

To: Commission for Regulation of Utilities  
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By email: [electricityconnectionpolicy@cru.ie](mailto:electricityconnectionpolicy@cru.ie)

7<sup>th</sup> July 2021

**Re: CRU proposed Direction to the System Operators related to Data Centre grid connection  
(CRU/21/060)**

Dear CRU Connection Policy Team,

I am writing to you on behalf of the Demand Response Association of Ireland (DRAI), the trade association currently representing Demand Side Unit (DSU) providers in the all-island Single Electricity Market (SEM). By aggregating the passive electrical loads of individual consumers into substantial load portfolios, our members create predictable, reliable, and controllable assets, which provide a valuable source of Demand Side Flexibility (DSF) that can be actively utilised by system operators to meet the near-time needs of the power system.

Today, we represent approximately 600 MW of demand and embedded generation response across hundreds of industrial and commercial customer sites throughout the island of Ireland. These sites are managed by our members each of whom actively participate in the Capacity, DS3, and energy markets.

DRAI members are committed to shaping the future of power system flexibility through advancing DSF on the island of Ireland. In the coming years as our membership grows, we envisage a future where the DSF solutions offered by our members expand to include energy storage and new distributed generation technologies. As Ireland strives to achieve the 70% renewable generation by 2030, our promise as an industry-led organisation is to champion the development of innovative DSF solutions that are designed to address the system-wide requirement for flexibility.

The DRAI expresses a single voice on policy and regulatory matters of common interest to its members, and collectively we welcome the opportunity to respond to the CRU's *Consultation on CRU proposed Direction to the System Operators related to Data Centre grid connection* (CRU-21-060) and trust that you will consider it in your deliberations.

**Opportunity to Incentivise and Capture the Full Value of Data Centre Connection Solutions**

While the proposed direction in the paper seeks to resolve an urgent resource constraint – namely the availability of large firm demand connections relative to the ambition of the data centre industry – there is also opportunity to incentivise new modes of demand user behaviours. These new modes of behaviour include participation in DS3 system services and the Capacity Mechanism. Rather than just incentivising back-stop behaviours from demand users to support the narrow but important issue of grid congestion to facilitate their own consumption needs, large demand users can be incentivised to contribute to solutions necessary to deliver wider security of supply and renewable integration efforts in Ireland.

As the DRAI, we note that participation within a Demand Side Unit is one such opportunity for large demand users to transition to become contributory energy market participants, rather than being evaluated only as an electrical system challenge that needs to be addressed.

### **Prioritisation and Acceleration of Data Centre Connections**

The unprecedented growth in data centre developments has meant that large demand connections have become analogous to large generation connections in Ireland. There is competition between prospective grid users for limited resource – the grid capacity. Demand users have added complications over generation sources in that the power they consume must be met with generation, whereas generation takes on the commercial risk of having no economic demand to serve. Furthermore, demand is not typically controllable, whereas the vast majority of connecting generation of material size is mandated to be controllable by the TSO.

The DRAI believe that some method of connection prioritisation – rather than a moratorium, or doing nothing – on large datacentre demand connections must be applied. The last moratorium on connection of a class of grid user was in 2003<sup>1</sup> for wind generation, a highly contentious period in the industry which was ultimately resolved through new Grid Code requirements for the controllability of wind generation, and the creation of the Gate connection offer process (which took several years) which has now evolved into the Enduring Connection Policy (ECP) process.

Insofar as there remains a shortage of grid capacity, it is clear a prioritisation structure must be employed. The prioritisation structure should be cognisant of wider policy objectives, and clearly demonstrate the required technical standards.

The DRAI believe that there are several precedents from within the experiences of Ireland’s only connection moratorium and existing ECP connection Policy which can be leveraged to not only appropriately prioritise large demand user grid connections, but also accelerate their connection under certain circumstances.

### **Decarbonisation Policy Objectives**

The CRU objective to “keep the lights on” is to be performed through “sustainable low-carbon solutions with well-regulated markets and networks”.

To that end, the DRAI believe that large demand users which can demonstrate behind the connection point renewable generation solutions (such as biodiesel) or demand side flexibility should be prioritised over those large demand users seeking to connect on the basis of behind the connection point generation reliant on non-renewable fuels. This should not be an unreasonable ask, given the Environmental, Social and Governance (ESG) requirements of most large demand users. This generation and demand flexibility should at the very least ensure security of supply for localised grid security issues by being at EirGrid’s disposal when required as a ‘backstop’ once all available generators, Demand Side Units, etc. in the market have already been dispatched.

Furthermore, within the context of allocating material proportions of remaining demand connection capacity to relatively few users, and noting the risk that such demand connections pose to Ireland’s decarbonisation objectives<sup>2</sup>, it is reasonable that a higher level of prioritisation is given to demand users which facilitate further integration of renewables. Integration of renewables can be supported by a datacentre’s active participation in the energy markets, such as participating in the Capacity Remuneration Mechanism (CRM), providing DS3 system services, etc.. Active participation in providing

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<sup>1</sup> <https://www.cru.ie/wp-content/uploads/2003/07/cer03310.pdf>

<sup>2</sup> Ireland’s principal decarbonisation targets (such as delivering  $\geq 70\%$  of electricity from renewable sources by 2030) are based on the total volume of electricity consumed. Therefore, any demand growth will cause a commensurate increase in the volume of renewable electricity required to reach the target.

grid DS3 system services should therefore give further prioritisation within the connection process, dependent on provable, reliable and demonstrably usable offered flexibility.

### **Security of Supply Policy Objectives**

Similarly, there are concerns around security of supply arising from generation adequacy more generally. Unfettered large demand access to the grid risks security of supply issues, so it is not unreasonable to prioritise the connecting users who are willing to facilitate efforts to resolve the issues to which they are otherwise contributing. Prioritisation to those generators who are participating in the CRM should also be considered.

### **Precedent from Existing Policy**

It is useful to examine similar types of prioritisation performed by the CRU in the past in the allocation of scarce generation capacity. The ECP Stage 1 Decision<sup>3</sup> allocated 400MW of generation connection capacity to DS3 providers, as well as defining a DS3 Prioritisation Ruleset to prioritise connection offers in the event of over-subscription. The rationale for this was clear: *“DS3 system services are a key tool in helping Ireland meet its renewable energy targets at affordable cost.”* It seems reasonable that large demand users which are sufficiently material in size to impact Ireland meeting its renewable targets should actively facilitate the wider decarbonisation agenda for the country. Participation in DS3 system services should result in prioritisation for further access to grid capacity.

Both DS3 system services and participation as a demand user requires a degree of dispatchability, either directly by the TSO or via a DSU. The DRAI do not believe that dispatchability should be mandatory for large connecting demand users, in contrast with the requirements for wind generation controllability which followed the wind connection moratorium of 2003. Such requirements within a centrally dispatched market where users cannot reflect the full opportunity cost of system actions through their complex offers are likely to represent too much of a risk for large demand users, overly impacting their inward investment to the Irish economy.

### **Proposed Implementation Regime**

The DRAI is proposing a “points-based system” for prioritisation for further grid capacity for large demand users, once basic criteria are met. The basic criteria (in order of preference) to manage grid constraint issues are:

1. Renewable generation or demand side flexibility
2. Conventional generation (either on a back-up basis or as a fully available generator)

All demand users in Category 1 should be prioritised ahead of Category 2.

Within each category, a further points based system would apply. There would be points allocated for DS3 system services provision, or CRM participation with a fully available resource (i.e. not just during times of grid system stress). This is aligned with the DRAI’s view that the resource constraint of demand connections represents an opportunity to transition a certain class of demand users from a “problem to be solved” into active participants supporting wider policy objectives.

The number of extra points would be down to the level of proven demonstrable availability to the TSO. To that end, existing demand users in place who wish to grow their demand connection would be given priority of increased connection capacity if they had historical demonstration of reliably declared and responsive flexibility to dispatch instructions from the TSO while participating in DS3 system services or the CRM. As each new tranche of demand comes online, the ability to continue to grow that demand

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<sup>3</sup> <https://www.cru.ie/wp-content/uploads/2017/04/CRU18058-ECP-1-decision-FINAL-27.03.2018.pdf>

connection would be dependent on the continued performance and provision of an appropriate level of flexibility to the TSO.

New large demand connections would not have that demonstrated historical track record. Correspondingly a new large demand user seeking a 50MW connection across for, for example, five data halls for a Data Centre would be given access on a 10MW five-tranche basis, each subsequent tranche prioritised for processing based on DS3 system services and CRM participation for the previous tranches.

Consideration could also be made for large demand users which become dispatchable, can demonstrate such dispatchability on a reliable basis, but due to contracting timing (e.g. CRM auctions, DS3 procurement rounds) must wait material time before actually becoming a CRM participant or a DS3 system services provider.

Ultimately, the degree to which new connecting demand that must be controllable, and the demonstrated availability of that service is a matter for the TSO. It is also sensible to consider offering lower points to a 50% available large demand user that only offers, for example, 60% of its peak demand capacity to the TSO, in comparison to a 95% available large demand user that offers 80% of this peak demand capacity. Minimum thresholds of both availability or offered peak demand capacity would also be appropriate, again to be set by the TSO.

## Summary

The large number of demand connections seeking to access the Irish electricity grid putting security of supply and the decarbonisation agenda at risk must be balanced against the need to encourage inward investment into Ireland. The DRAI propose that those large demand users which provide demand flexibility and renewable generation capacity to directly address these concerns should be given prioritised access to demand capacity, ahead of those large demand solutions which exclusively seek to manage local grid capacity issues only with non-decarbonised solutions. This prioritisation can be tailored by the TSO and the CRU to meet policy objectives more readily.

On behalf of the DRAI I hope that you find our response helpful and constructive, and as always, we welcome any request from the CRU to further clarify any aspect of our response.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Paddy Finn', written in a cursive style.

Paddy Finn

DRAI Chair