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For a fossil free future for Ireland

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Planning Application Reference: 212192

Applicant: EP Energy Developments

Location: Derryfrench

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.

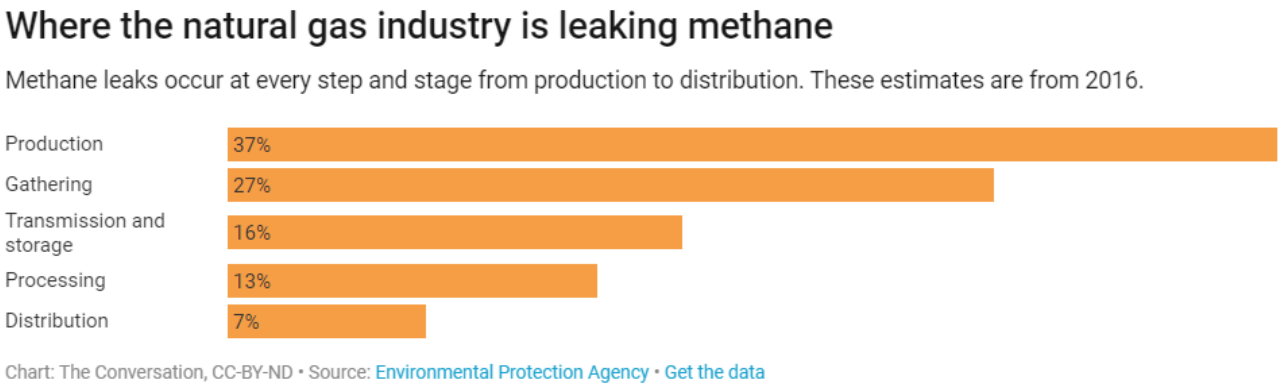
NHNA welcomes Ireland's commitment to transition to net zero by 2030 and the urgent adaptation of our energy supply. We recognise that the transition to renewables must be carried out in a way that guarantees nationwide energy security. However, we argue that the development of new fossil fuel infrastructure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

International climate agreements

Merely a few weeks after COP26, it is extremely concerning to learn that seven new gas power plants are planned for construction in Ireland, including that proposed in Derryfrench. During the fortnight of negotiations in Glasgow, 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 Galway County Council to reject the application made for a new gas power station proposed by EP Energy Developments.

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 C02 over a 20 year period (Myhre et al., 2013, p714, 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, p6) 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 reinstate that the current application is not made in isolation. When considering a new gas plant in Derryfrench, you must consider the cumulative impact of a potential seven new gas plants in Ireland.

National and regional climate targets

The application by EP Energy Developments claims this new gas plant will be used only as a back-up energy source and only in the transition to renewables. However, 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 its 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 energy security risks related to gas supply. Furthermore, developing new fossil fuel infrastructure is inconsistent with Section 14 of the Galway County Council Development Plan 2022-2028, which lays out an overarching goal to "reduce the carbon footprint by integrating climate action into the planning system in support of national targets [and] support indigenous renewable sources in order to reduce dependence on fossil fuels" (Galway County Council, 2021, p263).

Data centres and energy security

This application emphasises the contribution of the proposed gas plant to energy security, but 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. 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). 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. 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 Galway County Council to be cognisant of data centre growth in Ireland when considering Ireland's energy demand, and to prioritise our climate targets and commitment to net zero over the continued expansion of the data centre industry.

Applicant's reputation and motivation

In reviewing this planning application, it is essential that Galway County Council takes into consideration the applicants themselves. Parent company of the planning applicant EP Energy Developments, EPH, has been described as the 'coal villain of the EU'. As one of the biggest polluters in the EU ETS, and with an 80% stake in Tynagh Power Station, EPH is a cause for concern (Černoch, Osička & Mariňák, 2021). In addition, majority shareholders: billionaire Daniel Křetínský and millionaire Patrik Tkáč, control 94% of EPH (EPH, n.d.; Forbes Slovakia, 2020). This concentration of control shows that EPH is not likely to be susceptible to investor pressure regarding emissions reductions. In addition, as a holding company, made up of more than 70 different companies, EPH is unlikely to face direct pressure from retail customers (EPH, n.d.). We urge you to question the commitment of EPH to climate neutrality when reviewing this application.

Local climate commitments

We recognise that implementing a complete transition to renewables does not come without challenges. But, in the context of the climate emergency, increasing our use of and reliance on fossil gas cannot be the solution to Ireland's energy security. We encourage Galway County Council to review current energy use within their district, and consider the adaptations possible in order to bring about more efficient and more sustainable energy demand and consumption. Rather than focusing solely on sufficient infrastructure to guarantee energy security, there is an onus on all individuals and all communities to reflect on and readjust our energy demand. City and County Councils play an integral role in bringing about this transition. Section 14.3 of the Galway County Council Development Plan 2022-2028 lays out a policy objective "to support the transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050, by way of reducing greenhouse gases, increasing renewable energy, and improving energy efficiency" (Galway County Council, 2021, p270). We urge Galway County Council to demonstrate their commitment to this goal by prohibiting the development of new fossil fuel infrastructure and realising energy security through efficient and sustainable energy demand and the expansion of renewable energy supply.

Omission of methane leakage emissions

With regards to the specific application made for a new Open Cycle Gas Turbine power plant at Derryfrench, we would like to highlight several omissions and discrepancies in the emissions calculations of the EIAR (EP Energy Developments, 2021)

On page 22 of the Environmental Impact Assessment Report Volume II - Appendix 7B - Greenhouse Gas Emissions (the EIAR), item 7.1.1 states that approximately 83,527,397 m^3 of natural gas will be burned each year. Item 7.1.2 states that 214,598 tonnes of CO_2 equivalent (tCO_2e) will be emitted each year from operating the plant. This is summarised in Table 1 below.

Table 1- Operational emissions from combustion as per EIAR Volume II

Variable	Value
Total gas (m^3 per year)	83,527,397
Emissions proposed (tCO2e per year)	214,598

Nowhere in the EIA Report does the applicant account for CO_2e emissions from the leakage of methane. Methane has a Global Warming Potential 86 times that of C02 over a 20 year period (Myhre et al., 2013, p714, Table 8.7). Table 2 below proposes three different leakage scenarios (Howarth et al., 2012, p2, Table 1; Hayhoe et al., 2002) and calculates the volume of leaked gas and the volume of gas that would

actually be combusted under each scenario. Again let it be stated that the applicant has not considered leakage anywhere in their application and so our calculations below may currently be the only estimation for this project. We have used a range of industry averages within which the specific proposed project may lie.

Table 2 - Volumes of gas for combustion accounting for leakage

Variable	Low Estimate	Best Estimate	High Estimate
Leakage rates	0.2%	2.5%	10%
Total volume of gas (m^3 per year)	83,527,397	83,527,397	83,527,397
Total gas leaked (m^3 per year)	**167,055**	**2,088,185**	**8,352,740**
Total gas to be burned (m^3 per year)	**83,360,342**	**81,439,212**	**75,174,657**

Once the volume of gas likely to be combusted, accounting for leakage, has been calculated, the new emissions value from burning this gas was estimated as per Table 3 below. The estimation is based on the proportions provided by the applicant as shown in Table 1 of this document and items 7.1.1 and 7.1.2 of the EIAR.

Table 3 - CO2 Emissions from combustion after leakage volume has been accounted for

Variable	Low Estimate	Best Estimate	High Estimate
Gas to be burned (m^3 per year)	83,360,342	81,439,212	75,174,657
Total Emissions from burning (tCO_2e per year)	**214,169**	**209,233**	**193,138**

Table 4 takes the volume of gas leaked, assumes it contains 85% methane (Britannica, 2019) and calculates the emissions from this leaked gas in tCO_2e by applying the Global Warming Potential of methane over a 20 year period. Please note that 85% is somewhat conservative and it's not uncommon for natural gas to be comprised of 95% methane.

Table 4 - Emissions from leaked methane

Variable	Low Estimate	Best Estimate	High Estimate
Gas leaked (m^3 per year)	167,055	2,088,185	8,352,740
% Methane of natural gas	85%	85%	85%
Methane leaked (m^3 per year)	141,997	1,774,957	7,099,829
- *Density of methane (kg/m^3)*	*0.7165*	*0.7165*	*0.7165*
- *Methane leaked (kg per year)*	*101,741*	*1,271,757*	*5,087,027*
- *Methane leaked (tonnes per year)*	*102*	*1,272*	*5,087*
- *GWP_{20} of methane*	*86*	*86*	*86*
Total Emissions from leakage (tCO_2e per year)	**8,750**	**109,371**	**437,484**
Total Leakage emissions over 25 years (tCO_2e)	**218,742**	**2,734,277**	**10,937,109**

In Table 5 the new total operational emissions per year are calculated by combining the emissions from leakage with the emissions from combusting a lower volume of gas due to leakage. This is compared with Item 7.1.2 of the EIAR. The difference is displayed in both tCO_2e and as a percentage and shows how significant the omission of leakage can be if even a small percentage of the gas escapes.

Table 5 - Additional emissions per year once leakage has been accounted for

Variable	Low Estimate	Best Estimate	High Estimate
Total operational emissions (tCO_2e per year)	222,918	318,604	630,623
Reported estimate as per EIAR (tCO_2e per year)	214,598	214,598	214,598
Total emissions unaccounted for (tCO_2e per year)	**8,320**	**104,006**	**416,025**
Difference (%)	**4%**	**48%**	**194%**

Table 6 shows the potential difference in operational emissions over the full 25 year lifecycle of the proposed development when leakage is accounted for.

Table 6 - Difference over 25 years once leakage has been accounted for

Variable	Low Estimate	Best Estimate	High Estimate
Total operational emissions (tCO_2e)	5,572,962	7,965,103	15,765,564
Reported operational emissions as per EIAR (tCO_2e)	5,364,956	5,364,956	5,364,956
Total emissions unaccounted for (tCO_2e)	**208,006**	**2,600,147**	**10,400,608**
Difference (%)	**4%**	**48%**	**194%**

Given the impact methane leakage can have on the operational emissions of such a development, it is illogical to proceed with the planning process until this is understood and accounted for. We commend the applicants for including figures for embodied carbon emissions during the construction phase but if they are willing to account for somewhat negligible values like that there is no excuse for excluding such an impactful figure as leaked methane emissions.

Multiple errors in reporting total operational emissions

In addition to the omission of figures for leaked methane emissions, the EIAR also has discrepancies in how it reports total operational emissions.

Error 1

Table 7.1 on page 22/23 of the EIAR shows the expected net annual operational emissions to be 214,598 tCO_2e. Yet immediately below this, Table 7.2 shows the expected net annual operational emissions to be only 201,598 tCO_2e. As no explanation is provided for the difference, we deem it to be an error in the application.

Error 2

More significant still is the error made in reporting net operational emissions in Section 7 and Section 10.

Item 7.1.2 on page 22 of the EIAR states that the

"*net GHGs (including all GHG avoidance deductions) from operating the Proposed Development over its 25-year life are estimated to be* ***5,364,956*** ***tCO_2e****.*
Annual emissions are expected to be approximately ***214,598*** ***tCO_2e***".

However, in the Conclusion, Item 10.1.2 states that the

"*net GHGs (including all GHG avoidance deductions) from operating the Proposed Development over its (at least) 25-year life are expected to be* ***7,087,775*** ***tCO_2e****.*
Annual emissions are expected to be approximately ***283,511*** ***tCO_2e***".

There is no explanation given as to why the same values are reported differently, with the 25-year value differing by almost 2 million tonnes of CO_2 equivalent emissions.

Conclusion

We urge Galway County Council to reject the application made for the new gas power station proposed by EP Energy Developments for the following reasons:

- New fossil fuel infrastructure, such as the proposed development at Derryfrench, is not in line with Ireland's international climate commitments.
- New fossil fuel infrastructure of this type threatens our national and local climate targets.
- The reputation of the applicant leads us to question the commitment of EPH to climate neutrality and emissions reductions.
- Failure of the applicant to account for damaging methane leakage in the EIA report.
- Blatant errors in the applicant's stating of net operational emissions in the EIA report.

Yours sincerely,

Name:
Address:

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