

Irish Energy Security, LNG, Data Centres and the Energy Charter Treaty

Opening statement for the Oireachtas Joint Committee on Environment and Climate Action

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I thank the Joint Committee for the opportunity to provide evidence on these important topics. I am a Full Professor in the Faculty of Engineering and Computing at DCU, with a research focus on national energy systems decarbonisation in the context of the Paris Agreement. My comments will primarily address national energy security, but I will also relate this briefly to the other topics.

Ireland has suffered chronic energy *insecurity* virtually since the foundation of the state. This arose due to the dominant role of fossil fuels in 20th century energy systems combined with Ireland's relatively very small endowment of indigenous fossil fuel resources. Our current energy system consists of three almost equal sectors: transport, heating and electricity. Transport is dominated by the use of oil-based fuels, of which we have no indigenous sources. This is mitigated to some extent by the maintenance of a substantial reserve through the National Oil Reserves Agency, NORA. Heating and electricity are both *critically* dependent on natural gas. This is partially supplied from the indigenous Corrib field, but that is already declining quite rapidly, and we have virtually no domestic natural gas *storage*. Given the prospect of intensifying geopolitical instability, it is clear that Ireland has a compelling strategic need to address this situation of poor and deteriorating energy security.

Separately from this specific national situation, it is well understood that net global emissions of carbon dioxide — arising primarily from the combustion of fossil fuels — must now fall to zero extremely rapidly. Accordingly, urgent, disruptive transformation of our energy system is required in any case. The good news is that Ireland is exceptionally well endowed with indigenous zero carbon energy sources, in the forms of on- and off-shore wind, and also solar energy. *In principle*, there is the opportunity to simultaneously address decarbonisation *and* energy security through replacing most, if not all, of our insecure supply of imported fossil energy by these secure indigenous sources. Given the inherent variability of wind and solar, this will also require very large scale deployment of green hydrogen production and storage. All of this is technically feasible, though it will require decisive policy measures to bring about.

The bad news is that, due to prolonged procrastination and effective denial of the climate crisis, the time now available for this transformation is extremely limited. The scale of the challenge is likely to come sharply into focus when the Climate Change Advisory Council publishes its proposals for the first carbon budget programme, covering the period to 2021-2035. Without prejudice to such detailed analysis as may be provided by the Council, our own research at DCU strongly indicates that we will need radical action over that period on *both supply and demand sides*. That is, even with the most rapid conceivable build out of zero carbon energy *supply* it will also be essential to absolutely minimise society-wide energy *demand* for at least the next two decades. Of course, this must be done on a basis of equity, solidarity and absolute prevention of energy *poverty*.

To turn to the question of LNG: it has been suggested that, given the reality of our deepening exposure to disruption to natural gas supplies through our pipeline connections to the UK, the construction of LNG import terminals may represent a prudent diversification of supply routes. I believe this argument is flawed on multiple grounds including: the risk that locking in additional natural gas supply will conflict with the speed with which we now need to exit its use; the risks associated with upstream release of methane in LNG production (especially via fracking); and the essential global need to reserve “embodied emissions space” for the building of zero carbon energy infrastructure.

In relation to data centres: I have already emphasised the need to minimise national energy use over at least the next twenty years. In that light, combining effective climate action with continued rapid expansion of a sector that *relies* on additional energy consumption is akin to trying to run down an up-escalator. Given the related, very near term impact on the stability of the electricity

grid, I consider that there is a strong argument for an immediate moratorium on such expansion: at the very least pending full and detailed assessment of the actions which will be required to meet the carbon budget constraint for 2021-2024.

In relation to the Energy Charter Treaty I would simply endorse and echo the evidence already given to the Committee by Dr. Tienhaara of Queen's University, Ontario, Canada, and specifically the recommendation to support a co-ordinated EU-exit from the Treaty.

Finally, I attach a selection of documents addressing more specific aspects of the points made above, and I look forward to engaging with any questions the Committee may have.

Attachments:

- [Is Natural Gas “Essential for Ireland’s Future Energy Security”? A Critical Response to the Irish Academy of Engineering.](#) Barry McMullin, Paul Price, James Carton, Kevin Anderson. November 2018. (An independent expert peer review commissioned on behalf of Stop Climate Chaos, Ireland.)
- [Letter re Forthcoming Review of Irish Energy Security and Sustainability.](#) Barry McMullin, James Carton, Paul Price. January 2020. (Letter addressed to then Minister for Communications, Climate Action and Environment, Mr Richard Bruton TD.)
- [TEQs: Empowering Citizens for Radical Climate Action.](#) Barry McMullin. August 2017. (A submission to the Irish Citizens’ Assembly module on “How the State can make Ireland a Leader in Tackling Climate Change”.)