

TRANSPORT CANBERRA AND CITY SERVICES DIRECTORATE

ABOUT THE DIRECTORATE

Transport Canberra and City Services (TCCS) is a diverse Directorate responsible for delivering a wide range of services that Canberrans rely on every day. This includes the public transport network; management of public open spaces and city places, including lakes and Canberra's urban trees; the majority of urban infrastructure (roads, bridges, street lighting and stormwater); Libraries ACT; ACT NOWaste; Yarralumla Nursery; Birrigai Outdoor School; Capital Linen Service and ACT Cemeteries.

TCCS has a dedicated Sustainability Program which provides high level support and advice on the ACT Government's sustainability objectives and implementation of the Carbon Neutral Government Framework across the Directorate. The TCCS Sustainability Working Group was established in 2015 with representatives from each Division and most business units as well as inter-departmental representatives who advocate on sustainability matters, develop a positive sustainability culture, collaborate and share ideas.

The TCCS Carbon/Energy Budget for 2017-18 sets a target of 1% reduction in stationary energy compared with CY2016. This target is comprised of electricity reductions anticipated through an Energy Performance Contract for the streetlight network and LED lighting upgrades at a number of sites including Kippax, Belconnen and Tuggeranong Libraries and Belconnen and Tuggeranong Depots.

As the largest contributor to ACT Government emissions, TCCS are presented a responsibility and opportunity to lead by example through constantly striving to deliver our services in the most efficient way. The TCCS Carbon/Energy Budget demonstrates our commitment to supporting carbon neutral operations in ACT Government by 2020 and more broadly the Territory's net zero emissions target under the ACT Climate Strategy.

KEY PERFORMANCE INDICATORS

Growth in the Territory will result in TCCS increasing service delivery and operations resulting in a commensurate increase in energy use. Energy intensity measures are included in the TCCS Carbon/Energy Budget to track efficiencies where changes in operations or environment occur.

Transport Canberra bus network contributes to the Territory's emission reduction target under the Climate Change and Greenhouse Gas Reduction Act 2010 through reducing passenger vehicles on ACT roads. Transport Canberra continues to improve its customer experience and sustainability, trialling alternate energy buses in 2018 and promoting more passengers through greater accessibility, bike racks and introducing more air conditioned buses to the fleet. Energy use per passenger kilometre is a measure developed to monitor the energy intensity of the bus network as the network evolves to integrate bus and light rail with each other and with other forms of transport including taxis, cycling and walking to ensure that transport is accessible for all Canberrans.

Energy intensity trends as a measure of energy per unit of linen processed has been developed and normalised based on benchmark energy for 2013-14 for Capital Linen Services. As the gas meter is shared with another site, the energy use is proportioned against floor area and performance should therefore be considered an estimate of performance rather than actual performance.

Energy use per hectare of mowing area is currently being established for TCCS mower fleet in 2017-18 following the introduction of the global navigation satellite system (GNSS) in late 2017. The GNSS system is expected to be fully rolled out by the start of the 2018-19 mowing season. At this time a benchmark will be established for future tracking of this performance indicator.

COMMENTS ON THIS QUARTER

- > Energy consumption is affected by operational changes; environmental conditions; equipment or equipment controls; and other factors that may be outside the control of TCCS.
- > In relation to DG performance indicator, environmental analysis indicates 7% more greater heating requirements¹ during 2017-18 compared with the benchmark calendar year 2016. The 1.7% gas reduction can be partly attributed to energy conservation measures at Capital Linen Services, Transport Canberra bus depots and the Directorate vacating Macarthur House in 2017.
- > In relation to Q4 energy consumption, environmental analysis indicates 13% more greater heating requirements² during Quarter 4 (2017-18) compared with Quarter 4 (2016-17). Given this, 0.6% reduction in gas use demonstrates efficiencies have been achieved.
- > The increase of 1.8% for Transport Canberra bus network key performance indicator (GJ/100 passenger km) is related to network requirements with increased services and thus fuel use in Quarter 4 (2017-18) compared with Quarter 4 (2016-17).
- > A greater number of bus passenger journeys were recorded for Transport Canberra bus network with an increase of 7% for Quarter 4 (2017-18) compared with Quarter 4 (2016-17).

¹ Based on comparison of heating degree days at 15.5 degree base load for Station YSCB Canberra AU (149.20E,35.31S)

² Based on comparison of heating degree days at 15.5 degree base load for Station YSCB Canberra AU (149.20E,35.31S)

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COMMENTS

ACHIEVEMENTS

- > Exceeded Carbon Budget target for 2017-18 with a 4.2% decrease in stationary energy use for the year compared with calendar year 2016.
- > Second electric bus introduced to fleet as part of alternative energy bus trial. This equates to two electric and one hybrid vehicle in service.
- > Soft plastics trial undertaken at Capital Linen Services with two benches and a picnic set made from one week waste.
- > Solar feasibility being undertaken across TCCS sites for solar PV.

UNCERTAINTIES/CONSTRAINTS

- > Growth and increasing service delivery.
- > Environmental factors.
- > Existing infrastructure and limited budget constraints.

FOCUS AREAS/OPPORTUNITIES

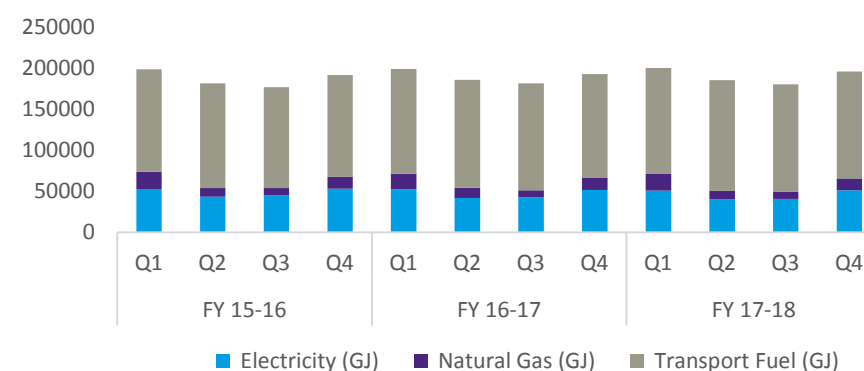
- > Identification of energy saving opportunities at key sites across the Directorate.
- > Explore alternative transport fuel options.
- > Carbon Neutral Government Loan Fund.

DATA EXTRACTED

- > Custom emission factors are updated annually to reflect changes in measured emissions intensity of electricity supplied to the ACT. Adjustments may be made to future reporting of emissions when updated emissions factors are known.

18/09/2018

3 YEAR ENERGY CONSUMPTION PROFILE



QUARTERLY ENERGY CONSUMPTION

	Q4 17-18	Difference*	tCO ₂ -e [^]
Electricity (GJ)	51,166	-1.1%	6,467
Gas (GJ)	14,471	-0.6%	746
Fuel (GJ)	130,618	+3.7%	8,859
Total energy (GJ)	196,255	+2.1%	16,072

* 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)	183,117	-3.1%	23,144
Gas (GJ)	51,729	-1.7%	2,666
Fuel (GJ)	526,196	+2.0%	35,705
Total energy (GJ)	761,042	+0.5%	61,515

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

FINANCIAL YEAR TO DATE ENERGY CONSUMPTION BY DIVISION

Division ⁺	Energy (GJ) [#]	Difference*	tCO ₂ -e [^]
Transport Canberra	509,879	+2.7%	34,926
City Services	249,126	-2.1%	26,356

⁺ Excludes head offices
[#] Electricity, natural gas and transport fuels
* Compared to financial year to date 2016-17
[^] Related to current reporting period

DG INDICATOR Q4 2017-18

(April to June 2018)

A 1% stationary energy reduction target and ensuring the effective internal governance of energy performance reporting.

PERFORMANCE AGAINST TARGET

	Target ¹	Result
Electricity (GJ)	-1.4%	4.9%
Gas (GJ)	0.0%	-1.7%
Total energy	-1.0%	-4.2%

¹ Target based on calendar year 2016 data and reflects Director-General performance indicator results.

DIRECTORATE KPI'S

KPI'S	16-17	17-18	Difference
GJ/kg Linen	0.99	0.96	-3.2%
GJ/100 passg km ²	0.25	0.25	1.8%
MJ/Hectare	-	-	-

² Passenger km is slightly overstated due to the method of calculation

FINANCIAL YEAR TO DATE ENERGY CONSUMPTION AT FOCUS SITES

Location	Energy (GJ) [#]	Difference*	tCO ₂ -e [^]
Streetlights	144,199	-1.2%	18,225
Bus Depots ^{##}	9,245	-5.1%	1,169
Libraries ACT ^{**}	1,031	-9.4%	130

[#] Electricity only
* Compared to financial year to date 2016-17
[^] Related to current reporting period
^{##} Relates to Belconnen and Tuggeranong Bus Depots
^{**} Relates to Belconnen, Kippax, Tuggeranong Libraries