

# PUTTING OUR ENERGY INTO USING LESS

By focusing on using electricity as efficiently as possible throughout our operations, we not only create a more efficient business but lead our customers and other stakeholders by example, and ultimately deliver reductions in greenhouse gas emissions.

As an electricity distribution business, we want our customers to use less electricity, especially at peak times, so that we do not have to build additional costly infrastructure unnecessarily. Even as an electricity retailer, we can incur significantly higher costs as our customers use more, which we all ultimately pay for. Using less electricity is good for almost everyone, as well as the environment, and we're striving to reduce our consumption as much as possible.

Ergon Energy's Climate Change Response Plan 2008-2010 provides a framework to guide improvements in electricity usage-related technical solutions, employee actions, and business operations and procedures.

To support Queensland Government targets, we have established energy reduction targets for our occupied building portfolio. Less than a year after setting the targets, we have seen a small reduction in our electricity use and we are expecting larger reductions based on the actions we have implemented, or will implement in the near future.

In 2008/09, we were successful in reducing our annual electricity use by 1%, despite a 3.2% increase in employee numbers – this, along with 'greener' energy use, supported a 3.1% reduction in associated emissions. We are working towards a 20% reduction in electricity use by 2015 based on the 2005/06 baseline year.

## UNDERSTANDING OUR ENERGY USE

In 2008/09, we improved the monitoring of electricity use in our buildings, and our understanding of the technical and behavioural drivers. We piloted enhanced electricity metering in 20 buildings that streams information into our computer systems providing near real-time insights into the impacts of energy conservation actions at each site. We now are part-way through rolling out these meters to all 120 sites, with deployment due to be complete in February 2010.

During the past year, as a preliminary element of the Depot Sustainability program, energy audits were conducted at 56 of our 80 depots; this saw 39 small and 17 medium sized depots assessed, revealing significant savings opportunities.

As part of the audits, a total of 13,838 appliances and individual loads were identified, from fridges in the depots' amenities areas to specialist power tools in the workshops. This register has formed the basis of depot-specific reports that are now providing detailed data on the baseline energy usage of each site, as well as recommended actions with their estimated energy and emission saving potential. These reports are also allowing the Area Operations Managers and their teams, as well as senior managers accountable for our climate change response, to compare depot performance by benchmarking each site in terms of energy and water usage and waste.

As the most successful actions become apparent, tailored technical and behavioural action plans will be implemented at each depots and eventually implemented at all sites.

During the year, we also began a process to establish Energy Performance Contracts with external service providers at a number of our major sites to drive down energy use. From the preliminary assessment of 13 of these sites, and the shortlisting of external service providers, we anticipate these contracts will be established for around 10 sites with the highest electricity consumption. Importantly, the ultimate solutions will effectively pay for themselves through the energy saved.

## FINDING THE TECHNICAL SOLUTION

Over the year, energy-saving technical initiatives have included lighting replacements, office equipment replacements, and air conditioner servicing and upgrades.



*New solar-powered LED lighting has recently been installed at Ergon Energy's Pandoin Substation storage yard. The energy-saving LED lighting is rated for 100,000 hours – or 20 years – before a bulb change is required.*



*The Mossman depot in Far North Queensland was recognised with a Master Builders Award for Innovation in Environmental Management – captured water is used for toilets, water run-off is filtered, energy efficient lighting is used throughout and the building is fully insulated.*



*We are engaging with our employees through informal Sustainability Lunchbox Sessions. As a result of these sessions, led in this instance by Manager Sustainability Dean Comber, many are realising that a more sustainable lifestyle can be cheaper and often more enriching too.*

In Brisbane, for example, the more efficient lighting installed as part of a new fit-out for the Eagle Farm office is expected to reduce electricity consumption for lighting by up to 60%.

Along with the initiatives that will be implemented as part of the Energy Performance Contracts mentioned, we are also undertaking a major capital investment in a Building Security System.

The system is being piloted at our Yeppoon depot and is designed to reduce unnecessary energy usage through the integration of the air conditioning and lighting into the security system. This enables staff to have a single turn-off point. When staff enter a building and disable the security alarm that action also turns on the lights and air conditioning; when they leave a building and re-arm the security alarm, the lights and air conditioning turn off. Once the energy savings of the pilot are understood, we plan to rollout the system to other sites.

We are also investing in solar-powered security lighting, which features a solar panel to charge an energy storage unit during the day to power the security lighting at night. Most recently, at Ergon Energy's Pandoin Substation near Rockhampton, we have installed a solar lighting system that uses high-intensity Light Emitting Diodes (LEDs) – the first installation of its type in Australia. These bulbs use much less energy than standard light bulbs, they last longer, are much more durable, and also do not contain mercury.

The Pandoin storage yard is also unique in that both the security lights and perimeter fence's security and communications network are all solar-powered. And the system is expected to pay for itself with the energy savings gained.

We also plan to continue to roll out solar photovoltaic systems on our buildings, and have incorporated the capacity for these systems, along with other environmental best-practice features, into all new building designs. The designs of two new combined office/depot buildings being developed in Cairns and Mackay incorporate a host of energy-saving, solar power and other sustainability-enhancing features that will see the network-provided electricity use per person reduced considerably.

More details on our involvement with solar power can be found in our online case study: *Solar Power – an Icon of Sustainability*.

## ENGAGING WITH OUR PEOPLE

To support our technical initiatives, behavioural change programs are being enhanced and implemented to further reduce electricity consumption. In many instances, behavioural change can be a no-cost solution, thanks to the energy cost savings. We want our people to be advocates of energy conservation in their communities, leading by example for everyone's benefit.

As part of our sustainability education program, Lunchbox Sessions are continuing to be rolled out in our major centres. The sessions cover a multitude of topics focused on helping employees live more sustainable lifestyles, at work and at home, and also what Ergon Energy is achieving in each topic area. Topics have included 'How to make your lifestyle carbon neutral', 'How to make your home more energy efficient', and 'How to buy and drive a more sustainable car'.

During the past year, Ergon Energy's Innovation Program has also encouraged employees to 'think outside the square' to respond to climate change with its first guided innovation campaign. Employees were encouraged to submit ideas on how we could reduce emissions with actions in the workplace, with many focused on energy conservation.

The campaign resulted in 69 ideas, covering awareness and education, staff incentives, technology and equipment, offsets and recycling. Each idea creator was rewarded with a tree planted on their behalf through Greenfleet, a registered carbon offset provider.

Another great example of how employee enthusiasm has found better solutions in responding to climate change is the nine-metre windmill at Ergon Energy's Stanthorpe depot, which was installed in December 2008. The windmill pumps water into storage tanks from a bore sunk at the depot, supplying water for its wash down bay. We estimate that using wind as an emissions-free energy source, instead of an electric water pump, although certainly not a new idea, is saving around a tonne of greenhouse gas emissions per annum.

*This poster encouraged our employees to participate in our first guided innovation campaign, focused on how we could respond to climate change.*



**THE WAY WE SEE IT...**

**... delivering an affordable, dependable and smart electricity network is central to our contribution towards the sustainability of regional Queensland.**

To find out more, see our Annual Stakeholder Report 2008/09 available online at [ergon.com.au/annualreport](http://ergon.com.au/annualreport). It presents a holistic view of the economic, environmental and social value we are providing to our customers, employees, government shareholders and other stakeholders.