



**MAG  
MELL**

ON A MISSION  
TO TRANSITION

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Mag Mell Energy Ireland Ltd. submission to the Department of Environment, Climate and Communications consultation on the Review of the Security of Energy Supply of Ireland's Electricity and Natural Gas Systems

**OCTOBER 2022**

## 01. INTRODUCTION

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**Against the backdrop of major geopolitical challenges, addressing Ireland's immediate and near-term security of energy supply has never been more critical.**

Mag Mell Energy Ireland Ltd. welcomes the opportunity to provide comments on this strategically important matter.

In response to the Department's consultation, our comments will focus primarily on consultation questions 4, 5, 8 and 10:

- Do you have any additional mitigation options that you think should be considered?
- Which gas supply mitigation options, if any, should be considered for implementation?
- Do you have any views on how the mitigation options should be implemented?
- What further tools and measures do you think would contribute the most to Ireland's energy security of supply?

## 02. IMPORTANCE OF SECURING INDEPENDENT LNG SOURCES FOR IRELAND'S ENERGY SECURITY

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**Depleting reserves from the Corrib gas field presently supply about 25% of Ireland's gas with most of the balance coming from the UK via the Scottish interconnector.**

Currently, there is very little de-risked potential to develop additional gas resources within the Corrib gas field. Notwithstanding recent infrastructure disruption, gas supply into the UK is considered secure through multiple sources including the North Sea, Norway, LNG import capacity, storage withdrawals and interconnectors to Belgium and the Netherlands.

However, it is still quite possible that the UK may face shortages of gas this winter and in future winters when peak day gas demand reaches critical levels, outstripping supply. Overall gas consumption is set to fall in Ireland, however peak day gas demand is forecast to increase significantly. For this reason, security and diversity of gas supply at these times will be critical for Ireland to stabilise price volatility.

This does not negate the fact that Ireland is increasing its reliance each year on a single source of natural gas as the Corrib gas field winds down, posing real risk to energy security should the UK reduce or stop supply through the interconnector. Sole reliance on UK supply would inevitably leave Ireland more exposed to a shortage of gas supplies compared to our European peers. If the interconnectors were to be sabotaged or damaged by natural causes, such as earthquakes, then Ireland would cease to have security of gas supply as it has no gas storage facilities accessible other than through the interconnectors.

The above risk is emphasised by Eurostat figures which show that Ireland's reliance on gas imports continues to grow, jumping from 33% in 2017 to 71% in 2021. This is also against the backdrop of Gas Networks Ireland reporting that on average gas currently supports up to 66% of Ireland's electricity supply. Furthermore, the Commission for Regulation of Utilities (CRU) has cited that since Brexit Ireland is no longer compliant with European Union energy security requirements and, LNG imports should be considered as a way of diversifying Irish energy supplies.

A Long-Term Resilience Study of the energy market conducted by Gas Networks Ireland and Eirgrid in 2018 concluded that the most economically advantageous option for Ireland to enhance its security of supply is a floating LNG terminal, along with bio-methane integration.

They cited that these measures would seriously improve Ireland's security of supply - a position taken prior to the current challenges because of the conflict in Ukraine.

It's imperative that Ireland now prioritises a focus on diversification of its energy supply in line with the decline in production at the indigenous Corrib gas field. This will be key to ensuring there is secure energy backup to support the overall objective of transitioning to a fully renewable grid. LNG offers a clear long-term energy security and diversity option, mitigating short and long peak demand shocks and meeting seasonal needs. It is an option which is endorsed by both the European Union, individual member states and now Ireland through the Review of the Security of Energy Supply.

The lower carbon, flexible and reliable energy backup LNG can provide will be key to supporting the development of intermittent renewable electricity and ensuring long-term secure energy supply for Ireland. LNG must now be used as a viable solution - as recommended in the Review of Security of Energy Supply - for keeping the lights on and our essential services powered when the sun doesn't shine, and the wind isn't blowing. This is far more preferable from the perspective of mitigating against climate change than burning more coal, which is Ireland's current medium-term solution to security of energy supply.

### **03. UTILISING FSRUs AND THE EXISTING KINSALE HEAD GAS FIELD PIPELINE INFRASTRUCTURE**

#### **OVERVIEW**

**Mag Mell Energy Ireland Ltd. has created a bespoke solution for a floating LNG storage and regasification project in the Celtic Sea close to the now depleted Kinsale Head Gas Field off the south coast of Ireland.**

The project is also designed to be capable of including, if required, strategic gas storage capacity for regasification of LNG by making use of an existing offshore gas reservoir at Ram Head, 40km to the east of the proposed Mag Mell project. Significantly, this gas reservoir contains undeveloped gas which is the "cushion gas" that forms the most expensive component of the development of gas storage facilities. This is Ireland's only near-term viable gas storage option. Injection of gas occurs in summer, when gas prices are lower, and withdrawal in winter, when gas prices are higher.

The Mag Mell FSRU LNG project utilises existing tried and tested technology which is subject to the most rigorous health and safety standards. Information on these standards is widely available in the public domain.

The project is aimed at providing enhanced security of energy supply for Ireland's energy network with less environmental impact than other proposed land-based energy infrastructure while supporting the transition to a green energy grid. The value of the project to Ireland cannot be understated - it has potential to supply 43% of Ireland's gas demand based on accurate historical and forecast severe peak day winter-demand figures and forecasts.

The proposed FSRUs would be located beyond the horizon, not visible from land. These storage facilities can in due course be converted for use as a green hydrogen reservoir and for CO<sub>2</sub> sequestration if required.

The project enhances and supports the timely roll out of green renewable energy by providing safe, secure, and affordable energy during periods of high volatility in electricity prices caused

by market economics related to supply and demand imbalances at critical peak times. The efficient operation of the electricity grid is maintained on those days when renewable energy is not contributing significantly to the electricity grid.

Importantly, Mag Mell offers the means whereby expensive strategic infrastructure is saved from premature abandonment before the technical solutions required for developing, transporting, and storing green hydrogen and CO<sub>2</sub> sequestration are fully tested and rolled out. Given that the Review of Security of Energy Supply now endorses the use of LNG and FSRUs – and market dynamics rule out a wholly State-owned facility – we strongly urge that the Department considers the Mag Mell option for rapid implementation.

It should be noted that if the project was adopted by the Department when first presented in 2020, Ireland would today have greater security of energy supply and would not be as exposed to potential electricity blackouts during the coming and future winters as it currently is. Security of energy supply was recognised by many as an important strategic issue long before the Ukraine-Russia war.

## **THE PROPOSED MAG MELL PROJECT IN DETAIL**

**Designed to provide an energy security bridge while Ireland transitions to a fully green grid, the LNG FSRU will be located some 50km offshore in the vicinity of the existing and now decommissioned Kinsale Head Gas Field platforms. It is not intended to be a long-term new fixed fossil fuel infrastructure.**

The FSRUs will have the on-board capability to vaporise LNG and deliver natural gas through the existing subsea Kinsale Head Gas Field pipeline to the shore at Inch Terminal near Middleton, Co. Cork, a current entry point to the national grid operated by Gas Networks Ireland. All natural gas processing and heating occurs within the vessel and does not involve developing an onshore processing terminal. This means that the facility is much easier to decommission. It just sails away.

Regarding the age and viability of the Kinsale pipeline, there are numerous examples of active oil and gas pipelines of a similar age in the North Sea which are safely and efficiently providing energy security for the UK. The Mag Mell project developers would recommend that the Department publish all the available pipeline survey data for the Kinsale pipeline to enable a proper assessment to be made by those technically competent and seeking to re-purpose the pipeline. This is in the public interest and, supports transparency and Departmental accountability for the decommissioning decision-making process at a time of a national energy crisis that is severely impacting the public.

It is envisaged that the procured FSRU vessels will moor to a subsea buoy system anchored offshore. The buoy system will be used as both the mooring mechanism for the FSRUs and the conduit through which natural gas will be delivered to the subsea pipeline.

The design for the project is focused on ensuring minimal impact on the environment and maximum safety relative to other proposed onshore energy infrastructure projects. It will also reduce CO<sub>2</sub> emissions by replacing coal and potentially providing compressed natural gas as an alternative to oil for isolated rural communities not connected to the onshore gas grid.

As gas produces significantly less CO<sub>2</sub> emissions compared to oil and even less compared to coal, this is entirely consistent with the Government's climate action policies. There will be valuable cost-savings by using existing infrastructure. Clearly, the project matches strongly



with the recommendations of the Department's Review of the Security of Energy Supply whilst also being aligned with the Government's climate action strategy.

## **MAG MELL'S COMMITMENT TO NON-FRACKED LNG**

**In alignment with the Government's policy pledge not to allow the import of LNG produced from fracked shale gas, the Mag Mell project would source LNG from a transparent certified origin, where there is no reliance on fracked gas feedstock.**

It is not correct to make the assumption that all LNG comes from fracked gas. The issue of fracked gas was the instrument to impose a moratorium on constructing LNG import terminals. This was solely based on the Shannon LNG development concept and totally ignored the FSRU LNG development option using gas not sourced from the US.

There is considerable opposition to the onshore Shannon LNG terminal being proposed by US company New Fortress Energy for construction in Ballylongford, Co. Kerry. Much of the opposition to the Shannon LNG terminal is based on the anticipated importation of fracked LNG from the US.

Media, political, and NGO commentary around the proposed terminal has subsequently added to this general misconception that all LNG is produced using fracked feedstock. All LNG imported to the proposed Mag Mell offshore FSRU for injection into the Irish grid, would come from non-fracked LNG feedstock, likely to be sourced in the Middle East. This would mitigate against concerns raised regarding the use of fracked gas like those associated with the proposed onshore Shannon LNG terminal.

There is confusion emanating from the Department at present as to what their definition of fracked gas is. Recent Ministerial statements have implied that negotiations will take place to source gas from the USA and Algeria, contrary to the Government's own stated policy regarding banning the import of fracked gas. Furthermore, the Department seem unable to answer the question as to whether there is fracked gas coming through Ireland's interconnectors with the UK.

Europe has embraced FSRU LNG technology in the past six months, while Ireland has been left behind and further isolated from Europe in terms of addressing security of energy supply. Ireland has a clear responsibility at this time to assist Europe in diversifying its options for gas supply to replace the long-term reliance on Russian gas. Ireland needs to be a proactive member state and do its part, not simply rely on the generosity and goodwill of others.

In addition, there needs to be absolute transparency, given that the delay in establishing vital LNG infrastructure for Ireland was premised by a desire not to import fracked gas. If this is now contradicted or the logic found to be wanting, the Department and Minister may have potentially exposed the Irish Government to materially significant litigation for applying anti-competitive practices. This is against the backdrop of recent comments regarding the instructions by the Department to prevent some data centres from connecting to the Gas Networks Ireland gas grid, contrary to the provisions of the legally binding Gas Act.



## CURRENT STATUS OF THE KINSALE HEAD GAS PIPELINE AND INCH ONSHORE TERMINAL

**A core component to the successful delivery of the proposed Mag Mell offshore LNG FSRU project will be the retention and repurposing of the Kinsale Head gas pipeline and the Inch Onshore Terminal.**

The Kinsale Head Gas Field was operated by PSE Kinsale Energy Ltd., a subsidiary of PETRONAS, up to the cessation of production in July 2020, when all gas reserves were depleted.

As part of its decommissioning process following cessation of production, Kinsale Energy Ltd. intends to remove all equipment from the Inch Onshore Terminal. Plugging the exposed ends of the Kinsale Head gas pipeline with grout is actively being considered. This would ultimately make redundant a key piece of physical infrastructure which provides access into the national gas grid operated by Gas Networks Ireland.

Filling the onshore section of the pipeline with grout and the decommissioning of the associated Inch Onshore Terminal is a premature move. This would remove any re-use options for this infrastructure, including the proposed offshore Mag Mell LNG FSRU project, and strongly contradict the recommendations set out in the Review of the Security of Energy Supply.

Furthermore, in one of its initial consent applications for decommissioning to the Department, Kinsale Energy Ltd. stated that a leave in situ option, particularly regarding the main export pipeline and landfall, 'could facilitate the re-use of the pipeline infrastructure in the future'. This statement is in effect a clear acknowledgement by the current owner of the potential future importance of this infrastructure. The statement fundamentally recognises that the pipeline is fit for purpose, otherwise the statement could not have been made.

Over the last 14 years many parties have sought to utilise this important piece of national infrastructure without success. Lack of fit and proper engagement by the owners of the Kinsale pipeline in advance of the decommissioning process, as is facilitated under the Government's own 1992 and 2007 Offshore Licensing Terms, has led to an unnecessary weakening of Ireland's security of gas supply. Eliminating the option to repurpose the Kinsale pipeline would effectively sabotage a key component of Ireland's orderly energy transition.

Without doubt, the demand for a public inquiry into the handling by the Department of the whole Kinsale pipeline issue since 2008 would quickly gather momentum. The Mag Mell management has a significant contribution to make to any such inquiry based on documents dating back to 2007 and, in the interests of transparency and public accountability, would cooperate fully with any such inquiry if held.

With the Review of the Security of Energy Supply endorsing LNG and the use of FSRUs, Mag Mell strongly argues that the Department's decision to grant consent to decommission the Kinsale and Inch infrastructure be deferred with immediate effect. Leaving the pipeline and onshore terminal in a state of interim decommissioning, until such time as access to this infrastructure is established by Mag Mell, should not adversely affect the overall decommissioning cost or schedule as set out by Kinsale Energy Ltd. Industry best practice makes provision for the deferral of decommissioning if reuse is an option, and furthermore the concept of "interim decommissioning" is acknowledged and allowed for in international decommissioning guidance documents.

The current Licensing Terms for Offshore Oil and Gas Exploration, Development and Production 2007, empower the Minister for Environment, Climate and Communications to require the owner of facilities to enter discussions with third parties on the potential utilisation of those facilities. The Department should direct Kinsale Energy to enter into such discussions with interested parties wishing to re-use the infrastructure in order to comply with existing regulatory rules and procedures.

The Review of the Security of Energy Supply endorses the use of LNG and FSRUs. It is therefore essential that any infrastructure which presents an opportunity to address Ireland's energy supply needs, while supporting the journey to decarbonisation, is retained. The Mag Mell project sets out a clear vision for how this infrastructure can be repurposed to help address Ireland's back-up energy needs while supporting the transition to a fully green grid.

### **EMPHASISING MAG MELL'S SUSTAINABILITY CREDENTIALS & SUPPORT FOR GREEN HYDROGEN**

**There is strong recognition at European political and industry level of the key role gas must play as a medium-term bridging fuel in the transition to renewable energy, supporting the immediate ambition to ditch high-carbon fossil fuels such as coal and oil.**

While the overarching priority is to ramp up the roll-out of renewable energy such as wind, solar, hydro and hydrogen as part of the journey to carbon neutrality by 2050, there must be acceptance that this cannot be achieved overnight.

Most significantly, the proposed infrastructure to import LNG via an offshore FSRU as set out by Mag Mell, can be repurposed in due course to facilitate the expected volumes of decarbonised and renewable gases such as green hydrogen as they come on stream. Any storage facilities associated with the project can also be converted for use as green hydrogen reservoirs and CO<sub>2</sub> sequestration. In addition, large volumes of green hydrogen will need to be stored if produced from wind power. Offshore geological storage is far more preferable compared to fixed visible onshore storage tanks that will require a drawn-out planning approval process and will be environmentally more intrusive.

Given the Mag Mell project intends to make use of existing infrastructure with minimal new fixed infrastructure required, this also mitigates against concerns that Ireland is locking itself into long-term reliance on fossil fuels undermining climate action efforts. These are concerns understandably linked to other LNG proposals which require substantial investment in onshore infrastructure. The proposed FSRU would act just like a land-based LNG terminal but without the intensive investment in physical infrastructure required.

#### **04. URGENT NEXT STEPS FOR BOLSTERING IRELAND'S SECURITY OF ENERGY SUPPLY**

1. The Department must defer the decommissioning of the Kinsale Head Gas Field pipeline and Inch Onshore Terminal now that the Review of the Security of Energy Supply of Ireland's Electricity and Natural Gas Systems has recognised the importance of LNG and FSRU projects to the security of supply to the country.
2. The Government and Department must take a more collaborative approach - beyond consultations – to engaging with all energy stakeholders who can support Ireland's



journey to a secure, sustainable, and affordable transition to renewable energy, including the LNG industry.

## **05. CONCLUSION**

**Being on the geographic periphery of Europe, any looming gas shortage will hit Ireland harder than most.**

However, in a turn of major good fortune, Ireland has a ready-made LNG solution that will allow us to directly import LNG in a safe, efficient, and cost-effective manner. To the envy of countries across Europe, Ireland possesses a suite of infrastructure assets that can be rapidly redeployed to support offshore importation of LNG - the Kinsale Head Gas Field pipeline and Inch Onshore Terminal.

The use of LNG and FSRUs to strengthen our security of energy supply is now fully endorsed by the Review of the Security of Energy Supply. In a smart and efficient manner, the Mag Mell project takes advantage of infrastructure already in place, providing Ireland with an LNG supply and storage solution that can be in place quicker than that of any other.

However, with the Kinsale gas pipeline currently scheduled for decommissioning, Ireland could lose this significant advantage. While we welcome the opportunity to provide comments to this consultation, time is of the essence to grab this unique advantage. Ireland may not be able to wait.

**ENDS**





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