

energy + water

sustainable solutions



energy
conservation
systems

“Creating more value from using less resources, to secure the future for our children is one of the greatest global challenges we face.”

Peter Szental, Managing Director of Energy Conservation Systems

accountability + leadership

By 2020, Australia's greenhouse gases are forecast to increase by 22% over 1990 levels under a business-as-usual scenario. This stands in contrast to the consensus view that cuts in emissions of between 60 and 80% by 2050 will be needed to avoid dangerous climate change.*

Within this total, commercial buildings are major users of energy and emitters of greenhouse gases, with emissions from this sector set to double between 1990 and 2010.*

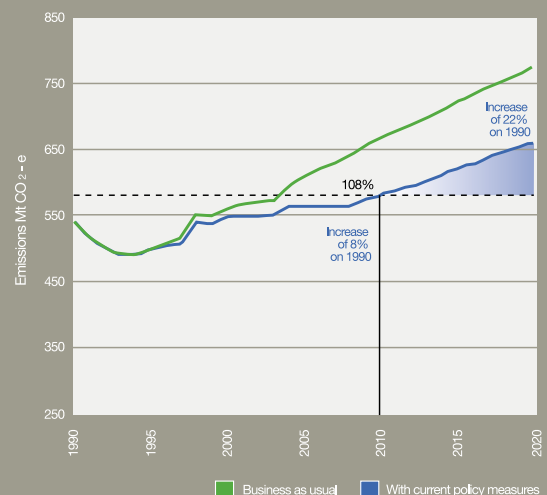
Already, we face immediate environmental and financial pressure due to rising demand.

This unsustainable demand creates the need for costly investment in new base-load and peak energy infrastructure - resulting in even more greenhouse emissions.

Clearly, we need practical affordable solutions.

* Australian Greenhouse Office, Tracking to the Kyoto Target, 2005

AUSTRALIAN GREENHOUSE GAS EMISSIONS PROJECTED TO 2020*



■ Business as usual ■ With current policy measures



energy and water + conservation

Energy Conservation Systems Pty Ltd (ECS) is Australia's market leader in energy and water management, for all market sectors: public, educational, industrial, commercial and large scale residential.

ECS provides a full range of energy and water management solutions. Our work is always structured to deliver innovative, cost effective solutions without compromising quality and sustainability.

Our offices across Australia and South-east Asia serve a wide range of customers all of whom have one objective in common, they want to cut their energy and water bills. Some are motivated purely by the financial benefits, others by the improved service that more efficient lighting, air conditioning and heating systems can provide, while others are driven to reduce greenhouse emissions or protect our water resources.

For almost 25 years, our Turnkey delivery system has been proven through hundreds of projects.

Today, ECS is the leader in energy and water conservation, from analysis of options through to delivery, commissioning, monitoring and verification.

outcomes

innovation

benefits

solutions

capabilities + outcomes

ECS, a pioneer in energy and water efficiency, is a thriving Australian company. Our mission is to:

- deliver leading energy and water management solutions in Australia and Southeast Asia through innovation and continuous improvement
- provide the most cost effective solutions while practicing world's best practice in design and implementation
- provide a stimulating work environment where all employees can reach their maximum potential
- respect the environment and support initiatives to reduce damage to it, especially the reduction of greenhouse gas emissions

ECS is able to deliver innovative long-term energy and water solutions to diverse market sectors. Our multi-disciplined engineering team is flexible and responsive to customer and project requirements.

Responsiveness to customer needs in a rapidly changing business environment is one of our most important capabilities; we look forward to demonstrating our capacity to provide you with value in meeting your energy and water system needs.



energy and water + solutions

COST, ENERGY, WATER, MAINTENANCE & GREENHOUSE GAS SAVINGS.

Today's corporate world is now held more accountable than ever for its role in environmental responsibility.

At ECS, we understand the value of our natural and social environment. With this awareness we adopt the most efficient use of resources through expertise in innovative designs and technology.

Australia's current energy needs are predominantly met through the intensive use of fossil fuels: coal, gas and oil. Unfortunately, this also results in pollution including greenhouse gases which can lead to global warming, one of the greatest, man-made, environmental threats the world has faced. By saving energy and water, you avoid the pollution that accompanies our use of fossil fuels. In addition, customers receive benefits of direct savings to their energy and water bills. Our technologies and solutions allow you to do all of this without compromising the performance of your property or business.



integrated occupancy control + lighting

The level of technological integration established within a building management system plays an important role in determining a building's performance. Although systems-integration can in theory simplify a building's operation, the full benefits will only be realised following the implementation of a well-designed strategy.

Many of the occupancy-related demands placed on, say, a lighting system are similar to those of the HVAC and security systems. In fact, maximising overall building performance is the facility manager's aim, and the driving force behind the increase in integrated building systems.

Based on the premise that the ability to control and monitor building systems from any point within the overall network is the key to peak operation performance and efficiency. Systems integration establishes a means of electronic communication between the numerous systems, and their control mechanisms in a building.

ECS occupancy based controls offer an integrated approach to the management of the electrical, lighting, mechanical and security services within a building or facility.

The ECS integrated occupancy control ensures that lighting and air-conditioning are reduced or switched off in unoccupied areas and after hours. This means energy is only used when areas are occupied, saving energy consumption within the facility.

The same occupancy detection system switches to security mode to secure the building at all other times. The system also integrates the ambient external environment to the interior of the building to dim lights when sufficient daylight exists.



performance contracting + innovations

Performance Contracting is an innovative form of contracting developed to overcome the major barriers to delivering guaranteed cost-effective energy and water efficiency.

By utilising performance contracting, the upgrading of the energy, water and operational efficiency of the facilities in your building is paid for through energy and water savings. More importantly, performance contracting identifies ways to reduce energy and more recently water consumption, leading to lower energy and water bills and reduced energy-related pollution such as CO₂ emissions.

Performance contracting is a team effort to explore improvement opportunities and select desired outcomes. With a performance contract, ECS assumes all risks and teams as a partner in an ongoing relationship for continued

Performance Contracting has been widely used around Australia to provide substantial cost and environmental savings. If your organisation lacks the time, resources, expertise and capital to fund energy and water saving initiatives, or you are not sure about the returns from an energy and water efficient project and want to minimise risk, performance contracting may be the answer.



greener air-conditioning

Air conditioning is a large energy consumer in commercial facilities. Efficient air conditioning runs only when it's needed, runs only as hard as it needs to and doesn't use poor control strategies that can see heating and cooling operating simultaneously to overcome bad design.

ECS can assess, design and implement improvements to your existing air conditioning system while ensuring a high level of comfort and performance. Improved control through smart building management systems, more control options with variable speed drives and even occupancy based controls can all be combined to improve efficiency.

Changing from a traditional electric chiller to an absorption, non-electric chiller can make a huge difference to facility greenhouse emissions.

Running on gas, waste heat or even solar energy the BROAD range of chillers make great commercial sense, have a lower impact on the environment and save on running costs.

BROAD systems are distributed in Australia only by ECS.



building performance ratings

The Australian Building Greenhouse Rating (ABGR) and the National Australian Built Environment Rating System (NABERS) are national performance-based rating schemes providing official, reliable and easy to measure comparisons of overall building performance.

The schemes benchmark a buildings' environmental performance to building owners, managers or tenants on a scale of one to five, with a 5-Star rating representing the best practice.

With trained assessors and experienced engineers around the country, ECS can guarantee both energy and water upgrades and provide ABGR and NABERS ratings.





monitoring & verification + water management

The ECS web-based automated meter reading solution for electricity, gas and water provides real-time energy and water consumption, monitoring, management and billing.

The system provides users with accurate, timely and useful data which gives the ability to make informed decisions on actual energy and water usage.

ECS takes this concept further by analysing data, usage patterns and information and ensuring continued effective and efficient use of energy and water.

ECS evaluates, designs and implements solutions to reduce consumption of fresh, potable water for all market sectors: public, industrial, commercial and large scale residential.

ECS water solutions help you save water, the environment and money by selecting and implementing the most appropriate technology.

ECS uses proven techniques and strategies to meet each client's and site's individual needs. Guaranteed savings can be achieved as part of a Performance Contract.

ECS is a leader in commercial rainwater harvesting schemes in Australia.



part of a team + commitment

szencorp
sustainable development

Szencorp is at the forefront of Australian industry in commercialisation and installation of innovative technologies for sustainable buildings.

Headquartered in Melbourne, Szencorp employs 65 people in Australia and 20 in SE Asia. Its core businesses includes Energy Conservation Systems, Carbon Partners, Water Conservation Systems and Jaemax Developments. The business model for Szencorp is centred on creating value by using resources more efficiently, through expertise in best practice design and engineering. Sustainability is an underpinning philosophy of the Szencorp group.

Peter Szental is the founder and owner of Szencorp. Peter has over twenty years experience in environmental sustainability. His commitment to the environment has led him to find ways to better manage the nexus between business and global sustainability.





sustainable + development

Energy Conservation Systems commitment to environmental sustainability in the workplace is demonstrated through the planning, development and operation of their head office, the Szencorp building.

Located in Melbourne, Victoria, the Szencorp building is a research and development test bed for innovative solutions. The project is aimed to demonstrate the highest energy and water performance, to minimise outgoings and running costs and demonstrate that green is commercial.

The Szencorp Building is currently rated as Australia's greenest office building, as measured by the most widely accepted building rating systems.



Imagine a future where clean energy and water resources are plentiful because they're used efficiently, effectively and economically.

Let's make it a reality today.

Peter Szental, Managing Director of Energy Conservation Systems

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