ENVIRONMENT

ACHIEVING

- our field worker environmental training is aligned with new national training modules
- streamlined our Environmental Work Plan process to deliver environmental and efficiency benefits
- reduced our paper consumption and introduced new toner and battery recycling.

Environmental Management System

Powerlink's Environmental Management System (EMS) provides a framework for monitoring and reporting against key environmental aspects of our business activities. During 2011/12, our Environmental Steering Committee began a review of the EMS, considering each aspect's importance to our business, our compliance obligations and response, environmental performance scoring, current information and processes, investments in related research, and areas for improvement.

Our environmental auditing strategy monitors our performance against relevant legislative requirements and internal requirements. Scheduled environmental audits undertaken in 2011/12 included:

- project delivery audits focused on substation construction in Southern Queensland
- substation maintenance audits
- land and environment audits
- an independent audit of our EMS
- an independent audit of our compliance with the *National Greenhouse and Energy Reporting Act 2007 (NGER Act)*.

The audits confirmed proper implementation of a number of planned improvements, including increased awareness of the condition assessment for containment systems at our substations and improvements in the reporting of non-routine situations on easements. Strategies to address the key areas for improvement identified by the audits are being progressed with our stakeholders and will be reviewed in 2012/13 audits.

The outcomes of all audits were evaluated against our key performance indicators and reviewed by the Environmental Steering Committee.

During the year, Powerlink reported two environmental incidents to the Department of Environment and Resource Management (DERM) (as of 30 March 2012, the relevant functions of DERM are delivered by the Department of Environment and Heritage Protection):

- 16 December 2011 – we advised DERM of a potential sediment release from the Richlands Substation site. DERM undertook inspections and made suggested improvements, but no formal action was taken.
- 11 November 2011 – we advised DERM that Siam weed *Chromolaena odorata* (a Class 1 weed) was discovered at several tower locations on the Yabulu to South Ingham transmission line. While the outbreak was not the result of Powerlink activities, we reported and managed the issue.

Measures to ensure compliance

Powerlink continually monitors the external environment for legislative changes and state planning policies with the potential to affect our activities. Monitoring, combined with consultation with relevant bodies helps us to ensure our activities continue to be compliant. During 2011/12, our initiatives included:

- contributed to an Energy Networks Association (ENA) submission on the Commonwealth draft *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Environmental Offset Policy and accompanying draft offset assessment guide
- readiness to implement the Queensland Government's Biodiversity Offset Policy
- implementing the Queensland Government's Koala Offset Policy
- examining the implications for Powerlink of the *Commonwealth Clean Energy Act 2011*. The carbon pricing mechanism will not apply directly to Powerlink as our emissions are well below the threshold. Powerlink is planning strategies to manage expected minor and indirect impacts.

Environmental training

Powerlink provides both general and specialised environmental training to our employees to ensure they are equipped to undertake their roles and understand their responsibilities. We also recognise World Environment Day annually by providing information and raising awareness among our employees.

Powerlink has participated in an ENA working group dedicated to developing national guidelines for environmental training and a supporting handbook for electricity industry construction and maintenance teams. These tools will ensure environmental training and awareness is consistently delivered throughout the industry and linked to recognised national competencies. During 2011/12, the suite of national training modules was approved by the Australian Skills Quality Authority.

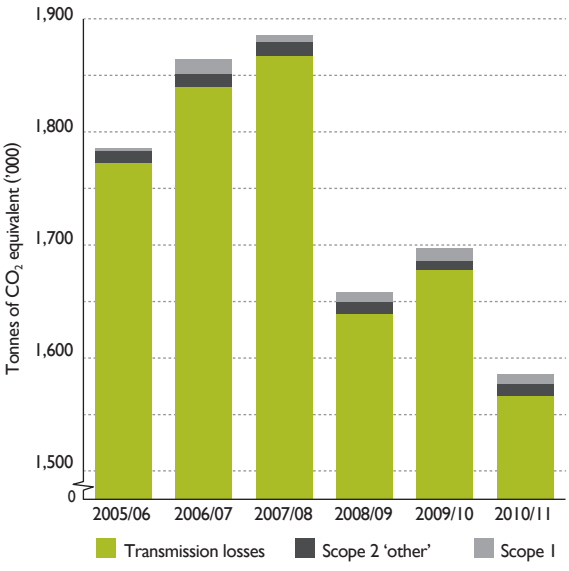
Powerlink has developed a training matrix for field staff, which aligns with the national training framework. Detailed mapping of current skills and training will be undertaken in 2012/13 to identify the most efficient way of ensuring requirements are met and integrated into business processes.

Emissions management and reporting

Powerlink submitted its annual report on energy and greenhouse gas emissions under the Commonwealth Government's NGER Act. An external audit verified the accuracy of our 2011 report. Our 2012 NGERs report will be submitted as required in October 2012. Following this submission, our audited 2011/12 emissions data will be reported in our 2012/13 Annual Report.

We continue to improve the quality of our data collection and reporting mechanisms, and action strategies to address the opportunities for improvements identified by the independent auditors.

Annual greenhouse emissions by type



CASESTUDY

NEW APPROACH TO ENVIRONMENTAL WORK PLANS

Our new process for developing and managing Environmental Work Plans (EWPs) for construction, operation and maintenance activities on our easements and sites will help us to better manage environmental matters in the field.

An EWP is a document that maps environmental and Cultural Heritage information, and landowner agreements on Powerlink sites.

Melissa Lunney, Environmental Strategist, said the EWPs have been streamlined to meet business need and to deliver significant environmental and efficiency benefits.

"Previously EWPs were only developed for sites in the Wet Tropics World Heritage Area and could only be modified and accessed by certain parts of the business. Our new approach is to now ensure EWPs are developed for all Powerlink's transmission line, substation and communications sites.

"We've also made them more accessible to teams across the business, which helps us to share important information about how to manage our work in the field.

"If one of our field workers identifies a new issue or constraint, they can now easily add information into the EWP system and produce updated mapping for all users.

"That means our data is more accurate, more accessible and more current, which adds up to better informed decision making on the ground," Melissa said.

At the end of 2011/12, the staged roll-out of the new EWP process and system across the business was almost complete.

Transmission losses

More than 98 per cent of greenhouse gas emissions reported by Powerlink are associated with transmission losses. Transmission losses result from energy lost as heat due to electrical resistance when electricity flows through the transmission network. Greenhouse gas emissions associated with transmission losses can be quantified as the CO_2 emissions associated with the generation of additional electricity to make up for the lost energy.

Greenhouse gas emissions associated with transmission losses are influenced by several factors, many outside the direct control of Powerlink, including:

- the actual electricity consumption for each point in time
- location of generating plant supplying the electricity demand
- the fuel type and efficiency of generation supplying the demand
- electrical resistance of transmission lines used in supplying the electrical load.

Powerlink's planning process, which is in line with the AER's Regulatory Investment Test for Transmission (RIT-T), involves financial assessments of transmission loss differences resulting from augmentation and selection of the augmentation option that results in lower transmission losses. This can lead to investments that economically reduce greenhouse emissions.

Fuel consumption

Powerlink's emissions from fuel consumption are predominantly attributable to our vehicle fleet. Fuel emissions decreased in 2010/11 as a result of strategies to replace older vehicles with more efficient vehicles and a decrease in kilometres travelled. Looking ahead to our 2011/12 reporting, we expect an increase in fuel consumption as a result of an increase in our vehicle fleet, and the more remote location of transmission projects which require our people to drive greater distances to sites.

Emissions from fuel consumption, transport and stationary usage

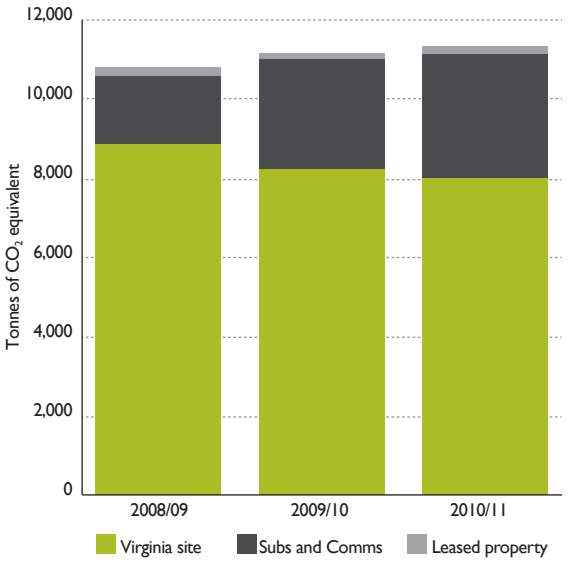
Electricity consumption

Powerlink purchased 6,030 megawatt hours of green power through Ecofund, equivalent to about 69 per cent of the estimated annual energy used at our Virginia site during 2011/12.

Electricity consumption at our Virginia site has decreased over recent years due to the use of energy efficiency measures including smart lighting. Total recorded electricity consumption at substations and communication sites has increased due to an increase in the number of sites and improvements in the quality of data collated.

We expect that our overall electricity consumption figures will show an increase in 2011/12 because of the inclusion of our Narangba warehouse, which opened in mid 2011. We continue to look for opportunities to improve our energy efficiency across our business operations.

Electricity consumption by type



Recycling and waste management

Our well-established regime of recycling business-related waste includes electronic equipment and larger waste items, particularly scrap metal and transformer oil. We encourage our people to act sustainably in their day-to-day business activities. Powerlink provides information about recycling opportunities to all of our employees. In response, our employees participate strongly in recycling initiatives.

This year we focused on reducing our use of paper and printing and, with the support of our employees, reduced our paper consumption by 13 per cent. We also successfully introduced new toner and battery recycling initiatives.

Research and development

Powerlink invests in research focusing on practical land and environmental management issues. We participate in a number of research and development programs that:

- examine wildlife interactions with our infrastructure
- assist us to continually improve our methods of managing vegetation
- assist us to continually improve site stabilisation and rehabilitation practices.

In 2011/12, we maintained our commitment to research projects including:

- investigating the movements of mahogany gliders near powerline easements and their use of fauna crossings in Far North Queensland
- quantifying the ecological value that can be retained on powerline easements by applying different construction techniques and vegetation management practices
- the effect of soil preparation, planting and seeding methods in establishing revegetation sites
- the effect of clearing practices on minimising soil loss in areas of dispersive sodic soils. This project was nominated as a finalist in the 2012 Healthy Waterways awards.

Powerlink is supporting koala research being undertaken by the University of Queensland's Koala Fund (UQKF). The research contributes to the scientific knowledge base on koala behaviour and rehabilitation of koala habitat, and helps meet our obligations under the new *State Planning Policy 2/10: Koala Conservation in South East Queensland*. The research outcomes will help Powerlink continue to refine our approach to conservation strategies, including managing mitigation and rehabilitation activities near koala habitats.

Cultural Heritage

We respect Cultural Heritage and take a long-term view to proactively managing Cultural Heritage for the life of our transmission assets. Powerlink considers two kinds of Cultural Heritage when planning our developments:

- Aboriginal Cultural Heritage – areas and objects that are significant to Aboriginal people
- Historical Cultural Heritage – areas and objects of historical significance post 1788 that are not solely associated with Aboriginal tradition and custom.

When acquiring easements or land to build our transmission assets our aim is to avoid or minimise harm to all Cultural Heritage. We consult with Aboriginal people, Cultural Heritage consultants, local communities, landowners and government agencies to identify any places of spiritual, cultural or historical significance. This enables us to put in place all reasonable and practical measures to avoid or minimise harm to Cultural Heritage.

We are required to meet obligations outlined in the *Queensland Aboriginal Cultural Heritage Act 2003* and the *Queensland Heritage Act 1992*, and Federal Cultural Heritage legislation.

The environmental impact assessment and associated work plans developed prior to construction provide us with a roadmap for how we will manage all types of Cultural Heritage. We also develop Cultural Heritage Management Plans (CHMP) with relevant Aboriginal parties to ensure the management of significant Aboriginal Cultural Heritage areas and objects.

In 2011/12, we continued to build on new relationships with Aboriginal parties in South West and Central Queensland, where Powerlink has a more recent presence.

LOOKINGFORWARD

In 2012/13 and beyond, we will:

- continue to review the environmental aspects identified in our EMS
- address the skills and training opportunities identified in 2011/12, in a way that aligns with the national training initiative
- work with research partners to identify methods to recycle our business-related waste materials which currently do not have a market, for example porcelain and toughened glass transmission insulators
- complete the roll-out of our new EWP processes.