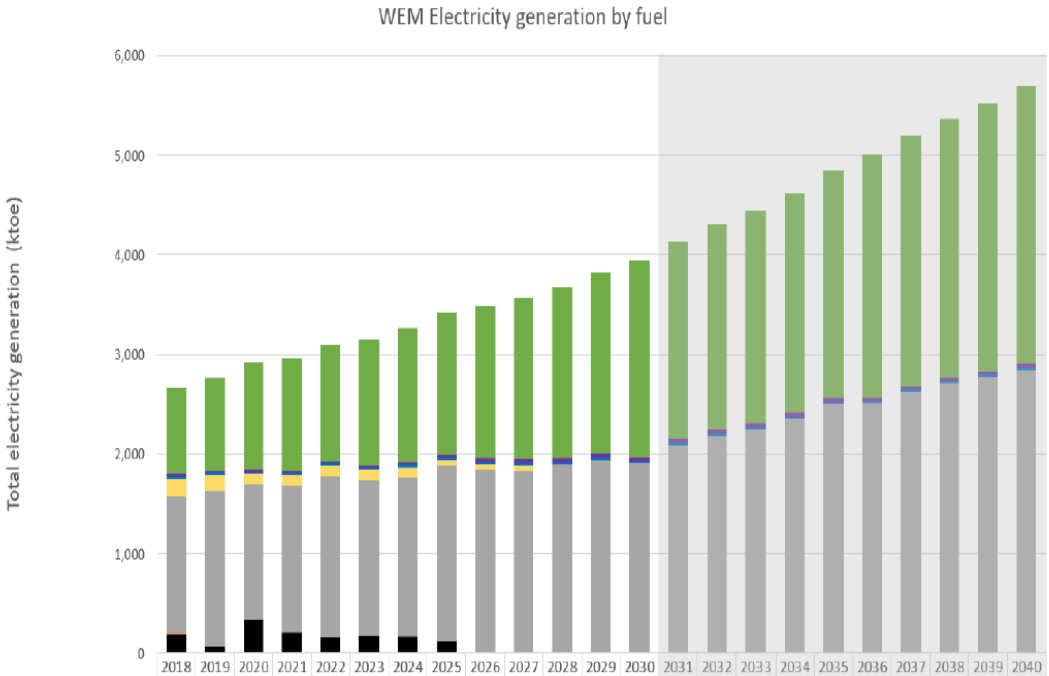
> *'The recent withdrawal of previously procured capacity and the failure of the recent auction to clear sufficient capacity means there is a significant capacity shortfall against security standards for Ireland. The situation is challenging in the short term (current and next winter). System alerts are expected to continue during this period. The main issues are in October 2023 and 2024.*'

EirGrid believes 1 to 2 GW of new clean, dispatchable capacity will be required between now and 2030 in Ireland. Gas-fired generation is expected to play a key role here.

The Climate Action Plan 2019 notes the need for development within electricity generation as follow:

> '*Intermittency also creates the need for a range of technology solutions which may include large-scale interconnection, storage, and dispatchable capacity (e.g., natural gas plants that can generate electricity at times where there is no wind).*'

The NECP has set out predicted increases in demand, see Figure 4-6 below.



	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Renewables ktoe	877	936	1,080	1,122	1,164	1,256	1,346	1,430	1,532	1,623	1,722	1,826	1,974	1,979	2,058	2,129	2,208	2,284	2,437	2,511	2,600	2,687	2,793
Pumped storage ktoe	20.4	15.0	16.9	19.9	21.0	25.0	28.1	24.0	39.2	38.7	39.8	39.3	41.9	43.4	40.1	40.4	39.9	39.0	35.9	35.9	34.7	34.1	36.0
Waste ktoe	25.9	23.1	23.1	23.0	23.1	23.0	23.1	23.1	23.0	23.0	23.1	23.0	23.1	23.1	23.1	23.0	23.1	23.0	23.1	23.0	23.1	23.0	23.1
Peat ktoe	178	159	106	106	106	106	106	53	53	53	0	0	0	0	0	0	0	0	0	0	0	0	0
Gas ktoe	1,377	1,560	1,359	1,470	1,627	1,561	1,592	1,765	1,836	1,825	1,887	1,938	1,899	2,078	2,175	2,240	2,342	2,498	2,506	2,621	2,702	2,771	2,838
Oil ktoe	11.7	0.3	0.6	0.7	0.8	0.8	1.2	3.9	6.6	9.2	6.4	6.2	7.0	7.9	6.8	7.3	9.5	5.1	4.1	5.1	6.3	7.0	8.0
Coal ktoe	185	77	337	215	153	173	170	122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 4-6 Electricity Generation by Fuel, NECP 2021-2030 (DECC, 2020b)

The NECP further states that as the penetration of electricity generated from wind increases, the electricity network must be able to handle the unpredictability of wind while still operating in a secure manner. The increased penetration of wind energy places an increased reliance on the gas network. Even with the growth in renewables up to the target of 70% of total electrical generation by 2030, the NECP shows gas demand increasing from 4.4 MTOE[4] to between 6.38 to 8.06 MTOE from now until 2040. The NECP goes on to state:

> '*…as the penetration of electricity generated from wind increases the electricity network must be flexible to handle the unpredictability of wind while still operating in a secure manner. The increased penetration of wind energy also places an increased reliance on Ireland's gas network.*'

Thus, the NECP formulates the specific policy goal to:

> '*Facilitate infrastructure projects, including private sector commercial projects, which enhance Ireland's security of supply and are in keeping with Ireland's overall climate and energy objectives.*'

In its statement to the Joint Oireachtas Committee on Climate Action in July 2021, the CRU commented (CRU, 2021):

> '*With regard to energy's contribution to our 2030 carbon reduction targets, the CRU is already working towards the delivery of an electricity sector with world-leading levels of intermittent renewable generation, including significantly increased contributions from solar and on- and offshore wind. This will be facilitated by flexible, efficient gas generation, of a similar scale to that which we have today, but used less frequently, which will provide back-up during those, sometimes extended, periods of very little sunshine or wind…*

[4] Millions of tonnes of oil equivalent

Natural gas, which will be decarbonised over time, will provide an essential underpinning for the security of energy supply, ensuring we can meet this demand as we transition to a net-zero carbon economy…

The Single Electricity Market Committee is also running capacity auctions to secure the additional generation capacity required. The twin challenges of replacing a large part of our existing generation fleet, while meeting rapidly growing demand, means that a minimum of 2GW of new gas-fired plant will be needed in the next few years. This flexible capacity is required to support increased renewables, enable us to retire older carbon intensive plant (coal, peat and oil) and ensure security of supply. This capacity is in addition to the increased storage and interconnection which must also be delivered at pace…

Gas is an essential transition fuel for Ireland as we move to a fully decarbonised energy system. Gas-fired generation will play a pivotal role in underpinning electricity security of supply and the secure electrification of heating and transport. As Corrib gas is in decline and in the absence of new indigenous production, we will be increasingly dependent on imports from the UK via our existing interconnectors. Implementing a strategy to decarbonise gas, and to ensure secure and diverse supplies and supply routes for gas, will be a key priority, noting that an increasing proportion of this could be indigenous biomethane and, in time, green hydrogen…'

4.2 Planning Policy

4.2.1 Introduction

This section focuses on the key planning policies at national, regional and local level that guide the nature and extent of the Proposed Project.

This section is written by Aiden O'Neill, Town Planner and Director of Coakley O'Neill Town Planning Ltd, who holds the qualifications of BSc(Hons), PGDip and is a Corporate Member of the Irish Planning Institute. Aiden has over 25 years' post qualification experience in the full range of planning services in the UK and Ireland, including energy, waste, industrial, water services and airport infrastructure.

4.2.2 National Planning Framework 2018 (NPF)

The NPF (which forms part of Project Ireland 2040) is the national level statutory plan guiding land use and sustainable development in Ireland for the next two decades (Department of Housing, Local Government and Heritage, 2020). Climate action and responding to climate change are core themes that guide the NPF and inform its policies and objectives.

National Strategic Outcome (NSO) 8 – Transition to a Low Carbon and Climate Resilient Society, of the NPF states:

> '*Ireland benefits from interconnection with the UK gas pipeline network and while there are two gas pipelines with two separate entry points into the island of Ireland, both pipelines are connected through a single facility in Moffat, Scotland.*'

Critically, NSO 8 also notes that:

> '*In addition, our gas storage capacity is limited, which poses a security of supply risk and constrains smoothing of seasonal fluctuation in gas prices.*'

Our energy security regarding gas is precarious in terms of the current infrastructure connecting Ireland to the UK gas pipeline network but also geo-politically, as the UK is no longer a member of the EU.

Therefore, ensuring autonomous gas supply and storage separate from being reliant on the UK is of paramount importance.

4.2.3 National Development Plan 2018-2027 (NDP)

Together with the NPF, the NDP (Department of Public Expenditure and Reform, 2018) constitutes Project Ireland 2050. The sum of €21.8 billion (€7.6 billion Exchequer/ €14.2 billion non-Exchequer) has been assigned under the NDP to support the realisation of NSO 8 of the NPF. The NDP states that NSO 8 is central to all other elements of spatial policy.

Within the context of plans for Irish society to transition to a low-carbon future, the NDP is also pragmatic in acknowledging that our national gas supply network nevertheless requires development in the meantime

The NDP states that:

> '*[G]iven the intermittent nature of this technology [i.e. wind energy], a proportion of Ireland's electricity needs will likely continue to be generated from gas over the medium to longer term. It will therefore remain necessary for a certain level of gas fired generation to continue to be available to ensure continuity of supply and the integrity of the electricity grid during the transition towards a low-carbon energy system.*'

The NDP therefore highlights that natural gas will be required into the future for electricity generation within Ireland. In addition to energy policy documents, the NDP also acknowledges that the national gas pipeline network will need investment and development as will the realm of gas supply, especially as the Corrib gas field is projected to decline and become exhausted by early next decade.

The NDP explicitly places the delivery of new gas infrastructure projects in the domain of the commercial/ private sector, as the State is not in a position to facilitate such projects itself.

This implies that a degree of reliance on natural gas will continue for some time into the future, and that to ensure Ireland's society and economy are supported in functioning well and fully throughout the country, gas infrastructure projects are required to support regional and rural development in particular.

This is related to one of the key spatial policy themes of the NPF, which is that the continued growth and current dominance of the Greater Dublin Area must be counter-balanced by even greater regional growth so that regional parity can be achieved across the country.[5]

In relation to NSO 9 'Sustainable Management of Water and other Environmental Resources' of the NPF, the NDP notes that Ireland's future energy security will be partly dependent on new infrastructure investment to potentially supply natural gas from a future gas field to the national gas network.

4.2.4 National Marine Planning Framework 2020 (NMPF)

The NMPF is a long term marine spatial planning framework that forms part of Project Ireland 2040 and parallels the NPF. The NMPF was approved by Cabinet on 23rd March 2021, and subsequently voted on by Seanad Éireann on 19th April 2021, and Dáil Éireann on 12th May 2021, before being launched on 1st July 2021 (Department of Housing, Local Government and Heritage, 2021).

With regard to energy production and natural gas storage[6], the NMPF contains the following objective:

> '*Support the development of natural gas storage where appropriate in the context of the outcome of the review of the security of energy supply of Ireland's electricity and natural gas systems. This review is being carried out by Department of the Environment, Climate and Communications, and is focusing on the period to 2030 in the context of ensuring a sustainable pathway to 2050.*'

Accordingly, Natural Gas Storage Policy 1 of the NMPF is as follows:

> '*Subject to assessments required for the protection of the environment, and only where in keeping with the outcome of the review of the security of energy supply of Ireland's electricity and natural gas systems (which is being carried out by Department of the Environment, Climate and Communications), natural gas storage proposals should be supported.*'

The NMPF states that while security of supply is a key energy policy objective for Ireland and the European Union, the issue cannot be examined in isolation from sustainability, and that natural gas storage installation and activities can have potential adverse environmental impacts.

In addition, Transmission Policy 4 of the NMPF states that:

[5] Section 2.4 'Growing Our Regions' of the NPF (page 26) states the following:
In accordance with the National Planning Framework vision, 'regional parity' is considered to be a more credible, reasonable and viable alternative scenario [to 'business as usual' and regional dominance scenarios], whereby the targeted growth of the Northern and Western and Southern Regional Assembly areas combined would exceed that projected under a 'business as usual' scenario and would at least equate to that projected for the Eastern and Midland Region.

[6] The NMPF states that natural gas can be stored offshore in depleted natural gas fields, or as LNG, which could be stowed floating or on land.

> '*Where possible, opportunities for land-based, coastal infrastructure that is critical to and supports energy transmission should be prioritised in plans and policies. Designation of land-based zones for the purposes of co-ordination and integration with relevant Marine Plans must be considered, where appropriate.*'

In this context, the site of the Proposed Development is located on lands zoned for marine-related industry which require deep water access, including energy infrastructure, in the Tralee-Ballylongford strategic landbank.

Furthermore, Ports, Harbours and Shipping Policy 1 of the NMPF is as follows:

> '*To provide for shipping activity and freedom of navigation the following factors will be taken into account when reaching decisions regarding development and use:*
>
> - *The extent to which the locational decision interferes with existing or planned routes used by shipping, access to ports and harbours and navigational safety. This includes commercial anchorages and approaches to ports as well as key littoral and offshore routes;*
> - *A mandatory Navigation Risk Assessment;*
> - *Where interference is likely, whether reasonable alternatives can be identified.*
> - *Where there are no reasonable alternatives, whether mitigation through measures adopted in accordance with the principles and procedures established by the International Maritime Organization can be achieved at no significant cost to the shipping or ports sector.*'

The above policy is relevant to the Proposed Development in terms of its proximity to Foynes Port as well as generally, regarding its location in a navigable harbour. The site of the Proposed Development is located approximately 23 km west along the Shannon Estuary from Foynes Port. Foynes Port and the site of the Proposed Development are adjacent to the world's busiest shipping routes. The Shannon Foynes Port company, which manages Foynes port, has capacity to handle over 10 million tonnes per year and has statutory jurisdiction over all marine activities on a 500 km^2 area on the Shannon Estuary, including the site of the Proposed Development.

4.2.5 Strategic Integrated Framework for the Shannon Estuary 2013-2020 (SIFP)

- The SIFP was published in November 2013 (Clare Co. Council, Kerry Co. Council (KCC), Limerick City and Co. Councils, Shannon Development and Shannon Foynes Port Company, 2013). The previously permitted scheme for an LNG regasification terminal at the location of the current Proposed Development is referenced in this strategic inter-jurisdictional plan. While the SIFP is not a statutory plan itself, it has been incorporated into the Kerry County Development Plan 2015-2021; the Clare County Development Plan 2017-2023; the Limerick City and County Development Plan; and the Regional Spatial and Economic Strategy for the Southern Region (Southern RSES).

- As illustrated in Figure 4-7, the Proposed Development site is located in one of nine strategic development locations identified in the SIFP: 'Strategic Development Location H: Tarbert-Ballylongford land bank, Ballylongford'. The SIFP references the previously permitted LNG scheme when it states that this location:

  - '*[I]ncludes a significant portion of lands currently zoned for industrial use within the Kerry County Development Plan, including a portion that has extant planning permission for a major LNG terminal.*'

Figure 4-7 Location of the Proposed Development Site in the Tarbert-Ballylongford Land Bank (Generally Identified in Red)

- The SIFP states:

> '*Ballylongford benefits from a significant deepwater asset and extant permission for a major LNG plant, the availability of natural gas, the proximity to the national grid and the potential for refrigeration from the regasification process, combined with the additional physical infrastruture in terms of roads and water. This makes the lands a very attractive location for other industries to locate in the future. There is also potential for gas fuelled electricity generation in the future. The SIFP proposes a Strategic Development Location around the Tarbert-Ballylongford complex to accommodate further development of the energy infrastructure and allow for economic development that will be attracted to such a significant site by virtue of its energy provision and deepwater facilities.*'

The SIFP also states that the Tarbert-Ballylongford land bank is zoned for industrial development in the Kerry County Development Plan and that:

> ' *[T]he proposed LNG plant will be a significant regional project which will act as a catalyst for further industrial development at this location in the future. The extension of the natural gas market and the existing electricity network distribution infrastructure already in place is intended to develop the area in a sustainable manner as a power generation hub within the region.*'

In addition, the SIFP states that:

> '*With the extension of the natural gas network and the existing electricity distribution infrastructure in place the SDL [Strategic Development Location H: Tarbert-Ballylongford land bank, Ballylongford] lends itself to development in a sustainable manner as a power generation centre for the region.*'

The SIFP therefore highlights that the prosperity of the entire region is, to a large degree, contingent on a scheme of the nature of the Proposed Development.

In relation to the Tarbert-Ballylongford land bank Strategic Development Location, the SIFP highlights that the previously permitted (and since expired) LNG regasification terminal scheme and associated permitted Combined Heat and Power Plant scheme are key enablers for the region, as well as being of national importance:

> '*The significant storage of oil reserves at this location is a further strategic asset confirming the importance of the SDL in a national context. The level of connectivity with the existing grid network together with synergies with ESB Moneypoint, and the extension of the natural gas network from the Combined Gas Cycle Turbine proposal and the adjacent proposal for the LNG facility presents a real opportunity.*'

The SIFP also highlights that the previously permitted LNG regasification terminal scheme is seen as a key economic driver for the region:

> '*The Estuary is also likely to benefit from other significant foreign investment of around €500 million through implementation of planning approval for the first LNG terminal in Ireland at the Tarbert-Ballylongford Landbank near Tarbert. The scheme will contain four insulated storage tanks of 200,000 cubic metres capacity and a re-gasification facility linked to the existing gas transmission system. Such significant investments, particularly in energy infrastructure are likely to be a catalyst for other major foreign investment in the region.*'

Lastly, the SIFP envisages that a scheme such as that of the Proposed Development will play a significant role in establishing the Universities and Shannon Development-led 'Shannon Energy Valley', '*which it is believed could provide a National hub for Energy Research & Development, Industry and Commerce to attract mobile international investment and generate high end employment.*'

The SIFP is explicit that a scheme of the nature of the Proposed Development is of regional and national economic and infrastructural importance.

4.2.6 Southern Assembly Regional Spatial and Economic Strategy (RSES)

The SIFP is highlighted in the RSES as a good practice example in regard to marine spatial planning. The RSES Southern Regional Assembly, 2020) emphasises the key significance of the previously permitted LNG regasification terminal scheme for the development and prosperity of this peripheral region. The RSES states the following:

> '*The zoned lands at Tarbert/ Ballylongford in North Kerry with extant planning for strategic energy and marine related industry including the Shannon Gas LNG project are a further example of the regional and national potential of the location.*'

The previously permitted LNG scheme, in combination with the associated permitted Combined Heat and Power Plant scheme, are also referenced as a nationally important project in the RSES with regard to energy hubs under the Gas Networks Ireland section of the 'Water and Energy Utilities' chapter:

> '*The Tarbert-Ballylongford lands in Co. Kerry comprise of 390 hectares of lands zoned for marine-related industry and compatible industries. Planning permission exists at the location to build a Liquified Natural Gas (LNG) importation and storage terminal on a portion of the site. The proposal included a 500MW Combined Heat and Power (CHP) plant, a 26 km pipeline and permitted connection to the natural gas grid. It is anticipated that the project would position the area as a major National Centre for CHP and facilities requiring access to deep water with substantial requirements for electricity and natural gas*.'

The RSES contains a number of Regional Planning Objectives (RPOs) of which Objective RPO 225 seeks to:

> '*e. Strengthen the gas network sustainably to service settlements and employment areas in the Region, support progress in developing the infrastructures to enable strategic energy projects in the Region. An example is the Tarbert/ Ballylongford landbank in Co Kerry which is a strategic development site under the Strategic Integrated Framework Plan for the Shannon Estuary and support for the extension of the Gas Network from Listowel into the Kerry Hub and Knowledge Tri-Angle settlements of Tralee, Killarney and Killorglin.*'

In relation to the potential for energy and renewable energy production in the South West Strategic Planning Area, the RSES states:

> '*Example of an opportunity: Tarbert- Ballylongford Landbank LNG and CHP Project, a key site identified in the Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary.*'

4.2.7 Kerry County Development Plan 2015-2021

The current Kerry County Development Plan (CDP) has been effective since 16th March 2015 (KCC, 2015). The review of the Kerry CDP is currently underway, with the Kerry County Development Plan 2022-2028 due to be published next year (i.e. 2022). The SIFP is integrated into the CDP via 3 objectives: ES-22; ES-23, and; ES-24.

Objective ES-22:

> '*Support the implementation of the Shannon Integrated Framework Plan (SIFP) to facilitate the sustainable economic development of the Shannon Estuary*.'

Objective ES-23:

> '*Promote and facilitate the sustainable development of these lands for marine related industry, utilising the presence of deep water, existing infrastructure, natural resources, and waterside location to harness the potential of this strategic location. Alternative proposals for general industrial development, compatible or complimentary with marine related industry and/ or those creating a synergism with existing or permitted uses and/ or those contributing to the sustainable development of a strategic energy hub at this location will also be encouraged. Development will be subject to compliance with the objectives of this Plan, particularly as they relate to the protection of the environment and will also be subject to compliance with the Environmental Reports prepared in support of the SIFP, where appropriate.*'

Objective ES-24:

> '*Ensure that development proposals for the Tarbert/ Ballylongford landbank are supported with detailed site level flood risk assessments. As part of this, the probability of flooding within the site together with the vulnerability of proposed land uses shall be taken into consideration and appropriate mitigation measures incorporated, where necessary, so as to adequately manage flood risk.*
>
> *In addition, only water compatible industrial type land uses, including flood control infrastructure and compatible industrial activities requiring a waterside location will be permitted on lands which have an annual exceedance probability of coastal flooding of 0.1% AEP (Extreme Flood Extent).*'

The Tarbert-Ballylongford strategic land bank is mentioned in the Core Strategy of the CDP, with the realisation of the potential of this land bank hinging to a great extent on the previously permitted LNG regasification terminal scheme being developed. A key element of the CDP's Core Strategy is the:

> '*Promotion of the Tarbert/ Ballylongford landbank as a strategic location for sustainable industrial/ energy type development in the region*.'

The Core Strategy of the CDP also contains Objective CS-7, where the land bank's sustainable development is prioritised and linked with the sustainable development of Tralee and Killarney.

Objective CS-7:

> '*Prioritise the sustainable development of the Linked Hub Towns of Tralee and Killarney and the Tarbert/ Ballylongford landbank, in line with National and Regional policy.*'

As illustrated in Figure 4-8, the Tarbert/ Ballylongford land bank of 390 hectares (ha) is zoned in the CDP for:

> *'Marine-related industry, compatible or complimentary industries and enterprises which require deep water access*.'

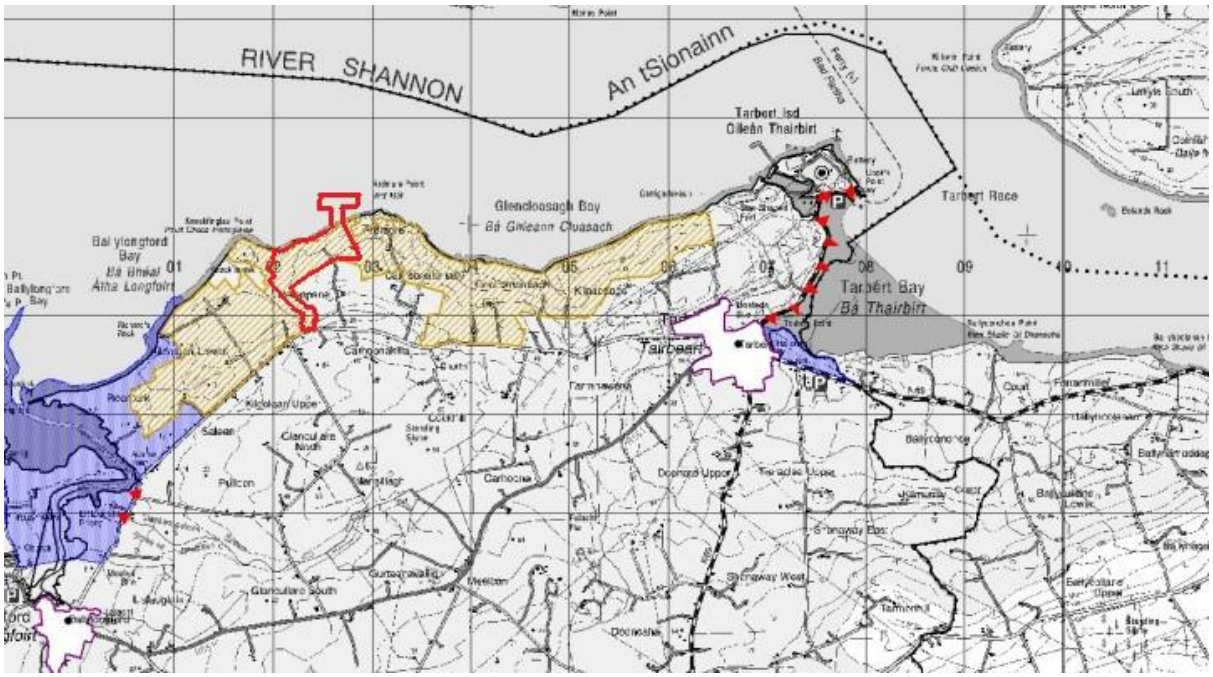


Figure 4-8 Zoning Objective Pertaining to the Proposed Development Site (Generally Identified in Red)

The previously permitted LNG regasification terminal scheme, in combination with the associated permitted Combined Heat and Power Plant scheme, are referenced in the 'Economic Development and Employment' chapter of the CDP. In a similar fashion to other policy documents, the CDP states that the previously permitted scheme has huge potential to support both the region's economic development as well as the region's energy security. The CDP states:

> '*Within the land bank planning permission has been secured for the construction of a Liquefied Natural Gas (LNG) regasification terminal. This site is 104 hectares in size. In addition, planning permission has also been granted within the LNG site for a Combined Heat & Power plant. These two developments were extensively environmentally assessed and have the potential to sustainably create substantial employment both at the construction and operation phases and can act as a catalyst for future industrial development and employment arising from the availability of secure gas and electricity supply in this region.*'

The 'Transport and Infrastructure' chapter of the CDP references the previously permitted LNG regasification terminal (in combination with the associated permitted Combined Heat and Power Plant and the associated permitted pipeline) as being of national importance to the Irish electricity-generation market. In addition, the CDP considers that Co. Kerry's potential for power generation is almost entirely contingent on a scheme such as that of the Proposed Development site:

> '*In relation to power generation Co. Kerry is well placed to encourage and facilitate the sustainable development of power generation facilities in the county, for a variety of reasons, namely: the proximity to Cork and Limerick, the proposed LNG plant in Tarbert/ Ballylongford which is a large industrial landbank and a deep sea estuary.*'

Finally, the CDP also contains an Energy and Power objective that relates to the Proposed Development implicitly as, aside from the previously permitted LNG regasification terminal within the Tarbert/ Ballylongford land bank, no other LNG project has been proposed in Co. Kerry.

Objective EP-6:

> '*Promote sustainable LNG associated enterprises/ industries at appropriate locations and expand the gas distribution network.*'

The draft Kerry County Development Plan 2022-2028 is currently being prepared for publication in Q3 2021.

4.2.8 Clare County Development Plan 2017-2023

Noting the Inspector's report in respect of pre-application consultation on the Proposed Project (case reference ABP-304007-19), wherein it was indicated that there is the potential for visual impact from the Co. Clare side of the Shannon Estuary, the following provisions and objectives of the Clare County Development Plan 2017-2023 are considered (Clare Co. Council, 2017):

'*6.3.6 Shannon Estuary: The Shannon Estuary is a natural asset of international importance and offers significant potential for future economic development in Co. Clare and the Mid-West region. In recognition of the potential to capitalise on this natural advantage and the need to take a sustainable approach to future development in the area, a Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary has been prepared. The SIFP identifies and zones two sites in Co. Clare for marine-related industry and also identifies opportunity sites for other key activities such as renewable energy development and aquaculture. It also promotes the potential of the estuary for tourism and recreation activities. The SIFP is contained as Volume 7 of this Plan.*

CDP6.9 Development Plan Objective: Shannon Estuary It is an objective of Clare Co. Council: To proactively implement the Strategic Integrated Framework Plan for the Shannon Estuary including the mitigation measures identified in Volume 2 Appendices of the Plan.

8.8.3 Energy Security The ability to deliver a secure and uninterrupted sustainable energy supply at a competitive cost is critical to the ability of Co. Clare to continue to attract and retain high levels of foreign direct investment and to provide a supportive environment for industry. Clare Co. Council will promote the implementation of the Clare Co. Renewable Energy Strategy and will facilitate the development of a range of sustainable forms of energy creation within the County in order to ensure a secure and effective supply of energy. The Shannon Estuary is identified as a key asset in contributing to the diversity and security of energy supply in the region. Significant potential exists to harness the sustainable development of renewable energy sources to assist in meeting renewable energy targets, as set out in the Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary. The SIFP identifies four sites within the Shannon Estuary that are of strategic significance in national and regional terms relative to their contribution to the security and diversity of energy supply and further economic potential. The four sites of strategic significance are:

- *Moneypoint;*
- *Tarbert;*
- *Tarbert-Ballylongford land bank; and*
- *Aughinish Alumina.*

CDP8.37 Development Plan Objective: Energy Security It is an objective of Development Plan: To promote and facilitate the achievement of secure and efficient energy supply, storage and distribution for Co. Clare.

11.3.2 Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary: The Shannon Estuary is one of Ireland's most important maritime resources and already contains a number of long-established, large commercial ports, as well as nationally significant industries and economic centres. However, since the enactment of the European Communities (Natural Habitats) Regulations S.I. 94/19974, it has become increasingly apparent that the future development and extension of such activities will need to be closely co-ordinated with the conservation objectives for the European sites concerned. As the entire estuary is designated as a cSAC – and large parts also as an SPA – no developments can be planned for, or permitted, unless the prior assessment regime laid out in Article 6 of the Habitats Directive has been complied with. In addition, public authorities are obliged to avoid pollution and deterioration of natural habitats and the habitats of species, as well as disturbance of the species, for which areas have been designated in so far as such disturbance could be significant in relation to the objectives of the Habitats and Birds Directives. Furthermore, the Cloon River, which flows into the Shannon Estuary, is a designated cSAC for the freshwater pearl mussel which is the subject of further specific protection measures. However, the designation of habitats is not meant to prohibit development. It is meant to ensure that policies, plans and projects are conceived having due regard to maintaining the integrity and dynamics of a habitat, its constituent species and the necessary environmental resources so as to sustain them at favourable conservation status.

The existence of such designations requires a systematic approach to the development of plans, policies and objectives. This is necessary to demonstrate that environmental considerations have been taken into account from the beginning – particularly in the initial consideration of alternatives – so that it can be demonstrated that only the least damaging reasonable alternative is progressed should an assessment under Article 6(4) be required. The design of such alternatives then needs to be developed and assessed in detail to ensure that the assessment regime laid out in Article 6 of the Habitats Directive has been complied with. This, in turn, calls for an evidence-led approach whereby decisions take account of all relevant environmental considerations –including resources such as air and water quality, disturbance, pollution and connectivity. Accordingly, to facilitate the implementation of Development Plan Objective CDP 11.1 Integrated Development of Shannon Estuary – the inter-jurisdictional Strategic Integrated Framework Plan for the Shannon Estuary has been prepared and is contained in Volume 7 of this Plan. The SIFP sets out an overall strategy for the proper sustainable growth, development and environmental management of the Shannon Estuary region for the next 30 years. Within its lifetime the SIFP must be able to respond to changing circumstances at EU, national, regional and local levels within policy and governance, as well as contextual changes within the estuary region, including population, lifestyles and aspirations for the future.

The Strategy aims to:

- *Support the multi-functional nature of the Shannon Estuary and identify opportunities to expand the existing economic base, including port-related industry and other associated activities;*
- *Facilitate the diversification of the economy through the promotion of appropriate commercial/ industrial employment, environmentally friendly aquaculture, maritime energy, transport, recreation and tourism industries in a sustainable manner;*
- *Promote, manage and enhance the natural coastal environment along the estuary, including its cultural, natural and built heritage;*
- *Safeguard the estuary's sensitive environmental resources and natural heritage of national, European and international significance.*

CDP11.2 Development Plan Objective: Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary It is an objective of the Development Plan: a To support and implement the inter-jurisdictional Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary in conjunction with the other relevant local authorities and agencies. All proposed developments shall be in accordance with the Birds and Habitats Directive, Water Framework Directive and all other relevant EU Directives. All proposed developments shall incorporate the Mitigation Measures as contained in the SIFP – Volume 7 of this Plan - for ensuring the integrity of the Natura 2000 Network.

11.3.3 Strategic Development Locations: The Shannon Estuary is one of Ireland's premier maritime resources with a number of long-established and successful marine enterprises including major ports and nationally significant industries and economic centres. The estuary benefits from key attributes that influenced the development of large scale industry and the marine industrial base. These existing industries have the potential to attract further significant investment to the area. There are two definable clusters of industry on the Shannon Estuary, one concentrated broadly around Moneypoint/ Tarbert/ Ballylongford, and another focussed around Foynes/ Aughinish/ Cahiracon.

CDP11.3 Development Plan Objective: Marine-Related Industry/ Large-Scale Industry on the Estuary: It is an objective of the Development Plan: To capitalise on the natural deep water potential and existing port and maritime infrastructure, by facilitating and proactively encouraging the environmentally-sustainable development of maritime industries at appropriate locations within the Shannon Estuary, while seeking to improve and promote the road and rail connectivity of the deepwater ports in the County. All proposed developments shall be in accordance with the Birds and Habitats Directive, Water Framework Directive and all other relevant EU Directives. All development associated with marine-related industry shall incorporate the sector and site specific Mitigation Measures as contained in the SIFP – Volume 7 of this Plan - for ensuring the integrity of the Natura 2000 Network.'

Consistent with the Shannon Integrated Framework Plan, these key provisions and policies of the Clare County Development Plan 2017-2023 endorse the strategic role and function of the Shannon Estuary

in supporting marine industry, and specifically reference the cluster of industrial activity in the Tarbert/ Ballylongford Strategic Development Location. The important role of the Shannon Estuary in the diversity and security of energy supply in the region is also acknowledged.

4.2.9 Listowel Municipal District Local Area Plan 2020-2026

The Listowel Municipal District Local Area Plan 2020-2026 (LAP) was adopted by Kerry Co. Council on 21st September 2020 (KCC, 2020). The LAP reiterates what other statutory policy documents state in terms of the importance for the local and regional economy and energy supply of a scheme such as the Proposed Development:

> '*Within the [Tarbert/ Ballylongford] land bank planning permission has been secured for the construction of a Liquefied Natural Gas (LNG) regasification terminal. The LNG site measures 104 hectares in size. In addition, planning permission has also been granted within the LNG site for a Combined Heat & Power plant.* ***These two developments have the potential to enable substantial employment both at the construction and operation phases and can act as a catalyst for future industrial development and employment arising from the availability of secure gas and electricity supply in this region*** *[emphasis added].*'

The overall Strategic Development Objective OS-08 of the LAP is to support the policies and objectives of the SIFP as follows:

> '*Support the sustainable development of the land zoned within the Tarbert/ Ballylongford area in accordance with the policies and objectives of The Strategic Integrated Framework Plan for the Shannon Estuary (SIFP) and the Kerry County Development Plan.*'

In addition, the previously permitted LNG regasification terminal and the permitted Combined Heat and Power Plant scheme are considered to be a solution to the established trend of rural decline in the locality of Ballylongford:

> '*The industrial land known as the Tarbert/ Ballylongford Land Bank is approximately 2 km to the north of [Ballylongford] village and comprises 398 hectares. On part of this site planning permission has been granted for a liquefied natural gas (LNG) import terminal. This development would, over a three year period, provide approximately 650 construction jobs and on completion 50 permanent jobs. Planning permission has also been granted for a Combined Heat & Power Plant which will, if developed result in the creation of additional employment. The Ballylongford Land Bank therefore represents enormous potential to create local employment for the village.*'

The LAP further states that the previously permitted LNG regasification terminal and the permitted Combined Heat and Power Plant within the Tarbert/ Ballylongford land bank, '*if completed together with future supporting developments will have a significant positive impact on employment, demand for services, and residential development in Tarbert.*'

Finally, the LAP also contains infrastructure objective LS-T-01 as follows:

> '*Sustainably harness the economic potential from the provision of a secure natural gas energy supply to the region.*'

The Proposed Development would support the realisation of this local policy objective.

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