

Fingal Data Centre Submission 27/09 FW21A/0151

Not Here Not Anywhere
www.notherenotanywhere.com

T:@NHNAireland

I:@notherenotanywherenhna

F:@notherenotanywherenhna

For a fossil free future for Ireland

Planning and Strategic Infrastructure Department
Fingal County Council,
County Hall,
Main Street,
Swords,
Co Dublin

Planning Application Reference Number: FW21A/0151

Applicant: Huntstown Power Company Limited

Location: Lands adjacent to Huntstown Power Station, North Road, Finglas, Dublin 11

Description:

- Demolition of 2 no. existing residential dwellings and ancillary structures to the east of the site (c.344qm total floor area);
- Construction of 2 no. data hall buildings (Buildings A and B) comprising data hall rooms, mechanical and electrical galleries, ancillary offices including meeting rooms, workshop spaces, staff areas including break rooms, toilets, shower/changing facilities, storage areas, lobbies, outdoor staff areas, loading bays and docks, associated plant throughout, photovoltaic panels and screened plant areas at roof levels, circulation areas and stair and lift cores throughout;
- External plant and 58 no. emergency generators located within a generator yard to the east and west of Buildings A and B at ground level. The area is enclosed by a c.6.5m high louvred screen wall;
- The proposed data halls (Buildings A and B) are arranged over 3 storeys with a gross floor area of C.37,647sqm each;

- The overall height of the data hall buildings is c28m to roof parapet level and c32m including roof plant, roof vents and flues. The total height of Buildings A and B does not exceed 112m OD (above sea level);
- The proposed development includes the provision of a temporary substation (c.32sqm), water treatment building (c. 369sqm and c.7.7m high), 7 no. water storage tanks (2,800m³ in total and c.6.4m high each), 2 no. sprinkler tanks (c.670m³ each and c.7.9m high each) with 2 no. pump houses each (c.40sqm and c. 6m high each);
- The total gross floor area of the data halls and ancillary structures is c.75,775sqm;
 - All associated site development works, services provision, drainage upgrade works, 2 no. attenuation basins, landscaping and berming (c.6m high), boundary treatment works and security fencing up to c.2.4m high, new vehicular entrance from the North Road, secondary access to the south west of the site from the existing private road, all internal access roads, security gates, pedestrian/cyclist routes, lighting, 2 no. bin stores, 2 no. bicycle stores serving 48 no. bicycle spaces, 208 no. parking spaces including 10 no. accessible spaces, 20 no. electric vehicle charging spaces and 8 no. motorcycle spaces;
 - Existing electricity overhead lines traversing the site will be undergrounded under concurrent application Ref. FW21A/0144;
 - A proposed 220kv substation located to the south west of this site will be subject of a separate Strategic Infrastructure Development application to An Bord Pleanála under section 182A of the Planning and Development Act 2000 (as amended);
 - An Environmental Impact Assessment Report (EIAR) is submitted with this application.

This submission is made on behalf of Not Here Not Anywhere (NHNA), a nationwide, grassroots, non-partisan group campaigning to end fossil fuel exploration and the development of new fossil fuel infrastructure in Ireland. To avoid the most severe impacts of climate change, global temperatures must be kept below 1.5°C above pre-industrialised levels, and we will need rapid and deep action to decarbonise our energy systems.

Burning fossil fuels is the single most significant cause of climate change, and taking climate action means newly built infrastructure in Ireland must be fossil free. Planning is a key area of influence, and county councils have a major role in establishing the

transition from fossil fuels to renewable energy. This encompasses processes for carbon-proofing major decisions, programmes and projects.

Regarding the application to Fingal County Council for the construction of a data centre spanning 75,775sqm, we make the following recommendations:

- 1. New data centres must be powered entirely by onsite or new off site renewable energy in order to reduce, rather than increase, Ireland's CO² emissions, consistent with the Climate Action Plan and commitments under the Paris Agreement.**

This planning application features both gas engines and diesel generators and fuel tanks, which will result in fossil fuels being used to both power the data centre and act as a back-up energy source. The applicant intends to "obligate the facility end user" to procure power purchase agreements and "provide for the establishment of new renewable energy generation projects by the Applicant's group". However, the Applicant intends with this merely to "offset the energy consumed" over time rather than immediately providing such new infrastructure. It is very possible that the Applicant may be unable to fulfil these commitments in the future, and until new renewable energy generation is achieved, the Applicant will rely on fossil fuels (gas, diesel) and create additional demand on the national grid. This additional demand will likely be fulfilled by burning fossil fuels and jeopardise the national goal of 70% renewable electricity generation by 2030. Therefore, the applicant should be required to either provide for its own renewable energy generation (on or off site) to power the data centres from first use.

Currently, many companies claim to operate data centres powered by 100% renewable energy. However, the energy is largely sourced indirectly through Renewable Energy Certificates or Purchase Power Agreements (Chernicoff, 2016), which means that the energy is sourced from the grid, which in Ireland is 69% fossil fuel-powered (Sustainable Energy Authority of Ireland, 2019). If we continue to allow companies to virtually purchase clean energy where it is cheapest to create, while actually using and increasing demand for dirty energy in Ireland, we allow them to profit while our real emissions continue to rise. It is crucial therefore that data centres are powered directly by onsite renewable energy generation such as rooftop solar farms or genuinely new offsite generation such as offshore wind or solar farms.

The government has acknowledged that "data centres pose considerable challenges to the future planning and operation of Ireland's power system" (Department of Business, Enterprise and Innovation, 2018). These challenges include higher electricity costs for consumers (Taylor, 2018). The Danish Council on Climate Change recommended in

April 2019 that the Danish government legally binds data centre owners and developers to contribute to the infrastructure required to supply the centres with renewable energy, such as wind and solar farms (Irish Examiner, 2019).

The **490,000 tonnes of CO² per annum** to be emitted indirectly to generate the required 150MW of electricity to power the data centre, as indicated by the submitted EIAR section 9.7.2.2, would *increase* Ireland's greenhouse gas emissions by over 0.8% of 2018 emissions. This is based on the EPA (2020) figure of 60.93 million tonnes carbon dioxide equivalent (Mt CO²eq) for 2018. This 1% increase generated from one data centre would occur during a period where by law emissions must be reduced by 51% in accordance with the Climate Act.

Furthermore, looking solely at Fingal for which the Council is responsible: assuming that Fingal's share of national emissions aligns with its share of the population based on Census 2016 figures (296,214 people in Fingal, divided by 4,761,865 people in the country) **Fingal's total 2018 emissions would be 3.34 million tonnes of CO² equivalent. This would mean that the construction of the proposed data centre would increase Fingal's CO² equivalent emissions by 14.5% compared to 2018 levels.**

For Fingal to reduce its CO² emissions by 51% overall to 2030 compared to 2018 levels while granting permission for this data centre, emissions from other sources (including agriculture) would need to fall by 65%.¹

If the plant cannot be powered by renewable energy, it will lead to an increase in Ireland's greenhouse gas emissions between now and 2030, contravening the Climate Act, Climate Action Plan and National Planning Framework. Thus, as powering the data centre with onsite or offsite renewable energy is not solidly proposed, permission for its development should be refused.

2. Where technically possible, heat generated from a data centre should be utilised for district heating systems.

¹ Using the population estimated figure for Fingal's 2018 emissions of 3,367,930 tonnes CO²eq, a reduction of 51% to 2030 allows for remaining emissions of 1,650,285 tonnes CO²eq.

The data centre alone will be responsible for 490,000 tonnes CO²eq by 2030 of this 1,650,285 tonnes, leaving 1,160,285 tonnes of remaining allowed emissions under the 51% target. Therefore 2018 emissions of 3,367,930 tonnes CO²eq will have to be reduced to 1,160,285 tonnes, or 34.5% of the 2018 total.

To accommodate the data centre and reduce Clare's total CO²eq emissions by 51% to 2030, 65.5% of 2018 emissions will need to be eliminated.

We found no evidence in the application of technology provided for this purpose. Denmark's Ramboll Group (2019) recommends that the large quantities of waste heat generated by data centres should be utilised in district heating systems. Existing technology (such as heat pumps) to capture excess heat should be required and used to increase data centres' energy efficiency.

3. Water usage

Cooling the data centre will divert a huge amount of water away from the local community, a situation which is likely to get worse as water scarcity is exacerbated and population increases. Rainwater collection cannot be relied upon, due to uneven patterns of precipitation which will become even more erratic as the climate changes. A region with ample water today may become water-stressed in 10 to 30 years. We have recently witnessed that protracted periods of temperatures above 26°C with no precipitation are becoming more frequent in Ireland. The UN expects water demand to outpace supply by almost 40% as soon as 2030. Greater consideration needs to be given to how available resources are going to be used.

Conclusion

To meet the greenhouse gas emissions targets set out in the Paris Agreement, and in the newly published Climate Act, it is paramount that Fingal County Council examine the impact that energy supply of data centres, will have on net emissions. **This data centre will increase Fingal's CO² equivalent emissions by approximately 15%. Unless the application is altered to provide 100% renewable power to avoid these emissions, permission must be refused.**

Thank you in advance for your consideration.

Regards,
Ronan Fallon
29 Richmond Cottages North, Dublin 1

On behalf of
Not Here Not Anywhere

References

Chernicoff, D. (2016). How data centers pay for renewable energy. Available: <https://www.datacenterdynamics.com/analysis/how-data-centers-pay-for-renewable-energy> (Accessed 2019, September 22)

Climate Home News. (2017). 'Tsunami of data' could consume one fifth of global electricity by 2025. Available: <https://www.theguardian.com/environment/2017/dec/11/tsunami-of-data-could-consume-fifth-global-electricity-by-2025> (Accessed 2019, September 22)

Department of Business, Enterprise and Innovation. (2018). Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy. Available: <https://enterprise.gov.ie/en/Publications/Publication-files/Government-Statement-Data-Centres-Enterprise-Strategy.pdf> (Accessed 2019, September 22)

Eirgrid. (2020). All Ireland Generation Capacity Statement. Dublin: Eirgrid. Available: <https://www.eirgridgroup.com/site-files/library/EirGrid/All-Island-Generation-Capacity-Statement-2020-2029.pdf> (Accessed 2021, May 16)

Environmental Protection Agency (2020). Ireland's Final Greenhouse Gas Emissions 1990-2018. Available: https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland-GHG-1990-2018-Final-Inventory_April-2020.pdf (Accessed 2021, August 12)

Irish Academy of Engineering. (2019). Electricity Sector Investment for Data Centres in Ireland. Available: <http://iae.ie/wp-content/uploads/2019/08/Data-Centres-July-2019.pdf> (Accessed 2019, September 22)

Irish Examiner (2019) *Tech told pay for wind farms*. Irish Examiner. <https://www.irishexaminer.com/business/arid-30917493.html>

Lillington, K. (2018). Net Results: Data centres need to power down their energy requirements. Available: <https://www.irishtimes.com/business/technology/net-results-data-centres-need-to-power-down-theirenergy-requirements-1.3561745> (Accessed 2019, September 22)

Ramboll Group. (2019). *Unprecedented data centre surplus heat recovery to fuel district heat network*. <https://ramboll.com/projects/rdk/unprecedented-data-centre-surplus-heat-recovery>

Sustainable Energy Authority of Ireland. (2019). Renewables. Available: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwi6>

[9MPZiPTuAhUvThUIHXzMA9wQFjADegQIARAD&url=https%3A%2F%2Fwww.seai.ie%2Fpublications%2FRenewable-Energy-in-Ireland-2019.pdf&usg=AOvVaw0H1q38mxqi3lTr3FrjO8O8](https://www.seai.ie/publications/Renewable-Energy-in-Ireland-2019.pdf) (Accessed 2019, September 22)

Taylor, C. (2018). Data centre demand to lead to higher energy prices. Available: <https://www.irishtimes.com/business/energy-and-resources/data-centre-demand-to-lead-to-higher-energyprices-1.3581998> (Accessed 2019, September 22)