Gluaiseacht Submission on Amazon's Data Centre expansion in Mulhuddart

30/01/23

Fingal County Council
County Hall, Main Street, Swords
County Dublin
K67 X8Y2

https://planning.agileapplications.ie/fingal/application-details/93949

Planning Application Reference Number: FW22A/0308

Applicant: Universal Developers LLC

A chara,

We refer to the above planning application and wish to make the following objection in relation to the proposed development. We request that you refuse the application.

Introduction

No to Amazon's data centre expansion
No to gas expansion
No to increasing coal use
No to the Climate Crisis

The application states
"The Proposed Development in conjunction with the Permitted Developments and future indicative development, has an estimated peak operational demand of 219.7MW per year in total which translates to 1,925GWh annually. This equates to approximately 607,523 tonnes of CO2eq per year".

For context, the CSO reported that the total metered electricity consumption for the country was 28,506 GWh in 2021. **Therefore the electricity demand of this data centre complex would represent 6.75% of the current electricity demand of the country. The amount of electricity used would be more than the annual consumption of 500,000 houses or ¼ of the housing stock in the country.**

Given that this is only one of 4 of Amazon's data centre complexes in Ireland, the others being in Clonshaugh, Tallaght and Drogheda, it does indicate the relevance of Eirgrid's Bill Thompson statement from May 2021:

"Ireland's electricity system was surely not planned to be, nor designed to be, a system which seeks to serve the needs of the global citizen for increased data supported by an ever proportionately smaller non-data centre commercial, industrial and domestic load. Whilst not questions first and foremost for EirGrid it surely must as part of this, give rise to consideration and potentially wider national debate as to that which is in the public interest in this regard. "

Bill Thompson, Eirgrid Group Head of Regulation in a warning letter to the CRU.
https://www.cru.ie/wp-content/uploads/2021/06/CRU21060-CRU-consultation-on-Data-Centre-measures.pdf

The EPA has estimated Irelands GHG emissions to be 61.53 million tonnes carbon dioxide equivalent (Mt CO_2eq). Therefore on the estimate given by the applicant for this Amazon complex represents a 1% increase in Ireland's annual emissions.

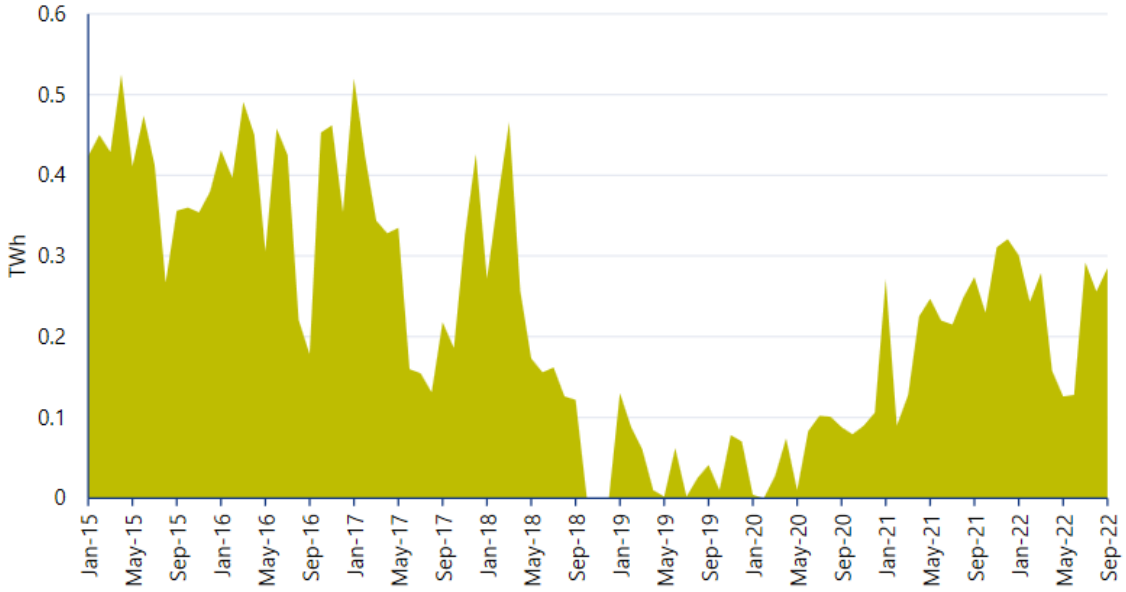
The emissions from the proposed development suggested by the developer itself area 202,139 tonnes of CO2eq per year.

However, we do not accept the emissions calculations that have been put forward by the applicant are an accurate or suitable quantification of the emissions that will be caused by this for the following reasons.

1. SEAI recent Energy in Ireland 2022 reported that electricity generation emissions increased by 17.3% in 2021. The year on year change of coal use as a fuel input that goes into electricity generation grew by 245.5% in 2021, while oil grew by 235.9%. Reports so far indicate that even more coal was used for electricity generation in 2022. The applicant seems to use a CO2 emissions factor of 315.7 gCO2/kWh for the emissions calculations, averaging the years of 2019, 2020 & 2021 which gives a skewed result. The SEAI's

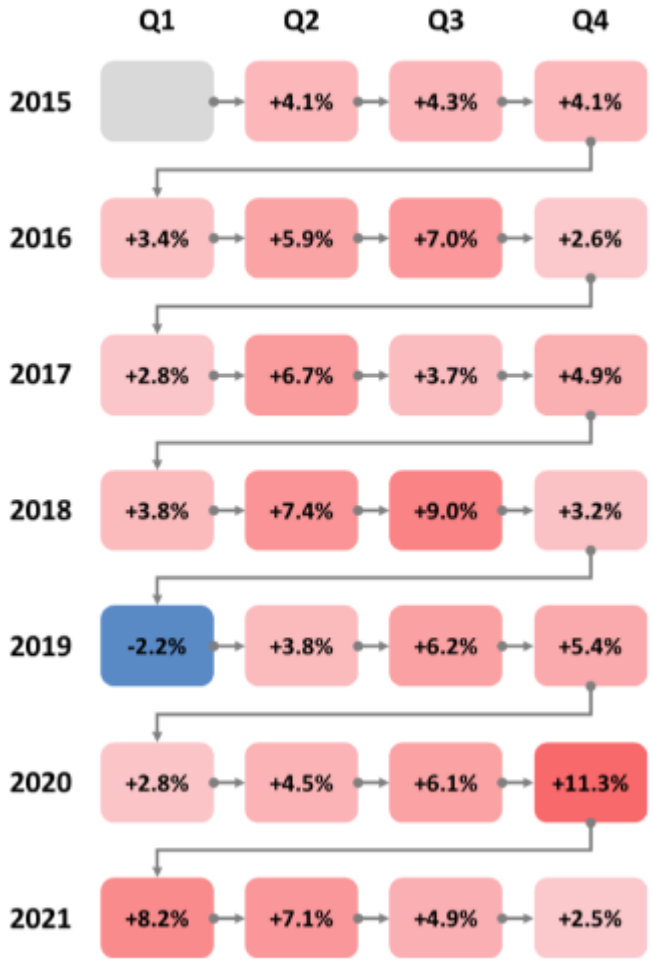
recent report stated “In 2021, our carbon intensity was 348 gCO2/kWh”

Figure 113: Monthly electricity generated from coal



2. The rise in the electricity demand from data centres was clearly shown in the figure below from the SEAI report.

Figure 15: Quarter to quarter increase in electricity demand from data centres as reported by the CSO



Renewables haven't been able to meet this increased demand and will not be able to be brought on stream in the near future to meet this demand. It can be seen from the coal use graph above that between Sept 2018 & May 2020, coal use in electricity generation had been largely phased out. We state that it is not unreasonable to argue that the vast majority of the current increased use of coal has been brought about due to the increased demand by data centres. We further argue adding further data centres will increase the amount of coal used and delay the closure of Moneypoint.

In 2021 Moneypoint generated 2,781GWh of electricity and created 3,23Mt CO_2eq of emissions. Using these figures in order to generate 1,925GWh of electricity from coal would generate 2.24 Million tonnes of CO2eq of emissions.

If this Data Centre complex came online tomorrow this would be closer to the actual annual emissions than the applicant's figures given the extreme pressure that is on the electrical system currently. Therefore we argue that is

irresponsible in the extreme to even contemplate giving planning permission for this data centre expansion currently.

https://www.seai.ie/publications/Energy-in-Ireland-2022.pdf
https://www.cso.ie/en/releasesandpublications/ep/p-mec/meteredelectricityconsumption2021/
https://www.clareecho.ie/electricity-generation-from-coal-at-moneypoint-up-this-year/
Plans to decommission Moneypoint by 2025 delayed by Government over fears of power outages – The Irish Times

Whatever way you look at this project it can in no way be considered to be good for the people of Dublin, the people of Ireland or overall life of Earth. At a time when the climate emergency could not be any more stark and when everyone is looking at minimising use of carbon based energy systems this single project seeks to increase both energy and water usage by massive amounts. We will show in this document the mind bogglingly massive amounts of energy use that is proposed for this project.

These massive energy costs will result in a huge increase in the burning of natural gas. Which, as a fossil fuel, involves one way CO2 emissions. Will this increase in the amount of energy used be for the benefit of Irish citizens we ask? Will it be used to add to our food security? Will it add large amounts of jobs? Will it help to solve the housing emergency? Will it help improve our health service. The answer to all these questions is no. No, it will only be used to provide space for the endless duplication of data. The data we all have from the endless back ups of smart phone pics or hard drive back ups we will never look at as we upgrade our devices. In short we will show that it is proposed to hugely increase county Clare's energy and water usage just so we can help create more space for everyone to save more junk in the online cloud that is likely to be rarely used in order for a private company to make a profit that will probably not be taxed very much.

Amazon Existing Data Centres:

A 2021 Knight Frank report on Dublin characterised Amazon as the company with the largest Data Centre presence in Ireland with a total of 224MW already built and 45MW under construction.
https://app.dcbyte.com/knight-frank-data-centres-report/Q2-2021

MARKET LEADERBOARD

Position	Company name	Total MW Built	Total MW Under Construction
1	Amazon Web Services	224	45
2	Microsoft	140	18
3	Facebook	108	72
4	Google	78	0
5	Equinix	21	19
6	EdgeConneX	18	15
7	K2 Data Centres	18	30
8	Digital Realty	16	6
9	Keppel Data Centres	14	2
10	CyrusOne	12	0

The fact that Amazon are saying that they will complete Building B in May 2024 and Building C in May 2025, seems to indicate that Amazon are just trying to stack up planning permissions currently. Presumably this is because they view that it will be harder for them to get approval, once it becomes even more apparent the effect that the level of data centres are having on the operation of the electricity grid and related greenhouse gas emissions.

We find the extensive lobbying campaign that has been undertaken by Amazon in recent years to be very troubling. This lobbying has includes lobbying of Fingal County Council, Dublin City Council, South County Dublin Council, and Meath CC in the last year along with many more politicians. We request that the minutes of the meeting held between Fingal County Council officials and Amazon this year be made public and added to the documents related to this application:
https://www.lobbying.ie/return/70908/amazon-web-services
https://www.lobbying.ie/return/83250/amazon-web-services

We find it also troubling that the former Chief Advisor to the then Minister for Finance Paschal Donohoe until Jul 2021, is now lobbying senior politicians on behalf of Amazon. He himself was lobbied individually by Amazon in 2020 and yet now works as Amazon's Head of Public Policy.
https://www.lobbying.ie/return/61568/amazon-web-services
https://www.lobbying.ie/return/93054/amazon-ireland-support-services-limited

Climate - Energy - Emissions

Professor of Energy and Climate Change Kevin Anderson recently gave evidence before the Oireachtas committee on Environment and Climate Action on carbon budgets. He stated that Ireland's fair-share of global carbon budgets until the end of the century was between 120 million tonnes and 300 million tonnes depending on whether we were trying to limit future warming to 1.5 or 2 degrees Celsius.
https://twitter.com/sli_eile_/status/1481414159757676549
Therefore if it is assumed that the overall data centre complex could be operational for 25 years, this proposed development therefore has the ability to use a twelfth of the overall carbon budget for the country for the century, then the very least that we can expect is an EIS

The climate crisis means we need to urgently reduce greenhouse gas emissions. We need to transition our energy system away from fossil fuels to one based on renewable energy, but more importantly we need to reduce our overall energy consumption.

A rapid reduction in the burning of fossil fuels and its attendant greenhouse gas emissions is essential if we are to meaningfully address the climate crisis. The following SEAI produced graphic shows how much renewables actually contribute to the total final energy supply in Ireland:

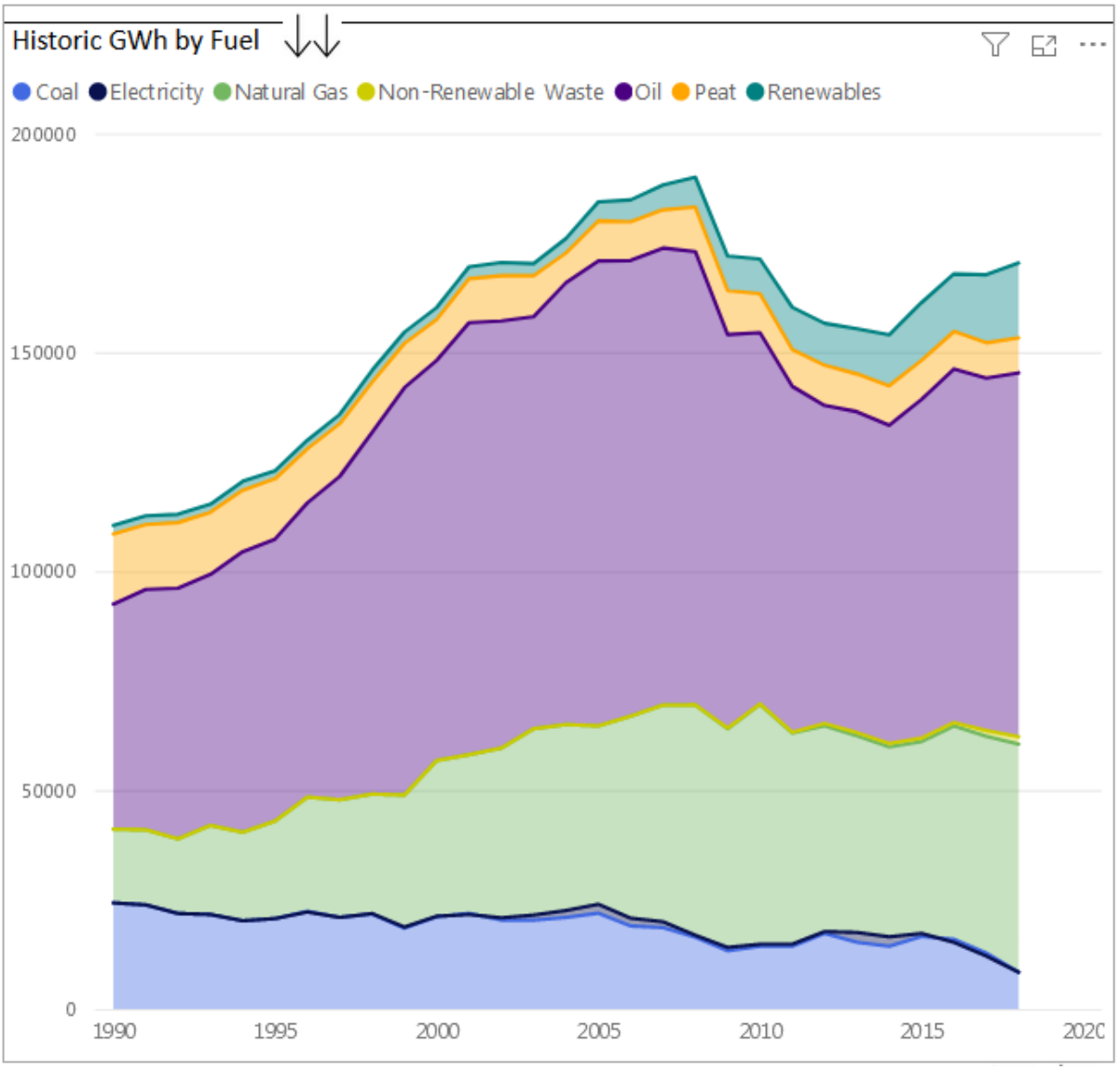
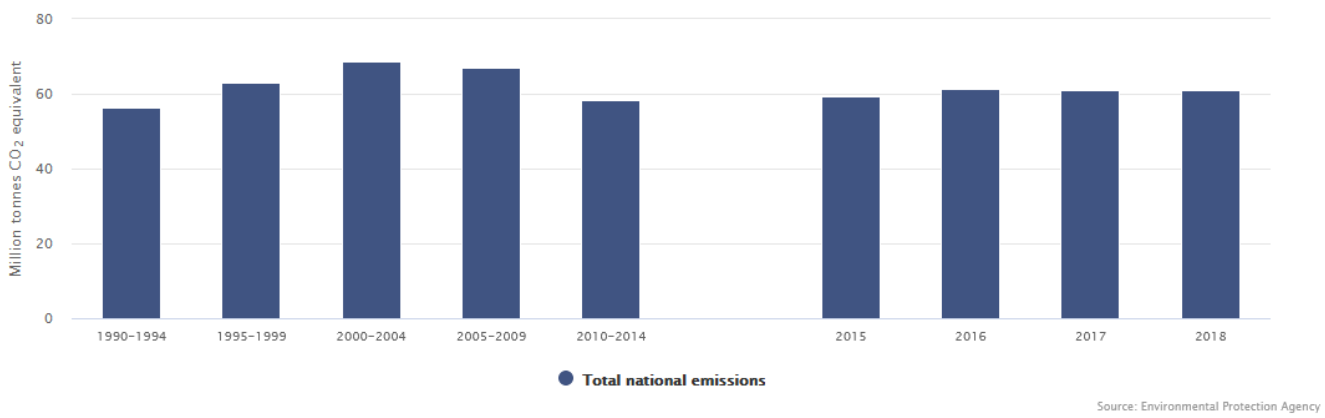


Image from https://www.seai.ie/data-and-insights/seai-statistics/energy-data/

The portion of renewable energy has increased dramatically since 1990, but it hasn't "eaten into" our energy demand - that has grown by more than renewables have added. There have been reductions in Greenhouse Gas emissions from electrical power generation overall but this has largely been achieved by replacing coal and peat power stations with gas. The benefit from that switch has been reaped and won't continue the downward trend.

A look at our overall greenhouse gas emissions by year is important for context to see how we are doing. The following graph of overall estimated greenhouse gas emissions per year is from the CSO Environmental Indicators Report 2020:

Figure 4.1 Ireland: Greenhouse gas emissions 1990–2018



Source: Environmental Protection Agency

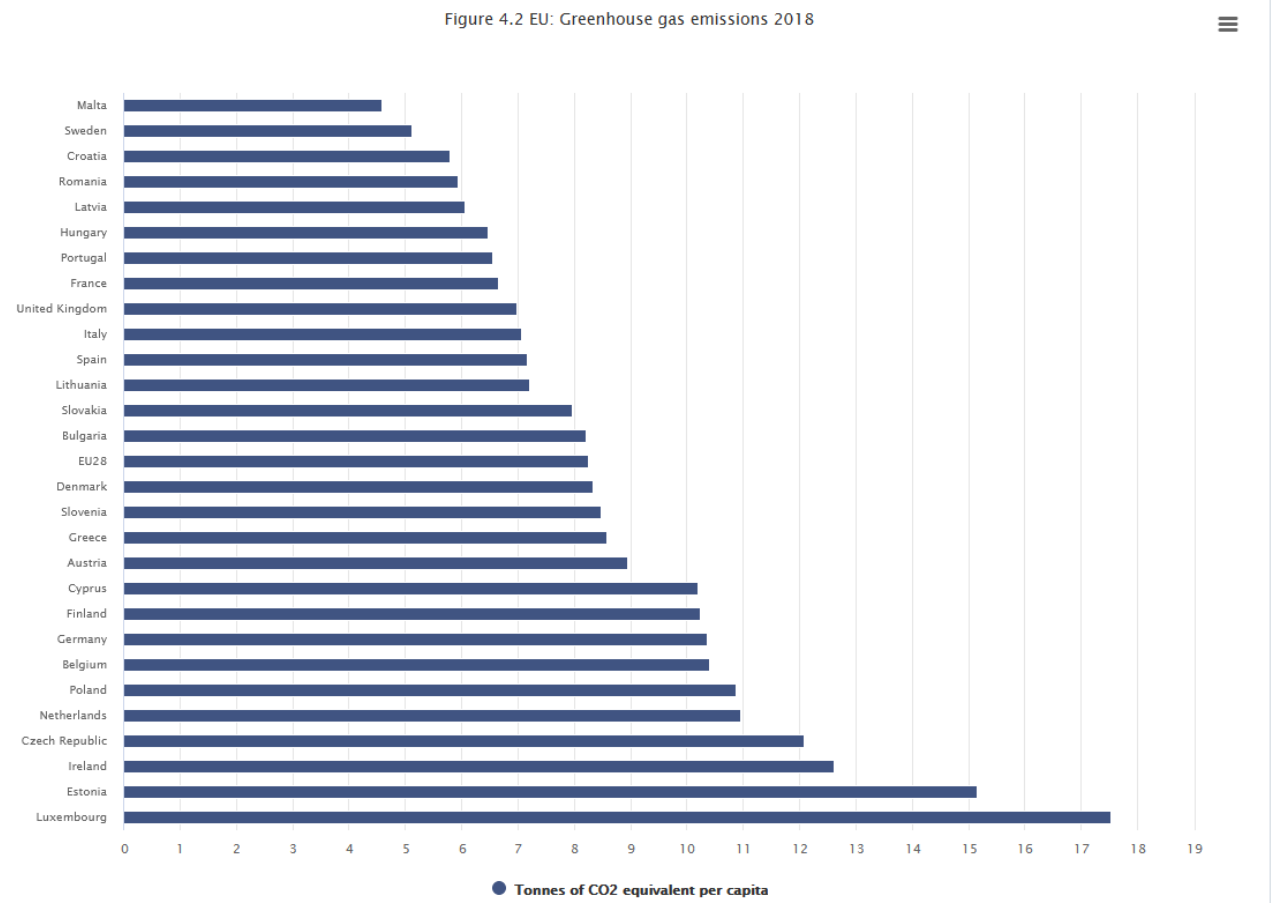
In 2018, Ireland's greenhouse gas emissions were 60.9 million tonnes of carbon dioxide equivalent. This was 9.9% higher than the 1990 figure of 55.5 million tonnes.

https://www.cso.ie/en/releasesandpublications/ep/p-eii/environmentalindicatorsireland2020/greenhousegasesandclimatechange/

The main trend visible over time is the increase in energy consumption and emissions during the Celtic Tiger boom years in Ireland. Our energy use however has risen back up to near the peak of the boom time while our emissions have flat-lined. Despite break-neck deployment of massive wind power capacity and retirement of our most polluting power stations, we cannot reduce our emissions.

For further context, we should understand our emissions position per capita within Europe:

4.3 EU: Greenhouse gas emissions per capita 2018



https://www.cso.ie/en/releasesandpublications/ep/p-eii/environmentalindicatorsireland2020/greenhousegasesandclimatechange/

We are the third worst greenhouse gas emitters per capita in Europe despite having the second highest wind power grid penetration in the world.

The obvious solution to prevent emissions from the burning of fossil fuels is to stop burning them - we need to rapidly reduce our energy demand back to within the capacity of our renewable resources. An overall reduction in energy use is the only viable basis of tackling climate change. This means we need a strategy of energy descent and de-growth economics. The strategies of using economic growth and interest as a means to provide for the necessities of life need to be deposed and replaced with strategies that don't mine our non-renewable resources.

In this context, after recording the seven hottest global mean temperatures on record and during a year which has already brought incredible climate extremes such as the flooding of Germany and near 50 degree centigrade heat in Canada, we have a proposal to add, for private profit, to our national energy demand and emissions the equivalent of all the power used by 140,000 homes.

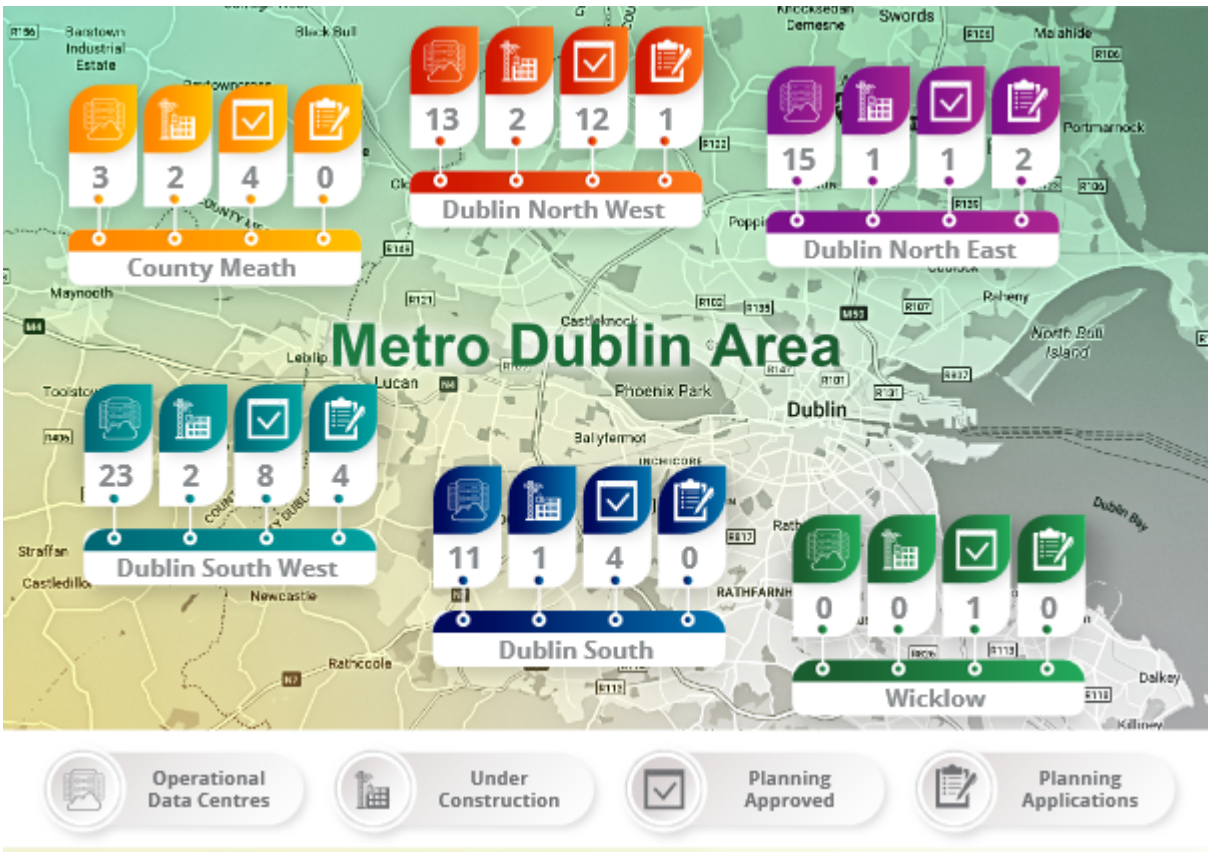
Proposed Development Emissions

Host in Ireland - the industry lobby group for Data Centres, estimated that Data Centres already account for 1.85% of Ireland's carbon emissions, around 1.04 million tonnes of CO2eq. This is likely a gross underestimation and this is expected to rise substantially in the near future unless decisive action is taken immediately.

Energy usage

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

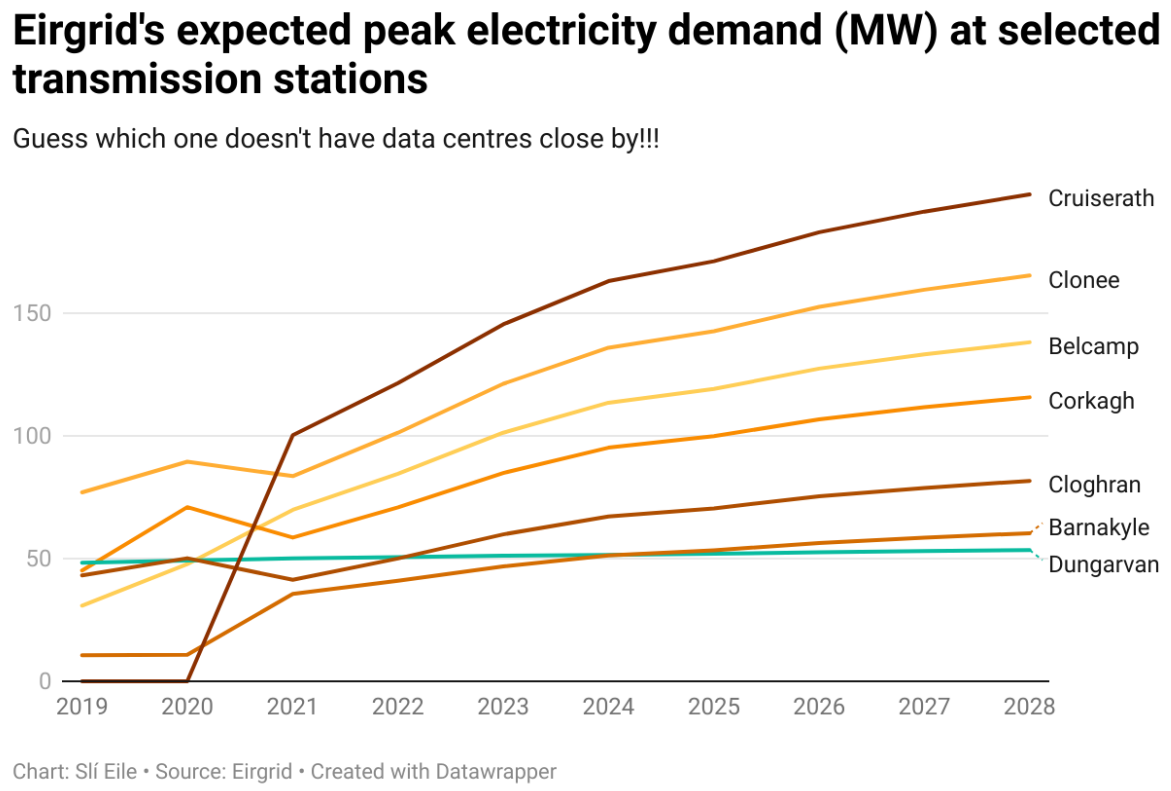
Recently Eirgrids Bill Thompson warned:

"*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

We oppose the development as proposed, but we also oppose the development even if the power required can be nominally procured from renewable resources existing or yet to be built. WIthout a massive reduction in, and an absolute transformation of how we produce, consume and store energy, renewables will only ever make up a portion of the energy mix. The creative accounting that some industries, including data centres, are using to claim that they are 100% renewable powered doesn't stand up to any scrutiny, especially for "always on" industries like data centres.

Projects with this level of proposed new energy and water usage should only be ever considered in the most dire of needs. A data centre simply does not meet this criterion especially when there has been no limits set on how much data is reasonable to store and there are no incentives for individuals and organisations to minimise their data usage in the face of ever increasing demands on energy.

Please reject this planning application

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