

Key sustainability results for 2017 against our baseline year 2013:

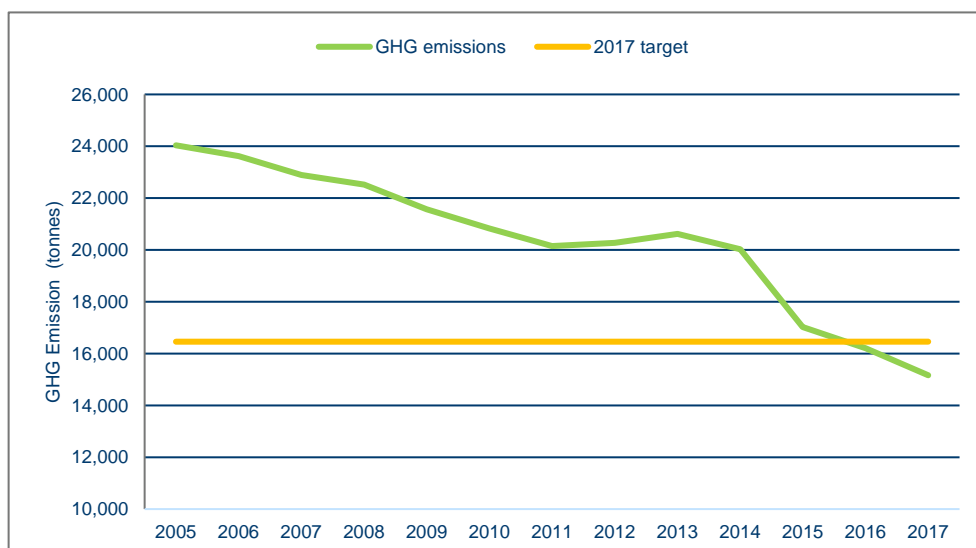
- greenhouse gas emissions (GHG) reduced by 26% or 6,115 tonnes
- electricity consumption reduced by 21%
- natural gas consumption reduced by 14%
- water consumption increased by 5% or 4.2 million litres
- waste to landfill reduced by 112 tonnes, a 23% improvement
- recycled waste increased by 56 tonnes, a 21% improvement
- staff and students recycled 41% of all waste, up from 31% in 2013
- fuel consumption for the vehicle fleet reduced by 21%, a saving of 46,000 litres
- Staff patronage on V/Line train travel (myki) increased by 71%
- paper consumption reduced by 32% or 6,444 reams

Greenhouse Gas Emissions

2017 Target – reduce GHG emissions by 20% (baseline 2013)

Result – 26% reduction since 2013

Greenhouse gas emissions



GHG emissions have fallen by 5% in 2017, 8% in 2016, 10% in 2015 and 3% in 2014.

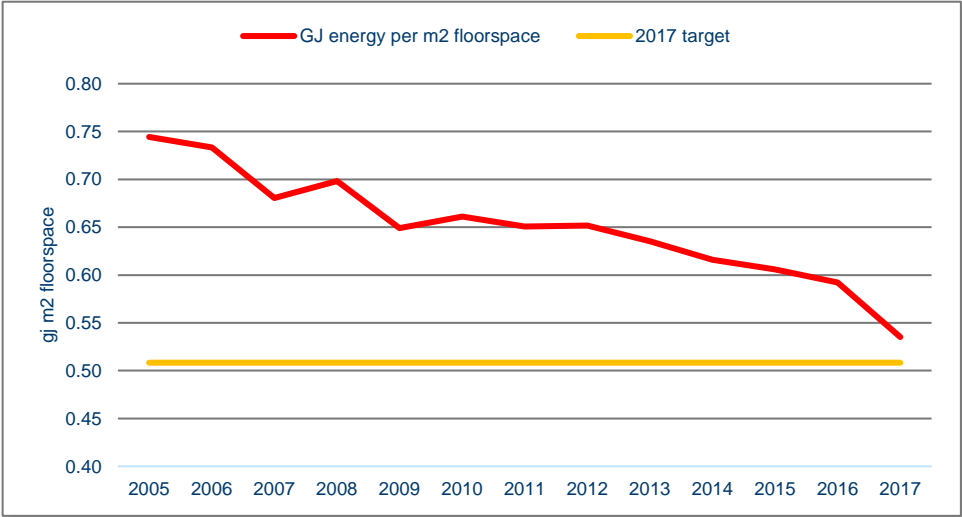
FedUni has been a finalist in the ACTS Green Gown Awards for the past 3 years for achievements in GHG emission reductions.

Energy

2017 Target – reduce energy consumption by 20%

Result – 17% reduction since 2013

Energy per m² floor space



Energy consumption continues to decline with a 21% decrease in electricity and a 14% decrease in natural gas in the past 4 years.

Overall energy consumption has fallen by 17%, just short of our 20% reduction target.

The reductions are predominately due to the successful Greener Buildings program which has installed a number of energy efficiency plant, lighting and solar programs.

Large Scale Solar at SMB campus



The Ballarat Tech School at SMB campus is undergoing a major building upgrade including a number of sustainability features.

On the roof is a 98 kwh solar system that will reduce electricity consumption by 40% in summer and 15% in winter.

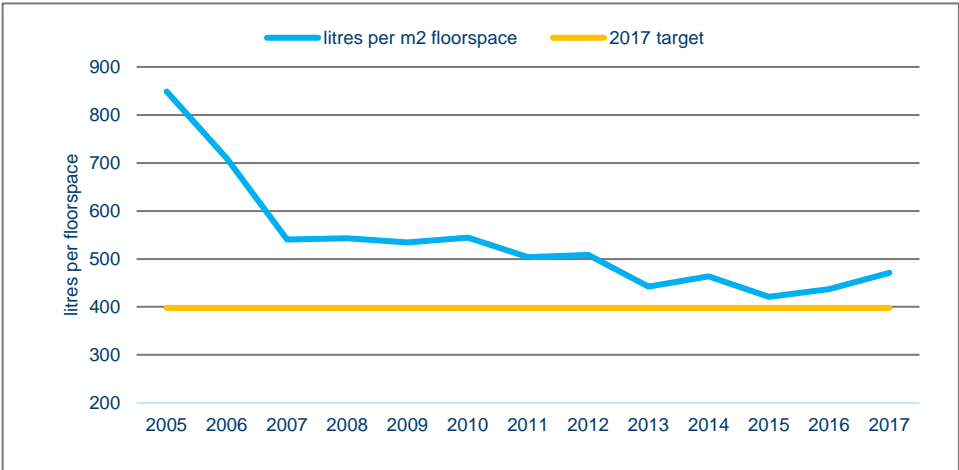
An interactive display will be shown on screens throughout the building to demonstrate the financial and environmental benefits of solar.

Water

2017 Target – reduce water consumption by 10% (baseline 2013)

Result – 5% increase since 2013

Water Consumption per m² floor space



Potable water consumption increased by 5% or 4.2 million litres since 2013.

Horsham campus experience major water leaks during January and February and Mt Helen campus has expanded the gardens that are watered.

All campuses now have 3G smart meters installed for accurate reporting and leak detection.

Water Consumption by campus (per m² floor space)



Jing Xiang and Xi Cao were among 50 students who participated in the Enactus tree planting day in May at Mt Helen campus.

Over 400 natives were planted and more plantings are scheduled for 2018.

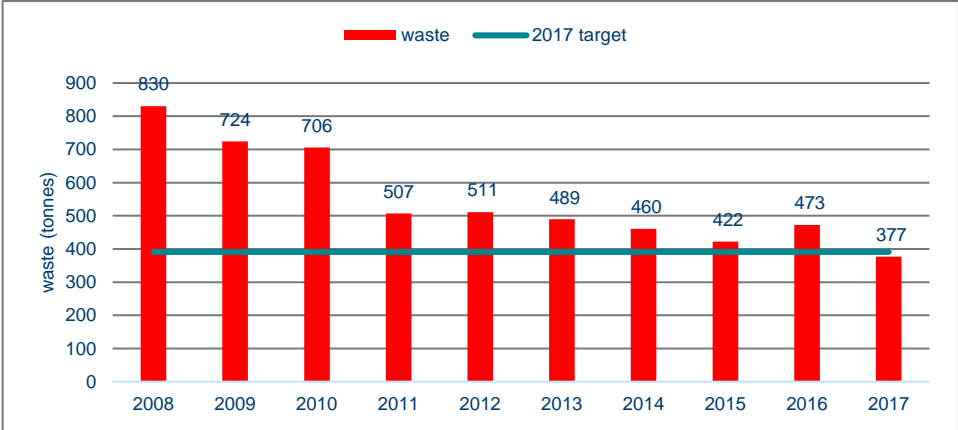


Waste & recycling

2017 Target – Reduce landfill waste by 20% and increase recycling by 20% (baseline 2013)

Result – 23% reduction in landfill waste and 21% increase in recycling

Landfill volumes



Our 2017 target has been achieved with a 23% reduction in landfill waste since 2013.

All up, FedUni sent 377 tonnes of waste to landfill. This result was also a 96 tonne improvement on the previous year.

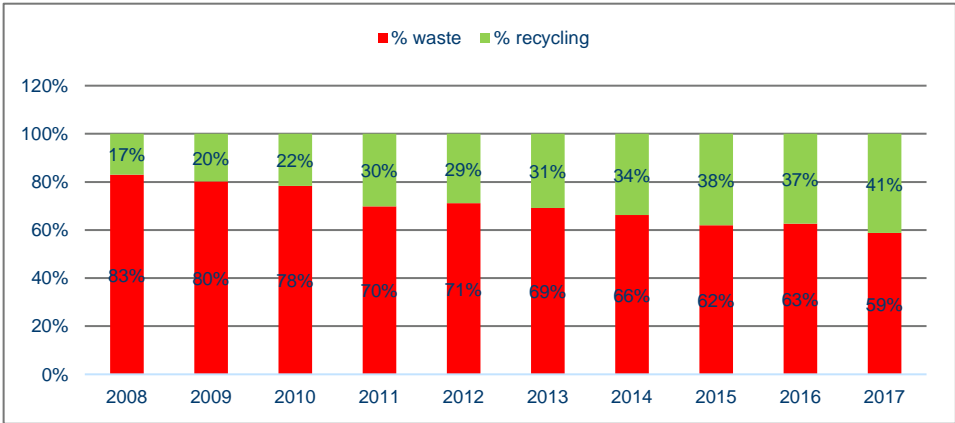
Recycling volumes



Our recycling target has been achieved too with a 21% increase in waste being recycled over the past 4 years.

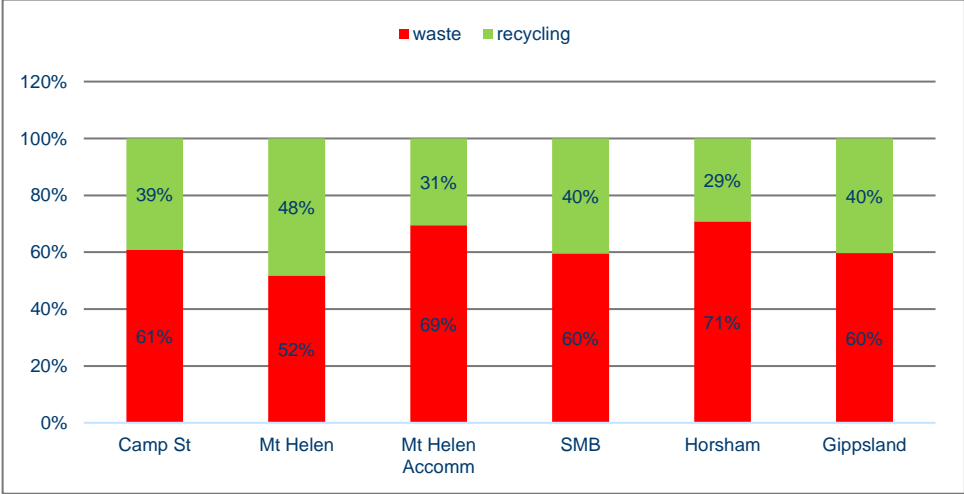
This year FedUni introduced battery recycling and green waste composting

Recycling Rates



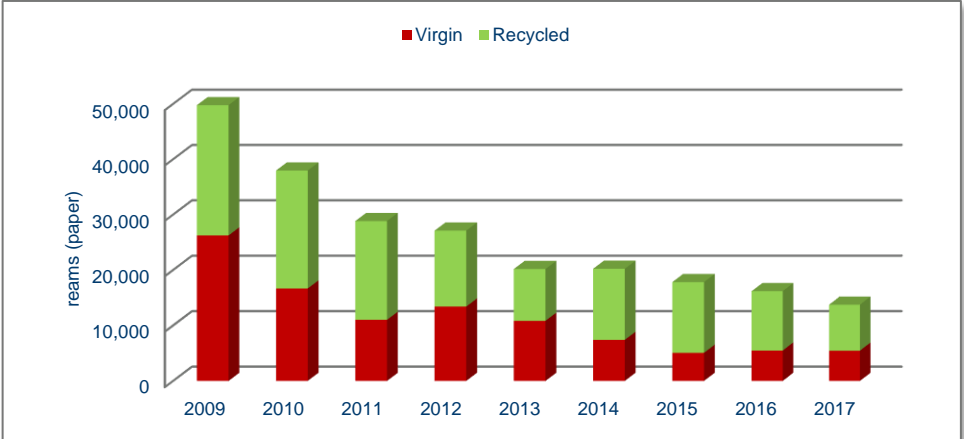
Our recycling rates continue to increase. In 2008 we only recycled 17% of our waste, now we recycle 41% of total waste.

2017 Recycling rates By Campus



Mt Helen campus is the leading recycling campus with 48% of all waste being recycled, followed by Gippsland and SMB campuses with 40% of waste being recycled.

Paper Consumption



University purchased 13,744 reams of paper in 2017, a reduction of 32% (6,444) since 2013.

In 2017, 60% of all paper purchased had a recycled component.



Every year FedUni staff and students participate in the National Ride to Work Day.

This year Mt Helen campus started from Sovereign Hill and rode along the Canadian Creek Bike Trail.

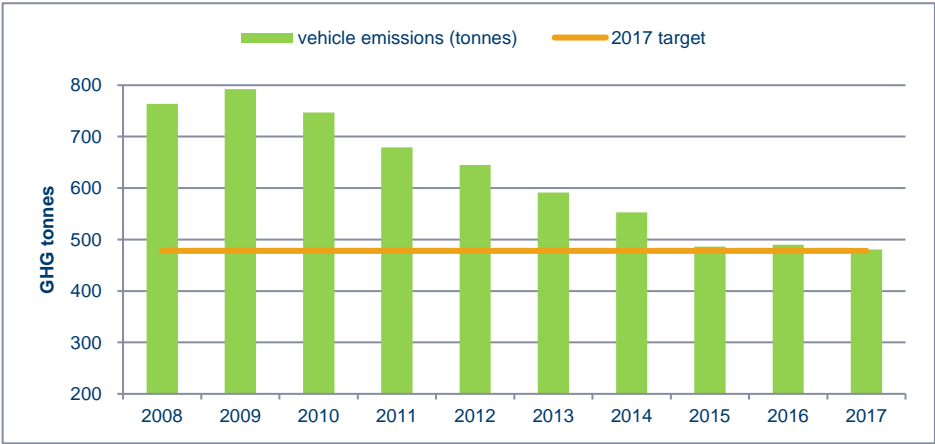
Participants had a free breakfast on arrival at the campus.

University Staff Travel

2017 Target – Reduce University vehicle emissions by 20% (baseline 2013)

Result – 19% reduction since 2013

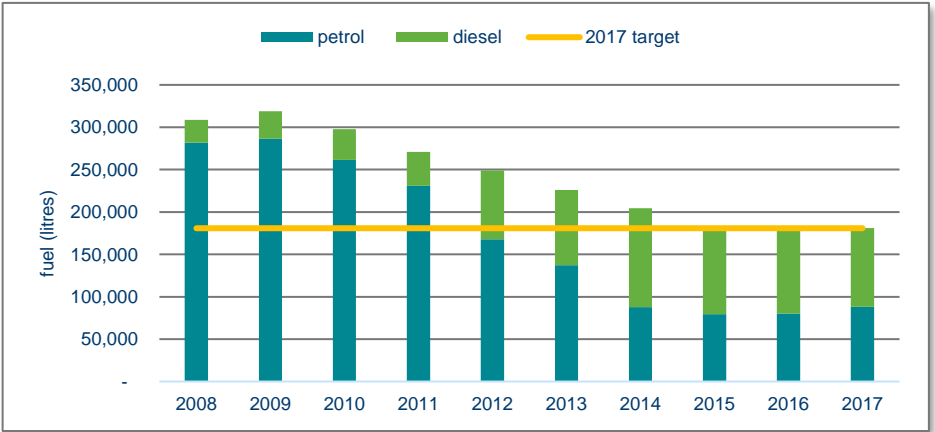
Motor Vehicle fleet - GHG emissions



FedUni has 101 fleet vehicles and these combined to emit 481 tonnes of GHG gases in 2017, a 19% reduction over the past 4 years.

These saving are attributed to more staff utilising public transport and improvements in vehicle efficiency through the adoption of diesel and 4-cylinder vehicles.

Vehicle Fuel Consumption

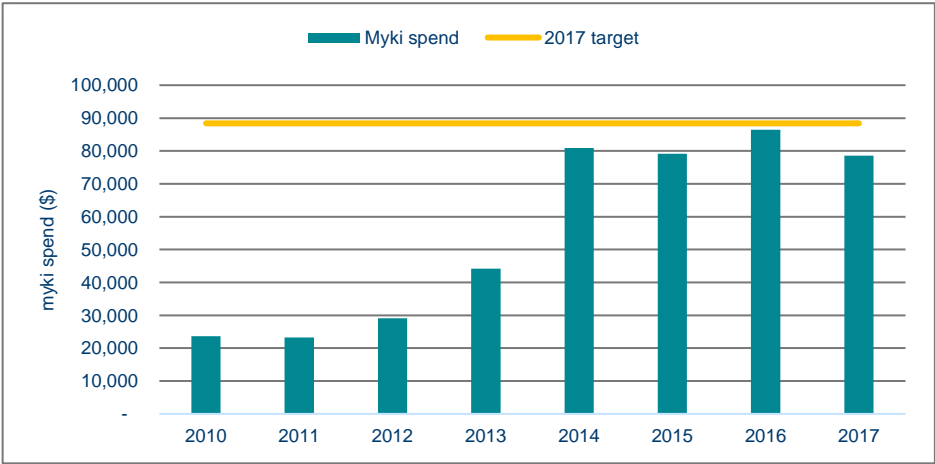


In the past 4 years, fuel consumption has reduced by 21%, a saving of 46,000 litres.

The savings are attributed to the replacement of petrol vehicles with diesel and recently the purchase of Hybrid Camry and Corollas.

60% of the passenger fleet are diesel, 28% are petrol and 12% are hybrid. 92% of the passenger fleet are 4 cylinder.

V/Line train expenditure



Staff continue to use V/Line trains travel with a \$78,608 spend in 2017. Down slightly on the \$88,000 target spend.

Since 2013, staff have increased public transport use by 71% whereas pool vehicle use has fallen by 21% for the same period.

2017 Carbon Inventory

The University emitted 17,079 tonnes of greenhouse gases in 2017, well below our target of 18,901 tonnes. This result is a 5% reduction on the previous year and 26% reduction since 2013.

Emissions source	Consumption units	Consumption	Actual Emissions (tonnes) 2013	Actual Emissions (tonnes) 2017	change from previous year	Target emissions (tonnes) 2017
Direct emissions (Scope 1)						
Natural Gas	GJ	67,052	3,508	3,060	-13%	2,806
Petrol for vehicles	kL	80	314	204	-35%	251
Diesel for vehicles	kL	103	240	253	5%	192
Total Scope 1			4,062	3,516	-13%	3,249
Indirect emissions (Scope 2)						
Electricity	kWh	10,564,369	15,109	10,845	-28%	12,087
Optional Emissions (Scope 3)						
Electricity - transmission & distribution losses	kWh	10,564,369	1,904	1,004	-47%	1,523
Flights	km	6,708,974	1,398	1,027	-27%	1,118
Waste - landfill	tonnes	473	538	452	-16%	430
Extraction of natural gas	GJ	67,052	267	232	-13%	214
Train travel	\$	75,630	28	50	79%	42
Water consumption	kL	77,531	187	197	5%	149
Paper consumption	reams	13,754	67	49	-26%	54
Emissions from fuel extraction	kL	183	44	24	-46%	35
Total scope 3			4,433	3,035	-32%	3,565
Scope 1 + 2 + 3			23,604	17,397	-26%	18,901
Reduction measures						
Air travel offsets						
AGL Green power	kWh	269,194	-414	-318		-331
Net Emissions			23,190	17,079	-26%	18,570