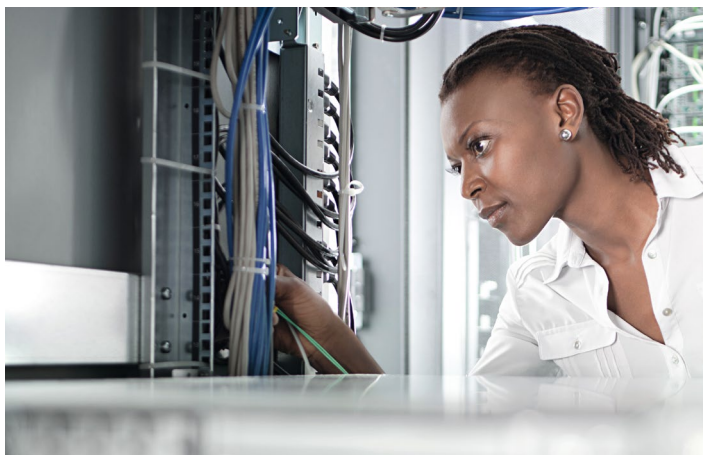


Case Study

NSW Office of Environment and Heritage

“Fujitsu is a leader in this area and provided very clear guidance on how data centres operate and how we can measure energy performance accurately. The knowledge and skills it provided enabled us to focus on practical issues.”

Tom Grosskopf, Metropolitan Branch Director, NSW Office of Environment and Heritage



The customer

The Office of Environment and Heritage (OEH) is the NSW government agency charged with protecting and conserving NSW's natural environment, Aboriginal country and culture as well as built heritage. It also manages NSW national parks and reserves.

Sustainability is at the heart of the OEH's strategic vision. It researches, reports, educates and enables, providing support to communities, business and government to make positive changes to the environment.

OEH acts as the national administrator of NABERS on behalf of the other Australian state governments, and the national government.

The challenge

For over ten years, NABERS has helped property owners, managers and tenants across Australia to improve their sustainability performance, reaping financial benefits and building their reputation. In 2013, the organisation turned its attention to data centres which are increasingly responsible for energy consumption.

“In 2013, data centres were responsible for 3.9 per cent of Australian electricity consumption but this is growing quickly as cloud services continue to soar,” explains Tom Grosskopf, Director Metropolitan Branch, OEH. “Businesses and consumers now expect access to their data from any device anywhere which means storing it in one of the 40,000 data centres in Australia and New Zealand.”

However, assessing the environmental impact of data centres is a very different proposition to evaluating a business or home. OEH needed to develop the right tools and metrics to accurately gauge how energy efficient a data centre could be.

“Typically data centres don't own the IT equipment but they take care of power supply, air conditioning, humidity and security,” adds Grosskopf. “We wanted to build industry-based standards that are practical and relevant.”

The customer

Country: Australia
Industry: Government
Founded: 1998
Website: www.nabers.gov.au



The challenge

NABERS is Australia's national programme for benchmarking the sustainability of building operations. Having identified the data centre sector as a significant and growing energy consumer, they wanted to introduce a tool to accurately evaluate the energy performance of data centres.

The solution

NABERS convened an industry technical working group to develop the tool. Like their other tools it would:

- be based on annual third party verified data
- use a 1-6 star scale, where 3 is average and 6 is market leading
- be aligned to responsibilities within the building
- measure energy consumption and greenhouse gas emissions.

As a market leader, Fujitsu were invited to the group where it played an influential role, providing expert guidance on the variables that influence data centre energy consumption and taking the team on tour of their facilities.

The benefit

- Data centres can now have their facilities rated, giving customers a transparent view of their energy efficiency and emissions
- NABERS ratings for office buildings are well established in Australia, high ratings provide a competitive advantage, incentivising businesses to reduce energy use
- With ratings of between 3 and 4 stars, Fujitsu is saving more than 13 gigawatt hours of electricity per year while reducing emissions by 27 per cent, compared to the market average

Products and services

- Fujitsu Data Centre Services
- ICT Sustainability Consulting
- ICT Sustainability Benchmark
- Data Centre Energy Efficiency

The solution

OEH brought together a technical working group to develop a ratings system for data centres, including two Fujitsu representatives. This group spent a year devising an appropriate methodology which was then approved by the national steering committee.

"Fujitsu is a leader in this area and provided very clear guidance on how data centres operate and how we can measure energy use precisely. The knowledge and skills it provided enabled us to focus on practical issues," says Grosskopf. "This allowed us to come up with a six star rating system where three is industry standard and six is market-leading."

NABERS now provides a simple indication and a common language of how well energy efficiency and greenhouse gas emissions are managed compared to market averages with calculations based on Power Usage Effectiveness (PUE). It does this through taking real onsite measurements of validated utility meters. As opposed to self-reporting PUE, a NABERS rating is conducted by a third party assessor and audited/certified by government.

"It is a credible and independent assessment methodology that encourages businesses to pay more attention to how environmentally friendly their data centre provider is," continues Grosskopf. "It also helps data centres become more competitive while reducing their emissions."

The benefit

Thousands of data centres across Australia now have a tangible incentive to have their performance rated because customers will increasingly expect emissions to be at industry standard levels or better. Leading the way has been Fujitsu, which has already had five of its six major data centres certified.

"With ratings of between 3 and 4 stars, Fujitsu is saving more than 13 gigawatt hours of electricity per year while reducing emissions by 27 per cent, compared to the market average," comments Grosskopf. "We believe Fujitsu is a market leader in energy efficiency and that these tools have the potential to transform the industry."

Fujitsu Australia and New Zealand CEO, Mike Foster explains, "The NABERS rating provides our customers with an independent validation of best practices in energy efficiency. Our data centre team is constantly working on ways to improve our facilities, processes and practices across our national data centre footprint."

It is hoped that this new initiative will encourage companies to take small and simple steps to minimise energy consumption like adjusting set points to the latest ASHRAE standards. "We're keen to support our businesses in becoming more productive and producing a unit of economic output at lower cost does exactly that," says Grosskopf. "It makes us all more competitive so it's a win-win situation for everyone."

Conclusion

With NABERS data centre ratings now in place, it will allow improvements made by facility managers to be recognised and act as further incentive.

"In the office building sector, NABERS has helped drive down energy use by 30 per cent," concludes Grosskopf. "We are convinced we have the potential to do the same in data centre sector."

"We take our hats off to Fujitsu, which has led the way with its open and transparent approach. The company has a real commitment to energy efficiency, its customers and the environment."

Tom Grosskopf, Metropolitan Branch Director, NSW Office of Environment and Heritage

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