

EDUCATION DIRECTORATE

ABOUT THE DIRECTORATE

The Education Directorate delivers quality public school and early childhood education to shape every child's future and lay the foundation for lifelong development and learning. Our vision is that every student will learn, thrive and be equipped with the skills and attitudes to lead fulfilling, productive and responsible lives. We strive to ensure that every child and young person in the ACT benefits from high quality, accessible education and early childhood education and care.

The Directorate oversees the management and maintenance of 87 public schools at 91 sites, including 76 preschools and two Education Support Office (ESO) sites. Strategic priorities for carbon emission reduction are informed by the strategic pathway outlined in AP2: A new climate change strategy and action plan for the Australian Capital Territory and the Carbon Neutral ACT Government Framework. Our emission reduction program is focused on maximising the efficient and sustainable use of energy resources while enhancing the thermal comfort of student learning and teaching spaces. The Directorate pursues a strategic approach that targets school buildings as a system, implementing solutions that incorporate the building envelope, mechanical systems and control systems while also building capacity within schools to identify and solve site specific issues.

KEY PERFORMANCE INDICATORS

The Education Directorate's performance targets identify key areas for increased operational efficiency of buildings and reduction in the emissions from fleet vehicles managed by the Education Support Office. The targets are as follows;

- > A reduction in gas consumption of 2% across the school portfolio and Education Support Office;
- > A reduction in electricity consumption of 3% across the school portfolio and 5% at the ESO site, Hedley Beare Centre for Teaching and Learning (HBCTL); and
- > ESO fleet fuel reduction target of 3%.

Energy use by Gross Floor Area (Megajoules/m²) is a key performance indicator of energy intensity and is used to track the performance of individual schools year on year and also to compare energy use intensity between schools of the same type, for example to compare high schools against their peers. The performance indicator assists the directorate in identifying schools for further investigation for energy conservation measures while also allowing the performance of these measures to be tracked over time.

COMMENTS ON THIS QUARTER

- > ESO fuel target is on track with a 16% reduction in fuel consumption achieved in the quarter. Two end of lease petrol vehicles were replaced with electric/petrol hybrids.
- > Electricity reduction targets across the school portfolio and ESO are on track to be achieved.
- > Ongoing energy management initiatives including fine tuning of building at Hedley Beare Teaching and Learning Centre are achieving incremental energy efficiency gains at the site.
- > A reduction in gas consumption of 22% and an electricity consumption reduction of 40% at Erindale Education and Recreation Complex on Q1 2016-17 indicate that the roll out of the BMS has met its objective of facilitating improved operational and energy efficiency at the site.
- > Building envelope upgrade (installation of an auto door and double glazing) at North Ainslie Primary school saw a 7% reduction in electricity and a 9% reduction in gas consumption when compared to Q1 2016-17.
- > A 14% increase in Heating Degree Days (the number of degrees that a day's average temperature falls below 15.5°C) was accompanied by an increase in gas consumption with nearly half of all school sites seeing an increase of over 10% when compared to Q1 2016-17. This indicates school facilities have a low resilience to changes in external temperature.

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COMMENTS

ACHIEVEMENTS

- > In accordance with the EDU Sustainable Transport Strategy two end of lease petrol vehicles were replaced with hybrid petrol/electric vehicles.
- > The roll out of the Building Management System (BMS) at the Erindale Education and Recreation Complex (EERC) is on track for completion in December 2017.
- > Stage 1 of the roofing upgrade at Mount Stromlo High School is on track for completion in December 2017.

UNCERTAINTIES/CONSTRAINTS

- > The need to mitigate heat over the summer has necessitated the installation of energy consumptive air cooling in some schools. These works are likely to see an increase in electricity consumption.
- > Estimates of consumption (as opposed to actual usage) on gas bills present a challenge in interpreting gas consumption trends.

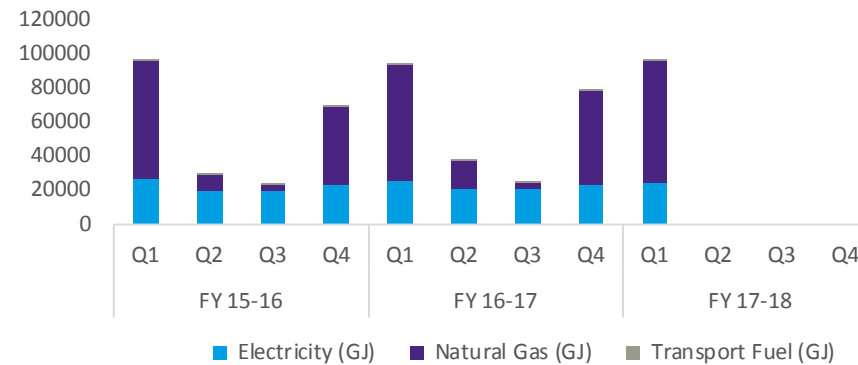
FOCUS AREAS/OPPORTUNITIES

- > Ongoing increases in gas consumption present a clear challenge.

DATA EXTRACTED

19/04/2018

3 YEAR ENERGY CONSUMPTION PROFILE



QUARTERLY ENERGY CONSUMPTION

	Q1 17-18	Difference*	tCO ₂ -e [^]
Electricity (GJ)	23,620	-3.6%	2,821
Gas (GJ)	70,209	5.1%	3,618
Total energy (GJ)	93,830	2.8%	6,439

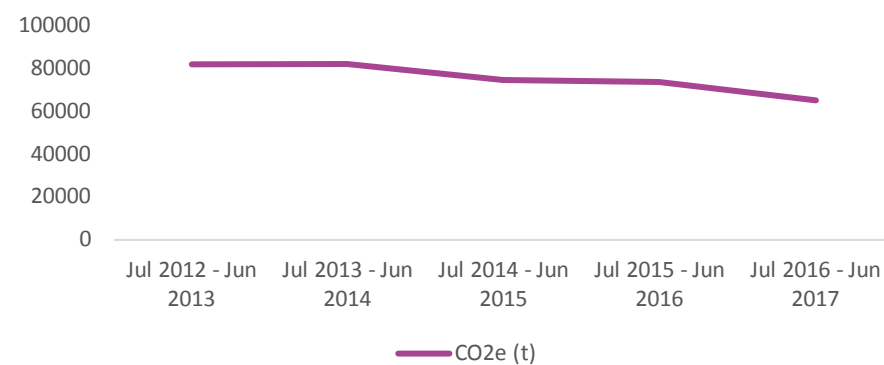
* Compared to the same period previous year
[^] Related to current reporting period

FINANCIAL YEAR TO DATE ENERGY CONSUMPTION

	YTD 17-18	Difference*	tCO ₂ -e [^]
Electricity (GJ)	23,620	-3.6%	2,821
Gas (GJ)	70,209	5.1%	3,618
Total energy (GJ)	93,830	2.8%	6,439

* Compared to the same period previous year
[^] Related to current reporting period

EMISSIONS PROFILE SINCE 2012-13



DG INDICATOR

Q1 2017-18

(July to September 2017)

A reduction in gas consumption of 2% across the school portfolio and Education Support Office (ESO). A reduction in electricity consumption of 3% across the school portfolio and 5% at the Hedley Beare Centre for Teaching and Learning (HBCTL) and an ESO fleet fuel reduction target of 3%.

FINANCIAL YEAR TO DATE ENERGY CONSUMPTION AT FOCUS SITES

Location	Energy (GJ) [#]	Difference*	tCO ₂ -e [^]
Hedley Beare Centre for Teaching and Learning	1,844	-7.4%	129
Erindale College/Theatre	3,764	-27.9%	260
North Ainslie Primary School	638	-9.2%	41

[#] includes Electricity and Natural gas only
^{*} Compared to financial year to date 2016-17
[^] Related to current reporting period

EDUCATION SUPPORT OFFICES QUARTERLY ENERGY CONSUMPTION

	Energy (GJ) [#]	Difference*	tCO ₂ -e [^]
Electricity (GJ)	739	0.92%	88
Gas (GJ)	1409	0.8%	73
Fuel (GJ)	102	-14.9%	7
Total energy (GJ)	2,250	0%	168

* Compared to financial year to date 2016-17
[^] Related to current reporting period

EDUCATION SUPPORT OFFICES FINANCIAL YEAR TO DATE ENERGY CONSUMPTION

	YTD 17-18	Difference*	tCO ₂ -e [#]
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