

Communication:

Climate Change Agreement: Closure to New Participants

April 2018

Introduction: what do data centres do?

Data centres represent a fundamental – but often unrecognised - part of our national infrastructure and enable an incredible range of activities across government, business and society. Our digital economy and our highly networked society rely on data and connectivity being managed securely and efficiently. Data centres underpin an internet economy that contributes over 10% of UK's GDP, is estimated to contribute £225 billion to our economy and is growing at 10%, faster than any other country in the G-20¹. Data centres are where our industrial strategy meets our digital strategy.

The UK data centre sector is a major business success story in its own right, is leading-edge in terms of technological development and is globally important. The London market is the second largest data centre cluster in the world and is dominant in Europe with over 40% of the Tier 1 capacity². The sector is a significant exporter of digital services such as data hosting, processing, transactions and storage to customers around the world, and acts as the entry point to the rest of Europe for many global data-dependent businesses. The UK sector also exports expertise in construction, engineering and training plus investment, brokerage and other professional services. But the critical economic contribution that data centres make is indirect: this core digital infrastructure stimulates a high-value supply chain at one end whilst at other enabling growth and competitiveness in an astonishing range of customer businesses³.

Climate Change Agreement

A Climate Change Agreement (CCA) is a voluntary scheme with the dual purpose of protecting energy intensive sectors subject to overseas competition and driving improvements in energy efficiency. Participants are eligible for reductions in, or exemption from, some carbon taxes in return for meeting efficiency targets. The scheme is broken down into four target periods with milestones at the end of each period. The CCA scheme has been in place since 2001, its second phase running from 2013 to 2023. The data centre sector joined the scheme in July 2014 and there are currently over 130 participating sites.

Benefits of the CCA

The CCA provides much needed relief from some of the more punitive non-commodity costs currently added to the price of electricity here in the UK. Across the sector this relief amounts to just over £21M per year, of which £12.1M is attributable to CCL discount and £8.9M to CRC exemption⁴. It is hard to overstate the value of the CCA to the UK data centre sector. It helps to level the playing field for UK operators trying to compete with overseas counterparts, it improves the business case for investment in efficiency measures and releases funding that would previously have been allocated to paying carbon taxes so it can be directed at implementing improvements. Critically, it gives a positive signal to investors and operators that the UK government values the sector and recognises the importance of state-of-the-art digital infrastructure.

But the benefits of the CCA are not just financial: the requirement to measure and report energy consumption in a robust, consistent and auditable way, including the obligation for all sites to implement

¹ Boston Consulting Group 2013, The 4.2 Trillion Opportunity: The Internet Economy in the G-20

² Largest global data centre clusters – colocation (commercial) facilities. Tier 1 means the four key European markets: London Frankfurt, Amsterdam and Paris. See Fast Facts for more information.

³ See [Data Centre Engines of Growth](#) and Data Centre Business Models: The Sherry Trifle

⁴ The actual value of the CRC exemption is higher but larger sites deemed to be EU ETS installations now have exemption to CRC by that route, so this figure is excluded from these calculations.

sub-metering, has set a much higher standard for energy monitoring. PUE⁵ is now being measured more consistently and appropriately. This has improved transparency and has given us a better understanding of energy stewardship. In many cases we are also seeing more open customer-supplier dialogue on energy to address the kind of split incentives that have historically occurred in landlord-lessee scenarios.

Most importantly, the CCA gives us invaluable data on the aggregate energy used by the UK's commercial data centre sector. The CCA is the only UK policy instrument that collects site level energy data by sector and the UK is unique in the robust way our energy consumption is measured: elsewhere it tends to be estimated or modelled. In 2016 the 129 participating sites collectively consumed 2.57TWh of electricity, equating to 0.7% of the 339TWh of electricity generated in the UK⁶ and 0.27% of primary energy supply.

The future of the data centre CCA

Barring a dramatic change in policy direction, the CCL discount that the CCA enables will continue beyond the fourth target period and operators will enjoy CCL discount up until 2023 (CRC will be abolished in 2019 and the resultant increase in CCL will be offset by an increase in the discount from 90% to 93%). However, the scheme closes to new entrants from October 31st 2018 which effectively imposes a June or July deadline for new applications because it can take several months to process an application. Under the current proposals, there will be almost a five year period when new facilities will not have access to the CCL rebate. We take the view that the current approach should be reviewed urgently for the reasons below.

Negative implications of closing the CCA to new applicants

- It introduces market distortion: those companies within the scheme will continue to benefit from the tax concessions but new sites selling exactly the same services will have to accommodate higher energy costs. In a highly commoditised market where energy is the highest operating cost this will place new entrants at a disadvantage compared to incumbents and discourage growth.
- It exacerbates competitive disadvantage: new entrants to the market are less able to compete with counterparts overseas not encumbered by these the taxes and charges applied in the UK
- It sends the wrong message to investors and operators: With Brexit looming this is exactly the moment that we should be doing all we can to encourage inward investment and help operators to expand. Instead, non commodity costs are set to escalate dramatically whilst the only route to any kind of mitigation is removed. This is an appalling signal to send to the investment community.
- It punishes growth: this matters because the data centre sector is growing: for mature industrial sectors, or long established oligarchic industries where there is little change, this may not present an issue. However, new facilities are coming online all the time. Most new operators have no idea that their sites will be excluded from the benefits conferred on the rest of the sector. Major new UK facilities just entering the market or in development but not yet operational include:

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| • Colt – Welwyn | • Indectron – Gloucester |
| • Digital Realty – London | • Infinity – East London |
| • E-Shelter Dagenham | • Kao – Harlow |
| • Etix Everywhere – Edinburgh | • NGD – Newport (expansion) |
| • Equinix – Slough | • OVH – South East London |
| • Global Switch- London (expansion) | • Telehouse – Docklands (expansion) |
| • Google – London | • TH Real Estate - Docklands |
| • Gyron – Hemel Hempstead | • Virtus – London |
| • IBM - London | • Zenium / Cyrus One - Slough and Stockley Park |

⁵ PUE, or Power Usage Effectiveness is a measure of energy productivity widely applied to data centres. It is the ratio of energy delivered to the IT function divided by energy to the facility. The lower the PUE, the higher the energy productivity.

⁶ DUKES 2017: https://www.gov.uk/Government/uploads/system/uploads/attachment_data/file/637823/DUKES_2017.pdf

- It devalues the energy data: Just at the time when increasing attention from policy makers is focused on energy use of ICT generally and on data centres in particular, the data that the scheme generates will become less valuable because it will not capture new growth within the sector. The energy data will cease to be representative of the commercial data centre sector and we will no longer have insight into the way that the growth in the number of facilities is impacting energy use. No other country measures and audits sector energy use in this way.
- It discourages operators from migrating to new facilities: existing participants who plant to expand or migrate into new facilities or halls to take advantage of more efficient technologies and infrastructures are discouraged from doing so. Operators will also have to implement much more complex charging structure for customers to ensure they charge accurately for power.

Legislative changes required

To extend the life of the existing CCA scheme no changes to primary legislation are needed. The restriction on new entrants after 2018 is mentioned only in the Umbrella and Underlying Agreements. These could be amended to allow a stay of execution until there is greater certainty about the future of carbon and energy pricing and taxation. Agreements will have to be revised in any case to reflect changes in the buy out price.

The UK data centre sector continues to need strong signals of support because it is very energy intensive, highly vulnerable to overseas competition due to the mobility of digital data, and critically important to the UK economy. While the commitment from BEIS a year ago to reduce energy costs for business was welcome, what we really want to see is robust action to make this a reality. In the meantime, routes for mitigation should be left open, not closed off.

For further information

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About the UK Council of Data Centre Operators

techUK's Data Centre Council comprises twenty individual members who represent the full spectrum of business interests and business models across the data centre sector. Members include wholesale and retail colocation providers, cloud and hosting operators and enterprise providers and range from multinationals to SMEs. Some members specialise in the provision of professional services to data centres such as lawyers, surveyors, investors and advisors and some manufacture the IT and communications hardware that occupy these facilities. The Council is a decision-making body providing strategic direction for all techUK's activity relating to data centres. Formal Terms of Reference provide governance for the group.

Comprising senior decision makers, the Council is the single most influential body representing data centres in Europe. The Council is chaired by Andrew Jay, Executive Director at CBRE and the vice chairman is Rob Coupland, MD of Digital Realty EMEA. A list of members, terms of reference, achievements and other Council communications can be found here: <https://www.techuk.org/focus/programmes/data-centres/groups/data-centres-council>

About techUK

techUK is the trade association representing the digital technology sector in the UK. techUK represents the companies and technologies that are defining today the world that we will live in tomorrow. The tech industry is creating jobs and growth across the UK. In 2015 the internet economy contributed 10% of the UK's GDP. 900 companies are members of techUK. Collectively they employ more than 800,000 people, about half of all tech sector jobs in the UK. These companies range from leading FTSE 100 companies to new innovative start-ups. The majority of our members are small and medium sized businesses. www.techuk.org