

Commission for Regulation of Utilities
The Exchange
Belgard Square North
Tallagh
Dublin 24

Re: CRU proposed direction to the system operators related to data centre grid connection – call for submissions

To whom it may concern,

We have reviewed much of the available information and advice provided by the CRU, Eirgrid and generator vendors, and have found a number of points of discussion worth further investigation. While it is true that Data Centres are large consumers of energy, it is not without reason, or benefit to the local and national economy. It should be considered that the bodies tasked with ensuring the Nations energy supply should have anticipated a logarithmic increase of demand based purely on past performance and demand within the Data Centre industry as a whole. For it to be highlighted so publicly and so late in the day that Data Centres are the cause of lack of capacity in the grid is unhelpful, when power plants are lying dormant due to underperformance in the energy auctions.

Nevertheless, we as customers find ourselves in the situation of collaborating on a solution to the energy crisis, and it is the wish of all Data Centre providers to be proactive in finding a solution. At present it would appear the CRU and Eirgrid are unclear on how a Data Centre operates. A few functions suggested by those parties seem to require Data centre providers to enter the energy market, so the items listed below are practical talking points in order to find a way forward for all parties. In almost all correspondence, the usage of “Dispatchable Generation” by Data Centres is highlighted however the definition of “Dispatchable Generation” is not clearly defined. The practical limitations and requirements are also not discussed. A number of the challenges for this means of generation can be broken into the topics below;

1. Gas Network Application
2. Dual Fuel Requirements & S.I. 209/2015
3. Data Centres entering the Energy Market
4. Practical Configuration for Maintenance

Gas Network Application

In the first instance of providing a secondary generation source, an application must first be made to Gas Networks Ireland. For sites requiring large connections (+10MWe / ≈22MWth) a connection to the Steel Pipe TSO side if the gas network is most appropriate however the lead time on these types of connections are around 4 years which is not really feasible for current electrical applications.

Alternatively, a number of smaller and far more costly DSO gas connection requests (<3MWe/≈6MWth) can be made, however this would rapidly deplete DSO capacity in the district, and is unsustainable. Concurrent DSO and TSO connections for the one site could be made but this would incur excessive cost and logistical challenges.

Dual Fuel Requirements & S.I. 209/2015

Once the system is larger than 10MW there is a requirement for the Gas sets to be Dual Fuel systems with 48 hours of fuel storage. In principle, if the system becomes large enough there is a risk of the system falling into the Seveso site classification which in turn would heavily impact the practical and financial operation of the Data Centre, effectively turning the site into a Fuel Depot.

Data Centre participation in Energy Auctions

It is unclear if the owner of the “Dispatchable Generation” will be required to enter into the National Energy Auctions, and how the Data Centre Operator will function within the existing framework. It is highly unlikely that the smaller, less cost-effective plant of the Data Centre will be capable of competing with other larger providers such as ESB and Energia. Aside from a guaranteed capacity payment, which is unlikely to cover the cost of maintenance, what would be the incentive for the TSO to engage the Data Centre Operators plant?

Configuration of Gas & Diesel for Maintenance

While this is principally a Data Centre operations challenge, we feel it is important that the TSO and DSO understands that the Diesel generation provided as part of a Data Centre installation is not primarily for overcoming power outages. While it is a major factor, it is also primarily used as a means to maintain the incoming electrical utility protective devices and switchgear. The introduction of TSO dispatchable gas powered plant does not satisfy the need for maintaining incoming infrastructure, as the system cannot be either partially or wholly removed from service to power a separate system during Data Centre maintenance.

Carbon Emission Targets and the EPA

It is not entirely clear what the tie in with the EPA is at present on the provision of smaller standalone gas fired plant. Are they part of the consultation here? Hypothetically if a Data Centre provides dispatchable plant, who is responsible for maintaining emission records and compliance to same.

While a number of items here are purely hypothetical, we feel they are the practical questions, in order to try come up with a workable solution to the existing power crisis. Existing models and processes clearly need to be reworked in their entirety in order to overcome the challenges presented to us, as clearly the system in place today is not working for both the TSO, DSO and the consumer.

We look forward to being further involved in the solution to this mutual issue,

Regards

A handwritten signature in black ink, appearing to read "Seán Halpin".

Seán Halpin
Director of Engineering
Dataplex Group