Gluaiseacht Submission to Kerry County Council regarding Shannon LNG, Data Centres and gas expansion

1. Introduction

No to Shannon LNG
No to fracked gas being imported to Irealnd
No to ignoring the "Code red for humanity" warning of the IPCC

At a time when warnings on the climate emergency could not be any more stark and when everyone should be looking at minimising use of carbon based energy systems, this project seeks get Ireland hooked on US fracked gas and to increase our dependence on fossil fuels.

We show in this document some of the project the massive damage that this proposed project will do in Ireland and the US, where the developer has it's fracked gas liquefaction plants.
It is be absolute lunacy and climate denial of the first order for Kerry County Council to support Shannon LNG, given the warning of "code red for humanity" that the latest IPCC report has given us recently.

2. Climate Implications

Shannon LNG - a further STEP to climate breakdown

2.1 Emissions:

In the Non Technical Summary of the application Shannon LNG write :
"*Direct emissions from the operation of the Proposed Development will equate to approximately 963kt CO2e in 2030, around 2.1% of Ireland's carbon allowance if Ireland's carbon reduction*

targets are met. As a standalone development, this represents a major adverse impact, however the impact of this
development needs to be considered in the context of the key role it will play in assisting Ireland to transition to a low carbon economy."
Further more in Chapter 15 they write
"*As detailed in Table 15-17, the total GHGs estimated to be emitted from the operational phase of the Proposed Development have been calculated to be 20,056,725 tCO2e over the course of the 25.5-year period.*"
"*To provide context, direct emissions from the Proposed Development in 2030 would equate to approximately 2.2% of Ireland's estimated emissions allowance. This excludes indirect well-to-tank emissions as these are not included in Ireland's emissions inventory.*"
"*As published by the EPA (2021), the total Irish emissions in 2019 have been estimated to be 59,777.6 kt CO2e (59.8 Mt CO2e).*"

At least the Applicant admits that this project "*represents a major adverse impact*" in terms of emissions, however it has excluded emissions on a number of fronts. Firstly it has excluded any emissions related to the Data Centre Campus which is due to the part of the Shannon Technology and Energy Park claiming the "*design of the potential Data Centre Campus is not advanced to the stage where the quantity of emissions and impact/ effect of those emissions is known*".
Shannon LNG have also excluded any consideration of the other emission related to this project that will occur outside of Ireland.

In section 15.5.1.5 the applicant states
"*For this study, well-to-tank emissions have been included only for that proportion of the imported LNG that will be consumed within the Proposed Development. For the LNG that is supplied into the Irish gas network and consumed by a third party, indirect well-to-tank emissions, as well as direct emissions from the final consumption of the gas by a third party, have been excluded from the scope of the Proposed Development.*"

These are very considerable emissions and so the actual annual figure for emissions will be considerably larger than the 963kt CO2e that the applicantant concedes.

We submit that the outsourcing of emissions to other countries as is proposed in the application is immoral and perpetuates inequality and continues the shirking of our climate responsibilities. Similar to the concept that "Ignorance of the law is no defence", we submit that "Ignorance of the emissions is no defence" and that is another form of climate denial.

2.2 Shannon LNG - a Fracked Gas Import Terminal

Would STEP be using Fracked Gas.
The short answer is an unequivocal yes.

In the record of the meeting between Bord Pleanála and the Applicant on the 25/03/21, while the Applicant was seeking and duly granted Strategic Infrastructure Planning Application status the following quote is noted:

"*The prospective applicant referred to the Programme for Government 2020 and in particular the matter of 'fracked gas', noting that most LNG in the world is not sourced from fracked gas. The prospective applicant stated that the proposed development is not dependent on fracked gas noting it is confident that it can source gas from non-fracked sources in order to meet the energy demand and security of supply in Ireland.*"

Furthermore later in the meeting it is stated:
"*With regard to the matter of fracked gas, the Board's representatives suggested that the prospective applicant might wish to address this issue in the planning application and noted that information provided on this point would be of particular importance from a public perspective. The prospective applicant noted the Board's comments and said that this matter would be addressed in the planning application.*"
https://www.pleanala.ie/anbordpleanala/media/abp/cases/records/304/p304007d.pdf?r=531120

We state that the matter has not been dealt with in this planning application as the Applicant told ABP specifically that they would do. In the actual planning application the applicant actually state:

"*The application does not propose or request permission for any extraction, refining or liquefaction of natural gas. The potential sources of liquefied natural gas (LNG) are varied and, although not possible to identify, will all be located outside of the State and almost all will be located outside of the European Union. The pre-application observations made by the Development Applications Unit of the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media suggest that the impacts of source gas extraction should be examined, where such data is available. In accordance with the decision of the High Court in An Taisce v. An Bord Pleanála [2021] IEHC 254 and 422, any impacts on the environment from extraction, refining or liquefaction of source gas are too remote from the Proposed Development to require examination, analysis and evaluation within the environmental impact assessment and appropriate assessment of the Proposed Development. We are advised that, for this reason, it is neither necessary nor appropriate to include particulars of any one place where source gas might be extracted.*"

We state that this shows that the Applicant has misled ABP in the process of getting Strategic Infrastructure Planning Application status.

They have also misled ABP and the public in their current application as to the extent that their operations aren't based on fracked gas. Take for instance Figure 1 which is an image in their brochure taken from EIAR_Volume4, which purportedly lists New Fortress Energy's "Operations & Development"

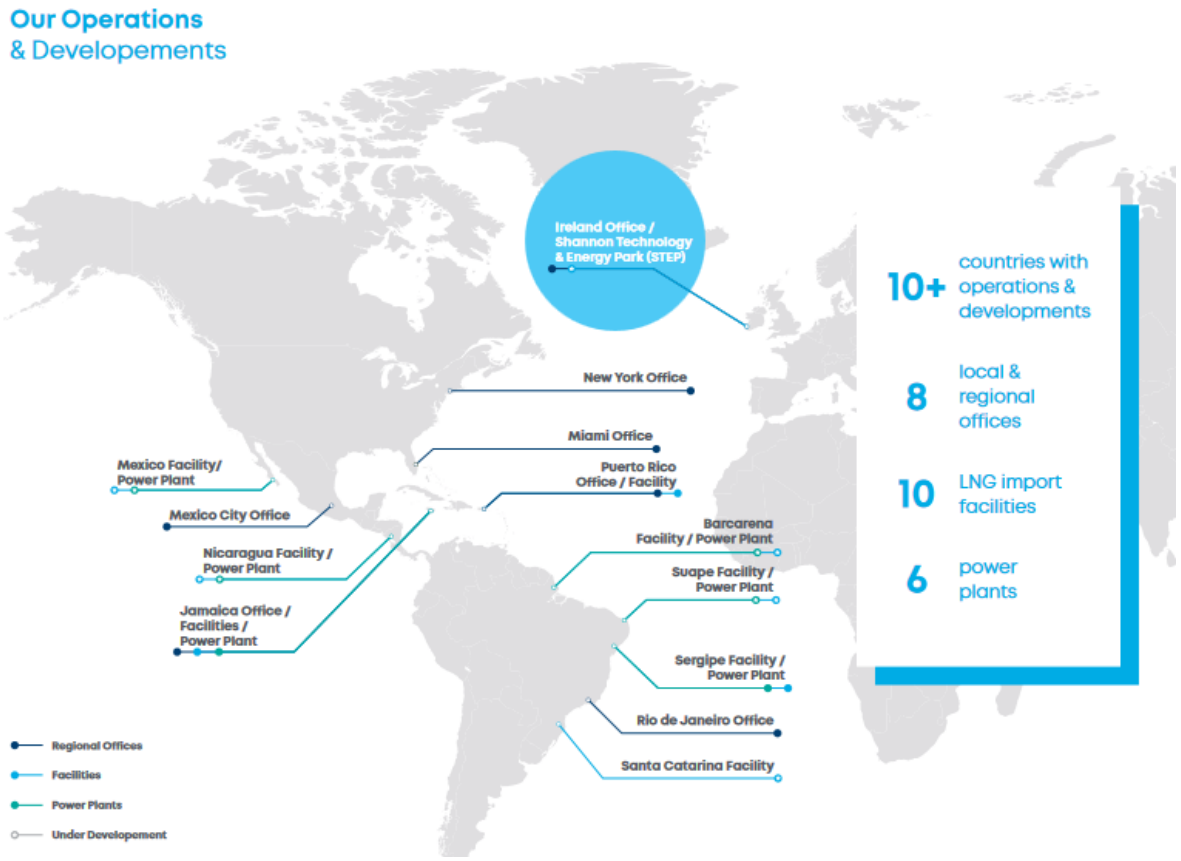


Figure 1: New Fortress Energy Operations & Development but with Liquefaction assets excluded

In the application New Fortress Energy have deliberately excluded their operations in the US, from which they source their gas. This is because if New Fortress Energy included their Liquefaction Assets in the image it would make clear how their whole operation is dependent on fracked US gas.

Contrast the image to a recent NFE SEC filing: https://ir.newfortressenergy.com/node/6301/html

In it New Fortress Energy state
"Liquefaction – Our approach is to enter into long-term, largely fixed-price contracts for feedgas, then liquefy that gas at or proximate to its site of extraction, minimizing transport and pipeline costs for the feedgas producers. We are currently developing a liquefier on land we have purchased in the Marcellus area of Pennsylvania, which is expected to have the capacity to produce approximately 3 to 4 million gallons of LNG (which is the equivalent of 250,000 to 350,000 MMBtu) per day, and intend to develop five or more additional liquefiers over the next five years.

Logistics – We expect to own or control the logistics assets necessary to deliver LNG to our customers through our "logistics pipeline." Tanker trucks will transport LNG from our liquefier to a port on the Delaware River, at which point LNG will be transloaded directly to large marine vessels."

"On March 2, 2018, the Company entered into a gas purchase agreement with a major Marcellus Shale producer to supply approximately 160 mcf/d or equivalent of approximately 2,000,000 LNG gallons per day to the Company effective upon fulfillment of certain conditions precedent."

In the SEC filing, under the title "*Our Liquefaction Assets*", New Fortress Energy also state

"We intend to supply all existing and future customers with LNG produced primarily at our own liquefaction facilities."

"*We constructed the Miami Facility, which commenced commercial operations in 2016, in under 12 months at a cost to build of approximately $70 million. The Miami Facility employs what we believe is one of the largest private ISO container fleets in the world. It has one liquefaction train, with liquefaction production capacity of approximately 100,000 gallons of LNG (8,200 MMBtu) per day*"

These are the only two liquefaction facilities identified under the "Our Liquefaction Assets"

Why have the applicants excluded these operations from the "Our Operations & Developments" Map and the application. The simple answer is that it is fracked gas coming from the Marcellus area of Pennsylvania.

Elsewhere in that SEC filing, NFE state
"The success of the domestic liquefaction component of our business plan is dependent, in part, on the extent to which natural gas can, for significant periods and in significant volumes, be produced in the United States at a lower cost than the cost to produce some domestic supplies of other alternative energy sources, and that it can be transported at reasonable rates through appropriately scaled infrastructure."

"Hydraulic Fracturing. Certain of our suppliers employ hydraulic fracturing techniques to stimulate natural gas production from unconventional geological formations (including shale formations), which currently entails the injection of pressurized fracturing fluids (consisting of water, sand and certain chemicals) into a well bore. Moreover, hydraulically fractured natural gas wells account for a significant percentage of the natural gas production in the U.S."

It can be seen from this New Fortress Energy promotional video how they are attempting to get South America hooked on US fracked gas. They are attempting to do the same to Ireland with the Shannon LNG project: https://www.youtube.com/watch?v=rF1KMRVqa3k

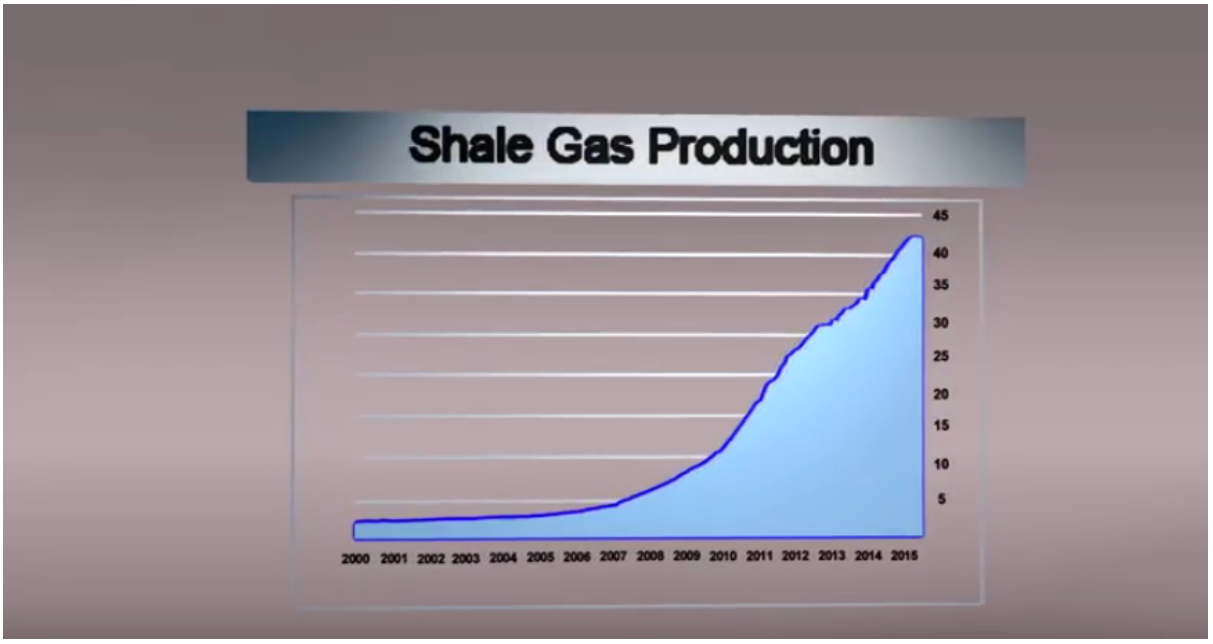


Figure 2: New Fortress Energy promotional video showing the increase in US fracked gas production

Figure 3: New Fortress Energy promotional video showing the plan to use Jamaica to deliver US fracked gas to other countries in the region.

In evidence before the Oireachtas Joint Committee on Climate Action, Professor Robert W. Howarth of Cornell University in New York made clear the damaging step backwards from a climate perspective that it would be to switch from coal use to fracked gas. https://www.oireachtas.ie/en/debates/debate/joint_committee_on_climate_action/2019-10-09/2/

"In the US, approximately 3.5% of the shale gas that is developed is emitted to the atmosphere as unburned methane due to leaks all along the chain from wells to the final consumer and purposeful emissions as the gas is processed, stored and transported. On account of these methane emissions, the use of shale gas in the United States has an even greater negative impact on the climate than coal, when we consider methane on the timescale of 20 years after it is emitted.

LNG imported to Ireland from the United States would have an even greater greenhouse gas footprint. To liquefy and transport the gas requires a substantial volume of energy. To import 1 cu. m of gas as LNG requires the production of 1.2 cu. m of gas with 0.2 cu. m of that gas burned to provide the energy for liquefication, etc. With that we increase the CO2 emissions as well as methane emissions and, therefore, I estimate the use of shale gas imported as LNG to Ireland would create greenhouse gas emissions of 156g of CO2 equivalents per megajoule, ***or a footprint that is 40% greater than that of coal.****"*

We therefore submit that New Fortress Energy have previously been clear in the past that fracked gas will be used to supply Shannon LNG.
We submit that ABP would be perpetuating inequality of suffering and pollution, should they allow this fracked gas to be imported for Ireland to use as energy at the same time as we have banned the process of fracking for gas ourselves.

2.3 STEP - Offensive Greenwashing

We find the greenwashing that the applicant has included throughout the application to be offensive to common sense, and includes many cases of classic doublespeak. An example is Figure 4 taken from the application.

Figure 3: New Fortress Energy promotional video showing the plan to use Jamaica to deliver US fracked gas to other countries in the region.

Giving permission to this application will delay and considerably damage any prospect of a zero-carbon future for Ireland. In addition it will guarantee a higher carbon future for the world. It was offensive to any notion of a zero-carbon future that Bord Pleanála gave this application Strategic Infrastructure status, that borders on a climate denial decision from a State agency.

Other examples of the Greenwash includes:

- "New Fortress Energy - A STEP to Zero"
- "STEP will also help lead the transition to a zero-carbon future for Ireland"
- "Our vision is to integrate offshore renewable power and green hydrogen within our facility in order to transition from natural gas to zero-carbon energy over time."
- "Supporting a Green Ireland - STEP is consistent with CRU, Eirgrid and GNI scenarios for creating a carbon-free Ireland"
- "NFE's Path to Zero - We are already working towards a net-zero future"

2.4 Contravening the Climate Action and Low Carbon Development Act 2021

We wish to highlight that the application would contravene the Climate Action and Low Carbon Development Act 2021

Section 6 states
"(8) For the purposes of performing their respective functions under this section, the Minister and the Government shall have regard to the following matters:"

"(j) the risk of substantial and unreasonable carbon leakage as a consequence of measures implemented by the State to pursue the national climate objective;"
"(12) In this section—
'carbon leakage' means the transfer, due to climate policies, of production to other countries with less restrictive policies with regard to greenhouse gas emissions;"

Granting permission to this application and allowing the off-shoring of Ireland's emissions would be in contravention to this Section of the Act and therefore must not be permitted by An Bord Pleanála.

2.5 Contravening the Policy Statement on the Importation of Fracked Gas

The PolicyStatement on the Importation of Fracked Gas, was published on the 18th May 2021 and states that the

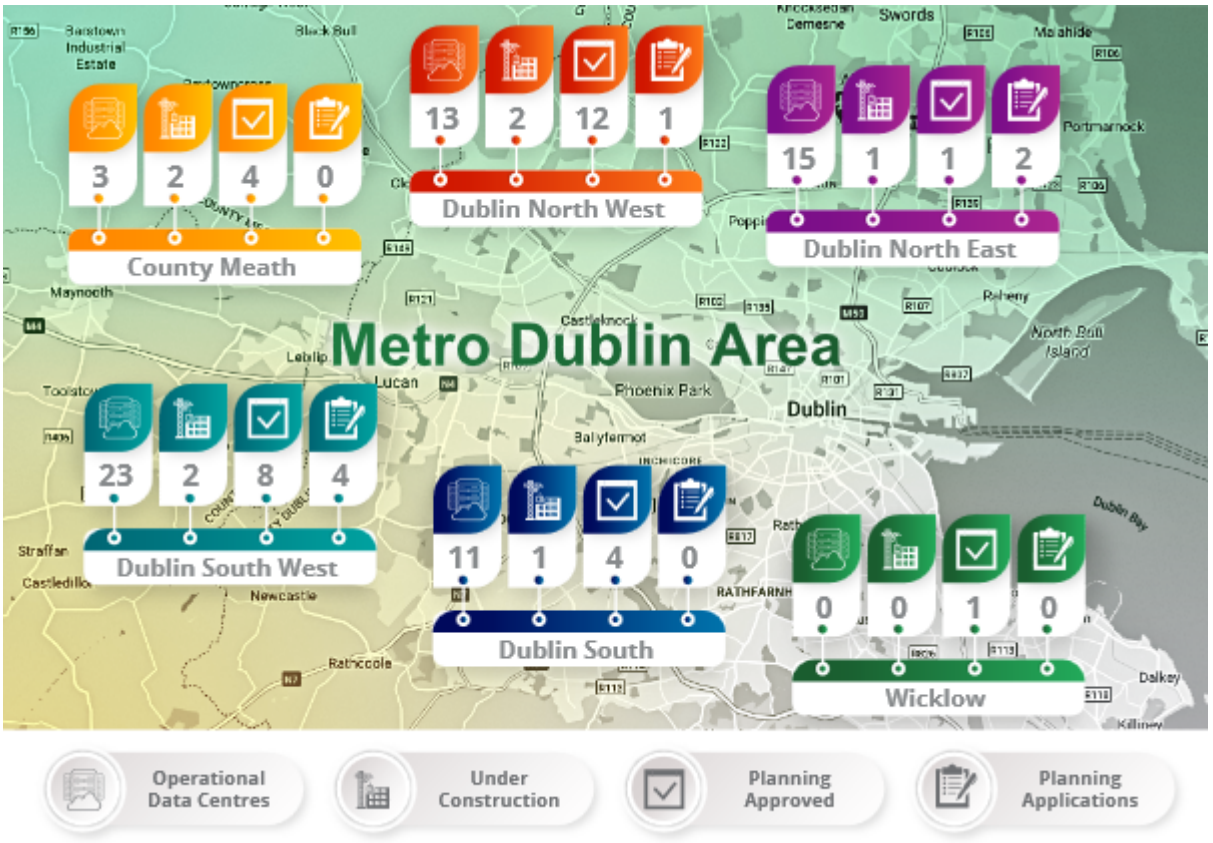
"*pending the outcome of a review of the security of energy supply of Ireland's electricity and natural gas systems being carried out by DECC, it would not be appropriate for the development of any LNG terminals in Ireland to be permitted or proceeded with*"
https://www.gov.ie/en/publication/f3774-policy-statement-on-the-importation-of-fracked-gas/

However ABP seemingly ignored this policy statement on the 2nd June 2021 by granted New Fortress Energy Strategic Infrastructure Application status, in what can surely be viewed as proceeding with an LNG terminal.

Data Centre Expansion

Kerry County council should not be supporting the growth in Data Centres The growth of data centres in Ireland has been extremely rapid over the last 5 years. In their May 2021 report, *Host in Ireland* stated that there are 70 data centres currently operational in Ireland with power capacity of 900MW and 8 more currently being constructed that will add another 255MW.

In addition a further 30 data centres have Planning Approved in the Dublin Metropolitan Area alone and a further 7 with Active Planning Applications.



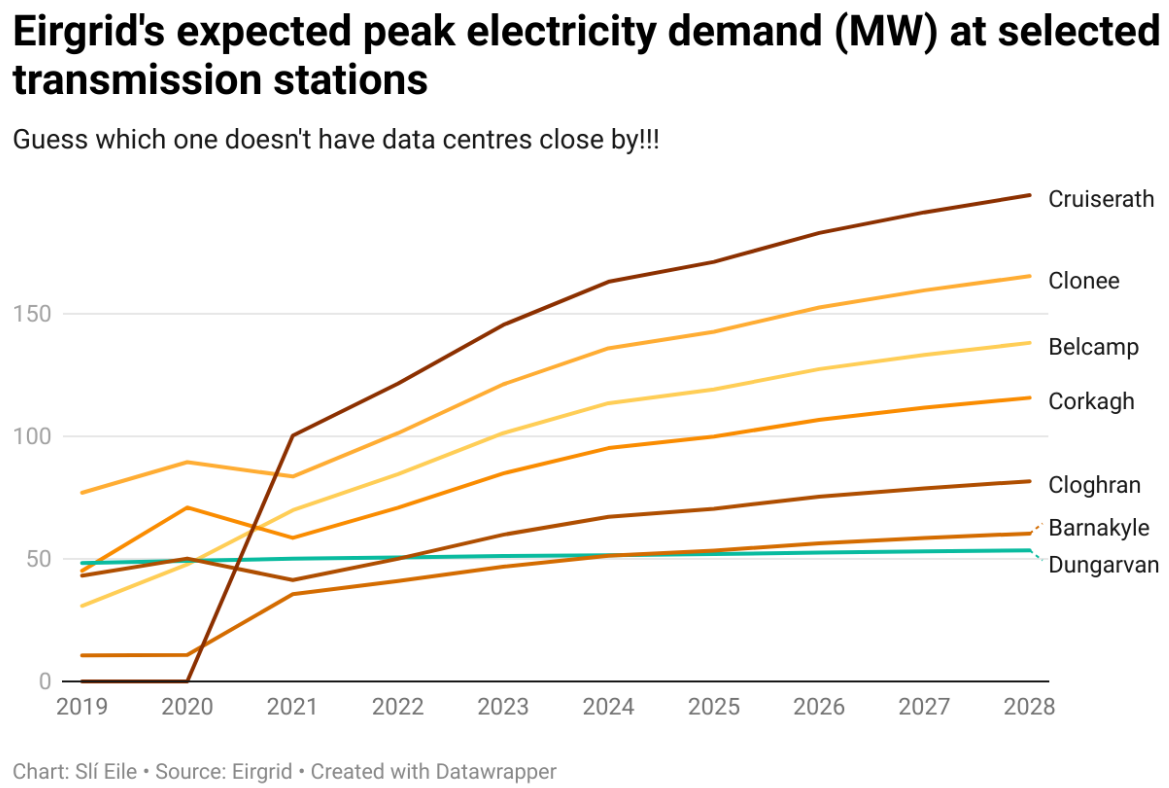
Graphic from Hosting in Ireland report May 2021

Recently Eirgrids Bill Thompson warned:

"*The rate at which data centres are seeking to grow their load is unprecedented. Over the last 4 years we have seen annual increases in demand usage of around 600 GWh from data centres alone – equivalent to the addition of 140,000 households to the power system each year."*

"Connection Agreements are already in place for over 1,800 MW of Maximum Import Capacity ("MIC") for data centres, with up to 2,000 MW of additional requests received... To put this in context Ireland has a current demand peak of around 5,500 MW".

It's clear that Eirgrid are very worried about the growth of Data Centres in Ireland and that this will lead to blackouts. Below is a graph based on the projected electricity demand by Eirgrid for selected transmission interface stations which have data centres close by. https://www.eirgridgroup.com/site-files/library/EirGrid/All-Island-Ten-Year-Transmission-Forecast-Statement-2019.pdf



While developers of data centres may make projections about renewable energy and future technologies that may mitigate emissions in future, we must base our decisions on the fact that the current energy system is overwhelmingly based on the burning of fossil fuels.

It has been shown in a recent BloombergNEF report how out of kilter Ireland is with other European countries with respect to the amount of our annual electricity demand we are willing to offer up to the data centres.

Table 5: Data-center electricity demand, as a % of national demand (TWh)

Country	2021	2030
U.K.	3%	5%
Ireland	15%	24%
Germany	1%	2%
Netherlands	6%	8%
Norway	<1%	2%

Source: BloombergNEF.
Note: '2030 %' is using our medium scenario.

https://about.bnef.com/blog/data-centers-set-to-double-their-power-demand-in-europe-could-play-critical-role-in-enabling-more-renewable-energy/

The report also states

"Unlike Germany, most data centers in Ireland are in one major city – Dublin. Dublin's electricity grid was not built to cater for such high demand from data centers, which has resulted in network supply constraints."

The next closest country to Ireland, which is the Netherlands has already begun introducing moratorium and restrictions on Data Centres in selected provinces. The report also highlights how Ireland is in an even worse situation that other countries due to it's isolated grid.

Ireland is an isolated power system, with 1GW of interconnection to the U.K., and has high renewable penetration. This means the system operator faces a challenging situation unlike any of the other countries covered, for which it uses several mechanisms to ensure system stability. For example, Eirgrid requires a 'Minimum Generation' (Min Gen) of 1,400MW of conventional fossil-fuel generation to be running at all times.

So what is the solution that is being proposed for the Data Centre problem. Well, the recent Climate Action Plan stated that the plan is to deliver another 2GW of new Gas power stations. If these gas plants are used similarly to our existing gas stations, the emissions are likely to be in the rage of adding another 3.4 million tonnes of CO2 emissions to our national output. These new gas plants are primarly needed because of the existing and projected data centres that have been built, with Eirgrid stating recently that they have 1.8GW worth of contracts in place.

Conclusion

Shannon LNG and the expansion of Data Centres will lead us further down the path to extreme Climate chaos and should be strongly opposed by anyone who takes the threat of climate chaos seriously.