

Shannon LNG Limited
HQ Listowel
Rear of 27 Market Street
Listowel, Co. Kerry, V31 Y436

For the Attention of:

Review of the security of energy supply
Electricity and Gas Policy Division
Department of the Environment, Climate and Communications
29-31 Adelaide Road,
Dublin 2, D02 X285

28th October 2022

Re: Consultation on the Review of the Security of Energy Supply of Ireland's Electricity and Natural Gas Systems ("the Consultation")

To whom it may concern,

the major outcome of the Review of the Security of Energy Supply of Ireland's Electrical and Natural Gas Systems is the recognition that Ireland's Energy Supply is insecure and only strategic LNG storage can address the insecurity in a timely and cost-effective basis.

Shannon LNG (SLNG) believes that there is a major opportunity for synergy between the Review's strategic LNG storage conclusions and Shannon LNG's energy infrastructure proposals.

As you are aware, SLNG proposes to develop a combined cycle gas power plant ("**Power Plant**"), a battery energy storage system ("**BESS**"), and a liquified natural gas terminal ("**LNG Terminal**") on the 600-acre Shannon Technology & Energy Park located between Tarbert and Ballylongford in Co. Kerry.

Shannon LNG/NFE would welcome the opportunity to participate in the provision of strategic LNG/Gas storage services to the State.

Shannon LNG's response to the Consultation is attached.

Yours sincerely,



Head of Regulatory and Commercial

Response to Consultation on the Review of the Security of Energy Supply of Ireland's Electricity and Natural Gas Systems

Introduction

The Consultation confirms the requirement for additional gas-fired power generation in the short, medium, and long term to support Ireland's increasing roll out of renewable electricity.

The Consultation confirms that Ireland:

- has a long-term need for natural gas,
- that relying on supply from a single supply point from the UK is insecure and
- that an LNG FSRU (liquefied natural gas floating storage regasification unit) is the only option that fully backs-up the single supply point from the UK.

In particular, the Consultation notes:

- *"LNG provides access to alternative sources of natural gas. There is currently no import capability for LNG in Ireland. This mitigation option is based on a floating LNG storage and regasification unit (FSRU) which could be used on a non-commercial strategic basis".*
- *"An alternative option could be to have an FSRU which is operated on a commercial basis but with a mandated level of strategic storage held at all times so that in the event of a supply shock a level of gas supply would be available immediately for the purpose of mitigating the supply shock"*
- *"Our modelling indicates that a strategic LNG FSRU is the **only** short-listed option that can fully mitigate all security of supply impacts observed in Section 4". [emphasis added]*

In testimony¹ before the Oireachtas Committee on European Affairs on the topic of *Engagement on the EU-level policy response to current energy security issues in Europe, including implications of EU energy security policy for Ireland (19th October 2022)*, Dr. Paul Deane of the UCC MAREI Institute said:

*"To understand gas security, it is important to distinguish between a physical interruption, whereby an importing pipeline is cut off, and a price risk, whereby gas is available but becomes expensive. Given our reliance on gas for energy, **a physical disruption in supply from the UK to Ireland for a long period would be catastrophic**, whereas a price disruption, which we are experiencing now, results in extremely high prices of gas rather than physical shortages." [emphasis added]*

"We must not let long-term optimism on the real potential of offshore wind or hydrogen to blind us to the short-term vulnerabilities of our energy supply and action must be taken on national security option such as gas storage and demand conservation in parallel with a massive build out of renewables and implementation of energy efficiency measures." [emphasis added]

"The challenge with Ireland energy security is not the future, it is the present and this need the most political focus. These will be our insurance policy as we transition away from fossil fuels towards the goal of a clean, sustainable energy future in Ireland." [emphasis added]

1

Response to specific questions raised in the Consultation

The responses are of necessity high level, as the detail of the analysis conducted is almost exclusively qualitative.

Risks

1. Are there any other security of supply risks that you can identify in addition to those set out in section 6?

The risks identified are broadly what should be considered given the current and future of Ireland's energy systems. However, the terms of reference set out by the Department has the effect of seriously minimising the impact of the risks based on the unrealistic expectations of delivery of energy transition infrastructure projects.

2. If there are other risks that you have identified, could you outline some mitigation options to address the risk(s)?

The mitigation options considered are sufficient but only the option of an FSRU based terminal protects the gas and electricity system from real supply shocks. Only an FSRU terminal satisfies the N-1 infrastructure requirement under EU Security of Supply Regulations.

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

Shock Scenarios 1 and 2 are normal business-as-usual contingency planning for GNI and Eirgrid in their roles as TSOs. Operating reserves (Primary, Secondary and Tertiary) are maintained by SEMO commensurate with the loss of the single largest infeed. The GNI system is designed for a 1-in-50 peak day and therefore, provided there is no loss of the interconnector infrastructure in Scotland or subsea, the system is adequate.

Shock Scenarios 3 to 5 are the pertinent considerations.

The impact of an outage affecting the gas interconnectors is, and always has been, the key risk to Ireland's energy systems. While there are 2 separate pipelines, they join or pass near each other at numerous points both onshore and subsea.

Mitigation Options

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

Additional mitigation options:

1. **Floating Storage Unit (FSU).**

An LNG Carrier could be used as a Floating Storage Unit ("FSU") moored adjacent to the FSRU at the Shannon Technology & Energy Park. This would immediately add additional strategic gas storage and could be operational within 18 months, or earlier. The State controlled FSU would be able to utilise the SLNG FRSU infrastructure, thereby saving the State hundreds of millions of euros and many years of development. The LNG held in the FSU would be fully owned by the State.

2. **Strategic LNG Storage in another Member State**

Strategic LNG Storage could be held by the State in another existing EU LNG terminal such as those in Spain, who have spare storage capacity. In an emergency, the strategic LNG could be shipped to Ireland and regassified using the SLNG facilities. This option would allow Ireland to participate in joint European efforts in relation to common buying of LNG and storage. This approach is analogous to the approach taken by the National Oil Reverse Agency (NORA). This option would also be operational within 18 months, or earlier, thereby saving the State hundreds of millions of euros and many years of development.

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

An operational LNG terminal in Ireland is the fastest way to deliver security of supply.

SLNG/NFE spent many years identifying an appropriate site that meets all safety, operational and technical requirements. Environmental, ecological and safety studies have taken many years to complete in compliance with planning regulations. The project is shovel ready.

Any other major gas infrastructure project would take many years to develop. We believe that such development studies will conclude that the only feasible site for LNG operations in Ireland is the site owned by SLNG.

Based on the analysis and commentary presented by CEPA in the consultation and SLNG/NFE's own knowledge and expertise we have analysed the gas mitigation options against a set of criteria in the table below.

Option	Commercial FSRU - Shannon LNG	State owned Non-Commercial FSRU	Strategic Gas Storage (e.g Kinsale Gas Field)	Gas Option Package (Kinsale + Demand reduction + Biogas)	GNI onshore LNG facility
Available by 2025	Yes	No	No	No	No
Complies with N-1	Yes	Yes	No	No	No
Provides 100% back up	Yes	Yes	No	No	Yes
Real Life operating example	Yes	No	Yes	Yes	Yes
Underwritten by State	No	Yes	Yes	Yes	Yes
Lowers costs of gas	Yes	No	No	No	No
Cost of interruption with option implemented	€0	€0	€4.525 billion	Not given	Unknown
Some analysis completed by CEPA	Yes	Yes	Yes	Yes	No

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

Additional electrical interconnection to countries with closely correlated weather patterns would seem of little benefit in the near to medium term. Both France and the UK are increasingly relying on imports as their demand is increasing and the French nuclear fleet ages and becomes increasingly unreliable.

Given the benefits provided by pumped storage along with the economics if there was a suitable project it would have already been progressed. Such developments require very particular geographical configuration and must then be connected to the power grid which may not be in proximity.

The expansion of biomass-based power generation is questionable given the availability of fuel.

The conversion of a gas fired power station to hydrogen is possible and indeed the CCGT Power Plant at the Shannon Technology & Energy Park is designed to run on significant hydrogen blends. The availability of hydrogen in sufficient quantities will be the primary issue. It is not expected that significant domestically produced green hydrogen will be available until the early 2030s.

The electricity mitigation package is already part of the plans for the SEM but, as acknowledged by the Consultation, this will only alleviate small, short-term electricity supply shocks.

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

Market measures should be implemented to allow users to voluntarily reduce their demand or increase their supply. Provision of real time information to large energy users and domestic customers is required to allow monitoring of energy usage and to allow behaviours to be modified if necessary.

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

Ireland must take the lead from other EU countries and bring all stakeholders together to implement the most beneficial and viable projects without any ideological thinking getting in the way of rational decision making.

Policy Measures

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

It is essential for Eirgrid, GNI and ESBN to actively co-ordinate in assessment of security of supply and system adequacy. These efforts should be appropriately resourced and complimented by similar resourcing and expertise in the CRU and the Department.

Ireland's limited connectivity to the rest of the EU limits its ability to benefit from co-ordinated EU measures. An LNG Terminal would give Ireland access to LNG Storage in other EU countries in the event of a disruption to the gas interconnector system from Scotland.

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

In general, Ireland needs to be much more proactive in terms of energy infrastructure planning. The issues currently being experienced were entirely predictable and action should have been taken many years ago. The Department, the CRU and the regulated TSOs and DSOs should consult more thoroughly with market participants and infrastructure developers.