NSW CLIMATE CHANGE FUND

Annual Report 2008–2009

NSW GOVERNMENT

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1 Drilling floor of Rig 100. Courtesy of Geodynamics Ltd
2 Ian Thorpe Aquatic Centre. Courtesy of City of Sydney
3 High efficient chillers at work at Vinidex. Courtesy of Vinidex Pty Ltd
4 Shoalhaven City Council sustainable house. Courtesy of Anna Wiewiora

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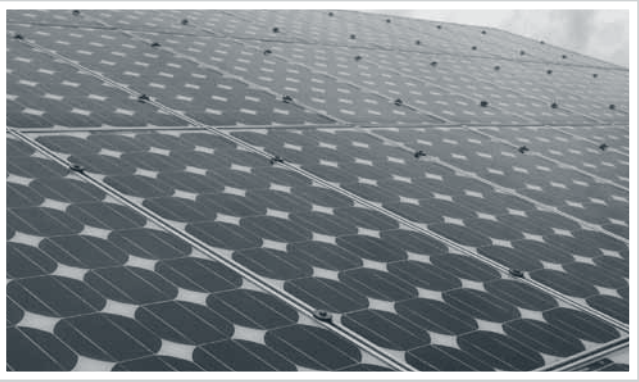


Minister's Foreword

The NSW Climate Change Fund has been designed to help the people of NSW take action on climate change. Already, more than 150,000 households, schools, businesses and community groups have participated in saving energy, water and greenhouse gas emissions.

Since it was established in 2007, $182 million of support has been provided. This funding will deliver estimated savings of 17 billion litres of water, 685,000 megawatt hours of electricity, 730,000 tonnes of carbon pollution and more than $100 million on water and energy bills a year. It is also supporting emerging renewable energy technologies and helping to increase the demand for other green technologies, products and services in NSW.

NSW householders are tackling climate change with their continued enthusiastic uptake for rebates for rainwater tanks, climate-friendly hot water systems and water-efficient washing machines.

The Fund has been expanded to include new programs to help a further 220,000 vulnerable households save power and cut their power bills, and to deliver energy audits and rebates to over 6,000 small businesses. It is also helping community organisations implement simple, low-cost water and energy upgrades to reduce their environmental footprint and save on their utility bills.

Training courses are being developed to help electricians, plumbers, building managers, engineers and architects improve their green skills. A new education and awareness program is increasing community understanding of the link between electricity use and carbon pollution while providing simple, practical suggestions for reducing energy bills.

This report on the second year of the Fund shows that with the support of this important program, NSW families, communities, business and government are continuing to take action to save water, energy and greenhouse gas emissions and are reaping environmental and financial benefits. If you read this report, you will be inspired by the breadth and depth of programs and partnerships across NSW.

Frank Sartor

Minister for Climate Change and the Environment

NSW Climate Change Fund Overview

Overview

The NSW Government's Climate Change Fund was established in 2007 to reduce greenhouse gas emissions and the impacts of climate change by supporting the development and uptake of energy and water saving technologies and practices in homes, businesses, government, schools and the community.

This is the second Annual Report for the NSW Climate Change Fund, covering operations during the 2008–2009 financial year. It includes details of funding allocations and analysis of performance for each of the Fund's programs and streams.

The second year of the Climate Change Fund builds on the strong platform of the first. It shows how partnerships with NSW households, communities, schools, government and business are achieving significant savings in water, energy and greenhouse gas emissions and increasing actions to reduce the impacts of climate change. There were a number of changes under the Climate Change Fund in 2008–2009, primarily the launch of new programs under the NSW Energy Efficiency Strategy to augment the NSW Government's support for cost-effective climate change mitigation measures and enhance the state's investment in green jobs.

Since it was established, $182 million has been committed under the Fund. To 30 June 2009, the Fund supported 299 projects and a substantial residential rebate program to save more than $100 million on water and energy bills, 731,000 tonnes of greenhouse gas emissions, 685,000 megawatt hours and 17 billion litres of water a year.

Of the $98.5 million spent in 2008/09, 61 per cent went to households, 17 per cent to business, more than 9 per cent to local councils, community organisations and schools, and 5 per cent to government agencies.

By continuing to demonstrate the practical application of a range of water and energy savings in operation and deliver measurable results, the NSW Climate Change Fund is encouraging a wider uptake across all sectors of the NSW community, stimulating markets for change, and positioning NSW well for a low-carbon economy.

Over five years, the NSW Climate Change Fund will deliver more than $700 million in funding through a number of programs and streams. The funding includes $310 million from election commitments in 2007, an additional $30 million for the Green Business Program, the $150 million NSW Energy Efficiency Strategy announced in 2008, the $100 million Clean Coal Fund and commitments continuing from the Water and Energy Savings Funds which were replaced by the Climate Change Fund in 2007.

The funding will achieve outcomes in two key ways:

- Providing direct financial support to homes, businesses, government, schools and community organisations to implement measures which will save water, energy and greenhouse gas emissions and reduce their water and energy utility bills; and
- Stimulating investment in cleaner technologies for the supply and use of energy and water by providing funding for manufacturing, demonstration and commercialisation of these emerging technologies.

Through direct financial support, the Fund is helping to overcome the major barrier to investment in efficiency by bridging the gap between the upfront cost of investment in water and energy upgrades and savings on utility bills.

Specific programs are being implemented to assist those most vulnerable to rising energy and water prices. The $63 million Low Income Household Refit Program will assist 220,000 households to save up to $95 each on their annual utility bills through a home assessment and power saving kit. The $15 million Energy Efficiency for Small Business Program is delivering audits and rebates to a target of 6,000 businesses. The Community Savers stream under the $30 million Public Facilities Program is assisting community organisations to implement simple water and energy measures to reduce their environmental footprint as well as their bills.

The number of NSW households implementing water and energy efficiency in their homes increased sharply in 2008–2009, encouraged by the rebates available under the Fund. Under this residential rebate program the NSW Climate Change Fund is already saving NSW families an estimated 1.9 billion litres of water, 80,000 tonnes of greenhouse gas emissions and more than $9 million on energy and water bills each year.

The Fund is providing financial support to businesses to enable manufacturing, retail, mining and service industries to upgrade equipment and processes to improve operational efficiency and reduce costs. Businesses have been allocated $56 million under the former Water and Energy Savings Fund, the Green Business Program, the Central Coast Water Savings Fund and the Public Facilities Program for 105 projects. This will save NSW businesses an estimated 11.5 billion litres of water, 104,525 tonnes of greenhouse gas emissions and more than $34.4 million on energy and water bills each year. The $20 million Sustainability Advantage Energy Savers program is providing tailored support to medium to large businesses, with the objective of improving energy efficiency in participating organisations by an average of 10 per cent.

Projects supported by the Fund will help NSW community organisations and schools save an estimated 980 million litres of water, 8,336 megawatt hours of electricity, and 8,984 tonnes of greenhouse gas emissions a year, as well as reduce peak energy demand by 363 kilowatts. This translates to $6.9 million in savings on annual water and energy bills.

A total of 80 projects supported by the Fund's Public Facilities Program and former Water and Energy Savings Funds will help government agencies and local councils save more than 1.7 billion litres of water, 26,267 megawatt hours of electricity, 5,278 kilowatts of peak demand, 28,053 tonnes of greenhouse gas emissions and $6.1 million in energy and water bills a year. As the Fund is pursuing both least cost savings and investing in transformation of supply chains and consumer preferences, the cost of savings realised varies.

The cost of funding ranges from $14 per megawatt hour to $95 per megawatt hour for energy efficiency projects and $7 to $28 per megawatt hour for renewable energy projects. This equates to an average of $13 per tonne of greenhouse gas emissions for energy projects and rebates. For water projects the cost of funding support is $0.33 to $1.68 per kilolitre for water efficiency, $0.58 to $2.97 per kilolitre for harvesting, $0.31 to $5.83 per kilolitre for recycling projects. These figures assume a conservative 10-year timeframe for estimated project savings.

In addition to financial support for direct savings measures, the Fund is also increasing awareness and understanding of the importance of climate change and the role of water and energy savings in mitigating its impacts. The $15 million community education and awareness program is increasing community understanding of the link between electricity use and carbon emissions. An additional $20 million is being invested in building green skills among trades people and professionals to ensure savings measures can be implemented, and NSW has the ability to manufacture more sustainable products with reduced energy consumption.

Water and Energy Savings Action Plans, administered under the Fund, require certain high using businesses and government agencies and local councils to assess water or energy use and identify opportunities to save. If all cost-effective actions were to be implemented from the 565 plans, the estimated savings would be more than 8 billion litres of water, 825,000 tonnes of greenhouse gas emissions and more than $55 million on energy and water bills each year. More than one-half of cost-effective water savings measures have already been implemented and one-third of energy measures.

The Fund provides monies to stimulate investment in the manufacturing, commercialisation and implementation of innovative green and clean energy technologies in NSW to help transform markets for these technologies, products and services. Already $30.7 million has been allocated to 12 projects under the Renewable Energy Development Program and the Market Transformation stream of the Green Business Program. While the greatest benefits of these programs will be from longer term market transformation, the projects will also directly save annually an estimated 386,109 megawatt hours, 412,364 tonnes of greenhouse gas emissions and more than $30.8 million in energy and water bills.

Additional monies will be allocated over the next year as the Recycling and Stormwater Harvesting Program and the Clean Coal Fund are rolled out.

The specific purposes of the Fund outlined in section 34F of the Act are to provide funding:

- to reduce greenhouse gas emissions and the impacts of climate change associated with water and energy activities
- to encourage water and energy savings and the recycling of water
- to reduce the demand for water and energy, including addressing peak demand for energy
- to stimulate investment in innovative water and energy savings measures
- to increase public awareness and acceptance of the importance of climate change and water and energy savings measures
- for contributions made by the State for the purposes of national energy regulation.

Highlights for 2008–2009

- A total of $17.5 million dollars was paid for 91 completed projects, delivering savings of 2.2 billion litres of water, 82,156 megawatt hours of electricity and 87,743 tonnes of carbon pollution a year and reducing peak demand by 11,293 kilowatts
- An additional 77,567 rebates were paid this year to NSW households for hot water systems, ceiling insulation and rainwater tanks, as well as new rebates for washing machines and removing second fridges
- NSW Energy Efficiency Strategy programs commenced for low income households, business, skills training and community awareness
- All of the required 267 Energy Savings Action Plans and 298 Water Savings Action Plans have been approved
- Round 1 of the Renewable Energy Program awarded more than $27 million to seven projects
- Round 1 of the Public Facilities Program allocated $9.6 million to 44 projects
- Round 2 of the Public Facilities Program opened with a new Community Savers stream to combine with the Demonstration stream
- Round 3 of the Central Coast Water Savings Fund allocated $668,110 to ten projects
- The Schools Energy Efficiency Program provided lighting retrofits to 16 high schools across NSW.

How is it funded?

The main source of funding for the NSW Climate Change Fund continues to be the annual contributions from water and electricity providers, as occurred previously under the Water and Energy Savings Funds. These include electricity distribution network service providers such as EnergyAustralia, Integral Energy and Country Energy and water suppliers Sydney Water, Gosford City Council and Wyong Shire Council.

Under the Act, the Minister for Climate Change and the Environment requires water utilities and network service providers to make contributions to the NSW Climate Change Fund via the annual gazettal of Contributions Orders. The Water Contributions Order requires the concurrence of the Minister for Water and the Minister for Local Government, and the Energy Contributions Order requires the concurrence of the Minister for Energy and the Treasurer.

Additional monies to the NSW Climate Change Fund are unallocated funding from the former Climate Action Grants Program under the Greenhouse Innovation Fund, funding from the Environmental Trust and interest earned on cash balances.

This Annual Report

The NSW Climate Change Fund was established on 1 July 2007 under the *Energy and Utilities Administration Act 1987* and is administered by the Department of Environment and Climate Change NSW (DECC).

This Annual Report has been prepared in accordance with the requirements of the Act (section 34H). Activities under the NSW Climate Change Fund are reported for the second financial year of operations: 1 July 2008 to 30 June 2009.

As required by the Act, the Report provides information on fund allocations and anticipated benefits, with reference to the key performance indicators and purposes of the Fund.

The key performance indicators for the NSW Climate Change Fund are:

- savings in water, energy (consumption and peak demand) and greenhouse gas emissions
- savings in annual energy and water bills for households, businesses, government and other organisations
- cost-effectiveness (per funding dollar spent)
- funding allocated.

The performance of each program under the Fund is reported.

The Independent Pricing and Regulatory Tribunal of NSW (IPART) review of NSW climate change mitigation measures in the context of the Australian Government's proposed emission trading scheme was released in July 2009. Results of this review that are relevant to the NSW Climate Change Fund will be covered in the 2009–2010 Annual Report.

Table 1

Funding and expected outcomes by sector

Sector	No projects	Funding approved	ML savings/year	MWh savings/year	tCO_2-e savings/year	kW savings/year	$ savings (water bills)*	$ savings (electricity bills)*	Cost-effectiveness** $/kL	$/MWh	$/$tCO_2$-e
Energy efficiency and renewables											
Business	54	52,196,746	92	492,132	525,647	62,247	212,619	39,370,528	-	$10.61	$9.93
Homes#	10	31,827,349	4	157,897	168,634	6,025	7,132	18,392,357	-	$20.16	$18.87
Community Organisations and Schools	31	3,592,848	2	8,336	8,903	363	3,902	1,177,455	-	$43.10	$40.36
Government	24	11,299,555	3	25,958	27,724	5,278	7,050	2,076,670	-	$43.53	$40.76
	119	**98,916,498**	**102**	**684,323**	**730,907**	**73,912**	**230,703**	**61,017,010**	**-**	**$14.45**	**$13.53**
Water conservation and recycling											
Business	63	34,723,718	11,501	58	62	0	26,452,284	4,632	$0.30	-	-
Homes#	15	24,264,374	2,417	0	0	0	3,891,797	0	$1.00	-	-
Community Organisations and Schools	46	7,734,901	978	0	81	0	5,765,533	0	$0.79	-	-
Government	56	16,775,724	1,728	309	330	0	3,975,183	24,696	$0.97	-	-
	180	**83,498,717**	**16,625**	**367**	**473**	**0**	**40,084,797**	**29,328**	**$0.50**	**-**	**-**
Total											
Business	117	86,920,464	11,593	492,190	525,708	62,247	26,664,903	39,375,160	-	-	-
Homes#	25	56,091,723	2,422	157,897	168,634	6,025	3,898,929	18,392,357	-	-	-
Community Organisations and Schools	77	11,327,749	980	8,336	8,984	363	5,769,435	1,177,455	-	-	-
Government	80	28,075,279	1,731	26,267	28,053	5,278	3,982,232	2,101,366	-	-	-
	299	**182,415,215**	**16,726**	**684,689**	**731,380**	**73,912**	**40,315,499**	**61,046,338**	**-**	**-**	**-**

\# Includes savings from Residential Rebate Program

* Water calculated using Tier 1 charges – $1.61/kL for residential, ($2.30/kL ($1.61+ 50% wastewater charges) for all other sectors (source Sydney Water usage charges 2008-2009). Electricity – residential and community calculated at $0.15/kWh (general supply tariff all time), and business and government $0.08/kWh (general supply tariff) (source DECCW data analysis average for medium to large users, EnergyAustralia tariffs 2008–2009)

** Cost-effectiveness of funding using funding $ divided by ten years of savings

Performance by program

Summary of program performance

Funding opportunities under the NSW Climate Change Fund continued to be received enthusiastically by households, community organisations, business, schools and government in 2008–2009.

Strong interest in water and energy saving rebates for households continued under the Residential Rebate Program, including significant uptake of the new washing machine rebate and Fridge Buyback, both launched on 1 August 2008.

Strong demand was also shown for a new funding round under the Public Facilities Program. The first funding round of the Renewable Energy Development Program was announced in late 2008 with over $27 million allocated to seven projects. Administration, monitoring and support of projects funded under the previous rolling version of the Public Facilities Program, the Green Business Program, the former Water and Energy Savings Funds and the Central Coast Water Savings Fund continued. A number of these projects were completed during 2008–2009.

The School Energy Efficiency Program, jointly delivered by DECC and the NSW Department of Education and Training, rolled out lighting retrofits to a further 16 high schools across the state. The Rainwater Tanks in Schools Program is under development for commencement in late 2009 and will take into account outcomes of an audit of rainwater tanks in schools across the state that was undertaken during 2008–2009.

Programs under the NSW Energy Efficiency Strategy are targeting assistance for low income households, businesses and the development of green skills, as well as increasing community awareness of the link between energy consumption and greenhouse gas emissions.

Table 2 provides a snapshot of program performance to date, with performance against key indicators shown in Table 3. Full lists of projects funded under the NSW Climate Change Fund up to 30 June 2009 are provided in Appendices D and E.

Savings shown include actual savings for completed projects and estimated savings for projects still underway.

Table 2
Summary of program performance in 2008–2009

Program	Progress and Achievements 2008–2009
Residential Rebate Program	77,567 rebates paid (comprising 7,740 insulation, 23,814 hot water, 12,404 rainwater tank, 27,765 washing machine and 5,844 fridge buy back rebates). Saving 1.2 billion litres of water and 67,496 tonnes of greenhouse gas emissions a year. Washing Machine Rebate Program and Fridge Buyback Program commenced 1 August 2008.
Green Business Program	Twenty-three of the original 24 projects proceeded with estimated savings of 237 ML of water and 42,387 tonnes of greenhouse gases per year. Three projects were completed saving 49 ML of water, 372 tonnes of greenhouse gases and reducing peak demand by 46 kilowatts a year.
Public Facilities Program	Forty-nine Round 1 successful applicants announced in September 2008 (44 proceeding). Round 2 opened in March 2009 with a new Community Savers Stream. Eight projects (five from the rolling program) were completed saving 8.9 ML of water, 650 MWh of electricity and 695 tonnes of greenhouse gas emissions a year and achieving a peak demand reduction of 297 kW.
Renewable Energy Development Program	Round 1 successful projects announced in November 2008, with seven projects allocated $27.3 million: estimated will generate 386,109 MWh of electricity and save 412,364 tonnes of greenhouse gas emissions a year. They will reduce peak demand by an estimated 11,401 kW.
School Energy Efficiency Program	A further 16 schools retrofitted for lighting: estimated to save 777 MWh of electricity and 824 tonnes of greenhouse gas emissions a year.
Low Income Household Refit Program	In 2008–2009 the program was piloted in Bathurst and Orange for social housing, and in Western Sydney for private households.
Sustainability Advantage Energy Saver Program	Commenced in 2008–2009. As at 30 June 2009, helped NSW businesses identify energy savings opportunities that could lead to over $3 million in cost-savings and the reduction of 21,000 tonnes of greenhouse gas emissions from their operations each year.
Energy Efficiency for Small Business Program	In 2008–2009 the program was piloted with over 100 businesses in a variety of industry and business activities. Assessments found that businesses could save an average of $420 a year on lighting alone, with a payback period of just five years.
Energy Efficiency Training Program	Commenced in 2008–2009 with program being developed for trades people and professionals to improve their design, installation and maintenance skills.
Energy Efficiency Community Awareness Program	Commenced in 2009 with 'Save Power' advertising campaign and a dedicated energy efficiency website www.savepower.nsw.gov.au
Central Coast Water Savings Fund	12 projects completed saving 395 ML of water a year.
Water and Energy Savings Funds	A total of 31 water and energy projects completed during 2008–2009, saving 833 ML of water and 24,101 tonnes of greenhouse gas emissions, and reducing peak demand by 8,758 kW a year.
Water and Energy Savings Actions Plans	All (565) Savings Action Plans required were approved by 30 June 2009. 220 annual reports from users were received to 30 June 2009, indicating the implementation of 523 cost-effective and 118 potential cost-effective water actions and 433 cost-effective and 162 potential cost-effective energy actions.

Table 3

Program performance against key performance indicators

Indicator		NSW Climate Change Fund Program									
Annual		**Water Savings Fund**	**Energy Savings Fund**	**Green Business**	**Public Facilities**	**Central Coast Water**	**School Energy Efficiency**	**Renewable Energy Development**	**Rebates**	**Action Plans****	**Total**
kL savings		13,645,288		237,448	161,328	808,053			1,874,295	8,271,792	24,998,203
kW savings			50,828	10,110	1,573			11,401		85,116	159,028
MWh savings			169,973	39,688	12,100		1,018	386,109	75,801	458,012	1,142,701
tCO_2-e savings			181,531	42,387	13,054		1,087	412,364	80,956	825,480	1,556,860
GJ savings										5,988,730	5,988,730
$ bill savings*^		31,070,832	19,817,830	3,721,186	1,373,233	1,797,202	81,440	30,888,720	9,095,671	55,666,109	153,512,223
Average cost-effectiveness#	$/kL	0.39		1.55	2.81	0.68			0.99		$0.50^W
	$/MWh		15.38	22.46	61.62		293	7.08	34.69		$14.45^E
	$/ tCO_2-e		14.40	21.03	57.46		275	6.63	32.48		$13.53^E
Network constrained kW			5,383	2,971	2					12,342	20,698

Notes on assumptions:

* Water calculated using Tier 1 charges – $1.61/kL for residential, ($2.30/kL ($1.61 + 50% wastewater charges) for all other sectors (source Sydney Water usage charges 2008–2009)

^ Electricity residential and community calculated at $0.15/kWh (general supply tariff all time), and business and government $0.08/kWh (general supply tariff) (source DECC data analysis average for medium to large users, Energy Australia tariffs 2008-2009)

\# Cost effectiveness of funding - funding divided by ten years of savings

** Estimated savings if cost effective measures are implemented

W For Water Savings Programs, see Table 1

E For Energy Savings Programs, see Table 1

Note: There may be 'apparent' discrepancies as a result of rounding from source data.

Residential Rebate Program

The $100 million Residential Rebate Program targets the highest water and energy uses in NSW homes and was introduced to help overcome the upfront cost barriers for households to make their homes more water and energy efficient.

A strong uptake of rebates has continued into the second year of the program in NSW. To 30 June 2009, a total of 99,838 rebates were paid for rainwater tanks, insulation, hot water systems, washing machines and removal of second fridges, saving an estimated 1.9 billion litres of water and 80,956 tonnes of greenhouse gas emissions and more than $10 million on energy and water bills a year. A detailed breakdown of rebate uptake by local government area is provided on the DECC website at www.environment.nsw.gov.au/rebates

The high uptake of rebates shows the program is helping to achieve significant water and energy savings in NSW homes and is an effective incentive to encourage more water and energy efficient purchasing choices by householders. The rebates are significantly reducing the payback period for householders for installing ceiling insulation, rainwater tanks, more climate-friendly hot water systems, more water efficient washing machines, and removing old inefficient fridges. This is helping to bridge the gap between the upfront costs and savings on bills.

However, with long payback periods remaining for some investments, NSW households are demonstrating through the rebate program a strong commitment to reducing climate change impacts in their choice of more environmentally friendly options.

On average, the NSW Climate Change Fund rebates covered about 20 per cent of the cost of installation. Table 4 shows the median cost of installation for each of the rebates per household and the average rebate amount.

Table 4

Installation costs and average rebate

Rebate	Median purchase and installation cost	Average rebate amount	% cost covered by rebate, on average
Rainwater tank	$2,000	$540	21%
Hot water system	$3,600	$768	20%
Ceiling insulation	$1,000	$290	25%
Washing machine	$780	$150	16%

Rainwater tank rebates

The rainwater tank rebate was introduced on 1 July 2007. The rebate was originally due to end on 30 June 2009 but in early 2009 the NSW Government extended the rebate to 30 June 2011 to meet the significant demand from NSW households. It provides up to $1,500 for a rainwater tank connected to a toilet and/or washing machine.

The tank(s) must have a minimum 2,000 litre capacity and be purchased in full and installed between 1 July 2007 and 30 June 2011. The rebate amount is based on the size of the tank and whether it is plumbed to a toilet or washing machine, as shown in Table 5 below. Households not connected to the mains supply are eligible for a rebate for the purchase of the tank only. The rainwater tank rebate is administered by Sydney Water for its customers and by DECC for the rest of the state.

Table 5

Rainwater tank rebate

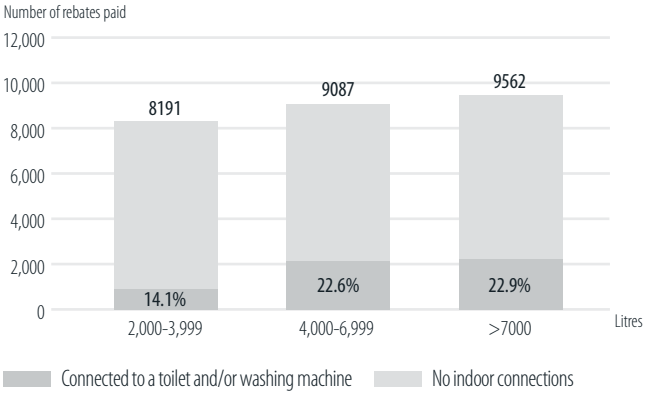
Tank(s) capacity (L)	Tank Rebate	Connection to toilet(s)	Connection to washing machine(s)	Maximum total
2,000-3,999	$150	$500	$500	$1150
4,000-6,999	$400	$500	$500	$1400
7,000 +	$500	$500	$500	$1500

In 2008–2009, 12,404 rainwater tank rebates were paid, totalling $7.3 million and saving an estimated 558 million litres of water a year. The average cost-effectiveness of the rainwater tank rebate is $1.31 per kilolitre for funding spent.

Over 20 per cent of rainwater tanks under the rebate scheme were connected. Figure 1 shows the breakdown of tank installations by tank size and percentage connected.

Figure 1

Rainwater tank rebates by tank size and connection



Hot water system rebates

The hot water system rebate began on 1 October 2007. The rebate was due to end on 30 June 2009 but in early 2009 the NSW Government extended the rebate to 30 June 2011 to meet the significant demand from NSW households.

It is available to NSW householders switching from electric to solar, heat pump or gas hot water systems, purchased in full and installed between 1 October 2007 and 30 June 2011.

The rebate provides:

- $300 to switch from an electric to a gas hot water system with a 5 star or higher energy rating
- up to $1,200 to switch from an electric to solar or heat pump hot water system eligible for at least 20 RECs.

The level of rebate for solar or heat pump hot water systems is based on the amount of greenhouse gas emissions saved, determined by the eligibility of the system for Renewable Energy Certificates (RECs) under the Commonwealth's Mandatory Renewable Energy Target (MRET), as shown in Table 6 below.

Table 6

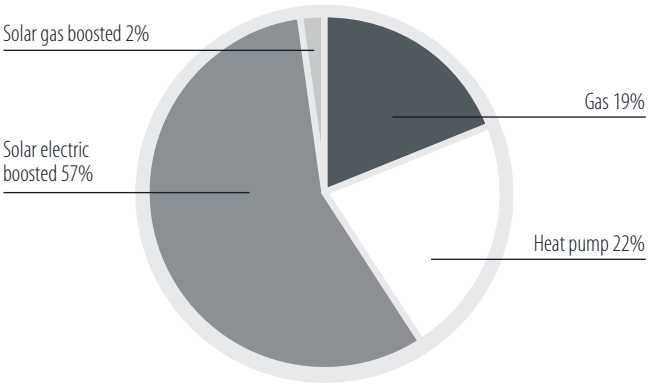
Hot water system rebate for solar and heat pumps

Number of RECs	Rebate amount
20-27	$600
28-35	$800
36-43	$1,000
44+	$1,200

In 2008–2009, 23,814 hot water system rebates were paid, totalling $18.7 million and saving an estimated 59,535 tonnes of greenhouse gas emissions a year. The cost-effectiveness of hot water system rebates is $31.37 per tonne of greenhouse gas abatement for funding spent (based on a ten-year life of the system). The breakdown by hot water system type is shown in Figure 2.

Figure 2

Hot water system rebates paid by system type



Following the increase in the Commonwealth Government's hot water rebate in February 2009 to $1600, DECC asked applicants for the NSW rebate to declare that the total payments they would receive would not exceed their total costs of installing the hot water system.

Ceiling insulation rebates

The ceiling insulation rebate began on 1 October 2007 and ended, as scheduled, on 30 June 2009. The Commonwealth Government's new rebate of up to $1,200 should now cover the full cost of insulating most homes. The NSW rebate covered half the cost of installing ceiling insulation, up to a maximum of $300. The insulation must have been purchased in full and installed between 1 October 2007 and 30 June 2009 and meet minimum R-value (thermal efficiency) requirements for each local government area.

Following the introduction of the Commonwealth Government's ceiling insulation rebate in February 2009 (then $1,600), DECC asked applicants for the NSW rebate to declare that the total payments they would receive would not exceed their total costs of installing the insulation.

An extension was granted to residents in the Northern Rivers/Tablelands area affected by floods in May 2009 as the delivery of supplies was affected. Residents scheduled to have ceiling insulation installed prior to 30 June 2009 had until 31 July 2009 to install it.

In 2008–2009, 7,740 insulation rebates were paid, totalling $2.7 million and saving an estimated 3,870 tonnes of greenhouse gas emissions a year. The average cost-effectiveness of ceiling insulation rebates was $69.71 per tonne of greenhouse gas abatement for funding spent (based on a ten-year life).

The median amount spent on insulation over the life of the rebate program was $1,000. Total greenhouse gas emissions saved through the insulation rebate were 5,400 tonnes and total savings on household energy bills are estimated at $1.1 million a year.

■ CASE STUDY

Fridge rebates are making homes more energy efficient

Fridges account for about 13 per cent of electricity use and older fridges can use up to three times the amount of energy of new fridges. They also cost householders up to an average of $190 a year in higher electricity bills.

The NSW Climate Change Fund has allocated Next Energy $2.8 million over three years to encourage householders to get rid of their inefficient second fridges.

Fridge Buyback is modelled on similar programs in the US and Canada. It provides $35 to householders to have a second fridge collected from their home. The NSW pilot was run by Next Energy from August 2006 to July 2007. In partnership with 24 Sydney councils, the initial target of 1,500 fridges was exceeded within six months. In total, the pilot removed 3,660 inefficient fridges from Sydney homes.

In August, 2008, following the success of the pilot, a three-year program to get a further 19,000 fridges out of circulation was launched. In April 2009 collections started in Wollongong and Shellharbour local government areas. The program has since been expanded into the Blue Mountains, Central Coast and Shoalhaven regional areas.

More than 5,844 inefficient fridges were taken out of circulation in the 2008–2009 financial year in Sydney and Wollongong under Fridge Buyback, saving more than 4,000 tonnes of greenhouse gas emissions a year.

Another environmental benefit to the program is that the refrigerant gases, which also have a greenhouse impact, are safely removed and the metal is recycled.

To be eligible for the program, the second fridge must be at least ten years old and 250 litres in size. The average family fridge is 400 litres. Most second fridges are more than ten years old.

The $35 rebate is paid to collect the second fridge where removal involves six or less steps. Collection is free for removal from homes which have between seven and 20 steps.

Visit www.fridgebuyback.com.au for more information.

Washing machine rebates

The washing machine rebate began on 1 August 2008 for $150 to buy a washing machine with at least a 4.5 star Water Efficiency Labelling and Standards rating (WELS). In Sydney Water's area of operations it replaced the rebate for 4 star machines.

A 4.5 star water efficient washing machine can save up to 100 litres per wash compared to an old top-loader, saving a family washing more than six loads a week up to 31,000 litres of water a year.

In 2008–2009, 27,765 washing machine rebates were paid, totalling $4.4 million and saving an estimated 666 million litres of water a year. The average cost-effectiveness of the washing machine rebates was $0.66 per kilolitre for funding spent.

Fridge Buyback

To further help NSW householders save energy, Fridge Buyback was introduced under the Residential Rebate Program on 1 August 2008, providing householders with $35 to have a second fridge taken away from their home. Initially available to Sydney households in partnership with local councils, the scheme has been expanded to Wollongong, Shellharbour, Blue Mountains, Central Coast and Shoalhaven regional areas. Opportunities to extend the program to other regional areas of NSW are being explored.

Fridge Buyback has been allocated $2.8 million from the NSW Climate Change Fund to take 19,000 old fridges out of circulation, to save an estimated 152,000 tonnes of greenhouse gas emissions and up to $190 a year from household energy bills.

In 2008–2009, 5,844 rebates were paid to remove inefficient fridges, totalling $742,662 and saving an estimated 4,091 tonnes of greenhouse gas emissions a year. The average cost-effectiveness of Fridge Buyback was $18.15 per tonne of greenhouse gas abatement for funding spent.

Green Business Program

The Green Business Program (GBP) provides funding for projects saving water and energy in business operations in NSW. The key selection criterion for the program is cost-effectiveness, calculated as the funding sought divided by the total project water or energy savings over ten years.

Eligible activities include: education and technology trial activities which increase the adoption of efficient technologies and practices; projects which improve the efficiency of buildings, appliances and industrial processes; projects which reduce peak electricity demand; and projects which reduce the demand for electricity or water supplied from electricity or water supply networks, such as cogeneration, fuel switching, water recycling and stormwater harvesting.

Over the life of the program, it is expected to deliver annual savings of:

- 3.5 billion litres of water
- 65,000 megawatt hours of electricity
- 13 megawatts of peak electricity demand
- 70,000 tonnes of greenhouse gas emissions.

Round 1 of the Green Business Program was held from October to December 2007. A total of $11.7 million was allocated to 24 projects. 23 projects have proceeded saving an estimated 237 million litres of water, 39,688 megawatt hours of electricity and 42,387 tonnes of greenhouse gas emissions a year and reducing peak demand by over 10,000 kilowatts, detailed in Table 7. Completed projects will save recipients $3.7 million a year in energy and water costs.

Funded projects include:

- $60,000 to the University of Technology Sydney for installation of pipework enabling supply of bleed water from the cooling towers to the toilet flushing system saving almost 2.5 million litres of water a year
- $75,000 to Vinidex for installation of high efficiency chillers in the cooling system of each production line at the Smithfield factory saving more than 310 tonnes of greenhouse gas emissions a year.

During 2008–2009 three projects were completed – saving 48.7 million litres of water, 348 megawatt hours of electricity and 371 tonnes of greenhouse gas emissions a year and reducing peak demand by 46.2 kilowatts.

Table 8 shows the cost-effectiveness of the Green Business Program Round 1 water projects by project type.

Table 8

Round 1 water projects estimated savings and cost-effectiveness by project type

Project type	No. of projects	Estimated savings (ML/yr)	Return on CCF funding /kL
Recycling	5	77	$2.59
Efficiency	2	59	$0.33
Harvesting	1	9	$0.58
Total	**8**	**145**	**$1.55**

Table 9 shows the cost-effectiveness of the Green Business Program Round 1 energy projects by project type.

Table 9

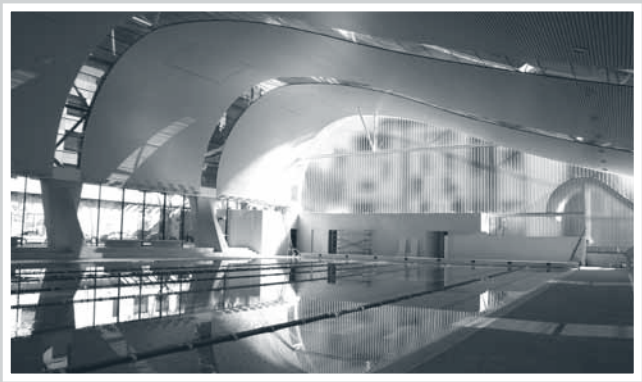
Round 1 energy projects estimated savings and cost-effectiveness by project type

Project type	No. of projects	Estimated savings (MWh/yr)	Return on CCF funding /MWh
Alternate power generation	3	28,809	$19.45
Efficiency measures	11	10,822	$30.34
Power factor correction	1	N/A	N/A
Total	**15**	**39,630**	**$22.46**

Table 7

Round 1 allocated funding and estimated annual savings

Program	No. projects	Funding allocated ($)	Estimated savings (ML/yr)	Estimated savings (MWh/yr)	Estimated savings (tCO_2-e/yr)	Estimated savings peak demand (kW)
Energy	15	8,900,548	92.4	39,630	42,325	10,110
Water	8	2,249,730	145.0	58	62	0
Total	**23**	**11,150,278**	**237**	**39,688**	**42,387**	**10,110**



Public Facilities Program

The Public Facilities Program (PFP) provides $30 million for water and energy saving projects in facilities which are open to and frequently accessed by the public, including schools, community buildings, sporting facilities, museums and art galleries. It was established in 2006 as a rolling program under the former Energy Savings Fund and became part of the NSW Climate Change Fund from 1 July 2007. Funding is now allocated via competitive funding rounds.

Applications are open to providers of not-for-profit public or educational facilities for projects which publicly demonstrate how water and/or energy savings can work in practice.

Over the life of the program, it is expected to deliver annual savings of:

- 2.2 billion litres of water
- 40,000 megawatt hours of electricity
- 12 megawatts of peak electricity demand
- 42,000 tonnes of greenhouse gas emissions.

To 30 June 2009, the Public Facilities Program has allocated a total of $11.5 million to 55 projects, saving an estimated 161 million litres of water and over 13,000 tonnes of greenhouse gas emissions each year, detailed in Table 10.

The rolling program saw a total of $1.9 million allocated to 11 projects to save an estimated 4,895 megawatt hours of electricity and 5,228 tonnes of greenhouse gas emissions a year, and reduce peak demand by 1,278 kilowatts.

The first competitive funding round of the Public Facilities Program was open from December 2007 to February 2008. The key criterion for funding under Round 1 was demonstration or education value. Eligible activities included education activities with the potential to increase the adoption of efficient technologies and practices or projects improving the efficiency of buildings and appliances. Successful projects were announced in September 2008.

Round 1 allocated $10.4 million to 49 projects, 44 of which are proceeding, saving an estimated 161 million litres of water and 7,826 tonnes of greenhouse gas emissions a year and reducing peak demand by 295 kilowatts. Projects funded under Round 1 include:

- $499,000 to Mogo Zoo to capture, treat and reuse wastewater to clean animal enclosures, saving 2.5 million litres of potable water a year
- $953,000 to Coffs Harbour City Council to solar power its Regional Gallery and library and source recycled water for the Botanic Gardens, saving 120 tonnes of greenhouse gas emissions and nine million litres of water a year
- $250,000 to the University of New England to save 50 tonnes of greenhouse gas emissions a year by installing state-of-the art solar energy collection and heat recovery equipment
- $370,000 to transform community centres in Chillingham, Comboyne, Baulkham Hills and Randwick into sustainability showcases for solar energy and water and energy efficiency, saving 519,000 litres of water a year and 27 tonnes of greenhouse gas emissions.

Avoided costs to the electricity distribution network will total more than $1.3 million a year. The average cost-effectiveness for the Public Facilities Program for energy projects was $61.62 per megawatt hour and $2.81 per kilolitre for water projects.

During 2008–2009 eight projects were completed from the Public Facilities Program Rolling (five projects) and Round 1 (three projects). Actual savings were 8.9 million litres of water, 650 megawatt hours of electricity and 695 tonnes of greenhouse gas emissions a year, with a reduction in peak demand of 297 kilowatts. Completed Public Facilities Program projects will save funding recipients over $1 million a year in energy bills and $400,000 in water bills. Completed projects include:

- $98,800 to the Association for Christian Education Blacktown for installation of rainwater tanks to harvest water for use in toilet flushing and installation of water efficient amenities fixtures and fittings at Tyndale Christian School saving four million litres of water a year

Table 10

PFP funding and estimated savings

Program	No. projects	Funding allocated ($)	Estimated savings (ML/yr)	Estimated savings (MWh/yr)	Estimated savings (tCO_2-e/yr)	Estimated savings peak demand (kW)
Energy	32	7,265,193	9.2	11,791	12,642	1,573
Water	23	4,267,886	152.1	309	411	0
Total	**55**	**11,533,079**	**161**	**12,100**	**13,053**	**1,573**

- $77,019 to EcoSave for installation of energy efficient lighting and air conditioning and water efficient amenities fixtures and fittings at Charles Sturt University's Wagga Wagga campus and, in combination with a student education program, saving more than four million litres of water a year and 442 tonnes of greenhouse gas emissions a year
- $39,800 to Port Macquarie – Hastings Council for installation of rainwater tanks to harvest water for use in toilet flushing and installation of solar photovoltaic cells to power sensor lights at the historic Port Macquarie cemetery, saving 76,000 litres of water and two tonnes of greenhouse gas emissions a year.

Round 2 of the Public Facilities Program was open from 2 March to 30 April 2009. Applications were invited under two funding streams:

- Demonstration stream – funding for projects which demonstrate how water and energy savings work in practice in public or educational facilities which are open to and frequently accessed, by the public
- Community Savers stream – funding of up to $40,000 for not-for-profit community organisations to undertake simple, low-cost water and energy saving upgrades in the facilities they use.

The Demonstration stream received 156 applications for a mixture of exciting water and energy saving projects in a range of venues including local council buildings and schools. The outcomes of this funding stream will be announced in late 2009 and projects will be reported in the 2009–2010 Annual Report.

Community Savers received 400 applications from a wide range of not-for-profit community organisations including preschools, sport and recreation clubs, RSLs, disability and support services and aged care facilities. The outcomes of this funding stream were announced in September 2009 and projects will be reported in the 2009–2010 Annual Report.

Table 11 shows the cost-effectiveness of the Public Facilities Program water projects by project type.

Table 11

PFP water cost-effectiveness by project type

Project type	No. of projects	Estimated savings (ML/yr)	Return on CCF funding /kL
Recycling	4	23	$5.83
Efficiency	9	71	$1.68
Harvesting	10	58	$2.97
Total	**23**	**152**	**$2.81**

Table 12 shows the cost-effectiveness of the Public Facilities Program energy projects by project type.

Table 12

PFP energy cost-effectiveness by project type

Project type	No. of projects	Estimated savings (MWh/yr)	Return on CCF funding /MWh
Efficiency measures	27	6,153	$95.02
Education	1	30	$242.10
Alternate power generation	4	5,608	$24.00
Total	**32**	**11,791**	**$61.62**

■ CASE STUDY

NSW Parliament becomes showpiece for energy and water efficiency

The NSW Climate Change Fund continues to help the seat of NSW government lead the way in its approach to sustainability.

Since 1983, NSW Parliament has been introducing sustainability technology and policies, starting with door-operated switches for urinal flushing 26 years ago, to the $3.5 million overhaul of its water and energy systems.

With $1.1 million from the NSW Climate Change Fund, Parliament House has implemented a number of water and energy saving measures including a pump station in the building's basement and a 60,000 litre water storage tank system on the roof for collecting water from fire system testing, air-conditioning condensation and storm water for use in cooling towers, toilets and grounds irrigation.

Brett Right, Assistant Manager Building for NSW Parliament House says the new installations will take only two years to complete and will save an estimated 17,000 kilolitres of potable water a year, 2, 360 megawatt hours of electricity and 2,520 tonnes of greenhouse gas emissions each year – the equivalent of taking 560 cars off the road.

The latest achievement of the Parliament's building services department, funded by the Climate Change Fund, has been to install a revolutionary solar roof system which will generate approximately 29 megawatt hours per year and reduce more than 800 tonnes of greenhouse gases in its lifetime – enough to power both the upper and lower houses with surplus feeding into the electricity grid.

In a move to achieve further energy savings and demonstrate its sustainability leadership, Parliament House will also replace all lighting in the building with long-life energy efficient compact and tri-phosphor fluorescent lamps.

The building management control system and its three air-conditioning chillers, which contain chlorofluorocarbon (CFC) gases, will also be replaced with energy smart building control technology and energy efficient chillers that run on environmentally friendly synthetic refrigerants.

Renewable Energy Development Program

The Renewable Energy Development Program (RED) was allocated $40 million over five years to support the commercialisation of new renewable energy technologies. All projects are required to generate electricity or displace grid electricity use in NSW for stationary energy purposes, with support offered to a range of new emerging renewable energy technologies, such as geothermal and biogas and new designs for more established technologies.

Over its life, the Renewable Energy Development Program aims to provide 35 megawatts of new installed renewable electricity generation capacity and deliver annual savings of:

- 125,000 megawatt hours of electricity
- 134,000 tonnes of greenhouse gas emissions.

Round 1 of the RED Program opened in December 2007. Applications were assessed in a two-stage process. Stage 1 invited expressions of interest and, following assessment by the Evaluation Panel, 17 applicants were invited to submit detailed applications for Stage 2.

Successful Round 1 projects were announced in November 2008. Seven projects were allocated $27.3 million. Together these projects will generate or displace grid electricity by an estimated 391,609 megawatt hours, reduce summer peak demand by 11,400 kilowatts and save 418,238 tonnes of greenhouse gas emissions a year.

The successful projects are summarised below:

- $750,884 for Aerogenesis Australia's Urban Wind Farm Project to explore the potential for small-scale urban wind farms to generate renewable energy to feed into the grid. Two grid-connected wind farms will be established using five kilowatt turbines and a total capacity of 200 kilowatts
- $2.5 million for Biogen Limited's Biogen Sydney G1 Project to develop a new generation modular biomass generator in Sydney to generate electricity from woody green waste that is currently sent to landfill. The process will generate 36 megawatts of baseload renewable energy, saving more than 300,000 tonnes of greenhouse gas emissions a year
- $2.9 million for Cargill Australia Limited's Wagga Wagga Biogas Project at Cargill's beef processing facility to generate energy from animal waste methane. The project involves the design and construction of a 75 million litre covered anaerobic pond and a 1400 kilowatt cogeneration set. The plant will utilise new technology to generate 1200 kilowatts electricity and 500 kilowatts equivalent steam
- $10 million for Geodynamics' Hunter Valley Geothermal Power Project, the first commercial hot rock geothermal energy project in NSW, which will draw geothermal energy from hot rocks with estimated temperatures above 200°C at depths of 4000–5000 metres. Deep wells will feed a 10 megawatt binary cycle power station that will generate approximately 80 gigawatt hours of zero emission baseload power a year for at least 30 years. The project will demonstrate the potential of the Hunter Valley hot rock resources and pave the way for expansion to a 50 megawatt plant
- $0.5 million for GPT Group's Solar Thermal Cooling Project at Charlestown Square near Newcastle. The GPT Group in partnership with the CSIRO, Bovis Lend Lease and New Energy Partners will install pioneering solar thermal cooling technology to air-condition the shopping centre building, using parabolic collectors on the roof to capture solar energy
- $9.25 million for Macquarie Generation's Liddell Power Station Solar Plant to demonstrate new developments in solar thermal technology. The project will build on the existing solar arrays at the plant, which have proved the viability of compact linear thermal reflection technology, and involves the installation of three further arrays of mirrors covering 27,000 m^2
- $1.425 million for the new CSIRO-developed Smart Storage Ultra Battery technology to store wind-generated energy at the Hampton Wind Farm, offering a solution to the issue of intermittent generation from wind farms. The batteries can store electricity and smooth voltage and power delivery to the grid. The project uses 100 kilowatt hours of battery storage attached to a wind turbine on an 11 kV grid and trials wind forecasting techniques.

Project savings and cost-effectiveness for the seven projects are shown in Table 13 below.

Table 13

Renewable Energy Development project savings and cost-effectiveness

Project type	No. of projects	Estimated savings (MWh/yr)	Return on CCF funding /MWh
Renewables	7	386,109	$7.08

Central Coast Water Savings Fund

The Central Coast Water Savings Fund (CCWSF) was established in partnership with the Gosford/Wyong Councils' Water Authority in 2006 to encourage investment in water savings on the Central Coast.

The Central Coast Water Savings Fund is supporting major water recycling projects, efficiency programs for schools and households, projects to harvest rainwater for reuse in sporting clubs and on playing fields, and Gosford City Council and Wyong Shire Council-nominated projects.

Round 3 of the Central Coast Water Savings Fund was held from April to June 2008. Successful projects were announced in November 2008. A total of $713,610 was allocated to 12 projects, ten of which have proceeded, saving an estimated 30 million litres of potable water a year.

To 30 June 2009, a total of $5.5 million had been allocated to 57 projects under the Central Coast Water Savings Fund, saving an estimated 808 million litres of water a year as shown in Table 14. The business sector accounts for 33.5 per cent of funding, community and schools 36.3 per cent, government 14.7 per cent and homes 15.5 per cent.

Table 14

CCWSF project savings and cost-effectiveness by sector

Project type	No. of projects	Funding allocated ($)	Total funding released to 30 June 09 ($)	Estimated savings (ML/yr)	Return on CCF funding /kL
Homes	8	851,300	637,476	89	$0.96
Communities & Schools	30	1,988,379	1,191,186	184	$1.08
Government	6	807,100	784,600	202	$0.40
Business	13	1,835,851	1,450,801	333	$0.55
Total	**57**	**5,482,630**	**4,064,063**	**808**	**$0.68**

■ CASE STUDY

Water wise schools

As an agricultural school, Brisbane Water Secondary College wanted students to learn first-hand about smart water use. The 'Water Wise School Community' project was provided $28,000 under Round 2 of the Central Coast Water Savings Fund.

The Umina Middle School Campus had a tank installed to harvest water off the school roof for use in new dual flush toilets. Upgrades to taps and urinals were also undertaken to increase water efficiency. Pumping equipment and pipes were laid so that existing tanks could irrigate the school farm and provide water for the animals. These water efficient measures are saving the school an estimated 4.6 million litres of water a year.

■ CASE STUDY

Wind technology helps Central Coast community group save water

With $31,000 from the NSW Climate Change Fund, Glen Centre Farm in Chittaway Bay on the Central Coast has installed a new windmill and upgraded its dam and storage tank connections to save more than half a million litres of water a year.

Operated by Nygmpie Aboriginal Corporation, the farm has utilised practical methods for storing and re-using rainwater including de-silting an existing dam to increase its storage capacity and pumping water into existing storage tanks with a new windmill.

Water is being delivered from the dam for more efficient use in toilet flushing, livestock watering and irrigation thanks to newly installed pipelines. Energy and carbon pollution are being reduced by using the new windmill to pump the water.

Nygmpie Aboriginal Corporation's Glen Centre Farm is a holistic rehabilitation centre specialising in drug and alcohol rehabilitation programs, set on 40 acres on the Central Coast.

A key element of the Glen Centre's rehabilitation program is to engage clients in agricultural projects and directly involve them with the care of animals.

The Glen Centre Farm water harvesting project has helped the centre keep its water use and costs down while maintaining successful programs for the benefit of the community.

Table 15 shows the cost-effectiveness of the Central Coast Water Savings Fund by project type. The average cost-effectiveness is $0.68 per kilolitre.

Table 15

CCWSF cost-effectiveness by project type

Project type	No. of projects	Estimated savings (ML/yr)	Return on CCF funding /kL
Recycling	11	407	$0.54
Harvesting	29	151	$1.09
Efficiency	15	244	$0.64
Groundwater	2	6	$0.82
Total	**57**	**808**	**$0.68**

In 2008–2009, 12 projects were completed – saving 395 million litres of water a year. Completed projects include:

- $36,500 to Aqua Jet Car Wash for installation of a wastewater recycling system which supplies the automatic car washer and saves almost three million litres of water a year
- $11,500 to Lutanda Children's Services for installation of a high efficiency irrigation system and showerheads and sinking a groundwater bore for irrigation water at Camp Toukley which saves just under three million litres of water a year
- $725,000 to MasterFoods (Effem) for installation of a stormwater harvesting scheme and wastewater treatment system which supplies high quality recycled water to all industrial processes at the Berkley Vale plant and saves over 109 million litres of water a year
- $46,500 to Ourimbah Lisarow RSL Club for installation of rainwater tanks to harvest water for use in toilet flushing and irrigation and for installation of water efficient fixtures and fittings including a waterless wok, saving almost four million litres of water a year.

School Energy Efficiency Program

The School Energy Efficiency Program provides $20 million for lighting upgrades in up to 150 NSW high schools. It also includes the Climate Clever Energy Savers Fund to implement energy and greenhouse gas saving projects identified by schools. This Program is jointly managed by DECC and the NSW Department of Education and Training (DET).

Sustainable Schools NSW offers schools a range of resources to assist in planning and implementing sustainability initiatives and in delivering environmental education activities. Schools participating in the School Energy Efficiency Program are therefore required to join the Sustainable Schools Program and develop a School Environmental Management Plan, using its online support (www.sustainableschools.nsw.edu.au).

Lighting retrofits were completed in 16 high schools across NSW in 2008–2009, saving an estimated 777 megawatt hours of electricity and 824 tonnes of greenhouse gas emissions a year.

The Climate Clever Energy Savers Fund is due to commence in 2009–2010 and is being run as a regional competitive grants program for school-initiated projects.

Lighting upgrades for a further 24 high schools with high energy use are listed for upgrading in 2009–2010 at a budgeted cost of $5.2 million. Estimated savings are 1,300 megawatt hours a year. More schools may be upgraded if the total costs are within the budget.

NSW Energy Efficiency Strategy Programs

In June 2008, the NSW Government announced an Energy Efficiency Strategy comprising several programs which are being managed by DECC.

Low Income Household Refit Program

The Low Income Household Refit Program will support low income households to save on energy use and costs and therefore also reduce their greenhouse gas emissions. Over four years, 220,000 low income households across NSW will receive a free home energy assessment, have energy-saving devices installed in their home and get personal advice about how to save power at home.

Every eligible home that signs up will get a free:

- home visit by a trained assessor to find ways to save power in the home
- power saver kit to help kick-start their power savings
- personalised power saver action plan to show more ways to save power and money.

Over the life of the program it is anticipated that:

- participants will save an average of ten per cent on their power bills
- the program will cut a total of $203 million from household bills
- the program will reduce carbon pollution by a total of 1.6 million tonnes.

In 2008–2009 DECC has conducted a series of pilots to inform the delivery of the main program:

- the first pilot program ran in Orange and Bathurst between October and December 2008, and targeted social housing residents. A total of 212 homes were assessed. Of participants surveyed, 96 per cent said they would recommend the program
- a second pilot was conducted in Western Sydney running from May to October 2009 and targeting 1,000 privately rented and owner-occupied homes.

The state-wide rollout of the program will begin in early 2010, and end in June 2013.

■ **CASE STUDY**

Pensioners save power

The Conley family of Kellyville will be saving at least $142 a year on their power bills following a free home energy assessment from the Low Income Household Refit Program.

Pensioner Robert Conley, who lives in a Kellyville home with his wife Di, said he learnt a lot from the assessment and was pleased to be saving money as well as helping the environment.

"I found the assessment, very thorough, informative and interesting," he said.

"What I found most useful was the draught excluder which was put around one of the doors. It stops the draughts coming through, and the home now feels much warmer."

In most NSW homes, the biggest user of power in the home is hot water. In the Conley family home they have a solar hot water system, which meets most of their needs, saving them lots of money.

The other energy saving opportunities identified from the assessment included:

- switching off appliances like TVs, DVDs, set top boxes at the power point when not in use could save $85 a year
- letting the air and sunlight dry clothes, rather than the clothes dryer could save $108 a year.

During the visit the family received a shower timer, a thermometer to monitor heating and cooling temperature and a draught excluder around one of the doors. Together they will help save $142 and the equivalent of 60,200 black balloons of carbon pollution a year.

Sustainability Advantage Energy Saver

The Sustainability Advantage Program provides tailored support to medium-to-large businesses to help improve their environmental performance. The program is being expanded to a further 800 participants with an injection of $20 million in additional funding from the NSW Climate Change Fund, with the objective of improving energy efficiency in participating organisations by an average of ten per cent. The program assists NSW businesses prepare for future rises in energy costs as well as accelerates the development and adoption of cost-effective energy efficiency technologies.

As at 30 June 2009, the Sustainability Advantage Energy Saver helped NSW businesses identify energy savings opportunities that could lead to over $3 million in cost-savings and the reduction of 21,000 tonnes of greenhouse gas emissions from their operations each year.

Energy Efficiency for Small Business Program

The $15 million Energy Efficiency for Small Business Program commenced in 2008–2009. The program will provide 6,000 small businesses with assistance to conduct energy efficiency audits and funding to implement savings. It targets businesses that spend up to $20,000 on electricity per year or employ up to ten employees. The program provides financial assistance for tailored energy assessments to identify no-cost and low-cost options to reduce electricity use. Matched funding of up to $5,000 is available for certain measures. This funding targets key areas such as lighting, heating, air-conditioning, refrigeration, hot water systems and compressed air use.

In 2008–2009, the program was piloted with over 100 businesses in a variety of industry and business activities. Assessments found that businesses could save an average of $420 per year on lighting alone, with a payback period of just five years.

The program was formally launched in 2008, with strong interest from key partners in local government, industry associations and peak bodies as well as major electricity retailers. Feedback from these stakeholders and a survey of pilot participants suggests the program is well designed to meet the needs of small business.

Energy Efficiency Training Program

Also under the NSW Energy Efficiency Strategy, $20 million is being provided between 2008 and 2013 to develop new 'green' skills training and accreditation through the vocational training system (including TAFE), universities and registered training organisations for key trades and professionals.

During the 2008–2009 year, the program was developed for electricians, plumbers, building managers, engineers, planners and architects to improve their design, installation and maintenance skills. In addition to the property and construction sector, the program works with key industries such as manufacturing to ensure NSW has the ability to manufacture more sustainable products with reduced energy consumption. It will also provide funding for the education and training sector, such as TAFE teachers, to gain the knowledge and skills they need to deliver these new job skill requirements.

Community Education and Awareness Program

The NSW Government's Energy Efficiency Strategy includes a $15 million community education and awareness program. Education plays an important role in helping people to understand how to reduce power use. Research has shown that the community has requested more information about ways to reduce power use, how much power they use and what they can do to save power.

The three-year program comprises mass media communication, including a campaign and website, education and training, and research and evaluation. The campaign was developed using research and the Victorian Government's successful 'black balloons' concept. The program targetting NSW households was launched in May 2009 with the *Save Power – What can you do in your world?* component of the campaign.

A range of TV, print, radio and online advertising was used to promote save power messages to NSW households and was successful in reaching approximately 72 per cent of NSW adults at least once and 47 per cent at least three times on average. The campaign has been developed to reach a broad audience, with concentrated waves of advertising targetting excessive power use during the peak summer and winter periods.

The savepower.nsw.gov.au website was launched in May 2009 to support the campaign and showcase the power saving achievements of business, government and communities. The website attracted 11,563 page views from when it was launched until the end June, with the households section of the site receiving the most views.

Water and Energy Savings Funds Projects

The Water and Energy Savings Funds were established in 2005 to provide funding for water and energy savings in NSW and complement the NSW Government's requirement for certain high water and energy users and local councils to prepare Water and Energy Savings Action Plans. The two funds are now incorporated into the NSW Climate Change Fund.

The Energy Savings Fund (ESF) supported measures to reduce overall electricity consumption and related greenhouse gas emissions in NSW, and to reduce peak electricity demand. The Public Facilities Program was introduced in 2006 as part of the Energy Savings Fund to support demonstration energy savings in public and educational facilities.

The Water Savings Fund (WSF) was announced as part of the NSW Government's Metropolitan Water Plan in October 2004 to fund water saving and recycling projects within Sydney Water's area of operations (Sydney, Blue Mountains and Illawarra). This fund was extended to the Central Coast in 2006.

Projects that received funding under the Water and Energy Savings Funds continue to be administered under the NSW Climate Change Fund. Thirty-one of these water and energy savings projects were completed in 2008–2009.

Energy Savings Fund projects

Two funding rounds under the Energy Savings Fund allocated $28 million to 49 projects. A total of 44 projects have proceeded and will save an estimated 181,531 tonnes of greenhouse gas emissions a year. They include generation, efficiency, education and power factor correction initiatives. Table 16 details the sectors covered in the Energy Savings Fund.

Round 1 was held from September to October 2005 and allocated $15 million to 20 projects. Round 2 was held from September to November 2006 and allocated $13 million to 29 projects.

A further, $400,000 was allocated to EnergyAustralia's Hot Water Conversion Program, providing discounts on selected gas, solar or heat pump hot water systems, saving 3,678 megawatt hours, 3,928 tonnes of greenhouse gas emissions and $2.7 million on customers' electricity bills a year.

The average cost-effectiveness for the Energy Savings Fund is $15.38 per megawatt hour, as shown in Table 17 below.

Table 17

ESF cost-effectiveness by project type

Project type	No. of projects	Estimated savings (MWh/yr)	Return on CCF funding /MWh
Efficiency measures	32	123,849	$14.05
Education	4	22,855	$7.05
Alternate power generation	4	23,270	$28.10
Power factor correction	4	N/A	N/A
Total	**44**	**169,973**	**$15.38**

Table 16

ESF funding, estimated annual savings and cost-effectiveness by sector

Program	No. projects	Funding allocated ($)	Estimated savings (ML/yr)	Estimated savings (MWh/yr)	Funding return (MWh/yr)	Estimated savings (tCO_2-e/yr)	Estimated savings peak demand (kW)
Homes	8	5,383,624	0.0	81,623	$6.60	87,174	5,729
Communities	1	142,000	0.0	7,234	$1.96	7,725	350
Government	5	5,398,662	0.0	16,916	$31.91	18,066	4,013
Business	30	15,220,314	0.0	64,200	$23.71	68,566	40,736
Total	**44**	**26,144,600**	**0.0**	**169,973**	**$15.38**	**181,531**	**50,828**

In 2008–2009, 13 projects were completed, saving 24,101 tonnes of greenhouse gas emissions, 22,567 megawatt hours and 8,758 kilowatts of peak demand a year. In 2008–2009, $4 million was paid for completed projects and project milestones.

Examples of completed projects supported under the Energy Savings Fund include:

- $66,000 to AGL Energy Services for installation of a high efficiency chiller as part of the air conditioning system which saves 461 tonnes of greenhouse gas emissions a year
- $298,689 to Integral Energy for providing householders in the Blacktown area with a home energy assessment and installation of compact fluorescent lamps and low flow showerheads
- $32,380 to Carter Holt Harvey Wood Products Australia to upgrade the compressed air systems at the Oberon and Tumut particleboard manufacturing plants, saving 312 tonnes of greenhouse gas emissions a year.

Water Savings Fund projects

Three funding rounds under the WSF allocated $56.8 million to 96 business, government agency and local council water saving projects. Ninety-two projects have proceeded, saving an estimated 13.6 billion litres of water a year. Funded projects include a range of water efficiency, stormwater and rainwater harvesting, recycling and groundwater projects. Table 18 details the sectors covered by the Water Savings Fund.

Examples of projects supported under the Water Savings Fund include:

- $3 million to Sydney Airport Corporation to install pipework at Sydney Airport's International Terminal to allow high quality recycled water to be used for toilet flushing, cooling towers, irrigation and cleaning, to save an estimated 274 million litres of water a year
- $299,680 to Astor Metal Finishes for installation of a recycling system to treat wastewater from the electroplating process and reuse in the industrial process, saving almost 31 million litres of water a year.

Round 1 was held from September to December 2005 and allocated $9.9 million towards 25 projects. Round 2 was held from March to May 2006 and allocated $31.6 million to 42 projects. Round 3 was held from October to December 2006 and allocated $15.2 million to 29 projects.

Table 19 details the cost-effectiveness of Water Savings Fund projects by project type. The average cost-effectiveness is $0.39 per kilolitre.

Table 19

WSF cost-effectiveness by project type

Project type	No. of projects	Estimated savings (MWh/yr)	Return on CCF funding /MWh
Recycling	37	9,666	$0.31
Harvesting	30	1,178	$0.87
Efficiency	22	2,620	$0.41
Groundwater	3	181	$0.98
Total	**92**	**13,645**	**$0.39**

In 2008–2009, 18 projects were completed comprising five efficiency, five recycling and eight harvesting initiatives, saving a total of 833 million litres of water. In 2008–2009, $7.9 million was paid for completed projects and project milestones.

Table 18

WSF funding, estimated annual savings and cost-effectiveness by sector

Program	No. of projects	Funding allocated ($)	Total funding released to 30 June 09 ($)	Estimated savings (ML/yr)	Return on CCF funding /kL
Homes	7	4,765,259	727,139	454	$1.05
Communities & Schools	10	4,781,502	2,777,219	784	$0.61
Government	33	12,665,758	7,484,051	1,384	$0.92
Business	42	30,638,137	12,838,328	11,023	$0.28
Total	**92**	**52,850,656**	**23,826,738**	**13,645**	**$0.39**

■ CASE STUDY

Council takes lead on water and energy savings

Hornsby Shire Council developed a Water Savings Action Plan (WSAP) which identified the top ten highest water-consuming parks and facilities within the council's area and outlined measures that would help save 22 million litres of water a year.

One of the actions in the Council's WSAP was a large stormwater harvesting and reuse scheme at Greenway Park, Cherrybrook.

With $274,274 in funding from the Climate Change Fund, Hornsby Council has helped save the day for much-needed sport and recreation facilities. By installing four underground water tanks, a treatment system and sub-surface irrigation they are expected to save almost 18 million litres of water a year and keep the Greenway Park playing fields in top shape.

The Council was also successful in gaining further funding of $206,818 to harvest and reuse stormwater for irrigation of the bowling greens, gardens and grounds at Asquith Bowling and Recreational Club, North Epping Bowling Club and West Epping Panthers Bowling Club.

The three bowling clubs attract around 43,000 members annually and because of drought conditions and water restrictions, the playing greens were deteriorating. By capturing rainfall off the sites and storing it in tanks, the water harvesting system provides valuable water to the clubs' greens. This project is saving Hornsby Council an extra 11 million litres a year.

An additional $131,000 in funding from the Climate Change Fund enabled the Council to improve energy efficiency at the Council's public libraries. The Council adopted CSIRO's newly developed predictive maintenance software to maintain heating, ventilating and air conditioning (HVAC) systems in five libraries which will save an estimated 105 tonnes of greenhouse gas emissions a year.

■ CASE STUDY

Keeping Sydney's parks green

Funds of $106,900 from the NSW Government's Climate Change Fund have helped URS install new technology across Sydney's parks, sporting ovals and civic places.

URS was able to fine tune the watering needs of landscaped gardens at 40 parks within the City of Sydney council area, saving 50 million litres of drinking water a year.

Developed by URS and Sydney Water, the Landscape Assessment Method identifies exactly how much water is needed for irrigation based on foot traffic, microclimate and soil type.

The method has been successfully trialled at parks, ovals, golf courses and gardens at Ku-ring-gai and Auburn with funding support from rounds 1 and 2 of the Water Savings Fund. In Ku-ring-gai, the new method demonstrated that many facilities were being over-watered by as much as 12 million litres a year.

Working with the City of Sydney Council's parks and management staff, the Climate Change Fund project has identified ideal watering frequencies for most of the City's open spaces, including Observatory Hill, Sydney Park and Victoria Park.

Many are high water-use facilities identified in the City of Sydney Council's Water Savings Action Plan. The data can also be used to accurately determine the feasibility and design of alternative water schemes such as stormwater harvesting or sewer mining for these landscapes.

■ CASE STUDY

One of Australia's first commercial sewer mining water reuse plant

With more than $1 million from the NSW Climate Change Fund, Pennant Hills Golf Club installed a sewer mining plant to become one of the first privately run golf clubs of its kind in Australia to use wastewater to keep its greens lush.

The sewer mining plant harvests wastewater from a large sewer main running under the golf course, and treats it to a very high standard using membrane bioreactor technology.

This system can produce up to 650,000 litres of high quality water a day to irrigate the club's 22 hectares of greens, tees and fairways.

By using recycled water instead of drinking water for irrigation, Pennant Hills Golf Club is conserving around 100 million litres of Sydney's drinking water a year – enough water to sustain over 280 households.

Steve Walker, president of Pennant Hills Golf Club says the club was very proud to be the first to embrace this innovative approach with thanks to the Climate Change Fund.

"It's bringing us a drought-proof supply of water that minimises impact on Australia's fresh water reserves," Walker says.

"With water supplies in question and prices rising, we needed a cost-effective way to minimise our water footprint while protecting the natural beauty of our course."

The solution was identified in the club's Water Savings Action Plan as the most effective solution to meet the club's long and short-term water needs.

Sewer mining turns urban wastewater into a valuable product, and helps to reduce pressure on urban sewerage systems and treatment plants.

■ CASE STUDY

Green business is good business for NSW shopping centres and offices

Stockland has shown that by improving the environmental efficiency of its commercial and retail property portfolio it can save costs.

The 2008 NSW Green Globe Award winner has delivered a number of positive social and environmental outcomes across its commercial and retail portfolio in NSW to achieve significant water savings.

After completing a Water Savings Action Plan for three shopping centres, in Merrylands, Shellharbour and Wetherill Park, Stockland identified a series of initiatives to improve its water efficiency including upgrades to public amenities, operational efficiency and staff education programs.

With $120,000 in funding from Round 2 of the NSW Climate Change Fund's Water Savings Fund, Stockland was able to install a rainwater harvesting system, low-flow tapware, low-flow cisterns and waterless urinals in the centre's toilets.

At the 12 hectare single-level shopping centre in Wetherill Park, for example, the Climate Change Fund project enabled Stockland to install a real-time water monitoring system and several sub-meters. This has helped to measure exactly how much water was being used throughout the shopping centre in Sydney's south west, to allow Stockland to minimise wastage.

Stockland has also installed a waterless wok in a food court tenancy and undertakes staff and retailer education.

The project will save more than 11 million litres of water per year and reduce the retail and commercial property group's water bills.

An additional $132,900 from the NSW Climate Change Fund was provided to EP&T to enable Stockland to roll out further water conservation projects across its commercial properties in Sydney's central business district at 52 Martin Place, 234 Sussex Street and 175 Castlereagh Street.

EP&T implemented various water saving measures in the office blocks including upgrading to dual flush toilets, installing flow restrictors in taps, cooling tower controllers and an online monitoring system, to save an estimated 41 million litres of water a year.

Water and Energy Savings Action Plans

Water and Energy Savings Action Plans were established in 2005 under the *Energy and Utilities Administration Act 1987* and are now administered under the NSW Climate Change Fund. Savings Action Plans were to be prepared by Designated Users, as gazetted in the Water and Energy Savings Orders of 28 October 2005. Savings Action Plans require certain high using businesses and government agencies and local councils to assess water or energy use and identify opportunities to save.

Who is required to prepare plans?

Energy Savings Action Plans (ESAPs) were required from businesses and government agencies for sites that use more than ten gigawatt hours of electricity a year and from 46 NSW councils which have populations of more than 50,000 people. Plans were required for 206 business sites and 15 government agency sites. Since the Energy Savings Order was gazetted, 19 sites have been exempted from preparing plans because they have either closed operations, changed ownership or sustained significant reductions in energy use to bring them below the 10 gigawatt hours a year threshold.

Water Savings Action Plans (WSAPs) were required by businesses and government agencies in Sydney Water's area of operations for sites that use more than 50 megalitres of water a year and 44 local councils. Plans were required for 220 business sites and 34 government agency sites. Since the Water Savings Order was gazetted, 28 sites have been exempted from preparing plans because they have either closed operations or have sustained significant reductions in water use to bring them below the 50 million litres a year threshold.

What is required in a plan?

Savings Action Plans must be completed by the Designated User in accordance with the Guidelines for Energy/Water Savings Action Plans. Plans undergo a detailed assessment to ensure the baseline energy/water use, the management review, technical review and description of the energy/water saving actions to be implemented meet the Guidelines.

Designated Users identify previous savings measures, as well as new 'cost- effective' and 'potentially cost-effective' savings actions. Cost-effective actions are defined as water and/or energy saving measures that pay for themselves within the organisation's hurdle rate of return. Potentially cost effective actions are measures that do not meet the organisation's investment rate of return and require financial assistance if they are to proceed.

The Minister for Climate Change and the Environment has responsibility for approving Water and Energy Savings Action Plans (or may delegate this authority). A plan expires four years after being approved. Designated Users report annually to DECC on the outcomes of their plans.

Energy Savings Action Plans progress

All of the total 267 Energy Savings Action Plans required had been approved by 30 June 2009. They identified 2,359 cost-effective actions estimated to save 825,480 tonnes of greenhouse gas emissions a year and $36.6 million on annual electricity bills[1].

The annual reporting of Energy Savings Action Plans shows that about one third of the cost-effective energy savings measures identified in Plans have been implemented. Tables 20 to 24 show Energy Savings Action Plan progress and types of cost-effective energy savings measures.

1 Following approval for all 267 Energy Savings Action Plans, data were verified which resulted in adjustments to previously stated total MWh, tCO_2-e and $ electricity bill savings.

Table 20

Savings from cost-effective (CE) actions identified in ESAPs

	No. of approved Plans	Previous savings (GJ)	No. of CE actions	CE savings (GJ)	CE savings (tCO_2-e)	CE peak demand reduction (kW)	Potential CE savings (GJ)
Business sites	206	5,133,204	1,343	5,746,698	729,023	76,408	7,672,575
Government sites	15	99,555	77	129,327	22,344	2,576	108,876
Local Councils	46	181,058	939	112,705	74,113	6,132	96,271
Total	**267**	**5,413,817**	**2,359**	**5,988,730**	**825,480**	**85,116**	**7,877,723**

Table 21

Savings from submitted ESAP annual reports to 30 June 2009

Annual Reports received to June 30 2009	No. CE actions identified in Plan	No. CE actions implemented	Implementation CE actions	No PCE actions identified in Plan	No. PCE actions implemented	Implementation PCE actions
125	1,208	433	35.8%	1,495	162	10.8%

Types of cost-effective energy savings measures

The tables below outline what types of cost-effective energy savings measures were found to be cost effective by businesses, government agencies and local councils.

Table 22

Business cost-effective energy actions by end use

End use	% of GJ savings	% of tCO_2-e savings	Examples
Combined	3.2	3.9	energy efficient appliances, heating and lighting controls, variable speed drives, power factor correction
HVAC	26.8	23.3	installation of seasonal control system and monitors, replacement of complete system, automatic sensor control
Industry equipment	45.7	47.1	installation or upgrade to efficient equipment, optimisation of existing equipment, installation of variable speed drives or controls on equipment
Industry processes/operations	13.3	16.0	reviewing and modifying industrial processes, monitoring and metering processes, cleaning and production modifications
Lighting	1.1	1.9	replacement of inefficient lighting, lighting controls, use of natural lighting
Other	10.0	7.9	waste disposal, pool systems, policy changes

Table 23

Government agencies cost-effective energy actions by end use

End use	% of GJ savings	% of tCO_2-e savings	Examples
Combined indoor	13.6	15.9	energy efficient appliances, heating and lighting controls, variable speed drives, power factor correction
Lighting	28.2	36.8	replacement of inefficient lighting, lighting controls, use of natural lighting
HVAC	36.0	36.3	installation of seasonal control system and monitors, replacement of complete system, automatic sensor control
Other	22.3	11.0	provision information/data, pool covers

Table 24

Local council cost-effective energy actions by end use

End use	% of GJ savings	% of tCO_2-e savings	Examples
Combined indoor	30.6	49.1	energy efficient appliances, heating and lighting controls, variable speed drives
Lighting	18.6	16.1	replacement of inefficient lighting, lighting controls, use of natural lighting
HVAC	24.0	16.3	installation of seasonal control system and monitors, replacement of complete system, automatic sensor control
Other	26.9	18.4	pool covers, change processes and policies

Water Savings Action Plans progress

All of the total 298 Water Savings Action Plans required had been approved by 30 June 2009. They identified 2,329 cost-effective actions estimated to save 8.2 billion litres of water a year and $19 million on annual water bills. The annual reporting of Water Savings Action Plans shows that about half of the cost-effective water savings measures identified in plans have been implemented. Tables 25 to 29 show Water Savings Action Plan progress and types of cost-effective measures.

Table 25

Savings from cost-effective (CE) actions identified in WSAPs

	No. approved of Plans	Previous savings (kL)	No. of CE actions	CE savings (kL)	Potential CE savings (kL)
Business sites	220	13,993,851	883	6,484,436	11,285,890
Government sites	34	616,344	156	895,955	321,675
Local Councils	44	358,103	1,290	891,401	1,430,644
To 30 June 2009	**298**	**14,968,298**	**2,329**	**8,271,792**	**13,038,208**

Table 26

Savings from submitted WSAP annual reports to 30 June 2009

Annual Reports received to June 30 2009	No. CE actions identified in Plan	No. CE actions implemented	Implementation CE actions	No PCE actions identified in Plan	No. PCE actions implemented	Implementation PCE actions
95	997	523	52.5%	567	118	20.8%

Types of cost-effective water savings measures

The tables below outline what types of cost-effective water savings measures were found to be cost-effective by businesses, government agencies and local councils.

Table 27

Business cost-effective water actions by end use

End use	% of kL savings identified	Examples
Indoor	15.8	installation of water savings fixtures in amenities, flow restrictors on taps and sensor controls in urinals
Combined	47.3	monitoring and repair of leakage, metering site locations, rainwater harvesting and supply
Industrial processes/operations	36.6	installation of waterless woks, optimisation of industrial processes and upgrading of industrial equipment
Other	0.3	modification of water features, changes to policy guides

Table 28

Government agencies cost-effective water actions by end use

End use	% of kL savings identified	Examples
Combined	57.6	recycled or harvested water for use indoor as well as irrigation, metering and monitoring of site locations
Indoor	33.5	upgrade of hot water system, installation of flow restrictors in amenities, modifications of toilets and urinals
Irrigation	6.0	efficient irrigation systems, controls and moisture sensors, recycled or harvested water to supply irrigation systems
Other	3.0	investigations, change programs

Table 29

Local Council cost-effective water actions by end use

End use	% of kL savings identified	Examples
Irrigation and outdoor	34.1	efficient irrigation systems, controls and moisture sensors, recycled or harvested water to supply irrigation systems, outdoor uses such as swimming pools
Indoor	37.5	efficient fittings in amenities, waterless urinals and hot water systems
Combined	28	leakage monitoring and repairs, installation of meters, recycled or harvested water to supply amenities
Other	0.4	installation of device locks, change policy

Other funded programs and projects

Recycling and Stormwater Harvesting Program

The Recycling and Stormwater Harvesting Program provides $13 million to support potential recycled water suppliers, distributors and customers in the development of localised recycling and stormwater harvesting schemes. The program is managed by the Office of Water (formerly the Metropolitan Water branch in the Department of Water and Energy) within DECC.

Strategic planning commenced in 2008–2009, with the development of draft guidelines for the allocation of funding and the preliminary identification of potential recycling schemes.

Rainwater Tanks in Schools Program

The Government's commitment to provide a rainwater tank for every government school in NSW is to be implemented through the Rainwater Tanks in Schools Program under the NSW Climate Change Fund. The Program will also involve water efficiency audits for selected schools to identify leaks and other water efficiency opportunities. This $20 million program will be delivered jointly by the Department of Education and Training (DET) and DECC. The Rainwater Tank contract has been established and a list of schools currently with rainwater tanks has been prepared, with roll-out of tanks to begin in 2009–2010.

The most cost-effective ways to save water in schools are to prevent wastage, fix leaks and install water efficient devices, especially dual flush toilets, as toilets are one of the highest water users in schools. Leakage can be a major contributor to water use in schools. The next major water uses have been identified as toilets, followed by irrigation. Educating children about turning off taps after use, and installing taps sensors so that children cannot leave taps running, are strategies that can assist in minimising wastage.

Housing NSW Program

The NSW Climate Change Fund is also providing more than $17 million over four years until 2010–2011 for energy and water savings in Housing NSW properties. The program aims to enable Housing NSW to replace approximately 12,000 electric storage hot water systems with solar hot water, saving an estimated 34,800 tonnes of greenhouse gas emissions a year and provide a WaterFix to 36,000 Housing NSW properties, saving an estimated 756 million litres of water a year.

In the 2008–2009 financial year, the WaterFix program installed Aqualocs (specially designed tap valves that save water) in 24,178 properties and installed water efficient showerheads in 9,978 properties. The estimated water savings from these WaterFix measures is a total of 208,540 kilolitres a year, saving households about $39 each per year. These measures can also be attributed with an additional energy saving of an estimated 138 kilowatt hours per annum per household or almost $27 a year for each household.

In 2008–2009 Housing NSW replaced 38 electric storage hot water heaters with solar hot water systems, saving an estimated 70,186 kilowatt hours of electricity and 74 tonnes of greenhouse gas emissions a year, as well as saving households a total of $4,864 a year on their electricity bills.

In addition, during 2008–2009, the Climate Change Fund provided funding to install ceiling insulation in 1,783 Housing NSW dwellings, saving an estimated 841,041 kilowatt hours of electricity and 892 tonnes of greenhouse gas emissions a year, as well as saving households a total of $164,213 a year on their electricity bills.

Water for Life Education Program

The Water for Life Education Program was established in 2005 as part of the NSW Government's Metropolitan Water Plan. The program is supported by the NSW Climate Change Fund, and is coordinated by the NSW Office of Water, within the Department of Environment and Climate Change.

The Program aims to:

- increase community understanding of the range of strategies to secure greater Sydney's water
- encourage continued wise water use in households, businesses and government across greater Sydney through changed water-saving and recycling behaviour.

Water for Life supports and builds upon initiatives already undertaken by government, industry, formal and informal education providers and non-government organisations to encourage responsible water management. It includes community campaigns, on-the-ground water education project; community consultation and the provision of training and resources.

Significant progress has been made since the program began four years ago. Specific achievements and progress are outlined in Table 30.

Independent evaluation has shown that the Water for Life Program's communications and education initiatives play an important role in the successful implementation of the Metropolitan Water Plan. As a result, $4 million has been allocated from the NSW Climate Change Fund to extend the program to June 2011.

Table 30

Water for Life progress in 2008–2009

Program element	Progress to date
Increased community awareness and involvement	Per capita demand for drinking water in Sydney has been reduced from 342L per capita/day in 2005–2006 to 307L per capita/day in 2008.
	The percentage of people that believe Sydney's water issues are being dealt with in partnership between Government, industry, farming and households has risen from 43% in 2006 to 59% in 2009.
	More people are aware of the range of strategies to secure water supply – from 68% in 2005 to 84% in September 2009. Dams, recycling, desalination and water efficiency are the top four ways recalled for securing Sydney's water supply.
	Eight in ten water users are very active in saving water and have made significant changes in how much water is used.
	The Water for Life website is a useful community resource – it attracted an average 12,585 page views each month during 2008–2009.
	The majority of people believe individual households can make a difference – those taking action often to reduce consumption increased from 65% in 2005 to 81% in 2009.
	Community engagement in May and June sought to identify the values that are of high priority to the community in planning for Sydney's water future as part of the Review of the Metropolitan Water Plan. This was undertaken via an online public survey, and through ten workshops for the community, business and other stakeholders.
	The 2009 Water for Life advertising campaign supported the Metropolitan Water Plan community engagement. Its aim was to assist the public in making an informed contribution to the planning process, as well as encouraging continued wise water use in the community.
	Provided funding and advertising templates for eighteen councils as part of the Water for Life Council Partnership Kit. The kit raised awareness of local government water efficiency, recycling and stormwater harvesting initiatives, and encouraged the community to continue to be water wise.
Building the knowledge, skills and ability of water educators	Increased the proportion of local councils involved in water education form 23% in 2005 to 77% in 2009. This can be attributed to a coordinated whole-of-government approach and increased community receptiveness to a range of sustainability messages including those on climate change.
	Increased the number of NSW Government water education programs delivered from 30 in 2006 to 51 in 2009.
	Launched the Water Education Plan for greater Sydney 2008–2012 to coordinate all water education.
	Expanded the Water for Life Education Resource Hub, offering a range of resources and tools for water educators including the online Resource Directory.
	Delivered an innovative leadership program, Advancing Leaders, for local and non government educators to increase delivery of water education projects and build the capacity of professionals that deliver them.
Targeted water education projects to engage priority sectors	Provided nearly $300,000 in NSW Government grants for eight local and non government water education projects, which are aimed at encouraging the people of greater Sydney to play an active role in managing and planning for a sustainable water future.
	Extended partnership with the Ethnic Communities' Council of NSW (ECC). The project engages ethnic communities to use water efficiently and understand the Metropolitan Water Plan by recruiting bilingual water ambassadors, running workshops and events, and developing a toolkit for Councils and utilities.
	Implemented a pilot program called WaterSmart, which uses phone-based methodology to develop *Home water action plans* for households in targeted suburbs. The key message of the program is that encouragement, motivation and support, households can make small easy changes to their behaviour resulting in water savings, without adversely affecting their lifestyles
	Finalised geography and science curriculum resources for NSW schools and professional development for teachers on their use.

Sydney Water Demand Management Program

The NSW Climate Change Fund supports Sydney Water's demand management initiatives listed in the Metropolitan Water Plan. Sydney Water submits invoices to DECC on a quarterly basis and reports against program indicators. Sydney Water also reports annually to IPART on its demand management performance as part of its Operating Licence requirements.

Sydney Water's demand management initiatives supported by the NSW Climate Change Fund include:

- WaterFix Residential Retrofits program
- DIY Water Saving Kits for householders
- Rainwater tank rebates
- Love Your Garden
- Every Drop Counts Business Program
- Every Drop Counts in Schools Program
- School rainwater tank rebates
- Outdoor education and long-term water use rules campaign.

In 2008–2009, Sydney Water distributed more than 200,000 water saving kits to Sydney homes and audited and retrofitted almost 500,000 homes under the WaterFix program.

Further detail on these initiatives and information on progress and achievements in 2008–2009 is reported in Sydney Water's Water Conservation and Recycling Implementation Report 2008–2009, available on Sydney Water's website at www.sydneywater.com.au

Australian Energy Market Commission

The NSW Climate Change Fund provides the funding for NSW's contribution to national energy regulation initiatives, as provided for under section 34H of the Act. In the 2008–2009 financial year, NSW paid $4.219 million to the Commonwealth as NSW's share of the Australian Energy Market Commission's (AEMC) annual operating budget. Under established funding arrangements agreed between relevant jurisdictions, NSW is responsible for 37.5 per cent of the AEMC's budget.

The AEMC was established in July 2005 by the Council of Australian Governments, through its Ministerial Council on Energy. The AEMC is the national body responsible for rule-making, market development and policy advice with regard to the National Electricity Market and, from 1 July 2008, with regard to access to natural gas pipelines services and elements of the broader natural gas markets. The Ministerial Council on Energy (on which the NSW Minister for Energy sits) approves the annual budget for the AEMC.

Earth Hour 2009

The NSW Government supported Earth Hour 2009 with a financial contribution of $100,000 from the NSW Climate Change Fund.

More than 46 per cent of adults in Australian capital cities actively participated in Earth Hour 2009, held from 8.00-9.00pm on Saturday 28 March 2009. Twenty-eight per cent of all Sydney businesses and 76 per cent of NSW local councils helped to send a powerful message about the need to take action on climate change.

Earth Hour 2009 had a widespread reach with more than 4,300 news items across Australian print, radio, television and online mediums.

Of the 98,000 people who signed up to the event in Australia, more than 50 per cent were from Sydney. According to EnergyAustralia, there was an approximate nine per cent drop in energy usage in the Sydney CBD area during 2009's Earth Hour 8.30-9.3 0pm.

After participating in Earth Hour for the past three years, Sydney Opera House has committed to switching off the floodlights on its sails every night after 2.00am. This is estimated to save 15 tonnes of carbon pollution each year.

Earth Hour is a WWF-Australia initiative in partnership with Fairfax Media and Leo Burnett, with support from the City of Sydney and the NSW Government.

Support from the NSW Government enabled WWF to hire additional staff for the NSW project, produce toolkits and recruit more NSW councils. DECC was also able to work with other government agencies and buildings to ensure lights out for iconic buildings and prominent locations, such as the NSW Parliament and the spotlights in the Royal Botanic Gardens.

Greenhouse Innovation Fund projects

The NSW Greenhouse Innovation Fund was established in 2005 to provide $24 million over four years to support action on climate change mitigation and adaptation activities. It included the $10 million Climate Action Grants Program to promote the development and adoption of low greenhouse technologies, processes and practices. Unallocated funds from the Climate Action Grants Program have been transferred to the NSW Climate Change Fund and projects with an energy efficiency focus are now administered and funded under the NSW Climate Change Fund. These include:

- $100,000 contribution to the development of a sustainability assessment tool by Landcom to help the development industry measure environmental sustainability at subdivision and neighbourhood levels
- $50,000 project jointly commissioned by NSW and Commonwealth Governments to analyse the effectiveness of energy efficiency measures and drivers
- $205,000 costing study into the current and likely future potential for energy efficiency in NSW.

Governance and administration

Governance arrangements

Under the Act, the Minister approves payments out of the NSW Climate Change Fund if satisfied they promote a purpose referred to in the legislation. The NSW Climate Change Fund is administered by DECC.

Contestable grants under the Fund are assessed by Evaluation Panels with an independent chair and members with relevant industry and technical expertise. DECC conducts technical assessments of all applications received to assist the Evaluation Panels in their assessments. Applications are assessed according to set selection criteria given in the relevant publicly available Guides for Applicants. The Evaluation Panel makes recommendations on funding to the Minister for Climate Change and the Environment.

Under the legislation, the Minister has the power to establish Advisory Committees to advise on strategy and priority areas for the Fund. The Climate Change Fund Advisory Committee was established in August 2007 and met three times in 2008–2009. The members of the Committee for 2008–2009 and its terms of reference are listed in Appendix B.

Principles for administering the Fund

DECC applies the following key principles in administering the Fund:

- funding allocations and expenditures will ensure responsible financial management
- a strategic approach will be used in setting priorities for expenditure
- the detailed priority setting process and fund allocation will closely follow strategic Government policy (including the election commitment of the NSW Climate Change Fund, the NSW State Plan and the NSW Energy Efficiency Strategy).

DECC will:

- regularly assess and review outcomes achieved through expenditure
- establish a program of regular reporting to provide oversight of the Fund
- ensure the Fund establishes strong accountability and adheres to clear corporate governance principles.

Funding streams

There are four types of funding available under the NSW Climate Change Fund:

1. Competitive grants: providing funding on a contestable basis for projects which meet specific selection criteria. These include the Public Facilities Program, Renewable Energy Development Program, Green Business Program, Central Coast Water Savings Fund and projects previously funded through the Water and Energy Savings Funds.
2. Rebate programs: funding provided in the form of rebates for specified water or energy savings measures under certain terms and conditions. These include the current commitment for the Residential Rebate Program.
3. External programs: funding from the NSW Climate Change Fund for programs implemented by an organisation other than DECC to meet Government commitments or policies. These currently include the Sydney Water Demand Management Program.
4. Other programs or projects: funding for programs or projects which are not competitive grants or external programs. These include programs which are jointly delivered by DECC and other agencies, and potential new programs which may include:
   - funding of demonstration of new technologies or practices (not yet able to compete for grants because they cannot clearly demonstrate cost-effective water/energy savings)
   - extension of successful competitive grants
   - studies/research projects needed to effectively target Fund programs
   - community awareness-raising efforts
   - projects or programs to fill gaps in Fund programs (e.g. sectors or approaches not yet covered).

All contestable funding rounds are advertised via the NSW Climate Change Fund subscriber e-newsletter, the NSW Climate Change Fund News, DECC's website (www.environment.nsw.gov.au/grants/ccfund) and in metropolitan, regional and ethnic newspapers. Full details on the communication activities for the Fund are given in Appendix C.

Reporting

Funding recipients must report on the progress of projects and their success in achieving the anticipated outcomes (e.g. water or energy and greenhouse gas savings). In the case of residential rebates, recipients must provide receipts to validate purchase and installation details.

The Fund is committed to keeping the NSW community fully informed about progress in achieving its climate change goals, expenditure and achievements under the Fund. DECC reports regularly on its progress in meeting its NSW State Plan emissions target and publishes information on the range of funding available and projects awarded funding under the NSW Climate Change Fund.

Budget and spending status

Revenue

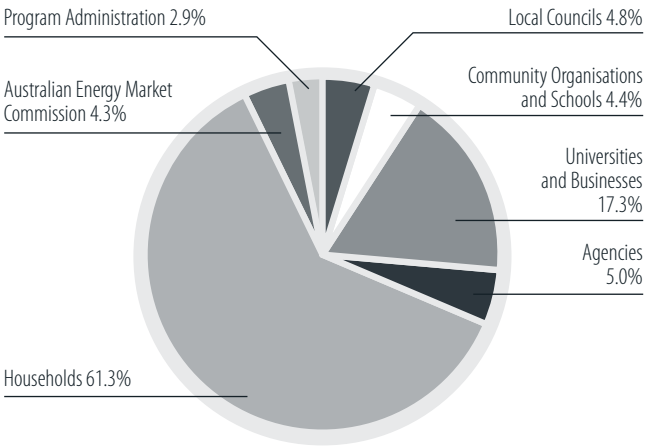
Electricity distributors and water utilities were required to make contributions to the Fund through annual contribution orders gazetted on 1 May 2009 for energy and on 19 June 2009 for water. A breakdown of revenue to the NSW Climate Change Fund in 2008–2009 is shown in Table 31 below.

Table 31

NSW Climate Change Fund 2008–2009 revenue

Source	Amount ($)
EnergyAustralia	18,866,000
Integral Energy	11,875,000
Country Energy	9,259,000
Sydney Water	36,024,668
Gosford City Council	1,050,000
Wyong Shire Council	950,000
Greenhouse Innovation Fund	3,413,000
Environment Trust	1,500,000
Interest	5,962,860
Miscellaneous *(*refund of contestable grant)*	714
Total	**88,901,242**

Figure 3



Expenditure

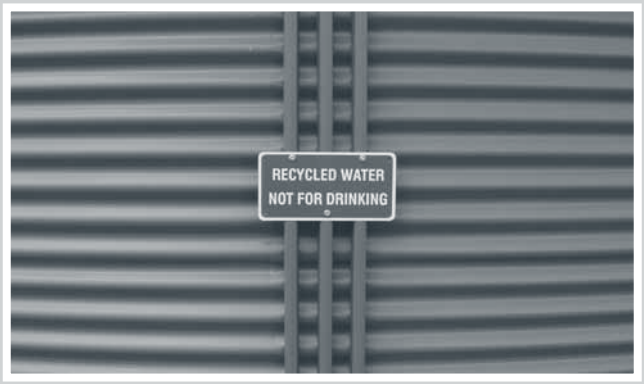
Actual expenditure was $98.54 million in 2008–2009. The proportion of program administration expenditure was 2.9 per cent. Expenditure for each of the components of the Fund is presented in Table 32 below. Figure 3 shows a breakdown of expenditure by sector.

Table 32

NSW Climate Change Fund 2008–2009 expenditure

Program/component	Recipient	Expenditure in 2008–2009 ($, GST exc)
Residential Rebate Program	Residents	40,038,063.09
Green Business Program	Business	2,319,710.00
Public Facilities Program	Various	2,549,536.10
Renewable Energy Development Program	Business	41,294.55
Recycling and Stormwater Harvesting Program	DWE	213,924.76
School Energy Efficiency Program	Schools	2,336,198.00
Central Coast Water Savings Fund	Various	1,953,161.58
Water and Energy Savings Funds *(funding allocated prior to establishment of CC Fund)*		
* contestable	Various	11,968,869.96
* non-contestable	Various	177,200.00
Energy Efficiency Strategy		
* Energy Efficiency for Small Business Program	Business	618,302.21
* Sustainability Advantage Program	Business	854,660.76
* Green Skills	Various	0
* Energy Efficiency Community Awareness Program	Various	1,911,568.79
* Low Income Household Refit Program	Residents	578,443.50
* Government Energy Efficiency Team Program	DECC	49,808.57
* Energy Efficiency Data Collection Program	DECC	73,696.93
Metropolitan Water Education Program	DWE	2,000,000.00
Sydney Water Demand Management Program	Sydney Water	18,051,277.00
Australian Energy Market Commission *(for national energy regulation purposes)*	AEMC	4,218,753.00
Greenhouse Innovation Fund projects	Various	281,444.60
Housing Program	Housing NSW	5,475,000.00
NSW Climate Change Fund administration *(includes Residential Rebates administration and administration of Savings Action Plans)*	DECC	2,830,667.73
Total		**$98,541,581.13**

Appendices



Appendix A Legislative requirements

The *Energy and Utilities Administration Act 1987*, which establishes the NSW Climate Change Fund, describes the purposes of the Fund and lays out a number of other requirements. Relevant provisions in the legislation are provided below.

Division 2 – Climate Change Fund

34F Purposes of Climate Change Fund

The purposes of the Fund are as follows:

(a) to provide funding to reduce greenhouse gas emissions and the impacts of climate change associated with water and energy activities

(b) to provide funding to encourage water and energy savings and the recycling of water

(c) to provide funding to reduce the demand for water and energy, including addressing peak demand for energy

(d) to provide funding to stimulate investment in innovative water and energy savings measures

(e) to provide funding to increase public awareness and acceptance of the importance of climate change and water and energy savings measures

(f) to provide funding for contributions made by the State for the purposes of national energy regulation.

34G Payments into Climate Change Fund

(1) There is payable into the Fund:

(a) all money received from contributions required to be made to the Fund under Division 3, and

(b) all money advanced by the Treasurer for the Fund, and

(c) all money appropriated by Parliament for the purposes of the Fund, and

(d) the proceeds of the investment of money in the Fund, and

(e) all money directed or authorised to be paid into the Fund by or under this or any other Act or law, and

(f) all money received from voluntary contributions to the Fund made by any other person or body.

(2) Without limiting subsection (1) (f), State agencies are authorised by this section to make voluntary contributions to the Fund.

(3) Subsection (2) does not authorise a State water agency or a distribution network service provider to refuse to pay a contribution to the Fund that is payable under Division 3.

34H Payments out of Climate Change Fund

(1) There is payable from the Fund:

(a) any money approved by the Minister to fund all or any part of the cost of any measure that the Minister is satisfied promotes a purpose referred to in section 34F, and

(b) any money approved by the Minister to fund all or any part of the contributions that the State is required to make for the purposes of national energy regulation, and

(c) any money required to meet administrative expenses related to the Fund, and

(d) any money required to meet administrative expenses of the Minister in connection with the Minister's functions under this Act in relation to savings action plans, and

(e) any money directed or authorised to be paid from the Fund by or under this or any other Act or law.

(2) In exercising the Minister's functions under subsection (1) (a) (but without limiting the generality of that paragraph), the Minister may:

(a) approve selection criteria from time to time to be applied to determine the kinds of water or energy savings measures that will be eligible for funding, and

(b) approve the funding of community grants from the Fund, being grants awarded on the basis of their merit in advancing one or more of the purposes referred to in section 34F, established through a competitive selection process, and

(c) require a person or body seeking funding for a water or energy savings measure to do either or both of the following as a precondition to applying for or obtaining funding:

(i) to submit a water savings action plan or energy savings action plan (as the case requires) that includes details about the measure,

(ii) to provide any other information requested by the Minister about the measure, and

(d) obtain and have regard to any advice, recommendations or other information provided to the Minister by a committee established by the Minister under Division 5, or by any other person or body, that the Minister considers relevant.

(3) The Minister is to produce an annual report detailing fund allocations and programs and anticipated benefits, by reference to key performance indicators, to be achieved in advancing any one or more of the purposes referred to in section 34F.

(4) The annual report is to include an evaluation of the effectiveness of each program as it is completed under the Fund.

(5) The annual report is to be tabled in each House of Parliament within 6 months after the end of the financial year to which it relates.

(6) The Minister is to publish each annual report so as to promote, to the NSW public, schemes, technologies and processes that address climate change and to inform the NSW public about consumer choices and procurement decisions.

Appendix B
Climate Change Fund Advisory Committee

Table B1

Members of Climate Change Fund Advisory Committee as at 30 June 2009

Organisation	Name	Title
Department of Environment and Climate Change	Simon Smith	Deputy Director General, Climate Change, Policy and Programs
NSW Treasury	Lindsey Williams	Director, Environment, Climate Change and Water Branch
EnergyAustralia	Peter Birk	Executive Manager, Development & Innovation
Country Energy	Ben Hamilton	General Manager, Corporate Strategy
Integral Energy	Karen Waldman	General Manager Regulatory and Corporate Affairs
Sydney Water	Andrew Kirkwood	Manager, Customer Resource Management
Clean Energy Council	Peter Szental	Deputy Chair of Clean Energy Council
Local Government and Shires Associations	Genia McCaffery	President of Local Government Association
Energy Users Association of Australia	Roman Domanski	Executive Director
Energy Retailers Association of Australia	Tim Nelson	Head of Carbon and Sustainability, AGL Energy
Total Environment Centre	Jeff Angel	Executive Director
CSIRO Energy Technology	Dr Stephen White	Distributed Energy Manager
NSW Business Chamber	Paul Orton	General Manager Policy and Membership
Property Council of Australia	Angus Nardi	NSW Policy Manager
Australian Water Association	Paul Hackney	Senior Water Scientist, NSW Water Solutions
Public Advocacy Interest Centre	Robin Banks	Chief Executive Officer
Big Switch Projects	Gavin Gilchrist	Managing Director
Beletich Associates	Steve Beletich	Principal

Terms of Reference of Climate Change Fund Advisory Committee

The Climate Change Fund has been established to provide funding:

- to reduce greenhouse gas emissions and the impacts of climate change associated with water and energy activities
- to encourage water and energy savings and the recycling of water
- to reduce the demand for water and energy, including addressing peak demand for energy
- to stimulate investment in innovative water and energy savings measures
- to increase public awareness and acceptance of the importance of climate change and water and energy savings measures
- for contributions made by the State for the purposes of national energy regulation.

Under the *Energy and Utilities Administration Act 1987*, the Minister for Climate Change and the Environment may appoint Advisory Committees for the purpose of advising the Minister in the exercise of his functions.

Purpose of Advisory Committee

The Advisory Committee will have the following functions:

- advise the Minister and the Department of Environment and Climate Change on strategy and priority areas for the fund
- review these priorities to take account of changing conditions and the success of various climate change activities, and
- monitor, review and report to the Minister on the overall performance of the fund against the established objectives.

Membership

The Advisory Committee consists of representatives from:

- Department of Environment and Climate Change NSW
- NSW Treasury
- local government
- water and electricity businesses
- water and energy services industry
- NSW water and electricity customers (including large business users and property industry) or representative groups
- environment groups
- individuals with expertise in water or energy savings measures.

Operation

The Advisory Committee is chaired by the Deputy Director General (Climate Change, Policy and Programs) of DECC and meets two or three times per year or as required. It is serviced by DECC.

Appendix C Communication activities

Overview

Communication activities for NSW Climate Change Fund target:

- General public (families and householders)
- Business and major industry
- Renewable energy generators/companies
- Schools
- Local government
- Public facility providers.

Environment Line

DECC's Environment Line (1300 361 967) number is the primary contact number for all telephone enquiries relating to the Climate Change Fund. For the period 1/7/08 to 30/6/09, the Environment Line fielded 43,433 calls. This accounts for just over 45 per cent of all Environment Line information calls for the year and was nearly double the amount of calls received in the previous financial year.

Media Releases

The following CCF media releases were issued by the NSW Government in 2008–2009:

- Cash rebates to encourage green washing machine purchase – 21 July 2008
- Fridge buyback pays $35 for energy guzzling old fridges – 6 August 2008
- Sydney Opera House embraces energy efficiency – 15 August 2008
- $10.7 million for local climate change projects – 26 September 2008
- Getting in early on climate change – 28 October 2008
- School project helps save Central Coast water – 13 November 2008
- NSW Investment in New Renewable Energy Technologies – 25 November 2008
- NSW Government Legislates for New Energy Efficiency Scheme – 28 November 2008
- $35 million investment to help business be green – 15 December 2008
- NSW residents' climate change success – 20 December 2008
- Uptake by LGA to 31 December 2008 – February 2009
- Household rebates reveal the greenest suburbs in NSW – 13 February 2009
- 50,000th household rebate claimed – 12 February 2009
- NSW Govt announces extension to household rebates program – 20 February 2009
- NSW sets targets for Energy Savings Scheme – 27 February 2009
- NSW residents' climate change success! – 20 December 2009
- Fridge Program Takes 5000 Old Fridges Out Of Circulation – 15 November 2008
- Deputy Premier encourages people to switch off for Earth Hour – 12 March 2009
- Fridge Buyback expands into the Illawarra – 23 March 2009
- Small business now has a new way to save money and energy – 01 April 2009
- Industry, community asked for input into NSW Energy Savings Scheme – 02 April 2009
- Special Green Skills Taskforce for NSW – 02 April 2009
- 70,000th household rebate claimed – 14 May 2009
- Rees launches program to cut home power bills – 17 May 2009
- New campaign to educate families on carbon pollution – 17 May 2009
- Green thumbs up for wind farm – 3 June 2009
- NSW unites for action on climate change on World Environment Day – 5 June 2009
- Energy efficiency legislation passed by NSW Parliament – 17 June 2009
- $150 million plan helps consumers save money and the environment – 18 June 2009.

Website

Information and updates on the NSW Climate Change Fund are posted on the DECC website at www.environment.nsw.gov.au/grants/ccfund.htm

The web pages relating to the NSW Climate Change Fund received a total of 538,390 page views, an increase of more than 300,000 views from the previous year.

The NSW home rebate program homepage received a total of 131,829 views, with linked pages attracting a record 310,419 views.

Publications

The following publications were produced for the Climate Change Fund. Rebate brochures and applications forms are distributed to local councils and suppliers on request. They are also available on the DECC website.

Print Publications

PUB NO.	Title	Distribution
DECC2007/426	Central Coast Rainwater Tank Rebate application form	2,460
DECC2007/428	Hunter Rainwater Tank Rebate application form	1,190
DECC2009/351	Residential Rebate Program brochure	94,170
DECC2007/433	Ceiling Insulation Rebate application form	12,857
DECC2007/278	Rainwater Tank Rebate application form	20,362
DECC2009/350	Hot Water System Rebate application form	50,123
DECC2009/349	Washing Machine Rebate application form	9,397
DECC2009/342	Low Income Household Refit Program – Western Sydney Pilot brochure	30,000
DECC2009/341	Low Income Household Refit Program – Western Sydney flier for community organisations	5,000

Web publications

PUB NO.	Title
DECC 2009/148	Public Facilities Guide for Applicants – Demonstration stream
DECC 2009/147	Public Facilities Guide for Applicants – Community Savers stream
DECC 2009/400 DECC 2009/534	NSW Rebate uptake by LGA – to 31 March 2009 – to 30 June 2009

Local Promotion Program

The Local Promotion Program was established to encourage councils to incorporate rebate promotions in existing sustainable living activities. Up to $5,000 is available for any promotional activity, nominated by the council, which encourages householders to save water and energy. DECC is also providing quarterly rebate uptake data by LGA online and to councils on request. Councils are required to provide reports on distribution and reach of promotional activities. Rebate uptake pre and post promotion will be measured to evaluate the success of different activities/strategies.

Advertising

- Statewide regional newspaper advertising Public Facilities Funding Round 2 – March 2009
- Western Sydney print advertising for the Western Sydney pilot of the Low Income Household Refit Program (Reduce Your Bills Today) – July 2009

Appendix D Funding approved in 2008–2009

Notes to Appendix D tables

- Tables display funding approved by the Minister, not actual expenditure. Expenditure by program is outlined on page 34.
- Highlighted rows denote completed projects and savings are actual. Other projects are estimated savings as provided in project proponents' approved applications or signed funding agreements.
- Numbers after program type relate to the funding round number.
- Fund round abbreviations:

WSF = Water Savings Fund
CCWSF = Central Coast Water Savings Fund
PFProll = Public Facilities Program rolling program
RWT = Rainwater Tanks
WM = Washing Machine
ESF = Energy Savings Fund
ED = Electricity Distributors Schools
PFP1 = Public Facilities Program Round 1
HWS = Hot Water Systems
FBB = Fridge Buy Back
GBP = Green Business Program
Schools EE = Schools Energy Efficiency Program
RED = Renewable Energy Development Program
INS = Insulation

Table D1

Residential projects 2008–2009

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
PFP1e	EcoSave Pty Ltd	'Learning by Doing' at Charles Sturt University	77,019	4.4	442	472	295.2
CCWSF3	Royal Freemasons Benevolent Institution	Reducing water consumption in Aged Care laundries	39,500	0.4	-	-	-
CCWSF3	Vietnam Veterans Keith Payne V.C Hostel Limited	Reducing water consumption in Aged Care laundries	28,000	0.3	-	-	-
CCWSF3	Woy Woy Community Aged Care Limited	Reducing water consumption in Aged Care laundries	41,500	1.0	-	-	-
		Funded residential projects – total	**186,019**	**6.2**	**442**	**472**	**295.2**

Table D2

Community sector projects 2008–2009

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
PFP1w	Police & Community Youth Clubs NSW Ltd, Griffith	Greening PCYC Griffith – with water-saving irrigation	18,728	0.4	-	-	-
PFP1w	Mogo Zoo	Mogo Zoo Integrated Water Cycle Management Project	499,000	2.5	-	-	-
PFP1w	Oberon R.S.L Outdoor Mens Lawn Bowls Club	Oberon Synthetic Bowling Green and Storm Water Re-use Project	138,000	1.2	-	-	-
PFP1w	University of New South Wales	Water Conservation Measures at UNSW Lifestyle Centre	131,065	0.6	-	81	-
PFP1w	Woollahra Municipal Council	Sustainable Woollahara – Water Saving Challenge	79,427	0.7	-	-	-
PFP1e	Chillingham Community Association	Community sustainability showcase	48,409	-	4	4	-
PFP1e	Comboyne Community Association Inc	Mid North Coast Centre for Sustainability	60,953	-	10	11	-
PFP1e	Petersham Bowling Club Ltd	Shades of Green Energy Project	23,450	-	11	12	-
CCWSF3	Mingara Recreation Club Ltd	Mingara Leisure Centre Rainwater Harvesting	60,000	2.2	-	-	-
PFroll3	Marine Discovery Centre Bondi	Energy saving by example at the Marine Discovery Centre Bondi Beach	25,460	-	32	34	-
		Funded community projects – total	**1,084,492**	**7.7**	**57.0**	**142.2**	**-**

Table D3

School projects 2008–2009

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCo_2e/yr)	Savings (kW/yr)
SchoolsEE	Sixteen NSW Department of Education schools	Schools lighting retrofit program	2,336,198	-	777	824	-
PFP1w	The Association for Christian Education Blacktown	Water Harvesting and Sustainable Washroom Facilities upgrade	98,800	4.3	-	-	-
PFP1e	Sylvania Public School	Retrofit hall to create outcomes same as aircon without use of power	103,951	-	1	1	-
PFP1e	Newtown High School of the Performing Arts	Newtown High School energy and water savings project	76,727	1.7	3	3	-
CCWSF3	Bateau Bay Public School	Bateau Bay Public School Rainwater Harvesting Project	60,000	1.5	-	-	-
CCWSF3	Woongarah Public School	Woongarah Public School Rainwater Harvesting Project	50,000	1.8	-	-	-
		Funded schools projects – total	**2,725,676**	**9.3**	**781**	**828**	**-**

Table D4

Total Community sector projects 2008–2009

	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
Funded Community sector projects (includes all community and all schools site projects as outlined in Tables D2 and D3)	3,810,168	17	838	889	-

Table D5

Local government projects 2008–2009

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
PFP1w	Baulkham Hills Shire Council	Making Waves (stage 1: water efficiency)	154,000	7.4	-	-	-
PFP1w	Bland Shire Council	West Wyalong Stormwater Capture and Management Project	510,000	15.0	-	-	-
PFP1w	City of Botany Bay Council	Water Saving Initiatives for Botany Aquatic Centre.	97,000	1.5	-	-	-
PFP1w	City of Canada Bay Council	Saving Energy and Water by using the weather	220,950	19.5	68.4	73	-
PFP1w	Carrathool Shire Council	Carrathool Shire Water and Energy Saving Project	41,600	1.0	12	13	-
PFP1w	Cobar Shire Council	Water reuse and solar heating for Cobar Memorial Pool.	150,000	1.9	222	237	-
PFP1w	Coffs Harbour City Council	Coffs Harbour Botanic Gardens reclaimed water irrigation project	218,486	9.1	-	-	-
PFP1w	Fairfield City Council	Save4Future – Rainwater tanks at Early Learning Centres	81,180	0.2	-	-	-
PFP1w	Ku-ring-gai Council	A partnership for sharing alternate water supplies	112,900	1.8	-	-	-
PFP1w	Ku-ring-gai Council	From Waste Water to Valuable Water. Reusing Leachate	488,600	10.9	-	-	-
PFP1w	Murray Shire Council	Moama Recreation Reserve – Self Sustainable Irrigation Supply	87,500	30.1	-	-	-
PFP1w	North Sydney Council	Forsyth Park Stormwater Reuse Project	396,000	5.1	-	-	-
PFP1w	Port Macquarie-Hastings Council	Port Macquarie Historic Amenities Education Model	39,800	0.1	1.9	2	-
PFP1w	Randwick City Council	Randwick Community Centre's (RCC) Sustainability Makeover	211,700	0.2	4.4	5	-
PFP1w	Port Macquarie-Hastings Council	Water capture at Port Macquarie transfer station	14,500	0.2	-	-	-
PFP1w	Willoughby City Council	Backwash Recycling at Willoughby Leisure Centre	148,650	0.7	-	-	-
PFP1e	Baulkham Hills Shire Council	Community Environment Centre – Sustainable Home Demonstration Site	49,650	0.3	4.9	5	-
PFP1e	Coffs Harbour City Council	Rigby House Green Retrofit (Coffs first PV solar public building)	735,000	-	112	120	-
PFP1e	Hornsby Shire Council	Demonstrating how HVAC Predictive Maintenance can reduce CO2 Emissions	131,000	-	98.2	105	-
PFP1e	Junee Shire Council	Junee Library – A community building that embraces green technologies	80,773	0.2	30	32	-
PFP1e	Lake Macquarie City Council	Civic and Cultural Energy Savings in Lake Macquarie	89,573	-	107	114	-
PFP1e	Lake Macquarie City Council	Happy Campers: Energy & Water Savings in Lake Macquarie Holiday Parks	93,124	1.8	26	28	-
PFP1e	Manly Council	Manly Oval Energy Saving Lighting Project	154,000	-	16	17	-
PFP1e	Parramatta City Council	Parramatta City Council Public Facility Energy & Water Saving Project	35,358	0.7	89	95	-
PFroll3	Blue Mountains City Council	Blue Mountains Leisure Centres – Energy Savings on Pool Heating	27,500	-	171	183	-
PFroll3	Willoughby City Council	Chatswood Civic Place – Innovative sustainable energy savings initiatives and environmental education centre	121,000	-	51.57	55	-
		Funded local government projects – total	**4,489,844**	**108**	**1,014**	**1,083**	**-**

Table D6

NSW Government agency projects 2008–2009

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
PFP1w	Department of the Arts, Sport and Recreation	Water Savings at Narrabeen and Jindabyne Sports Centres	330,000	37.6	-	-	-
PFP1e	NSW National Parks and Wildlife Service	NSW NPWS, the MPA NSW and NSW Maritime Staff and Community Facility	259,120	0.1	29	31	-
PFP1e	Department of the Arts, Sport and Recreation	Energy Savings at Narrabeen and Jindabyne Sports Centres	1,117,500	-	1,285.2	1,373	-
PFP1e	Kingsgrove to Revesby Rail Quadruplication Alliance (K2RQ)	Photovoltaic Integrated Noise Barrier Initiative	1,030,000	-	900	961	-
PFP1e	Sydney West Area Health Service	SWAHS – Western Sector Energy Efficiency Projects	325,000	-	1,429	1,526	-
PFP1e	TAFE NSW – New England Institute	Electricity Consumption Reduction Gunnedah Campus	111,995	-	106.8	114	-
PFroll3	TAFE New England Institute	Reduction in electricity use and CO2 emissions Tamworth TAFE Library	59,300	-	256	273	-
		Funded state government projects – total	**3,232,915**	**38**	**4,006**	**4,278**	**-**

Table D7

Total Government sector projects 2008–2009

	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
Funded Government sector projects (includes all local government and state government site projects as outlined in Tables D5 and D6)	7,722,759	145	5,020	5,362	-

Table D8

Business projects 2008–2009

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
PFP1e	University of New England	Reducing GGE & Saving Energy Onsite in a cool climate NE Region	250,000	-	-	50	-
PFP1e	University of New South Wales	Cogeneration Facility – Lowy Cancer Centre – UNSW	500,000	-	2,192	2,341	-
CCWSF3	Glengara Village	Glengara Village Rainwater Harvesting Project	24,000	0.9	-	-	-
CCWSF3	Lowes TC Pty Ltd	Rainwater Harvesting for Elite Plug Production at Lowes TC	30,110	2.0	-	-	-
CCWSF3	Sulo MGB Australia Pty Ltd	Process Water Saving Project for Factory Cooling Towers	185,000	7.0	-	-	-
CCWSF3	Woolworths Limited	Rainwater Harvesting for Woolworths Wyong Regional Distribution Centre	150,000	13.3	-	-	-
RED1	Aerogenesis Australia Pty Limited	The Aerogenesis Urban Wind Farm	750,884	-	360	384	40
RED1	Biogen Limited	Biogen Sydney G1 Project	2,500,000	-	293,000	312,924	-
RED1	Cargill Australia Limited	Wagga Wagga Biogas Project	2,900,000	-	9,986	10,665	1,200
RED1	Geodynamics Limited	Hunter Valley Geothermal Power Project	10,000,000	-	78,840	84,201	10,000
RED1	GPT Group	GPT Group- Solar Thermal Cooling Project	500,000	-	77	82	161
RED1	Macquarie Generation	Liddell Power Station Solar Plant	9,250,000	-	3,500	3,738	-
RED1	Smart Storage Pty Ltd	Ultra Battery Smart Storage for Wind Applications	1,425,000	-	346	370	-
		Funded business projects – total	**28,464,994**	**23**	**388,301**	**414,755**	**11,401**

Table D9

2008–2009 Summary

2008–2009 allocated funding	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
Residential projects	186,019	6	442	472	295
Community projects	1,084,492	8	57	61	-
Local Government projects	4,489,844	108	1,014	1,083	-
Schools projects	2,725,676	9	781	828	-
NSW government agency projects	3,232,915	38	4,006	4,278	-
Business projects	28,464,994	23	388,301	414,755	-
Total	**40,183,940**	**192**	**394,601**	**421,5602**	**295**

Appendix E Funding approved before 30 June 2008

Notes to Appendix E tables

- Tables display funding approved by the Minister, not actual expenditure. Expenditure per program is outlined on page 34.
- Highlighted rows denote completed projects and savings are actual. Other projects are estimated savings as provided in project proponents' approved applications or signed funding agreements.
- Numbers after program type relate to the funding round number.
- Fund round abbreviations:

WSF = Water Savings Fund
CCWSF = Central Coast Water Savings Fund
PFProll = Public Facilities Program rolling program
ESF = Energy Savings Fund
ED = Electricity Distributors
PFP1= Public Facilities Program Round 1
GBP = Green Business Program
Schools EE = Schools Energy Efficiency Program
RED = Renewable Energy Development Program

Table E1

Residential projects pre-2008

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
ESF1	Low Energy Supplies and Services (LESS)	Rural and Regional Energy and Water Retrofit	489,000	-	55,041	58,784	1615
ESF1	EnergyAustralia	Residential Refit Program – Sydney	400,000	-	5,937.9	6,342	2344.4
ESF1	Next Energy	2nd Fridge Buyback Scheme	400,000	-	2,084	2,226	188
ESF1	Integral Energy	Smart Home Audit Program	298,689	-	1,183	1,263	-
ESF1	Murray Regional Development Board (on behalf of MESP Consortium) Albury Council	Murray Energy Savings Program	2,106,000	-	10,630	11,353	795
ESF1	Big Switch Projects Pty Ltd	Northern Wollongong Home Energy Initiative	400,000	-	369	395	112
ESF2	Australian Conservation Foundation	ACF's GreenHome – community education for sustainable living	889,935	-	2,700	2,884	675
ESF1	EnergyAustralia	Hot Water Conversion Program	400,000	-	3,678	3,928	-
PFroll1	Charles Sturt University	Facilitating energy-saving behaviours among university student residents	72,631	-	30	32	-
WSF1	Save-a-drop Products Australia Pty Limited	Save-A-Drop Water Saving Devices	120,000	21.5	-	-	-
WSF2	Aged Care Association Australia – NSW	Residential Aged Care Water and Energy Savings Program	545,000	63.3	-	-	-

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
WSF2	Rainsaver Pty Ltd	Auxiliary Water Supply for Sydney Using Rainsaver Storage Gutter	800,000	154.4	-	-	-
WSF2	Waterwise Systems Australia Pty Ltd	Greywater Gardens: A Community Demonstration	127,259	18.7	-	-	-
WSF3	Aged Care Association Australia – NSW	Residential Aged Care Facility Leak Detection and Water Savings Program	500,000	45.5	-	-	-
WSF3	Fieldforce Services Pty Ltd	Enviro Saver Toilet Rebate Program	400,000	52.6	-	-	-
WSF3	Discovery Point Pty Ltd	Sustainable water recycling for Discovery Point Apartments and Cooks River Parks	2,273,000	98.0	-	-	-
CCWSF1	The Hammond Care Group	Woy Woy Nursing Home Water Saving Project	33,780	2.8	-	-	-
CCWSF1	Rainsaver Pty Ltd	Auxhilliary Water Supply for the Central Coast Using Rainsaver Storage Gutters	74,000	12.0	-	-	-
CCWSF2	University of Technology, Sydney	Pilot Evaluation of Water Savings from Toilet Retrofits and Shower Monitors in Central Coast Households	34,520	1.5	-	-	-
CCWSF2	Gosford Council	Non-contestable rebate funding – washing machines	300,000	23.9	-	-	-
CCWSF2	Wyong Shire Council	Non-contestable rebate funding – washing machines	300,000	47.0	-	-	-
		Funded residential projects – total	**10,963,814**	**541.2**	**81,653.2**	**87,206**	**5,729**

Table E2

Community sector projects pre-2008

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
ESF2	Community Broadcasting Association of Australia	Energize: Energy Savings Education Project	142,000	-	7,233.5	7,725	350
PFroll2	Fairfield City Council	Energy Efficiency Community Hall	25,700	-	3.24	3	-
WSF1	Centennial Parklands Foundation	Centennial Parklands Water Saving Projects	139,980	11.0	-	-	-
WSF1	Hornsby Shire Council	Harvesting stormwater for irrigation usage at 3 local bowling clubs	206,818	11.4	-	-	-
WSF2	Sutherland Shire Council	Cronulla – Woolooware Wastewater Reuse Scheme	881,000	414.1	-	-	-
WSF2	Northbridge Golf Club Ltd	Stormwater harvesting and reuse	534,071	92.3	-	-	-
WSF2	Pennant Hills Golf Club Limited	Wastewater treatment plant	1,100,000	100.0	-	-	-
WSF3	Ryde Hunters Hill District Hockey Club Inc	Recycling Stormwater for use on Synthetic Hockey Field, North Ryde	25,000	4.2	-	-	-
WSF3	Menai Hawks Junior Soccer Club	Buckle Reserve Menai, Water Harvesting and Water Recycling Project	124,250	4.4	-	-	-
WSF3	Roseville Golf Club Ltd	Construction of a Water Storage Dam and Stormwater Recycling System	370,170	40.0	-	-	-

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
WSF3	North Ryde Golf Club Limited	Sewer Mining Scheme to Replace Potable Water for Irrigation	1,000,213	62.8	-	-	-
CCWSF1	Lutanda Childrens Services	Water Wise at Camp Toukley	11,500	2.7	-	-	-
CCWSF1	Toukley Golf Club Ltd	Toukley Golf Club Stormwater Harvesting	69,000	33.3	-	-	-
CCWSF1	Halekulani Bowling Club Limited	Halekulani Bowling Club's Water saving scheme	24,861	6.0	-	-	-
CCWSF1	Ourimbah Lisarow R S L Club Ltd	Ourimbah Lisarow R S L Club Water Saving and Harvesting Plan	46,500	3.7	-	-	-
CCWSF1	Toukley District Bowling Club Limited	Toukley District Bowling club saves precious water 'Tombstone flushed with success'	16,500	2.5	-	-	-
CCWSF1	Wyong Council	Wadalba Community School Stormwater Harvesting	81,350	2.9	-	-	-
CCWSF2	Central Coast Hockey Inc	Storm Water Harvesting for Water Based Hockey Field – Pollock Ave Hockey Field	70,000	2.8	-	-	-
CCWSF2	The Entrance Cricket Club	Eastern Road Oval Stormwater Harvesting Project	46,620	5.4	-	-	-
CCWSF2	Budgewoi Soccer Club	Budgewoi Soccer Club, Tertiary Treated Effluent Reuse Project	250,000	16.0	-	-	-
CCWSF2	Doyalson-Wyee RSL Club	Doyalson-Wyee RSL Club Playing Fields Stormwater Harvesting Project	46,000	5.9	-	-	-
CCWSF2	Gwandalan Bowling Club Limited	Storm Water and Harvesting Recycle System and Proposed Upgraded Irrigation System	35,400	2.5	-	-	-
CCWSF2	Mingara Rebels Baseball Club	Adelaide Street Oval Stormwater Harvesting Project	66,500	3.4	-	-	-
CCWSF2	Mingara Recreation Club Ltd	Storm Water Harvesting from Hansen Wetland to provide sustainability and extension to existing stormwater harvesting project – Mingara Recreation Club	93,820	7.0	-	-	-
CCWSF2	Northern Lakes Power Junior AFC	Northlakes Oval Stormwater Harvesting Project	70,000	4.5	-	-	-
CCWSF2	Nygmpie Aboriginal Corporation	Conservation of Excess Rainwater by Water Storage	31,208	0.6	-	-	-
CCWSF2	Sanctuary Point Developments Pty Ltd	Ozone Laundering in on-premise laundry in aged care facility	32,850	3.7	-	-	-
CCWSF2	Northern NSW Christian Soccer Association	Killarney Vale Athletics Field Stormwater Harvesting Project	61,000	4.9	-	-	-
CCWSF2	Uniting Care Ageing-Hunter, Central Coast and New England	Recycle Water ex Bateau Bay Sewerage plant salvage gardens in aged care facilities.	80,000	3.0	-	-	-
CCWSF2	Wyong Rugby League Club Group	Storm Water Harvesting from Kanwal Wetland to provide irrigation system for the Wyong League Club sports fields	80,000	5.6	-	-	-
CCWSF2	Wyong Wildcats Baseball Club Incorporated	Watanobbi Oval Stormwater Harvesting Project	76,500	5.9	-	-	-
CCWSF2	Mingara Recreation Club Ltd	Mingara Swimming Pools Backwash Recycling Project – Mingara Recreation Club	114,300	7.0	-	-	-
		Funded community projects – total	**5,953,111**	**869.5**	**7,236.7**	**7,728.8**	**350.0**

Table E3

School projects pre-2008

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
SchoolsEE	Five NSW Department of Education schools	Schools Lighting Retrofit Program	650,000	-	241	257	-
PFroll2	Climate Change Balmain-Rozelle	Solar for Schools Program	60,000	-	17	18	11
PFroll2	Eurobodalla Shire Council	Eurobodalla kids' voices for cooler choices	40,000	-	3,425	4	2
WSF3	The Council of the King's School	King's School Water Recycling and Self Provision Program	400,000	44.1	-	-	-
CCWSF1	Hunter Councils Inc	Central Coast Public Schools Integrated Water Program	113,070	15.0	-	-	-
CCWSF1	Rumbalara Environmental Education Centre	Take it easy with water	39,900	20.0	-	-	-
CCWSF1	Wyong Council	Tuggerah Lakes Secondary College/OLR Primary School Treated Effluent Recycling	111,500	6.1	-	-	-
CCWSF2	St John Baptist Catholic Primary School Woy Woy	Reduction of water usage in toilet facilities	67,000	1.6	-	-	-
CCWSF2	Brisbane Water Secondary College–Umina Campus	Brisbane Water Secondary College Umina Middle School Campus 'Our Water Wise School Community'	28,000	4.5	-	-	-
CCWSF2	Gwandalan Public School	Gwandalan Public School-Tertiary Treated Effluent Reuse Project	55,000	2.0	-	-	-
		Funded schools projects – total	**1,564,470**	**93.4**	**261**	**279**	**13.0**

Table E4

Total community sector projects pre-2008

	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
Funded Community sector projects (includes all community and schools site projects as outlined in Tables E2 and E3)	7,517,581	963	7,498	8,008	363

Table E5

Local government projects pre-2008

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
ESF1	Southern Sydney Regional Organisation of Councils	SLI Program Energy Efficiency Implementation Project	4,180,880	-	14474	15,458	3423
ESF1	Eco$ave Pty Ltd	Lighting Retrofit and Education Project	206,050	-	1170	1,250	345
ESF1	Willoughby City Council	Cogeneration at Willoughby Leisure Centre	200,000	-	610	651	197
ESF2	Fairfield City Council	Sustain'n'Save – Energy Smart Council leading the way in the Fairfield Leisure Centre and Administration Centre	111,732	-	233	249	48
PFroll2	Dungog Shire Council	Clarence Town Swimming Pool Solar Heating	20,000	-	0.703	1	-
WSF1	Warringah Aquatic Centre	Rainwater and Overflow Catchment Project	53,500	4.0	-	-	-
WSF1	The Irrigation Association of Australia Limited	Improving urban irrigation practice in Sydney	270,000	25.0	-	-	-
WSF1	Kogarah Municipal Council	Beverley Park Water Reclamation	665,000	159.1	-	-	-
WSF1	North Sydney Council	Cammeray Park and St Leonards Park Water Reuse Project	300,000	90.0	-	-	-
WSF1	Waverley Council	Waverley Groundwater Irrigation Project	74,900	16.0	-	-	-
WSF1	Mosman Municipal Council	Stormwater Reuse for Balmoral Oval and Foreshore Reserve, Mosman, Sydney	140,000	15.3	-	-	-
WSF1	Ku-ring-gai Council	Sewer mining and stormwater harvesting for Gordon and Killara golf courses	831,500	125.0	-	-	-
WSF1	URS Australia Pty Ltd	Reducing potable water use on golf courses and parks	40,670	13.3	-	-	-
WSF1	Lane Cove Council	Alternate Water Supply for Lane Cove Golf Course	49,550	5.6	-	-	-
WSF1	Ryde City Council	Water Savings Initiatives at Ryde Aquatic Leisure Centre	431,841	25.6	-	-	-
WSF2	Campbelltown City Council	Kooringa Reserve Stormwater Mining Project	70,000	3.7	-	-	-
WSF2	The Council Of The Municipality Of Hunters Hill	Rainwater Harvesting and Greywater Recycling	40,000	3.4	-	-	-
WSF2	Kogarah Municipal Council	Beverley Park Water Reclamation	1,000,000	113.5	-	-	-
WSF2	Auburn Council	Wyatt Park Sustainable Water Program – Stage 1	55,000	65.9	-	-	-
WSF2	Blacktown City Council	Rainwater harvesting and pool filter backwash water reuse	145,000	0.6	-	-	-
WSF2	Penrith City Council	Water Recycling and Rainwater Harvesting	325,490	13.7	-	-	-
WSF2	The Council Of Camden	Recycled Water Project	200,000	12.9	-	-	-
WSF2	Baulkham Hills Shire Council	Rainwater Harvest for Irrigation reuse	28,000	4.0	-	-	-
WSF2	URS Australia Pty Ltd	Water savings at Auburn Botanic Gardens and Rosnay Golf Course	46,000	12.8	-	-	-

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
WSF2	Wollondilly Shire Council	Water Savings at Wollondilly Pools	30,000	4.6	-	-	-
WSF2	Wollondilly Shire Council	Tahmoor Sportsground Groundwater Bore	45,000	4.9	-	-	-
WSF2	Willoughby City Council	Chatswood CBD and Civic Place Integrated Water Management System	1,881,143	103.0	-	-	-
WSF2	Manly Council	Effluent Recycling for Irrigation	1,600,000	162.3	-	-	-
WSF3	Strathfield Municipal Council	Stormwater Harvesting for Irrigation of Mason Park	157,500	10.9	-	-	-
WSF3	Waverley Council	Bronte Park Stormwater Harvesting & Reuse Project	106,220	15.4	-	-	-
WSF3	URS Australia	Generating potable water savings across 40 'City of Sydney' irrigated landscapes	106,900	50.6	-	-	-
WSF3	City of Canada Bay Council	Sewer Mining for Irrigation of City of Canada Bay Parks and Golf Courses	1,227,500	139.0	-	-	-
WSF3	Pittwater Council	Sydney Lakeside Caravan Park – Integrated Water Harvesting and Reuse Scheme	260,568	13.3	-	-	-
WSF3	North Sydney Council	North Sydney Stormwater Reuse Project	1,200,000	90.0	-	-	-
WSF3	Woollahra Municipal Council	Sportsfield Subsurface Irrigation and Stormwater Harvesting System	270,200	2.0	-	-	-
WSF3	The Council of the Shire of Hornsby	Greenway Park Water Harvesting and Athletics Field Irrigation Project	274,276	17.8	-	-	-
CCWSF1	Wyong Council	Baker Park Stormwater Harvesting	31,000	5.0	-	-	-
CCWSF1	Wyong Council	Maximising Irrigation Efficiency at Wyong Shire Council Sporting Fields	62,500	15.6	-	-	-
CCWSF1	Wyong Council	Taylor Park Stormwater Harvesting	39,600	4.5	-	-	-
CCWSF1	Wyong Council	Tunkuwallin Oval Stormwater Harvesting and Tertiary Treated Effluent Reuse	149,000	1.6	-	-	-
CCWSF1	Gosford Council	Tertiary Upgrade and Tanker Filling Station Kincumber STP	346,500	80.0	-	-	-
CCWSF1	Gosford Council	Tertiary Upgrade and Tanker Filling Station Woy Woy STP	178,500	95.1	-	-	-
		Funded local government projects – total	**17,451,520**	**1,525**	**16,488**	**17,609**	**4,013**

Table E6

NSW Government agency projects pre-2008

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
ESF2	Country Energy	Energy and Water Savings through Minimisation of Water Evaporation	700,000	-	429	458	-
PFroll1	Powerhouse Museum	Returning power to the powerhouse	461,000	-	1970	2,104	520
PFroll1	The Legislature	Parliament House – Energy Reduction Program	1,000,000	-	2360	2,520	745
WSF3	Zoological Parks Board of NSW	Upgrade of the Taronga Zoo wastewater treatment and reuse plant	630,000	43.3	-	-	-
WSF3	The Legislature	Parliament House water recycling, alternative supply and harvesting initiative	110,000	17.9	-	-	-
		Funded state government projects – total	**2,901,000**	**61**	**4,759**	**5,083**	**1,265**

Table E7

Total Government sector projects pre-2008

	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
Funded Government sector projects (includes all local government and state government site projects as outlined in Tables E5 and E6)	20,352,520	1,586	21,247	22,691	5,278

Table E8

Business projects pre-2008

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
ESF1	Visy R & D Pty Ltd	Visy Paper Smithfield Site Power Factor Correction	108,500	-	-	-	2,500
ESF1	Visy R & D Pty Ltd	Optimise power use by pumps, agitators and pulp screening equipment	181,000	-	3,331	3,558	396
ESF1	Investa Property Group	Investa Greenhouse Guarantee Funding	500,000	-	3,783	4,040	208
ESF1	AMCOR Packaging (Australia) Pty Ltd	Optimising Compressed Air Costs Using a Holistic Approach	102,000	-	460.9	492	-
ESF1	Energy Response Pty Ltd	Demand Side Response Project in Constrained Areas	2,500,000	-	-	-	25,000
ESF1	University of Newcastle	MS & Library Compressor Upgrade to Turbocor & Data Centre Grid Connect Generator	175,000	-	185	198	220.6
ESF1	Impact Employee Communications Pty Ltd	Workplace Energy and Water Saving Communications Program	200,000	-	1,066	1,138	-

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
ESF1	CBD Energy Limited (formerly Capacitor Technologies Pty Ltd)	Small-Medium Enterprise Energy Management Project	420,000	-	-	-	3,234.6
ESF1	United Collieries Pty Limited	United Collieries Power Factor Correction Initiative: Beyond Compliance	27,400	-	-	-	1,640
ESF2	Energy Conservation Systems	Industrial/Commercial Absorption Cooling	500,000	-	3,670	3,920	784
ESF2	AGL Energy Services Pty Ltd	Holiday Inn Potts Point Chiller Upgrade	66,000	-	432	461	117
ESF2	Burrangong Meat Processors Pty Ltd	To recover gas from effluent ponds and generate electricity to operate meat processing plant	700,000	-	3,600	3,845	600
ESF2	Carter Holt Harvey Wood Products Australia Pty Limited	Compressed air reduction	50,000	-	292.2	312	39
ESF2	Eco$ave Pty Ltd	Public Buildings Energy Savings Program	210,949	-	1,073	1,146	110
ESF2	Electrolux Home Products Pty Limited	Power Factor Correction	32,404	-	-	-	735.3
ESF2	EP&T	Energy efficiency program for (GPT) – Commercial Portfolio	388,355	-	2,643	2,823	393
ESF2	EP&T	Energy efficiency projects for Investa Property Group – Commercial Portfolio	120,020	-	342	365	124
ESF2	EP&T	Energy efficiency program for Industry Superannuation Property Trust (ISPT) – Commercial Portfolio	711,064	-	2,186	2,335	663
ESF2	EP&T	Energy efficiency program for Macquarie Asset Services Limited – MDP Commercial Portfolio	343,770	-	1,333	1,424	251
ESF2	GPT Group	The GPT Group Retail Shopping Centre Embedded Co-generation Program	1,960,000	-	5,683	6,069	2303
ESF2	P & M Quality Smallgoods Pty Ltd	Energy Management System	299,000	-	1,241	1,325	300
ESF2	Springvale Coal Pty Ltd	VVVF for Springvale's #2 Bore Water Pump + Power Factor Correction for Shaft #3	244,425	-	1,902	2,031	207
ESF2	Sydney Water Corporation	Sydney Water's Renewable Energy Generation – Stage 2	3,679,400	-	13,377	14,287	-
ESF2	The Commonwealth Steel Company Limited	VSDs for EAF Dust Extraction System	183,624	-	1,772	1,892	275
ESF2	GPT Group	Retailer Energy Efficiency Education Program	256,000	-	6,421	6,858	-
ESF2	Tooheys Pty Limited	Power factor correction and refrigeration improvements	150,118	-	342	365	95
ESF2	Ethnic Communities Council	Dry Cleaner Electricity Saving Project	420,000	-	693.2	740	160
ESF2	Huhtamaki Australia Pty Limited	Optimising demand and generation of compressed air	152,000	-	562	600	144
ESF2	Goldway EnergyAustralia Pty Ltd	Clubs Energy Excellence Program	215,285	-	1,310	1,399	236
ESF2	Impact Employee Communications Pty Ltd	Workplace Energy Savings Communication Program	324,000	-	6,500	6,942	-

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
GBPR1e	EDS Australia	Power Factor Correction Installation	14,500	-	-	-	710.1
GBPR1e	EcoSave Pty Ltd	Commercial-Industrial-Retail (CIR) Energy & Water Savings Program	185,085	6.3	1,193	1,274	128
GBPR1e	Kellogg (Aust.) Pty. Ltd.	Utility Management System	444,000	-	1,563.5	1,670	342
GBPR1w	University of Technology, Sydney	Cooling tower bleed water reuse in toilet flushing	60,000	2.5	20	21	-
GBPR1e	Mirvac Property Trust	Commercial building energy savings projects	112,240	-	626	669	125
GBPR1w	Rous County Council	Engaging Business to Save Potable Water in the Rous Water region of North East NSW.	105,000	12.8	-	-	-
GBPR1w	Swift Electroplating (NSW) Pty Ltd	Water recycling and heavy metal recovery in electroplating processes	188,246	17.1	-	-	-
GBPR1w	SPIK Pty Ltd	Western White Linen Water Recycling Project	110,484	12.8	-	-	-
GBPR1e	Bunnings Group Limited	Replacement of over 3,400 hi-bay light fixtures across sixteen Bunnings Warehouse Stores in New South Wales with highly energy efficient bi-level lighting system.	1,085,436	-	3,168.7	3,384	435
GBPR1w	Warmma Pty Ltd & Sydseed Pty Ltd	WaterSTARS (Sustainable Treatment and Reuse) Program	175,000	-	-	-	-
GBPR1e	Vinidex Pty Ltd	Vinidex, Smithfield – Extrusion Chiller Upgrade	75,000	-	290	310	46.2
GBPR1w	University of Technology, Sydney	Sewer Mining for Cooling Tower Make Up Water	1,471,000	45.0	-	-	-
GBPR1e	Drycleaning Institute of Australia NSW	Dry Cleaner Electricity Saving Project	256,200	-	855	913	475
GBPR1w	Coca-Cola Amatil (Aust) Pty Ltd	Rainwater harvesting for process water use	50,000	8.6	-	-	-
GBPR1e	Hawker de Havilland Aerospace Pty Ltd	New lighting method which is energy efficient for manufacturing components built in the vertical plane.	37,500	-	180.3	193	-
GBPR1e	Sara Lee Bakery Pty Ltd	Optimization of Refrigeration System	140,587	-	1,090.1	1,164	729.3
GBPR1w	Coles Group Limited	Installtion of the Enware Pre-Rinse Gun, Food Services Application Water Savings Initiative, in Coles and Bilo Supermarkets	90,000	46.2	37.9	40	-
GBPR1e	Tooheys Pty Limited	Tooheys 2MW Co-generation with thermal (steam and hot water) heat recovery	2,000,000	-	15,336	16,379	1,992.6
GBPR1e	Qantas Airways Limited	Sydney domestic terminal outside air cooling efficiency improvement	95,000	-	91	97	320
GBPR1e	Qantas Airways Limited	Jet base flourescent tube lighting energy reduction	680,000	-	1,434	1,532	367
GBPR1e	Westfield Management Limited	Cogeneration Energy initiative for Westfield Sydney City	2,402,500	-	6,070.2	6,483	2,540
GBPR1e	Rockdale Beef Pty Ltd as manager for and on behalf of the Rockdale Beef Partnership	Rockdale Sustainability Projects	172,500	86.1	330	352	100
GBPR1e	Mirvac Projects Pty Ltd	Mirvac Tri-generation System, Royal Newcastle Hospital Site	1,200,000	-	7,402.5	7,906	1,800

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
WSF1	So Natural Foods Australia Limited	Water capture and re-use of potable water from Sydney Water	115,900	32.2	-	-	-
WSF1	Solvay Interox Pty Ltd	Utilisation of treated groundwater for non-potable production applications	200,000	172.9	-	-	-
WSF1	The Austral Brick Company	Utilisation of alternate water source from quarrt sump for brickmaking	269,000	25.0	-	-	-
WSF1	CSR Building Products Limited	Process water recycling – fibre cement factory Sydney	102,000	88.3	-	-	-
WSF1	Ethnic Communities Council of NSW	Saving water in Asian style cooking restaurants	391,000	65.8	-	-	-
WSF1	University of Western Sydney	Smart irrigation technologies for saving potable water on vegetable farms	160,164	14.6	-	-	-
WSF1	Amcor Packaging (Australia) P/L	Botany Mill – new steam raising plant to replace existing boiler	1,661,507	160.0	-	-	-
WSF1	Energy Conservation Systems Pty Ltd	Water savings in city towers through integrated water management systems	1,000,000	87.0	-	-	-
WSF1	Port Kembla Coal Terminal Limited	Use of stormwater for dust suppression at Port Kembla coal terminal	420,000	95.0	-	-	-
WSF1	The Australian Gas Light Company	Metropolitan Sydney recycled water projects	1,487,004	3,218.0	-	-	-
WSF1	Master Plumbers & Mechanical Services Association	Greenplumbers water and energy saving training and accreditation	263,600	236.9	-	-	-
WSF2	Arnotts Snackfoods	Arnotts Smithfield Wastewater Recycling Project	925,000	137.2	-	-	-
WSF2	NSW Department of Primary Industries	Water smart farms in the Sydney Basin	3,000,000	1,228.2	-	-	-
WSF2	Ensign Services (Australia) Pty Limited	Water recycling in a commercial laundry using an Aquamiser system	145,000	48.2	-	-	-
WSF2	Inghams Enterprises	Treating water for re-use in permitted areas of poultry processing plant	200,878	4.9	-	-	-
WSF2	Macquarie University Sport and Recreation Inc.	Sustainable Water for Macquarie University playing fields	350,000	20.8	-	-	-
WSF2	Astor Electroplaters Aust. Pty Ltd	Water recycling/zero discharge system	299,680	30.7	-	-	-
WSF2	Jones Lang Lasalle NSW Pty Ltd	Connection to Homebush Bay recycled water system – The Quad I and II	48,500	7.7	-	-	-
WSF2	Qenos Pty Ltd – Minimising mains water consumption	Minimising townwater consumption using treated groundwater and targeted water reduction strategies	1,068,500	922.1	-	-	-
WSF2	University Of Western Sydney	A sustainable recycled water supply for the Hawkesbury Racecourse	119,000	10.5	-	-	-
WSF2	The Australian Gas Light Company (AGL) – applicant on behalf of nine Potential Users of recycled water to be produced by the AGL project	Metropolitan Sydney Recycled Water Project	954,602	312.4	-	-	-

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
WSF2	Bonds Industries Limited	Engineered water recovery system with inbuilt 'smart' monitoring and control technology	240,000	50.2	-	-	-
WSF2	Tahmoor Coal Pty Ltd	Mine discharge water recycling – Tahmoor Colliery	2,000,000	380.0	-	-	-
WSF2	Cumberland Country Golf Club Ltd	Cumberland Country Golf Club irrigation pipeline	398,250	55.9	-	-	-
WSF2	Investa Property Group	Water savings initiative for fire protection systems maintenance and testing	107,000	10.7	-	-	-
WSF2	Merck Sharp & Dohme (Australia) Pty Ltd	Water conservation projects	25,900	10.3	-	-	-
WSF2	Orica – Reusing treated groundwater	Reusing treated groundwater in manufacturing processes	157,218	165.5	-	-	-
WSF2	Sydney Airport Corporation Limited (SACL)	Sydney Airport Water Recycling Project	3,000,000	273.8	-	-	-
WSF2	The University Of Sydney	Sustainable water at the University of Sydney	305,000	10.1	-	-	-
WSF2	EP&T Pty Ltd	Water efficiency upgrades for Colonial First State Property's commercial portfolio	950,000	201.8	-	-	-
WSF2	Stockland Development Corporation	Stockland shopping centre water management	120,000	11.9	-	-	-
WSF2	Mowlemsodexho	Westpac rainwater harvesting and water efficiency	125,725	14.7	-	-	-
WSF2	Caltex Refineries and Continental Carbon Australia – Kurnell industrial water recycling plant	Kurnell industrial recycling plant	5,180,000	2,124.3	-	-	-
WSF3	Alinta AGN Ltd – applicant on behalf of five Potential Users of recycled water to be delivered by the Alinta project	Camellia Recycled Water Project	225,384	90.3	-	-	-
WSF3	Irrigation & Water Technology Pty Ltd	Reduction in potable water use at production nurseries	1,567,849	265.0	-	-	-
WSF3	University of New South Wales	Campus borewater treatment plant	747,000	100.5	-	-	-
WSF3	Sydney Turf Club	Sydney Turf Club sewer mining project to produce irrigation water to replace potable water use	773,760	75.9	-	-	-
WSF3	Ethnic Communities Council	Saving water in Asian restaurants project (SWARP) Stage 2	743,780	130.1	-	-	-
WSF3	Orica Australia Pty Ltd	Treatment and reuse of spent acid regeneration plant effluent	344,902	52.9	-	-	-
WSF3	EP&T	Water reuse projects and efficiency upgrades for Investa Property	258,134	27.3	-	-	-
WSF3	EP&T	Water reuse and efficiency upgrades for Stockland and C&I buildings	132,900	39.6	-	-	-

Fund round	Applicant name	Project title	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
WSF3	ISPT Pty Ltd	Installation of dual flush cisterns at 477 Pitt Street, Sydney	54,000	13.8	-	-	-
CCWSF1	Central Coast Laundry (Martin And Angela Channell)	Ozone Laundering in Commercial Laundries	23,820	3.7	-	-	-
CCWSF1	Sanitarium (Australian Health & Nutrition Association Limited)	Sanitarium Integrated Water Strategy	287,363	82.1	-	-	-
CCWSF1	Aqua Jet Car Wash Pty Ltd	Recycling to save and survive	36,500	2.9	-	-	-
CCWSF1	Robann's Pty Ltd	The Harvesting of Rain and Irrigation including Methods of Moisture Reduction	19,000	3.2	-	-	-
CCWSF1	Ethnic Communities Council of NSW	Saving Water in Central Coast Asian Restaurants	247,500	95.4	-	-	-
CCWSF1	Delta Laboratories	Recirulated chilled water system for in process cooling	60,000	4.9	-	-	-
CCWSF1	MasterFoods (Effem Foods Pty Ltd)	Process Water Recycling and Storm Water Harvesting Project	725,000	109.3	-	-	-
CCWSF2	Boral Montoro PTY LTD	Old Quarry Dam Water Transfer	19,058	2.1	-	-	-
CCWSF2	Edsvend Pty Ltd	OTEK ozone laundry system installation	28,500	6.6	-	-	-
		Funded business projects – total	**58,455,470**	**11,570**	**103,889**	**110,953**	**50,846**

Table E9

Total project funding prior to 30 June 2008

Pre 1 July 2008 allocated funding	Funding approved ($)	Savings (ML/yr)	Savings (MWh/yr)	Savings (tCO_2-e/yr)	Savings (kW/yr)
Residential projects	10,963,814	541	81,653	87,206	5,729
Community projects	5,953,111	870	7,237	7,729	350
Local Government projects	17,451,520	1,525	16,488	17,609	4,013
Schools projects	1,564,470	93	261	279	13
NSW government agency projects	2,901,000	61	4,759	5,083	1,265
Business projects	58,455,470	11,570	103,889	110,953	50,846
Total	**97,289,385**	**14,660**	**214,287**	**228,858**	**62,216**

Appendix F Projects discontinued during 2008–2009

Notes to Appendix F tables

- Tables display funding approved by the Minister, not actual expenditure.
- Numbers after program type relate to the funding round number.
- Fund round abbreviations:
  WSF = Water Savings Fund
  ESF = Energy Savings Fund
  GBP = Green Business Program
  CCWSF = Central Coast Water Savings Fund
  PFP1 = Public Facilities Program Round 1

Table F1

Discontinued projects

Fund Round	Applicant Name	Funding allocated
GBP1e	QAF Feeds Pty Ltd	$540,000
ESF1	Rockdale Beef Pty Limited	$2,100,000
ESF1	Bulga Coal Management Pty Limited	$59,045
ESF2	Bartter Enterprises Pty Limited	$93,632
ESF2	Gosford City Council	$137,999
ESF2	Huhtamaki Australia Pty Limited	$190,000
ESF2	George Weston Foods Limited	$40,000
WSF1	DPK Australia Pty Limited	$525,000
WSF2	ABC Paper & Paper Mills Pty Ltd	$2,450,000
WSF3	Marrickville Council	$133,200
WSF3	Berri Limited (National Foods Australia)	$798,000
CCWSF1	Sara Lee Bakery Pty Ltd	$91,650
CCWSF2	Northern Sydney Central Coast Area Health Service	$29,000
CCWSF3	Coles Group Limited	$34,500
CCWSF3	Malandi Pty Limited as Trustee for the Malandi Trust	$11,000
PFP1w	Stockland Development Corporation	$380,804
PFP1w	Tweed Shire Council	$40,000
PFP1e	Castle Hill RSL Club	$285,500
PFP1e	Sutherland Shire Council	$52,800
PFP1e	Wollongong City Council	$60,000
		$8,052,130

Glossary

Glossary

ACF	Australian Conservation Foundation
The Act	*Energy and Utilities Administration Act 1987*, under which the Climate Change Fund is established
AEMC	Australian Energy Market Commission
Backwash	The reversal of water flow back through a water filter to remove entrapped solids
biogas	A by-product of anaerobic digestion, which is a decomposition process by micro-organisms. This gas by-product can be harvested to convert to energy
Carbon Pollution Reduction Scheme (CPRS)	A national emissions trading scheme for greenhouse gas emissions being developed by the Australian Government
CCF	Climate Change Fund
CCWSF	Central Coast Water Savings Fund
Compact fluorescent light bulbs (CFL)	Energy efficient light bulbs which use about one quarter of the energy compared to incandescent light bulbs
tCO_2-e	An abbreviation of 'tonnes of carbon dioxide equivalent' and is the internationally recognised measure of greenhouse gas emissions
Cogeneration	The simultaneous generation of electrical and thermal energy where both forms of energy are put to productive use. Cogeneration is typically possible when facilities that produce large amounts of waste heat (usually in the form of steam or hot water) is used efficiently for space or water heating, cooling, industrial use, agriculture or conversion into electricity
DECC	Department of Environment and Climate Change, NSW
DET	Department of Education and Training, NSW
ED	Electricity distributors efficiency (energy and water) Reducing the amount of energy or water required to provide a given level of service (eg for lighting, air-conditioning, toilet flushing)
Effluent treatment (primary, secondary & tertiary)	Typically the outflow of water or wastewater from any water processing system or device. Primary treatment is the first stage of treating sewage, usually the removal of large solids such as plastic and wood, sludge and volatile liquids. Secondary treatment is the removal of organic matter from wastewater using aerobic biological processes. Tertiary treatment involves further treatment such as nutrient removal, filtration, aeration, constructed wetlands and higher levels of disinfection
Electrical generation	The process of converting mechanical or solar energy into electricity
ESAP	Energy Savings Action Plan
ESF	Energy Savings Fund
Flow restrictor	A device used to restrict the amount of water flow for a given use. For example, flow restrictors are often installed on taps to inhibit the amount of water people can use to wash their hands
Fluorescent lamp	A low pressure mercury discharge lamp that emits light via a phosphor coating. Tubular and compact types are available. The main types of general office luminaires use tubular fluorescent lamps
GBP	Green Business Program
GHG	Greenhouse gas
gigajoule	A joule is a unit of energy, equivalent to a power of one watt for one second. A gigajoule is one thousand million joules
greywater	Wastewater from a variety of sources within households or businesses, typically sourced from baths, showers, laundries or basins. Greywater is not sourced from toilets or bidets
Groundwater	Water that has been collected in an aquifer or the water table that is below ground level
Harvesting	To collect rain or stormwater for reuse
Heat pump	A device that pumps heat energy used in both heating and cooling systems. As heating units, heat pumps are able to extract heat energy from even the coldest outdoor air to heat the inside of a structure. When used as cooling units, they can extract heat from indoor air even if the outdoor air is much hotter
HVAC	Heating, ventilation and air-conditioning
Insulation	Most commonly refers to thermal insulation used in buildings to prevent heat energy loss in cool climates or heat energy gain in climates or structures where air conditioning is commonly used
IPART	The Independent Pricing and Regulatory Tribunal is the independent economic regulator NSW
Kilolitre (kL)	A volumetric measurement equivalent to one thousand litres, or one cubic metre
Kilowatt hour (kWh)	A quantitative measure of electric current flow equivalent to one thousand watts being used continuously for a period of one hour; the unit most commonly used to measure electrical energy. A kilowatt is one thousand watts (see definition under watt)
Key performance indicator (KPI)	A benchmark that has been determined as a reference so that reductions in future energy or water use can be quantified
Local government area (LGA)	Administrative divisions or areas controlled by a Local Government shire or council
Luminaires	A complete lighting unit consisting of a lamp or lamps, lampholders, optical elements to distribute the light, and the means for connection to a power source
Megalitres (ML)	A volumetric measurement equivalent to one million litres
Megawatt hour (MWh)	A unit of electricity equivalent to 1,000 kilowatt hours or one million watts
National Australian Built Environment Rating System (NABERS)	NABERS is a performance-based rating system for existing buildings. NABERS rates a building on the basis of its measured operational impacts on the environment, and provides a simple indication of how well you are managing these environmental impacts compared with your peers and neighbours

Payback period	The time taken for the savings or profit of investment to pay for the initial capital expenditure. Payback period = Capital cost/Total annual savings. For example, a new lighting system costing $400 with $200 savings per year has a payback period of $400/$200 = 2 years
PCA	Property Council of Australia
Peak demand	The maximum power demand of a system at a given time, or the maximum power required to supply customers at any time. This may be at a particular time of the day or a specific hour of the day
PFP	Public Facilities Program
PFProll	Public Facilities Program rolling program was originally established as a component of the former Energy Savings Fund
Photovoltaic (PV)	A form of solar energy that directly converts light into energy
Potable water	Water that is suitable for drinking
Power factor correction (PFC)	The demand for electricity a site places on the electricity network is expressed in kVA (1,000s of volt amps) and is a measure of the customer's load on the power supply network. Power factor is the ratio of the actual power in kW divided by the kVA. The ratio is between 0 and 1, where 1 means that you are making the most effective use of your electricity supply. Power factor correction reduces your peak demand on the electricity supply network by bringing the ratio closer to 1
Rainwater harvesting	Collection and storage of rainwater from roofs for reuse
Recycled water	Water taken from a non-potable source and treated to a level suitable for its intended use
Renewable energy	Energy which is generated from renewable sources, including the sun, wind, waves, water (hydroelectricity) and waste, as opposed to fossil fuels that emit greenhouse gases
Renewable Energy Certificates (RECs)	A form of 'currency' that can be earned when you install renewable energy equipment. One REC represents one megawatt hour of renewable energy generated
Retrofit	Upgrading an existing system or building, typically to make it more energy or water efficient
Reverse osmosis (RO)	A form of wastewater treatment that uses a semi-permeable membrane to separate and remove dissolved solids, organics, viruses, bacteria and other materials from water. It is called reverse osmosis as it requires pressure to force pure water across a membrane, leaving the impurities behind
School EE	School Energy Efficiency Program
Sewage	Sewage refers to wastewater that has been sourced from greywater or blackwater sources and can contain a high level of organic and non-organic matter
Sewer mining	Sewer mining involves tapping directly into a sewer main either before or after a treatment plant and extracting the wastewater. The wastewater can be treated and reused as recycled water
Smart meter	An advanced water or energy meter that can provide more information about consumption patterns than a conventional meter
Solar energy	Solar power refers to the potential of the sun to produce energy. Solar energy can be generated using a wide variety of methods, ranging from simple water recirculating systems used to heat homes and commercial offices to sophisticated networks of solar cells that produce enough energy to supply small cities
Stormwater harvesting	The collection and reuse of rainwater that would otherwise end up in the stormwater channels that lead to a river or the ocean. Harvesting stormwater generally involves two stages: storage and treatment. Stormwater usually comes in large volumes during a rainfall event, and as such, must be stored to allow for reuse. Also as stormwater is typically of low quality with a high level of pollutants it must be sufficiently treated. The most common reuse of stormwater is for irrigation
Variable speed drives (VSDs)	Mechanisms that control motor speed. They can be installed on motors driving fans and pumps to adjust to speed at which they are running. This means that the amount of energy being consumed can be adjusted to match the demand and so does not waste energy
wastewater (& wastewater recycling)	Water that has been contaminated by some activity, includes greywater and sewage. It can be collected from a variety of sources, stored and treated so that it can be used as an alternative to the potable supply
Watt (W)	The unit for measuring electrical power. The rate of energy consumption by an electrical device when it is in use is measured in watts
WSAP	Water Savings Action Plan
WSF	Water Savings Fund
WWF	World Wildlife Fund

Photographs:

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