

# Carbon and energy management



Equinix Data Centre SY3 Australia

Carbon and energy management are increasingly important attributes of industry leading Information and Communication Technology (ICT) businesses.

They are both a significant challenge and an opportunity for creating long term shareholder value.

At Aurecon, we draw on a depth of specialist engineering and advisory expertise across our industries and geographies to meet these challenges and to deliver results – for business, communities and the environment.



## **Aurecon delivers complete carbon and energy management solutions for data and telecommunication clients across the globe.**

The exponential growth in ICT traffic is fundamentally coupled with growth in energy demand, consumption and its associated cost, all of which are forecast to rise. It is of increasing importance for our clients to find innovative ways to supply energy to and improve the efficiency of their networks and data centres.

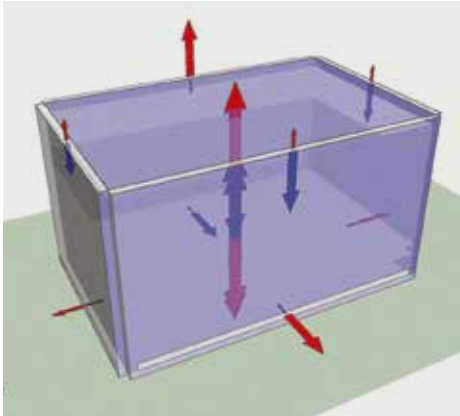
Implementing energy efficiencies is typically the most cost-effective way to reduce carbon emissions, and this can translate to significant cost savings for business.

We help clients gain a competitive advantage through complete energy and carbon management during all stages of a project, asset life cycle or business operation.

Our integrated, tailored and cost-effective solutions create value for our clients by:

- building business integrity, and supporting the business response to the wider sustainability and climate change challenges
- building capacity to succeed in carbon-constrained economies by identifying new business opportunities
- reducing the business risks associated with exposure to energy, carbon and regulatory costs
- delivering business savings through improved energy efficiency.

# Aurecon's expertise



Passive cooled remote shelter thermal modelling, Silcar Australia



Exchange economy cycle, Telstra Australia



Global Switch East and West Data Centres Australia

## Strategy development and policy advice

A practical understanding of carbon and energy markets, in our clients' operational context, enables us to define issues, develop a business strategy or provide project development advice. We help our clients identify and manage their risks and opportunities.

## Inventory development and assessment

Inventories provide essential information for effective carbon and energy management, and can lead to reduced carbon emissions and increased energy efficiencies

We work with our clients to compile and manage their project or business carbon footprint. We also deliver life-cycle assessments, audits and independent verification services for reporting emission reductions.

## Government programmes and reporting

With our clients facing evolving legislation and increasing compliance requirements, we've made it our business to understand the relevant carbon and energy legislation.

We help our clients realise the benefits of a well-planned business response to compliance, reporting, assurance and beyond. In Australia, for example, this includes: the Clean Energy Legislation Package, the National Greenhouse Energy Reporting Scheme and the Energy Efficiency Opportunities Act.

## Low carbon energy solutions

Like the ICT landscape, the business case for energy supply, demand response and low carbon technologies is constantly changing, from the decreasing cost of wind and solar to the use of fuel cells, the role of battery storage and back-up generation.

We help our clients to evaluate and model their renewable energy and carbon abatement potential across their asset portfolio, from the business case for small scale site specific integration, through to large scale, corporate leadership investment opportunities.

We also help our clients to innovate through the deployment of new technologies, equipment modifications and operational process improvements.

## Energy management

Aurecon's energy management solutions translate to cost benefits for our clients.

We help our clients to embed best practise energy management systems and ways to identify performance improvements to realise the business benefits of energy efficiency.

We deliver supply and demand-side services, including energy efficiency in design, peak demand and network tariff assessments, energy audits, onsite testing, feasibility assessments, and more.

We also deliver measurement and verification services to support programmes or manage the performance of individual projects.

## Markets and investment advice

Market understanding, project economics and financial analysis help businesses make informed choices. It's an essential part of progressing projects from identified opportunities through to implementation.

Our clients can make implementation decisions that are assured of delivering results through our market or economic analysis, financial modelling and business case development. As part of our due diligence, we also identify energy efficiency and carbon offset incentive schemes, and can manage the process from grant applications through to post-award reporting.

## Key projects

### Network tariff analysis and energy management (ISO 50001:2011) action plan

Client: Chorus, New Zealand

### Exchange sites, bumpless transfer feasibility studies

Client: Telstra, Australia

### Data centre closed loop cooling system feasibility, design, tender documentation and energy impact statement

Client: Telstra, Australia

### Data centre Power Usage Effectiveness (PUE) analysis and energy efficiency action plan

Client: Melbourne Water, Australia

### Mobile tower Solar Power System upgrade

Client: Optus, Australia

### Exchange Variable Refrigerant Volume air conditioning system

Client: Telstra, Australia

#### Key contact

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