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Sent: Friday 28 October 2022 15:13
To: Energy Consultation
Subject: Consultation Response - Review of the security of energy supply of Ireland's electricity and natural gas systems

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I would like to make a submission on the above. In response to the questions posed, I have the responses below to some of the questions asked.

My main message to the Department would be to finish the **talking** and get on with the **doing**. This situation needs to be treated as an emergency. Striving for perfection must not hinder action.

Mitigation Options

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

Dealing with the energy crisis needs to be treated as the emergency that it is, no more small slow measures which is what we've seen up to now, this needs a massive effort on behalf of Government.

- Indigenous production of electricity must be prioritised, which will reduce consumption of gas for power production.
- Incentives need to be ramped up are put in place to remove barriers and encourage adoption of renewables at a much faster rate than heretofore. The urgency of the problem must be recognised so that permissions for connecting to the grid can be granted much faster than they are at present.
- Small-scale hydro, which often generates electricity closer to the consumption points, should be incentivised with increased subsidies for the capital costs involved.
- The aim for the electricity system is to have it 100% from renewables by 2035 and this can be done if it is treated with the urgency it requires.
- As well as encouraging continued wind expansion, to counter the risk of reduced generation due to low wind, solar generation should be massively expanded throughout the country. Very often low wind conditions are accompanied by sunny weather and these can complement each other. There should be widespread installation of solar panels on roofs of schools, factories, sports halls, gyms as well as other public and private buildings as well as on domestic properties. Research should be carried out on the types of agriculture which can be carried out on land on which solar farms are installed, perhaps as sheep grazing, but also into crops which might grow beneath panels, even if at a lower production level than in an open field.
- To counter widespread opposition to wind farms in rural areas, a public information campaign should be instigated to inform about the benefits of indigenous energy production and how much it has already reduced our energy imports and the cost of our electricity. It was notable that during the current crisis domestic electricity prices have increased less than domestic gas prices, which I would assume is due to the amount of electricity generated from indigenous renewable sources. The public should be informed about this. It should not just be left to the Wind Energy Association to tell the public.

- New data centres should only be considered where they can provide district heat to a housing estate or an adjacent factory with a heating requirement.
- If a connection cannot be made to a district heating system, data centres in general should be connected to national electricity or gas grids, being required to produce their own power.

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

- Energy saving in domestic properties must be given the priority it requires to greatly reduce gas and electricity consumption. There has to be a massive ramping up of the home renovation schemes with greatly increased funding from Government, higher subsidies and a huge increase in the number of properties which can be covered.
- Installation of new gas hardware should be actively discouraged or legislated against. New properties should not be connected to gas networks so that gas demand declines over time. Sources of gas demand should be shifted to electrical demand, accompanied by the rapid increase in electricity renewable production.

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

In the early part of the last century small-scale hydro was used in many locations to generate electricity for groups of houses, yet it is widely ignored at present. It could provide much needed generation which is less weather-dependent than wind or solar and is distributed production which could be utilised close to the point of production, reducing the distance power needs to be transmitted (with accompanying losses). Greater incentives should be put in place to support this.

Distribution of wind and solar capacity throughout the country, as well as off-shore wind, help to maintain supply.

External interconnectors permit import of electricity if there is a countrywide shortage, and permit export when there is excess.

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

- Domestic users are very unaware about what devices and fittings use large amounts of electricity. In educational adverts on media I have not heard anyone mention electric showers which are probably the highest users of power in a house (7-11kW) and should be minimised.
- To assist users, kitchen-counter electricity consumption meters should be given to all households. Utility companies did this in the UK and it permitted users to see exactly what their instantaneous usage was, and the impact of turning on or off various items. Utility companies here should be mandated to provide them to all users.

Demand management can play a huge role in matching electricity demand to supply. Innovative methods of demand management should be implemented such as:

- Vehicle-to-grid (V2G) should be adopted whereby charged vehicle batteries can be used to return power to the grid in response to high demand, and owners incentivised to join such schemes. Not all EV manufacturers allow V2G, so they should be mandated by setting a date by which vehicle manufacturers must comply with this requirement.

- Dynamic Demand Controllers should be fitted to all fridges, freezers and air-conditioners. These can detect tiny fluctuations in the frequency of the electricity supply which are an indication of a failure in the supply network and can temporarily alter their set temperatures slightly. Increasing the target temperature by one degree over all devices in the country can have a large immediate effect, avoiding blackouts in cases of equipment failure, yet are practically unnoticeable at the delivery end.
- Home Management Systems (HMS) in conjunction with smart meters can provide a form of demand control in domestic houses and should be encouraged for new and renovated dwellings. These can respond to supply constraints by slightly raising or lowering room and cold-device thermostat temperatures, thereby helping to match demand to supply.

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

Policy Measures

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

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