

# Data Centres in Ireland's Evolving Energy Landscape

---

## EAI Position Paper

---

Electricity Association of Ireland



The Electricity Association of Ireland (EAI) is the representative body for the electricity industry and gas retail sector operating within the Single Electricity Market (SEM) on the island of Ireland.

Our membership comprises utilities that represent 90% of generation and retail business activities and 100% of distribution within the market. Our members range in size from single plant operators and independent suppliers to international power utilities. Our members have a significant presence in Ireland, Northern Ireland and Great Britain across the sector value chain. We represent the interests of the all-island market in all relevant jurisdictions, including the EU via our membership of the European electricity representative body Eurelectric.

We believe that electricity has a fundamental role in providing energy services in a decarbonised, sustainable future, in particular through the progressive electrification of transport and heating. We believe that this can be achieved, in the overall interest of society, through competitive markets that foster investment and innovation.

We promote this vision through constructive engagement with key policy, regulatory, technology and academic stakeholders both at domestic and EU levels.

Our ambition is to contribute to the realisation of a net-zero GHG emissions economy by 2050 or sooner, in order to limit the impact of rising temperatures. Electricity offers opportunities to decarbonise the Irish economy in a cost-effective manner.



## Contents

1. Executive Summary.....	4
2. Evolution of Data Centre Policy Landscape .....	4
2.1. Increasing System and Policy Focus on Large Energy Users.....	4
2.2. Key Recent Publications and Decisions.....	5
2.2.1. CRU LEU Connection Policy Decision .....	5
2.2.2. Large Energy User Action Plan (LEAP).....	6
2.2.3. Green Energy Parks Assessment.....	7
2.2.4. Assessment of Recent Policy Developments .....	8
3. EAI Position on Data Centres in the Current Context .....	8
3.1. Economic Contribution and Strategic Importance .....	8
3.2. Role of Data Centres in the Energy Transition.....	9
3.3. Contribution to Network Tariffs .....	11
4. Recommendations .....	12
5. Conclusion.....	15



## 1. Executive Summary

Since the publication of the Electricity Association of Ireland's (EAI) original position paper on data centres, the policy and regulatory landscape in Ireland have evolved materially. Most notably, the Commission for Regulation of Utilities (CRU) has advanced its approach to Large Energy Users (LEUs) connection policy, while broader Government strategy has further embedded data centres within Ireland's energy transition and economic development framework.

This updated paper reflects these developments and reaffirms EAI's central position: data centres remain a critical component of Ireland's economic and digital infrastructure, and their continued development must be aligned with the delivery of a secure, decarbonised, and efficiently functioning electricity system.

Recent policy developments signal a shift towards a more system-led approach to connections, with increasing emphasis on co-location, self-sufficiency, and demand-side participation. At the same time, new models such as Green Energy Parks (GEPs) are being explored as potential pathways for aligning large-scale demand with renewable generation.

## 2. Evolution of Data Centre Policy Landscape

### 2.1. Increasing System and Policy Focus on Large Energy Users

Ireland's electricity system is undergoing rapid transformation, driven by the dual imperatives of decarbonisation and electrification. Within this context, large energy users, particularly data centres, have become a central focus of both policy and regulatory attention.

Projected demand growth has elevated concerns regarding security of supply and system adequacy, resulting in a shift away from purely connection-led frameworks towards a more integrated approach that considers how large demand interacts with the system in both operational and planning contexts. This has led to an increased emphasis on ensuring that new demand contributes to, rather than detracts from, system stability.



## 2.2. Key Recent Publications and Decisions

Recent developments can be broadly grouped into three interrelated areas: connection policy, strategic planning, and alternative system models.

### 2.2.1. CRU LEU Connection Policy Decision

The CRU's decision on the connection policy for Large Energy Users represents one of the most significant regulatory interventions in this space to date. It introduces a fundamentally more conditional approach to the connection of data centres, moving beyond the traditional framework of network access towards one that explicitly considers system adequacy and operational contribution.

At its core, the policy requires that new data centres provide onsite or proximate dispatchable generation or storage capacity equal to, or exceeding, their maximum import capacity. This generation must be capable of supporting the system and is expected to participate in electricity markets, including the capacity market. In practical terms, this shifts a portion of the responsibility for security of supply from centralised system planning towards individual demand users.

The policy further links the ramp-up of data centre demand to the delivery and performance of this associated generation. This introduces a direct operational dependency between demand and generation assets, which is a notable departure from existing arrangements.

In addition, the policy incorporates a locational element, whereby connection applications are assessed based on whether they are in constrained or unconstrained regions of the network. This reflects an increasing emphasis on spatial planning and efficient use of network infrastructure.

Finally, the decision also introduces reporting obligations, requiring data centres to provide annual information on their renewable energy usage and emissions. The site is required to meet 80% renewable energy generation with a six-year glide path.



### **2.2.2. Large Energy User Action Plan (LEAP)**

The Large Energy User Action Plan provides a broader strategic framework for managing the growth of large-scale electricity demand in Ireland. It reflects a recognition at Government level that data centres and other large users are both economically valuable and systemically significant. The LEAP positions data centres as critical enablers of Ireland’s digital economy and foreign direct investment strategy, while also acknowledging the pressures they place on the electricity system. As such, it seeks to balance economic development objectives with energy system constraints and decarbonisation goals.

A key theme of the LEAP is the need for a more coordinated and plan-led approach to the development of large energy users. This includes encouraging development in locations that align with available or planned infrastructure, supporting greater regional distribution of demand rather than continued concentration in existing hubs, and promoting closer integration with renewable energy sources.

The plan also emphasises the importance of demand-side participation, including flexibility and the ability of large users to respond to system conditions. This aligns with broader system operator and regulatory objectives around managing peak demand, improving system resilience, and facilitating higher penetrations of variable renewable generation.

Importantly, the LEAP places increasing emphasis on the potential role of Green Energy Parks and similar co-located models as part of Ireland’s long-term solution for integrating large energy demand. It recognises that aligning large energy users with renewable generation, storage, and potentially dispatchable capacity in a coordinated manner could help to reduce pressure on the transmission system, facilitate the development of new renewable capacity, and support more efficient spatial planning of both demand and supply. In this context, GEP-type approaches are presented not as a singular solution, but as a key component of a broader, more strategic framework for accommodating future demand growth in a manner that is consistent with security of supply and decarbonisation objectives.



### 2.2.3. Green Energy Parks Assessment

The economic assessment of Green Energy Park concepts introduces a more structural and forward-looking perspective on how large energy demand could be integrated with renewable energy supply. It explores the potential for co-located developments that combine generation, demand, storage, and, in some cases, industrial activity.

The report defines Green Energy Parks as sites that:

- Co-locate large energy users, such as data centres, with renewable generation,
- Incorporate storage and dispatchable backup capacity, and
- Operate with a degree of self-sufficiency while remaining connected to the wider grid.

From a system perspective, these models are seen as offering several potential advantages. By aligning demand with renewable generation, they can provide a route to market for offshore and onshore renewables, reduce the need for long-distance transmission, and improve the efficiency of infrastructure utilisation. The report also highlights the potential for such developments to act as hubs for economic activity, innovation, and regional development.

The assessment further identifies data centres as natural anchor tenants for these developments, given their scale, demand profile, and ability to underpin investment in generation assets. It also notes the potential for complementary industrial users to locate within such parks, creating opportunities for cross-sectoral collaboration.

However, the report is equally clear in outlining the challenges associated with GEP development. These include:

- Limited grid capacity and the continued need for network integration, even in co-located models,
- The requirement for dispatchable backup generation, given the variability of renewable supply and the infeasibility of relying solely on storage technologies in the near term,



- Policy and regulatory uncertainty, particularly in relation to private wires and connection frameworks, and
- Long and uncertain development timelines, particularly for offshore wind generation.

A key conclusion of the assessment is that there is no single standard model for GEPs, and that flexibility will be required to accommodate a range of approaches. This is an important consideration for policymakers, as overly rigid definitions or requirements could limit the development of viable projects.

#### **2.2.4. Assessment of Recent Policy Developments**

Taken together, these three publications represent a clear evolution in Ireland’s approach to large energy users. The CRU’s decision introduces immediate, system-driven constraints and requirements, while the LEAP provides a broader strategic framework for managing demand growth. The GEP assessment, in turn, explores how structural changes to the organisation of supply and demand could support longer-term system objectives.

### **3. EAI Position on Data Centres in the Current Context**

#### **3.1. Economic Contribution and Strategic Importance**

In considering the role of data centres within Ireland’s energy transition, it is important to situate them within their broader economic context. Data centres are not solely large electricity consumers; they are core infrastructure underpinning Ireland’s position as a leading global technology hub and play a central role in supporting economic growth, innovation, and international competitiveness.

Ireland has developed a highly prominent technology sector, hosting many of the world’s largest digital and cloud service providers. This has been enabled by a combination of factors, including a skilled workforce, a stable and transparent regulatory environment, and strong connectivity to European and global markets. Data centres are central to this ecosystem, facilitating the delivery of cloud computing, financial services, digital platforms, and increasingly, emerging technologies such as artificial intelligence and advanced data analytics.



Their presence reinforces Ireland’s attractiveness as a destination for foreign direct investment and supports the continued expansion of high-value economic activity.

The economic contribution of the data centre sector is substantial. A 2022 analysis by Baringa<sup>1</sup> showed that the data centre industry was a major contributor to Ireland’s economy, attracting an estimated €10bn of investment over the previous 10 years, and averaging over 25% growth per year. At the time, there were over 90,000 jobs in computing, almost universally relying on data centre services, and within the wider economy, Ireland boasted over one million jobs in digitally-intensive industries. Information & Communications, part of the Irish tech industry, was contributing 15% of gross value added (GVA) with computer services accounting for 33% of total Irish exports.

In addition, data centres contribute to Ireland’s public finances through taxation and local economic activity, while also playing a role in supporting regional development where located outside traditional urban centres. Their long-term investment horizons and capital intensity further underline their importance as stable economic actors.

It is therefore essential that policy recognises data centres as strategic economic participants, rather than solely as sources of demand. While their impact on the electricity system must be carefully managed, this should be balanced against their wider contribution to Ireland’s economy and their potential to support the energy transition.

### **3.2. Role of Data Centres in the Energy Transition**

From an energy system perspective, data centres represent a large and relatively predictable source of electricity demand, which can support the development of renewable generation by providing long-term offtake certainty. In this regard, they can act as a key enabler of renewable investment, particularly in the context of Ireland’s ambitious offshore and onshore wind targets. The scale of their demand also provides a potential route to market for renewable generation that may otherwise face constraints due to system limitations.

---

<sup>1</sup> Baring (2022). [Green Data: A vision for sustainable data centres in Ireland](#). In association with bitpower energy solutions and commissioned by Cloud Infrastructure Ireland.



Data centres are therefore playing an increasingly important role within Ireland’s evolving energy landscape, influencing not only electricity demand, but also renewable energy deployment, infrastructure planning, and broader decarbonisation pathways. While the Renewable Electricity Support Scheme (RESS) remains the primary route to market for renewable generation projects, these large energy users are also contributing significantly to renewable development through Corporate Power Purchase Agreements (CPPAs). These arrangements provide long-term revenue certainty for renewable projects and have become an increasingly important mechanism supporting the development of wind, solar, and battery storage projects.

Industry analysis has indicated that approximately half of new wind energy capacity developed between 2020 and 2023 was financed through CPPAs, resulting in over 500 GWh of renewable electricity generation during this period. Although this only met approximately 16% of new electricity demand associated with data centres over the same timeframe, this contribution is expected to increase as additional CPPAs are signed, and more renewable projects reach operation. In this respect, data centres are not solely contributing to electricity demand growth but are also actively supporting the expansion of renewable generation capacity.

This increasing emphasis on renewable integration is also reflected in the CRU’s Large Energy User connection policy decision, as discussed above. In addition to introducing reporting obligations relating to renewable energy usage and emissions, the decision requires connected sites to demonstrate that at least 80% of their electricity consumption is matched with renewable energy generation, subject to a six-year glide path. This reflects a broader policy shift towards ensuring that large energy users contribute more directly to Ireland’s decarbonisation objectives and align future demand growth with renewable deployment.

At the same time, it is important to recognise the scale of the challenge facing Ireland’s electricity system. Ireland remains committed to achieving a target of 80% renewable electricity by 2030, yet significant challenges remain regarding the pace of renewable deployment, planning timelines, network development, and increasing electricity demand.



The continued growth of data centres, particularly given their relatively flat baseload demand profile, will require corresponding increases in renewable generation and supporting infrastructure if national decarbonisation targets are to be achieved.

However, the role of data centres in the energy transition extends beyond renewable procurement alone. As highlighted in Baringa's *Green Data: A Vision for Sustainable Data Centres in Ireland*, many decarbonisation solutions increasingly depend on digital infrastructure and data centre capabilities. The report notes that data platforms and analytics are being deployed across multiple sectors of the economy to improve efficiency, optimise energy usage, and support emissions reductions. Importantly, the analysis highlights that cloud data centres can be significantly more energy efficient than traditional on-site servers, with some estimates suggesting efficiencies of up to 80%, thereby reducing the overall carbon footprint of computing workloads.

In this context, data centres should be viewed not only as large electricity consumers, but also as critical enabling infrastructure for digitalisation, innovation, and broader decarbonisation across the economy. Their future role within Ireland's energy transition will therefore depend on ensuring that policy frameworks appropriately balance system security, renewable integration, economic competitiveness, and long-term infrastructure development.

### 3.3. Contribution to Network Tariffs

Data centres, alongside other Large Energy Users (LEUs) already make a substantial contribution towards the financing of Ireland's electricity system and renewable energy transition through existing tariff and levy structures. Under the Public Service Obligation (PSO) framework, medium and large commercial customers continue to contribute significantly to the recovery of renewable support scheme costs through capacity-linked charges based on Maximum Import Capacity (MIC). While the CRU's 2025/26 PSO Adjustment Paper<sup>2</sup> revised the overall levy requirement downward from its original decision, the underlying charging methodology remains unchanged, meaning that large demand users continue to represent a significant share of overall PSO cost recovery. Even following the downward revision in the

---

<sup>2</sup> [Public Service Obligation PSO Levy 25\\_26 Adjustment.pdf](#)



2025/26 PSO levy, a hypothetical 100 MW site would still contribute approximately €70,000 per month under the revised levy rates, illustrating the scale of contribution made by large electricity users towards renewable support mechanisms such as RESS, REFIT, and SRESS.

More broadly, large electricity users contribute materially across a range of electricity system cost recovery mechanisms beyond the PSO alone, including transmission and distribution network charges, system services costs, and capacity market charges. As Ireland continues to invest heavily in electricity infrastructure to support electrification and renewable integration, the presence of large demand customers expands the contribution base over which these fixed system costs can be recovered. In this respect, LEUs can support the financing and scalability of wider grid reinforcement and renewable integration measures, while also improving utilisation of network infrastructure and strengthening the business case for investment in new renewable generation and associated transmission development. While it remains important that demand growth is managed in a coordinated and plan-led manner, it is equally important to recognise the significant financial contribution that large electricity users already make towards the development and operation of Ireland's low-carbon electricity system.

#### **4. Recommendations**

The recommendations and policy developments introduced by the CRU, Government, and wider industry stakeholders represent an important evolution in Ireland's approach to integrating data centres into the electricity system. EAI supports the underlying objective of ensuring that future demand growth is aligned with security of supply, decarbonisation, and efficient system development. However, achieving these objectives will require a coordinated and proportionate framework that balances economic competitiveness with long-term system sustainability.

In this context, EAI further recommends the following measures to support the efficient and sustainable integration of data centres into Ireland's evolving electricity system.

##### **A. EirGrid's Approach to LEUs**



EAI considers that the integration of data centres and other LEUs must be assessed within a holistic evaluation of system needs, including generation adequacy, system services requirements, network constraints, operational security, and inertia volumes. This assessment should also be undertaken in conjunction with broader developments across the electricity sector, including offshore wind deployment, hybrid connection policy development, renewable integration, storage deployment, and evolving market arrangements.

It is important that the operational characteristics of data centres are appropriately recognised within policy and regulatory frameworks. Data centres require highly secure and stable electricity supplies, with limited tolerance for interruptions or fluctuations in power quality. Stable operating conditions are also essential for maintaining data integrity and supporting critical cooling systems and ICT infrastructure. As such, policy approaches should seek to integrate data centres into the system in a manner that enhances overall system resilience without compromising the operational requirements that underpin their economic function.

## **B. Decarbonisation & Net Zero Pathway**

EAI supports the phased decarbonisation pathway outlined within the CRU's LEU connection policy decision, including the increasing emphasis on renewable energy procurement and alignment between large-scale demand growth and renewable generation deployment.

In particular, the requirement for connected sites to demonstrate increasing levels of renewable energy matching over time reflects the broader transition towards a more decarbonised electricity system. EAI considers that this pathway should continue to facilitate innovative approaches to renewable integration, including CPPAs, hybrid connection arrangements, co-located renewable generation, and emerging flexibility solutions.

This also aligns with the growing potential for more advanced approaches to renewable integration, including 24/7 matching of large energy user demand with carbon-free electricity generation. As Ireland's renewable sector and enabling technologies continue to develop,



data centres and other LEUs could play an important role in supporting more granular alignment between electricity demand and renewable availability.

### **C. Grid Infrastructure**

EAI recognises that Ireland’s electricity system is undergoing a period of unprecedented development and transformation. The scale and pace of demand growth, particularly from data centres and other LEUs, has created significant challenges for the electricity networks. This growth must be seen in the context of other demand drivers including requirements to meet decarbonisation targets, large scale electrification, and the growing need for new housing connections.

The network system operators have already enabled growth across all sectors, including significant growth in LEU / data centre connections. These connections, which can be difficult to predict, typically involve very large amounts of network capacity being allocated to a single customer. Given the long lead times required to deliver new network capacity, spare capacity has been fully absorbed in some locations, leading to capacity constraints and longer waiting times for other customers seeking connections.

These significant demands need to be accommodated within a holistic and integrated industrial and electricity policy, as committed to within the Programme for Government. In light of accelerated policy targets relating to housing, economic growth, and climate action, the system operators are scaling up resources and investment to deliver significant network capacity growth over the next five years and beyond. This ambitious delivery programme (PR6) is focused on areas where the need is greatest and where there is known load growth. It remains the case however, that this additional capacity could be absorbed relatively quickly by unforeseen data centre or LEU requirements.

In summary, strategic investments in transmission and distribution infrastructure is necessary to prevent congestion and enhance reliability. Without timely upgrades, bottlenecks in the network could hinder renewable energy deployment, leading to curtailment and inefficiencies that undermine Ireland’s decarbonisation and energy security objectives.

### **D. Irish & European Competitiveness**



EAI recognises that maintaining Ireland’s international competitiveness will be critical to delivering both economic growth and decarbonisation objectives over the coming decades. Data centres and the broader digital economy form a strategically important component of Ireland’s foreign direct investment model and support a wider technology ecosystem that underpins innovation, productivity, and economic activity across multiple sectors.

At the same time, Ireland faces increasing competitiveness challenges relating to electricity prices, infrastructure constraints, planning timelines, and policy uncertainty. Addressing these issues will require evidence-based policymaking, coordinated infrastructure delivery, and market frameworks that support efficient investment and technology-neutral decarbonisation pathways.

EAI also considers it important that the broader enabling role of digital infrastructure is recognised within policymaking. As highlighted in recent industry analysis, digital technologies, cloud computing, and artificial intelligence are expected to play a significant role in improving efficiency and reducing emissions across the wider economy. In this regard, data centres should be viewed not only as electricity consumers, but also as enabling infrastructure supporting Ireland’s broader economic and decarbonisation ambitions.

A balanced and proportionate policy framework will therefore be essential to ensuring that Ireland remains an attractive location for digital investment while simultaneously delivering a secure, sustainable, and decarbonised electricity system.

## **5. Conclusion**

The EAI believes that data centres are an integral part of Ireland’s economic and energy future. With appropriate policies and market mechanisms (with regard to other national policies that need to be delivered) these users can be effectively integrated into the system, supporting grid stability, decarbonisation, and renewable investment. For our members, these large energy users offer opportunities for renewable energy development, system services innovation, and tailored energy solutions.

