

Environmental Audit Committee

Oral evidence: Risks and opportunities to the sustainability of data centres in the UK, HC 22

Wednesday 10 June 2026

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[Watch the meeting](#)

Members present: Mr Toby Perkins (Chair); Jonathan Davies; Sarah Gibson; Alison Griffiths; Sojan Joseph; Manuela Perteghella; Dr Roz Savage; John Whitby; Sammy Wilson.

Questions 40-72

Witnesses

[II](#): Matt Evans, Chief Operating Officer and Director of Markets, techUK, Dame Dawn Childs, CEO, nLighten, and Oliver Hayes, Head of Policy and Campaigns, Global Action Plan.

Written evidence from witnesses:

- [techUK \(DCU0073\)](#)
- [Global Action Plan, Friends of the Earth, Foxglove, Global Justice Now, Green Web Foundation, The Citizens, and Beyond Fossil Fuels \(DCU0070\)](#)

Examination of witnesses

Witnesses: Matt Evans, Dame Dawn Childs and Oliver Hayes.

Chair: Welcome back everybody to the second panel of the opening session on the issue of data centres. I am very pleased to welcome our panel. Could I start with you, Mr Hayes, and invite the three of you to introduce yourselves, your organisations and your particular interest regarding data centres?

Oliver Hayes: I am Oliver Hayes. I am head of and campaigns at Global Action Plan. We are an environmental charity established in the UK for 35 years. For the last couple of years, we have been looking at the environmental impact of data centres.

Chair: Excellent, you have come to the right place.

Dame Dawn Childs: I am Dawn Childs, a non-executive director at Pure Data Centres Group. It builds and operates hyperscale data centres globally for key hyperscale customers. We also have a climate tech arm called A Healthier Earth, which looks at decarbonisation of data centres. I am also the CEO of nLighten, which runs a portfolio of 34 edge data centres, pan Europe.

With my third hat on, I am a fellow of the Royal Academy of Engineering and a member of its National Engineering Policy Centre's AI sustainability working group. We developed a report last year, "Foundations for environmentally sustainable AI", and also follow-on work in support of the AI Energy Council and the drive for wider sustainable adoption of AI.

Chair: Goodness. We are very lucky to find a space in your diary, by the sound of it.

Matt Evans: It is great to be here this afternoon. My name is Matthew Evans. I am chief operating officer at techUK, a trade association for the UK tech sector. We represent over 1,200 companies, and we have a mission to ensure that tech delivers benefits for people, society, the economy and the planet. Of particular note today, we represent the vast majority of UK data centre operators in their various different forms, as well as many of the SMEs and institutions from the life sciences and financial services sectors that make use of those services as well.

Q40 **Chair:** Mr Evans, what are the trade-offs between reducing energy and water use, as we heard in the first panel, while still maintaining the operational continuity of data centres?

Matt Evans: First, it is worth making the point that both the sector itself and its end customers are absolutely committed to sustainable data centre build and operation. As you heard on the first panel, there are a number of trade-offs when it comes to these areas, but there are also, importantly, a number of mitigations that it are important to bear in mind.



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There is loosely a trade-off between water and energy use, though that is actually narrowing over time, particularly as we get to more advanced cooling technologies. In some areas, it makes sense to use more water—as you might have guessed from my accent, I am from an area where it may sometimes make sense to use water if there is an energy challenge with grid connection—but broadly, we are moving away from water as a form of cooling.

Data centres are energy intensive, but that has benefits as well as challenges. Industrial energy demand in the UK is actually falling and has been for a number of years. Obviously, the grid changing and decentralising as we move to a renewable future brings grid costs, and with industrial demand falling, a lot of those grid costs could start to accrue for individual households. As data centres bring demand to the grid, they can potentially offset some of the grid costs by, ultimately, paying for them.

As you heard from the first panel, they also underpin a lot of renewable energy generation. One example is the Moray West wind farm off the coast of Scotland, which came online last year. It is an 800 MW renewable farm, and about 60% of that is underpinned by power purchase agreements with the data centre sector. It is about bringing additional resource to the grid. I will leave it there on my opening remarks, but I am happy to go into any of that in detail.

Q41 Chair: Thank you. Mr Hayes, you heard that claim that, effectively, data centres can have advantages for the environment. What do you make of that?

Oliver Hayes: It is extremely important to look at this in the round and economy wide. We have seen escalating estimates of how much demand data centres bring—there is a new estimate almost every couple of months. In 2022, just ahead of the boom in generative AI, the energy system operator NESO put out a figure on the total energy demand they expected from data centres out to 2050. When they revised the figure three years later, it had doubled. The figure that they put out now looks like the equivalent of the entire commercial sector today—roughly a quarter of the entire electricity that the UK currently uses.

As was mentioned in the previous panel, there is quite worrying discrepancy in the figures coming out of Government. Earlier this year, Ofgem asked for people seeking a grid connection to come forward. Some 140 data centres came forward, equating to 50 GW of demand, which is slightly more than the entire UK demand on this year's peak winter day. In evidence to this Committee, DESNZ said that that figure might actually be 50 to 70 GW—an additional 40%. These are enormous figures.

The Government already face a big challenge in electrifying heating and transport in order that we decarbonise our economy. Doing that will require a doubling of electricity, so the idea that we can load on another doubling without fossil fuel generation coming into the mix seems very far-fetched to us. The reality is that the pace of data centre growth is far

outstripping the pace of renewables deployment, which mean that we will stimulate more fossil fuel generation. The final thing I would add—

- Q42 **Chair:** Let me just stop you for a second there. We will come on to your other point, but that is a very interesting and important one. Of course, we already have huge demands for energy, and we want to see renewable sources being used to service those demands. In your original answer, Mr Evans, you were sort of saying, “Well, we’ve got this wind farm and we can give them 60% of the business,” but wind farms are only an advantage if they are replacing fossil fuels. If we are having to build renewables in order to service data centres, we have lost the initial benefit the renewables might have produced in replacing fossil fuels.

If, as Mr Hayes says, the growth of data centres is outstripping the growth of renewables, the sector is likely not only to utilise all the energy that might otherwise replace fossil fuels but to make additional demands on top. Do you not accept that the scale of energy usage places huge demands on the sector to be more efficient to reduce its energy and water consumption?

Matt Evans: The simplest demand on the sector to be more efficient, particularly in power but also in water, is the price of energy. As I am sure you are aware, we have one of the highest commercial industrial costs of energy in the G7, and it is well above the cost across the IEA. To give you a sense of what that looks like, running a 100 MW data centre in the UK is about four times as expensive as running one in the US, so it is a really significant driver and the greatest commercial driver for efficiency in the UK.

I will touch on some of those headline figures, because there are some laughable figures out there about the demand for data centre build in the UK. On the 50 to 75 GW, there are definitely a lot of speculative demands at the moment in the grid connection queue system. Some of that is an unintended consequence we have seen from policies such as AI growth zones, unfortunately, but there is also a lot of land banking going on from developers who are not well established in the UK, and we are working with Ofgem to look at how we put a couple more gates in place for that grid connection.

Chair: You think that the 50 to 70 GW is not true.

Matt Evans: To give you an example of what that might cost in power terms annually, it would be about £75 billion a year just to power that on an 80% load rate—not even taking a 100% load rate. That is the defence budget. We might have a separate argument about whether the defence budget is high enough these days, but that is the level it would be, and there is no demand from that in terms of the current market situation in the UK. At the moment, we are at 1.5 GW or 2 GW, moving towards 3 GW, in terms of what the market is. I should say as well that we are really good at this; we have been a leading data centre market across Europe and globally because of our expertise in how we build and run data centres, and that is a lot to do in terms of the efficiency we have.

Q43 **Chair:** So despite the energy costs because of intellectual property and expertise, Britain is still seen as an attractive place to do this.

Matt Evans: And we have the customers here. We have the financial services sector, the life sciences sector and increasingly the public sector as well, and we have others who have really stimulated and provided that demand. Ultimately, data centres are there to service the end customer.

Q44 **Chair:** Dame Dawn, what specific metrics do you think should be reported to make statutory reporting meaningful for assessing resource needs?

Dame Dawn Childs: Everybody focuses on power usage effectiveness, and I think that misses the point slightly. To Mr Evans's point, we are very good at building and operating data centres in the UK, so PUE is generally very good. Our customers, if I think from a Pure perspective, demand the best PUE.

Q45 **Chair:** Sorry, what is PUE?

Dame Dawn Childs: Power usage effectiveness. Effectively, you are comparing the power for the compute, which is working the chips and that power consumption, with the power to operate the building, which is the cooling and management of the data centre. That is the ratio: the 1 is the compute and the 0.2 up to however far you go is the power to run the building.

Particularly for new data centres—let's face that we are focusing on new data centres because the legacy data centres are already built, so you are not changing them anytime soon—we can all demand a good PUE, and all the hyperscale customers would already demand that of us. The focus should really be on the 1, which is the power to compute. The advances in the last decade have significantly improved that. We are already seeing 10 times more efficient compute.

Every single chip designer is working on improving that power efficiency yet again. You will see improvements in designs from silicon on to photonics. There are new ways of overlaying logic, which means that the power consumption will go down. Of course you can measure PUE. You can measure water-usage effectiveness. At Pure, for example, we operate closed-loop systems. We never used adiabatic cooling. For all our new data centres going forward, there is no running water. Of course, you can measure WUE, but that is not necessarily a requirement for modern data centres.

Q46 **Chair:** I will just stop you for a second there, because we are hitting upon something that is of real interest to this Committee. If it is the case that the level of potential demand is far greater than the level of demand that is likely to actually be delivered, and there are all kinds of technological wizardry that can reduce the environmental footprint of these data centres, what should the Government expect of data centres?

If we are saying that the Government do not just have to accept whatever anyone offers, and they can make sure that we only get the most environmentally friendly and those data centres that will make

contributions, for example, to the grid or to recycling the water, what sort of reasonable expectations should the Government have of the sector, to ensure that it minimises the detriments and maximises the benefits?

Dame Dawn Childs: Any good data centre operator will always be thinking about the environmental and community benefits of the data centres they are building. If I look at, for example, the Pure Data Centres Group scheme in Brent, we worked very closely with the local community to ensure that the facility we were putting up actually added to the community.

From a biodiversity perspective, that building will be enrobed in one of the largest living walls in the world, which will have the impact of taking and absorbing pollutants out of one of the most polluted parts of the country, where someone actually had pollution as a cause of death. From a community perspective, it adds to the community, so we should expect developers to be ethical and considerate in the way they develop.

But let us be clear: we will not be getting massive data centres built in the UK. All of my customers are looking only at growing organically in the UK, for the compute demands that are needed for the customers that are already here, such as the banking sector and so on. Organic growth is required, but large-scale AI data centres will not be built because it is too expensive in terms of the power of compute.

To pick up on the example Matt used, for a 100 MW data centre, operationally, the cost of power is a quarter of a billion pounds more a year to operate it here, so my customers want me to build Pure data centre facilities in the Nordics, for example, where the cost of power is much cheaper.

Although there might be a very backed-up system of applications, the majority of those are speculative, and I do not believe that any of my customers would want those built here because the facilities would be too expensive to run and too far away, from a planning, consenting and access-to-power perspective. We can be as demanding as we choose to be, but the reality is that those data centres will not be built here unless it is for organic growth. We need to measure up what we are seeking and be sure that we are asking for the right things to be built.

Q47 Chair: I hear what you are saying. We have had somewhat conflicting evidence, because a minute ago we were hearing about the great attractiveness of the UK, and now you are saying no one will build one here, except for organic growth. I absolutely hear what you say—that a good provider might be doing many of these things anyway—but in this place we end up hearing about the bad providers. They are the ones that end up on our doorstep.

I will return more specifically to my original question. When we get to the end of this inquiry, we will make recommendations to the Government about what we might see here, balancing the environmental demands with the need for the UK to have an attractive business environment, taking on board everything that you and Mr Evans have said about the potential for



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the next generation of data centres. What sort of things could Government put in place to offer reassurance that we can have some of the data centre growth that your sector advocates without the worst fears of people about its possible environmental damage coming true?

Dame Dawn Childs: The PUE, or power usage effectiveness, the water usage effectiveness, the use of waste heat—but may I just say that all our data centres are already ready to give away waste heat? There is nowhere to give it to, though. When I build in other jurisdictions, the waste heat networks are there to plug into, so the waste heat is used immediately. In the UK, the manifolds are already there for waste heat to be reused, but there is no network to plug into.

Q48 **Chair:** Is that a planning thing or a network thing?

Dame Dawn Childs: It is not planning; it is a network thing and a more systems-thinking thing. Effectively, if I take the Brent data centre example, we are waiting on a housing scheme to be built sometime in the future before there is a sufficient business case for the provider of the heat network to be able to put the scheme together. We are ready and waiting, and the data centre has been operational for multiple years, but that heat reuse has not been put into effect.

Matt Evans: That is a good example. Where we have seen heat offtake in particular work for district heating, it is often in a cool site development area. The Old Oak and Park Royal area and the Olympic Park are good examples of where the data centre, the housing and the district heat network were being built concurrently. Therefore, there were good incentives and often a local co-ordinating body to make sure that those benefits were spread across the piece. It can be very hard to line those up on a purely commercial basis, because timelines and other things will run differently for each.

Q49 **Chair:** Mr Hayes, what do you say to the evidence that we have just heard that the scale of data centre growth has been hugely exaggerated and that we cannot take the speculative queue as any sign of what is likely actually to be built?

Oliver Hayes: The first thing to say is that Ofgem looked at the 50 GW, and said that, of that, 20 GW had final investment decisions in place, with the financing good to go. I am sure that significant chunks of that 50 GW will end up not getting built, but I slightly challenge the idea that there will be no big data centres here. We see that in particular planning applications as well. We have just had a very short and—some would argue—slightly anti-democratic consultation on the Havering data centre out in east London, which is a 600 MW site, very advanced in its planning and being pushed through with a local development order. We were involved, as you know, in the data centre that has been referenced in Buckinghamshire, which is a 90 MW data centre that is coming through. We have 1 GW data centres in planning in Elsham Park in Lincolnshire and in Blyth, and 1 GW is 2 million homes-worth of power, which is the size of a nuclear power station's output.



Q50 Chair: To stop you before you move on, that is interesting to put to Dame Dawn Childs. When you hear about those kinds of proposals, is that what you consider to be fairly small data centres, or do you acknowledge that 1 GW data centres are major data centres?

Dame Dawn Childs: Of course they are major data centres, but from my perspective, working with my investors, we would never build one speculatively, so I guess my question is, who is the end customer and will that definitely go forward? We have already seen some fantastic announcements, and then some step-backs from those announcements. The reality of investing the money and of putting it in the ground are two very different things.

Q51 Chair: Do you want to finish what you were saying, Mr Hayes, or shall I move on?

Oliver Hayes: The final thing that I wanted to add is that the grid connection and the grid queue are clearly a problem for developers. Understandably, developers want to build as quickly as they can, but unfortunately that is leading to inquiries about powering data centres with gas. There have been reports in the press that more than 100 data centres have inquired about the availability of connections to the gas grid. In fact, the Government have given the go-ahead to a development in Wapseys Wood, near Beaconsfield, saying, "Yes, you can apply to the new nationally significant infrastructure projects programme." This is pre-application, so I don't want to overstate whether this is definitely going to happen, but that data centre is saying, "We are not going to seek a grid connection. We are going to have 300 MW of on-site gas generation." If that pattern starts to be replicated because data centres cannot connect quickly enough to the grid, that provides even greater concern when it comes to emissions and our ability to reach net zero.

That also raises serious concerns about local air quality. It is one thing for a 300 MW data centre to connect to the grid, and it is quite another to be burning that gas on site. Local residents coming to us at Global Action Plan are equally concerned about the potential of air quality impacts from gas generation and from the diesel back-ups—we have seen that too.

Dame Dawn Childs: May I pick up the gas point?

Chair: You can quickly, and then we will move on.

Dame Dawn Childs: At Pure Data Centres Group, we operate an islanded gas solution in Dublin, but it uses biogas. That was run entirely carbon neutral last year, and there are sufficient quantities of biogas to run it carbon neutrally as it upgrades, so there are opportunities to ensure that gas solutions are carbon neutral.

Q52 Chair: Might it be sensible if this Committee suggests that, when gas applications go in, they should be approved only if they are biogas?

Dame Dawn Childs: Yes. The biogas gets injected into the grid, so it is not necessarily that biogas is being trucked to the place where the gas is being consumed, but that can work in the UK, as well as in Dublin.

Q53 Jonathan Davies: There are a couple of things that I am surprised have not come through in our discussions with the various panels. These questions are about efficiency improvements to offset growth in data centre demand. The role of advanced modular reactors is significant. That technology is nascent at the moment, but some of the big data centre providers have engaged with the likes of Rolls-Royce regarding AMRs—I know that because I used AI to tell me in this meeting.

Mr Evans, perhaps you are well placed to answer this. What is the sector doing to communicate its willingness—the colour of its money—to support the growth of that technology? Sure, we can do efficiencies over time—a car from 40 years ago is much less efficient than a modern one—but what is the sector doing to help move that technology along? It has applications well beyond what data centres can do.

Matt Evans: The sector is very interested in it because of the grid connection challenge. I should say that the grid connection challenge is not just the duration of the connection that you might face, which is often multiple years, but the uncertainty within the grid connection system. You can have significant slippages within that, when you have already started to build out the infrastructure and have already let space in halls within the data centre. This is a big challenge for the sector. I should stress that it is not just the UK. We are looking at things behind the meter, in that private wire area, and small modular reactors are one of those.

Q54 Jonathan Davies: Do you mean advanced modular reactors, rather than small?

Matt Evans: I think there are micro, small and advanced modular reactors. I might be getting my technologies confused here, but if we use the term “small nuclear reactors” I might sort of blanket that across. Ultimately, I think those technologies are at least five to six years away, not least with regulatory challenges and complying with the regulatory regime, which is very sensible. That is not a “go live today” solution in terms of when we are looking to build out over the next four to five years. What that energy mix looks like beyond that point is interesting. We are broadly supportive of having that energy mix because of the resilience that it can bring to the grid as a whole.

Q55 Jonathan Davies: Are you able to give us a sense of how much money the sector is stumping up to support the development of advanced modular reactors?

Matt Evans: Just as we have used power purchase agreements to incentivise renewable build—there is a piece of research from Aurora Energy Research that estimates what power purchase agreements could bring on, or that it could de-risk around 19 GW of renewable energy sources over the next 10 years—the sector would be very interested in having similar power purchase agreements in place, or in co-locating build where that might make sense so that you can more effectively use private wire, but it would be as an anchor tenant.



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As you heard from the previous panel, a lot of UK compute is cloud; that is steady state. There are obviously other forms of compute. We do not have large frontier models being trained in the UK, for high energy and copyright reasons, and that is unlikely to change in the foreseeable future. Where you move to inferencing and other fine tuning of models, those workloads have an element of flexibility in both their location and the amount of load that you put on them. Broadly, it is a very good anchor tenant for some of these energy build-outs.

- Q56 **Jonathan Davies:** On co-locating, the Government have stumped up £1 billion to support heat networks through the heat network transformation programme. How plugged in are you to the conversations around that? Is it difficult to bring the stakeholders together? You have DESNZ and local authorities, and they are not your usual stakeholders.

Matt Evans: That is not my area of knowledge and insight, but certainly where we have convened some of our members around Old Oak and Park Royal and others, there has been some Government investment into the heat network itself. That is an area, as Dawn mentioned, of significant interest to the data centre sector itself.

- Q57 **Jonathan Davies:** What about green hydrogen? Are those conversations happening? You talked about gas. That still requires a huge amount of electricity to produce. But if we got to a stage where we were doing that with renewables, as the Nordics are, and supplementing it with nuclear, is that technology you could scale up for data centres?

Matt Evans: As long as it meets the sector's climate commitments—there are really strong climate commitments around the data centre sector that they have signed up to—and as long as the price point works for the sector as well, although I would say we already face a very high price point in the UK, we are open to a range of technology solutions. We have already talked a bit about on-site generation. That is mostly for back-up and used in extremis. It is tested. The sector has mostly moved towards HVO and away from diesel. Often that testing can be a result of the permit requirements at individual sites. It is the Environment Agency at times that tells us to turn the generators on, but that is to make sure they are working and compliant with Environment Agency permits as well.

- Q58 **Jonathan Davies:** We have a national plan to largely decarbonise the grid on the energy that we use by 2030. This will be a new strain on the grid as the sector grows. Mr Hayes, if efficiency gains in the data centres are slower than anticipated, how should the Government and regulators respond to prevent the data centre growth from placing unsustainable pressure on energy, water and wider infrastructure systems?

Oliver Hayes: That is the nub of it, really. We have carbon budgets. We have a carbon budget and growth delivery plan, which looks at how we will meet targets up to the sixth carbon budget. But we know that in the seventh carbon budget, there is no specific reckoning with data centres, and all we are hearing from Ministers is that the growth is inherently uncertain. Of course it is, in one sense; we do not know exactly how many



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data centres there are going to be, or how much demand there is going to be. But I think we urgently need two things.

First, we need the national policy statement, which was promised in November, to be delivered within three months; we still have not got it. That will set out how we look cumulatively at the planning applications that come through the NSIP process.

On top of that, we need the Government to look very carefully at how this growth will be absorbed within carbon budgets, because of course carbon budgets are technology-neutral. They do not say, "You can only have this amount of wind," or whatever. It is a budget. But it is based in the reality of physics, emissions and the ceilings that we are committed to. Therefore, if data centre growth is going to push up emissions and the Government decide that that is what they want to do, that is a legitimate choice, except that they have to then show where the emissions will come down.

Our concern at the moment is that, with the relaxation of planning rules and the express intention of the Government to make it easier to build data centres here, there is not a sense that somewhere else is being constrained in order to make it all add up and fit under the carbon budgets.

Q59 Jonathan Davies: Surely one of the levers to mitigate the environmental impacts is to have better collaboration in relation to the opportunities that can be created through the waste heat. Previously, I was a local councillor and cabinet member. I was very keen to have a data centre at the local swimming pool, because we could use some revenue there to heat the swimming pool and provide a useful thing, but there were just no means of getting it off the ground.

Oliver Hayes: Clearly, a number of data centres are going to be built and we know that about 90% of the energy that goes into data centres escapes as heat; that is clear. So, the best use possible of that heat is going to be a good thing. Lots of communities are interested in how that waste heat could be used to drive district heating networks, etc.

Unfortunately, that is sometimes being used as a reason to advocate for the construction of a data centre, rather than looking at it—as I would suggest the Government ought to look at it—and thinking, "Okay. When they are built, this is how we must make best use of them." As I say, we have a worrying lack of clarity about what the overall plan is.

We also have a lack of clarity about who the end users are. There has been a little bit of discussion about that, both in the previous panel and in this one, but I think the industry would help itself if it was really transparent about who the ultimate end users of these data centres are, because in the planning applications that we look at and in the questions we ask, it is never disclosed.

For the local residents who are concerned about the construction of these data centres, that matters, because if the end user is going to be a



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university that is looking to crack an intractable medical problem, the local residents will feel very differently about it than if the end user is generative AI, which at the benign end is just generating pointless videos and at the more destructive end is doing some of the things that, for example, we saw at the beginning of the year, with Grok enabling the nudification of teens.

Transparency from the industry is critically important, and asking those questions is an important job that the Government can do. We did ask them, "Do you know? Do you have a list of all the clients of the data centres up and running?" They said, "No."

Jonathan Davies: I would love to explore this more, but the clock is against us, isn't it? Thank you.

Q60 **Sarah Gibson:** I have a very quick question off the back of what you have all said about being able to use some of the waste heat, and the difficulties that Dame Dawn mentioned with district heating. Is there a possibility that the Government's initiative on expanding the mayoral authorities would allow, if they were given the authority and the capabilities, or the power to be seriously strategic—I am avoiding using the word "planning" deliberately, on the grounds that "planning" in this country means nothing, in terms of what it would mean to a secular person. But what if there was strategic thinking and a strategic initiative to be able to do some of the things that Mr Evans mentioned had been done around Old Oak?

Dame Dawn Childs: Yes, definitely. Whenever we have had success in our conversations around district heating, it is because we have had the conversations at the local level. That is about wanting to go in, be a good citizen, effectively, and sit well within the community. So where we have schemes that are going forward—Old Oak and the Brent scheme, when it eventually goes forward, and those in other European jurisdictions—it is because we have had the conversations at the local level.

Q61 **Sarah Gibson:** Do you think the mayoral authorities model will help with that?

Dame Dawn Childs: Potentially, but there is a timing piece as well, because these systems do not exist here. It is about being able to build them out sufficiently to enable the data centres to plug in. Heating swimming pools is lovely, but there are not enough swimming pools, and it is quite small scale, to be candid. If you are trying to offset larger-scale facilities, it is not a sufficient use of the heat.

Matt Evans: Sadiq Khan actually launched quite a significant report on data centres in London today, where he reaffirmed his commitment to London being a leading source of energy-friendly data centres. Where we bring some of those development zones together—it is not just within London; this is about identifying areas where there is demand for data centres, and then starting to think about what else you are building in that area—that starts to make it a lot easier, as Dawn said, to engage the different parts of the system to take best advantage of some of that heat off-take.



Q62 John Whitby: We have heard lots of references to your back-up HVO today. I am just a bit concerned that it is being used frequently. Is that because the grid cannot cope, for whatever reason?

Dame Dawn Childs: It is not used frequently; it is used only in emergencies—when the grid fails, effectively. But I would say that I think we are missing a bit of a trick. If we were better able to use all the data centre stand-by power assets and our uninterruptible power supply, our battery assets, for grid participation—we have developed schemes at Pure and nLighten for being a good grid citizen and participating in the grid—you could add power into the most constrained areas, such as London. You could then avoid some of the more than £1 billion of constraint costs that we currently have on the national grid, where we are actually turning off wonderful renewable power and turning on other, potentially fossil fuel-powered sources to stabilise the grid. I think the use of stand-by power, and the ability for data centres to have stand-by power, should be seen as a very good addition that could be used more thoughtfully to better enable clean power 2030.

Q63 John Whitby: What is going to produce the lesser impact on the environment? Is it fabulous design for the building, or is it where the centre is sited?

Matt Evans: It is both about how the building is built—as Dawn said, new data centres being built are meeting the highest BREEAM and LEED standards; that is the standard that the data centre sector uses—and about how effectively we use it, as we have already covered, in terms of power and water.

It is also about what that enables you to do: NESO has AI, deployed from a UK data centre, in its control centre—you probably would not want that being deployed from outside the country. Last year, I think that saved it somewhere in the region of £25 million in grid balancing costs, and several hundred thousand pounds in deferred carbon as well. So it is also about what the data centre then enables and allows us to do in other sectors, to help them on their decarbonisation journeys as well.

Q64 John Whitby: How should the drive to accelerate the development of data centres through AI growth zones be balanced against environmental constraints and local infrastructure capacity?

Oliver Hayes: AI growth zones are what they sound like: an attempt to generate greater capacity of AI in data centres in specific places. We have also seen an attempt to change the way that planning is pursued in those growth zones. In Culham in Oxfordshire, it looks like the groundwork is being laid for local development orders to be pursued. I can see the Government's logic of, "We want to streamline this process," if that is what they are setting out to do. I would only caution that everywhere that major proposals are going in, local residents are getting very concerned and feeling like they are not participating—not able to participate—in that planning process and not having their voices heard. There is sense that this is being done to them centrally and does not involve them. That is a big risk for Government. If we look back 10 to 15 years, we saw very

similar approaches in the attempt to get the fracking industry going in this country; there are a lot of similarities there. Ultimately, local people did not feel like that was for them.

This has been mentioned already, but the jobs benefits really do not seem to be what the developers are claiming. The data centre I mentioned in Blyth in Northumberland, put lots of press releases out and repeated in local media that it would lead to 4,000 jobs, but the slightest bit of interrogation drew an admission that that would actually be 100 jobs. The investment in Blyth is £10 billion—it is enormous—which means you are getting one job for every £100 million. There needs to be real interrogation of what it means for the people living in AI growth zones, and less of a laissez-faire approach.

Matt Evans: I completely understand the Government's intent here. We are in a moment in time for capital investment in data centre and compute build-out. The amount of capex being spent globally will not be the new normal—no one expects it to be. In our view, it is right for the Government to try to capture as much of that in a sustainable way as possible. We have seen significant capital investment announced over the last couple of years in the UK in compute infrastructure.

On jobs, it is challenging, in that you can either say that the data centre employs the exact number of people that it employs, which is the direct employment, or you can say that it underpins the entirety of our digital economy, which is everyone. It is quite hard to then narrow that down to a sensible middle. Two years ago, techUK did a piece of work on this, and we believe that we employ about 44,500 in the data centre sector, across all 600 to 650 sites across the UK. They are well-paid jobs; they are highly technical—often, high-voltage electrical engineers. All of them are above the UK median wage bracket. An individual data centre will employ a relatively small number of people, depending on its size, and if you are at the very edge of a data centre, it might employ no people, but it ultimately underpins everything that we do in our lives.

Dame Dawn Childs: To clarify on the jobs piece, I will cite our data centre in Brent, because that is a nice, local example. That site is being built out over a number of years—close to a decade—so when we say that there are thousands of jobs in construction, that endures for nearly a decade in that local area. There are hundreds of jobs then in the data centre itself, which then endure for its longevity—its entire lifetime. Do not forget the halo effect that that has on the local community, because for every job in the data centre, we are using the local supply chain, so that is amplified.

Yes, you could be reductionist and say, "The construction jobs don't endure," but when you are building out these facilities, there is over a decade of construction jobs in that local area. I hear that it is probably not as compelling as putting in a factory, but the factories are not coming—they do not exist any more. I would rather a data centre that adds to the community than something else.

Q65 **John Whitby:** Should we be deploying SMRs in those growth zones and those clusters of data centres?

Matt Evans: It is fair to say that the sector is not united in its view on AI growth zones. That is partly because, even in the digital world, location matters in where we currently deploy a lot of our data centres. Latency matters for a lot of the compute that we are deploying in the UK. So it is that storage piece: you ultimately want to be geographically close to your customer. If you are fine-tuning models and things like that, that relationship loosens as you go.

With some AI growth zones, it is hard to understand where that customer demand is coming from. But they are largely in areas where the grid is less constrained, so there is logic to where they have gone. It is about how you then use that data centre to create more of a flywheel effect to stimulate demand and the local digital economy. That involves Government taking a whole-of-Government approach to make those a success.

Q66 **John Whitby:** Mr Hayes, are there any environmental constraints that would rule out a site completely, regardless of mitigation?

Oliver Hayes: The best and most memorable acronym I have heard is "BYONCE"—"Bring your own new clean energy", which I like a lot. That is of critical importance. We should be demanding of data centres that if they are going to be built in an AI growth zone or elsewhere, they can demonstrate that they can pay for the construction of genuinely new, additional clean energy that is near enough to be used by the site, although it will not always be practical to build that on the plot itself. That is so that we not talking about somewhere at the other end of the country, where those electrons cannot come through the grid. So it has to be new and additional, and it has to be clean.

Despite the example given about biomethane—correct me if I am wrong, but as I understand it that biomethane was bought from Germany and injected into the grid—

Dame Dawn Childs: Last year, it was all locally sourced.

Oliver Hayes: Okay, forgive me. However, as I understand it, there is only capacity in the UK for about 8 TWh of biomethane, and that is the equivalent of one large data centre. We know that biomethane requires an enormous amount of land for the crops to be grown. Global Action Plan would rule that out and say that this has to be genuinely new and additional clean energy—so, BYONCE.

Q67 **Sarah Gibson:** I want to pick up the point Mr Hayes made about local communities feeling that these applications—especially now that they can be referred up very quickly because they are strategic infrastructure—are happening to them rather than with them. That is a general problem with development and the lack of transparency over our planning system. However, in this specific case, are some of the voluntary sustainability commitments by operators sufficient to make communities feel they are



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getting that co-benefit from having a data centre? Or do we need a regulatory framework that would require more public engagement and more public and community benefits? Some of our solar farms are starting to have community benefit companies as part of their infrastructure, which is certainly changing the tide on how people feel about them. What else, both regulatory and from the industry, should we be doing?

Oliver Hayes: I think there is a lack of trust about the voluntary commitments coming through from developers—rightly or wrongly. Certainly, the communities that reach out to us basically do not buy it. As we saw in the recent legal challenge around the Buckinghamshire data centre, we now have the precedent that voluntary commitments made by developers must be concrete and legally binding. I think that that will help, and that it will help developers. Communities can see what is in an application and say that what has been promised has to happen, and that is an important step forward.

However, we are still seeing plenty of applications where there are attempts to mitigate the environmental impact associated only with the administrative offices of these data centres. There is a strange definition that says that regulated energy is actually only that associated with the kettle, the printer and the heating of the back office, and that the servers themselves count as unregulated energy. When that meets the real world, it does not stand up to scrutiny. Again, I strongly encourage developers to be transparent in those applications and to say, "This is our total energy footprint, these are our associated emissions and this is what we are going to do to mitigate them."

The final thing is that we have had slightly strange examples reported to us—for instance, in the Havering case I gave earlier—of the local community being concerned about the heat coming off the data centre, and the developer saying, "Don't worry, because you will be able to grow aubergines and cucumbers with that excess heat." That does not really meet the seriousness of the local community's concerns. They are concerned about this enormous infrastructure and how it might change their local area, and for developers to make slightly flippant remarks like that is unhelpful.

So I urge developers to enter into things in good faith, to be as transparent as possible and to try to build trust, as well as being totally clear about who the end users will be and what they will be doing in the data centre. I think that will help.

Q68 **Sarah Gibson:** I presume they were not actually offering to build the polytunnels for the cucumbers. It was not actually a serious scheme, I take it.

Oliver Hayes: Not to my knowledge.

Q69 **Sarah Gibson:** I would like to ask you, Matt or Dame Dawn, because you are involved in the sort of schemes that have co-benefits and have been more successful than some of the ones Mr Hayes mentioned, what further things would help to make it a level playing field, so that everybody is



doing the kind of things you have discussed.

Dame Dawn Childs: From a Pure or an nLighten perspective, I am more than comfortable if the voluntary schemes are made mandatory, because I think that that is entirely reasonable. I cannot speak for other developers' schemes, but perhaps some of the anomalies and nuances that come through the current planning system are because the developer is only talking about the building they are building; we cannot possibly talk about our customers' use of the compute—the power usage effectiveness. You are talking about the 0.2 or the 0.3 and not the 1. That was the point I made earlier about looking at the improvements in the efficiency of compute. It is irrelevant who the end customer is. That efficiency of compute is really mandated by the chipsets they put in, and the developer rarely owns those.

Of course, the big tech companies can comment on their self-developed sites that they are building for themselves, but particularly if you are developing a site and you do not yet have an end customer, you cannot do that. When a scheme goes through planning, we may not yet have an end customer, because generally our customers need to know that the scheme is already consented and that you already have your power application. At the point of planning, I could not possibly tell you who my end customer was, because I do not know. I could give you an example and say, "Well, it's likely to be one of these five, but I do not know which because I haven't sold it yet." That might be where some of those anomalies are coming from.

Matt Evans: Data centres are largely a new asset class, and they are particularly new to the public eye, so it is on the sector to explain what we do and what data centres enable. I agree with Oliver that we have been our own worst enemy sometimes when it comes to explaining that. There are sometimes very good reasons why we cannot say, "And the data in this infrastructure build-out is going to be used in the NHS," because it may well be that the NHS definitely does not want us to say that, or that the regulatory and resilience regimes that the data centre operator operates under forbid that for critical national infrastructure reasons.

The sector really does want to work with local communities. Ultimately, these are significant capital investments that are going to be there for a long time—they are going to be a part of that community for a long time—so the sector really does want to do that. At times, it can be a bit of a challenge to engage with a variety of local community groups around some of this, but I think it is on the data centre sector to do that better. Part of the challenge is that we cannot always say, "Come and have a look to see what the data centre looks like." These are, as I said, critical national infrastructure. They are secure facilities, so it is sometimes hard to make that happen and to demystify them.

Despite that, the best polling I have seen on this shows that, ultimately, the public do support data centre builds at both national and local level, although it is not a huge margin at all. There is a big "Don't know" in that, but ultimately they do still favour that—I think that was polling by Public



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First this year. They favour it for three reasons: they think it will create jobs, they want to keep data in the UK, and it will create opportunities for UK tech companies. Those are the top three reasons.

Q70 **Sarah Gibson:** People are always very keen on infrastructure, as long as it is not next to their own home.

Matt Evans: It did say "in your locality". I will agree that the majority did decrease slightly, but it was still a majority.

Q71 **Sarah Gibson:** In terms of having stronger regulatory offsets for local communities, you would not think that that was a detrimental idea? Some local authorities having the ability to insist on better communication and engagement at an early stage would perhaps be beneficial to all?

Dame Dawn Childs: I do not see a challenge with that. I do think there are some movements in the planning system that could be beneficial. Rather than the section 106 stuff just going into a big black hole and paying money, it could be doing more meaningful things. Perhaps we could do some meaningful things with our biochar facility and our decarbonisation platform through A Healthier Earth. For example, around our London sites, we build urban forests. We work with local communities and local schools, doing meaningful things with section 106 funding and increasing the biodiversity in the local area. As a platform, Pure Data Centre Group is happy to participate in those things and make this more local, rather than just giving money over that then does not necessarily see community benefit in the local area.

Q72 **Sarah Gibson:** To see a direct benefit from the data centre, rather than something just disappearing into your cash-strapped local authority.

Dame Dawn Childs: Yes.

Sarah Gibson: Thank you. That is very helpful.

Chair: Mr Hayes, Dame Dawn Childs and Mr Evans, thank you very much indeed for your evidence. This has been an excellent first session, and we are very grateful to all of you for your evidence.