



2017-18 ANNUAL FEED-IN TARIFF REPORT

DECEMBER 2018

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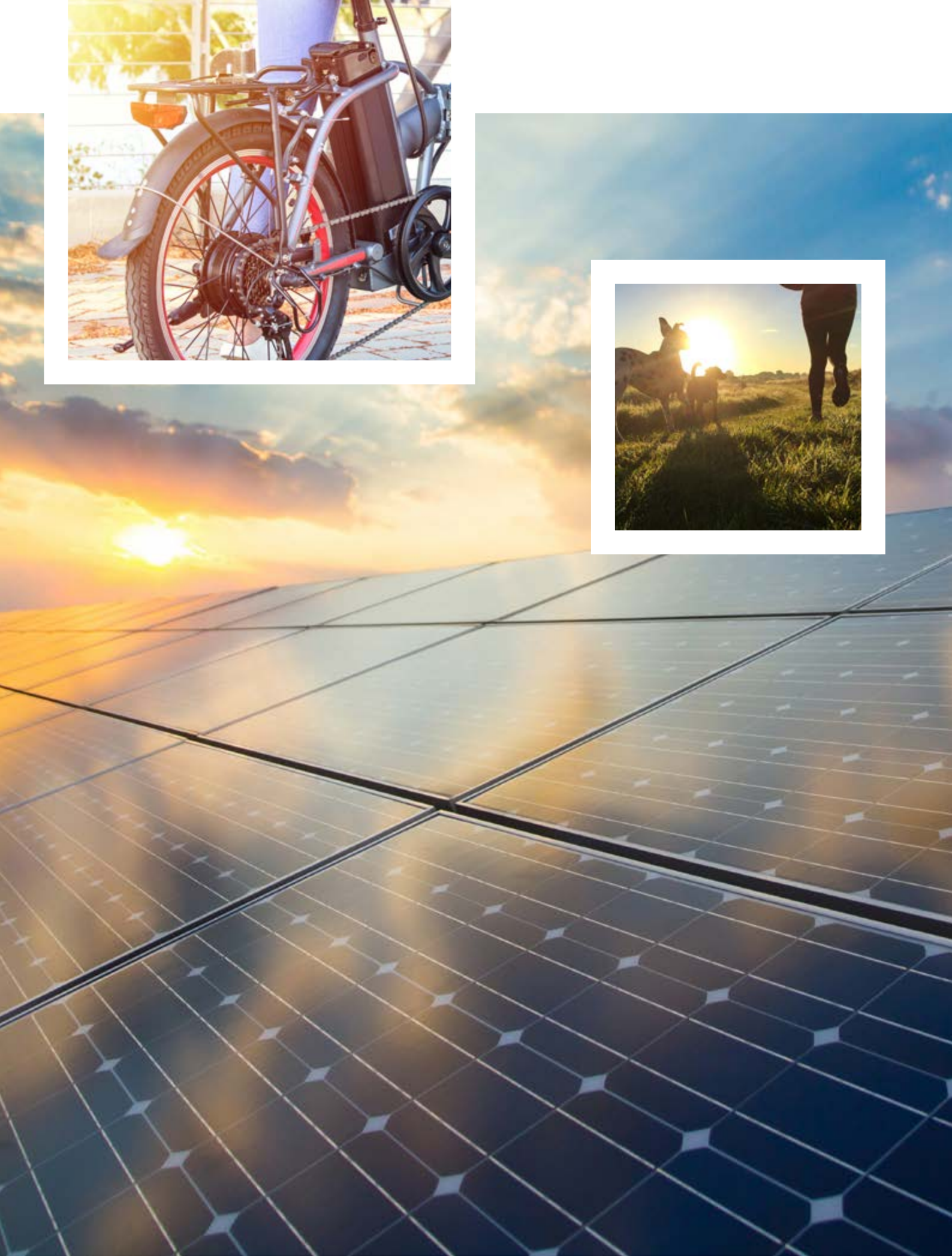


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EXECUTIVE SUMMARY

Under section 11A of the Act, the Minister must publish an annual report that provides the following information on the scheme:

- The number of compliant renewable energy generators installed on premises in the ACT;
- The total capacity of compliant renewable energy generators installed on premises in the ACT; and
- The costs under this ACT on electricity users.

Renewable generators supported by the small and medium feed-in tariff scheme (the scheme) generated 47,559.94 megawatt hours (MWh) of electricity in 2017–18, from a total installed capacity of around 32.94 megawatts (MW), consisting of 10,428 solar photovoltaic systems. Further detail is provided in Table 1.

The estimated cost of the scheme to consumers is \$7.01/MWh, or around 96.4c per week for a two person house consuming 7.151 MWh annually.

Table 1: Number and capacity of small and medium FiT generators (2017-18).

	NO. OF GENERATORS	CAPACITY (MW)	GENERATION (MWH/YEAR)
Medium scale	55	7.09	12,735.54
Small scale	10,373	25.86	34,824.40
TOTAL	10,428	32.94	47,559.94

INTRODUCTION

This report is the fourth annual report on the scheme. Section 11A of the *Electricity Feed-in (Renewable Energy Premium) Act 2008* ('the Act') requires an annual report containing the number of compliant renewable energy generators installed under the scheme, the total capacity of the generators installed under the scheme, and the costs under the Act on electricity users.

Previous reports have contained a broad range of information pertaining to the ACT's small and medium and large scale Feed-in Tariff schemes, however, 2017-18 has also seen a comprehensive review of the Act, and the 2017-18 annual report does not seek to duplicate this work. As such, this report focuses on the specific reporting requirements of Section 11A of the Act. The outcomes of the review of the Act and any associated recommendations will be made available in 2019.

A premium feed-in tariff (FiT) is a premium payment (higher than the market value) for electricity generated by a renewable electricity generation system. The purpose of these payments is to encourage the uptake and development of renewable electricity.

The Act established a scheme for payments to ACT households and businesses generating renewable electricity. While this scheme was open to any form of small (up to 30 kW) and medium (30 – 200 kW) sized renewable electricity generator, initially only rooftop solar photovoltaic system applications were successful, so the scheme also became known as 'the rooftop solar scheme'. The scheme opened for applications on 1 March 2009 and was closed to new entrants on 13 July 2011. The cut-off date for generator installation under the scheme was 31 December 2016.

Successful applicants receive FiT payments for 20 years from the date their system was connected to the electricity network. Successful applicants are paid by their electricity retailer for the total kilowatt hours (kWh) their system generates, including any generation used at the same premises where it was generated. The FiT rate depends on the system's capacity and date of application to the scheme. Retailers then pass on the cost of FiT payments to the electricity distributor, who incorporates this cost into network charges.

While the ACT Government FiT scheme is now closed, households can still access solar support schemes offered voluntarily by electricity retailers that extend payments for excess generation from rooftop systems installed by households. Unlike the ACT Government scheme, which offers a FiT for all generation ('gross'), market offers by retailers only make payments for 'net' generation exported to the grid, left over after any consumption at the premises. The tariffs offered under these retailer schemes are generally more closely aligned with the value of this electricity in the market, which is significantly lower than the FiTs offered under the ACT Government FiT scheme.

SMALL AND MEDIUM-SCALE FIT SCHEME PERFORMANCE

The table below provides the performance of the scheme in 2017-18, with data from two previous years for comparison.

As the cut-off date for generator installation under the scheme was 31 December 2016, the number of generators, installed capacity, electricity production and total FiT paid are unlikely to significantly change in future years. Any change is likely to be due to variations in insolation and the degradation of solar panels.

The estimated cost added to electricity bills is, however, expected to decline over time as the population grows and solar PV systems age. It is important to note that in 2016-17, the representative consumer was a 4 person household consuming 7.441 MWh annually, where in 2017-18 this had changed to a 2 person household consuming 7.151 MWh annually, and this has affected the cost in electricity bills for a representative consumer.

Table 2: Small and medium-scale FiT Scheme Performance.

	2015-16	2016-17	2017-18
Number of generators	10,304	10,394	10,428
Installed capacity (MW)	26.35	32.53	32.94
Electricity production (MWh)	34,910	40,355	47,560
Total FiT Paid	\$14,562,165	\$15,496,627	\$16,723,351
Cost (\$/MWh)	\$6.21 ¹	\$6.30 ²	\$7.01 ³
Cost in electricity bill for a representative consumer (cents/week)	88.9 ⁴	90.2 ⁴	96.4 ⁵

1 From the ICRC's Retail electricity price recalibration 2015-16 report

2 Calculated as the 2015-16 costs increased by the Australian Energy Regulator's estimated consumer price index rise of 1.51 per cent allowed by way of the [ActewAGL Distribution 2017-18 Network Pricing Proposal](#)

3 From the ICRC's *Standing offer prices for the supply of electricity to small customers from 1 July 2017* report.

4 Based on 4 person household consumption in ACT of 7.441 MWh annually - Table 13, Electricity Bill Benchmarks for Residential Customers - A report to the Australian Energy Regulator by ACIL Allen Consulting (March 2015).

5 Based on a representative two person house consuming 7.151 MWh annually - *AEMC 2017 Residential Electricity Price Trends* report.

INSTALLED CAPACITY

In 2017-18, there were 10,428 generators under the scheme with a total installed capacity of around 32.94 MW.

Since the scheme cut-off date occurred in 2016-17, there should be no more growth in capacity or number of systems in 2017-18 or future reporting periods. However, minor adjustments may have been made due to improvements in data completeness.

It is worth noting that the final scheme capacity is under the maximum of 35 MW set by the Minister by way of the Electricity Feed-in (Renewable Energy Premium) Total Capacity Determination 2012 (No 1).

Figure 1: Number of generators under the small and medium FIT scheme

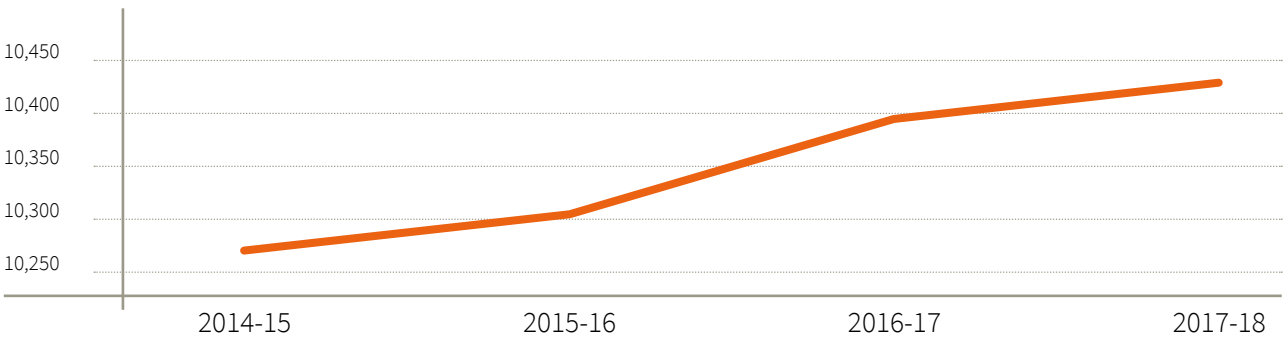
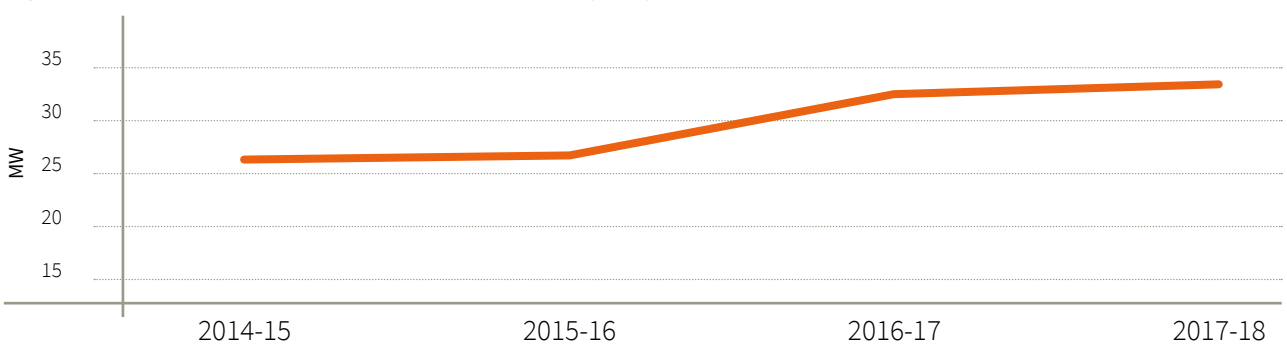


Figure 2: Small and medium FiT scheme installed capacity



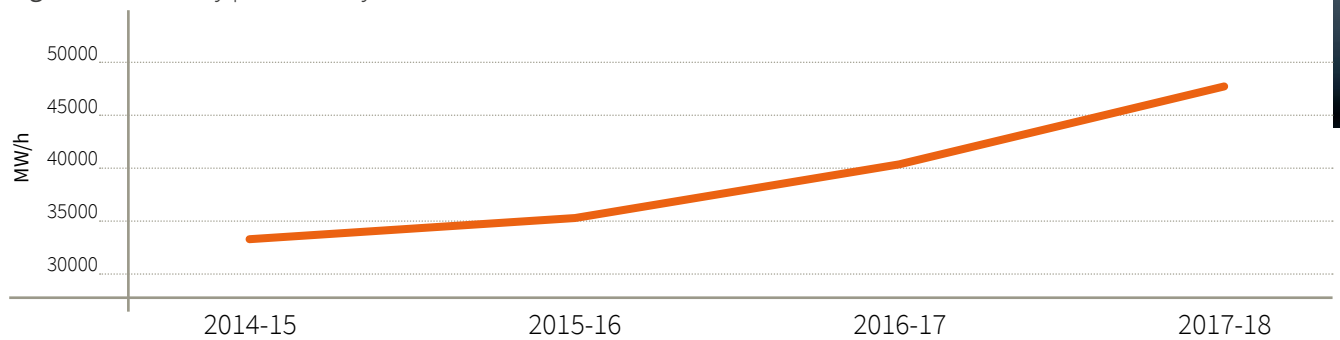


GENERATION

A total of 47,559.94 MWh was generated under the scheme during 2017-18. This represents an increase of approximately 15 per cent from 2016-17, which is primarily driven by generators that were online only for part of 2016-17 delivering their full output in 2017-18.

Variation in generation over time can also be driven by variability in the amount of solar insolation between different years. A small degradation in the output can be expected as solar photovoltaic systems age and decline in performance over time.

Figure 3: Electricity produced by the small and medium FiT scheme

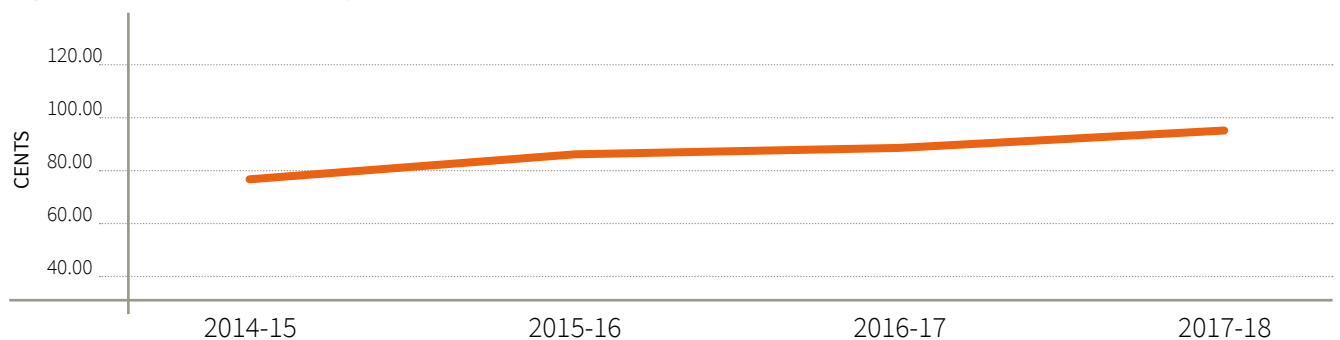


IMPACT ON ELECTRICITY BILLS

The ICRC calculates and publishes detailed FiT cost data annually in its price direction report. In this year's report, Standing offer prices for the supply of electricity to small customers from 1 July 2017, the ICRC determined the cost of the scheme to be \$7.01/MWh.

Based on a representative two person house consuming 7.151 MWh annually, the scheme contributed \$50.13 to an average annual electricity bill for an ACT household in 2017-18, or 96.4c per week.

Figure 4: Cost to ACT electricity users (cents/week)



RETAILER MARKET OFFERS (NON-PREMIUM FITS)

While the ACT Government is only required to report on its small and medium-scale FIT scheme, this report also includes information on solar support schemes offered by retailers. This is intended to provide a more complete picture of rooftop solar generation in the ACT.

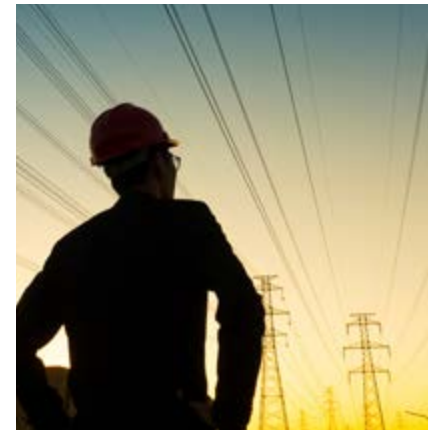
As retailers' market offers for solar are not regulated, there is no mandatory reporting of installation and generation rates. This creates problems for data completeness and accuracy and data has to be derived from a range of sources, and data reported here should be regarded as best estimates only.

As at 30 June 2018, there was a total of around 10,050 generators installed under retailer supported schemes with a combined capacity of approximately 42.08 MW, and an output of 48,574.80 MWh during 2017-18.

Totals for the combined ACT Government and retailer supported schemes, compared with the totals for 2016-17, are presented in Table 3.

Table 3: Totals for the combined ACT Government and retailer supported FiT schemes for 2016-17 and 2017-18.

	ACT GOVERNMENT SCHEME	RETAILER SCHEMES	2017-18 TOTAL	2016-17 TOTAL
Number of generators	10,428	10,050	20,478	18,168
Installed capacity (MW)	32.94	42.08	75.02	66.65
Electricity production (MWh)	47,559.94	48,574.80	96,134.74	82,653.00



ACT RENEWABLE ELECTRICITY TARGET

In April 2016, the ACT Government set a target of 100 per cent renewable electricity supply by 2020. This target is the most ambitious target for any jurisdiction in Australia, and is amongst the most progressive in the world.

In 2017-18, the total contribution of renewables to electricity supply in the ACT was 50.8 per cent, which is an increase from 31.1 per cent in 2016-17. Solar photovoltaic systems operating under the scheme contribute around 1.57 per cent to the total. The proportion of renewable electricity will significantly increase by 2020 to achieve the 100 per cent renewable electricity target.

The majority of the ACT's renewable electricity supply will come from the ACT Government's FiT schemes; this includes both the small and medium-scale FiT scheme as outlined in this report and the large-scale FiT scheme, which is administered under separate legislation. The large-scale FiT scheme allows the ACT Government to grant FiT entitlements to large-scale renewable energy generating systems, like large-scale wind farms and large solar farms, with a generating capacity above 200 kW. These large-scale generators can be located anywhere in the National Electricity Market (NEM), allowing the ACT to source competitively priced renewable electricity across the NEM.

APPENDICES

APPENDIX A – ADDITIONAL DATA ON THE SMALL AND MEDIUM FIT SCHEME

The following FiTs were available to eligible renewable energy generators from the date of scheme opening on 1 March 2009 to its close on 13 July 2011.

Table A1: Small and medium FiT scheme rates

GROSS FIT RATE	ELIGIBLE GENERATION CAPACITY AND DATE OF APPLICATION
50.05c/kWh	Generator capacity up to 10kW for applications approved 1 March 2009 to 30 June 2010.
45.7c/kWh	Generator capacity up to 30kW, applications approved 1 July 2010 to 31 May 2011
40.04c/kWh	Generator capacity between 10 to 30kW, applications approved 1 March 2009 to 30 June 2010.
34.27c/kWh	Generator capacity between 30 to 200kW for applications approved 7 March 2011 to 11 July 2011
30.16c/kWh	Generator capacity up to 200kW for applications approved 12 July 2011 to 13 July 2011

Source: Review of the Electricity Feed-in (Renewable Energy Premium) Act 2008 (August 2015)

It is important to note that the ACT Government small and medium FiT scheme was a ‘gross’ scheme. This means that the FiT was paid for all the electricity generated by a renewable energy generator, rather than only the net generation left after consumption – as is the case for retailer solar support schemes.

Table A2: Capacity and number of generators by tariff in 2017-18

GROSS FIT RATE	NO OF GENERATORS	INSTALLED CAPACITY (MW)
50.05c/kWh	2,475	5.208
45.7c/kWh	7,892	21.24
40.04c/kWh	3	0.091
34.27c/kWh	11	0.994
30.16c/kWh	47	5.412
Total	10,428	32.94 MW

Source: ActewAGL Distribution (September 2018)

Table A3: Long term generation data

MWH	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Output	202	2,409	7,670	20,947	33,717	35,342	33,397	34,910	40,355

Source: 2015-16 Annual Feed in Tariff Report and ActewAGL Distribution (November 2017)

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