

## Communication: Energy Impacts of Digital Policies

May 2016

The energy consumed by data centres providing cloud and other IT services has recently come under scrutiny. Data centres are indeed energy intensive; consolidating the IT functions that underpin our digital activities into these purpose-built facilities concentrates the energy demand but also allows it to be managed far more efficiently and transparently. Future energy demand of the sector will be dictated by consumer and business requirements, by technological developments, and by policy.

The UK Council of Data Centre Operators considered the number of current policy initiatives that depend on digital technology and the way that business models within the sector are evolving. These trends will have an impact on the extent to which we can predict our energy use and how we will manage it. The Council made the following observations:

- We support policy initiatives that stimulate the uptake of digital technologies. They will improve efficiency and competitiveness. They will drive growth in our core digital infrastructure, in the industries and services that supply and support it and in the customer organisations that depend on it. (See our [data centre publications](#)).
- However, significant growth in our digital infrastructure will have consequences on energy demand. Over the last decade, exponential growth in the volumes of digital data transmitted, processed and stored has been accompanied by incremental growth in data centre energy demand. In any other sector an explosion in output would be accompanied by an explosion in energy use, but for digital services the rapid speed of technology development has delivered orders of magnitude efficiency improvements: the energy required to process a given volume of data halves about every 18 months. This trend is likely to continue in the short to medium term.
- It is not possible to predict the future energy demand of this sector with certainty: the development of ICT is frequently driven by disruptive technologies: on the one hand the successful commercialisation of IoT may generate major new sources of data, on the other a replacement for silicon or a software innovation may allow the sector to continue to deliver orders of magnitude improvements in energy and carbon productivity in the longer term.
- Current estimates regarding the energy use of the sector and its future trends vary wildly. Few if any should be used as a basis for informed decision-making. Those calculated by reputable third party organisations such as the Carbon Trust, in which the assumptions are clearly stated, are preferable and can be provided. Nevertheless those assumptions are likely to be significant.
- Business models in the data centre sector are changing. Traditional demand to support transactional and records systems for government and businesses concerned with security, sovereignty and resilience will remain. However, the big growth area will be cloud provision for activities like social networking, IoT, smart grid, big data and analytics. These two approaches depend on different kinds of facilities. Policy makers must avoid the temptation to apply one-size-fits-all regulation which will inevitably damage one cohort.
- Energy is the dominant operational cost for the sector and therefore attracts very close scrutiny. The sector has developed advanced self-policing tools to drive good energy stewardship and the adoption of international standards such as ISO 50001 is widespread. Regulation that adds to energy costs will create no further incentive but will damage EU competitiveness: digital data is the most mobile commodity on Earth and cloud services can easily be offshored.

For further information on the Council, membership and achievements, please see overleaf or visit: <http://www.techuk.org/focus/programmes/data-centres/groups/data-centres-council>

## 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, some manufacture the IT and communications hardware that occupy these facilities and others represent the data centre supply chain. 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.

The Council was established in 2009 in conjunction with the British Computer Society (BCS). Its primary objective was to provide a representative voice for the sector in policy matters, particularly those relating to energy and carbon taxation. Over the last five years the Council has been responsible for delivering a number of significant outcomes for the UK data centre sector. These include negotiating a Climate Change Agreement for Data Centres, limiting the impact of the Carbon Reduction Commitment, building a qualification framework to recognise professionalism in the sector, demonstrating the economic value of the sector to Treasury and BIS and demystifying data centres to policy makers across government. The UK has the largest data centre market in Europe by a significant margin and as a result the Council also takes a close interest in EU policy developments impacting the sector.

Comprising senior decision makers, the Council is the single most influential body representing data centres in the UK.

### Current members are:

|  |                           |
|--|---------------------------|
| Andrew Jay (Chairman)                        | CBRE                      |
| Rob Coupland (Vice Chairman)                 | Telecity                  |
| Ian Bitterlin (Chair of Technical Committee) | Critical Facilities       |
| Derek Allen                                  | Global Switch             |
| Tony Allen (alternate: Billy McHallum)       | Equinix                   |
| Mark Bailey                                  | Charles Russell Speechlys |
| Jack Bedell-Pearce                           | 4D-DC                     |
| Allan Bosley (alternate: Pip Squire)         | Ark                       |
| Robin Brown                                  | Colt                      |
| Paul Cranfield (alternate: Patrick Coogan)   | Digital Realty            |
| Peter Gibson                                 | Intel                     |
| Nicola Hayes                                 | Andrasta                  |
| Matt Lovell                                  | Pulsant                   |
| Gavin Murray (alternate Paul Smith)          | Rackspace                 |
| John Oliver                                  | Barclays                  |
| Dave Smith                                   | DataCentred               |
| Steve Strutt                                 | IBM                       |
| Mark Trevor                                  | Cushman & Wakefield       |
| Mark Yearwood                                | CenturyLink               |

### Contacts: Emma Fryer, Associate Director, techUK

T: +44 1609 772 137 M: +44 7595 410 653 e: [emma.fryer@techuk.org](mailto:emma.fryer@techuk.org)

### For more information on Council membership, TOR, achievements and communications, see:

<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](http://www.techuk.org)