

Government Resource Efficiency Policy

Office of Environment and Heritage
Annual Report 2015–16



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About this report

Launched in July 2014, the Government Resource Efficiency Policy (GREP) provides guidance for government operations to improve performance in three main areas – energy, water and waste, and to reduce harmful air emissions from government operations. All general government sector agencies are required to report annually on policy targets, actions and minimum standards by using financial-year data.

This report gives details of resource usage for the 2015–16 reporting year and the three previous years by the Office of Environment and Heritage (OEH). A list of entities included in this report is available in Appendix C.

OEH is located within the NSW Government Planning and Environment cluster.

This report has been compiled by OEH and is based on the headings for the measures in the policy:

- E1: Total electricity and gas consumption and expenditure, including a comparison with the previous three years
- E1: Number of energy efficiency projects undertaken during the reporting year and the estimated annual bill savings
- E2: Minimum NABERS Energy ratings for offices and data centres
- E3: Minimum standards for new electrical appliances and equipment
- E4: Minimum standards for new buildings
- E5: Identify and enable solar leasing opportunities
- E6: Minimum fuel efficiency standards for new light vehicles
- E7: Purchase 6% GreenPower
- W1: Total potable water consumption and expenditure, including a comparison with the previous three years once data is available
- W2: Minimum water standards for office buildings
- W3: Minimum standards for new water-using appliances
- P1: Top three waste streams by volume and cost of disposal over the past three years
- A1: Air emission standards for mobile non-road diesel plant and equipment
- A2: Low volatile organic compound (VOC) surface coatings

Agency summary

Action: E1

Targets to undertake energy efficiency projects

Individual interim target for agency

 
1.05m

All clusters will undertake energy efficiency projects at sites representing 90% of their billed energy use (electricity and natural gas) by the end of 2023–24, with an interim target of 55% for Health and 40% for other clusters by 2017–18.

 
22.9

Agency progress to date towards individual energy target

The individual interim target figure is billed energy use for electricity and gas.

The target was set using baseline data available at the time of publishing the OEH 2014–15 Agency GREP report.

Table 1: Total electricity and gas consumption and expenditure, including a comparison with the previous three years

FY	Electricity		Natural gas		LPG	
	MWh	\$m	GJ	\$m	GJ ¹	\$m
2012–13	10,365.69	2.66	1,891.57	0.03	1,602.19	0.05
2013–14	10,191.85	2.64	1,467.15	0.03	4,572.93	0.19
2014–15	11,287.90	2.71	1,170.67	0.03	5,526.08	0.15
2015–16	10,845.53	2.16	982.65	0.02	4,527.62	0.11

Note: The consumption data in Table 1 differs slightly from that in OEH's 2014–15 Agency GREP report. This is due to the inclusion of data which was submitted after the previous reporting period had closed, or inclusion of newly identified sites. The historical data is amended accordingly to reflect updated data once it is received.

Table 2: Number of energy efficiency projects undertaken during the reporting year and previous years, and the estimated annual bill savings

FY	Agency projects (undertaken independently)	Estimated bill savings (\$)	Agency projects (Government Finance Facility)	Estimated bill savings (\$)	Total number of projects
2012–13 – 2014–15	16	49,291.36	0	0.00	16
2015–16	5	10,221.20	0	0.00	5

Agencies are able to count the savings generated by energy efficiency projects implemented since July 2012 towards meeting the energy efficiency target.

OEH is progressing towards the 40% interim energy savings target. Table 2 shows that OEH has implemented projects at 21 sites since 2012, representing 22.9% of the total billed energy use across all OEH and NSW Environment Protection Authority (EPA) sites.

This is an improvement of almost 10% when compared to the OEH 2014–15 Agency GREP report.

OEH has a number of projects in the pipeline and is on track to satisfy the 2017–18 interim target of implementing energy efficiency projects at sites that represent a total of 40% (\$1.05 million) of its 2012–13 baseline billed energy for electricity and gas.

¹ Converted from litres LPG [1kL = 25.7GJ].

Action: E2

Minimum NABERS Energy ratings for offices and data centres

Describe how large owned and leased office buildings (over 2000m²) will achieve and maintain a NABERS² Energy rating of at least 4.5 stars by June 2017.

OEH has three leased offices that are over 2000 square metres at Parramatta, Sydney CBD and Hurstville. EPA staff are located in the Parramatta and Sydney CBD offices within the OEH tenancy. OEH has been conducting NABERS Energy tenancy ratings since 2009.

Table 3: Current NABERS Energy ratings for OEH, valid until October 2017

	NABERS Energy tenancy rating without GreenPower	NABERS Energy tenancy rating with GreenPower	NABERS Energy base building ratings
Hurstville	6 stars	6 stars	4.5 stars
Parramatta	5.5 stars	5.5 stars	5 stars
Sydney CBD	4.5 stars	5 stars	4 stars

Note: Base building ratings are the responsibility of building owners and building management. OEH does not conduct base building ratings.

Describe how your data centres will achieve a minimum infrastructure and IT equipment NABERS Energy rating of 4.5 stars by June 2017.

OEH is virtualising servers and retiring old equipment at its Hurstville, Lidcombe and Sydney CBD offices, with equipment from the Lidcombe and CBD offices progressively moved offsite during 2015–16.

Due to the submetering requirements and relocation of our largest data centre to the Government Data Centre in September 2016, it has not been possible to undertake an infrastructure rating. An equipment rating will take place once equipment has been transferred to offsite data centres.

² The NABERS (National Australian Built Environment Rating System) rating scale for NABERS Indoor Environment, Energy and Water tools for offices and data centres:

6 stars..... Market leading performance

5 stars..... Excellent performance

4 stars..... Good performance

3 stars..... Average performance

2 stars..... Below average performance

1 star..... Poor performance

0 stars..... Very poor performance

The more stars in a NABERS rating, the better the environmental performance.

Action: E3

Minimum standards for new electrical appliances and equipment

How is the agency performing when purchasing energy efficient appliances and equipment?

Key procurement documentation, such as the procurement manual, templates and contracts which cover OEH and EPA, were updated previously to include sustainable procurement and reflect the GREP performance requirements.

These requirements are included in new contracts when appropriate.

Action: E4

Minimum standards for new buildings

How are the minimum standards for new buildings being incorporated into construction specifications?

OEH is exploring opportunities to integrate GREP performance requirements into our internal asset manuals and guidance documentation.

Action: E5

Identify and enable solar leasing opportunities

What solar PV projects have been implemented this financial year? What new solar PV opportunities have been identified?

OEH implemented one solar photovoltaic (PV) project during the reporting year, as noted in the energy efficiency projects section of this report. A further 30 sites have been identified as potentially suitable for solar leasing.

Action: E6

Minimum fuel efficiency standards for new light vehicles

Describe how vehicles purchased outside the State Contract comply with the minimum fuel efficiency standards.

OEH purchases its fleet via State Fleet under the State Contract for fleet.

The NSW National Parks and Wildlife Service purchases specialised firefighting fleet which are exempt from meeting some standards as they are required to be fit for purpose. The firefighting fleet is also managed through State Fleet.

The EPA does not purchase any vehicles outside the state contract.

Action: E7

Purchase of GreenPower by general government sector agencies³

A minimum of 6% GreenPower is to be purchased.

The OEH percentage of GreenPower purchased was lower in 2015–16 as some sites have opted to reduce the amount of GreenPower to the minimum requirement to cut operational costs.



Sites that purchase a higher percentage of GreenPower include:

- Narooma (100%)
- Coffs Harbour (100%)
- Lidcombe Laboratory (25%)
- Sydney, 59 Goulburn Street (25%)
- Hurstville (10%)
- Ku-Ring-Gai Chase National Park (10%).

Action: W1

All agencies to report on water use

Total potable water consumption and expenditure, including a comparison with the previous three years once data is available.

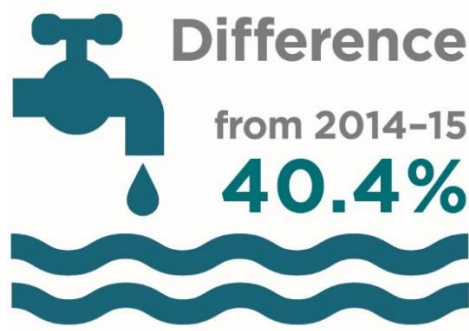
Table 4: Water consumption

FY	Water	
	kL	\$m
2013–14	144,206	0.49

³ This includes government contract and off-contract data.

FY	Water	
	kL	\$m
2014–15	124,332	0.58
2015–16	174,560	0.84

Note: OEH did not report on water consumption for 2012–13 due to the poor quality of data available.



OEH water consumption increased in 2015–16 from the previous year. The increase in water consumption occurred in regional areas, with a decrease in consumption recorded in areas supplied by Sydney Water Corporation and Hunter Water Corporation. OEH will continue to identify opportunities to improve water efficiency at sites where this is cost effective.

Action: W2

Minimum NABERS Water ratings for office buildings

Describe how owned and leased, new or refurbished, office buildings (over 2000m²) will achieve a whole building NABERS Water rating of 4 stars where cost effective.

OEH has three leased offices that are over 2000 square metres located at Parramatta, Sydney CBD and Hurstville. The current whole building NABERS Water rating for these offices is:

- Parramatta **3.5** stars
- Hurstville **4** stars
- Sydney CBD **3** stars

Hurstville maintained its NABERS Water rating compared to 2014–15, while the water ratings for the Parramatta and Sydney CBD offices declined by half a star.

As key tenants in both buildings, OEH is partnering with Property NSW to establish green lease committees in the buildings, to work proactively with the building managers and support improved water efficiency to meet the GREP minimum standards for water.

Action: W3

Minimum standards for new water-using appliances

How is the agency performing when purchasing water-efficient appliances? Do all new water-using appliances meet the average Water Efficiency Labelling Scheme (WELS) star rating for the product type?

Key procurement documentation, such as the procurement manual, templates and contracts which cover OEH and EPA, include sustainable procurement and reflect the GREP performance requirements.

GREP requirements are included in new contracts when appropriate.

Action: P1

Top three waste streams⁴ by volume and cost of disposal over the past three years

Agencies to report on their top three waste streams by total volume and by total cost.

OEH is reporting waste data for the first time in 2015–16 as no reliable data was available in previous years.

OEH total waste spend is more than \$3.8 million, however this does not include the costs associated with management of waste within tenanted buildings.

To gain a better understanding of the waste profile across assets, a waste survey was delivered to all OEH sites, both owned and tenanted.

Data was extrapolated based on asset types to estimate the volume of waste generated. Where reliable waste data is available, it has been reported in tonnes.

OEH continues to improve data collection for waste and to increase diversion from landfill. A summary of findings is below.

Waste units are: kL – kilolitres; T – tonnes; m³ – cubic meters.

⁴ Top three waste streams nominated by agency.

General waste



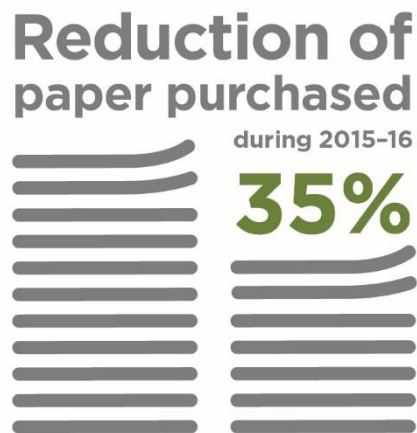
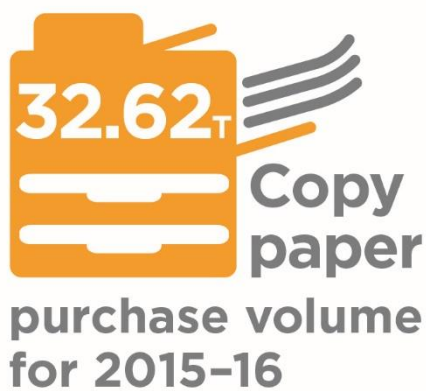
Note: The numbers above are separate numbers and do not relate. Some sites receive monthly reports on tonnage of waste collected by their external contractor. This data has been reported separately to the estimated volumes.

Commingled recycling



Note: The numbers above are separate numbers and do not relate. Some sites receive monthly reports on tonnage of waste collected by their external contractor. This data has been reported separately to the estimated volumes.

Paper purchase



Paper data is collected via our finance systems and is based on paper purchased. OEH and EPA spent a combined \$67,263 on copy paper in 2015–16. Paper-purchase data was collected in 2014–15 but was not reported as there was insufficient data available for the other waste streams.

OEH has reduced its paper purchase by almost 17 tonnes (35%) in this reporting period compared to last year.

Action: A1

Air emissions standards for mobile non-road diesel plant and equipment

Outline how specifications for any new or contractor-supplied equipment will meet the air emission standards.

OEH maintains a register of the plant and equipment it owns and operates, and is integrating air emission standards into its specifications.

Action: A2

Low-VOC (volatile organic compound) surface coatings

Outline how specifications for surface coatings (used by the agency and its subcontractors) will comply with the Australian Paint Approval Scheme.

Key procurement documentation, such as the procurement manual, templates and contracts which cover OEH and EPA were updated to include sustainable procurement and reflect the GREP performance requirements.

GREP performance requirements are included in new contracts when appropriate.

Appendix A

Office of Environment and Heritage beyond-compliance statement

Energy

During the reporting period, OEH implemented a range of initiatives to improve energy efficiency across the organisation. Staff engagement included a notice distributed to all staff reminding them to turn off equipment and lights, reducing standby demand over the Christmas and New Year close-down period.

In addition to our minor capital works projects reported in the E1 target, OEH engaged energy and water efficiency experts to undertake site inspections in the South Coast Region to develop a method to identify energy and water efficiency projects for sites across New South Wales.

OEH also participated in Fujitsu's Information and Communication Technology (ICT) Sustainability Benchmark, comparing OEH ICT to more than 2500 other organisations globally. Results indicated that OEH ICT is in line with peers in Australia and the global government community.

Water

Through our sustainability minor capital works program, OEH invested in water efficiency initiatives in Lane Cove National Park and Lane Cove Tourist Park.

This included plumbing existing rainwater tanks to toilets at Lane Cove National Park, work to the value of \$5000. Upgrades to some hot water systems and water-efficient shower heads, taps and pressure reduction valves were installed in amenities blocks at Lane Cove Tourist Park, the third highest resource-consuming site in OEH.

This work was valued at \$29,429 and is expected to save the site more than \$7700 annually in reduced water and energy consumption.

There are ongoing benefits from this work as the tourist park is likely to continue to invest in energy and water efficiency opportunities to reduce resource consumption.

Waste

OEH implemented several waste initiatives during the reporting period to contribute to meeting the waste target in the OEH and EPA Sustainability Strategy. To gain a better understanding of the waste profile, a waste survey was designed and distributed to sites to identify waste services and optimisation opportunities.

In parallel, OEH Procurement worked in partnership with the most significant waste contractors to obtain data to investigate opportunities to increase the proportion of OEH waste services on the government waste management contract.

The aim of this process is to ensure sites are on the correct contract rate and to improve reporting outcomes for waste.

OEH implemented a Hold Print pilot at its Parramatta office to reduce paper and printing waste. The pilot was trialled with 180 staff.

The results of the pilot were positive and indicated there are cost savings (toner, paper, and energy) to be made through Hold Print and a broader trial is warranted. OEH paper purchasing was reduced by 17 tonnes during the reporting period which is likely to be due to electronic document records management.

Should Hold Print be rolled out across OEH offices, paper consumption is likely to continue to decrease.

The EPA has developed an online licensing tool which, as of May 2016, allows the electronic submission of environment protection licences. It is estimated this will lead to approximately 1000 sheets of paper saved each year.

In addition to waste efficiency projects, OEH also continued to promote recycling to staff through dissemination of a recycling newsletter to Sydney CBD and Parramatta office staff and improved recycling signage in common areas and bathrooms.

Soft plastics recycling is continuing to operate successfully in the Sydney CBD office with 204 kilograms of soft plastics collected during the reporting period.

Clean air

As a result of the NABERS Indoor Environment rating, the Sydney CBD office undertook an air balance to improve indoor air quality for staff. This is likely to contribute to an improved NABERS Indoor Environment rating.

Other

The OEH and EPA Sustainability Strategy was launched in September 2015. The strategy is based on GREP requirements but also goes beyond GREP by including a 70% waste diversion target, support for health and wellbeing programs and an emissions intensity reduction for travel target. The strategy is available on the OEH website and includes a video from the Deputy Chief Executive, Regional Operations Group, the executive sponsor of the program.

The OEH corporate induction program links to the sustainability strategy on the website. Since the launch of the strategy, all divisions within OEH and the EPA have contributed to the development of a draft implementation plan for 2016–18 which provides a roadmap of actions needed to meet strategy targets and GREP requirements.

As part of this process, OEH established baseline data for resource efficiency targets in GREP, and the sustainability strategy will assist identifying and tracking progress towards the targets over time. All areas of OEH have been encouraged to integrate sustainability into their 2016–17 business and operational plans.

OEH is an active member of the Sustainability Advantage Program and used its membership to investigate available benchmarking tools. A review of the recommended tools is underway.

OEH received recognition in the 2015 City Switch NSW Partnership of the Year award for resource efficiency improvements in its Sydney CBD office.

OEH also won the Sydney Rides Challenge for an organisation with more than 500 staff. Eighty-nine staff from three offices participated, collectively travelling 10,131 kilometres and saving 742 kilograms of carbon dioxide emissions.

Office of Environment and Heritage additional information

No statement.

Appendix B

Cluster overview – Planning and Environment


**Total
resource
expenditure**
 2015-16
\$7.4m


**Total
resource
expenditure
decrease**
11.9%

Includes electricity, natural gas, LPG and water. Does not include waste data.

Table 5: Total resource consumption and expenditure

FY	Electricity		Natural gas		LPG		Water		Waste	
	MWh	\$m	GJ	\$m	GJ	\$m	ML	\$m		\$m
2012-13	22,993	5.37	11,709	0.22	1,669	0.05	79	0.27	0.00	0.01
2013-14	22,512	5.34	8,635	0.17	9,550	0.37	623	1.60	0.00	0.02
2014-15	25,413	5.46	9,381	0.20	11,232	0.30	686	2.48	0.00	0.78
2015-16	31,335	4.86	9,340	0.18	10,381	0.22	624	2.14	0.00	4.90

Table 6: Number of energy efficiency projects undertaken during the reporting year and the estimated annual bill savings

FY	Agency projects (undertaken independently)	Estimated bill savings (\$)	Agency projects (Government Finance Facility)	Estimated bill savings (\$)	Total number of projects
2012-13 – 2014-15	21	80,065.36	0	0.00	21
2015-16	6	11,381.20	0	0.00	6

Note: This report was downloaded on 6 December 2016. This summary is based on the data available at this time.

Appendix C

Entities included in this report

Entity name	Is GGS ⁵
Office of Environment and Heritage	Yes
NSW Environment Protection Authority	Yes
Heritage Council of NSW	No
National Parks and Wildlife Advisory Council	No
NSW Environmental Trust	Yes

Entities included in the Planning and Environment cluster

Entity name	Is GGS ⁵
Planning and Environment	No
Department of Planning and Environment	Yes
Central Coast Regional Development Corporation	No
Office of Environment and Heritage	Yes
NSW Environment Protection Authority	Yes
Hunter Development Corporation	Yes
Office of Local Government	Yes
Office of Strategic Lands	No
UrbanGrowth NSW Development Corporation	Yes
Centennial Park and Moore Park Trust	Yes
Heritage Council of NSW	No
Jenolan Caves Reserve Trust	No
Lord Howe Island Board	No
National Parks and Wildlife Advisory Council	No
NSW Environmental Trust	Yes
Parramatta Park Trust	No
Royal Botanic Gardens and Domain Trust, The	Yes
Sydney Living Museums	Yes
Taronga Conservation Society Australia	No
Western Sydney Parklands Trust	Yes
National Parks and Wildlife Service	No

⁵ GGS: general government sector agency

Appendix D

Methodology

This report presents data from government-held contracts combined with internally sourced data, where provided by agencies.

All data has been annualised to cover 12 months for monthly billing cycles, and 365 days for quarterly billing cycles.

All expenditure figures include both usage and service charges and exclude GST.

Expenditure and consumption in leased premises managed by Property NSW is included in the Department of Finance, Services and Innovation report.

Cluster 40% or 55% target

The cluster 40% or 55% target is based on the total billed energy use (\$) for electricity and natural gas data from 2013–14 (1 July 2013 – 30 June 2014).

Data for all sites belonging to agencies classified as general government sector within a cluster are included in the target.

The cluster classification used in this report is for 2015–16, effective 1 July 2015.

Water data is collated by OEH and sourced from Sydney Water and Hunter Water Corporation along with additional data reported by agencies on water purchased from local government suppliers. OEH collects data on behalf of government agencies that have granted permission to access their accounts.

Waste data is not collated by OEH but reported directly by agencies.

Contact OEH

If you would like further information on how OEH collates the data it receives or information on the Government Resource Efficiency Policy, please contact:

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