APRS Briefing Note
Hyperscale Data Centre Debate

Current proposals

There are currently 23 hyperscale data centres proposed across Scotland, with 21 already in the planning system, the bulk of which are in the central belt. Collectively, the ones in the planning system, if approved, would use 7.3GW of power, when peak winter power demand in Scotland is 4 GW. The four projects currently under active consideration by planning authorities (Larbert, Greenock, Auchtertool and Chapelhall) would require as much energy as is generated by Torness nuclear power station, which will close in 2028. According to the developer's own projections, the proposal for Auchtertool will use 4TWh (4,000 GWh) of energy a year - nearly 20% of the energy used by the whole of Scotland's economy, according to latest available figures.

By comparison, the capacity of data centres currently operating in Slough, the densest accumulation of data centres in Europe, is 416 MW according to industry analysts, DC Byte, in evidence submitted by Slough Council to a planning inquiry. Data centres in Slough consumed 65% of the electricity of the entire borough in 2024 and, even so, the power demand of the whole of Slough's data centres is only two-thirds that of the single data centre planned in Auchtertool, Fife (600MW).

I hope that this demonstrates the sheer scale of the projects proposed in Scotland. These hyperscale developments are not the data centres which support the general computing and data storage needs of the economy: cloud computing, business, banking and public body data storage and processing etc. Neither are they to support the kind of cutting edge research that machine learning AI can bring to medicine, the economy and the environment, where, Edinburgh is a world leader. These hyperscale AI data centres proposed in Scotland are an order of magnitude bigger and are all for training and inference for Large Language Models (LLMs).

Implications for the grid

The level of increased demand from even one of the larger hyperscale data centres proposed would lead to significant risks to residential and commercial electricity users, not least because data centres operate 24/7 and cannot dial up and down to match renewable generation capacity. In the US, data centres have placed stress on grid infrastructure, and in Ireland research shows they have led to increases in domestic energy bills through a combination of the increased grid and generation infrastructure required, and the increased use of gas to generate the baseload. Three local councils in London - Ealing, Hillingdon and Hounslow - have had to halt or delay new housing developments given the pressure existing data centres are putting on the grid locally and housing developers have expressed alarm at UK Government proposals to prioritise data centres for grid connections.

According to Ofgem, there is 73GW of contracted power demand from data centres in the GB grid queue, more than 1.5 times as much as GB total demand. Ofgem noted the impossibility of this happening in their consultation exploring proposals of how this grid queue can be reduced. Until Ofgem has managed to find a mechanism to deal with the legacy of NESO (the National Energy System Operator) overpromising on connections, the

planning system is the only way that Scotland has to keep some level of control over the energy demand of hyperscale AI data centres.

Implications for decarbonisation

Scotland has spent decades supporting a shift to renewable energy, not just for the financial benefits it brings, but to decarbonise electricity supply and to extend that decarbonisation to heat and buildings, transport, industrial processes, and to contribute to the decarbonisation of the whole of the UK.

In Ireland, progress towards decarbonisation has stalled and is going backwards, as the pace of renewable energy development is outpaced by energy demand from data centres. More and more 'behind the meter' gas generation is being built, in Ireland and in the UK, to service the huge energy demand of data centres. Recent reports that data centres in Ireland will be required to switch to alternative fuel which is 'likely to be diesel' at times of high power demand is alarming given that the new proposal for the 120MW Chapelhall data centre will run its diesel generators to produce extra power at times of high energy load (for example in hot weather when more people are outside and have their windows open)

The development of 12GW of new undersea interconnectors (five on the east and one on the west), coming on stream from 2029, will eliminate so-called curtailment of wind power, i.e. payment by the grid not to generate, and ensure future capacity goes either to decarbonisation or for export.

Employment and economics

The economic benefits of hyperscale AI data centres overwhelmingly flow to US-based corporations: Meta, OpenAI, Google and Anthropic, etc. Data centres employ extremely few people, typically 20-50 (see APRS's report on employment and data centres). Our investigation into the UK Government claims of jobs in the AI Growth zone showed actual numbers employed in the data centre/s would be less than 10% of the figures given.

It should also be noted that the companies intending to use these data centres for LLM training and inference have expressed clear views on the employment consequences of the technology they are developing. Sam Altman, CEO of OpenAI, said in 2023 that "AI" would eliminate up to half of all existing jobs, although has now somewhat backtracked on this. His main rival, Dario Amodei at Anthropic, said last year that the technology could cause a 10-20% spike in unemployment. Beyond that, there has been growing consideration of the wider risk these technologies may bring, including the recent warning from a former researcher at OpenAI and Anthropic that "the people building AI earnestly believe that it could kill us all by the end of the decade". This could also be rather bad for the economy.

Community opposition

Fifteen community groups, including at Auchtertool, Larbert, Hurlford and Hunterston, have sprung up over the last year, all opposing the projects in their area and also working together to press MSPs to back a moratorium. Two cross-campaign protests have taken place

outside Parliament in June and September of this year, and local groups have lodged tens of thousands of objections to projects which have reached the planning stage.

Locals are concerned that many are proposed for green belt and greenfield sites, and that they can be vast, hyperscale data centres are some of the largest buildings on the planet - the site proposed for Auchtertool, for example, will cover the area of 100 football pitches. They also worry about noise and air pollution. Almost all the data centres that have submitted plans or EIA screening so far have proposed diesel back-up generation on site. The Larbert project, which will be determined by the local authority by the start of October would, according to the developer's own figures from the EIA, be one of Scotland's top ten polluters simply through routine testing of the diesel generators, let alone when they are on emergency back-up mode. It is not surprising that there were over 7000 objections to this proposal, which has a care home next door and a hospital within 500m.

It is clear that all of the data centres that have come into Scotland's planning system are the wrong development in the wrong place: two (Greenock and Ravenscraig) are on sites with planning permission for homes - 1450 in total, most proposals are on green belt, farmland or countryside, some are on grade 2 farmland, Dunbar is across two designated historical battlefields, many are extremely close to large numbers of homes, and also hospitals, schools and nurseries.

None of the 21 proposals in Scotland's planning system are on the shortlist of 10 sites proposed by Scottish Enterprise as appropriate for data centre construction. The most egregious example is the proposed 450-500MW site at Hunterston on greenfields 50m from a 900 year old castle, however the north end of the site is only a couple of hundred meters from the Hunterston coal yards, one of the shortlisted sites.

Exposure of local councils to risk

The National Planning Framework 4 (NPF4) was written prior to the development of ChatGPT and other Large Language Models. Data centres required to support the rollout of fibre broadband were included within National Development 12, Digital Fibre Network, though, with the requirement (undefined in NP4) that they be “green data centres”. It is clear, from the context and the greenhouse gas assessment that these were intended to serve a marginal increase in internet and device use, and that ‘green data centres’ were not intended to include hyperscale AI data centres.

There is no current requirement for hyperscale data centre applications even to carry out an Environmental Impact Assessment. Scottish Ministers are to be commended for stepping in to require this for the Auchtertool and West Edinburgh proposals, but making this standard mandatory, and to include energy and water impacts, is one of the requirements if local authorities are to be sufficiently well informed to decide on applications.

The 17th August 2026 decision to require Scottish Ministers to be notified of all such applications over 50MW is also welcome, and would provide the information needed for a pause in hyperscale data centres while the necessary strategic work and research is carried out. However, we are concerned that if a development does not show the capacity on the face of the application, such as the Greenock project, they may not be picked up by this requirement.

Need for a pause

If the Scottish Government does not urgently introduce a pause, as requested by communities across Scotland and backed by SNP National Council, it will be too late to set a strategic framework, protect communities, support councils, and do the work required to assess impacts on the grid and decarbonisation.

Lack of alternatives

A few weeks ago Denmark had to put through emergency legislation to put data centres to the back of the queue due to a crisis with grid supply. Scotland does not have the devolved powers to do this. Planning policy is the only lever that can be deployed in Scotland to manage this process. Without an urgent pause, the horse will have bolted, at currently unknown but substantial cost to local communities, to grid security, to the local environments in question, and to decarbonisation.
The Strategic Spatial Energy Plan (SSEP), being created by NESO is not a substitute for a pause and a strategic approach. Firstly it doesn’t report until at least Autumn 2027, which is too late. And secondly demand connections need to meet readiness requirements but not a ‘strategic need’ requirement, unlike transmission (generation and storage) projects (Ofgem para 2.6).This means they don’t need to align with strategic documents such as Clean Power 2030 and SSEP.

What needs to be done during the pause.

APRS laid out in a letter to Hannah Mary Goodlad on 19 August a list of actions that should be carried out to ensure a proper framework for scrutiny and governance around hyperscale data centre decisions. These include:

- A proper assessment of the impact of new hyperscale data centres on Scotland's climate targets, communities, land and water resources and the electricity grid to inform the guidance.
- National Planning policy on data centres which must include a statement of need in the national interest for any data centres covering the full range of data centre types, scales and purposes
- Direct all data centres to be EIA development, (or add data centres to schedule 1 of EIA regulations).
- Define the term "green data centres" very tightly so that the impacts of any green data centres match those set out in the existing lifetime greenhouse gas emissions analysis for ND12
- The development of Scottish Government guidance that encourages data centre developers to submit full planning applications.
- The development of planning guidance, including on the effective use of planning conditions to control environmental harms and negative impacts on community health and wellbeing, and how these will be monitored and, if necessary, enforced – as well as the delivery of community benefits.
- Consider making Distribution Network Operators and Transmission Network Operators statutory consultee on data centre planning applications
- A requirement that all data centres have to report water and energy usage regularly and transparently, including resulting discharge of pollutants (eg refrigerants, waste heat, exhaust gases).

We urge MSPs to vote to support Motion S7M-01177 *'That the Parliament agrees to the introduction of a moratorium on planning applications for new hyperscale data centres until a national strategy and updated planning guidance are produced, which takes into account the cumulative impacts on energy demand and the environment.'*

APRS Scotland's countryside charity

Action to Protect Rural Scotland
Augustine Church, George IV Bridge, Edinburgh, EH1 1EL
info@aprs.scot • 0131 225 7012

www.aprs.scot

President: Patricia Macdonald BSc PhD FRSE FSA(Scot) FRSA HonFRSGS HonFICS

Chair: John Thomson MA MSc FRSA

Director: Dr Kat Jones

Scottish Charitable Incorporated Organisation (SCIO) Charity Number SC016139