

techUK is proud to represent UK data centre operators. Our award-winning programme is comprehensive and influential. Our aim is to ensure that the UK is a place where the sector can flourish. We intervene on policy, we mitigate regulatory impacts and we raise awareness. To date, we have changed UK law and negotiated a tax concession worth over £200M for operators, we have reduced regulatory burdens, identified and mitigated business risks, established a community of interest and shared knowledge. Most recently we negotiated key worker status for data centre staff, contractors and suppliers, protected construction sites and obtained quarantine exemptions. We continue to help operators get to grips with policy developments and educate policy makers about the sector.

What did we get up to in 2020?

2020 was a year characterised by seismic challenges to our daily lives and massive disruption to travel, business and social activities. Digital infrastructure took centre stage as processes and interactions moved online. In March, conscious that demand for data centre services was escalating and that lockdown was imminent, we urgently sought confirmation from Government that data centres staff would be included in the list of key workers. The Department for Digital, Culture, Media and Sport (DCMS) responded promptly and effectively, ensuring that the sector could continue to operate and in turn support growth in demand for services and protect customer business continuity. Within days key worker status was confirmed and a dedicated team was established to work with us. Once the reactive work was complete, the focus moved to longer term sector resilience, with supply chains and data security firmly in the spotlight. So in policy terms, 2020 marked a major change: for the first time, Whitehall formally acknowledged the infrastructural importance of data centres.

Although activity in 2020 was dominated by our COVID-19 response and managing the new relationship with a government department keen to learn about the sector and identify any policy measures needed to protect it, we were not entirely idle on other fronts. We engaged with government on IETF, we responded to consultations on the Climate Change Agreement, on EUETS and Carbon Taxes, on Red Diesel, on Planning for the Future and on the National Data Strategy. We also continued our bitter trench-warfare with BEIS on their unhelpful proposals for implementing the CCA extension. At the very end of the year, BEIS, clearly keen to limit our recovery time after a very demanding year, published the National Security and Investment Bill on 11 November with a consultation deadline of 6th January – every policy wonk's nightmare. This extends Government powers to intervene in mergers and acquisitions within the digital space - and data centres are firmly in scope.

In terms of outputs during 2020, those related to COVID-19 are collected in a single Dossier. However, we also managed to produce a UK sector overview: *The UK Data Centre Sector: the most important industry you've never heard of*, various infographics and a draft FAQ for planning professionals: *Data Centres: Animal, Vegetable or Mineral?* which was ready for publication at the year end and will be released in the new year. In terms of coverage, we appeared in Computer Weekly, DataCenterDynamics, Inside Networks, Data Economy, Data Center Knowledge and Techerati, among others. We spoke at DataCentre World, at DCD Europe, Infrastructure Masons, at Kickstart Europe, at EuroDIG, and Data Centres Ireland, in webinars on attributing carbon to cloud and COVID recovery, on data centre sustainability with Host in Ireland, plus the usual roundup of workshops and seminars.

Our 2020 priorities were sidelined by events so we have a lot of catching up to do in 2021. We have the National Security and Investment Bill to contend with plus skills shortages and the usual challenges on sector reputation, energy use and growth. And COVID-19 hasn't gone away yet, so 2021 priorities will therefore include:

- **Business continuity:** protecting sector activity and supporting operators to limit routes for infection.
- **Energy:** Positioning the sector as prosumer in the energy market, implementing Energy Routemap actions.
- **Skills:** Tackling the technical skills gap and addressing gender imbalance in the sector
- **UK competitiveness:** Ensuring the UK continues to be a business environment where the sector can flourish
- **Public Positioning:** Improving external perceptions of the sector
- **Compliance:** Clarifying obligations and reducing compliance burdens for operators

2020 activities and topics included:

1: COVID-19 Response

2: Policy and Regulation

- [Red Diesel- proposed changes to taxation](#)
- [National Data Strategy](#)
- [National Security and Investment Bill](#)
- [Climate Change Agreement](#)
- [More generator woes: MCPD and IED](#)
- [Resilience to Severe Weather Risks \(Adaptation Reporting\)](#)
- [Planning](#)
- [Carbon Emissions Tax](#)
- [Budget submission](#)
- [IETF](#)
- [Air Conditioning: EPBD/TM44](#)

3: Tussles with Brussels

- [Brexit](#)
- [Green Public Procurement](#)
- [Green Deal, Cloud Study, EU Digital Age](#)
- [EUDCA/CISPE Carbon Neutral initiative](#)

4: Other Tissues and Issues

- [Energy: implementing routemap priorities](#)
- [Science Based Targets](#)
- [Greening Government Digital Services](#)
- [Efficiency of Cloud Computing](#)
- [Sector Reputation](#)
- [Skills shortage](#)

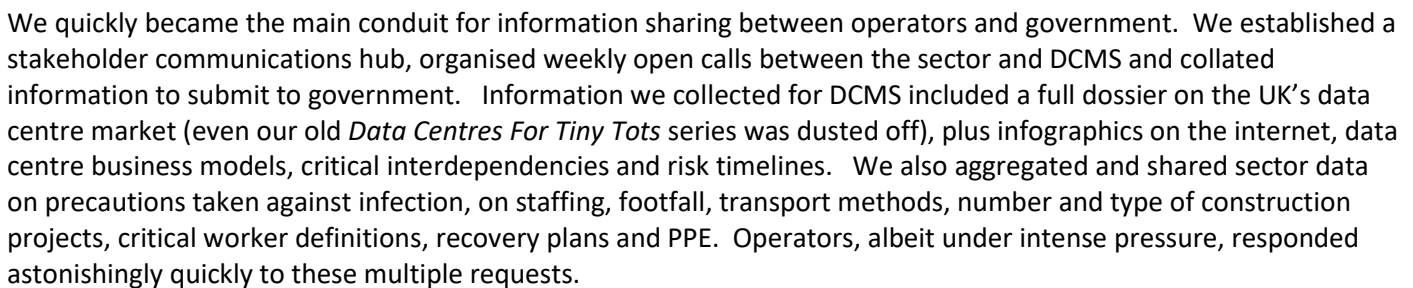
5: Publications

- [Directory of Publications](#)
- [COVID-19 Dossier](#)
- [UK Sector Overview](#)
- [SECR Guidance](#)
- [Internet infographics](#)
- [Compliance Healthcheck updated by popular demand](#)

6: Events, Platforms, Press

7: Governance, Further Information and Contacts

Although operators had implemented resilience plans long before formal measures were imposed by government, the risks presented to the sector by COVID-19 required an immediate policy response. Our primary concern was ensuring that operators could get staff on site in the event of a lockdown and our urgent intervention with officials at DCMS resulted in the addition of Data Infrastructure to the list of key workers, so employees, contractors and suppliers could travel to work a team to work with the sector and identify how, and also ensure the future competitiveness of the effective response from a government department advocated successfully for the protection of core (tighter lockdown) and we also obtained quarantine have negotiated priority lateral flow testing for



We were pleased that Government acknowledged the critical importance of our sector and acted to protect it. However, with such recognition comes greater scrutiny and we have seen this in the form of intense interest in data security and operational resilience, especially in terms of security of supply chain (vulnerabilities, supply clusters and pinch points) and potential negative interventions. As a result, data centres were explicitly included in major policy consultations like the National Data Strategy and the National Security and Investment Bill (see separate items below). There has also been a lot of chatter about whether data centres will in future be designated Critical National Infrastructure (CNI), but this is not a simple discussion and you can find a useful commentary [here](#).

All the collateral is collected together in a [Phase 1 COVID Dossier](#). For ongoing work as well as the back catalogue, see the COVID-19 section in our main [Directory](#).

Meanwhile we will continue to work with operators on recovery planning and with government to ensure that data centres are factored into policy decisions and future support measures.

And don't forget, our dedicated DCMS team is now fully resourced and the mailbox for queries is: COVID-data-resilience@culture.gov.uk

2 Policy and Regulation: Developments

Proposed changes in taxation of Red Diesel

A wide range of business and industrial users are eligible to use red diesel which is taxed at a much lower rate than normal (white) diesel for machinery that does not run on roads. Data centre operators therefore use red diesel. In a [consultation](#) that closed on 29th September, HMT proposed that after March 2022 it will be illegal to use red diesel other than for agriculture, rail and non commercial heating. Even if no more red diesel is purchased, residual stocks present significant operational, contractual and resilience challenges for sectors with large storage obligations and low generator activity. It may result in perverse outcomes if tens of millions of litres of unwanted red diesel are dumped on the market.

On the plus side, it was a joy to see our community of interest working like a well-oiled machine: one member flagged it two days before the consultation closed, others quickly confirmed that it was an industry wide issue, we pulled evidence together and submitted a response. Many thanks to operators who provided sufficiently substantive feedback quickly enough for us to provide formal, properly evidenced input to the consultation before the deadline. You can find that [here](#) and we since followed up with further advocacy, direct to HMT and via DCMS. We anticipate a reply from Government in Q1 2021.



National Security and Investment Bill

This [National Security and Investment Bill](#) represents a seismic change in UK government policy on foreign direct investment and dramatically extends scope for Government scrutiny of mergers, acquisitions and other transactions in the digital space. Data centres are firmly in scope. The Bill was published on 11 November with immediate effect, although it was accompanied by a consultation on the legal definitions of sectors now obliged to notify transactions.. Data centres are explicitly included as data infrastructure. The intention is only to capture those data centre transactions that present a threat to national security. We held useful discussions with DCMS and as a result the initial definition will undergo revisions to exclude landowners with no operational remit, and definitions of “privileged access” and “relevant data” will be refined. We await an updated version. Our concerns are that the



complexity of ownership and leasing models in the sector will make it very hard to identify whether a transaction should be notified and will lead to precautionary notification and subsequent delays for both investment and development. In the meantime you can find the DCMS presentation to operators and the Data Infrastructure information pack, both tailored to data centre operators [here](#). And for good measure you can find the Bill itself [here](#) and the initial Consultation on Sectors in Scope of the Mandatory Regime [here](#). This is likely to be busy topic in 2021 to look out for updates.

National Data Strategy

The long awaited [National Data Strategy](#) sets out the policy actions needed to ensure that the UK will be a leading data economy in terms of data use, skills, security, public trust, equity, technology and environment. The objectives are to ensure we optimise data to boost productivity, trade and growth, speed up research and transform public services. The proposed framework was published on 9th September together with a [consultation](#). It includes a section dedicated to data infrastructure and therefore pertinent to data centre operators. We held a [dedicated session](#) with DCMS on 25th September which was recorded (see <https://youtu.be/KBIOBjybCnw>) and submitted our response, in conjunction with other stakeholders from techUK’s membership, on 9th December. The government reply is expected later in 2021.



Climate Change Agreement

After sustained lobbying of BEIS during 2019, in 2020 we appealed to DCMS and Treasury with supporting dossiers. We pointed out the critical function of data centres as digital infrastructure underpinning our economy and explained why signals of support were important to protect the competitiveness of this energy intensive sector. We backed this up with evidence from our three CCA reports ([First Findings](#), [Target 1](#) and [Target 2](#)) and included a plea for data centres in techUK’s [Budget submission](#). We were delighted therefore to see in the Budget on 11th March, that the Chancellor

confirmed both an extension of the CCA for two years until 2025 and that it would reopen to new applicants. We just needed BEIS to implement it in a sensible way. Sadly, that was not to be.

BEIS proposed an absurdly short application window for new sites to enter the scheme. After [widespread criticism](#), the window was nudged open a little longer, to the end of November, albeit still wholly inadequate for operators too preoccupied with COVID to apply and many sites coming online too late to qualify - and all having to commit without knowing what target they would have to meet. Insult was added to injury by a target that did not reflect reality and for which BEIS provided no supporting evidence. [We pushed back](#). Further bad-tempered wrangling demonstrated that within BEIS, understanding of commercial realities and technical infrastructure is poor. Eventually, a sector target was confirmed for TP5 at 4.539% improvement, over a 2018 baseline. If we sound cross, that's because we are.



More Generator Woes: MCPD and IED

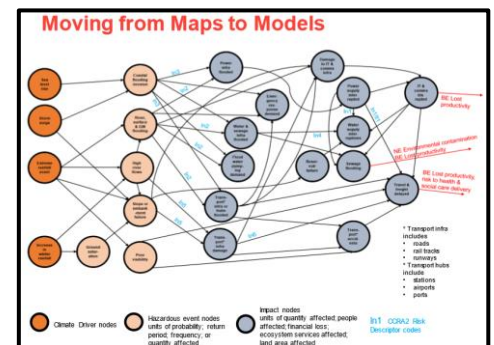


Now that [MCPD](#) is in place, several operators reported that, when installing new plant at a site, they would prefer to obtain permits for all the generators at that site at the same time. This effectively means “advance permitting” existing plant well ahead of the 2025 and 2029 deadlines. There is nothing in the regulation to prevent this but such requests have been rejected by the EA on the basis that this would be gold plating, despite the fact that it would hugely simplify the process from an operational perspective and allow for proactive maintenance. The EA has responded that if we wish to “advance permit” everyone in the sector would have to do it. We will continue with this joyless dialogue in 2021. In the meantime our guidance on MCPD is [here](#).

Operators also reported more snagging issues; long delays, inappropriate conditions and gratuitous intransigence over IED permitting and we held a call with the Environment Agency to resolve some of these. We will follow up in Q1 2021. We also asked for data from a monitoring station from the lockdown period to see if data centre emissions were noticeable. We await the results. Further resources are in the compliance section of our [Directory](#).

Climate Change Adaptation (Resilience to severe weather risks)

We continued to work with DEFRA and the Environment Agency on sector readiness for climate change risks such as flooding and high temperatures during 2020. We compared notes with the airline sector and represented operators at a very productive workshop with DEFRA on interdependencies on 24th February. In view of the highly interconnected nature of the modern economy and its dependence on ICT, both DEFRA and the CCC would like to see more evidence of preparedness from our sector. We take the view that resilience is high (after all, the sector stood up to an existential threat in 2020 and handled a surge in demand much better than the toilet roll supply chain) and that they are asking the wrong questions, so this tricky dialogue will continue.



Meanwhile we ran a briefing session for data centres on 26th March with DEFRA and the EA on climate change risk. You can find slides [here](#). We will prepare a second formal report on sector readiness to submit to DEFRA this year under the Adaptation Reporting Power (ARP), part of the UK's [National Adaptation Programme](#). We will build on our [first report submitted](#) in the previous round and assess progress. We also provided [input to](#) the Environmental Audit Committee's [Inquiry on Heatwaves](#) and the CCC's Inquiry on [lighting and high winds](#). We will continue to liaise with the ECRG (Electronic Communications Resilience and Response Group) who cover telecoms.

Planning

The government finally issued its flagship [Planning for the Future](#) consultation which included lots of pretty pictures but neglected infrastructure. Focused entirely on housing, it even proposed that local authorities should be allowed to dedicate their entire infrastructure levy funds to affordable homes. In our short response we suggested that

when planning for the future, the role of digital infrastructure – and therefore data centres – should be acknowledged; we noted that housing is not infrastructure and we proposed that future National Planning Policy Frameworks make explicit reference to data infrastructure in future. We submitted [our response](#) on 29th October.



We have also been reviewing the London Plan, which is currently being batted backwards and forwards between MHCLG and the Mayor of London and are concerned that there are potential implications for operators in terms of the proposed changes to the infrastructure levy. We also want to establish the impact that the carbon offset levy is having on developments. Meanwhile, we developed a draft to improve awareness, due to be published Q1 2021.

Carbon Emissions Tax (EUETS alternative)



This exercise should not be confused with EU Commission proposals on carbon taxation and cross border adjustments. This was a domestic proposal to provide an alternative to EU ETS in the event that we left the EU with no deal. Details are [here](#). Obviously having laboured for years to negotiate exemption for data centres and won through with Article 27A, our priority was to ensure those provisions were duplicated in any alternative, which they were. We also requested a pragmatic approach in monitoring generator emissions and asked that new facilities should be eligible for the ultra-low emitters exemption without “doing time” on the full scheme. In the event, a UK ETS replaced the EU scheme on 1st January 2021. You can find more [here](#) while we bottom out the detail.

Budget and Comprehensive Spending Review

The 2020 Budget was cancelled so the work we did on the broader techUK submission will now be adapted for the 2021 Budget. We positioned the sector as an anchor customer for green energy and asked for stimuli to speed up the establishment of meaningful markets for green hydrogen and battery storage. We also asked for pressure to be placed on BEIS to make allowances for missed targets in TP4 under the CCA. Please get in touch if you would like a copy of our submission.



Industrial Energy Transformation Fund



This fund is aimed at high capex energy efficiency projects within industrial environments (including data centres) that will not happen without some form of stimulus. We have been forwarding updates to operators during 2020 and anticipate that some, with the help of suppliers, may be accessing this fund through the bidding process. We fought hard for inclusion of data centres and were rewarded with a sector-specific carve-out. However, these schemes often present too many hoops to jump through with no certainty of success which limits uptake. We are therefore very interested to hear from operators or suppliers who have engaged, or considered engaging but decided against it, as this will provide the evidence we need to encourage government to make these types of intervention fit for purpose.

Air Conditioning system compliance: EPBD and TM44

We fielded queries from operators on their obligations under the Energy Performance of Buildings Directive for the first time this year, despite it having been in force since 2012. It requires that air conditioning systems over 12KW are inspected regularly. TM44 is CIBSE's Technical Memorandum on this and seems to be regarded by DCLG (the sponsoring department for this legislation) as the go-to guide to compliance. We flagged this to operators as there was confusion about its scope. There appear to be no exemptions for industrial space. You can find information from govt [here](#) and the specific publication you need is [here](#). Alternatively you can use the helpful [CIBSE guidance](#).



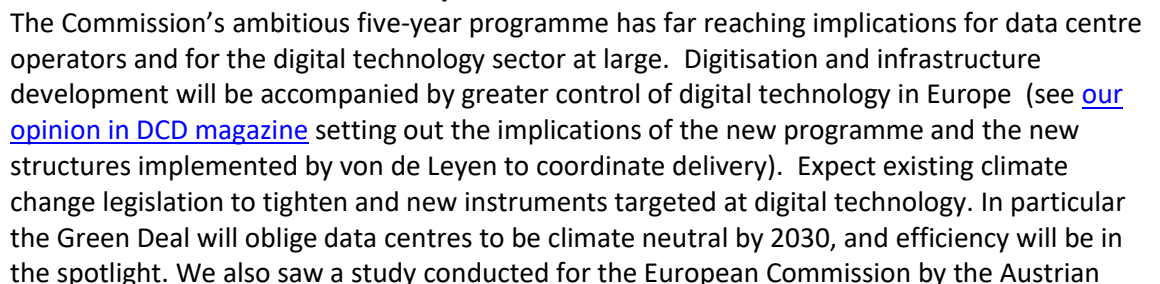
Brexit

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As we all know, a trade deal of sorts was confirmed in late December and my colleague Neil Ross has produced a [helpful analysis of the implications for digital technology businesses](#) and a [data adequacy explainer](#). You can find more information and guidance on our [EU Exit hub](#). Since the issues relating to Brexit are common to the whole tech sector, we have not produced a data centre specific Brexit report since our [Silver Linings](#) report and [update](#).

Green Public Procurement for Data Centres (GPP)

European Commission Green Deal and Data Centre Policy Ambitions



Energy Agency on the energy implications of cloud services in Europe, both now and looking ahead. By cloud services, think data centre operations. While the study is good in parts, it is littered with pejorative and unevidenced statements. Plus ça change. This moves us nicely on to.....

EUDCA Climate Neutral Data Centres: Self Regulatory Framework



Energy: implementing routemap actions and repositioning the sector

At the end of 2019 we produced the first ever data centre sector energy routemap, which set out the challenges facing the sector in terms of availability, sustainability and cost, and how we can contribute to net zero. We identified ten priority areas and assessed progress against them. These were strategy, security of supply, energy stewardship, renewables adoption, becoming a prosumer, disclosure and reporting, customer transparency, heat reuse, air quality and regulation. During 2020, we started implementing these actions despite the distraction of COVID-19. We hosted an excellent [overview of Renewables strategy and explanation of the PPA market](#) by Schneider Electric on 4th March. Operators keeping an eye on the development of a meaningful market for green Hydrogen were interested in No. 10's Ten Point Plan for the Environment, which included 5GW of low carbon hydrogen provision by 2030. The original announcement is [here](#) and you can find more in the [accompanying booklet](#).



Science Based Targets

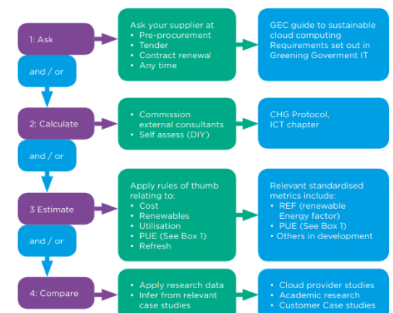
The ITU, GSMA, GeSI and SBTi announced an [ICT sector commitment](#) to Science Based Targets to reduce emissions by 45% by 2030 early in the year and they also published the pathway for data centres within this commitment. To meet this, operators have to switch to 100% renewables and phase out diesel standby, among other things. We hosted a useful session with the Carbon Trust in October and will follow up with an FAQ in 2021.

Greening Government Digital Services

Members also attended a useful workshop with DEFRA on the [Greening Government: ICT and Digital Services Strategy 2020-2025](#) organised by my colleague Susanne. The main implications for data centre operators are the increased focus on transparency of supply chain and outsourced services, not just in terms of energy and carbon, but also in terms of responsible sourcing, ethical employment practices and resilience. This matches the increasing scrutiny being applied to the sector both from within and externally by regulators, stakeholders and customers. You may recall that we worked with this group to produce [“Lost in Migration”](#), a discussion paper on attributing carbon to cloud services. We will continue to liaise closely.

Efficiency of Cloud Computing

We mentioned above that the EU published their [study on the efficiency of cloud computing](#) which hints at likely regulatory direction. Customer demand for carbon data associated with outsourced digital services is growing hence our *Lost in Migration* paper (see above), which proved timely. We spoke at a webinar in January and chaired a session on *How To Build a Sustainable Cloud* in October. We continue to press for improved transparency of carbon impacts at point of use, both for customers and consumers. Progress is good: the next challenge will be consistency in reporting.



Skills: long term and short term shortages

During COVID the sector's skills shortage became ever more acute but towards the end of the year, new opportunities emerged. Firstly, we held a [joint call with operators](#), the Baker Dearing Educational Trust and CNet Training on Friday 11th December to discuss a partnership opportunity with a UTC (University Technical College) to train learners between 14-19 for a career in the data centre sector. If we can find ten partners from industry this will provide an ongoing pipeline of young people with data centre specific skills ready for apprenticeships or entry level employment. There is more information [here](#) and in the skills section of our [Directory](#).

At the same time we have two potential opportunities to tackle our short term skills needs: We have been exploring the potential for redeployment of aviation staff into the sector and have established that there are many skills, competencies and attributes common to both sectors. The next step is a webinar where we can explain the sector to aviation staff and operators can outline their skills needs. We have followed a similar path with the IMechE and will be holding a webinar for process engineers in the new year. We continue to work with IET to establish how best we can get outreach into the broader engineering community.

Publications and Outputs

Data Centre Directory of Publications and Resources

You can now find our programme outputs in this [Directory](#). Contents are arranged thematically by topic and then by date, with most recent first. We are still working to reassemble the material lost when we transferred to our new website, so let us know if there are gaps. In the meantime, highlights from 2020 include:

Our Covid 19 Dossier

This dossier contains all our outputs, briefings, positions statements and guidance relating to COVID-19. While this link to the [document](#) relates to the initial phase only, the COVID section of our [Directory](#) includes links to the same material and will be updated as things progress.

UK Data Centre Sector Overview

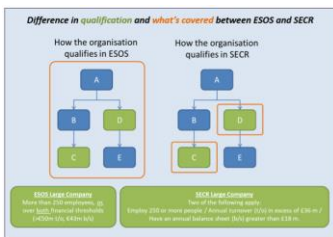
This grew out of the material we submitted to DCMS to multiple questions they asked about the sector whilst building their knowledge base. It made sense to combine this information into a more coherent document and this sector overview was the result. It covers things like market size, energy consumption, approximate data centre distribution, business models, comparisons with other markets, reasons for UK success, potted history of computing and growth rates and drivers and broader trends. You can find it in the Tiny Tots section of our Directory or link to it [here](#).



Sector Reputation

Despite the fact that everybody learned at first hand just how much we rely on digital infrastructure in 2020, we saw a spate of ill-informed and misleading articles, ranging from the BBC and Channel 4 to The Guardian and The Sunday Times, on the energy impact of data centres. We published rebuttals in [March](#) and [November](#) to the more wayward claims made by the broadcasters, both of whom were streaming programmes about the environmental impacts of, er, streaming. The BBC also published a sensible [follow up](#). While fiction remains more entertaining than fact, these silly and highly derivative stories will continue to frustrate and annoy us. Meanwhile, the more transparent the sector becomes, the easier it will be to disprove them. In the meantime, respected and well researched third party reports, by the IEA ([Data Centres and Data Transmission Networks](#)) and the Royal Society ([Digital Technology and the Planet](#)), are helping to set the record straight.

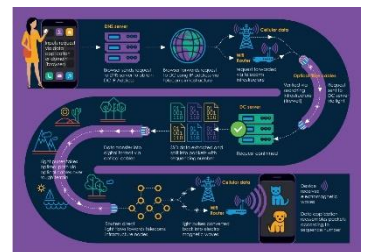
Guidance on Streamlined Energy and Carbon Reporting: SECR



The Department for Business Energy and Industrial Strategy implemented proposals to streamline carbon reporting. In reality these did not streamline anything at all and instead seemed to add plenty of unnecessary bells and whistles. We held a briefing session in late 2019 ahead of 2020 implementation and followed that up in Q1 2020 with [guidance](#) which we developed with help from SLR Consulting to help with sector specific issues like recharging energy and “opco-propco” relationships.

Sector Business Models

We also developed an infographic explaining [how the internet works](#), and a [schematic map](#) that shows, in simplistic terms, the types of services that different operators provide. The objective of this was not to list all the UK operators but to demonstrate the breadth of data centre offerings and providers in the UK market.



Compliance Healthcheck Updated

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Data centre operators tend to struggle with the avalanche of compliance requirements, expressed in an alphabet soup of acronyms. Back in 2017 we produced a digest of some of the most common and/or troublesome instruments where we graded them by burden, penalties and reputational risk. It proved worryingly popular and we updated it for a fourth time in October 2020. You can find it in our Compliance section [here](#).

6 Platforms and Press

Events

We spoke at a workshop on the Future of Cloud 2020 on 23rd January, talking about the problems of attributing carbon to cloud services – a follow on from our [“Lost in Migration”](#) paper last year. We also spoke at Kickstart Europe in Amsterdam in January on European policy for data centres, and then at an Infrastructure Masons event on 20th February, and at DCW on 12 March on data centre infrastructure management, which proved to be a lively session.

Since then, all events were held remotely and included a really interesting panel on EuroDIG on data centre sustainability, a fireside chat with George Rocket on criticality in summer and a spot on the keynote panel at DCD Global. We also ran or spoke at techUK webinars on recovery and sustainable cloud, and panellised for Host in Ireland and Data Centres Ireland.

Press Coverage

We’ve had plenty of press coverage in 2020 with pieces in Data Economy, Data Center Dynamics, Computer Weekly, Data Centre Knowledge, Techerati and Inside Networks, among others. We missed our annual pilgrimage to Monaco for DataCloud but hope we might get there in 2021. Fingers crossed for the awards.

7 Governance, Further information and Contacts

We held five [Data Centres Council](#) meetings in 2019 to review programme activity and set priorities. Council ToR, member bios, application criteria and formal Communications will eventually be available from our new website, in the meantime just ask. Notes and papers are available for all Council meetings on request.

Further Information

Previous annual overviews can be found in our Directory or directly using these links:

[Data Centre Programme Overview 2019](#)

[Data Centre Programme Overview 2018](#)

[Data Centre Programme Overview 2017](#)

[Data Centre Programme Overview 2016](#)

Please be aware that the links within these older overviews to techUK material may not work. By “may not work” I mean “won’t work”. Blame the mysteries of website migration and redirection for that. If you need anything from the archive and can’t find it or are struggling with Death by 404, please just ask.

To find out more please contact:



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