



Department of the Environment and Energy 2018-19 Annual Report Environmental Indicators

The following performance indicators should be read in conjunction with the Department's Annual Report.

Sites and Staffing

The Department operates nationally, with office facilities in:

- Canberra, ACT
- Darwin, NT
- Jabiru, NT
- Kingston, TAS

The Department also has laboratories and workshops in:

- Darwin, NT
- Jabiru, NT
- Hobart Port, TAS
- Kingston, TAS

The total area of these premises has increased to 99,455m² compared to 2017-18 accommodation footprint of 86,478m². The increase in space leased by the Department can be attributed to additional facilities and smaller site buildings for the Australian Antarctic Division being included in 2018-19 data.

Antarctic operations are based out of one research station on Macquarie Island and three Antarctic research stations (Casey, Davis and Mawson).

The Department also has a number of staff located in other states and territories as well as overseas under agreements with other state and Commonwealth Government agencies. The environmental management and reporting for these sites is completed by the organisations responsible for these locations.

During 2018-19, the Department saw less than 1% decrease in staffing numbers with 2,214 in total based in Australian offices and 117 involved in Antarctic operations.

Environmental Management

Due to the diverse nature of the Department's operations the day-to-day management of environmental performance is completed at a local level.

The Department is committed to planning, implementing and monitoring measures to improve environmental performance across all offices and tenancies. The Department approaches the reduction of operational environmental impacts strategically by reviewing available data and focusing on continuous improvement, with the support of our outsourced property services provider.

Although no dedicated Environmental Management System (EMS) is in place at offices and laboratories based in Canberra and the Northern Territory, operations are conducted in a manner consistent with the Department's aim to minimise the ecological impact on the environment.



Australian Antarctic Division continued to demonstrate leadership in environment protection across all its activities in Australia and Antarctica against ISO 14001 and through its EMS. Environmental performance was at the forefront, with regular communication to staff and public.

Staff based in other states, territories or overseas endeavour to meet environmental best practice wherever practicable.

Energy

Electricity and gas usage for national operations decreased in the 2018-19 period, and usage per person also decreased. Electricity usage in the 2018-19 period equates to 298 MJ/m². The Department continues to promote energy efficiency practices to staff and installs energy saving devices wherever practicable.

Practices undertaken throughout the 2018-19 period included: test and tagging; and condition reports of electrical equipment to assist in ensuring efficient use of electricity. Canberra-based sites also continued to purchase 100% Green Power to offset greenhouse gas emissions.

The solar power system operating at the Department's Kingston premises produced 1,660,644 MJ of renewable energy and directly contributes to the Tasmanian power network.

Antarctic operations reported an increase in energy use, despite a decreased number of expeditioners. Environmental training is provided by the Australian Antarctic Division to all expeditioners, and energy efficient behaviour is promoted across all stations.

Water

Due to the type of services available at the Jabiru Field Station, water consumption figures for the 2018-19 period are unavailable for this location.

Reportable water consumption within the Department's Australian-based operations decreased slightly throughout the 2018-19 period while Antarctic operations reported an increase in water consumption for the same period overall.

Water saving behaviours are promoted to all expeditioners involved in the Department's Antarctic operations and general staff across all Australian-based operations.

Transport

The total number of Departmental fleet vehicles increased in 2018-19 with a continued increase in the use of diesel fuel in remote areas across Australia.

Due to the changing nature of the Department's operational requirements large fluctuations in fuel consumption is expected.



Resource Efficiency and Waste

Due to the type of services available at the Jabiru Field Station, waste figures are not available for this location. Waste data for the Department's 51 Allara Street premises is unavailable due to the multi-tenanted nature of this building.

Copy paper purchased by the Department reduced in 2018-19 and staff are continuously encouraged to purchase paper items made from post-consumer recycled content. Battery and other resource recycling facilities are also made available where practicable.

Canberra-based sites continue to participate in the ACT Smart Office Recycling Program.

Wastage figures from Antarctic operations are expected to vary greatly depending on the type of works occurring during the reporting period. This is reflected in the data for the 2018-19 period when compared to the 2017-18 period.



Table 1: Summary of Environmental Indicators – Australian-based Operations

| Indicator | 2017-18 Result | 2018-19 Result | % Change |
|--|----------------------------|----------------------------|----------|
| Staffing | | | |
| Average Staffing Levels | 2,235 | 2,214 [^] | -0.9% |
| Energy Use | | | |
| Total Electricity and Gas | 31,491,690 MJ | 29,673,114 MJ | -5.8% |
| Electricity Use per Person | 14,090 MJ | 13,402 MJ | -4.9% |
| <i>John Gorton Building, Canberra</i> | 7,354,760 MJ | 5,600,002 MJ | -23.9% |
| <i>51 Allara St, Canberra</i> | 1,730,462 MJ | 1,753,309 MJ | 1.3% |
| <i>3 Pederson Rd, Darwin</i> | 5,083,387 MJ | 4,920,631 MJ | -3.2% |
| <i>Jabiru Field Station, Jabiru</i> | 437,760 MJ | 478,182 MJ | 9.2% |
| <i>Channel Hwy, Kingston</i> | 16,062,462 MJ | 16,173,266 MJ | 0.7% |
| <i>Hobart Port Cargo Facility</i> | 802,483 MJ | 731,286 MJ | -8.9% |
| <i>Kettering Facility</i> | 20,376 MJ | 16,438 MJ | -19.3% |
| Greenhouse Gas Emissions | | | |
| Total Greenhouse Gas Emissions | 4,441 t CO ₂ -e | 2,129 t CO ₂ -e | -52.1% |
| <i>John Gorton Building, Canberra</i> | 1,961 t CO ₂ -e | 0 t CO ₂ -e | n/a |
| <i>51 Allara St, Canberra</i> | 461 t CO ₂ -e | 0 t CO ₂ -e | n/a |
| <i>3 Pederson Rd, Darwin</i> | 932 t CO ₂ -e | 998 t CO ₂ -e | 7.1% |
| <i>Jabiru Field Station, Jabiru</i> | 80 t CO ₂ -e | 97 t CO ₂ -e | 21.3% |
| <i>Channel Hwy, Kingston</i> | 955 t CO ₂ -e | 988 t CO ₂ -e | 3.5% |
| <i>Hobart Port Cargo Facility</i> | 51 t CO ₂ -e | 45 t CO ₂ -e | -11.8% |
| <i>Kettering Facility</i> | 1 t CO ₂ -e | 1 t CO ₂ -e | 0% |
| Transport | | | |
| Total Number of Fleet Vehicles | 25 | 26 | 4% |
| Unleaded Fuel Used by Fleet Vehicles | 4,596 L | 541 L | - 88.2% |
| Diesel Fuel Used by Fleet Vehicles | 16,722 L | 26,900 L | 60.9% |
| Resource Efficiency and Waste | | | |
| Office Copy Paper Purchased | 12,170 Reams | 10,675 reams | - 12.3% |
| Copy Paper per Person | 5.4 Reams | 4.8 reams | - 11.1% |
| Office Paper Recycling [*] | 125.8 t | n/a ^{***} | n/a |
| Co-Mingled/Cardboard Recycling ^{*^^} | 49.67 t | n/a ^{***} | n/a |
| Organic Waste ^{*^^} | 17.77 t | n/a ^{***} | n/a |
| Waste to Landfill ^{*^^} | 130.87 t | n/a ^{***} | n/a |
| Water Consumption | | | |
| Total Water Use [*] | 28,609 kL | 27,514 ^{**} kL | -3.8% |
| [^] ASL figure includes Parks Australia and Australian Antarctic Division. ^{^^} Due to the multi-tenanted nature of 51 Allara Street premises, waste figures for the 2018-19 period are unavailable. [*] Due to the regional location and type of services available in Jabiru, water consumption and waste figures are unavailable. ^{**} Data for the John Gorton Building was not provided and only an estimated consumption was included in the total figure. ^{***} Data was not provided at the time of the report. | | | |



Table 2: Summary of Environmental Indicators – Antarctic Operations

| Indicator | 2017-18 Result | 2018-19 Result | % Change |
|--|-----------------------------|-----------------------------|----------|
| Staffing | | | |
| Average Staffing Levels | 133 | 117* | - 12% |
| Energy Use | | | |
| Electricity Generated by Diesel | 20,558,009 MJ | 21,001,702 MJ | 2% |
| Renewable Energy Generated | 4,044,575 MJ | 2,435,677 MJ | - 40% |
| Electricity Use per Person | 184,982 MJ | 200,319 MJ | 8% |
| Operational Diesel Fuel | 2,248,119 L | 2,389,550 L | 6% |
| Marine Diesel Oil (Shipping) | 2,572,183 L | 2,847,618 L | 11% |
| Aircraft Fuel | 1,571,285 L | 1,554,293 L | -1% |
| Total Number of Operational Vehicles | 174 | 175 | 0.6% |
| Greenhouse Gas Emissions | | | |
| Station Emissions – Diesel Fuel | 6,031 t CO ₂ -e | 6,410 t CO ₂ -e | 6% |
| Total Emissions – Antarctic Operations | 17,829 t CO ₂ -e | 18,996 t CO ₂ -e | 6.5% |
| Water Consumption | | | |
| Total Water Use | 6,678 kL | 6,831 kL | 2.3% |
| Water Use per Person | 50.21 kL | 58.38 kL | 16.3% |
| Waste Returned to Australia | | | |
| Liquid Waste – Treated and Disposed | 10 t | 22^ t | 120% |
| Waste Sent to Recycling Facilities | 78 t | 61 t | -22% |
| Waste to Landfill | 164 t | 191 t | 16% |
| Total Waste per Person | 1.98 t | 2.15 t | 4.1% |
| * Average Staffing Levels does not include round-trippers, etc., as this information is no longer available. | | | |
| ^ Liquid is made up of sewer sludge, oily water, RO water and coolant. | | | |