

## 7. A SUSTAINABLE TERRITORY

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### Highlights

The 2009-10 Budget supports the Government's commitment to achieving a sustainable future for the community. The initiatives and actions build on earlier work across Government to protect our natural and built environments, conserve our natural resources, adapt and respond to the challenges of climate change and promote the development and uptake of renewable energy.

The initiatives and actions also reflect the Government's determination to lead in sustainability by reducing its carbon emissions, promoting sustainable urban development and land management and ensuring that its accommodation and facilities are energy and water efficient.

### *Government Leading by Example*

The Government established the Department of the Environment, Climate Change, Energy and Water in November 2008 to give priority to the critical issues of climate change, environmental protection, sustainability, water security and energy efficiency. The Department will work across Government to ensure better integration in the development and implementation of environmental policy, regulation and service delivery, particularly in the areas of climate change, environment protection, sustainability programs, natural resource management and energy and water policy.

#### *Renewable Energy — GreenPower*

In 2009-10, the Government will continue to support the use of GreenPower, by significantly increasing its proportion of GreenPower use, as well as promoting the use of GreenPower in the community.

#### *Renewable Energy — Feed-in Tariff*

Building on the successful introduction of the Feed-in Tariff in March 2009, the Government will continue to promote the scheme to households and businesses encouraging them to install renewable energy generation technology and will explore the extension of a Feed-in Tariff to larger installations.

#### *Renewable Energy — Solar Farm Facility*

In 2009-10, the Government will facilitate the procurement of a large scale solar power plant capable of powering at least 10,000 Canberra homes.

#### *Green Office Building*

The Government will continue examining the feasibility of establishing a green office building to accommodate a range of ACT Government agencies. The building will enable the Government to meet its environmental objectives whilst also demonstrating fiscal

responsibility through rental, water and energy savings across Government.

The office building is proposed for Section 19, Civic, on the site immediately to the south of the Legislative Assembly Building on London Circuit.

#### *Government Office Accommodation*

The Government occupies almost 90,000m<sup>2</sup> of owned and leased office space and is implementing programs to reduce its carbon emissions and show leadership in the property sector. The Government Property Group, which consists of representatives from all government jurisdictions including the ACT, is developing a National Framework for Sustainable Government Office Buildings. This framework will establish performance benchmarks for ecologically sustainable development in all new buildings and large fit-outs.

The Government is also actively involved in developing Green Lease Schedules as part of an on going cooperation between the Commonwealth and State/Territory governments to make it easier for all businesses to implement environmentally sustainable leases. When subleases for office accommodation become due for renewal and where appropriate, new clauses will be included to improve the environmental performance.

In 2009-10, the Government will commence implementation of a program of installing 'smart' meters in Government offices, to help improve efficiency in the operation of both owned and leased office buildings. Smart meters will measure and store data on how Government offices use electricity, measuring energy consumption in half-hourly intervals. This program will also assist staff in adopting environmentally friendly behaviours. The ACT Government Real Estate Policy will be introduced in 2009-10, and will incorporate sustainable standards for office accommodation including performance benchmarks to ensure ecologically sustainable development.

#### *ACT Health's Capital Asset Development Plan*

ACT Health will be undertaking a feasibility study on sustainability design features in 2009-10 as part of the Capital Asset Development Plan. The feasibility study will provide an overarching strategy to enable ACT Health to progress environmentally sustainable design principles and build on the energy and water efficiencies already achieved and, wherever possible, factor these into the redevelopment process.

#### *New Environmentally Sensitive Residential and Commercial Development*

In 2009-10, the Government expects to release approximately 32 commercial and industrial sites, as well as land for the construction of 3,014 residential dwellings, in accordance with the Government's objectives for sustainable environmental, social and economic development within the Territory. The land to be released has previously been identified as suitable for urban development in the Canberra Spatial Plan and is subject to environmental assessment through the Government's Territory Plan variation processes prior to its release.

Within these developments, key initiatives include:

- continued development of standard planning practices such as water sensitive urban design and designing for optimum solar orientation;
- stormwater harvesting for irrigation in Franklin, Harrison, Forde and Bonner;
- construction of wetlands, ponds and landscaping along Gungaharra Creek in Franklin to protect downstream riparian health;
- upgrade of Yarralumla Creek to incorporate water sensitive urban design measures as part of the development of 'Woden Green';
- decontamination of the former Weston Creek Sewage Treatment Plant;
- construction of a water quality control pond in North Weston to protect the Molonglo River from stormwater flows from current and future development in North Weston;
- incentives for new residents within the Flemington Road corridor to use public transport;
- construction of dedicated on-road cycle lanes along Flemington Road;
- solar incentives program offering rebates for new residents in Bonner;
- cat containment policies in Bonner and Forde to help preserve local birds and other wildlife;
- development of a community nursery and garden in Forde to assist in preserving endangered local flora;
- a 'Strategic Assessment' of land to be released for development in the Molonglo Valley, under the Australian Government's *Environmental Protection and Biodiversity Conservation Act 1999*; and
- 'Carbon Neutral' subdivision construction in Crace through the purchase of Carbon Credits under Greening Australia's Carbon Credit Scheme.

### *Education Based Initiatives*

Building on the continued success of the Australian Sustainable Schools Initiative, in 2009-10, the Government will:

- support the existing 100 schools and engage more schools;
- develop curriculum support material for teachers;
- provide professional development for teachers; and
- promote the recently developed best practice guide of the program.

### *Solar Schools*

The 2009-10 Budget will also provide for the installation of solar power generation systems to all public schools. Installation will include a 'smart' electrical meter and educational interface software. Use of the solar power generation systems will reduce the amount of electrical power and also increase student awareness of solar power generation and support curriculum activities in relation to environmentally sustainable practices.

### *Water Tanks for Public Schools*

Rain water tanks will be progressively installed at public schools throughout 2009-10. The tanks will supply water to toilet cisterns and class project areas such as feature garden beds, courtyards and agricultural plots. In addition to raising student awareness of water conservation issues, this initiative will significantly contribute to reducing the consumption of potable water.

### *Environmentally Sustainable Designed Facilities*

The design of the new Gungahlin College, Kambah P-10 School and Harrison Secondary School will feature Environmentally Sustainable Design (ESD) initiatives to achieve a high green star rating. ESD initiatives include water-sensitive urban-design principles where rainwater run-off is used to provide supplementary water to garden areas, building orientation and solar passive design, clerestory windows, solar hot water system and underground rainwater storage tanks.

The new Electrotechnology building, situated at the Fyshwick Trade Skills Centre, will be designed to incorporate environmentally responsible materials and services, including the building fabric, insulation, shade, heating and cooling systems, ventilation, lighting and water consumption. The design for this project will be compliant with high quality sustainable design principles.

In 2010, the new purpose-built horticulture facilities at the Canberra Institute of Technology's (CIT) Bruce Campus will provide for the latest in water efficient plantings, efficient water management and recycling processes on a site that is potentially carbon neutral. The new facilities will include:

- diversion of stormwater run-off to a large retention pond within the grounds;
- orientation of new buildings so they are able to take advantage of solar power collection in the future; and
- installation of low energy lighting throughout.

### *Information and Communications Technology Initiatives*

Initiatives currently underway include the efficiency and environmental impact of data centres. This comprises:

- replacing most of the low end Sun Server hosted systems with new 'Coolthread' based systems that deliver sound performance, maximum energy and space efficiency, and a high level of performance per watt;
- replacing the enterprise 6800 Sun Servers with a new virtual server model dramatically reducing the number of power consuming and heat generating physical servers;
- migrating ACT Government applications onto virtual servers in preference to physical based systems thereby further reducing the power and cooling requirements for hundreds of systems;

- improving efficiency and reducing power requirements for cooling data centres by consolidating numerous small air-conditioning units into fewer more efficient large cooling units; and
- InTACT is investigating ‘free air’ cooling for data centres that utilises a strategy of filtering outside air to cool data centres during Canberra’s winter months rather than powering air conditioning units.

### *Climate Change*

Through the Department of the Environment, Climate Change, Energy and Water, the Government will implement a program that will provide a virtual one-stop shop for the commercial, non-government and residential sectors for the coordination of audits, rebates and advice for reduction in water, energy and waste. The ‘*Switch Your Thinking*’ program will include:

- a single point of information for all sectors on reducing energy and water consumption and the production of waste, including virtual tours, tips and links to Commonwealth Government programs, as well as other programs and publications;
- sector-focussed audit programs for commercial, non-government organisations, and residential homes and gardens;
- rebates and incentives that support water, energy and waste audit findings and recommendations for eligible households; and
- evaluation, monitoring and reporting that enables continual evaluation of the effectiveness of the overall initiative and its individual components.

The Department will also continue to oversee the implementation of the Government’s climate change strategy and action plan, *Weathering the Change*, whilst also commencing work on the development of a new strategy to take into account progress to date, national developments and potential new greenhouse gas emission targets.

### *Energy Efficient Streetlights*

In 2009-10 an additional \$500,000 will be provided to Roads ACT for the installation of energy efficient street lights. Works will incorporate the conversion of 80 watt mercury vapour lamps and luminaries to 42 watt compact fluorescent lamps and luminaries in the suburbs of Weetangera, Scullin, Higgins and Hawker. Works are expected to be completed by December 2009.

## **Waste**

In 2009-10, the Government will undertake a review of the current waste strategy to build on the significant achievements to date. The percentage of resource recovery has increased from 42 per cent in 1995-96 to 74 per cent in 2007-08. The Government will build on this success and also develop new strategies to better manage more complex waste issues such as commercial, electronic and organic waste. To achieve this, the Government will work collaboratively with businesses to address any impediments to increasing recovery of recyclable material, as well as developing a targeted response to these obstacles.

In 2009-10, the Government will be making an investment in material recycling at the Mugga Transfer Station. This initiative will fulfil the election commitment to build on our undertaking to reduce the amount of waste ending up in landfill through investment for materials recycling from the Mugga transfer station. It will also contribute to the Government's goal of reducing the Territory's greenhouse gas emissions through reduced methane emissions from garden waste in landfill.

## **Water**

Since the commencement of the drought in 2002, the Government has responded prudently and effectively through a range of measures including, developing a water resource management strategy with detailed demand management targets and measures, introducing permanent water conservation measures, and investing in major infrastructure to improve and expand our water treatment and storage capacity.

In 2009-10, the Government will develop and implement policies and programs to reduce demand for water and increase the use of non-potable water, including the modification of selected stormwater systems to resemble natural ponds and wetlands in both form and function.

### *Accelerated Wetlands Program and Forward Designs*

The Government is fast tracking its commitment to replacing stormwater drains with wetlands. In 2009-10 the Government will commence work on the projects for constructed wetland ponds in Dickson and Lyneham.

Forward design for the reticulation of non-potable water will proceed for nine existing ponds at Tuggeranong, Ginninderra, Lower Stranger, Gungahlin, West Belconnen, Yerrabi, David Street Wetland, Dunlop 1 and Dunlop 2.

### *North Weston Pond and Bridge*

Construction of a pond in the North Weston precinct will provide improvements to the water quality of run-off from new development areas and the existing suburbs of Weston Creek. The project will also include a new road bridge over Weston Creek.

### *Coombs and Wright Water Supply*

New distribution water mains will service the potable water supply needs to land releases in the new suburbs of Coombs and Wright, within the new district of Molonglo.

### *Water Security Projects*

In 2009-10, the Government will further review our demand management regime to ensure it is appropriate for the new norm in rainfall and catchment performance. The Government's objective is to implement an efficient and effective planning and management approach to ensure water security for the ACT and parts of the broader region.

A central platform to this approach is catchment diversification. Specifically:

- the construction of an enlarged Cotter Dam which is scheduled to commence construction in August 2009 and be completed around April 2011; and
- the construction of a pump station and pipeline from the Murrumbidgee River, near Angle Crossing to Googong Dam is expected to commence in February 2010 and be completed by July 2011. The Googong reservoir, at 120 gegalitre storage capacity, is and will again be the ACT's largest storage reservoir for urban water use — with the water sourced from the Murrumbidgee River, through a program currently being pursued, whereby water is acquired from the New South Wales Tantangara Reservoir.

### *Energy*

In 2008-09, the ACT Government commenced the development of an energy policy for the ACT, commenced an expression of interest process for the establishment of a solar power facility, continued to work with ACTEW to enhance security and diversity of energy supply, and introduced the nation's most generous feed-in tariff.

This work will continue in 2009-10, with the draft energy strategy setting ambitious and responsible greenhouse gas reduction targets, focusing on promoting and developing renewable energy, decentralising energy supplies, achieving a higher level of energy self sufficiency, improving the security of the electricity supply for the ACT and region and ensuring the equitable provision of energy. The Government will also:

- take forward an energy reform agenda at an ACT and national level, including responding to the Carbon Pollution Reduction Scheme;
- facilitate the procurement of a major solar power facility in the ACT;
- further investigate the take up of renewable energy in the ACT by examining the potential extension of the Feed-in-Tariff to larger installations; and
- increase the Government's uptake of Greenpower from 23 per cent to 30 per cent.

The Government will also continue to work closely with ActewAGL and TransGrid to put in place a second electricity supply line to the ACT and south-eastern NSW.

## *Transport*

One aspect of planning for integrated transport is understanding and managing parking supply and demand, particularly in the city and town centres. The *ACT Parking Strategy* was released as a draft document in 2007. In 2009-10, two parking studies will be undertaken, allowing the Parking Strategy to be completed this financial year. The first will be a transport and access survey, to provide additional information on characteristics of demand and demand management. The second will be a study on parking supply options to identify the role of the private sector in parking provision, and assess the potential utility of, and operational requirements for, a parking offset fund.

Investigating ways of increasing public transport use is also part of creating a more sustainable and integrated ACT transport system. In 2009-10, a feasibility study into new Park'n'Ride and Bike'n'Ride facilities at Erindale and Mitchell will be undertaken.

ACTION has also engaged Carbon Systems Australia to measure the carbon footprint within its operations. The aim of this study is to identify and understand current outputs and find innovative ways to reduce emissions.

ACTION currently has 129 bus bike racks fitted to buses on the high frequency Intertown Routes operating between Town Centres. ACTION will continue to retrofit bike racks on the bus fleet.

The ACT's bus transport network will be further improved with an upgrading of Network 08, creating bus lanes and priority measures which aim to improve bus travel times on busier routes, and the trial of an additional inter-town route incorporating improved bus stops (transfer stations) at eight major employment hubs.

## *Protecting the Environment*

Preserving the Territory's environment for future generations, involves balancing development needs with the responsible and efficient use of available resources. In 2009-10 the Government will work with the ACT Natural Resource Management Council, community, governments, landholders, industry, the local Indigenous community, and scientific and research organisations, to improve our natural environment through the 'Caring for our Country' program. The Government will also progress a review of the *Nature Conservation Act 1980*, including public consultation. The consultation will examine:

- vegetation and biodiversity to be protected across the Territory through a range of policies and market-based instruments;
- connectivity and ecosystem resilience to be enhanced through protecting existing wildlife corridors and fostering restoration;
- the scope of the Act to be broadened so that the regulation provisions that currently only relate to reserved land could apply to other public lands; and
- revision of measures and penalties to assist in compliance with the Act.

Environmental protection will continue to be a high priority for the Government during 2009-10. Key priorities for the year include responding to the Commissioner for Sustainability and the Environment's report on lowland native grasslands and maintaining a high level of regulatory oversight over water quality and abstraction, noise pollution and air quality.

#### *Urban Forest Replacement*

This initiative will provide for the staged replacement of the Urban Forest, which is a strategic initiative that aims to reduce the risk to Government, people and property from the declining condition of the ageing and drought affected urban tree estate. The program also aims to improve the look of Canberra through improved maintenance of trees. This program forms part of the ACT Climate Change Strategy 2007-2025.

#### *Rabbit Control across the Reserve System*

This initiative continues on from the 2008-09 Budget to commence rabbit control on the Mount Majura/Ainslie nature reserve. This program will allow for primary and follow up rabbit control works by contractors working in priority reserves across the ACT.

The outcome will be a significant reduction in rabbit populations in the targeted nature reserves and an improvement in biodiversity as the vegetation and native species respond to the removal of rabbit grazing pressure. This program is consistent with the objectives of the *ACT Vertebrate Pests Strategy* which provides a strategic approach to the protection of conservation and rural production resources of the ACT that are subject to harmful impact by vertebrate pests.

#### *ACT Weeds Strategy 2009-2019*

The Government has completed its review and has given approval to release the final *ACT Weeds Strategy 2009-2019*. Two-hundred copies of the final Strategy are being published for distribution to key stakeholders. A copy of the final Strategy will be made available on the ACT Government's website.

#### *ACT Vertebrate Pest Management Strategy 2009-2019*

The *ACT Vertebrate Pest Management Strategy 2002* is currently being jointly reviewed to:

- assess the efficacy of its objectives, strategies and performance indicators; and
- ensure alignment with the ACT's *Pest Plants and Animals Act 2005* and the recently released Commonwealth and NSW Government management strategies, codes of practice and management plans.

A working group comprising staff from the Departments of the Environment, Climate Change, Energy and Water, the Department of Territory and Municipal Services, external experts and stakeholders representing CSIRO, the Department of Defence, the ACT Rural Landholders Association, the NSW Department of Primary Industries and a private consultancy will be responsible for the review process from May-October 2009. The Department of Territory and Municipal Services will provide up to \$15,000 for working group meeting attendance by external members and the draft printing of a revised Strategy for public comment. The Department of the Environment, Climate Change, Energy and Water will provide for the printing of the final *ACT Vertebrate Pest Management Strategy 2009-2019*.

#### *Implementation of ACT Kangaroo Action Plan*

In the 2009-10 Budget, \$0.770 million has been allocated over four years to implement the ACT Kangaroo Management Plan, which will underpin the management of kangaroos throughout the ACT. The plan aims to manage the environmental, social and economic impacts of Eastern Grey Kangaroos in the ACT with particular consideration given to managing grazing pressure on endangered grassy ecosystems in the lowland areas around Canberra.

The plan was released for public comment in April 2009 and it is anticipated that it will be finalised by August 2009. Implementation of the plan is paramount to address kangaroo overgrazing in highly sensitive endangered ecosystems. The Commissioner for Sustainability and the Environment Inquiry Report on lowland native grasslands in the ACT highlights the need to control kangaroo populations in native grassland areas.

#### *Lower Cotter Catchment and Greening Australia — Cotter Transformation*

In the 2009-10 Budget, \$0.830 million has been allocated over four years to support the continuing community-based actions to complete the restoration of the Lower Cotter Catchment to a stable native ecosystem that supports water quality in the Cotter Reservoir. Funds will be made available to Greening Australia (Capital Region) through Parks, Conservation and Land (TAMS) to continue its role in facilitating community involvement in the Lower Cotter Catchment. Two hundred thousand native understorey plants will be seeded or propagated and planted by community volunteers over five years to supplement the trees and shrubs planted between 2006 and 2009.

#### *Care for Nature Reserves*

The construction of reserve boundary fencing, including visitor access points and visit orientation displays for three new nature reserves — Karma, Kinleyside and East Jerrabomberra Nature Reserves, and in six existing nature reserves — Mt Majura, Mt Ainslie, Aranda Bushland, Red Hill, Mt Taylor and Tuggeranong Hill.

#### *Strengthening Communities*

The Government is focused on supporting the community to undertake activities that complement the delivery of environmental priorities. In 2009-10 the Government will

provide support to our community partners including the Canberra and South East Region Environment Centre, the Conservation Council and SEE Change ACT.

### *Community Engagement, Education and Support — Grants Programs*

The ACT Environment Grants will continue to support worthwhile projects, including:

- conservation planning;
- sustainable landscape development;
- environmental impact reduction;
- Canberra Centenary Celebrations;
- community engagement, education and awareness-raising; and
- natural and cultural heritage conservation works.

The Commonwealth Government's *Caring for our Country Program* provides financial support to the Territory that complements ACT Government programs in these areas.

### *Planning for a Sustainable Future*

The Government recognises the role of urban planning in ensuring a sustainable future. In 2009-10 the Government will lead the East Lake sustainable urban renewal project, which will be continued through Phases 2 and 3 of the Environmental Site Assessment work. The culmination of this work will see East Lake established as a showcase of innovative urban sustainability.

### *Social Housing — Nation Building and Jobs Plan*

The Government is committed to implementing a number of reforms to address environmental sustainability as part of the estimated 320 social housing properties to be constructed under the Commonwealth Government's \$42 billion *Nation Building and Jobs Plan*. In the first stage all new properties will have an energy rating of 5 stars and will also include separate grey water plumbing provisions and rain water tanks. Stage 2 development will move towards an energy rating of 6 stars.