

Submission

Submitter:	Mr Anna Pringle
Organisation Name:	Not Here Not Anywhere
Submission Title:	NHNA Microsoft Gas Plant objection
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Application

Applicant:	Microsoft Ireland Operations Limited
Reg. No.:	P1187-01

See below for Submission details.

Attachments are displayed on the following page(s).



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For a fossil free future for Ireland

Environmental Licensing Programme
Office of Environmental Sustainability
Environmental Protection Agency

3rd February, 2023

Planning Application Reference: P1187-01

Applicant: Microsoft Ireland Operations Limited

Location: Microsoft Dublin Data Center Campus, Unit 74-76 GRANGE CASTLE
BUSINESS PARK, NANGOR ROAD, Clondalkin, Dublin.

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 and across the world. We advocate for fair society-wide energy usage and a just transition to renewable energy systems.

NHNA welcomes Ireland's commitment to transition to net zero by 2030 and the urgent adaptation of our energy supply. We recognise that the transition to renewables must be carried out in a way that guarantees nationwide energy security. However, we argue that the development of new fossil fuel infrastructure to facilitate this transition is not a viable solution. Further, adding fossil fuel infrastructure to facilitate expansion of data centres impedes the transition.

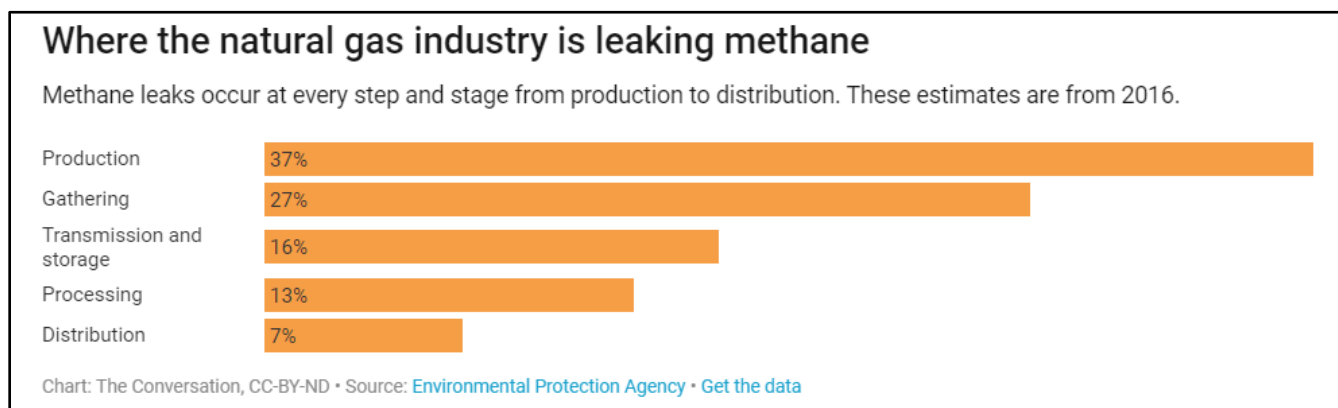
On that basis, we urge the EPA not to grant a license to Microsoft to build and operate a gas generation plant as outlined in application P1187-01. Any new fossil fuel infrastructure such as this has a negative environmental impact and must be considered in the context of Ireland's and the EU's climate goals. Building new fossil fuel infrastructure to run a privately owned data centre is not consistent with Ireland's crucially important Climate Action Plan and carbon budget targets, or with meeting the EU's Emissions Trading System goals of reducing net greenhouse gas emissions by at least 55% by 2030.

If data centres need additional sources of energy, they should be generated by onsite or new offsite renewable energy, rather than by investing in fossil gas plants.

International climate agreements

At COP26 in Glasgow in 2021, Ireland became a core member of the international Beyond Oil and Gas Alliance (BOGA), committing to align oil and gas production with the objectives of the Paris Agreement. In signing on to this international coalition, the government recognised that oil and natural gas demand need to decline by 75% and 55% respectively between 2020 and 2050 to achieve net zero, with nations of the global North pioneering this transition (Beyond Oil and Gas Alliance [BOGA], 2021; International Energy Agency, 2021). In this light, we urge the EPA to reject the application made for a new gas power station proposed by Microsoft.

COP26 also saw our government aligning with a global partnership to cut methane emissions by 30% by 2030. Methane is a potent greenhouse gas, with a Global Warming Potential 86 times that of CO₂ over a 20 year period (Myhre et al., 2013, p. 714, Table 8.7). Natural gas is frequently portrayed as a ‘clean alternative’ to coal and oil, as burning it emits less CO₂ than oil and coal. However, research emerging on the significant amount of methane leaked in the production and transport of natural gas disproves these claims (Borunda, 2020; Environmental Defence Fund, n.d). Leakage is an inherent part of the natural gas system as highlighted in the below graph (The Conversation, 2018) adapted from the US Environmental Protection Agency’s 2018 inventory report on GHG emissions (EPA, 2018).



We cannot justify accompanying the transition to renewable energy with new gas-fueled power plants. McMullin and Price (2019, p. 6) emphasise the need for “extremely rapid and immediate absolute reductions in near-term fossil fuel usage, at a year-on-year rate of c. 20%, falling effectively to zero within 10-15 years (c. 2030-2035)” to achieve Paris-aligned climate targets. Further, we emphasise that the current application is not made in

isolation. When considering a new gas plant as proposed by Microsoft, the cumulative impact of multiple potential new gas plants in Ireland must also be considered, as well as multiple diesel generation applications, all to service Data Centres.

National and regional climate targets

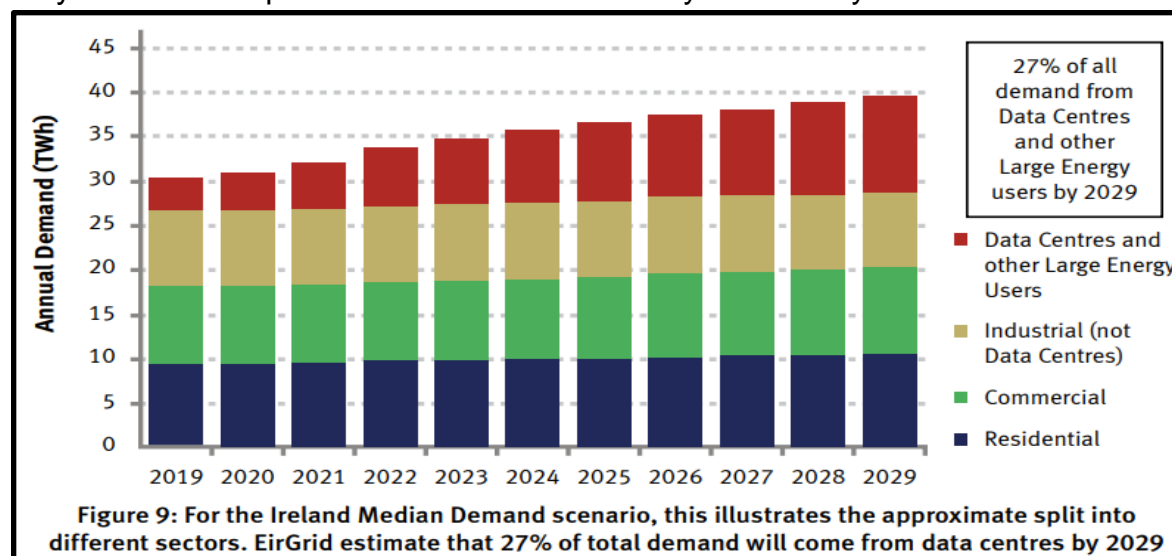
The application by Microsoft proposes using gas to generate electricity on site. The expansion of fossil fuel infrastructure inevitably leads to economic reliance on these dirty energy sources, and a ‘lock-in’ effect to fossil fuels (Borunda, 2020; McMullin & Price, 2019). It is crucial that Ireland does not further lock in dependence on fossil fuels if we are to meet our climate targets under the Paris Agreement and the Climate Action and Low Carbon Development (Amendment) Bill 2021—which legally obliges us to achieve a 51% reduction of our 2018 emissions levels by 2030 and net-zero by no later than 2050.

Fundamentally, the climate risks of locking Ireland into new fossil fuel infrastructure far outweigh any potential economic benefits of the expanding data centre sector.

Notably, recent applications for gas power plans have previously been rejected. For example, a 293MW gas power plant proposed by Kilshane Energy was rejected by Fingal County Council in early 2022 because “Planners said they were not satisfied that the proposed development on Kilshane Road, ‘would not give rise to adverse impacts on the green infrastructure, biodiversity, ecology, archaeology, landscape character and the visual amenities of the area’.” (Irish Times, 2022). Microsoft’s proposed gas power plant would pose the same threats to Ireland’s ecology by increasing emissions.

Data centres and energy security

We must acknowledge that Ireland’s energy security is greatly undermined by the recent and rapid growth of data centres in Ireland. Eirgrid (2020) estimates that data centres may account for up to 27% of Ireland’s electricity demand by 2028.



Although the applicant is proposing generating electricity through its gas power plant, the question must be addressed of how and where the gas will be sourced? In the event of possible future gas shortages, how will supply be prioritised and how does this align with the current National Energy Security Review that is ongoing?

We cannot continue to increase Ireland's energy demand so dramatically, only to continue building fossil fuel infrastructure to cater to this demand. As outlined in our policy briefing, a moratorium on data centre development is imperative until an appropriate regulatory framework is in place (Not Here Not Anywhere, n.d.).

We ask the EPA to be cognisant of data centre growth in Ireland when considering Ireland's energy demand, and to prioritise climate targets and commitments over the continued expansion of fossil fuel infrastructure to service the data centre industry.

Greenhouse Gas Emissions

The applicant has provided the following information about resources that will be used at the development (table 7.1 attachment 4.8.1-p20):

Table 7.1 Summary of the Estimated Future Resource use at the Installation Resource

Resource	Quantity per annum
Electricity (purchased)	498,000 MWh
Total Electricity (generated and used)	107,435 MWh
Electricity (generated and exported)	N/A
Natural Gas	26,500,000 m ³ annually
Diesel (Gas Oil)	C.30 m ³ annually
Water (Public Supply & Rainwater Harvesting)	9,003 m ³ annually

According to the SEAI (2023), for every kWh produced by burning natural gas in this plant, Ireland's CO₂-emissions will rise by 202.9 gCO₂. Assuming that 1m³ = 10.55 kWh, the plant would generate 279,575,000 kWh from natural gas annually, meaning it would emit 56,725,767,500 gCO₂ or 56,725.77 tons of CO₂. This would represent an untenable increase in CO₂ emissions, when large decreases are necessary every year to make 2030 and 2050 targets.

In addition to its CO₂ emissions, the detrimental climate impact of the proposed gas power plant is further exacerbated by its methane emissions. Natural gas consists largely of methane, a greenhouse gas with a global warming potential 86 times greater than

carbon dioxide over a 20-year period (Myhre et al., 2013, p714, Table 8.7). Methane leakage is inherent to all gas systems and in order to understand the true emissions impact of this plant we must also take into account the impact of leaked methane.

Conclusion

We urge the Environmental Protection Agency to reject this application for an Industrial Emissions License for the following reasons:

- New fossil fuel infrastructure, such as the proposed development at Grangecastle, is not in line with Ireland's international climate commitments.
- Ireland's energy security is threatened by the proliferation of data centres and installing fossil gas generation onsite does not alleviate this issue.
- Renewable energy, either on or offsite, should provide any additional data centre energy needs.

Finally, as the EPA has noted: "GHG emissions are the most significant contributor to climate change". The EPA is also clear that "Ireland must invest in structural and behavioural change to enable the transition to a climate neutral, climate-resilient country".

Yours sincerely,

Not Here Not Anywhere

References

Beyond Oil and Gas Alliance [BOGA] (2021). The Beyond Oil and Gas Alliance Declaration. Accessed on 13 December 2021 from:
<https://drive.google.com/file/d/176fTn0z5aNr-vhUecAsLOD8Jg110dQMF/view>

Borunda A. (2020). Natural gas is a much 'dirtier' energy source than we thought. *National Geographic*. Accessed on 13 December 2021 from:
<https://www.nationalgeographic.com/science/article/super-potent-methane-in-atmosphere-oil-gas-drilling-ice-cores>

Britannica. (2019). Composition and properties of natural gas. Accessed on 05 January 2022, from: <https://www.britannica.com/science/natural-gas/Composition-and-properties-of-natural-gas>

- Černoch, F., Osička, J., & Mariňák, S. (2021). The “coal villain” of the European Union? Path dependence, profiteering and the role of the Energetický a průmyslový holding (EPH) company in the energy transition. *Energy Research & Social Science*, 76, Article 102066. Accessed on 28 December 2021 from: <https://www.sciencedirect.com/science/article/abs/pii/S2214629621001596>
- Chernicoff, D. (2016). How data centers pay for renewable energy. *Data Centre Dynamics Ltd*. Accessed on 22 September, 2019 from: <https://www.datacenterdynamics.com/analysis/how-data-centers-pay-for-renewable-energy>
- Eirgrid (2020). All Ireland Generation Capacity Statement. Dublin: Eirgrid. Accessed on 16 May 2021 from: <https://www.eirgridgroup.com/site-files/library/EirGrid/All-Island-Generation-Capacity-Statement-2020-2029.pdf>
- Environmental Defense Fund (n.d.) Methane: A crucial opportunity in the climate fight. *Environmental Defense Fund*. Accessed on 02 January 2022 from: <https://www.edf.org/climate/methane-crucial-opportunity-climate-fight>
- EPA. (2018). Inventory U.S. of Greenhouse Gas Emissions and Sinks (1990 - 2016). Accessed on 05 January, 2022, from: https://www.epa.gov/sites/default/files/2018-01/documents/2018_complete_report.pdf
- EPA (2023). <https://www.epa.ie/environment-and-you/climate-change/>
- Forbes Slovakia (2020) Patrik Tkáč returns to Křetínský EPH. The Slovak millionaire will own 44 percent. *Forbes*. Accessed on 28 December 2021 from: <https://www.forbes.sk/patrik-tkac-sa-vracia-do-kretinskeho-eph-slovensky-miliardar-bude-vlastnit-44-percent/>
- Hayhoe K, Kheshgi HS, Jain AK, Wuebbles DJ (2002). Substitution of natural gas for coal: Climatic effects of utility sector emissions. *Climatic Change* 54: 107-139. Accessed on 05 January 2022 from: http://isam.atmos.uiuc.edu/atuljain/publications/HayhoeEtAl_CC_2002.pdf
- Howarth, R., Shindell, D., Santoro, R., Ingraffea, A., Phillips, N., & Townsend-Small, A. (2012). Methane Emissions from Natural Gas Systems. Ithica: Cornell University, NASA Goddard Space Institute, Boston University, University of Cincinnati. Accessed on 05 January 2022 from:

http://www.eeb.cornell.edu/howarth/publications/Howarth_et_al_2012_National_Climate_Assessment.pdf

International Energy Agency (2021). Net zero by 2050: A roadmap for the global energy sector. Accessed on 19 December 2021 from:

<https://iea.blob.core.windows.net/assets/ad0d4830-bd7e-47b6-838c-40d115733c13/NetZeroBy2050-ARoadmapfortheGlobalEnergySector.pdf>

Irish Times. (2022). Planners refuse permission for Kilshane power plant.

Available at: <https://www.irishtimes.com/business/energy-and-resources/planners-refuse-permission-for-kilshane-power-plant-1.4806104>

McMullin, B. and Price, P. (2019) Investigating the role of negative emissions technologies in deep decarbonisation pathways for the Irish energy system. *IE-NETs Work Package 4Report*. Working Paper, Dublin City University. Accessed on 19 December 2021 from <http://tinyurl.com/IENETs-WP4-Report-PDF>.

Myhre, G., D. Shindell, F.-M. Bréon, W. Collins, J. Fuglestad, J. Huang, D. Koch, J.-F. Lamarque, D. Lee, B. Mendoza, T. Nakajima, A. Robock, G. Stephens, T. Takemura and H. Zhang, (2013): Anthropogenic and Natural Radiative Forcing. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. *Cambridge University Press*, Cambridge, United Kingdom and New York, NY, USA. https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf

Not Here Not Anywhere (n.d.). Data Centres and the Energy Transition. Briefing, September 2021. *Not Here Not Anywhere*.

Accessed on 04 January 2022 from:

https://drive.google.com/file/d/1P72ncJuEiOy_lemXYmVaLAheGicc_32G/view

SEAI. (2023). Conversion Factors. Accessed on 03 February 2023 from:

<https://www.seai.ie/data-and-insights/seai-statistics/conversion-factors/>

The Conversation. (2018, July 02). The US natural gas industry is leaking way more methane than previously thought. Here's why that matters.

Accessed on 05 January 2022 from: <https://theconversation.com/the-us-natural-gas-industry-is-leaking-way-more-methane-than-previously-thought-heres-why-that-matters-98918>