

Data Centres Programme Achievements 2016

techUK is proud to represent UK data centre operators and offers a comprehensive and influential programme. Our aim is to ensure that the UK is a place where the sector can flourish. We intervene on regulation, we mitigate 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 technical knowledge. We have educated the sector about policy and we have educated policy makers about the sector.

What have we been up to in 2016?

During 2016 we alerted members to new regulatory threats, we resisted policy developments that could be damaging to the sector and we negotiated with government to reduce the impact of existing measures that are particularly problematic. We advised operators on little-known legal obligations like IED and simplified compliance on EU ETS and CCA. We provided input to a range of consultations including Treasury's review of business energy taxes, CCA targets and buyout, Phase IV of EU ETS, the Medium Combustion Plant Directive, the Energy Technology List, burdensome regulation and smart energy. We briefed members on GDPR, Safe Harbor and the US-EU Privacy Shield, on resilience and energy security. We promoted best practice tools like the EU Code of conduct and supported standards development. We considered broader issues like EU representation and discussed policy priorities with our European counterparts and sector energy use with the European Commission.

Following the Referendum our usual preoccupations were eclipsed by the urgent need to make sense of our new circumstances and deal with the implications of Brexit for data centre operators, their customers and the supply chain. We had to be crystal clear about what we needed from government in terms of negotiation priorities and broader forms of support. We produced statements, ministerial letters and a substantial thought leadership report. This dominated activity over the summer, which meant that important work on skills development, on problematic legislation like ESOS and ETS, on tackling energy costs and on understanding the future energy impacts of the sector were delayed. We did manage to submit a delayed report to DEFRA on sector resilience to severe weather by the year end.

Activities included meetings, briefing sessions and technical workshops with government and agencies. We held speaking platforms at a number of industry events. We published a range of material including policy responses, industry positions, briefings and guidance notes, plus our regular policy updates. At the same time we continued the usual business of negotiating with government and regulators, answering questions from members and stakeholders, supplying data and information about the sector and generally keeping all the plates spinning. Most of our outputs from 2016 are captured in the pages below.

Looking ahead to 2017

In addition to our regular dialogue and ad hoc policy activity our 2017 priorities are likely to include:

- Informing the Brexit negotiations and ensuring that the sector's interests are adequately represented
- Mapping the latest research on the way that sector energy use is evolving
- Reporting on the sector's performance against the second CCA target milestone
- Producing bespoke apprenticeship standards and promoting the sector as a career destination
- Developing explanatory briefings on technical and market characteristics of the sector
- Exploring the role of the data centre within the smart city
- Promoting the UK as a location of choice for data centre operators and investors
- Lobbying government to mitigate non commodity energy costs and other barriers to growth
- Monitoring the impacts of GDPR on demand for data centre services
- Understanding how hyperscale operators are driving market evolution
- Helping the sector prepare for physical risks

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Data Centres Programme Activity 2016 by topic

- [BREXIT](#)
- [Climate Change Agreement](#)
- [Data Protection, Data Flows, GDPR](#)
- [Energy: costs, security, consumption and carbon emissions](#)
- [Energy Technologies List \(ETL\)](#)
- [EU ETS \(Generator Woes\)](#)
- [EU Representation](#)
- [IED/ EPR and MCPD \(More Generator Woes\)](#)
- [Severe weather risks](#)
- [Skills](#)
- [Standards, best practice and guidance](#)
- [UK Competitiveness](#)

BREXIT

The Referendum decision signals changes in the political and business landscape and presents a number of challenges for the data centre sector. It was essential to understand the implications, both risks and opportunities, and outline the policy actions we needed from government.

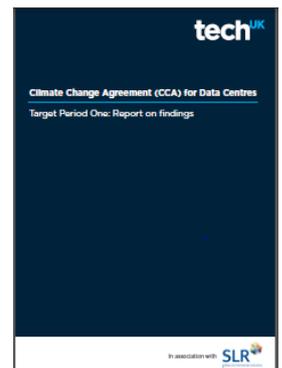
- We produced an interim Brexit position: [Post Referendum Policy Priorities for Data Centres](#).
- We wrote a formal letter to the Digital Economy Minister on data flows, which was well-received.
- We ran a [Risk Radar session](#) on 14th September jointly with our Cloud and Big Data programme where we presented the implications of Brexit for cloud service providers and data centre operators.
- We produced a thought leadership paper "[Silver Linings: The Implications of Brexit for the UK Data Centre Sector](#)".
- We have been engaged in dialogue with multiple departments to help them understand the potential impact of Brexit on the sector and contributed to Select Committee Inquiries on Brexit.
- We [responded to the BEIS inquiry on priorities for Brexit negotiations on energy](#).
- The Council is represented on techUK's high level Brexit Advisory Panel.

Data Centre Brexit Dashboard								techUK	
RISK	UNCERTAINTY	DATA FLOWS / DATA PROTECTION	TRADE	SKILLS	ENERGY and COMMODITY COSTS	INWARD INVESTMENT	ENVIRONMENT & CLIMATE CHANGE	OPPORTUNITY	
What is the risk?	Paralysis, planning blight. Loss of FDI. Offshoring, relocation, attrition	UK deemed inadequate as data host. Restrictions on data flows to EU. Offshoring, relocation, attrition	Exclusion from trade agreements. Tariffs on physical goods. Non-tariff barriers on services.	Acute skills shortage, especially technical skills. Operational and business risk. Constraint on expansion.	Increased operating costs. Failure to compete.	Loss of FDI. UK competitiveness damaged. Relocation.	Competitive disadvantage. Burdens without benefits.	What is the risk?	
How do we mitigate this risk?	Immediate high level commitment to protect data flows and trade in services.	Adequacy. Legal clarity.	Single market access	Free movement of skills. Review Tier 1 & Tier 2 criteria. Protect non UK employees.	Protection from high energy costs and non-commodity energy costs	Explicit support for sector. Bespoke incentives. Practical help for FDI's	Equivalent standards and targets but greater freedom in how they are achieved.	How do we mitigate this risk?	
Can we turn this into an opportunity?		Parity = success. Simplified GDPR possible in theory but unlikely in practice.	Parity = success. Limited scope for additional third party trade agreements.	Opportunity to rethink migration rules and access a wider pool of international talent.	Better support for priority sectors freed from constraints of State Aid Rules.	Scope to radically upgrade the UK's offering. Incentives can be targeted where they will be most effective.	Unprecedented opportunity to review and streamline a burdensome array of policy measures	Can we turn this into an opportunity?	

Climate Change Agreement (CCA)

The CCA is worth over £30m a year to the sector and we are protective of the scheme, which is mitigating energy costs, improving efficiency and providing invaluable data. All climate change legislation has been under review and while we needed the complex landscape to be simplified we wanted to retain the CCA.

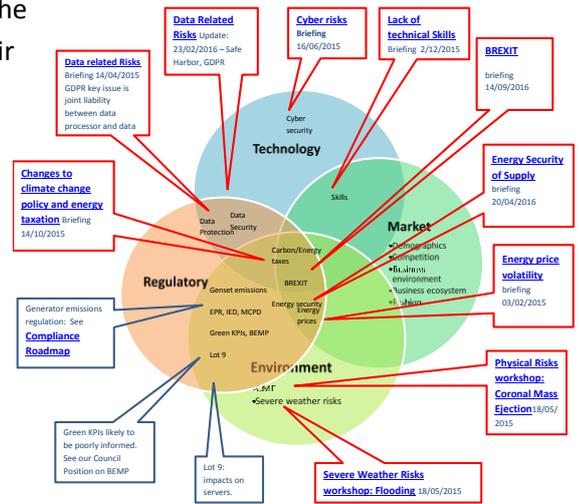
- We successfully [lobbied Treasury to retain the CCA](#) and even succeeded in an increase to the CCL discount. Even better, the CRC is set to go. We also submitted evidence to the Environment and Climate Change Select Committee and produced an [Opinion](#) on the Budget announcement
- We published our [report on the sector's progress against its first target](#).
- We successfully persuaded BEIS to defer target renegotiations until there is better data.
- We increased the number of CCA participants to over 130 sites
- We successfully negotiated a [streamlined compliance route](#) to account for fuel use in generators (See EU ETS)



Data Protection, Data Flows, GDPR

The free flow of data, data adequacy and data security underpin the digital economy and are critical concerns for data centres and their customers. We work through our policy team within techUK on this dialogue because these issues are not restricted to data centres but concern the wider digital technology sector, so the activity below represents only a small fraction of the techUK engagement here.

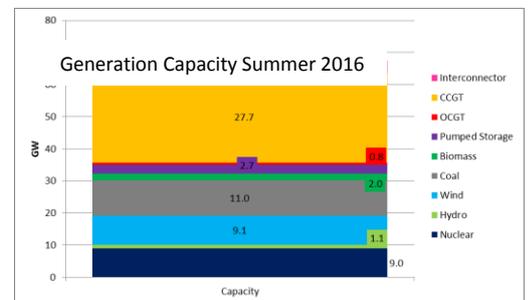
- We ran a [Risk Radar](#) session on data related risks, specifically developments on GDPR and Safe Harbor/EU-US Privacy Shield on 23rd February
- We wrote to Matt Hancock, Digital Economy Minister on 21st July on the importance of data flows to the sector.
- We featured GDPR and data flows in our [formal Brexit report](#).



Energy: costs, security, consumption and carbon emissions

Energy costs, especially commodity costs, and security of supply are primary concerns of the UK sector and this is an ongoing priority for the data centre programme. We are also engaged in an exercise to develop our understanding of the sector’s energy use and associated carbon emissions. This work was interrupted by the Referendum but will be resumed in 2017.

- We organised a [Breakfast Workshop](#) in Brussels with Commission stakeholders, industry, government and academia to discuss the energy impacts of digital living “the Cloud is a Data Centre”, as part of EU Sustainable Energy Week.
- We produced [A Council Communication on the Energy Impacts of Digital Policies](#)
- We produced an opinion piece on the difficulties of aggregating sector energy use – [The Donald Rumsfeld Guide](#) to sector energy use.
- We continued dialogue with BEIS on the energy intensive status of the sector and attended an Energy Intensive Industries workshop on 9th May. Our objective is to ensure that government’s focus is not ring fenced to limited sectors and will extend to protecting future growth.
- We produced a [briefing note on energy security of supply](#) following the [Risk Radar](#) session on 20th April.



Energy Technology List (ETL)

The Energy Technology List is a register of energy efficient products that qualify for enhanced capital allowances. Data centre infrastructure is capital and energy intensive but the potential benefits of ETL are not all realised. As part of a wider review, Government consulted on the ETL and we proposed a less burdensome administration process and a higher tax rebate to incentivise long term investments.

- We responded to DECC’s [call for evidence](#) on the effectiveness of the Energy Technology List (ETL), attended stakeholder workshops and submitted our [input](#) on the 29th January. We took the position that the list was good in principle but was bureaucratic in operation and was insufficient incentive for major long term investments. The ETL scheme has been retained.

EU Emissions Trading Scheme - EU ETS (Generator Woes)

Data centres are not the intended target of EU ETS but are captured due to their standby generating capacity. EU ETS compliance costs are disproportionate and the policy delivers no benefits when applied to data centres. We have been mitigating the impacts of phase III, including penalties, and lobbying for improvements in Phase IV.

- We alerted the sector to [their obligations](#) and we liaised closely with the Environment Agency to [smooth the compliance process](#) for operators.
- We successfully helped mitigate penalties for operators caught unawares by ETS Phase III. They were reduced by about 95%.
- We organised a [technical workshop](#) on 29th January with the Environment Agency to address compliance burdens and successfully negotiated a streamlined route to account for fuel use.
- We produced a [guidance note](#) and [ready reckoner](#) to explain this simplified approach (see also CCA)
- We produced a [Council position on EU ETS](#) to explain why the policy was dysfunctional
- We lobbied for reform on ETS Phase IV to DECC and made submissions under the Red Tape Challenge, the Energy and Climate Change Select Committee Inquiry on burdensome carbon legislation, (building on our earlier [Cabinet Office input](#)) and made direct representations to DG CLIMA via DIGITALEUROPE
- We alerted other European NTAs and gave them [collateral](#) to lobby at member state level.
- We ran a [Low Emitters Workshop](#) with DECC and the Mineral Products Association on simplifying Phase IV of ET for low emitters. This gave DECC the arguments to take forward at EU level.



EU Representation

The sector has been considering how best to represent itself at EU level. Our preferred approach is to address each policy issue through engagement with individual institutions with relevant responsibility. However, we worked with other bodies to review our EU policy priorities and establish whether and where we needed to escalate activity and/or call in reinforcements.

- We ran an industry [Round Table on 15th June](#) in Brussels to discuss EU policy priorities for the sector.
- We produced a [summary of policy priorities](#) for European data centre operators.
- We produced a [Council Communication on EU Representation](#).
- We fostered informal links with representative bodies including DDA, CESIT, BITKOM, DIGITALEUROPE, ECO and Host in Ireland, among others.

Policy Issues for European Data Centres:
What are they, why do they matter and what are we doing about them?

techUK has been working informally with a number of data centre specific organisations and Broad Based Digital Technology associations so that we can coordinate on topics of mutual concern in European level. Issues keeping European data centre operators awake at night include energy costs, access to technical skills, and a wide range of regulatory developments in areas such as environmental performance, carbon footprint, data security, data privacy and data sovereignty. Some issues impact the broader digital technology sector and concern data centre specific. The majority are already being dealt with effectively at EU level but some would benefit from cooperation between representative bodies to address member states and others may need coordinated action. The table below summarises the current situation from a UK perspective. The policy issues are in no particular order. The table contains actions that are being taken or planned to be taken in the UK.

▲ = scope for influence at EU level only ▲ = limited scope for influence - eg MS level ▲ = no scope for influence, mitigation only

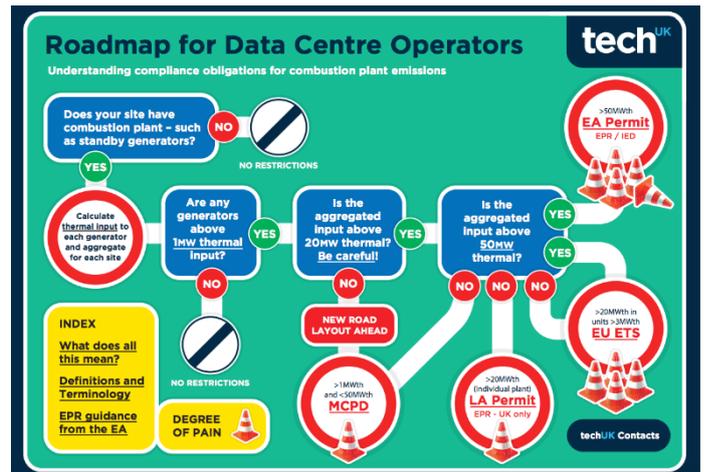
Issue	What is the current status?	What are we doing/what needs doing?	When to contact
General Data Protection Regulation (GDPR) EU Directive on data protection, which will create new and more powerful rights for consumers in the EU. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data.	Regulation has formally been passed (14 th April 2016). Implementation date is 25 th May 2018. Data controllers need to ensure compliance. Data controllers need to ensure compliance. Data controllers need to ensure compliance.	Member states await guidance from their national data protection authorities. Information should be shared with data protection authorities. Information should be shared with data protection authorities. Information should be shared with data protection authorities.	techUK CESIT BITKOM DDA ECO Host in Ireland
Energy (Single Market) EU Directive on energy, which will create new and more powerful rights for consumers in the EU. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data.	EU Directive on energy, which will create new and more powerful rights for consumers in the EU. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data.	Member states await guidance from their national data protection authorities. Information should be shared with data protection authorities. Information should be shared with data protection authorities. Information should be shared with data protection authorities.	techUK CESIT BITKOM DDA ECO Host in Ireland
Networks and Information Security (NIS) EU Directive on networks and information security, which will create new and more powerful rights for consumers in the EU. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data.	EU Directive on networks and information security, which will create new and more powerful rights for consumers in the EU. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data.	Member states await guidance from their national data protection authorities. Information should be shared with data protection authorities. Information should be shared with data protection authorities. Information should be shared with data protection authorities.	techUK CESIT BITKOM DDA ECO Host in Ireland
Energy Trading Scheme (ETS) EU Directive on energy trading, which will create new and more powerful rights for consumers in the EU. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data.	EU Directive on energy trading, which will create new and more powerful rights for consumers in the EU. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data.	Member states await guidance from their national data protection authorities. Information should be shared with data protection authorities. Information should be shared with data protection authorities. Information should be shared with data protection authorities.	techUK CESIT BITKOM DDA ECO Host in Ireland
Energy (Energy Efficiency) EU Directive on energy efficiency, which will create new and more powerful rights for consumers in the EU. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data.	EU Directive on energy efficiency, which will create new and more powerful rights for consumers in the EU. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data. Data controllers will have to ensure that they have a lawful basis for processing personal data.	Member states await guidance from their national data protection authorities. Information should be shared with data protection authorities. Information should be shared with data protection authorities. Information should be shared with data protection authorities.	techUK CESIT BITKOM DDA ECO Host in Ireland

IED/ EPR and MCPD (More Generator Woes)

EU ETS is not the only legislation that captures operators due to their standby generator capacity. Sites of 15MW and over may be caught by little-known regulations (IED) and new regulations are coming in that will cover all generators above about 0.3MW. This, the Medium Combustion Plant Directive - MCPD, includes additional requirements for diesel generators and is particularly problematic for anyone engaged in demand side response or triad avoidance.

- We ran another [Technical Workshop](#) with the EA on 6th May to understand EPR obligations in detail and explore scope for streamlining compliance and developing Best Available Techniques (BAT).

- We produced a [Compliance Roadmap](#), AKA “Cones of Pain” to explain generator emissions legislation.
- We developed a guidance note on [IED / EPR obligations](#) ([IED IN or OUT](#)) to help companies assess whether they are obliged or not. Our technical helpdesk, run by SLR consulting, produced Stairway to Heaven, a [step by step guide](#) to IED compliance to explain the process.
- We produced a Council position highlighting [Demand Side Reduction \(DSR\) policy contradictions](#)
- We attended DEFRA workshops on MCPD (Medium Combustion Plant Directive) on 6th May and lobbied for the retention of exemptions for emergency standby plant and for a more intelligent approach to DSR. We discussed [transposition proposals](#) with DEFRA on 16th December and reported back.



Severe weather risks (climate change adaptation)

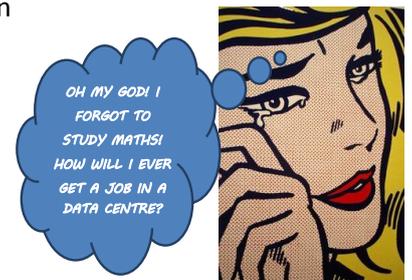
Data centres are exceptionally risk averse and compete on the basis of their resilience. DEFRA has asked the sector to report on its preparedness for risks associated with changes in climate, especially flooding.

- We participate in the Infrastructure Operators Adaptation Forum (IOAF) run by the EA.
- We have produced a provisional report on the sector’s readiness for climate change risks for submission to DEFRA. The [full report](#) was published formally in January 2017. In the interim a [draft abstract and executive summary was available](#).
- We will review and implement the recommendations of this report in 2017.

Skills: Addressing skills gaps and driving professionalism

Data centre operators often struggle to find the technical skills they need and there is also a longer term shortage of young people choosing technical subjects at all stages of education. While techUK has a wider [skills programme](#) our activity focuses on trying to close these skills gaps and on recognising the capabilities of the technical staff in our data centres.

- 100 candidates have now taken up our [route to apply for professional registration](#) (through IET)
- We produced an [informal note](#) explaining why data centres present good career opportunities and how students can avoid [limiting their options](#).
- We have broadened the remit of our [professionalism group](#) (see below).



Standards, best practice and guidance

Many standards apply to data centres and our objective has been to support existing standards and dissuade bodies like the Commission from creating new standards when good ones already exist.

- Our [Technical Committee](#) members attended workshops with JRC on the development of Best Environmental Management Practices (BEMP) for data centres and have ensured that these approaches refer to and are consistent with existing standards.
- We produced a [Council Communication](#) on policy process issues identified in the BEMP activity.
- We represented the sector on TCT/07, the BSI steering committee for many standards applicable to data centres, including the CENELEC 50600 series, and will continue to do so.
- We [supported](#) the activity of the [EU Code of Conduct](#) for data centres and the transposition of its best practices into a [CENELEC Technical Report](#), now approaching its second iteration.

UK Competitiveness

It is essential that the UK remains an attractive location for data centre operators to invest and grow, especially after Brexit. The UK cannot be complacent and must act to ensure that we are competitive in areas like energy costs, taxation, data regulation and planning and this will be one of our main programme priorities for 2017.

- We stepped up our dialogue with UKTI (now part of the Department for International Trade)
- We urged govt to upgrade the UK's offering to inward investors and UK operators in our [Brexit report](#)
- We produced an opinion assessing London as a location of choice for data centres – [Ours Goes Up to 11](#)

Governance, specialist groups and community of interest

Governance: techUK Data Centres Council: The [UK Council of Data Centre Operators](#) provides strategic direction for the programme. A list of members, terms of reference and recent communications are all available online. The Council held its regular meetings on 23rd February, 20th April, 21st June, 14th September and 7th December to set priorities, agree actions, review progress and develop forward strategy. An emergency meeting was held on 7th July following the Referendum. Council members represented the sector to potential inward investors and government, briefed MPs and discussed cooperation with European bodies.

Technical Committee: This group advises Council on technical matters but its remit has recently broadened. It now provides an informal source of technical and market information to government and other stakeholders at the pre-consultation stage, to ensure that policy making is informed. During 2017 the Committee will develop a number of technical briefings. The Technical Committee meets twice a year but handles most enquiries electronically.

Professionalism Steering Committee: This group was originally established to smooth the path to professional registration for technical staff working data centres. Now this [project](#) is up and running we continue to work closely with the IET (Institution of Engineering and Technology). Our next objectives are to start addressing long and short term technical skills shortages, to develop a bespoke apprenticeship standard and to improve professional representation.

Data Centres Group: Most of our data centre activity is conducted through our Data Centres Group, the programme's core community of interest. From time to time we set up ad hoc sub-groups to deal with specific topics. More information can be found on our website:

<http://www.techuk.org/focus/programmes/data-centres>

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