Maynooth University
National University of Ireland Maynooth

Social Sciences Institute

MUSSI Working Paper Series
No – 31 September 2026

How we all pay for Big Tech

The social, economic, and environmental costs of data centres in Ireland

Seán Fearon, Patrick Bresnihan, and Patrick Brodie

Autonomous University of Barcelona
Maynooth University
University College Dublin

How we all pay for Big Tech

The social, economic, and environmental costs of data centres in Ireland

Seán Fearon[a], Patrick Bresnihan[b], and Patrick Brodie[c]

[a] Research Fellow, Institute of Environmental Science and Technology at the Autonomous University of Barcelona (ICTA-UAB)
[b] Associate Professor, School of Geography, Maynooth University and Member, Maynooth University Social Sciences Institute
[c] Assistant Professor, School of Information and Communication Studies, University College Dublin

Executive Summary

This report outlines the widespread costs and disproportionate drain on public resources resulting from data centre expansion in Ireland. The economic contributions of data centres to the Irish economy are exaggerated, with headline figures failing to account for where value accrues and who benefits from it. The development of data centres in Ireland represents a key means through which the "costs" of industrial development are socialised and its benefits privatised, especially in the context of energy transition. These costs are not just in the form of energy and water use, or inflated household bills, but the opportunity costs involved as alternative, socially necessary and climate resilient development pathways are foreclosed.

Key findings

1. Claims about the economic benefits and value of data centres to Ireland are exaggerated

We show how the recent Government commissioned KPMG report on the benefits of data centres to the Irish economy is based on a flawed methodology and misreading of national accounting data in Ireland. Instead of a realistic attribution of direct and credible real economic activity in the Irish economy to data centres, the report exaggerates economic benefits of data centres and creates untenable links between data centres and large sections of the Irish economy, including economic activity that long pre-dates data centres in Ireland. This is attempted to create a myth of "domestic dependency" on data centres.

2. Data centres are not comparable to other national industrial sectors

An argument in favour of data centres, especially regarding disproportionate resource use, is that they represent a heavy industrial presence similar to comparable national sectors such as the German automotive industry. Yet, direct employment in the German automotive manufacturing industry is in the measure of between 400,000 direct jobs, compared to about 3,300 in the Irish data centre industry. Electricity use in the German automotive sector was 12.86TWh in 2024, about 3% of German national grid demand, and this scale is expected to decline in the coming years. Data centres in Ireland in 2025 used 9.4TWh of electricity, or 23% of national grid demand.

3. Negligible indigenous economic development

The ICT sector was responsible for €279bil in computer service exports, or 58% of Ireland's total services exports in 2024. €262bil, or 94% of this total, was from foreign-owned firms (which includes the value of exports linked to assets resident in Ireland for tax reasons but not backed by real economic activity in Ireland). This means that comparatively the indigenous sector in computer service exports is negligible. A "spinoff" productive benefit of data centre growth is Ireland's high-tech construction (HTC) sector, which has grown to €2.1bil in yearly exports, 40% of all exports in the indigenous HTC sector. This means that the value generated in terms of the domestic HTC industry through exports is less than 1% of the value of (albeit distorted) exports from the foreign-owned computer services sector.

4. Power and energy consumption

Employment in the data centre sector is 776 times more power intensive than a job in education, 1,217 times more intensive than employment in the construction sector, and 1,529 times more electricity intensive than a job in the health, residential and social care sectors. Data centres provide 3,300 direct permanent jobs and utilise 23% of Ireland's power (144 jobs per 1% of national demand). The health sector alone employs approximately 140,000 and utilises about 8% of electricity (17,500 jobs per 1% of national demand). Even

if these numbers are halved, the scales of energy use per job are hugely disparate, and for work that is providing a life-saving essential service against less clear and for-profit social applications of AI.

5. Water consumption

The total water footprint of data centres in Ireland was approximately 125.9 million litres of water a day in 2025, with a total annual footprint of 46 billion litres. Cumulatively over the period 2015-2025, the total water footprint, including direct and indirect water consumption, of the Irish data centre sector is an estimated 254.7 billion litres of water. The total data centre water footprint in Ireland in 2025 is equivalent to the total direct water consumption of 340,600 homes (or 18.5% of occupied dwellings in the state).

6. Greenhouse Gas Emissions

At 620 tonnes of CO_2 per direct full-time worker employed in data centres, data centre employment is over 880 times more carbon intensive than a job in the health sector, 590 times more intensive than employment in the education sector, and nearly 400 times more intensive than retail employment. More broadly, data centre employment is 42 times more intensive than the average job in the Irish economy.

7. Economic capacity and labour shortage

In our analysis, nearly 50,000 homes could have been built between 2019-2024 with the capital invested in data centres. This is the opportunity cost of misallocated construction industry capacity to build out the infrastructure of tech giants. On average over the seven-year period 2019-2025, final demand committed to the buildout of data centre infrastructure in Ireland could have created and sustained 20,490 jobs in the education sector, 12,657 jobs in the health service, or 25,484 jobs in social work-related activities.

8. Alternative pathways of development

In growing the material footprint of multinational tech companies, Ireland risks locking its energy and industrial development pathways into the infrastructural functions of some of the most powerful companies in the world. One way of describing these developments is as a transfer of functions from the state to the tech sector, a form of privatisation by stealth. For Ireland, this gamble not only carries implications for investment but also for the functioning of critical infrastructure and services. A severe downturn in the AI economy - driven by mounting debt, minimal productivity gains, or cheaper, less compute intensive AI technologies - could result in stranded assets and de-development.

Recommendations

Current policies aimed at enabling further data centre growth represent an irrational and ecologically unsustainable allocation of resources that undermine necessary social, economic, and environmental objectives in a time of climate crisis. We argue that a more equitable and rational approach to data centre development requires a strong rejection of the "AI arms race." At a minimum, this will require a moratorium on new data centre development, allowing the re-centring of priorities on climate action and digital policies which are explicitly in service to the urgent socio-environmental needs and democratic mandate of the Irish public.

Table of Contents

Executive Summary 1
Key findings 1
Introduction 4
1. The 21st century data centre and AI economy - a concentration of wealth and resources 6
2. Exaggerated benefits 9
2.1. Government Support for the Data Centre Sector 9
2.2. The exaggerated economic benefits of Ireland's data centre sector 10
2.3. Data centres are not comparable to other national industrial sectors 11
2.4. Negligible indigenous economic development 12
3. Socialised costs 15
3.1. Power and energy 15
3.2. Water 18
3.3. Greenhouse gas emissions 20
3.4. Economic capacity and labour shortage 21
4. Alternative pathways of development 25
4.1. Infrastructural lock-in 26
4.2. Vulnerability to speculative AI economy 27
4.3. Alternative pathways 28
Footnotes and References 32

Introduction

Data centres in Ireland use a significant amount of electricity and water, contributing to carbon emissions, ecological degradation, and infrastructural constraints in the context of a mounting climate crisis. The industry and government insist that the benefits of continued data centre growth, in terms of value to the economy and securing future tech investment, outweigh this resource intensity. In fact, industry and government argue that data centres are critical infrastructures for delivering the "twin transitions" of digitalisation and decarbonisation of our society,[1] and thus should be facilitated and planned for in a more strategic and accelerated way.

However, the arguments of the industry and successive Governments do not stand up to empirical scrutiny and tend to rest on non-transparent and spurious methodology designed to inflate the economic value of data centres in spite of recognised costs and capacity constraints. Drawing on empirical evidence, this report presents arguments that respond to these claims from industry and government. In doing so, we aim to provide some much needed clarity on the role, benefits, and costs of data centres to Ireland.

The development of data centres in Ireland represents a key means through which the "costs" of industrial development are socialised and its benefits privatised, especially in the context of energy transition. These costs are not just in the form of energy and water use, or inflated household bills, but the opportunity costs involved as alternative, socially necessary and sustainable development pathways are foreclosed. **Current policies aimed at enabling further data centre growth represent an irrational and ecologically unsustainable allocation of resources that undermine necessary social, economic, and environmental objectives in a time of climate crisis.** We argue that a more equitable and rational approach to data centre development will require an immediate moratorium, to shift emphasis from AI-led competition and economic growth towards socially beneficial and environmentally necessary green industrial development policies.

The report is structured around three core arguments.

First, **claims about the economic benefits and value of data centres to Ireland are exaggerated.** Headline figures and government claims about the value creation of data centres are overstated and ignore where value accrues and who benefits from it. Comparisons of data centres to large industrial sectors in other European countries fail to account for how the digital services sector, dominated by US multinationals, generates value *through* Ireland, rather than for Ireland. An indigenous data centre construction sector has developed but this carries significant opportunity costs, with labour diverted to highly specialised construction as well as overseas projects rather than the construction of urgent social infrastructure at home.

Second, **the costs of data centre development, including runaway electricity consumption, water use, and greenhouse gas emissions, are socialised through existing industrial policy**. This is compounded by the opportunity cost of data centre development, where economic capacity required to build necessary social infrastructure and adapt to the worsening impacts of the climate emergency is diverted to build the infrastructure of US multinational tech giants. Given the limited jobs and concrete economic benefits, this demonstrates why continued growth of data centres represents an irrational allocation of resources, when

these resources and infrastructures should be prioritised for decarbonisation, climate adaptation and social need.

Third, **a development strategy that focuses on continued data centre growth locks us into a dependent economic model which is ecologically unsustainable and contradictory to long-term sustainable planning and development.** Rather than securing Ireland's economic future, current policies around data centre growth leave Ireland and our energy system irresponsibly exposed to geopolitical and economic downturns in the digital economy, the fortunes of US multinational companies, and foreign energy supply.

In what follows, we provide the evidence base to support these three arguments. We begin by providing some much needed context on the nature of the 21st century "digital economy" as it is taking shape in Ireland.

1. The 21st century data centre and AI economy - a concentration of wealth and resources

To understand the distribution of benefits facilitated by data centres, it is first necessary to understand the nature of the "digital economy" in the 21st century, and Ireland's place within it. Data centres are the infrastructures of "cloud computing," a business model developed in the 2000s which was premised on the outsourcing of computing capacity to dedicated firms. In recent years, data centre growth is largely driven by the surge in consumption of artificial intelligence (AI) technologies,[2] a sector in which the Irish government seeks to position itself as a "global leader."[3] The multinational corporations behind this expansion, many of whose European headquarters are based in Ireland, have seen an unprecedented expansion in market capitalisation due to the AI boom. Meta, for example, based in Ballsbridge in Dublin and with a hyperscale data centre campus in Meath, are among a group of tech giants at the heart of AI-driven wealth accumulation whose total assets grew by 23.8% in 2025, equivalent to $583 billion.[4] Meta's market capitalisation at the time of writing is $1.5 trillion.

Between control of the infrastructure and the IP of technology, the US tech industry has become increasingly monopolistic in character.[5] The cloud and AI boom are undergirded by the cloud "hyperscalers," in particular the "Big 3" - Amazon Web Services (AWS), Google, and Microsoft - who together account for 63% of the global market share in cloud computing, an effective monopoly.[6] Most of the electricity used by data centres in Ireland comes from hyperscalers - about 1,350 MW of the total 1,543 MW.[7]

They also plan to expand. According to Baxtel, an industry source, AWS has installed a total of 921 MW capacity in Ireland as of 2026. If this installed capacity were to be used to its full allotted capacity, over the course of a year, this would take up 8,067,960 MWh[8] - or around 25% of all electricity consumed in the state (as of 2025).[9] One estimate suggests that Microsoft has a total installed data centre capacity of 600 MW,[10] which would, similar to AWS, mean that about 16% of national electricity demand could be allocated to Microsoft's servers. This is of course not the true scale of electricity usage, which would be more than reported electricity usage by all data centres. But it raises up front an issue of transparency and reporting, as well as concerns around the scalability of these facilities based on existing market dynamics and available capacity.[11]

Advocates of data centre expansion point to the investment they bring to communities, such as the €4mil invested in Clondalkin since 2008 (€222,000/year over 18 years).[12] However, Microsoft's market capitalisation at the time of writing is $3.6 trillion. **After tax, Microsoft's Irish subsidiary recorded €47bil in profits in 2025,[13] 38% of the company's global profits, also paying €42.7bil in dividends to its US parent company.[14] That means the company's €100,000 earmarked, conditional community fund for Clondalkin in 2025 accounted for just 0.0000021% of its reported Irish profits.** With limited jobs available in the sector, it is clear, therefore, that the uninhibited growth of data centres is not a development opportunity for struggling communities - it is the physical footprint of the rapid expansion of the wealth and power of tech giants.

Industry boosters might point out that Microsoft paid €5.6bil in corporation tax in 2025, to the public exchequer, and has a presence in Ireland wider than its data centre footprint. The company reports 3,500 jobs directly in Ireland as a whole,[15] or 6,654 including subsidiaries, reportedly 400 of whom work across their 17 individual data centre facilities in Grange Castle.[16] But the company also booked €7mil in profits

per Irish employee in 2025, 13x its global average.[17] That means that operations are exceptionally profitable for the corporation in Ireland, indicating likely profit shifting alongside immense profits on less labour-intensive activities including cloud services.

In the end, these arguments rest on a view that Ireland's dependency on US capital creates a "concentration risk" which is actually an asset to be protected. Our reliance on foreign direct investment (FDI)-based tax receipts, employment, and "spillover" development means that keeping these companies happy is a top priority, and is conflated with our national development strategy.[18] This includes protecting secrecy, shielded by "commercial sensitivity," around the true footprint of big tech infrastructure in Ireland.[19]

The Irish state's economic model - and specifically its ongoing data centre strategy - is thus now deeply tethered to the AI boom and the infrastructural demands of tech companies of extraordinary scale and power. In fact, the historic inflation of the market capitalisations in the AI sector are increasingly underpinned by expectations that tech giants will continue to be able to build data centres, and amass the resources required for greater computing power, uninhibited in the future. Between 2021 and May 2026 $1.8 trillion has been invested in data centre construction in the US, with this expenditure dominated by the tech giants also resident in Ireland, namely Google, Meta, Microsoft and Amazon.[20] Fully $600bn of this data centre buildout came in 2025.

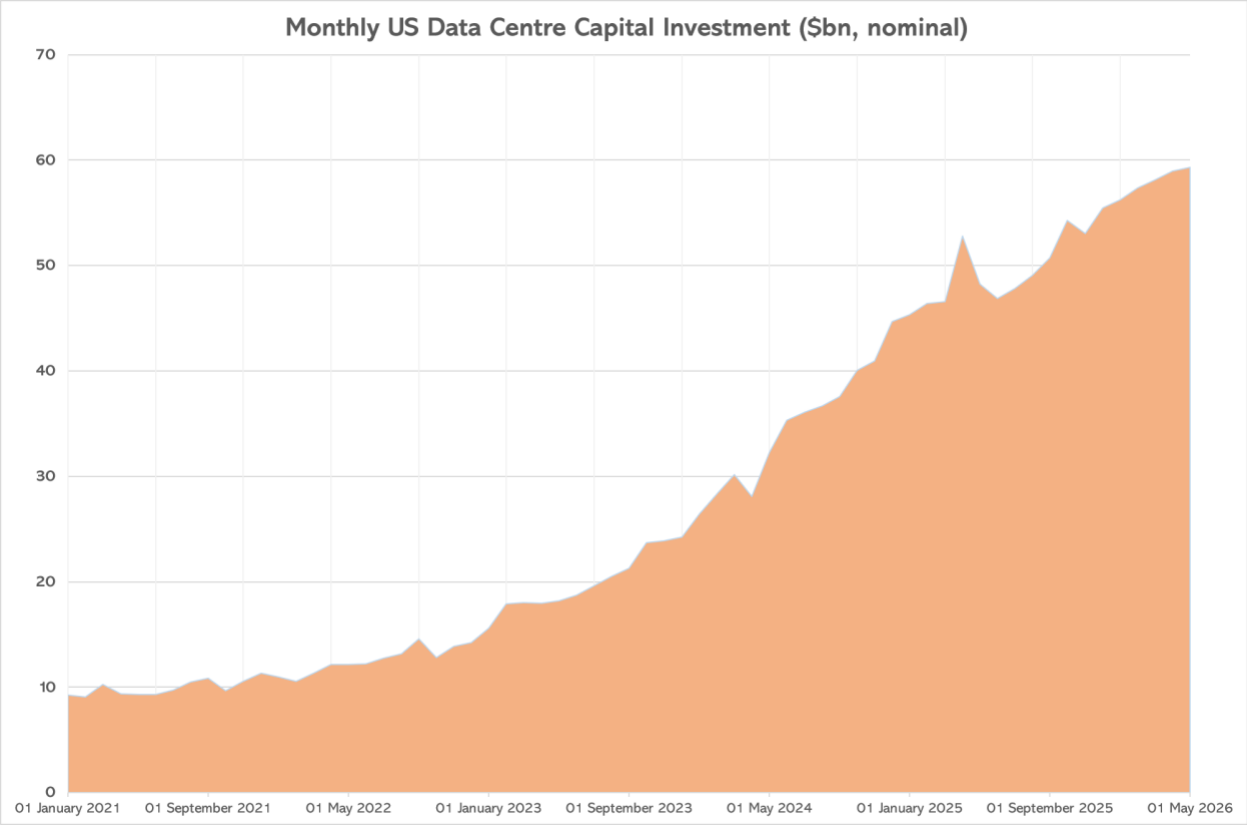

Figure 1 - Monthly US data centre capital investment trends, $bn nominal[21]

As the "AI arms race" intensifies, concentrated in infrastructure and driven by geopolitical and firm competition,[22] this investment is increasingly debt-fuelled, as the hyperscalers exhaust free cash flows in order to chase uncertain AI returns. In a recent report, the Bank of England has noted how the historically

"unprecedented" surge in capital investment financed by debt is increasing systemic risk in financial markets,[23] with risks for society and the real economy. Official modelled estimates from the Irish government make clear the same risks. Such is the nature of Irish economic dependency on US tech giants, where an AI price correction could have a significant impact on the public finances and loss of employment.[24]

The corollary of this rapid expansion in the market capitalisations of tech giants is that the billionaire executives atop these corporations have seen their personal wealth soar.[25] This has contributed to a profound rise in global inequality in recent years, which frays the social fabric and frustrates socially-useful economic development[26] by misallocating our essential resources to a handful of US multinational tech companies. This is especially true when it comes to countries where outsourcing operations are located. The owners of these companies do not reside in Ireland, and direct social investment is limited to minor philanthropic activities in local areas to gain development consent.

This is the shape of the data centre and AI economy as it lands in Ireland in the 21st-century, dominated by US tech giants with data centres representing the physical footprint of this surge in concentrated wealth and resource control. It is also an important context for understanding Ireland's place within the new digital economy, as the Irish government seeks to further position the domestic economy and infrastructural policies firmly within the flows of wealth and resource accumulation of tech monopolies. To make this case, it has exaggerated and obscured the relationship between the real Irish economy and data centres.

2. Exaggerated benefits

In this section, we show that headline figures and Government claims about the value creation of data centres are overstated, and elide where value accrues and who benefits from it. Comparisons of data centres to large industrial sectors in other European countries fail to account for how the digital services sector, dominated by US multinationals, represents an unsophisticated but capital-intensive and largely automated part of the AI value chain. Data centres require very few jobs after the construction phase and perform tasks that are akin to managing electricity and waste heat for server operations, with little to no socially useful production beyond basic computer services. An indigenous data centre construction sector has developed but this carries significant opportunity costs, with labour diverted to highly specialised construction as well as overseas projects rather than the construction of urgent social infrastructure at home.

2.1. Government Support for the Data Centre Sector

Irish Government policy has been unanimously supportive of data centre expansion. In 2018, soon after Apple withdrew from its proposed €850mil, 160 MW Athenry data centre project due to planning delays, the Government put out its first "Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy."[27] The 12-page document outlines a series of now-familiar arguments about the importance of data centres to the Irish economy, arguing that the location effect of data centres contributes to drawing in and maintaining investment and jobs across sectors. Advocating a "plan-led" approach that accounts for energy demands, local concerns, and planning delays, the document proposes a policy framework that will treat data centres as "strategic infrastructure" and avoid repeated situations like Apple in Athenry.

Data centre energy usage continued to rise, unsurprising given Government support. In 2021, it rose to 14% of national electricity up from 5% in 2015, which would today still place Ireland at the top of national-scale allocated electricity towards data centres in Europe.[28] Amidst campaigning from opposition parties and climate groups towards a moratorium, a Commission for Regulation of Utilities (CRU) directive (CRU/21/060) in 2021 indicated that the national grid was under significant pressure and would require restrictive connection measures to ensure that the grid could keep up with expected demand. In response, Eirgrid imposed what was referred to by the industry as a "de facto moratorium" on data centre grid connections in the Dublin region.

The next Government statement arrived soon after the de facto moratorium, in 2022,[29] arguing that data centres are attracted by Ireland's FDI successes. Far from a barrier, the statement develops the argument that data centres can facilitate a renewable energy transition, and that the Government should enable their expansion through grid investment. As the document concludes,

> In addressing our energy system constraints and unlocking the full potential of Ireland's renewable energy resources, we are building the longer-term foundations for a net-zero ready economy and society that will be a competitive and attractive hub for decarbonised digital services and manufacturing industries. Digital infrastructure is the backbone of our knowledge economy and will continue to serve us well in delivering a future-ready low carbon, high value economy. (p. 22)[30]

There has been no shortage of debate surrounding the economic benefits of the sector to justify these costs. 2026 has seen these debates come to a head, with a clear Government offensive to deliver data centre growth, in order to accommodate and compete in the AI race. However, critiques have long centred on the

lack of long-term jobs, the unclear development benefits, and the fact that the Irish grid is, by the Government's own admission, in no position to accommodate further demand from what they classify as "large-energy users."[31]

As a generality, the problem of data centre growth has been presented as a technical problem in the mainstream, meaning that Government solutions such as corporate power purchase agreement (CPPAs), "private wires," fast-track planning, on-site energy generation, and grid flexibility mechanisms delivered by data centres themselves appear as common-sensical adaptations to this essential industry.[32] Lacking in these arguments is a clear and transparent articulation of the benefits for Ireland, especially as they might outweigh the increasingly obvious environmental costs and other trade-offs, which are widely reported as being amplified during AI data centre expansion elsewhere.

2.2. The exaggerated economic benefits of Ireland's data centre sector

In an attempt to respond to these concerns, a report written by KPMG entitled "The value of data centres to Ireland" was published in June 2026. Commissioned by the Department of Enterprise, Tourism, and Employment, at a cost to the public exchequer of over €100,000, the report claims that data centres are responsible for over 876,000 jobs (almost 1/3 of total employment) in Ireland. The report calculates that €104bn in gross value added (GVA) is "enabled" by data centres annually, equivalent to about 1/5 of Ireland's GDP in 2024. These claims have been repeated by senior government figures and cabinet ministers since the publication of the report.[33] Minister for Finance and Tánaiste, Simon Harris TD, specifically cited the headline claims made by KPMG in their report:

> …the evidence available to Government is that across the six sectors in Ireland that are identified as being most dependent on data centres, it's estimated that of the order of €100bn in annual gross value added, 875,000 jobs and €14.6bn in annual employment-related taxes were enabled by data centre capacity located in Ireland.[34]

If these figures were true, it would mean that data centres are responsible for an enormous proportion of Irish economic activity. They do not hold up to any scrutiny, however. The economic claims made in the KPMG report are based on a spurious methodology and a misreading of national accounting data in Ireland.

Using an input-output (IO) modelling approach based on economic data from the Central Statistics Office (CSO), KPMG have estimated the direct, indirect, and induced economic impacts linked to data centres in key sectors of the Irish economy. Among these is the ICT sector, whose GVA is among the highest of all sectors in the Irish economy. This is not solely due to real economic activity, however. Value added in the ICT sector in Ireland is heavily distorted by the effects of multinational profit shifting. This has rendered GVA useless as an indicator of economic activity in sectors of the Irish economy dominated by multinational activity.[35]

KPMG plugged these inflated GVA figures into an input-output model, and through simple IO operations[36] calculated employment or GVA effects throughout supply chains (i.e. indirect effects). They created a range of scenarios, however, where these GVA figures are filtered by a range of parameters, two of which are worth unpicking here in detail: the *digital* and *domestic* dependencies of large sectors of the Irish economy on data centres (ICT, finance, health and social work, transport, retail and professional services).

By conducting a survey of just 30 huge private enterprises across these sectors, employing an average of 2,100-5,200 people, KPMG created a simple percentage share of how much of their work is "digitally dependent" and how much relies on data centres being located with 50km (estimates that are themselves unverifiable given the nature of cloud computing).

They then applied these shares to *all GVA* (including the grossly inflated ICT figures) *from all businesses* in these sectors. They further claim this approach to be "robust" and "representative" of the economy, despite the fact that approximately 99% of businesses in the Irish economy employ less than 50 people, and these small businesses constitute nearly two-thirds of total private sector employment.[37] The report further claims that domestic economic activity from these sectors is dependent on nearby data centres if it is located within 50km of a data centre site.

To take a tangible example. If Hospital A, residing within the "Health and social work" sector, is within 50km of an AWS data centre, then the activities of surgeons and paediatricians with clear and urgent social use value, are assumed to be dependent on this specific data centre. It will come as some surprise to medical professionals in Ireland that many of them are "dependent" on nearby data centres for their life-saving work, whilst others are not.

Instead of a credible analysis of direct and real economic activity that may be linked to data centres, the Government has sought to create a myth of "domestic dependency" of huge sections of preexisting economic activity in Ireland to hyperscale data centres.

Furthermore, KPMG's presentation of employment creation as a benefit of data centre expansion should be more accurately understood as a misallocation of scarce economic resources. The Government-sponsored report claims that data centre investment in 2024 *created* 6,000 direct construction jobs, out of about 11,000 total construction-related jobs related to data centres. However, our analysis suggests that in the context of widely acknowledged labour and skills shortages and reduced construction capacity in other sectors, this actually represents market and sectoral distortion due to the scale of capital investment available for hyperscale data centre development (which made up the vast majority of data centre construction jobs). Indeed, results presented in Section 3.4 show that if investment final demand directed towards data centres in 2024 was instead directed towards home construction, this demand would have required labour equivalent to 7,750 direct jobs (6,220 of which are in construction), some 1,750 more than that claimed by KPMG. In short, this is about a market-led misallocation of labour and resources at a significant opportunity cost, at a time when finite economic capacity is urgently required to address social and ecological needs.

2.3. Data centres are not comparable to other national industrial sectors

Another frequent argument in favour of data centres, especially regarding disproportionate resource use, is that they represent a heavy industrial presence similar to comparable national sectors such as the German automotive industry.[38] Beyond the basic flaws in this comparison - including the ownership models, jobs, and direction of capital flows - it is worth briefly unpacking what cloud computing represents in the scheme of the tech industry.

While data centres are essential to AI development in its current model, their location and status as a "multiplier" for productive economic activity and technology transfer is not backed up by empirical evidence. Data centres represent an **unsophisticated and largely automated part of the AI value chain,**

requiring very few jobs after the construction phase and performing tasks that are akin to managing electricity and waste heat for server operations.

The scale and concentration of data centre development in Ireland is the highest in Europe, as the country is the world's third-largest hyperscale data centre hub, home to about 5% of the world's hyperscale data centre capacity, behind only Northern Virginia and Beijing.[39] These hyperscale data centres in Ireland provide basic cloud services for European enterprise, which has minimal direct impact on domestic activities such as R&D. In short, the "multiplier" effect cited by the industry and policymakers only relates to potential latency and sovereignty concerns for companies already located in proximity to these existing data centre hubs, or to the potential for companies developing their own bespoke AI models to require computing capacity locally.

Compare this to the German automotive industry. Ultimately, in terms of exports, we are looking at comparable numbers - the German industry exported €261bil in vehicles in 2024.[40] Direct employment in the sector, however, is estimated in the measure of 400,000 direct jobs depending on counts.[41] Electricity demand of the sector was 12.86TWh in 2024,[42] 3% of all electricity generated in Germany in 2024,[43] and this scale is expected to decline in the coming years.[44] Data centres in Ireland in 2025, on the other hand, used 9.4TWh of electricity, or 23% of national grid demand, offering direct permanent employment of about 3,300 in 2024.[45]

Comparisons between these nationally-based industries are thus spurious at best, considering the scale and the differences in physical goods manufacturing and technological services, but especially in terms of domestic ownership, employment numbers, and GVA. Think about what a car factory can be used for. Electric vehicles, for example, structurally shift the demand profile of energy in the economy to cleaner forms (electricity) whilst meeting a basic human need (mobility). Data centres in Ireland, on the other hand, largely host the passive storage of data and increasingly space for training AI models and engagement "slop" with limited social use value and meeting no basic need.[46]

Similarly, economic productivity gains and decarbonisation promised by data centres and AI, on the other hand, have not been delivered, and remain speculative, mired by exaggerated claims about benefits and greenwashing.[47] Official estimates from the Irish government indicate that AI is already contributing to net job losses among under-29s,[48] meaning employment drain may continue apace following further AI incentivisation. Where AI is increasing productivity, it is benefitting employers rather than workers[49] - and "optimistic" economic forecasts predict that any eventual widespread productivity gains would directly correspond with significant employment losses.[50] On the climate solutions front, data centres have actually directly led to increasing national emissions, including through gas lock-in and absorption of new renewable capacity (meaning as electricity usage rises due to data centres, growth in renewables cannot meet new demand).[51] Their ability to "unlock" green investment rests on the same speculative and unproven promises.

2.4. Negligible indigenous economic development

One of the core arguments for data centres and FDI-led industrialisation as a whole is that Ireland reaps "spillover" developmental benefits from the location of multinational industries in Ireland. Beyond the statistics of the KPMG report, this argument rests on an admission that domestic sectors, including AI and ICT more broadly, are secondary to, and dependent on, the presence of FDI companies. Indeed, indigenous

companies make up a very small proportion of the sector, primarily as contractors in tertiary design, component manufacturing, and services. A Government report supporting the Silicon Island national semiconductor strategy from 2025 demonstrates that the production of microchip components in Ireland is almost 100% foreign-owned, with nearly all of the €15.5bil estimated annual export revenue generated by multinational entities. [52]

The ICT sector, of which data centres are a part, represents an extreme if distorted example of similar industrial sectors in the Irish economy. The ICT sector in Ireland accounted for €279bil in computer service exports, 58% of total services exports, in 2024. €262bil of this €279bil was from foreign-owned firms, which includes the value of exports linked to assets resident in Ireland for tax reasons, but not backed by real economic activity in Ireland. Of this reported export value in the ICT sector, 94% was from multinationals (or 54% of total services exports). There is little evidence that the immense value of ICT exports in the mid-2020s is linked to a real spillover benefit for indigenous economic development in the sector, rather than just a tax opportunity for tech giants, generating inflated export receipts without real concurrent economic activity.

Undoubtedly, the primary employment creation from data centres is short-term jobs during the construction phase. In 2020 alone, during "peak construction" of data centres in the state, there were 14,300 construction jobs and 6,000 indirect construction-related jobs across the data centre supply chain. The concomitant concentration of data centre construction expertise in the sector has supported and grown indigenous industry. The KPMG report shows that Ireland's high-tech construction (HTC) sector has grown to the tune of €2.1bil in yearly exports, or around 40% of all exports in the indigenous HTC sector.[53]

However, this spillover benefit is less than 1% of the value of exports from the foreign-owned computer services sector. This should not discredit the real economic activity that occurs alongside the data centre industry - domestic firms that operate within data centre supply chains are undoubtedly more proportionally employment-intensive than the operational facilities themselves, from engineering to energy service and component providers to construction.[54] However, what this financial disparity shows is that whatever the minimal spillover benefits, data centres are ultimately pass-through investment, or what used to be called "enclave industries."[55] Empirically verifiable data about their real economic activity is unavailable, especially given the FDI characteristics of the sector and associated inflated export receipts, which do not correspond to real production occurring in Ireland. When this is considered, then, the real, domestic economic activity that occurs around data centre development represents an opportunity cost, given that engineering and construction capacity is being dedicated to inflated AI growth rather than socially useful development in green transition, housing, and other activities (see section 3.4).

In spite of this, state industrial policy is increasingly emphasising the urgent need to keep up in the "AI race," developing pathways for data centres to accommodate their own bespoke infrastructure and development needs, or risk falling behind and losing investment. However, even warnings from economic experts at KPMG, hired by the Government to produce a positive account of the industry, reportedly sounded the alarm that "infrastructure support and investment" allocated to data centres "could be more impactful if directed toward public services like transport or housing."[56] The Government directed KPMG to remove this line from the report, to make sure that it "provides the evidence base that supports the position that we should continue to further develop our data-centre landscape post-2030 in the context of our climate objectives."

The next section considers those “opportunity costs” excluded from the Government commissioned report, shifting from our assessment of existing claims and scenarios to calculated costs and projections based on available data and trends.

3. Socialised costs

The sheer scale and pace of data centre growth, and the wealth and power of US tech giants, enables the concentration of productive capacities, infrastructure, labour, natural resources, and the rapidly dwindling, or already exhausted, ecological "space" within which we can develop the global economy within safe planetary limits.[57] This dynamic creates direct ecological and economic costs for all of us.

In this section we outline the costs of runaway data centre development borne by Irish society. These can be understood in a number of different ways:

- Direct costs imposed on households and businesses;
- Indirect costs from excessive resource use, environmental degradation, and infrastructural requirements;
- Opportunity costs of devoting scarce resources and economic capacity to building out the infrastructures of US tech giants at a time of ecological crises and social shortage in Ireland.

We explore and present empirical estimates of many of these costs through the channels in which they primarily manifest: the power and resource consumption of data centres, their environmental footprints, and their consumption of scarce economic capacity.

3.1. Power and energy

A recent UN report on AI and sustainability corroborated the fact that Ireland is a "cautionary tale" when it comes to poorly planned data centre growth.[58] According to the latest CSO figures, 23% of electricity on the national grid was accounted for by data centres in 2025. The closest country comparison is Singapore which is in the range of 7%.[59] In Europe, the Netherlands was 4.6% in 2024.[60] Ireland's installed data centre capacity is projected to grow by 19% between 2025 and 2030, based on 300MW worth of existing contracts for further grid connections as of the end of 2025.[61] This would mean a total installed capacity of 1.84GW. As much as 30% of all electricity consumption in the Irish state could be consumed by data centres by 2030.

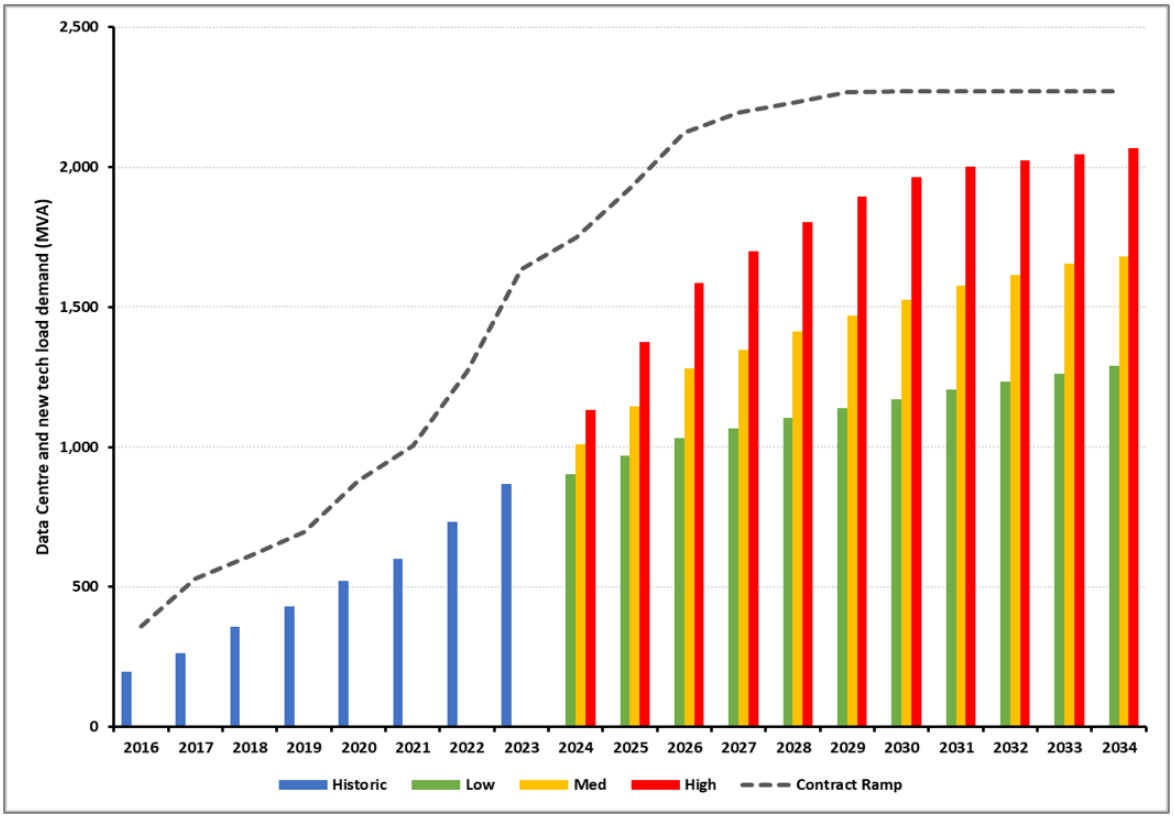

Figure 2 - EirGrid analysis of future installed data centre capacity and power consumption scenarios[62]

However, a recent market intelligence exercise undertaken by EirGrid indicates that this capacity could rise to as high as 5.8GW[63] over the 15 years out to 2040 due to anticipated data centre demand. Though this will depend on domestic policy, the clear signal from tech giants, given the unprecedented flows of investment capital they have committed to data centre buildout in recent years, is that they fully intend to expand their data centre footprints, and with it their consumption of energy in the throes of a climate emergency. For an indication of scale, Google globally consumes more electricity than the entire Irish state, with its total power demand increasing almost *8-fold* since 2017.[64]

It is difficult in social and environmental terms to justify this extraordinary growth in energy consumption, particularly when the growth is understood in terms of limited direct economic benefits data centres provide Ireland, as well as Ireland's fossil fuelled grid mix.[65] Direct employment in data centres versus the material and energy required to construct and operate them is extremely low versus other sectors. Data centres provide 3,300 direct permanent jobs and utilise 23% of Ireland's power (144 jobs per 1% of national demand). The health sector alone employs approximately 140,000 and utilises about 8% of electricity (17,500 jobs per 1% of national demand). Even if these numbers are halved, the scales of energy use per job are hugely disparate, and for work that is providing a life-saving essential service.

Figure 3 below illustrates the comparative intensity of electricity consumption between a job in data centres and employment in other crucial sectors in the Irish economy, including ICT when data centres are excluded. **Based on 2024 data,[66] at 2,120 MWh of electricity consumption per directly employed job in the Irish data centre sector, we find this employment is 776 times more power intensive than a job in education, 1,217 times more intensive than employment in the construction sector, and 1,529 times**

more electricity intensive than a job in the health, residential and social care sectors combined. Importantly, it is also 350 times more intensive than employment in the ICT sectors when data centres are excluded from this sector.

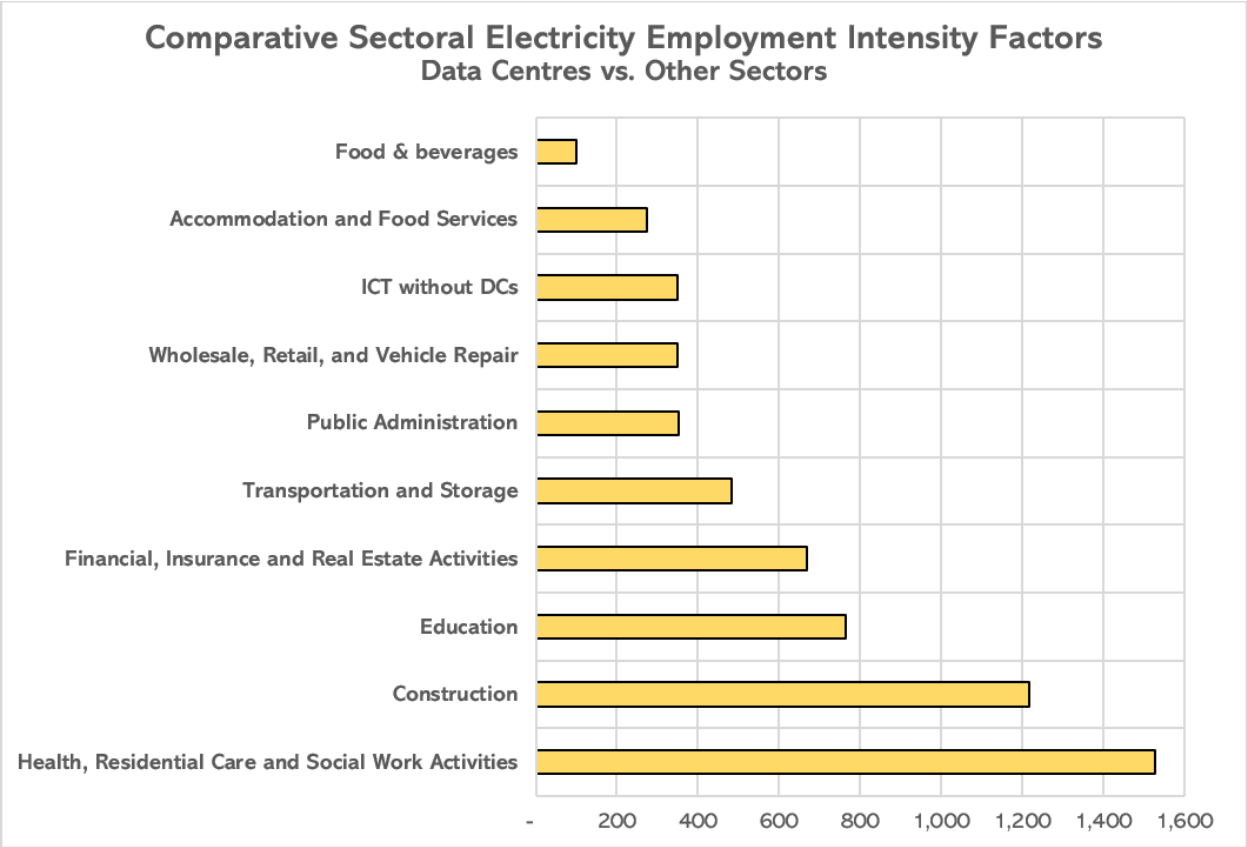

Figure 3 - Comparative electricity intensity factors of data centre employment versus other selected sectors in the Irish economy (2024 data)

Comparing data centres to other sectors of the FDI-led tech economy, such as semiconductor manufacturing, is also instructive. Based on Intel's own estimates of direct and indirect employment, the company is responsible for nearly 1% of all employment in Ireland and .7% of GDP.[67] Most of the roughly 5,000 direct jobs at Intel are centred around its manufacturing operation. Intel's electricity demand is also likely in the order of 5% of national demand,[68] equivalent to around 1,000 jobs per percentage of national electricity demand (vs 144 direct jobs per percentage of national electricity demand for data centres, or 7x more power intensive than an already power intensive Intel-related job). Similar to Intel, like other industrial consumers, data centres receive preferential electricity prices and the state mobilises to provide the necessary infrastructure.[69] This requires policy and planning choices that accommodate the scale of infrastructural build-out, to support demonstrably minimal direct jobs. In 2024, as an example, Meta's data centre campus in Clonee consumed 1,076,961 MWh of electricity to power its multiple facilities[70] - 3.34% of total national electricity consumption that year.[71] Similar to Intel before it, Meta's facility was a transformative infrastructural project in the Dublin suburbs - 250 acres, to Intel's 360 - and supports 300 presumably permanent operational jobs.[72] That's roughly 1.2 jobs/acre, to Intel's 13.8. Or, 89.8 jobs per 1% of national electricity usage.[73]

The soaring consumption of electricity by data centres resident in Ireland is not an abstract issue. It imposes direct costs on households and small businesses by consuming scarce renewable energy capacity and intensifying Irish dependence on fossil fuels (which have been subject to extraordinary price volatility since 2022). In fact, since 2017 data centres have effectively consumed all new renewable power capacity created in Ireland.[74] The Climate Change Advisory Council (CCAC) have reported that additional renewable energy generated is being "cannibalised" by data centres instead of displacing fossil fuel generation.[75]

This electricity demand growth by data centres has directly exposed Irish households to electricity price increases, exacerbated by fossil fuel price shocks in wholesale electricity markets. Recent modelling has indicated that data centres increased wholesale electricity costs in Ireland from 2015-2023 by €360 for the average household.[76] In total, this has cost all Irish households some €715m during this time. This is the lost income of Irish households, paid by the public to support data centres over the period. Households pay twice as much for their electricity per unit as data centres.[77]

This all occurs during a cost of living crisis, when Ireland has hit a record of 322,298 customers, or 14% of all domestic electricity users, in arrears on their electricity bills.[78] That represents an increase of 20% compared to December 2024. In April, Eurostat found that households in Ireland had the highest electricity prices in the EU for the second half of 2025.[79]

The wholesale electricity market is not the only means by which data centres and tech giants socialise the costs of their infrastructural development. Despite accounting for 88% of electricity demand growth in Ireland since 2015,[80] with further growth expected into the future, data centres are expected to pay disproportionately low charges for maintenance and expansion of the grid for the transmission and distribution of electricity. As a recent report found, network pressures from large energy users such as data centres explicitly implicate charges on household energy bills - meaning, data centre growth and the associated costs of grid upgrades will be distributed amongst households, rather than the corporations driving it. This model of inequitable, "public risk, private reward" through the energy system is a policy choice by the utilities regulator, not an inevitability.[81]

As well as shifting the financial costs of energy to households, growing data centre energy usage on an already constrained grid directly impinges on the ability of Eirgrid to power other, socially beneficial sectors and services. In 2025, Oonagh Buckley, secretary general at the Department of Environment, Climate and Energy, told an event that data centres had used up the spare capacity in the energy grid, requiring policymakers to make stark choices: "We're having to even think about prioritising what is the social need of the demand [for energy] - is it housing or is it AI (artificial intelligence)?" While this binary choice was denied by Government ministers, it is clear that infrastructural planning requires trade-offs, particularly with electricity demand and grid connection requests growing for public transport[82] and housing in the context of decarbonisation.[83]

3.2. Water

Data centres are voracious consumers of freshwater.[84] World-leading researchers in the science of planetary boundaries - the real, non-negotiable ecological limits which define the safe space within which our societies can survive - have found that sustainable levels of freshwater consumption have been passed since the mid-20th century.[85] The UNU estimated that globally data centres had a total water footprint linked to

electricity consumption of 4.5 trillion litres, equivalent to the annual basic water needs of 600 million people in Sub-Saharan Africa.

Using parameters published in the UNU report,[86] alongside data centre energy consumption data released by the CSO,[87] **we estimate that the total water footprint of the electricity consumption of data centres in Ireland was approximately 125.9 million litres of water a day in 2025, with a total annual footprint of 46 billion litres (see Figure 4 below).** Assuming approximately 85 active data centres in Ireland[88] this infers the average daily water footprint of electricity consumption from a single data centre in Ireland is 1.48 million litres. **Cumulatively over the period 2015-2025, the total water footprint, including direct and indirect water consumption, of the Irish data centre sector is an estimated 254.7 billion litres of water.**

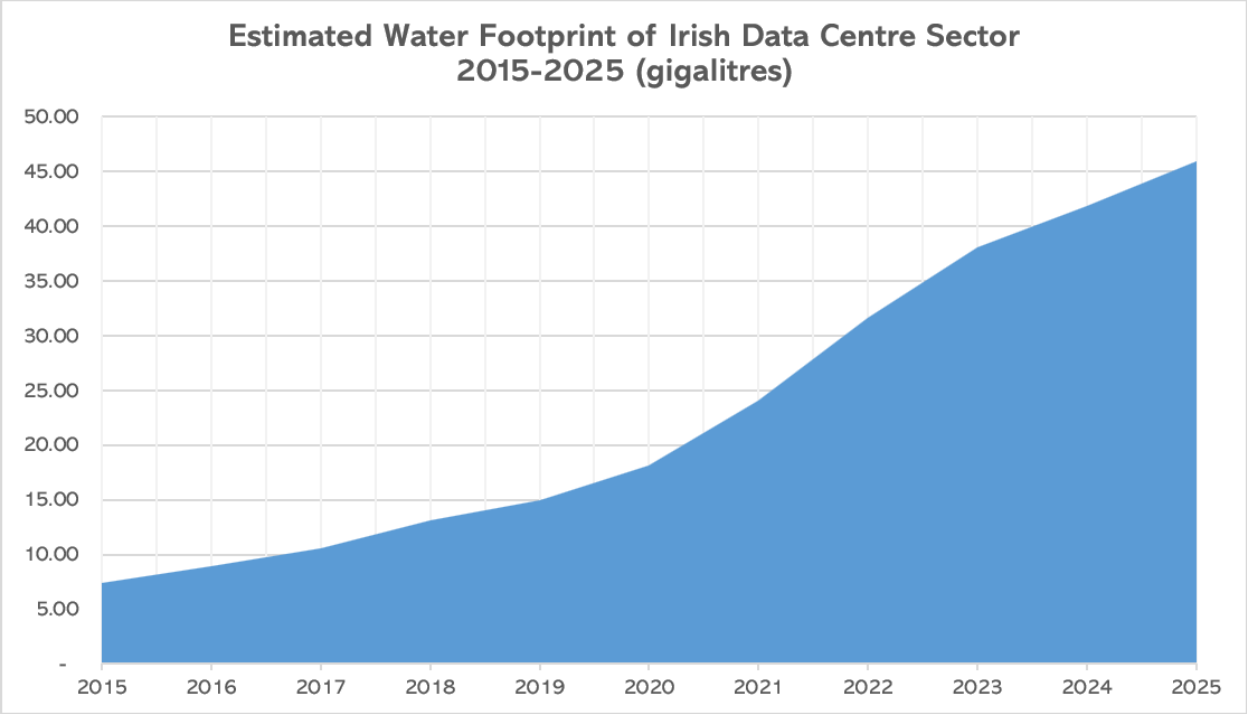

Figure 4 - Estimated water footprint of electricity consumption of Irish data centres, 2015-2025

For a more intuitive comparison, we can contrast this figure against the average daily direct water consumption of the average Irish household (though this approach compares total footprint consumption, including direct and indirect water use of data centres, versus direct consumption only). Using CSO data available from 2016-2022, the total water footprint of the data centre sector is equivalent to the direct consumption of water of 66,200 homes in 2015, 97,440 homes in 2018, rising to 175,800 homes in 2022. If we assume that in 2025 the average Irish home consumed the average of its daily consumption from 2016-2022 (370 litres), then **the total data centre water footprint in Ireland in 2025 is equivalent to the total direct water consumption of some 340,600 homes (or 18.5% of occupied dwellings in the state).**[89]

These estimates are based on publicly available data, and research in this space would be substantially improved by the regular, detailed and transparent release of environmental pressure variables and foot printing data from tech companies resident in Ireland, who lobby against even basic environmental disclosures.[90] At present the Irish data centre sector does not disclose any detailed power usage effectiveness

(PUE) and water usage effectiveness (WUE) estimates to the Irish public, despite oncoming EU legislation requiring mandatory sustainability performance reporting. Despite the legislation having taken effect, only 11 of Ireland's 82+ data centres are represented on the dedicated EU database at the time of writing. There are no financial penalties currently in place to enforce the reporting mandate, meaning the Irish state is currently risking EU fines for non-compliance while protecting data centre interests.[91] This is another example of the Irish state socialising the costs of data centre development, as these EU fines implicate public finances. The lack of basic transparency requirements in the data centre and tech sector more broadly means that reporting is stymied by "commercial sensitivities" and direct lobbying to avoid basic accountability, let alone effective regulation.[92]

3.3. Greenhouse gas emissions

Figure 5 (based on 2024 data) below makes clear the stark disparity between the emissions intensity of direct data centre employment and the CO_2 intensities of employment in other sectors in the Irish economy. **At 620 tonnes of CO_2 per direct full-time worker employed in data centres,[93] data centre employment is over 880 times more carbon intensive than a job in the health sector, 590 times more intensive than employment in the education sector, and nearly 400 times more intensive than retail employment. More broadly, data centre employment is 42 times more intensive than the average job in the Irish economy.**

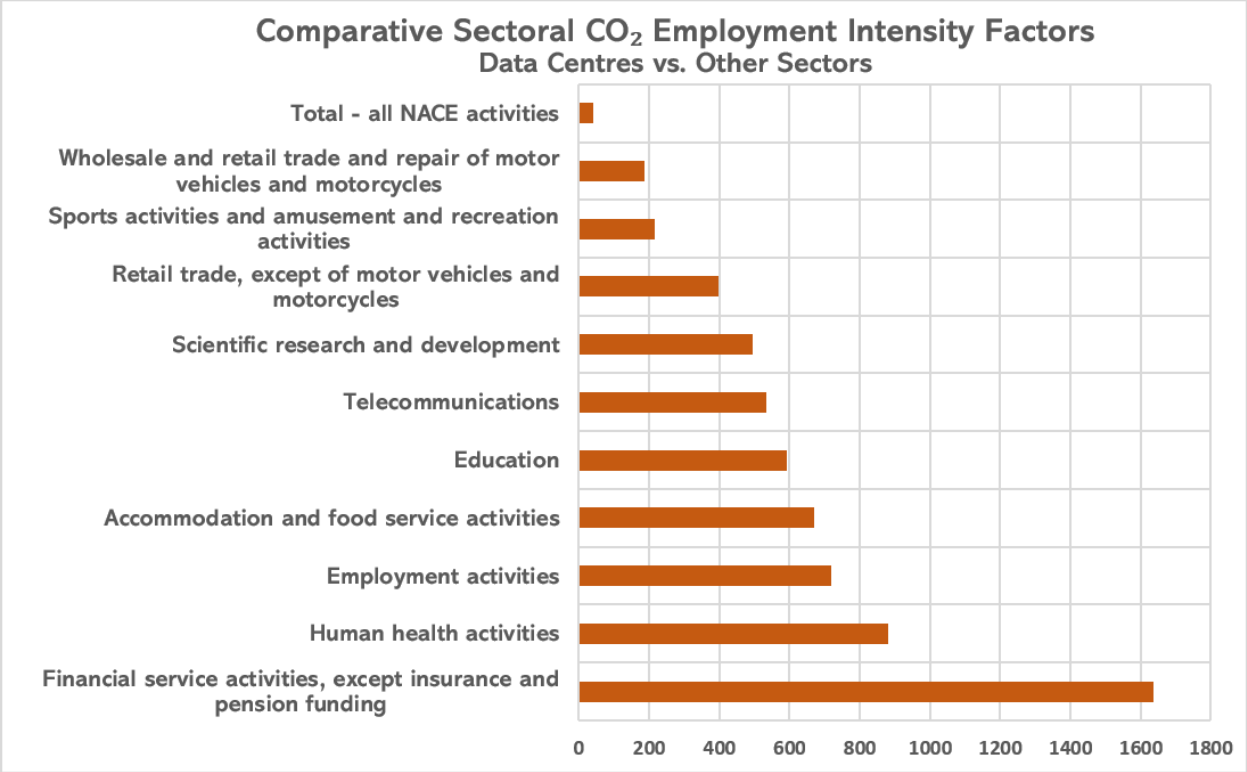

Figure 5 - Comparative CO_2 intensity factors of data centre employment versus other selected sectors in the Irish economy (2024 data)

Service employment in healthcare and education, for example, is work with immediate, urgent social value and for which there is a real shortage of provision in Ireland. With Irish territorial CO_2 emissions already

overshooting its international emissions reduction obligations under the Paris Climate Agreement, and carbon budgets underpinned by domestic legislation, expansion of data centres is not a credible or legitimate means of economic development in ecological terms.

The CRU connection policy for large energy users, published in December, does not address these concerns. The policy allows data centres to continue to use fossil fuels for the next six years, after which they are required to run on an energy supply that is at least 80 percent renewable. However, this excludes onsite, back-up generation which is a high-intensity process that often runs on fossil gas. As international experience highlights, there is also considerable uncertainty over what 80 percent renewable energy will actually mean (i.e. "additionality") and how it will be enforced,[94] as it is expected that the majority of these requirements will be met by CPPAs and offsets purchased elsewhere, which will do little to mitigate emissions and constraint locally. The six year lead in period also fails to address the fact that Ireland needs to lower emissions now if we are to get anywhere close to the 2030 national target of halving emissions.

Missing our climate targets through the expansion of fossil-fuel powered data centres carries the risk of direct financial costs. A joint report from the Irish Fiscal Advisory Council (IFAC) and the Climate Change Advisory Council (CCAC) in 2025 warned that Ireland could face what it describes as "staggering" costs of between €8 billion and €26 billion if it fails to meet legally binding climate targets by 2030. These costs would be borne by the taxpayer.[95]

A recent report by the Grantham Research Institute on Climate Change and the Environment identified Ireland as a likely "hotspot" for legal challenges over data centre expansion in the coming years.[96] If cases such as the one taken last March by Friends of the Irish Environment, Friends of the Earth Ireland and ClientEarth over the CRU recommendation, become more frequent, we will see more financial resources, state capacity and time wasted in protracted legal battles against campaigners specifically requesting more rational climate policy.

Fines and costs associated with climate litigation are significant in fiscal terms. In macroeconomic terms, they are a drop in the ocean in relation to the loss of production and capital destruction, due to drought, soil exhaustion, extreme heat, and extreme weather events (such as floods) that are inherent characteristics of our climate-changed world. Ironically, data centres themselves are directly exposed to the effects of extreme heat and drought to which they directly contribute, placing the assets of tech giants at risk of distress.[97] Costs of climate change to Ireland's exchequer for example, are projected to reach 1-4% of GNI* by 2060; meaningful green industrial policy can mitigate these costs in the long term (see section 4).[98]

Despite this evidence base, the data centre lobby appears unperturbed, and now directly lobbies for the weakening and scrapping of climate targets, to facilitate further fossil fuel driven data centre expansion across Europe.[99] With oncoming legislation to support AI infrastructure,[100] the state remains committed to the industry, providing increasing infrastructure and resource capacity for data centres to expand around constraints.

3.4. Economic capacity and labour shortage

The clear and direct opportunity costs of data centre development extend beyond the resources they use and the emissions they produce which prevent economic development within planetary limits. They also consume essential economic capacity which could otherwise meet pressing social needs.

In macroeconomic accounting using input-output (IO) analysis, there are three forms of final demand in the economy: household consumption, government final demand, and gross fixed capital formation (or investment). These flows of demand require labour in the sectors to which they're directed, and therefore the allocation of different types of demand across sectors has effects on employment across sectors. To illustrate the scale of final demand as investment committed to data centre expansion in recent years, we use IO modelling methods to estimate the effects on employment if this final demand was directed to other sectors. Calculating labour hours IO final demand multipliers using CSO IO databases and NACE sectoral working time data from Eurostat, we can estimate the counterfactual job creation if investment in data centres was invested in other socially necessary sectors where significant social shortage exists in Ireland.

Table 1 below summarises the tens of thousands of jobs that could have been created in the health, education, and social work sectors if capital formation[101] was instead directed as demand towards these sectors.

Sector	**Education**		**Healthcare**		**Social work**	
Year	**Direct**	**Indirect**	**Direct**	**Indirect**	**Direct**	**Indirect**
2019	14,873	1,106	9,164	1,323	18,453	3,462
2020	17,654	1,316	10,899	1,574	21,946	4,118
2021	20,770	1,549	12,829	1,852	25,832	4,847
2022	22,321	1,655	13,788	1,991	27,761	5,209
2023	19,437	1,450	12,006	1,734	24,174	4,536
2024	24,222	1,807	14,962	2,160	30,125	5,652
2025	24,200	1,805	14,949	2,158	30,099	5,647

Table 1 - Counterfactual annual job creation estimates (2019-2025) if demand for data centre construction was directed towards demand for education, healthcare, or social work. Note: this is not cumulative, but specific to each year.

On average over the seven year period 2019-2025,[102] final demand committed to the buildout of data centre infrastructure in Ireland could have instead created and sustained 20,490 jobs in the education sector, 12,657 jobs in the health service, or 25,484 jobs in social work related activities. Instead, these resources have been expended to build out the assets of US tech companies and push up the electricity bills of Irish homes. As we have seen in Sections 3.1 and 3.3 above, this is also job creation with an energy and emissions intensity which is lower than direct data centre employment by orders of magnitude, a fundamental economic concern in our era of climate emergency.

The above example relates to a scenario where investment demand was instead utilised as government final demand on critical services. However, there is a significant social opportunity cost to data centre expansion instead of committing demand to social capital investment. Foremost among these, in the context of chronic

housing shortage in Ireland, is the consumption of scarce resources in the construction sector to build data centres instead of homes.

Using inputs from the Expert Group on Future Skills Needs[103] which disaggregates the input costs for home construction by sector, we can estimate a) the number of homes that could have been built if the demand directed towards data centre expansion was instead used to build homes,[104] and b) the direct and indirect employment that could have been created across the Irish economy by this demand.[105] Table 2 below summarises the total number of homes that might have been built from 2019-2024 through allocation of data centre capital investment to home construction, and therefore the social opportunity cost of misallocated construction industry capacity to build out the infrastructure of tech giants. **In our analysis, nearly 50,000 homes could have been built between 2019-2024 with the same allocated capacity.**[106]

Year	Number of homes
2019	6,559
2020	7,674
2021	8,987
2022	8,773
2023	7,071
2024	8,703

Table 2 -
Counterfactual estimate, using input-output modelling, of number of homes that may have been built if capital directed towards data centre construction was instead utilised for home construction, 2019-2024

Aside from the obvious benefit of meeting urgent social need, this construction has a significant labour footprint across the Irish economy, with the further effect of increasing employment elsewhere in the economy. Figure 6 below illustrates estimated job creation numbers across each of these years, including direct creation in construction sectors, and indirectly across the rest of the Irish economy. For direct job creation, 80% of these jobs would have been created in the construction sector, 9% in public administration, 5% in architectural and engineering services, with the remainder scattered across other sectors. While arguments are made that data centres enable other activity and gains in productivity across the economy, the meeting of housing as an urgent social need - to use one example - is a more base-level enabler of economic activity and stability that would otherwise be lost to other expenses (including those outlined in this report).

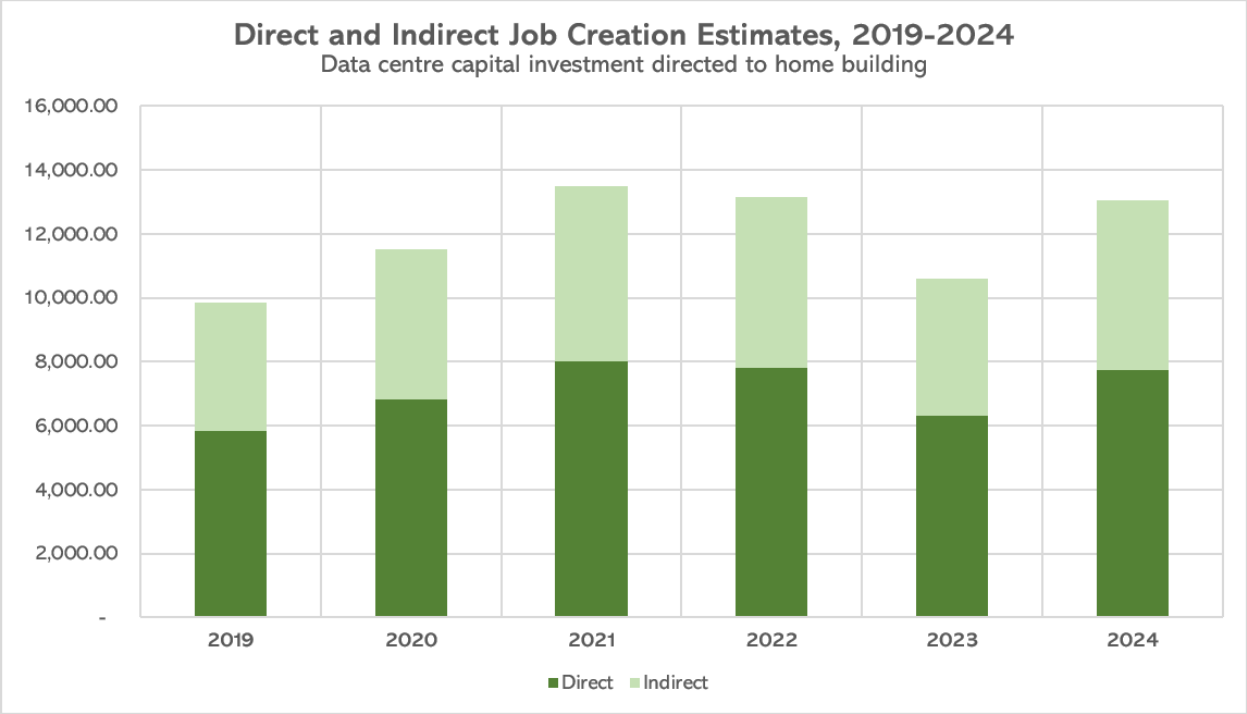

Figure 6 - counterfactual gross job creation if data centre demand was redirected toward home construction

Home building cannot compete with the contract values of data centre construction, changing the allocation and profile of essential construction skills across the sector. The construction sector reportedly needs "110,000 more workers" between now and 2030 in order to meet its housing targets.[107] A Construction Industry Federation report written in 2025 argues that public projects do not offer the competitive requirements for the industry, including low margins and long timelines, meaning that industry focus turns towards projects and activities that offer more reliable (and profitable) growth.[108] While the report concludes that it is not an industry capacity issue but a planning and policy issue, it appears the more obvious culprit is a market for projects that favours scalable, high-capital assets. The data centre industry offers these opportunities at the expense of other socially-useful sectors, especially in the context of an "AI infrastructure arms race" that the Irish state has provided the planning runway to accommodate through 2040 with the LEAP strategy.[109]

4. Alternative pathways of development

In the context of chronic industrial decline and poor economic growth in core, Western countries, as well as dramatic shifts in the world economic balance of power, particularly the rise of China, the past decade has seen the "return" of the state as a key actor within industrial policy and economic planning.[110] In this sense, state intervention is mobilised to secure national economic position in a world market, which has led the US to "weaponise" its hegemony and has seen the growth of centralised industrial policy among Global North economies to secure national economic interests and political blocs.[111]

In these conditions, Ireland is not the only country gambling on US FDI as an increasingly primary source of investment and development. However, **Ireland's extreme and long-standing dependency on US firms and the conditions of the EU market has rendered our economy intolerably vulnerable to the economic and geopolitical factors of recent years.** This exposure has resulted in sharp trade-offs and compromises in the face of US pressure and EU industrial policy geared towards competitiveness and security.[112] This is the context for the apparently irrational incentivisation of US tech firms in support of a socially and environmentally harmful AI industry, at the expense of socially beneficial development and meaningful climate action.

Any economic development strategy for a climate-changed world where resource and energy consumption has completely transgressed planetary limits, must be rooted in social and planetary sciences.[113] Every unit of output, and all economic activity (including cloud computing) has a real, identifiable biophysical footprint in the form of energy and resource use, and corresponding waste. We must therefore maximise the socioeconomic gains achieved against dramatically lowered resource and energy use,[114] such as guaranteeing employment, eradicating poverty, and so on. As we have shown above, economic development through data centre expansion is the exact opposite of this imperative - it delivers minimal direct economic benefits, at extraordinarily high water, energy, and emissions intensity.

The good news is that the continued growth of data centres in Ireland is a policy choice, not an inevitability. This policy choice is in turn grounded in a development strategy that assumes that Ireland's long term economic well-being relies on the ability of the state to attract and retain FDI. This development strategy has come under increased scrutiny from economists, particularly in relation to Ireland's growing dependence on corporation tax receipts from a small number of companies.[115] Since 2015's bumper year, when tax reforms closed the "Double Irish," corporation tax receipts have exploded. In 2014, corporation tax collected was €4.6bil, 11% of total tax collected[116] - near the current OECD average of 12%.[117] That number jumped to €6.9bil in 2015, a rise of 50%.[118] By 2024, the official reported number was €28bil, or 29% of all tax revenue collected.[119] Just three US multinationals accounted for 50% of this - Microsoft and Apple alone, over 40% of this tax, or 11.6% of the total exchequer.[120] In 2025, foreign-owned companies paid 87% of total corporation tax.[121] Most recent justifications for continued commitment to an FDI-led model tend to point towards these tax figures, which are exceptionally concentrated and repeatedly acknowledged by economic watch-dogs as a risk rather than a sustainable tax base for the exchequer.[122]

Ireland's industrial policy - increasingly beholden to the infrastructural demands of these same tech companies - deserves the same level of scrutiny as its tax regime. In growing the physical footprint of multinational tech companies upon which Ireland depend, this policy risks locking Ireland's energy future and industrial development pathways into the infrastructural functions of some of the most powerful companies in the world, ensures that Ireland is acutely vulnerable to shocks in the speculative AI economy,

and forecloses any debate over alternative pathways to socially beneficial and environmentally viable development.

4.1. Infrastructural lock-in

For at least a decade, state and data centre industry efforts have sought to overcome electricity grid constraints, to enable further data centre expansion, through policy and technological solutions. But due to the scale of data centre growth in the period from 2015, the state has been unable to provide the necessary infrastructure. The demand from the industry has been clear: If you can't provide it, find a way to let us. **One way of describing this process is as a gradual transfer of functions from the state to the tech sector, a form of privatisation by stealth.**

We can take a few concrete examples. CPPAs have been promised to become the central aspect of data centre energy policy, due to the demand-based argument that tech investment secures supply, and lessens reliance on state-supported price subsidies. However, as the above sections indicate, if all new capacity has been taken up by data centres since 2017, this strategy has not added "additionality" in the way that is necessary to contribute to decarbonisation. In fact, Eirgrid has acknowledged amidst expected data centre growth that it will be in a "challenging" position over the next several years,[123] requiring the emergency re-commissioning of Moneypoint coal plant and the expansion of gas generation capacity in the near term at minimum.

Industry lobbyists and Government policymakers have now advanced new legislation and strategies that will allow tech companies to build their own off-grid solutions to meet their growing energy needs. While claiming to offer a technical solution to energy constraints - if data centres are not contributing to grid saturation, the technical constraint has been solved - these novel forms of energy privatisation actually generate new risks to public energy provision and the sustainability of Ireland's energy transition. Beyond rising emissions, if data centre companies are able to transfer their disruptive tech business model into the energy sector, we are looking not only at the end of a public energy system that has effectively been in place since the foundation of the Irish state, but the potential undercutting of public energy provision in favour of private energy needs.[124]

Embedding tech companies further into our energy system, as "essential" infrastructure for Ireland's energy transition, creates technological dependencies that have direct financial implications. For example, it has already been suggested that data centres' on-site gas power can be sold back to the grid at times of constrained capacity. AWS is also a key partner on the public/private Tallaght District Heating Scheme, which rests on partial re-use of data centre waste heat to warm municipal buildings. Microsoft's data centre grid flexibility experiments are being sold by energy solutions company Eaton as a commercial product, utilising public electricity needs as a business opportunity. Eco-energy parks, closed campuses pairing renewable energy with dedicated data centre demand, are pitched by semi-state companies such as Bord na Móna and the IDA as a way to deliver decarbonisation and industrial development on rural landbanks, while also producing islanded "enclaves" of profitable computer services with privileged access to new electricity capacity. From grid flexibility to district heating, these "energy solutions" can eventually be sold back to the state as services once they are tested on our public land and infrastructures.[125] In these contexts, the public directly absorbs the costs of these technological advances towards privatised climate action, while tech monopolies eventually profit and become essential service-providers in decarbonised energy systems.

The contradictions between public energy provision and private energy needs have also surfaced in the context of Eirgrid's efforts to ensure grid security.[126] Eirgrid have called for data centres to be restricted in the amount of time they can come off the grid in the case of a system fault, stating that such compliance is "urgently required." In response, the data centre industry has warned of a "compliance crisis" that will potentially result in the loss of billions of euros in the form of stranded data centre assets. Such threats stand in stark contrast to comments by Minister Darragh O'Brien that "[d]ata centres are no longer just electricity users, but partners in delivering Ireland's renewable energy future while sustaining its digital competitiveness."[127]

The facilitation of infrastructure for tech giant growth and investment is a key factor of the industrial development model, as much as tax incentives.[128] In August 2026, a consortium of lobbyists and business leaders representing multinationals wrote to the Government asking that grid upgrades would be made to accommodate the AI boom, alongside other policy and funding commitments.[129] This lobbying contained no acknowledgement of how this data centre growth further embeds dependence on imported fossil fuels, imposing widespread economic costs on Irish society, or details of how the public will be expected to pay for grid upgrades to accommodate an AI boom which is leading to unprecedented wealth accumulation among tech giants.

The clouding of public-private interests suggests that the data centre industry is willing to support Ireland's energy policy when it allows for accumulation of benefits, but without a responsibility for shouldering socialised costs. Given that tech companies are playing a growing, even central, role in the development of our energy system, these conflicts and tensions should be understood for what they are rather than dismissed as "necessary trade-offs" or the "costs of doing business" in the AI race. We are witnessing in real time the evolution of mechanisms for the backdoor privatisation of our energy sector, with tech companies assuming utility-scale functions without a clear public remit or requirements for transparency and accountability.

4.2. Vulnerability to speculative AI economy

Section 1 outlined the monopolisation of cloud computing by the "Big 3," a situation that is deepening with AI and the mounting market caps of the Magnificent 7 US tech giants. Mainstream economic analysts are sounding the alarm about increasing consolidation of the digital economy occurring through the AI sector.[130] With the AI boom increasingly resting on access to computing power, these companies are investing unimaginable sums into cloud infrastructure,[131] with an AI data centre boom fuelling land speculation, infrastructural strain, and ecological damage in an increasing number of localities across the world.[132]

Tech giants claim that data centres provide the opportunity for countries and municipalities to grow their AI sector and keep up in the "AI arms race." However, similar to other building booms, and related to global market dynamics, the promises remain highly speculative. The value of AI-linked firms has climbed $27 trillion in the past three years, equivalent to 36 percent of the value of the entire US stock market today. Yet the promise of productivity gains has not been forthcoming. An MIT study published in 2025, revealed that "despite $30-40 billion in enterprise investment into GenAI…95 percent of organizations are getting zero return."[133] There are now strong indicators, assessed by a range of economic analysts, warning that the land grab for AI data centres is inflating a financial bubble.

No less than OpenAI's Sam Altman[134] and Microsoft CEO Satya Nadella[135] have warned of an AI bubble as a means of encouraging adoption of their technologies (the underside of this being risk of a catastrophic economic crash). In recent months, the limited voluntary adoption of AI technologies has seen more aggressive lobbying and PR by the major tech companies as they push national and supranational policy-makers to invest in cloud infrastructure and embed AI technology across key sectors in the name of competitiveness.[136]

The tech companies driving AI growth openly admit that their aims are exponential growth (which necessarily means inextricable increases in resource use and pollution), profitability, and cutting jobs, and that this can only be delivered by wide scale adoption and scaling up of infrastructure. **The hype around AI, including that adopted by the Irish Government, serves the interests of tech monopolies by preventing a sober assessment of AI's actual productivity gains and benefits.** Ireland is a good case in point, where state capacity and physical[137] resources are being drawn into the development of data centres, and necessarily diverted away from socially useful parts of the economy which can meet the unmet basic needs of the population. Moreover, due to the growing infrastructural dependence on tech giants, a severe downturn in the AI economy - driven by mounting debt, minimal productivity gains, or cheaper, less compute intensive AI technologies - could realistically result in stranded assets.

Ireland is an important feature in the extraordinary rise of the market capitalisations of tech giants, facilitating US cloud and now AI expansion in a number of ways. The Irish economic model facilitates greater returns to tech capital through its taxation and regulatory behaviour, allowing the onshoring of exports linked to intellectual property made resident in the state, which are taxed less than the region in which the underlying economic activity was carried out[138] - refer back to Microsoft's inflated profits reported in Ireland, for example (see Section 1). This model, more broadly, plays a role in facilitating the global wealth accumulation of tech giants used to finance the unprecedented build out of data centres, in Ireland as elsewhere. Thus, the impact of a burst AI bubble on the public finances could be significant. Corporation taxes would undoubtedly be negatively affected as a result of lower reported profitability. Furthermore, a reduction in employment in the Irish tech sector, driven either by layoffs in pursuit of cost reduction to chase AI returns or through a "popping" of the AI bubble, would lead to a proportionately greater impact on income tax revenues.

The economic and environmental risks associated with this vulnerability should be intolerable for any rational state policy. Ireland must take a step back and consider how fundamental functions of the state and prospects for long term, sustainable development are being undermined by what is effectively a market gamble and land grab by the US tech giants, some of the largest monopolies that have ever existed.

4.3. Alternative pathways

Ireland is following the US and the EU into an uncertain and unsustainable future, driven by an imperative towards competitive security rather than socially beneficial green development. The AI race, to quote political economist Ilias Alami, "encourage[s] the irrational use and allocation of resources. This includes energy, land and water, which are diverted in ever greater amounts to build data centres and other AI infrastructure instead of satisfying urgent human and ecological needs."[139] The EU's plan to scale up domestic AI capacity via AI gigafactories of up to 150 MW to keep up with US AI growth - colocating AI infrastructure, manufacturing, and R&D operations - is entirely speculative, gambling on driving demand at a scale currently unseen: "By providing a predictable, large-scale demand for high-end computing, the

initiative will stimulate the domestic design and - in due course - the future manufacturing of indigenous EU AI processors, thereby contributing to developing the Union's full-stack technological sovereignty."[140] In other words, the EU's AI strategy is based on replicating the existing US big tech model within Europe's borders, participating in an "AI arms race" rather than developing a more rational industrial policy centred on decarbonisation and green industrial jobs.[141] For context, Meta alone is currently developing a 5 GW campus just for developing and utilising frontier models in Louisiana. Each of the other major US hyperscalers are currently developing campuses of similar scales, in the US and elsewhere. More and bigger AI, as EU industrial policy promises, will be required, and will likely require deepening dependency on the US stack to stay afloat.[142]

In this context, the Irish data centre milieu is considered either a model or a cautionary tale. Industry boosters and policymakers marvel at how a small, semi-peripheral economy has managed to leverage its industrial policy to facilitate its economic and resource base for these critical infrastructures and their exceptional market value. Critics in Europe lament and chastise how this small nation-state has continued with an economic model that allows its infrastructural, economic, and environmental futures to be dominated and exhausted by US tech monopolies. Neither perspective truly addresses the history or necessary future changes required to not only reduce our vulnerability and dependencies, but to construct an economic model that better serves the people of Ireland and the world.

We can look to Spain for some direction around what a socially-orientated, green industrial policy looks like.[143] Since 2019, the country has doubled renewable energy generation, with the share of renewables increasing from 40% to 56%.[144] Spain's energy transition has been lauded not only for reducing energy-related emissions, but also for reducing electricity bills and insulating the country against recent energy price volatility. Spain's green transition is not radical, it simply involves long-term state planning and independent industrial policy; crafting strategic autonomy in the context of a multipolar world that exceeds the US and EU.[145] That is in contrast to Ireland, where the energy transition is beholden to AI growth and the interests of US FDI. Over the same period, Ireland's share of renewables has stalled - as cited above, any new renewable capacity since 2017 has been absorbed by data centre growth. While there are risks in Spain of replicating and deepening AI and data centre absorption into the national industrial strategy,[146] Ireland's economic model demonstrates the pragmatic barriers for meaningful green industrial policy and decarbonisation represented by privileging data centre expansion as a tool for development.

Despite industry and government claims, there is no necessary connection between Ireland's energy transition and the exponential growth of data centres. In fact, the conflation of Ireland's energy needs, including decarbonisation, with the energy needs of multinational tech companies only serves to obscure the contradictions that exist between public need and private interest. This has been clarified by experts in energy economics and planning, such as Professor Andrew Keane, who said the following before the Oireachtas AI Committee: "If Ireland is to continue to develop data centres, we must be honest that this is a deliberate policy choice, not an inevitability. That choice carries consequences for our ability to meet climate targets, keep bills affordable and allocate grid capacity in line with the public interest."[147]

When it comes to AI, an equitable and secure energy future requires a strong, meaningful rejection of the "AI arms race." At a minimum, this will require a moratorium on new data centre development, allowing the re-centring of priorities on climate action and digital policies which are explicitly in service to the needs and democratic mandate of the Irish public.

The Government and industry have, unsurprisingly, dismissed the possibility of a moratorium. The common response, carried in the media, is laden with arguments about the economic "risks" - delivered as threats - if these companies decide to leave Ireland for greener pastures.[148] This response is designed to close down political debate about Ireland's economic present and future.

In reality, however, the prospects of AI-led development being socially beneficial or economically sustainable are minimal. In the midst of an escalating climate emergency and Global North economies which are already fundamentally unsustainable, the prospect of AI-led development being ecologically *viable* is vanishingly low. The real question then is: what industrial policies would better address social needs, respond to environmental imperatives and generate sustainable economic activity? In other words, how else could resources and state capacity be allocated and organised to achieve positive societal goals?

These questions are not abstract. Ireland faces record levels of homelessness, an acute housing crisis, chronically poor health services, and some of the highest living costs in Europe, including for childcare and energy. At the same time, households and individuals are being encouraged to take on more responsibility for carbon emissions and other environmental problems, from retrofitting to EVs, even as the cost of these technologies falls outside the reach of many. And, as we have experienced this summer, the costs of responding to climate change will only grow with time as prolonged heat, intense rainfall and extreme storms intensify.[149]

Data centres - and the AI economy being pushed by big tech - are not an opportunity for Ireland. They are an anchor limiting our potential for a more equitable, efficient, and rational economy. We have presented a body of evidence demonstrating this. Ideologically, many policymakers believe that data centres continue to present an opportunity, and represent the latest iteration of Ireland's development model. From this perspective, keeping these companies happy and grounded here is a developmental imperative, for our economic and climate futures; data centres are the unavoidable cost of FDI.

But, as the social costs of data centre expansion grow, it will become increasingly difficult to sell the story that we need more data centres because they bring investment, deliver climate action, and address societal issues. A low watermark of these attempts may be the Government paying over €100,000 for a report from KPMG, which makes empirically vacuous claims about the dependency of ⅓ of the Irish economy on data centres. When people are unable to afford housing and increasing energy costs due to our deepening dependency on fossil fuels, and when the clear infrastructural imbalances and opportunity costs are brought to the fore, arguments in favour of data centre and AI growth cease to add up. The risk is not just that this will lead to growing mistrust and resentment of the government. Rather, **by promoting the obviously spurious climate and economic benefits of data centres towards the energy transition and wider green industrial strategies, the Government risks turning more people against the necessity of a low-carbon, green transition which can fundamentally reduce costs and improve wellbeing across Ireland.**

As pressing social needs and environmental challenges mount, there will be an onus on the state to provide interventions at scale. Transient subsidies to cushion the worst impacts of energy price spikes or support those affected by climate-related damage are not sustainable in the medium to long term. Public infrastructure and green industrial policy are required to ensure energy sovereignty, housing and health care, in the face of climate change. As climate breakdown accelerates, during which drought and extreme

weather events are guaranteed features of Ireland's future, amidst wider breakdown of the earth's life supporting systems, the watchword for developed economies is ensuring "a good life for all within ecological limits."[150]

There are real political stakes here: Government party politicians have identified a weakening of the "social contract" due in large part to the lack of social and public infrastructures and increasing costs of living. Nor is it enough to say that the state lacks capacity or resources to provide more long-term solutions. As we have outlined above, the state has demonstrated considerable ability to create the conditions for multinational tech companies to thrive and profit, through planning and infrastructural interventions for data centre growth.

The state needs a strong green industrial policy, which puts people, the environment, and the achievement of social good to the fore. This type of industrial policy is being foreclosed by AI-centred growth strategies that continue to prioritise the build-out of AI infrastructure over pressing social and ecological needs. An immediate moratorium on data centre development is just the starting point, not just to halt AI infrastructure build-out and disarm the AI arms race, but to create the time and space to develop alternative and effective green development policies and strategies.

Footnotes and References

[1] https://assets.gov.ie/static/documents/government-statement-on-the-role-of-data-centres-in-irelands-enterprise-strategy-ca190.pdf
[2] https://collections.unu.edu/eserv/UNU:10647/UNU-INWEH-Report-The_Env_Cost_of_AI-2026.pdf
[3] https://enterprise.gov.ie/en/news-and-events/department-news/2026/june/20260602.html
[4] UBS (2025). *Billionaire Ambitions Report 2025.*
[5] https://www.routledge.com/Capitalism-Power-and-Innovation-Intellectual-Monopoly-Capitalism-Uncovered/Rikap/p/book/9780367750299
[6] The "Big 3" are part of the "Magnificent 7" US big techs, said to dominate the global investment market in tech: Alphabet/Google, Amazon, Apple, Tesla, Meta, Microsoft, and NVIDIA, "driven by technological innovation, market dominance, financial performance, brand equity, research and development, and global economic conditions." https://www.investopedia.com/magnificent-seven-stocks-8402262
[7] https://enterprise.gov.ie/en/publications/publication-files/the-value-of-data-centres-to-ireland.pdf
[8] MWh = MW x hours. 8,067,960 MWh = 921 MW x 8760 hours (or 1 year)
[9] 32,986 GWh. https://www.cso.ie/en/releasesandpublications/ep/p-mec/meteredelectricityconsumption2025/keyfindings/
[10] https://www.irishtimes.com/environment/2026/02/18/inside-the-dublin-data-centres-consuming-an-unknown-amount-of-energy/ - Microsoft would not confirm or deny.
[11] Data centres do not tend to use all available capacity but rather reserve more electricity than demanded to ensure scalability. Actual electricity usage is shielded by "commercial sensitivity" and, at this point, becomes public via voluntary reporting.
[12] https://www.eudca.org/documents/content/ZlZXb4bRSRefaEVqya2I_Aoea?download=0
[13] https://www.irishtimes.com/business/economy/2026/07/01/microsofts-irish-business-paid-56bn-in-corporation-tax-last-year/
[14] https://www.irishtimes.com/business/2026/04/10/microsofts-irish-subsidiaries-paid-close-to-50bn-in-dividends-to-parent-in-2025/
[15] https://www.microsoft.com/en-ie/aboutireland
[16] https://www.irishexaminer.com/business/companies/arid-41874857.html
[17] https://www.irishtimes.com/business/economy/2026/07/01/microsofts-irish-business-paid-56bn-in-corporation-tax-last-year/
[18] https://www.digitalinfrastructure.ie/post/digital-infrastructure-for-the-future-we-want-report
[19] This includes through bending to lobbying influence to protect confidentiality, as well as more active non-enforcement of binding sustainability reporting directives such as the European Energy Efficiency Directive. Dylan Murphy, forthcoming, "Report - Data Centre Delay: Tracking the Transposition of the Energy Efficiency Directive across Ireland and Europe" ; https://www.theguardian.com/technology/2026/apr/17/microsoft-us-tech-firms-lobbied-eu-secrecy-rules-datacentre-emissions.
[20] https://www.federalreserve.gov/econres/notes/feds-notes/the-ai-buildout-and-the-economy-publicly-available-data-to-assess-ais-impact-20260717.html
[21] https://www.federalreserve.gov/econres/notes/feds-notes/the-ai-buildout-and-the-economy-publicly-available-data-to-assess-ais-impact-accessible-20260717.htm#fig4
[22] https://transitionsecurity.org/imperial-state-capitalism/
[23] https://www.bankofengland.co.uk/financial-stability-report/2026/july-2026
[24] https://assets.gov.ie/static/documents/58aa0993/Impact_of_an_AI-related_US_equity_price_correction_on_the_Irish_economy_final.pdf
[25] https://oi-files-d8-prod.s3.eu-west-2.amazonaws.com/s3fs-public/2026-01/EN%20-%20Resisting%20the%20Rule%20of%20the%20Rich_0.pdf
[26] https://www.sciencedirect.com/science/article/pii/S0305750X25003365
[27] https://enterprise.gov.ie/en/publications/publication-files/government-statement-on-the-role-of-data-centres-in-irelands-enterprise-strategy.pdf
[28] See CSO figures: https://www.cso.ie/en/releasesandpublications/ep/p-dcmec/datacentresmeteredelectricityconsumption2021/. For context, if the Apple data centre had been built to its full 8 server hall capacity, estimates suggested it could have used 3-5% of Ireland's electricity alone. In 2024, the Netherlands, the next closest European data centre hub, was faced with 4.6% of its electricity going towards data

centres as a whole. https://www.cbs.nl/en-gb/news/2025/51/data-centres-consume-4-6-percent-of-the-netherlands-electricity.

[29] https://enterprise.gov.ie/en/publications/publication-files/government-statement-on-the-role-of-data-centres-in-irelands-enterprise-strategy.pdf

[30] https://enterprise.gov.ie/en/publications/publication-files/government-statement-on-the-role-of-data-centres-in-irelands-enterprise-strategy.pdf

[31] "Electricity demand from data centres, which accounted for 22% of metered national electricity consumption in 2024, has grown faster than the delivery of new grid infrastructure, and connection of renewable and dispatchable generation. … Significant additional electricity grid capacity and an accelerated connection of renewables will be therefore required if further growth in LEUs is to be sustainable, and available grid capacity will act as a constraint on data centre growth in the short and medium term. There have been further technical challenges in Ireland and other jurisdictions associated with data centre integration, including the fault ride through issue, which must be resolved through innovation and engagement between System Operators and industry" (p. 28). https://enterprise.gov.ie/en/publications/publication-files/leap-large-energy-user-action-plan.pdf.

[32] For a breakdown of these arguments, see Bresnihan, P. and Brodie, P. (2025). *From the Bog to the Cloud. Dependency and Eco-modernity in Ireland.* Bristol University Press; Brodie, P. (2025). Smarter, greener extractivism: Digital infrastructures and the harnessing of new resources. *Information, Communication & Society*, 28(6), 1061-1080. https://doi.org/10.1080/1369118X.2024.2341013.

[33] https://www.irishexaminer.com/news/arid-41853348.html

[34] https://www.irishexaminer.com/news/arid-41853348.html

[35]https://www.fiscalcouncil.ie/wp-content/uploads/2023/06/Demystifying-Irelands-national-income-a-bottom-up-analysis-of-GNIstar-and-productivity-Kevin-Timoney-Fiscal-Council.pdf

[36] Calculating direct intensities and multiplying these by the Leontief inverse matrix to produce final demand multipliers for a given economic indicator (e.g. employment).

[37]https://www.nsai.ie/images/uploads/standards/20240126_SME_Report_Art_6_Regulation_1025.2012.pdf

[38] https://www.thejournal.ie/data-centres-moritorium-dail-7073271-Jun2026/

[39] https://www.computerweekly.com/news/366604878/Dublin-confirmed-as-worlds-third-largest-hyperscale-datacentre-hub

[40] https://www.statista.com/statistics/655786/export-import-vehicles-value-germany/

[41] https://www.statista.com/statistics/587576/number-employees-german-car-industry/; https://www.statista.com/statistics/1284921/automotive-industry-employees-number-germany/. It is expected that the upper count (800,000) includes indirect or induced jobs, including those in parts and accessories suppliers. https://www.aa.com.tr/en/economy/german-auto-industry-employment-falls-to-lowest-level-since-2005/4027331. This is a key distinction, as in 2024, the KPMG methodology counted around 3,300 direct operational jobs in the data centre sector, with 8,316 *related* jobs, corresponding roughly to the proportion of direct and indirect/induced jobs in German automotive manufacturing. However, the scale of energy use differential remains clear (144 direct jobs per percent of national electricity demand in Ireland's data centres vs. 133,333 direct jobs per percent of national electricity demand in the German automotive industry; or, in directly comparable terms, 351 vs. 31,100 direct jobs/TWh of yearly national electricity usage). Even the proportion of national employment in the sectors does not correspond, as boosters of the sector have suggested – including indirect and induced jobs, .3% in of the workforce are directly or indirectly employed in data centre operations in Ireland (of sum total 2.82mil in employment) against 1.8% in the German automotive sector (of sum total 44.4mil in employment). https://www.gov.ie/en/department-of-enterprise-tourism-and-employment/press-releases/minister-burke-welcomes-record-year-for-the-irish-labour-market/ ; https://eures.europa.eu/living-and-working/labour-market-information/labour-market-information-germany_en.

[42] https://www.argusmedia.com/de/news-and-insights/latest-market-news/2790414-german-car-manufacturing-sector-power-demand-could-fall

[43] https://www.trade.gov/country-commercial-guides/germany-energy

[44] The German industry looks to be in decline given extraordinary Chinese progress in this space, but projections of lowering energy usage have more to do with expected changes in the domestic sector.

[45] As stated above in footnote 40, 3,300 is the direct operational jobs supported by data centres in 2024, as cited in the KPMG report. The report claims a total of 8,316 jobs supported by data centre operations across the supply chain. Short-term jobs in construction in 2020, direct and indirect by their calculations, were 26,300. We primarily work with the 3,300 direct employment figure unless otherwise noted. https://enterprise.gov.ie/en/publications/publication-files/the-value-of-data-centres-to-ireland.pdf.

[46] The distinction between the power demands of "conventional," purpose-built AI and the frontier models of generative AI should be noted here, the latter of which are the domain of the tech monopolies and are the most energy-intensive. The former would have more direct and proven social uses in health, energy, and climate, though it also risks ownership and infrastructure concentration. https://www.youtube.com/watch?v=8M3MciEmC5c.
[47] https://beyondfossilfuels.org/wp-content/uploads/2026/02/AI-for-climate-claims-Report_FEB-2026_FINAL-2-16.pdf ; https://fortune.com/2026/07/08/ais-productivity-gains-jim-reid-deutsche-bank-debt/.
[48] https://assets.gov.ie/static/documents/965beb0a/Summer_Economic_Statement_2026.pdf
[49] https://www.rte.ie/news/business/2026/0908/1590657-ai-employment-report/
[50] https://www.promarket.org/2026/07/15/what-economists-are-missing-about-ai/
[51] https://zenodo.org/records/20585450
[52] https://enterprise.gov.ie/en/publications/publication-files/mapping-of-ireland's-semiconductor-and-microelectronics-industry.pdf
[53] https://enterprise.gov.ie/en/publications/publication-files/the-value-of-data-centres-to-ireland.pdf
[54] https://www.irishtimes.com/business/2026/08/28/data-centre-boom-turns-many-niche-specialist-business-into-multimillion-euro-industry-players/
[55] Crotty, R. (1986). *Ireland in Crisis: A Study in Capitalist Colonial Underdevelopment*. Dingle: Brandon Book Publishers.
[56] https://www.irishtimes.com/politics/2026/08/07/department-of-enterprise-denies-trying-to-predetermine-conclusions-of-data-centre-study/
[57] https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5171050; Hao, K. (2025). Empire of AI: Inside the reckless race for total domination. Random House.
[58] https://www.irishtimes.com/ireland/2026/06/03/irelands-data-centre-strain-a-cautionary-tale-for-rest-of-world-un-says/
[59] https://pmce.sg/blogs/data-centres-singapore-electricity-prices/
[60] https://www.cbs.nl/en-gb/news/2025/51/data-centres-consume-4-6-percent-of-the-netherlands-electricity
[61] https://www.oireachtas.ie/en/debates/debate/joint_committee_on_artificial_intelligence/2026-06-16/2/
[62] All Island Resource Adequacy Assessment 2025-2034 Data Workbook, EirGrid
[63] https://www.oireachtas.ie/en/debates/debate/joint_committee_on_artificial_intelligence/2026-06-16/2/
[64] https://ketanjoshi.co/2026/07/01/googles-exponential-path-to-climate-wrecking-digital-bloat/
[65] Fossil fuels account for nearly 60% of Ireland's electricity grid inputs. http://seai.ie/data-and-insights/seai-statistics/electricity
[66] SEAI National Energy Balance database
[67] https://www.intel.ie/content/www/ie/en/company-overview/economic-impact.html
[68] Two 220 kV substations required construction or upgrading to accommodate a planned 2019 expansion, and one 100 kV substation already served the site. https://www.independent.ie/business/irish-business/intel-will-use-four-times-as-much-power-as-galway-city-in-leixlip/a/136961638.html. Together, 500 kV would typically serve 1-1.5 GW capacity - though such conversions between frequency and capacity are obviously not direct/perfect, this would be standard. https://parkplanning.nps.gov/showFile.cfm?sfid=76974&projectID=25147. The required construction and upgrading of the grid is another opportunity cost: the infrastructure renovations and construction resources required to be allocated towards substation delivery for data centre projects. https://buildermuse.com/infrastructure/electrical-substation-construction-cost-2026/.
[69] https://www.thejournal.ie/data-centres-gas-prices-cut-7154835-Sep2026/; https://www.independent.ie/business/money/its-a-slap-in-the-face-irish-households-are-paying-twice-as-much-for-electricity-as-data-centres/a/136789304.html
[70] https://sustainability.atmeta.com/wp-content/uploads/2025/10/Meta_2025-Environmental-Data-Index.pdf
[71] 1,076,961 MWh = 1,077 GWh. Total national electricity consumption in 2024 was 31,900 GWh. 1,077 / 31,900 = .03376. https://www.cso.ie/en/releasesandpublications/ep/p-mec/meteredelectricityconsumption2024/keyfindings/
[72] https://www.rte.ie/news/ireland/2018/0915/993768-facebook-data-centre/
[73] We can perform a similar exercise here as Microsoft on community investment (p. 8). Meta booked €2.9bil in profits in Ireland in 2024, and sent €1.9bil to the US in dividends. In 2023-2024, the company boasted €500,000 invested in community development grants, focused on digital technologies and skills. The two-year total equals .00017% of 2024 Irish profits. Compared to Microsoft, they're altruists. https://www.irishtimes.com/business/2025/11/26/profits-at-facebook-parent-meta-ireland-surge-57-to-29bn/; https://datacenters.atmeta.com/wp-content/uploads/2025/02/Meta_s-Clonee-Data-Center.pdf.
[74]https://www.friendsoftheearth.ie/assets/files/pdf/data_centrres_and_the_carbon_budgets_-_prof_hannah_daly_dec_2024.pdf

[75] See: https://www.thejournal.ie/ireland-exposed-to-global-energy-shock-due-to-dependence-on-imported-fossil-fuels-7037689-May2026/
[76] https://www.friendsoftheearth.ie/publications/the-cost-of-data-centre-growth-in-ireland/
[77] https://www.independent.ie/business/money/its-a-slap-in-the-face-irish-households-are-paying-twice-as-much-for-electricity-as-data-centres/a/136789304.html
[78] https://www.rte.ie/news/business/2026/0804/1586471-electricity-bills-arrears/
[79] https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20260505-1
[80] https://www.seai.ie/sites/default/files/publications/energy-in-ireland-2024.pdf
[81] Eve Ryan. Forthcoming. "Report - By Design, Not Default: How Regulatory Discretion Socialises the Cost of Data-Centre Expansion in Ireland."
[82] https://www.independent.ie/irish-news/overloaded-energy-grid-threatens-to-delay-major-transport-projects-including-metrolink/a/122890071.html
[83] https://www.thejournal.ie/data-centre-government-report-housing-transport-7122123-Aug2026/
[84] https://www.eesi.org/articles/view/data-centers-and-water-consumption
[85]https://www.stockholmresilience.org/research/research-stories/2024-03-06-freshwater-planetary-boundary-has-been-crossed-since-the-mid-twentieth-century.html
[86] The UN report estimates the water footprint intensity of Irish electricity consumption is 6L/kWh. We assume this parameter is constant across 2015-2025 in our estimates, and apply it to the power consumption of data centres. Though this assumes no change in the intensity of water use of data centres, this bias flows in both a positive and negative direction, not accounting for less efficient water consumption and water intensive supply chains in the early years of data centre growth in Ireland.
[87] https://data.cso.ie/table/MEC02
[88] Own estimates based on industry sources
[89] As of 2022: https://www.cso.ie/en/releasesandpublications/ep/p-cpr/censusofpopulation2022-preliminaryresults/housing/.
[90] https://www.thejournal.ie/investigates-data-centre-confidential-lobbying-7013368-Apr2026/; also see policy pipelines in Europe around energy efficiency directives, which include mandatory reporting measures.
[91] Dylan Murphy, forthcoming, "Report - Data Centre Delay: Tracking the Transposition of the Energy Efficiency Directive across Ireland and Europe."
[92] https://www.thejournal.ie/investigates-data-centre-confidential-lobbying-7013368-Apr2026/
[93] Assuming data centres are responsible for 4% of (territorial) carbon emissions as stated by the government-sponsored KPMG report.
[94] https://thepoint.com.au/opinions/260803-why-data-centre-greenwashing-is-about-to-explode
[95] https://www.lawsociety.ie/gazette/top-stories/2025/march/ireland-faces-staggering-climate-costs--report/
[96]https://www.businesspost.ie/legal/why-ireland-is-set-to-become-a-hotspot-for-data-centre-lawsuits/#selection-1253.0-1253.282
[97] https://www.weforum.org/stories/climate-action/data-centres-3-3-trillion-question-heat-cooling/
[98] https://www.socialjustice.ie/article/future-forty-climate-change-and-green-transition
[99] https://www.politico.eu/article/europe-choose-ai-climate-goals-data-center-chief-warns/
[100] https://www.williamfry.com/knowledge/irelands-policy-pivot-on-data-centre-delivery/ ; https://enterprise.gov.ie/en/publications/leap.html.
[101] https://www.bitpower.ie/index.php/dashboard
[102] Assuming constant employment hours to final demand intensities in each year.
[103]https://www.egfsn.ie/media/flijiosz/labour-demand-estimates-for-ireland-s-national-housing-targets-2021-2030-for-egfsn-website.pdf
[104] Using service and industry price indices we adjust the input costs by sector for inflation in each year 2019-2024.
[105] To calculate the domestic labour footprint of annual demand by sector required to build *N* number of homes, we adjust all final demand across sectors to 2022 prices to match our employment hours multipliers and multiply by the number of housing units in each year 2019-2024.
[106] This is 17% of planned Government housing expansion up to 2030 (300,000), or 70% of all social housing planned (72,000). https://www.theguardian.com/world/2025/nov/13/irish-government-announce-plan-to-build-300000-homes-within-five-years.
[107] https://www.irishtimes.com/business/2026/02/26/construction-sector-needs-up-to-111000-more-workers-to-hit-housing-targets/
[108] https://cif.ie/wp-content/uploads/2025/05/CIF-Policy-Paper-on-Industry-Capacity-May-2025.pdf
[109] https://enterprise.gov.ie/en/publications/leap.html

[110] Jostein Hauge, Bruno Houtzager, Alessandro Julian Hörmann. 2025. "The new economic nationalism: industrial policy and national security in the United States, China, and the European Union." *Geoforum*,166, 104382, https://doi.org/10.1016/j.geoforum.2025.104382.
[111] https://www.foreignaffairs.com/united-states/weaponized-world-economy-farrell-newman
[112] https://www.uplift.ie/neutrality-files/
[113] https://www.science.org/doi/10.1126/sciadv.adh2458
[114] https://www.sciencedirect.com/science/article/pii/S0959378020307184?via%3Dihub
[115] https://www.fiscalcouncil.ie/more-than-corporation-tax-irelands-growing-reliance-on-foreign-owned-multinationals/
[116] All Irish corporation tax receipt figures collected from p. 10 of: https://dx.doi.org/10.2139/ssrn.6393038.
[117] https://www.oecd.org/en/publications/corporate-tax-statistics-2025_6a915941-en/full-report/corporate-tax-revenues_57b634d9.html
[118] https://momentum.ie/just-10-firms-paid-50-of-record-irish-corporation-tax-in-2015/
[119] This excludes the enforced collection of a further €11bil owed from Apple. https://dx.doi.org/10.2139/ssrn.6393038.
[120] https://www.irishtimes.com/business/economy/2026/02/19/three-multinational-companies-paid-close-to-50-of-states-corporate-tax-in-2024/
[121] https://www.fiscalcouncil.ie/more-than-corporation-tax-irelands-growing-reliance-on-foreign-owned-multinationals/
[122] https://www.fiscalcouncil.ie/more-concentration-more-risk-three-firms-account-for-almost-half-of-irelands-corporation-tax-revenues/?_cldee=vgmzvvoB3RSlSQExOTXBxENeCMSDxJcLtpyiyVaaFma7HQghURYxqvI6mIZtDo7D&recipientid=contact-5cc91815fbf9e71180fb3863bb358f88-3836aad431944937b43913f4f1e79a94&esid=6febfd3c-7f0e-f111-8406-6045bd88a218. While corporation tax figures as percentage of exchequer and GDP have been growing globally, likely as a result of corporate concentration, 2024-2025 figures put Ireland more in line with low and middle income economies than "high income" peers. https://www.oecd.org/en/publications/corporate-tax-statistics-2025_6a915941-en/full-report/corporate-tax-revenues_57b634d9.html
[123] https://www.rte.ie/news/ireland/2026/0226/1560463-eirgrid-generation-capacity/
[124] https://www.irishexaminer.com/opinion/commentanalysis/arid-41388436.html
[125] See Bresnihan and Brodie, Chapter 4, *From the Bog to the Cloud* (2025).
[126] https://www.businesspost.ie/uncategorized/crisis-data-centre-hyperscalers-warn-new-grid-rules-risk-creating-billions-in-stranded-assets/
[127] https://www.businesspost.ie/analysis-opinion/darragh-obrien-data-centres-will-play-a-crucial-role-in-shaping-irelands-economic-future/
[128] See Bresnihan and Brodie, Chapters 3-5, *From the Bog to the Cloud* (2025).
[129] https://www.irishtimes.com/business/economy/2026/08/19/us-multinationals-call-for-clearly-defined-funding-for-energy-grid-improvements/
[130] https://www.wired.com/story/ai-industry-monopoly-nvidia-microsoft-google/
[131] https://www.economist.com/finance-and-economics/2026/07/28/ai-revenues-are-growing-fast-but-not-fast-enough
[132] https://www.nytimes.com/2025/10/20/technology/ai-data-center-backlash-mexico-ireland.html?eafs_enabled=false
[133] https://cloudelligent.com/wp-content/uploads/2026/02/v0.1_State_of_AI_in_Business_2025_Report.pdf
[134] https://www.cnbc.com/2025/08/18/openai-sam-altman-warns-ai-market-is-in-a-bubble.html
[135] https://www.business-standard.com/companies/people/satya-nadella-ai-bubble-warning-wef-2026-diffusion-growth-126012100472_1.html
[136] https://euobserver.com/231973/reverse-centaurs-eu-approach-to-ai-risks-dystopia-for-human-workers/
[137] https://www.theatlantic.com/ideas/2026/07/ai-economy-stock-market/688004/
[138] See: https://www.ucd.ie/newsandopinion/news/2025/may/7/ucdresearchexposesriskofirelandstaxmirage/
[139] https://transitionsecurity.org/imperial-state-capitalism/
[140] https://commission.europa.eu/topics/competitiveness/competitiveness-coordination-tool-projects/ai-gigafactories_en
[141] https://transitionsecurity.org/imperial-state-capitalism/
[142] https://ecipe.org/publications/eu-gap-ict-and-cloud-computing/

[143] There is growing literature on the necessity and outlines of progressive green industrial policy which should be carried into policy debates in Ireland. See: Hauge, J., & Hickel, J. (2025). A progressive framework for green industrial policy. New political economy, 30(6), 880-897.
[144] https://www.greeneuropeanjournal.eu/spains-energy-lesson-independence-through-renewables/
[145] https://www.realinstitutoelcano.org/en/commentaries/why-spain-chooses-engagement-with-china/
[146] https://www.bloomberg.com/news/features/2026-04-16/spain-s-90-billion-ai-data-center-plan-draws-amazon-web-services-microsoft
[147] Oireachtas Committee on Artificial Intelligence, 16 June 2026. https://data.oireachtas.ie/ie/oireachtas/debateRecord/joint_committee_on_artificial_intelligence/2026-06-16/debate/mul@/main.pdf
[148] https://www.digitalinfrastructure.ie/post/digital-infrastructure-for-the-future-we-want-report
[149] https://www.irishtimes.com/opinion/2026/08/11/opinion-europe-needs-to-start-treating-the-climate-emergency-as-a-threat-to-our-national-security/
[150] O'Neill, D. W., Fanning, A. L., Lamb, W. F., & Steinberger, J. K. (2018). A good life for all within planetary boundaries. Nature sustainability, 1(2), 88-95.