



**Department of the Environment,  
Climate and Communications:  
Review of the security of energy  
supply of Ireland's electricity and  
natural gas systems**

Consultation Response

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# 1 INTRODUCTION

## 1.1 Who We Are

Vantage Data Centers (VDC) is a leading global data center provider and operator.

- We were founded in 2010 and are headquartered in Denver Colorado, USA and serve the world's leading technology brands.
- We currently are in 5 continents across 12 countries in 18 individual markets.
- We develop proven, standardized yet flexible campus model, data centers with a focus on reliability, efficiency, collaboration, operational expertise and sustainable designs.
- Across the EMEA region we currently have 12 data centers operational and / or in development including: Cardiff, UK; London, UK; Zurich, Switzerland; Berlin, Germany; Frankfurt, Germany; Milan Italy; Warsaw, Poland and Johannesburg, South Africa.

## 1.2 Our Approach to Sustainability

At Vantage, we take an integrated approach to building data centers for maximum efficiency and resiliency. It starts with careful site selection, followed by the design and construction of highly efficient data center campuses - yielding both industry-leading Power Usage Effectiveness (PUE) and low water use (measured as Water Usage Effectiveness, or WUE) - which then extends through into our constantly evolving operations.

Vantage Data Centers has committed to achieving net zero carbon emissions by 2030.

To date, we have successfully completed our first greenhouse gas inventory and created programs to strategically drive emission reductions covering Scope 1,2 & 3. Informed by the latest climate science, we are creating interim reduction targets that are in alignment with the Science Based Target initiative (SBTi) methodology, focusing on three areas:

- Reducing Emissions through Investments in Technology: From microgrid-enabling technologies to lowered emissions from on-site generators, we are pursuing reduced energy use and emissions at all our facilities.
- Sourcing Renewable Energy: Wherever possible, Vantage Data Centers customers are offered renewable energy options for their power.
- Funding Carbon Removal Projects: Starting in 2030, Vantage Data Centers will purchase offsets that fund carbon removal projects for unavoidable emissions. Priority will be given to opportunities that directly benefit the communities where we operate.

As signatories of the Climate Neutral Data Centre Pact, Vantage Data Centers is committed to the sustainable development and operation of our data centers.

## 1.3 Decarbonization and Digital Leadership

### 1.3.1 Decarbonization

With regards to climate risk, Ireland has two overriding imperatives – the Climate Action Plan and Decarbonization. It should be acknowledged that whilst there are short term energy supply capacity issues, Ireland has sufficient wind and other renewable resources, which once fully exploited, will provide sufficient energy capacity to meet not just the needs of the country as a whole but also the expansion of the data center sector.

Indeed, should Ireland fulfil its potential in offshore wind generation rollout, the country will be well placed in the medium to long term to become a net energy exporter. The expansion of Ireland’s wind energy capacity and the exploitation of other technologies, ranging from battery storage to hydrogen to solar, etc., will mean that Ireland will achieve the targets as set out in the Government’s Climate Action and will be well on the path towards decarbonization.

### 1.3.2 Digital Leadership

Whilst Ireland has the potential to radically decarbonize its energy sector it too can become a digital leader –the two are not mutually exclusive. By investing in its digital future, Irish society will benefit in a myriad of ways including remaining at the forefront of global economic development, and at the heart of Europe as a key European economy. The Government’s recent “Statement on the Role of Data Centers in Ireland’s Enterprise Strategy” summarized its principles for Sustainable Data Center Development, a few of which we have highlighted that we intend to embrace in current and future investments in Ireland:

- **Grid Capacity & Efficiency** – we aim to alleviate constraints by building onsite dual fuel “energy centers” where we incorporate energy storage systems such as batteries, to provide grid resilience services and / or extend the availability of renewable energy either to consume on site or export excess into the grid.
- **Renewables Additionality** – should the government approve the necessary legislation, we would encourage development of new renewable generation in close proximity to our facilities under a “private wire” arrangement. We would offer long term Power Purchase Agreements direct to the developer to support investment.
- **Proximity with Future-Proof Energy Supply** – where we look to deploy a dual fuel energy center, we also specify a requirement for the plant to be able to accommodate up to 20% Hydrogen mix from the gas grid network.

## 2 CONSULTATION RESPONSE

### 2.1 Demand Side Risk

#### 2.1.1 Low Wind Speeds

We would argue that “Low Wind Speeds” is not a demand side risk. Our view is that this is a supply risk since it reduces the ability of wind farms to generate electricity.

#### 2.1.2 Increased Demand from Large End Users (LEUs): Additional Mitigation

- **What:**

It is important to understand that all data centers when built, will not be fully utilized from its first day of operation, i.e. meaning that the power consumption of a data center “ramps up” as our customers increase the use of the facility over time, and often at peak times during the day (ramp rate).

- **Why:**

In terms of modelling demand, it is unrealistic to model all data centers as consuming 100% of their energy demand from day 1.

Similarly, not all data centers will ramp up at the same rate. Adopting a more nuanced and data backed approach can allow the TSO, Eirgrid, to monitor and manage the impact of new data centers more realistically.

- **Mitigation:**

Customers could be requested to provide forecasts of their ramp rate for the year(s) ahead against the contracted power (the connection agreement capacity) either on an absolute basis (i.e., X MW by year YY) or on a scaling basis (i.e., Z MW / month).

These forecasts can then be included in the grid connection application to Eirgrid, which will allow it to better model the impact of both existing and new data centers on the power grid (appreciating that the provider of the data center service is contractually obligated to provide 100% of the contracted MW load).

## 2.2 Supply Side Risk

### 2.2.1 Electricity Network Access: Additional Mitigation

- **What:**

There are not enough points of connection to the national grid both for demand (e.g., LEU's) and generation assets (e.g., renewable plant).

- **Why:**

This causes the congestion and concentration of such assets to be unevenly geographically distributed and delayed due to network upgrade works not being delivered in a timely fashion.

- **Mitigation:**

Fasttrack legislation to allow “private wire” connections to be made between LEU's and sources of generation. Alternatively, planning legislation could be amended to offer exemptions to allow connections between generators and end consumers without the need for a planning application.

Furthermore, relevant bodies could encourage LEU developers to apply for “generation” connections that allow both export and demand.

This will encourage LEU's to make private investment to expand the grid network and allow LEU's to:

- Be conduits for clean power to the grid that they do not consume (i.e., export excess)
- Catalyze the investment of renewable generation plant as their developers can now connect direct to LEU's and enter into Power Purchase Agreements (PPAs) to support their business case
- Include supporting infrastructure, such as batteries, that allows surplus clean energy to be exported to the grid when required and provide grid services

## 3 CLOSING

### 3.1 Summary

Vantage Data Centers fully supports the Government's Climate Action Plan and additional mechanisms such as the DCCOPP to ensure security of supply. We appreciate the opportunity to provide a response, presented by way of evidence and research, to this consultation.

Our intention is to be an engaged and willing private investor in the Irish economy and the energy system that supports the island of Ireland. We want to ensure that the power system is resilient and evolved, so that it supports the Government's efforts to achieve its climate change targets, while keeping the lights on and supporting sustainable growth.

Our response comprises several additional mitigations that may already be being considered by the government but were not mentioned in the evidence provided. We believe these are eminently achievable and encourage the Government to foster an environment that encourages the private sector to take responsibility to deliver the mitigations sought within the 2025 – 2030 timeframe.

This can be achieved by government providing the required legislation and policy to support such investment in a timely and coherent fashion.

Furthermore, if implemented, we believe our recommendations will support the other mitigations, as suggested in the consultation briefing document, by creating a positive environment for change.

### 3.2 Contact

Should our response this consultation require any further clarifications please contact:

- [REDACTED] Senior Director, Public Policy, Global | [REDACTED]