



# D-DAY FOR DATA CENTRES

Global demand for ICT is exploding – and with it, demand for the massive, power-sapping data centres that support it. **Adam Coleman** reports.

**T**hese days, information and communication technology (ICT) is expected to be available almost everywhere, all the time.

This is no more apparent than in the government sector, where the demand for reliable, high-capacity data centres will soon outstrip supply.

In March, the Federal Government released its Australian Government Data Centre Strategy – a proposed whole-of-government approach to future data centre requirements – which reveals that most existing data centres used by government will not be able meet requirements for increased capacity and reliability. The Government will look to address this shortfall in data centre infrastructure with an approach to market via AusTender later this year.

That means more, higher-capacity government data centres: typically huge power users that, according to the AGDC, currently generate about 300,000 tonnes of carbon annually.

However it estimates that “modern data centre technology can reduce this carbon footprint by around 13 per cent or 40,000 tonnes per annum”.

“I think that is very conservative,” says Greg Boorer, managing director of Canberra Data Centres (CDC), which counts Centrelink among its clients.

“Across the industry that might be the case, but our facility is two years old, it has the most modern air-cooled design and infrastructure and [the reductions in power consumption] are more like 50 or 60 per cent.”

Another government data centre provider, Macquarie Hosting, suggests government could easily meet a target of 13 per cent. Macquarie Hosting managing

director, Aidan Tudehope, says there are many steps government can take to reduce power consumption.

“We are a commercial data centre operator so we think every day about how much our facility is consuming power because it is a real cost to our business. We are taking 13 per cent off our power bill like-for-like every year,” he says.

Macquarie Hosting maintains that data centre power, reliability and efficiency is the most significant infrastructure issue currently facing public sector IT executives.

“The critical nature of business applications, rising power costs and the likelihood of further carbon legislation, means that IT managers must quickly address the reliability and efficiency of their power and cooling infrastructure”, its website states.

“Failure to do so will leave them exposed to serious service disruptions and significantly increased delivery costs.”

## POWERING ON

What is clear is that the incredible growth in demand for ICT shows no signs of abating.

“The number of units being consumed continues to skyrocket,” Tudehope says.

“We only need to look at the use of the internet, and now the National Broadband Network roll out that will start to kick in and have traction over the next three to eight years.

“All of a sudden the amount of data that can be consumed is going to be multiplied by something between ten and twenty times. That data needs to come from somewhere, it needs to be stored somewhere, it needs to be sent through some type of processing framework, all of which consumes energy.”

This growth has also seen ICT take a much larger role in government business, according to Boorer.

“In the past, ICT assets were generally housed in offices. But with technology changes over the last 15 years, and more rapidly over the last five years, suddenly those server rooms and even those existing data centres are no longer capable of accommodating the much more powerful computing devices.”

This has created an enormous challenge for government, he says.

“It is now more efficient to consolidate all of your computing assets into shared facilities that are purpose built, that are highly resilient facilities that have enormous redundancy built in and are environmentally efficient.”

Government should employ best-practice, energy efficient data centres from the outset, he says, because the cost of retrofitting efficiency into a data centre is not economically sound.

“The cost of retrofitting massive power and cooling into an existing data centre is cost prohibitive. You’d be better of starting with a greenfield site and getting the foundations right rather than retrofitting,” he says.

## COST FACTOR

With government at all levels increasingly expected to take the lead in being green, any uptake of new data centre infrastructure will need to consider the most efficient technologies available. But at present cost seems to be the predominant consideration.

The review of the Australian Government’s use of ICT, undertaken by Sir Peter Gershon, recommended a whole-of-government approach for future data