

Friends of the Earth



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**Friends of the Earth submission to Department of Environment Climate and
Communications Consultation on the 'Review of the security of energy supply of
Ireland's electricity and natural gas systems'
28 October, 2022**

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Introduction

1.1 Friends of the Earth welcomes the opportunity to respond to the Department's consultation. Friends of the Earth Ireland is a community at the heart of the growing movement for a just world with zero pollution. We are part of the world's largest grassroots environmental network. We campaign and build movement power to bring about the system change that is needed for a just world where people and nature thrive. We promote education and action for environmental sustainability and justice and focus on Ireland's response to the big environmental challenges of our time, including the climate emergency and the achievement of the Sustainable Development Goals. We support people and group working autonomously to connect their local work to the bigger national and international picture. We have particular experience in participatory education, campaign strategy, shaping public debate and driving policy change.

1.2 Friends of the Earth welcomes the opportunity to respond to this consultation and to raise research undertaken by UCC MaREI on behalf of Friends of the Earth (see attached and summary below).

1.3 We welcome the Department's approach in publishing the detailed CEPA Security of Supply Technical Report as part of this consultation. We particularly support that CEPA's analysis refers to the impact on emissions and undertakes a clear long-listing and short-listing.

1.4. We acknowledge that this consultation is one part of the review process and that statements made in the consultation paper do not amount to Government positions. Notwithstanding positive elements in the CEPA analysis, certain comments made in the consultation paper raise 4 over-arching and interrelated risks regarding the ongoing Government's energy security review:

- (i) Climate obligations may be insufficiently addressed or disregarded in examining energy security responses
- (ii) Energy security responses are misinterpreted as primarily amounting to the prioritisation of new long-term gas supply infrastructure without analysis of adverse carbon lock-in and stranded assets impacts.
- (iii) Demand reduction measures are not adequately considered or actively ignored.
- (iv) Gas and electricity demand projections are not in accordance Sectoral Emissions Ceilings.

We urge the Department to respond to such risks in the follow-up to this consultation.

1.5 In order for Ireland to act in line with the Climate Act and Paris Agreement, fossil gas use must reduce urgently, including the rejection of further fossil fuel infrastructure, as well as the need to plan for decommissioning and identification stranded assets. This must be reflected across all elements of the energy security review process

1.6 We underline that it would be entirely inappropriate for Government to take a position on new infrastructure or measures which have not been subject to full and transparent analysis by the independent technical analysts CEPA, as well as relevant state bodies (the CCAC, the EPA, the SEAI and the CRU).

1.7 In this submission we start by presenting our key recommendations and research undertaken by UCC MaREI on behalf of Friends of the Earth for this energy security review. Responses to specific consultation questions are addressed below.

FoE Recommendations

- It is essential that the energy security review actively integrates climate objectives. This means that any consideration of energy infrastructure, must start with the question as to how it will support the decarbonisation of Ireland's energy system, in accordance with the urgency and scale of legally-binding sectoral emissions ceilings.
- Continued development, expansion and operation of fossil gas assets is incompatible with legally-binding climate targets. It is in this context that any and all proposed energy security measures must clearly demonstrate compliance with legally binding carbon budgets, as well as 2030 and 2050 targets. This must include a transparent and published analysis of the expected emissions associated with any infrastructure decision.
- The Government must clearly reject gas supply mitigations options, in particular LNG, given that they would have a negative effect on emissions and the environment, particularly any form of carbon lock-in due to long-term fossil gas infrastructure. We are calling on Government to make the current moratorium on LNG and fracked gas imports permanent through legislation.
- We support the technical analysis regarding fundamental risks in relation to FSRU. We reject the shortlisted option of state-backed FSRU and also the reference to a 'mandated level of strategic storage held at all times so that in the event of a supply shock' for the same reasons as provided in the CEPA technical analysis for not shortlisting commercial LNG: these measures would likely result in the importation of fracked gas, would have high emissions and may not guarantee volumes sufficient to cover a security of supply shock.
- The Government should take steps to end current licences for fossil fuel exploration in light of the independent technical analysis that additional gas reserves from existing exploration licences, such as from Providence or Corrib should not be supported as "[a]dditional domestic production of natural gas could lock Ireland into a high-gas energy market...Unknown volume of any potential additional natural gas discoveries."
- In relation to current gas infrastructure, the Government must set out how gas demand will be reduced (see UCC MaREI research), as well as how infrastructure will be phased out and decommissioned.
- We call on the Government to introduce a moratorium on new data centres connecting to the electricity grid until electricity system pressures and gas demand risks are transparently and comprehensively addressed.
- The independent expert report clarifies the positive contribution that can be made from energy efficiency, offshore wind, solar, battery storage and further interconnection. Such measures are entirely consistent with achievement of Sectoral Emissions Ceilings. These must be prioritised instead of continuing dependence on dirty, expensive and unreliable fossil fuels.
- We are concerned by the seeming absence of focus on energy security at household and community level, as well as the co-benefits of energy efficiency, district heat, community energy and solar PV. We note reference to these issues in recent statements of Minister Ryan however such measures and advantages are not sufficiently examined in the consultation paper or the technical review. The

Government must examine the security benefits of energy efficiency measures and significant expansion of rooftop solar PV as these will permanently enhance our security, reduce emissions and protect households from rising energy costs. The energy security review must also take account of the risk of continued connections to the gas network and installation of fossil fuel boilers which increase dependence on fossil fuels and are not compatible with decarbonisation and climate commitments.

Summary of UCC MaREI Recommendations (see attached research)

UCC MaREI has undertaken research on behalf of Friends of the Earth on Irish electricity and gas demand to 2050 in the context of climate commitments for this energy security consultation. This UCC research examines the requirement for new gas-fired power generation capacity and future gas demand in the context of these challenges. The research report also compares a carbon budget-consistent energy system with projections and forecasts of electricity and natural gas demand from network operators, EirGrid and Gas Networks Ireland. The analysis is based on the TIMES Ireland Model (TIM).

We call on Government to examine this research and the conclusions therein (**attached to this submission**) and we welcome the opportunity to engage with the Department of Environment, Climate and Communications directly on these issues.

A summary of some of the main conclusions and recommendations from this independent research is provided below:

- *To meet the national Carbon Budget Programme, as set out in the 2021 Climate Law, and long-term objective of a carbon-neutral economy by 2050 at the latest, cost-optimal pathways for the Irish energy system require demand for natural gas to fall by 40% this decade and a further 80% in the 2030s.*
- *Meeting the carbon budget programme means that, compared with 2020, natural gas demand in 2040 is reduced by 93% in the power sector, 85% in the residential sector and 67% in enterprise.*
- *Strong growth in data centre electricity demand, for example a trajectory aligned with the “High” or “Median” electricity demand forecasts set forth by EirGrid in its Generation Capacity Statement in 2022, would substantially increase the challenges for the achievement of Sectoral Emissions Ceilings in the power, transport and buildings sectors. To remain within emissions ceilings, data centre demand growth represented in EirGrid’s “High” scenario – a 500% in growth in electricity demand from data centres this decade – would require deployment of renewable electricity capacity at implausibly rapid rates: a quadrupling of renewable electricity generation this decade.*
- *If significant growth in future renewable electricity generation is ultimately required mainly to serve strong data centre demand growth, this will further limit the potential for transport, buildings and industry sectors to meet their decarbonisation commitments. This is the case as replacing fossil fuels through electrification is also among the most cost-effective and achievable mitigation measures available in these other sectors.*
- *Delivering on the legally-binding Sectoral Emissions Ceiling for the power sector to 2030 requires an immediate increase in natural gas capacity (largely to replace existing, more polluting capacity) but at the same time, meeting carbon budgets will require a strong decrease in the utilisation of natural gas-fired generation later this decade.*
- *New natural gas-fired power capacity is urgently necessary to meet climate commitments to replace older, more carbon-intensive generation capacity, but to meet carbon budgets, the annual power generation from natural gas plants (i.e. the*

actual operation of these plants annually) must fall by more than half by 2030. Around 2 GW of additional natural gas capacity must be deployed as quickly as possible. High data centre demand growth necessitates an additional 0.2 GW of natural gas power generation capacity. Failure to ensure compliance with Sectoral Emissions Ceilings would risk higher investment in and operation of gas generation (and associated risk of emissions lock-in).

- *Any failure to rapidly deploy far greater renewable electricity capacity in parallel would lead to an increased utilisation rate of natural gas capacity, with consequent increase in emissions and risks to Sectoral Emissions Ceilings.*
- *While additional natural gas-fired power capacity is necessary in all scenarios, the share of time that natural gas capacity is used must be more than halved this decade for natural gas usage and CO₂ emissions to reduce in line with the Sectoral Emissions Ceiling. This cannot be achieved without a very rapid acceleration in renewable electricity capacity deployment – around 15 GW of new wind and solar capacity this decade – and this challenge is amplified with higher demand growth from data centres.*
- *To adequately plan for the rapidly energy transition required to meet the national climate objective, and to avoid a lock-in to fossil fuel infrastructure, state agencies consistent with EirGrid’s “High Demand” scenario from the Generation Capacity Statement report, 2022 must make carbon budget planning explicit within energy projections and forecasting.*
- *EirGrid and Gas Networks Ireland (system operators of the electricity and gas networks) project future electricity generation capacity and natural gas demand without taking explicit account of Sectoral Carbon Budgets or the long-term net-zero commitment. The result is projections of demand which risk being misinterpreted by policy and industry as being compatible with legally-binding climate commitments. This provides poor policy messaging that does not factor in legally-mandated carbon budgets and risks locking in fossil fuel-intensive infrastructure and a CO₂ emissions pathway which exceeds legally-binding carbon budgets.*
- *It is necessary to shift focus from examining and addressing technology deployment only in terms of long-term targets to immediately reducing fossil fuel use in line with carbon budgets to 2025 and 2030. Delays in emissions cuts are likely to make the carbon budget programme infeasible.*

In the following sections we provide answers to the questions outlined in the Consultation document.

- 1. Are there any other security of supply risks that you can identify in addition to those set out in section 6?**
- 2. If there are other risks that you have identified, could you outline some mitigation options to address the risk(s)?**

- We note that GNI's role in both putting forward gas network development plans while at the same time promoting expansion of the gas network raises conflict of interest risks. GNI network plans to date do not align with Ireland's decarbonisation objectives nor do they properly take account of wider energy system decarbonisation and longer-term reductions in gas supplies through electrification and demand-side measures. Delivery of new connections are based on projected gas demand scenarios which are produced by GNI.
- Gas Networks Ireland is also continuing to connect homes in areas with the most potential for district heating. Phase-out regulations for gas should be connected to heat planning, as the decarbonisation of space heating will require a reduction of the gas distribution grid. This will require a regulatory framework for decommissioning of the gas grid. The Government should legislate to end further expansion of the gas network, particularly at distribution level, by amending relevant provisions in the 1976 Gas Act.¹
- It is also not clear that the CRU's regulatory functions transparently address risks of carbon lock-in through fossil gas investments, potential stranding of fossil fuel assets or barriers to small and large-scale renewables and energy storage developments. Where GNI's functions remain focused on expansion of pipeline infrastructure and where CRU's regulatory framework does not adequately respond to these challenges, it is open to question whether GNI activities and investment may serve to actively undermine the Government's decarbonisation and broader climate action programme which prioritises electrification of heat and transport. GNI/Ervia have continued to advocate for fossil gas investment at EU level and for new connections to the network.²
- The starting point in this regard should be to ensure that the mandates of GNI and CRU (and ESB) as detailed in Electricity Regulation Act 1999 and the Gas Act 1976, are amended. The objective of GNI to promote gas usage and network extensions should be removed and its Memorandum of Understanding amended accordingly. It is also essential that the Government ensures executive boards include members with expertise in climate science/biodiversity protection/sustainable development. Friends of the Earth has analysed the objectives and functions of these bodies and put forward detailed changes in a 2020 research paper.³
- Departments and public bodies informing the energy security review and taking measures in light of subsequent Government decisions must act in accordance with climate obligations. Under the 2015 Climate Act as amended by the 2021 Climate

¹ Friends of the Earth The Role of Public Bodies in Driving Ireland's Decarbonisation, 2020 https://www.foe.ie/assets/files/pdf/the_role_of_public_bodies_in_driving_irelands_decarbonisation_-_final.pdf

² Ervia's response to Ireland's Draft National Energy & Climate Plan (NECP) 2021-2030, February 2019 <https://assets.gov.ie/76009/cd2cd4e4-0639-40ae-aa25-e3cf5a87f4c4.pdf>

³ Ibid

Amendment Act, public bodies, are obliged to “perform...functions in a manner consistent with—(a) the most recent approved climate action plan; (b) the most recent approved national long term climate action strategy, (c) the most recent approved national adaptation framework and approved sectoral adaptation plans, (d) the furtherance of the national climate objective, and (e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.”⁴

- The energy security review must align with obligations set out in the recently agreed [Public Sector Climate Action Mandate](#). This Mandate also requires both the Department and public bodies under the Department’s jurisdiction to reduce emissions in accordance with the 2021 Climate (Amendment) Act.
- The current energy price and security crisis, driven by volatility in the gas market raises significant questions regarding previous Government decisions to expand gas usage, particularly at domestic level, while downplaying or dismissing energy efficiency measures and solar generation. Had successive governments invested and rolled out energy efficiency, solar (combined with greater wind, storage, and grid development) citizens would not be as exposed to the current gas crisis. Fossil fuel pricing is volatile and is likely to remain so. Prices are also likely to remain high. Renewable generated electricity has been competitive with fossil fuels for some time, even before the recent price increases. The discourse of “cheap” fossil fuels and the “expense” associated with the energy transition has not been accurate for many years. Overreliance on gas and likely long-term gas market volatility must be assessed, in particular with regard to short-listed gas infrastructure options.

3. Are the five shock scenarios that were considered, and the additional scenarios related to the Russian invasion of Ukraine, sufficiently broad?

- The consultation paper points to the fact that forecasts are based on Gas Networks Ireland’s 2021 NDP and EirGrid’s All-Island Generation Capacity Statement 2021 – 2030, both of which were produced prior to the introduction of REPowerEU and the recent Government sectoral emissions ceiling agreement. However, the consultation paper does not address how resulting proposals are at best incomplete and at worst entirely at odds with the legally-binding SECs and REPowerEU.
- As noted by UCC MaREI research for this energy security review, ‘*EirGrid and Gas Networks Ireland...project future electricity generation capacity and natural gas demand without taking explicit account of Sectoral Carbon Budgets or the long-term net-zero commitment. The result is projections of demand which risk being misinterpreted by policy and industry as being compatible with legally-binding climate commitments. This provides poor policy messaging that does not factor in legally-mandated carbon budgets and risks locking in fossil fuel-intensive infrastructure and a CO2 emissions pathway which exceeds legally-binding carbon budgets.*’
- As noted by Brian O Gallachoir, ‘this failure means no mention of the 40 Mt CO2 ceiling for electricity in the period 2021-2025, the fact that we’re on track to use at least half of that in the first two years (2021-2022), and that we will have to limit electricity emissions to within 20 Mt in the three years. What this means is that the GCS electricity demand growth projections are completely misaligned with Ireland’s climate policy...’⁵

⁴ Section 15 7(1) 2015 Climate Act

⁵ <https://twitter.com/BOGallachoir/status/1578770825653600257>

- Energy security is a function of both likelihood and impact. While the analysis points to the risk of reliance on a single gas entry point (Moffat) and the effects of a disruption at that entry point, neither the analysis or the consultation paper properly addresses the actual likelihood of this piece of infrastructure being disrupted.
- We remain concerned that the energy security review does not properly take account of the ability of Moffat to meet annual gas demand in all scenarios, as Corrib declines, and that demand for GB gas imports through Moffat may be substantially increased where increasing amount of renewables are brought online in accordance with SECs. As recommended in the attached UCC MaREI analysis, *'It is important that the Government and the CRU analyses, before any decisions on new fossil fuel infrastructure, the potential for reduced gas usage in line with Sectoral Emissions Ceilings to result in lower demands for GB imports from the Moffat Entry Point in Scotland.'*

4. Do you have any additional mitigation options that you think should be considered?

- We recommend that the Government explore and implement measures to ensure that citizens are shielded from the extraordinary electricity price increases, particularly increased supports for insulation, solar PV and other energy efficiency measures. Friends of the Earth recommends that Government urgently prioritises increased supports and incentives to insulate 100,000 homes in 2023 including increasing the individual grants available for low-cost, low-hassle improvements, such as cavity wall and attic insulation, from 80% to 100% for those at risk or suffering from fuel poverty. The focus must be on reaching those most at risk of energy poverty and those who rely on coal and turf. A proactive approach is necessary i.e. sitting down with organisations working directly with vulnerable households, such as SVdP and Age Action, in order to plan a coordinated outreach campaign offering wrap-around supports for retrofitting rather than waiting for individuals to apply to SEAI for a grant.
- We need to ensure that homes and businesses do not continue to connect to the gas network and do not continue to install fossil fuel heating systems. The SEAI has already outlined that an unprecedented level of additional policy effort beyond the current Climate Action Plan is needed and recommended the phase out of fossil fuel heating systems must speed up immediately. If the emissions cuts from heat energy are to stay within the proposed carbon budget limits, then the move from fossil fuel will need to begin before 2025. If heat-using sectors are to carry a larger share of the decarbonisation target beyond a pro rata share, then fossil fuel phase-out must speed up even more.⁶
- The IEA has recommended in their recent net zero analysis that Government's expedite the replacement of gas boilers with heat pumps, accelerate energy efficiency improvements in buildings and industry and a temporary thermostat reduction of 1 °C by consumers given the significant benefits this would bring in terms of reduction in gas demand.⁷
- Installing fossil fuel boilers into the homes of low-income families risks locking them into fossil fuel heating for many years, leaving them vulnerable to global shocks like

⁶ <https://www.seai.ie/publications/National-Heat-Study-Summary-Report.pdf>

⁷ IEA, Net Zero by 2050 A Roadmap for the Global Energy Sector

the current energy crisis. The SEAI has also noted ‘a timeline and plan for fossil-fuel phase-out must urgently be put in place if we are to reach net zero by 2050’. In order to prevent fossil fuel lock-in and prioritise rollout of deep retrofits, a regulatory framework for fossil fuel phase-out must be developed alongside increased access to energy efficiency measures and alternative zero-carbon heating options. Friends of the Earth recommends the following measures and calls for this process to be supported by policy and legislative change.⁸

- A ban on fossil fuel boilers in new buildings in 2023 (in line with 2019 and 2021 Climate Action Plan commitments).
 - A ban on further expansion of the gas distribution network from 2023 through legislation.
 - A ban on sale of new fossil gas boilers for existing buildings by 2028.
 - Phasing out fossil fuel boilers in existing buildings, prioritising residential homes, by 2033.
- Such measures have already been progressed in other EU Member States including Austria and the Netherlands. See expert analysis of Member State measures in this [report by the Oeko Institute](#). Austria has already banned the sale of oil boilers entirely, and is introducing a ban on the sale and repair of gas boilers from 2023. A report from a coalition of European NGOs has also shown that an EU-wide oil & gas boiler ban could result in Ireland reaching 90% of our 2030 renewable energy targets for heating & cooling.⁹
 - We recommend that Government prioritise the rollout of solar PV on the rooftop of 1 million homes by 2030 and on the rooftop of every school by 2025. UCC MaREI research indicates that more than 1 million homes in Ireland have roof space and orientation suitable for 10 solar panels . This action would produce 25% of all residential electricity demand and would contribute to a culture change around the energy transition where citizens are at the heart of climate action.¹⁰
 - Climate action and the need to decarbonise the energy system is an opportunity to democratise the energy system, and to improve energy security for by giving communities and householders the chance to generate, own and benefit from their own energy. In doing so, special attention needs to be given to support vulnerable and marginalised households and communities to participate in the energy transition. New financing models and direct grants should be prioritised to support those in energy poverty to participate.
 - We recommend that ambitious targets are set for 2025 and 2030 to encourage widespread microgeneration uptake with a focus on community, farm, business and public buildings in the first instance, and facilitating collective ownership of installations where possible. We also recommend that supports for microgeneration, retrofitting and community energy be a core element of expansion of the electricity transmission and distribution network.
 - It is recommended that the government develop a community energy strategy with interested stakeholders to ensure that the energy transition is a shared societal project, and to support the ramping up of development and ambition far beyond the

⁸ See: https://www.oeko.de/fileadmin/oekodoc/Phase-out_fossil_heating.pdf

⁹ See: <https://www.coolproducts.eu/wp-content/uploads/2022/07/Coolproducts-gas-boiler-ban-2022-11-July-22.pdf>

¹⁰ Siddharth, J., Deane, P. (2022) Quantifying the potential for rooftop solar photovoltaic in Ireland. Available at: <https://www.marei.ie/wp-content/uploads/2022/07/Quantifying-the-Potential-for-Rooftop-Solar-Photovoltaic-in-Ireland.pdf>

500MW of community energy by 2030 as committed to in the Climate Action Plan 2021.

- More financial and technical support for community energy is also needed to build support for the energy transition and to contribute to a Just Transition. In RESS 2, just 10 communities are being supported to produce their own power.¹¹ Urgent action is needed to connect local development to the energy transition. In other countries, community and locally owned power is a fundamental part of the energy transition. In Scotland, over 850MW of community and locally owned renewable energy capacity has been rolled out over ~25k individual projects.¹² To date Ireland's potential has been held back by regulatory issues and insufficient supports and incentives. The reserved capacity available under the renewables support scheme should be increased for community energy projects. Access to the grid is also a considerable challenge and the approval/consenting process needs to be sped up to support development.

5. Which gas supply mitigation options, if any, should be considered for implementation?

- The Government must clearly reject gas supply mitigations options, in particular LNG, given that they would have a negative effect on emissions and the environment, particularly any form of carbon lock-in due to long-term fossil gas infrastructure. We are calling on Government to make the current moratorium on LNG and fracked gas imports permanent through legislation. We support the conclusions in the CEPA technical analysis in relation to the finding that the following measures should not be shortlisted:
 - A commercially-operated or state-owned LNG import terminal on land, such as Shannon LNG, as it would “Likely result in the importation of fracked gas to Ireland...embedded emissions in LNG can exceed that of natural gas...no guarantee that stored gas volumes would be sufficient to cover a security of supply shock...”. (A commercially-operated floating LNG terminal is also ruled out for the same reasons.
 - Additional gas reserves from existing exploration licences, such as from Providence or Corrib, as “Additional domestic production of natural gas could lock Ireland into a high-gas energy market...Unknown volume of any potential additional natural gas discoveries.”
- We reject the shortlisted option of state-backed FSRU and also the reference to a ‘mandated level of strategic storage held at all times so that in the event of a supply shock’ for the same reasons as provided in the CEPA technical analysis for not shortlisting commercial LNG: these measures would likely result in the importation of fracked gas, would have high emissions and may not guarantee volumes sufficient to cover a security of supply shock. A state-owned LNG terminal would still have to import LNG from the private market and poses all the same environmental, health, economic and security risks as a commercial terminal - not to mention the issues caused to communities where the gas is sourced.

¹¹Renewable energy support scheme 2: RESS 2 final auction results. June 2022. Available at: [https://www.eirgridgroup.com/site-files/library/EirGrid/RESS-2-Final-Auction-Results-\(R2FAR\).pdf](https://www.eirgridgroup.com/site-files/library/EirGrid/RESS-2-Final-Auction-Results-(R2FAR).pdf)

¹² Community and Locally Owned Energy. Available at: <https://energysavingtrust.org.uk/wp-content/uploads/2021/03/Community-and-locally-owned-renewable-energy-in-Scotland-2020-report.pdf>

- Friends of the Earth does not consider that Ireland should risk reliance on LNG given our climate obligations, given the risk of carbon leakage, given social and environmental impacts particularly of fracked gas, as well as human rights implications. We note in particular Section 6.4(8)(j) of the 2021 Climate Act which notes that “For the purposes of performing their respective functions under this section [the preparation of climate action plans and a national long term climate action strategy], 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.”
- As Minister Ryan has already noted, an LNG terminal would take years to be operational and securing LNG shipments in Europe during a gas market crunch is not guaranteed.¹³ Minister Ryan has been clear that he does not think LNG will be necessary for Ireland’s energy security¹⁴ and the Tánaiste has underlined that the right investment in north Kerry is in renewables and green hydrogen, not LNG.¹⁷¹⁵
- Tara Connolly, Senior Gas Campaigner at Global Witness has raised the following risks regarding LNG development¹⁶:
 - ‘the capital costs alone for the Shannon LNG terminal as announced by the developer would be €650 million¹⁷. This is likely to be an underestimate now, given the bottlenecks in global supply chains necessary to build LNG terminals.’
 - LNG terminals also have significant operational costs: ‘the Croatian government supported the construction of a LNG terminal off the coast of the Croatian island of Krk, which started operating in 2021. For this terminal with the capacity to import 2.6 billion cubic meters per year, the investment cost was €233.6 million.’
 - ‘In the Irish context, the function of an LNG terminal would be as a ‘last resort’ in the event of disruption of supplies from the UK. This means the utilisation rate of such a facility could be anticipated to be very low. Added to this, Ireland’s fossil gas demand will fall in the coming years as Ireland implements its climate action plan and implements measures to cut fossil gas consumption, for example through the recently announced building renovation scheme. Given the useful lifespan of an LNG terminal is 30 to 40 years, it is feasible that Irish gas customers (or taxpayers) could still be paying for the LNG terminal in 2062.’

¹³ See

www.oireachtas.ie/en/debates/debate/joint_committee_on_environment_and_climate_action/2021-11-16/speech/13/ . Minister Ryan “Even if we made a decision tomorrow on LNG and Shannon it would be a five- to ten-year delivery for anything and it would not address the immediate issue.”
www.oireachtas.ie/en/debates/debate/select_committee_on_environment_and_climate_action/2022-03-08/3/

¹⁴ See

www.oireachtas.ie/en/debates/debate/joint_committee_on_environment_and_climate_action/2021-11-16/speech/13/

¹⁵ <https://www.oireachtas.ie/en/debates/debate/dail/2022-02-24/speech/203/>

¹⁶ See

https://data.oireachtas.ie/ie/oireachtas/committee/dail/33/joint_committee_on_environment_and_climate_action/submissions/2022/2022-03-29_opening-statement-tara-connolly-senior-gas-campaigner-global-witness_en.pdf

¹⁷ <https://www.irishtimes.com/business/energy-and-resources/new-plans-to-be-submitted-for-650m-shannon-gas-terminal-1.4600625>

- ‘Another cost consideration must be the price of the gas itself. At a global level, Ireland is a small gas market, representing just over 1% of EU-27 gas consumption in 2020¹⁸. .. Moreover, most LNG contracts today are for the duration of 20 years and either linked to volatile spot prices or set at a higher price than today's spot market. All of this would lock Ireland into high gas and consequently, energy prices.
- ‘This set of factors raises serious questions as to the financial impact not only of the initial investment but also the cost of the ongoing operation of an Irish LNG terminal on the Irish exchequer, Irish taxpayers and Irish gas customers.’
- Further expansions in fossil gas pipelines and LNG infrastructure would deepen Ireland’s import dependency and only serve to increase our exposure to geopolitical disruptions and increasing gas prices, while exacerbating the climate crisis. LNG supplies are periodic, are dependent on commercial decisions and market signals to prospective operators, and involve major competition with Asian markets which has previously resulted in less volumes being available in Europe.¹⁹
- The Climate Change Advisory Council briefing has also highlighted that “issues with respect to the embedded greenhouse gas emissions associated with the production, compression, distribution and storage of natural gas sourced from a more diverse range of regions and production techniques (e.g. fracking) would need to be addressed.”²⁰ This analysis also notes that there are “risks to achieving Ireland’s emissions reductions 2030 targets and 2050 objectives if large reserves of oil and gas are brought ashore. In addition, there are risks to the economy of stranded assets and lock-in to fossil fuel based and emissions intensive energy systems.”
- Onshore slow liquefaction storage facility, we note the CEPA comment that ‘GNI has also indicated that the storage tanks could be located close to port facilities. Subject to developing the necessary infrastructure, this location could allow LNG cargos to bring in new LNG supplies to refill LNG stocks in storage. Under this type of arrangement, the gas stocks in store at the time of a shock could serve to mitigate the initial impacts while Ireland seeks to attract LNG cargoes which inject into the storage facility.’ It is very important that GNI’s proposal does not effectively amount to LNG by the back-door. It is not made clear that such a facility would also need to operate purely as a back-up facility.

We support various risks regarding FSRUs in CEPA’s technical analysis:

- “The availability of FSRUs and their commercial terms will however depend on global supply and demand. By the end of 2020, there were a total of only 37 FSRUs in operation globally. Getting access to a unit may become increasingly challenging given global demand following Russia’s invasion of Ukraine in March 2022. At the time of

¹⁸

https://ec.europa.eu/eurostat/databrowser/view/NRG_CB_GAS__custom_2364260/default/table?lang=en

¹⁹ “the availability of spot market LNG supplies is related to patterns of supply and demand on the global LNG market, and the price spreads between Europe and the Asian market, where the latter has traditionally commanded a price premium and has therefore attracted LNG supplies away from Europe in periods of market tightness.” www.oxfordenergy.org/wpcms/wpcontent/uploads/2018/03/UK-Dependence-onImported-Hydrocarbons-Insight-32.pdf The Oxford Institute for Energy Studies, UK Dependence on Imported Hydrocarbons: How Important is Russia? March 2018

²⁰ Briefing note on Irish Offshore Exploration for Hydrocarbons Prepared by the Secretariat for the Climate Change Advisory Council, 2019

www.climatecouncil.ie/media/climatechangeadvisorycouncil/Briefing%20note%20on%20Irish%20Offshore%20Exploration%20for%20Hydrocarbons.pdf

writing this report Germany, Italy, the Netherlands, Finland, and Estonia have all announced plans to procure or have already procured FSRUs in the wake of increased energy uncertainty in Europe. Ireland's access to an FSRU may therefore depend on its ability to compete with global demand for a limited number of available units. Increased global competition for available units may also limit Ireland's ability to dictate the commercial terms under which a FSRU is available – for example, units may only be available under a more long-term lease structure.

- “...questions may be raised over the cost of developing a strategic facility which is expected to be idle for most of the time and not fully consistent with the Government's stated environmental targets. “
- “Another implementation challenge is associated with the feasibility of using an LNG FSRU as a strategic store which would only be utilised during periods in which there is a material risk of demand disruptions. Under this operational framework, the LNG would need to be stored for extended periods of time in the FSRU in a pressurised and cooled state. We have not identified any FSRUs which are currently used for this purpose. As such, the technical feasibility of the FSRU to hold LNG for extended periods of time in a pressurised state would need to be determined. The same requirement would apply to any reserves that would need to be held under regulation if introduced for a commercial FSRU development. “

We welcome the clear conclusion in the technical analysis that ‘Lifecycle emissions intensity of LNG can exceed that of pipeline natural gas due to the liquefaction, tanker transport, and re-gasification steps required to export LNG to global markets.’ We also wish to highlight the following points:

- LNG imports into GB are almost 170% greater than the emissions intensity of gas extracted from the UK continental shelf (UKCS), and almost 230% higher than the emissions intensity of gas imported from Norway.
- Some proportion of the gas imported from the LNG terminal could be produced by the process of hydraulic fracturing (“fracking”). This could occur due to the increasing prevalence of fracked gas within the global LNG supply chain. For example, the US Energy Information Administration predicts that the vast majority of natural gas produced in the USA will be developed from shale gas by 2030.¹ The USA has become the largest global supplier of LNG.
- In addition, there may be several localised environmental impacts associated with the development of an LNG FSRU facility. For example, the LNG FSRU typically uses sea water to heat its LNG reserves back into a gaseous state. When operating, this process can result in impacts on local ecosystems through the injection of seawater being returned which is cooler than the surrounding ambient temperatures. Similarly, FSRUs are typically required to combat the biofouling of its internal piping systems by using chemical disinfectants. This process can lead to residual chloride content being injected into the surrounding water system.
- The key risk associated with the introduction of LNG FSRU is that new shipments of LNG may need to be obtained at short notice to mitigate all unserved demand during an extended disruption to pipeline gas imports from GB. For example, in the 2030 scenario the LNG FSRU is only able to keep enough LNG in store to meet protected and I&C demand over a 30-day period. When demand from the power sector is also considered, the FSRU would run out of supplies after nine days. The ability of the LNG FSRU to mitigate unserved demand during the import disruption will therefore depend on the following factors.
- The ability of LNG shippers to flexibly alter their destination mid-voyage has been demonstrated throughout 2021. Nonetheless, obtaining LNG shipments at short notice could prove challenging and may be outside the control policymakers in Ireland.
- Fracking is a method of oil and natural gas extraction which involves injecting fluid into subterranean rock formations at high pressure to produce a fracture network that

allows crude oil and natural gas inside dense rocks to be extracted at the surface. The approach can lead to large detrimental environmental impacts in terms of water consumption, water contamination, seismic inducement, and air pollution.

- *Another potential unintended consequence may result from ongoing political pressure to draw on stores of gas outside of a physical shock event. For example, there may be political pressure to use LNG reserves to mitigate the impact of high gas prices on residential and I&C consumers or to prevent gas-fired power stations from using secondary fuels.*
- We are concerned by certain negative or incomplete framings regarding gas supply arrangements. For example “it should be noted that the UK is no longer required to provide solidarity to Ireland during natural gas supply disruptions as set out in article 13 of Regulation 2017/1938”. GNI has itself underlined that the fact that the supply of gas to Northern Ireland and the Isle of Man is reliant on GNI infrastructure serves to underpin continued cooperation between Ireland and the UK in relation to gas supplies. GNI have stated “within the framework of existing intergovernmental agreements in place since 1993 between Ireland and the UK concerning Ireland’s two gas interconnectors, GNI and National Grid have agreed a voluntary protocol for dealing with gas emergencies affecting GB and Ireland. We see no reason for these arrangements to change post Brexit.”²¹
- We also wish to question why the section on ‘international developments’ addresses in detail gas supply investment in other EU Member States, yet fails to provide any information on decisions by such Member States on renewables, energy efficiency and energy demand responses in response to energy security concerns. The implication appears to be a limited or misguided interpretation of energy security risks and responses as amounting *only* to fossil fuel supply.

6. Which electricity supply mitigation options, if any, should be considered for implementation?

- We support Government efforts to expedite necessary policy actions to ensure that the 80% renewable electricity target by 2030 is achieved. It is important that 80% is not considered a ceiling; as renewable penetration and grid development progresses, necessary analysis should be carried out (by DECC, CRU and EirGrid) to provide for increases in this target, e.g. 90% by 2030 and 100% by 2035.²²
- The primary goal should be to make the electricity system the backbone of the entire energy system. Studies have shown that this is both possible and cost-optimal without reliance on carbon capture and storage.²³

²¹ Gas Networks Ireland’s Statement to the Seanad Special Select Committee on the UK’s Withdrawal from the European Union June 1st 2017. data.oireachtas.ie/ie/oireachtas/committee/dail/32/seanad_special_committee_on_the_withdrawal_of_the_united_kingdom_from_the_european_union/submissions/2017/2017-06-01_openingstatement-gas-network-ireland_en.pdf

²² See WEI-Baringa study - <https://windenergyireland.com/images/files/20210629-baringa-endgame-final-version.pdf>

²³ Bogdanov, D., Ram, M., Aghahosseini, A., Gulagi, A., Oyewo, A.S., Child, M., Caldera, U., Sadovskaia, K., Farfan, J., Barbosa, L.D.S.N.S. and Fasihi, M., 2021. Low-cost renewable electricity as the key driver of the global energy transition towards sustainability. *Energy*, 227, p.120467.

- The rollout of large-scale offshore wind and associated infrastructure must be seen as a shared societal project, rather than a developer-led project. The absence of public engagement, including public participation and public ownership, risks hindering necessary rollout of infrastructure for both the state and developers.
- The IEA has also recommended not only rapid deployment of new wind and solar projects but also increased efforts to diversify and decarbonise sources of power system flexibility given the problematic links between gas supply and electricity security at European level.
- In relation to the section on the Policy Statement on Security of Electricity Supply, the consultation paper does not highlight the fact that this Statement also notes that '*As more wind, solar, storage and interconnection is added to the system, conventional generation is expected to operate less... This conventional generation will spend much of its time in reserve for when needed...*'. The exclusion of such key elements of the policy risks the public perception that the Department has already taken a view on infrastructure investment/operation.
- A Baringa and TNEI report shows that *rapid delivery*²⁴ of renewables can reduce cumulative power sector emissions by 4 million tonnes of CO₂ (or 2 years worth of power sector emissions by 2030) as compared to *delayed delivery* of the same capacity. Both pathways would achieve the same installed capacity of renewables; however, focusing efforts on faster deployment means that much less CO₂ is emitted during the transition.

7. What measures should be considered on the demand side to support security of supply of electricity and gas?

- See section 3.2 of the attached UCC MaREI analysis re 'How Is Data Centre Demand Growth Driving The Need For New Natural Gas Capacity'
- See also section 2 regarding proposals on energy efficiency.
- The consultation largely sidesteps the fundamental contradiction and policy incoherence of facilitating significant increases in data centre electricity demand while at the same time focusing on the connection of additional fossil fuel supply infrastructure due to increasing gas demand.
- As underlined by Chairperson of the Commission for Regulation of Utilities, "data centre demand is growing faster than we can deliver electricity and gas networks, gas generation and renewable infrastructure".²⁵ This is the clearest example of an immediate known, definitive energy security risk yet it is not addressed in the consultation paper in any detail.
- The assumption that electricity demand due to data centres is allowed to continue to expand undermines the credibility of the analysis and the Government's commitment

²⁴ Rapid delivery requires the following: (a) each auction (extending to RESS 4 and ORESS 2) proceed according to the schedule set by DECC, (b) volume maximums set out in the schedule are assumed to be procured in the early auctions, (c) the procured capacity is delivered as quickly as possible, and (d) by the end of 2030 the following capacities have been delivered: 7GW onshore wind, 5GW offshore wind, and 3GW solar PV. See here:

<https://windenergyireland.com/images/files/bridging-the-gap-a4-report-final.pdf>

²⁵ <https://twitter.com/energyireland/status/1542066522570588160>

to both energy security and climate action. It is equally unacceptable, from both a moral and policy perspective, for data centres to continue to be approved and connected while households and smaller businesses are being asked to reduce their demand over the coming winter and beyond due to the gas crisis.

- As noted in section 3 electricity and gas demand projections put forward by EirGrid and GNI are not in accordance with climate targets. This further undermines the credibility and suitability of the analysis undertaken. As noted by Brian O Gallachoir, 'while the renewable electricity growth is necessary, it is insufficient to meet our emissions reductions targets, without a strong parallel focus on limiting electricity demand.'²⁶
- The Department is well-aware, even without independent technical analysis, that growth in data centres contributes significantly to electricity security risks, risks continued and long-term utilisation of gas-fired generation and risks undermining adherence with carbon budgets. We do not consider recent regulatory changes sufficient and we are therefore calling for moratorium on data centre connections until such pressures are transparently addressed.
- We note the statement in the consultation paper that 'The Decarbonisation section of this Government Statement highlights the undesirability of "Islanded" data centres that would be powered mainly by fossil fuels.' However, we are concerned that activities by GNI appear to be resulting in gas lock-in and increased gas demand at the very time such demand should be minimised. CEPA analysis highlights that '*GNI has told us that it has contracted with a significant number of I&C gas connections, primarily related to the development and construction of data centres. Our analysis captures the impact of data centres on the Irish energy system through an increase in electricity demand which, in turn, leads to an increase in gas demand for power generation. However, we understand that most new data centre gas connections contracted by GNI are related to so-called 'islanded' data centres that require a direct gas connection for on-site power generation, with limited or no connection to the electricity grid. These new connections may lead to an increase in I&C gas demand above the levels assumed in our analysis*'.
- The [MaREI centre](#) has noted a pause in the connection of new data centres as the most impactful single action the Government can take to reduce electricity demand. [Previous UCC MaREI analysis](#) has indicated that projected data centre development will directly undermine necessary climate action, potentially resulting in a 40% emissions reduction instead of the at least 60% reduction required if Ireland is to meet its overall 51% commitment. We are of the view that a moratorium remains necessary and the energy security review must go beyond what is set out in the Department of Enterprise's new Policy Statement on data centres in order to ensure renewables, storage and demand side management are prioritised ahead of development and use of new gas plant.
- There are also several weaknesses in the Department's new Policy Statement on data centres. This include that the principles in the Statement are only noted as preferences. We call on the Department to go beyond recommendations such that any such developments are obliged to support renewable generation and storage and reach net zero services. It is also concerning that while sectoral emissions ceilings are noted in the Statement, neither these targets nor the Climate Law itself are referenced as a key principle. We would underline that the Department of

²⁶ <https://twitter.com/BOGallachoir/status/1578770825653600257>

Enterprise has legal obligations related to climate action (see Section 2) and any seeming dismissal or deprioritisation raises not only legal concerns but also reputational damage for the Department.

- [Recent analysis produced by UCC](#) on behalf of the EU Greens/EFA group addresses data centre impacts on electricity supply and decarbonisation ambition in Ireland. It highlights that the focus for data centres should be on emissions reduction and net-zero targets, not simply renewable energy commitments. It also notes that onsite generation from fossil fuels at data centres simply shifts the location of where emissions are produced rather than reducing them. It may also increase emissions as smaller onsite generators are less efficient than larger, grid-scale fossil fuel plants. Its recommendations include:
 - Integrate decarbonisation plans into the data centre planning application process, and make critical investments in our energy grid to support the move to a 100% renewable power system over time.
 - A dedicated forum on Data Centres within the National Dialogue for Climate Action.
 - Disclosure of annual data centre emissions and projections of future emissions.
 - Preventing speculative Data Centre applications which can inflate expected future energy use by increasing the initial grid connection fees.
- We recommend that the Government makes demand reduction and storage a core component of Irish policy in order to prevent further reliance on gas-fired generation. This can be achieved by introducing new incentives and obligations to ensure storage is in place for any new large energy users and expanding supports for demand-side management.
- Energy storage is also a key component of decarbonising our energy system and delivering reduced CO₂ emissions, greater energy security, and flexibility to manage the grid with high renewable capacity. A comprehensive regulatory and commercial framework is needed to support the development of energy storage at scale, and the Government should prioritise the development of an energy storage strategy for Ireland. A recent report by Baringa shows that at the very least Ireland will need 1700MW of energy storage to meet the 2030 power sector target.²⁷ Current installed capacity is 500MW (as of May 2022), and efforts need to be focused on securing sufficient storage capacity to support our renewable ambitions.
- There is a pressing need to prioritise operational capacity and incentivise demand response measures such as those that can be taken by large electricity users to contribute to decarbonising the electricity system, and to help relieve network congestion. It is particularly important that this measure is developed and prioritised in order to prevent a dependence on new gas-fired generation which runs the risk of gas lock-in. We note the recommendations of the Demand Response Association of Ireland submission²⁸ to incentivise demand participation via effective network tariff design; introduce a form of carbon credit for Large Energy Users, homes and communities that provide demand response and flexibility; and prioritise grid access for committed demand response participants to reward the provision of energy system services.

²⁷ Baringa. 70 by 30: A 70% renewable vision for Ireland in 2030. Available at:

https://windenergyireland.com/images/Article_files/Final_Baringa_70by30_Report_web.pdf

²⁸ Demand Response Association of Ireland. See: <http://files.basekit.com/c9/c2/c9c2b0e5-0793-49e5-976b-ee6d49a923ae.pdf>

8. Do you have any views on how the mitigation options should be implemented?

9. Do you support the policy measures proposed in section 8 of the consultation paper?

- See responses to question 5.
- As noted above, the Government must clearly reject any infrastructure which would have a negative effect on emissions and the environment, particularly any form of carbon lock-in due to long-term fossil gas infrastructure. We are calling on Government to make the current moratorium on LNG and fracked gas imports permanent through legislation.
- We reject the shortlisted option of state-backed FSRU and also the reference to a 'mandated level of strategic storage held at all times so that in the event of a supply shock' for the same reasons as provided in the CEPA technical analysis for not shortlisting commercial LNG: these measures would likely result in the importation of fracked gas, would have high emissions and may not guarantee volumes sufficient to cover a security of supply shock.
- The Government should take steps to end current licences for fossil fuel exploration in light of the independent technical analysis that additional gas reserves from existing exploration licences, such as from Providence or Corrib should not be supported as "[a]dditional domestic production of natural gas could lock Ireland into a high-gas energy market...Unknown volume of any potential additional natural gas discoveries."

10. What further tools and measures do you think would contribute the most to Ireland's energy security of supply?

- The Government must focus on energy efficiency solutions as they will permanently enhance our national security, reduce emissions and protect households from rising energy costs. Such measures can make a significant impact and complement the legislative ban on new exploration licences and the moratorium on LNG and fracked gas imports.
- Analysis has shown that building renovation across the EU can cut gas imports by the equivalent of 25 LNG carriers every year.²⁹ Clean energy can reduce EU's Russian gas imports by 2/3 by 2025 and each unit of gas avoided immediately directly translates into cost savings for consumers³⁰ and bring significant health benefits³¹.
- We are concerned by the seeming absence of focus on energy security at household and community level, as well as the co-benefits of energy efficiency, district heat, community energy and solar PV. Friends of the Earth has undertaken research on barriers to retrofits which is available [here](#). We recommend:

²⁹ Cambridge Econometrics, The Renovation Wave can cut EU gas imports and reduce consumer bills. Oct 2021 www.camecon.com/what/our-work/the-renovation-wave-can-cut-eu-gas-imports-and-reduce-consumer-bills/

³⁰ Regulatory Assistance Project (RAP), Ember, E3G & Bellona
Europa. network.bellona.org/content/uploads/sites/3/2022/03/EU-can-stop-Russian-gas-imports-by2025-Final.pdf

³¹ <https://friendsoftheearth.eu/wp-content/uploads/2021/05/Towards-a-healthy-renovated-Europe.pdf>

- Deploy Local Community Energy Advisors throughout every local authority to increase awareness and offer guidance on home energy improvements as well as community organised support programmes to engage and inform hard to reach energy users who would most benefit from energy efficiency upgrades.
 - The Warmer Homes scheme (free energy upgrades) should be expanded to include properties in the private rented sector if the tenant is receiving the Housing Assistance Payment. However, eligibility should be contingent on the landlord providing a long-term lease to the tenant.
 - Increase the individual grants available for low-cost, low-hassle improvements, such as cavity wall and attic insulation, from 80% to 100% for those at risk or suffering from fuel poverty.
 - Explore a sliding scale of grants and low-cost loans for Home Energy Upgrades based on an income assessment such that lower income households could avail of close to full funding for deep retrofit.
 - In its 2021 Technical Report on Carbon Budgets, the Climate Advisory Council found that solid fuel use for primary home heating is predominantly associated with poorer households, rural households and older occupants.³² A dedicated retrofitting programme for households solely relying on solid fuel heating systems should be established and funded.
 - Traveller families in mobile homes are particularly at-risk of energy poverty, with 77% living in energy poverty before the current energy crisis. SEAI support should extend to providing solar PV on year-round occupied mobile homes.
 - Extended ban on disconnections from energy suppliers for vulnerable households.
 - Engage with households at risk of disconnections and fast tracking targeted interventions such as retrofitting or solar energy installation.
- Integrated, system-wide and future-proofed energy and heat planning is necessary for the coordinated implementation of national climate policy at regional and local level. It will also ensure that bottlenecks and synergies are identified. A coordinated approach to heat planning is urgently needed where distinctions are made between homes/communities/regions based on the most suitable type of heating, with certain homes and communities being prioritised for heat pumps, and others for district heating. The [revision of the EU's Energy Efficiency Directive](#) provides new provisions regarding proposed heating and cooling assessment and planning. This includes that Member States must prepare local heating and cooling plans for areas with populations higher than 50,000. Urban centres will therefore have greater input and a clear stake in how heating in their localities should be planned and delivered. It is important that gas distribution plans do not preclude or prevent such local planning.
 - Currently, some homes that may be eligible for district heating in the coming years are being encouraged to invest in heat pumps and are receiving grants for doing so. Phase-out regulations for gas should be connected to heat planning, as the decarbonisation of space heating will require at least a partial reduction of the gas distribution grid. This will require a regulatory framework for decommissioning of the gas grid.
 - We note that there is not a specific question in this consultation concerning green hydrogen development. Friends of the Earth recently made a detailed submission in response to the Department's consultation on this issue. Below we have highlighted

³² Climate Change Advisory Council (2021). Carbon Budgets Technical Report. Available at: <https://www.climatecouncil.ie/media/climatechangeadvisorycouncil/Technical%20report%20on%20carbon%20budgets%2025.10.2021.pdf>

some of our main recommendations from this submission and would welcome the opportunity to engage further with the Department at a later stage on the development of a new hydrogen strategy.

Recommendations:

- Ensure that green hydrogen is not used as a means of propping up or furthering expansion of gas network assets and supporting continued gas usage.
- Guarantee a complete separation between the ownership, control, and operation of fossil gas and hydrogen assets.
- Ensure that green hydrogen is prioritised in those sectors where no alternative exists.
- Prioritise the development of offshore wind energy to meet green hydrogen electricity consumption.
- Guarantee that regulatory incentives are only granted to green hydrogen produced from 100% additional renewable electricity.
- Exclude hydrogen blending to enable a targeted use of hydrogen.
- Ensure that innovation funding is not incorrectly used or intended to extend the life of assets which would otherwise be phased out as part of eventual system decarbonisation.
- Green hydrogen development should not result in the deprioritisation of measures with lower costs, higher efficiency and greater mitigation potential.
- Hydrogen production should not eat into existing renewable electricity generation. Hydrogen deployment which is not based on additional renewable generation may significantly increase electricity demand and energy costs.
