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18for0 Submission on 'Review of the security of energy supply of Ireland's electricity and natural gas systems'

Introduction

Ireland's energy security underpins our entire economy and, by extension, citizens' quality of life. Ireland has never had a full electricity system blackout, but in recent years 'near-miss' events have worryingly increased in frequency. Since 2017, Eirgrid have been highlighting impending electricity supply issues relating to inadequate firm generation capacity. It is worrying that this shortage is arising alongside Ireland missing key and legally-binding decarbonization targets for the electricity sector.

Bearing in mind the questions listed in section 9 of the review, we have produced this consultation response along the following themes:

- Incomplete technical assessments
- Reliance on unproven and uncertain technologies
- Electrification of heat and transport
- Future energy security reviews
- Nuclear power

Incomplete assessments

Section 5, describing policy context, states that "As stated by Minister for the Environment, Climate and Communications, the Government has no plans to revisit the prohibition on, or explore the development of, nuclear powered electricity generation in Ireland³⁸ and therefore it has not been considered in this review."

Not only has nuclear power not been in technical assessments in this review, but its conspicuous omission for political reasons render several other sections of the report incomplete. One example of this is Section 5.5 describing international developments, which lists a number of steps European countries have taken in improving their own energy security to "2030 and beyond". Nuclear power development is a cornerstone of medium to long term energy security strategies of several European countries, such as France, the UK, the Netherlands, Poland, Romania and Sweden.

Nuclear power plays a key role in the security of our energy supply through our increasing interconnection with Europe. Regardless of Ireland's intention to revisit statutory bans on domestic nuclear power generation, this gap in analysis paints an inaccurate picture of the landscape of European energy security measures. The omission of nuclear power in this review therefore depreciates its value for use in decision-making and understanding relevant international developments.

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Electrification of heat and transport

It is deeply concerning that electrification of heat and transport are considered to be risks to Ireland's energy security in this review. Electrification is essential to the decarbonization of these sectors, and should be considered as a target, not as a risk. The inclusion of electrification as a 'risk' to our energy security implies a lack of coordination and misaligned priorities between government departments and key bodies, such as local governments, Eirgrid and SEAI.

Furthermore, nuclear power has been identified by UNECE and the IEA as being critical in international decarbonization strategies and ensuring energy security. In this context, nuclear power's exclusion from technical assessments inherently disadvantages us in addressing energy security concerns, particularly those arising from decarbonization policy.

Reliance on unproven and uncertain technologies

The review states that hydrogen is a prioritised technology, and it is assumed throughout the report that hydrogen will play a significant role in Irish electricity generation in years to come.

This is unusual in an international context, where no concrete plans currently exist to fully decarbonise electricity systems in this way. Ireland also has no concrete plans, because this strategy relies on technologies which have never been demonstrated, and have uncertain scalability, supply chain risks and commerciality. One key example technology is 100% hydrogen-powered turbines. This is a reckless approach to Ireland's energy security and 18for0 recommends a thorough review into alternative technologies which could be used in the case that these hydrogen technology innovations do not occur on the ambitious timelines assumed by the Irish government.

We welcome the HyLIGHT project, and call for similar projects to be implemented for technologies which have been highlighted by the IEA as being useful in decarbonizing electricity systems. We recommend discussions with the IEA on this matter, and strongly recommend a programme dedicated to Small Modular nuclear Reactors (SMRs).

Energy Security Reviews

18for0 welcomes this review of Ireland's energy security and the consultation on this review. We especially welcome the proposed regular energy security reviews every two years, as described in section 8.2 of the review. To ensure that these reviews produce useful and actionable information, we strongly recommend that the technical analysis be expanded beyond what is described to include all potentially helpful technologies.

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Nuclear power

Nuclear power development is highly unusual in having statutory bans in Ireland. As mentioned, other countries have found, following optimisation models and assessment, that nuclear power could enhance the economics and security of their electricity systems while lowering carbon emissions. The statutory bans have been listed in this review, and in other energy planning studies, as being a barrier to assessing this technology for Ireland. For this reason, our energy planning studies are incomplete and it is impossible to run any true optimisation models as long as this technology is treated differently to other technologies.

We strongly recommend the lifting of the legislative barriers to developing nuclear power in Ireland, to allow for its inclusion in energy planning studies to see if it is something we wish to develop in the future.

It is important to note that the removal of these statutory barriers will only serve to allow for nuclear power's inclusion in energy planning studies. A legal and regulatory framework would need to be established before it is permitted (or even possible) to develop any nuclear generation capabilities. This is potentially a barrier to implementing energy systems identified as optimal in future studies, and we therefore recommend a comprehensive study into developing the relevant legal and regulatory frameworks for Ireland, in collaboration with the International Atomic Energy Agency (IAEA), to pre-emptively remove these barriers, and allow for the efficient development of a nuclear power programme, should we decide that this is desirable in Ireland.