

Submission for CRU Consultation on proposed Direction to the System Operators related to Data Centre grid connection

In Ireland, there are currently 70 operational data centres, 10 of which came into operation in the past year which collectively use 900 MW. Eight are under construction which will add an additional 250 MW. In 2020, the total electricity consumption of Ireland was 5357 MW. This would bring data centres demand to approximately 16.8 per cent of the nation's total. EirGrid estimates that total electricity demand will increase by 50 per cent by 2030. According to their estimates, data centres will account for 29 per cent of energy demand in Ireland by 2028, and 33 per cent by 2030. CRU and EirGrid have signalled that the significantly increased demand brought about by data centres risks supply and could cause rolling blackouts. In our approach to this area it is not sufficient to focus on energy transition, it is also essential that measures are introduced to reduce energy demand.

The scenario of doing nothing in relation to electricity demand from data centres and continuing with the status quo, as outlined in the CRU consultation document, is not a desirable nor viable option. It would go contrary to EU legislation that clearly required the CRU to take steps to ensure security of supply.

While the CRU consultation document does not suggest a moratorium as appropriate at this time, I believe a moratorium is essential, certainly pending the completion of Ireland's energy security review. It is considerably easier to introduce a blanket measure to pause new applications than it is to pause or revoke applications which are already underway. Due to the relative lengthy timeframe of lodging a connection application to having fully functional data centres, a moratorium on applications is necessary within the coming years as to not pass an unsustainable tipping point of supply scarcity in the State. While a moratorium is the appropriate response, it is vital that at a minimum a significant limitation—not just a policy of prioritisation of connection applications—on the approval of new connection applications for data centres is introduced in order to avoid blackouts and fulfil the commitments laid out in the Programme for Government.

In a JOCECA meeting on 06 July 2021, Jim Gannon of CRU suggested a grading system for data centres that generate their own electricity and reduce demand at key times based on market signals. It has also been suggested that data centres be graded on their use of renewable energy. CRU should require data centres within the State to match their demand with available electricity supplied from renewable resources. It is important to note that the generation of their own energy or reliance on renewable energy by data centres is not in itself a sufficient response to the concerns in relation to energy security and the concerns in relation to our national transition to renewable energy. The renewable energy consumed by data centres is renewable energy which is not available for other energy needs within the State. The siting, planning and construction of that infrastructure uses

capacity, resources and locations that are not available to address other energy transition needs in the State. However, it is certainly the case that CRU and EirGrid should not enter into contracts with or grant connection applications received from data centres with dispatchable generation utilising fossil fuel resources. Further, for those data centres committed to reducing demand based on market signals, there should be a robust administrative sanctioning mechanism to ensure compliance and combat blackouts brought about by non-compliance in times of scarcity. Further, this proposal should not only be the basis of a prioritisation system. CRU and EirGrid should consider non-fulfilment of one or a number of these considerations should constitute grounds for refusal of a connection application. Lastly in respect of future planning for connection applications, considerations may need to be given in the future to the nature of the data processing taking place. While EU and national policy in this area is still developing, the EU A.I Directive may prove relevant in respect of regulation of certain forms of machine learning and in a scenario of future energy pressure and high demand differentiation may need to be made between data processing, essential for the operation of key public services and platforms and data processing uses such as cryptocurrency which do not deliver public benefit.

CRU has highlighted the role that they believe natural gas may play in electricity production to fill demand once coal and peat generators are retired, however this position and the categorisation of hydrogen as a transition fuel is highly contested. In order to fulfil the commitments within the 2020 Programme for Government, e.g. reducing Ireland's carbon emissions by 7 per cent each year and 51 per cent over the decade and meet the obligations in the Climate Action and Low Carbon Development (Amendment) Bill 2021, alternative scenarios predicated on an earlier and thorough exit from fossil fuels, including brown and blue hydrogen, is likely to be required. Therefore alternative scenarios predicated on a more rapid and thorough exit from fossil fuels and/or a limitation of national hydrogen production to clean or green hydrogen should be modelled.

Finally, CRU should address and review, as far as it can within the current constraints imposed upon it by legislation, issues related to public service obligation levies and data centres. In their current form, PSO levies do not necessarily best reflect an equitable division of contributions based on the consumption model of data centres vis-à-vis domestic consumers. A reform towards PSO levies based on average demand or on a unit-consumed basis instead of the current use at peak demand would go some way to reduce cross-subsidisation of data centres by domestic consumers and ensure that the levy paid by data centres adequately reflect their proportion of electricity consumption. In the JOCECA meeting of July 6th 2021, the CRU indicated they did not currently have plans for a review or reform of PSO levies. I would suggest that such a review is in fact very timely and essential.

In addition to being large consumers of electricity data centres are very large-scale consumers of water. CRU is the economic regulator for Irish Water, while the Environmental Protection Agency are the environmental regulators of Irish Water. In its review of policies and regulations in respect of data

centres, CRU should also reflect on the commercial arrangements around the extraction and use of water and management of waste water as such data centres may have with Irish Water and measures in regulations that may be required in respect of that. CRU should also, in line with its MOU it holds with the EPA, engage actively to ensure that economic policy and regulation in this area are complementary to environmental standards, regulations and sustainability. Similar co-operation with the EPA and robust public research is also required in relation to the potential future use of underwater data centres and ensuring appropriate environmental standards and measures are applied. It is of course important that marine protected areas would also be designated prior to any major developments in this area.