

Summary of Results

Base Case

Year of installation	Actual 2015	Actual 2016	Actual 2017	Estimate 2018	Forecast 2019	Forecast 2020	Forecast 2021
1. SGUs (PV)							
1.1 New Residential							
Number of Systems Installed	123,684	111,461	143,080	191,249	221,585	185,121	171,428
Avge kW/system	4.30	4.64	5.29	6.01	6.18	6.28	6.46
Avge Certificates/kW	20.0	20.1	18.8	17.4	15.9	14.4	13.1
MW Installed	531.3	517.5	756.9	1,149.8	1,368.3	1,163.3	1,106.7
Eligible Certificates ('000)	10,635	10,401	14,247	20,022	21,732	16,801	14,474
1.2 Residential Upgrades							
Number of Systems Installed	10,221	11,984	18,968	21,619	26,235	21,565	19,884
Avge kW/system	3.17	3.69	4.24	5.06	5.02	5.01	5.01
Avge Certificates/kW	20.2	20.4	19.0	17.6	16.2	14.8	13.5
MW Installed	32.4	44.2	80.4	109.5	131.6	108.0	99.5
Eligible Certificates ('000)	655	901	1,530	1,932	2,127	1,604	1,345
1.3 New Non Residential							
Number of Systems Installed	6,903	8,338	11,584	15,243	17,961	16,105	16,018
Avge kW/system	19.17	20.13	22.03	21.06	21.06	21.09	21.09
Avge Certificates/kW	20.2	20.2	18.7	17.4	16.1	14.8	13.4
MW Installed	132.3	167.9	255.2	321.1	378.2	339.7	337.8
Eligible Certificates ('000)	2,674	3,388	4,785	5,601	6,087	5,017	4,536
1.4 Non Residential Upgrades							
Number of Systems Installed	709	948	1,376	2,068	2,346	2,073	2,150
Avge kW/system	14.04	19.44	19.66	22.12	20.91	20.94	20.92
Avge Certificates/kW	20.3	20.5	18.9	17.5	16.2	14.9	13.5
MW Installed	10.0	18.4	27.1	45.7	49.0	43.4	45.0
Eligible Certificates ('000)	202	377	511	802	795	645	608
Total PV Systems							
Number of Systems Installed	141,517	132,731	175,008	230,178	268,127	224,864	209,480
Avge kW/system	40.68	47.90	51.22	54.26	53.16	53.32	53.47
Avge Certificates/kW	20.1	20.1	18.8	17.4	16.0	14.5	13.2
MW Installed	706.0	748.1	1,119.6	1,626.1	1,927.2	1,654.4	1,589.0
Eligible Certificates ('000)	14,166	15,067	21,073	28,357	30,741	24,067	20,963
2. SWH Systems							
2.1 SWH System (New Homes)							
Number of Systems Installed	33,263	34,182	35,352	36,333	35,994	37,055	36,764
Avge Certificates/System	30.4	30.3	30.0	30.1	30.1	30.1	30.1
Eligible Certificates ('000)	1,013	1,035	1,061	1,095	1,083	1,115	1,107
2.2 SWH System (Replacement)							
Number of Systems Installed	25,441	27,836	28,774	29,256	31,216	31,949	32,714
Avge Certificates/System	30.8	31.2	30.2	30.6	30.4	30.4	30.4
Eligible Certificates ('000)	784	870	870	894	948	970	994

Summary of Results

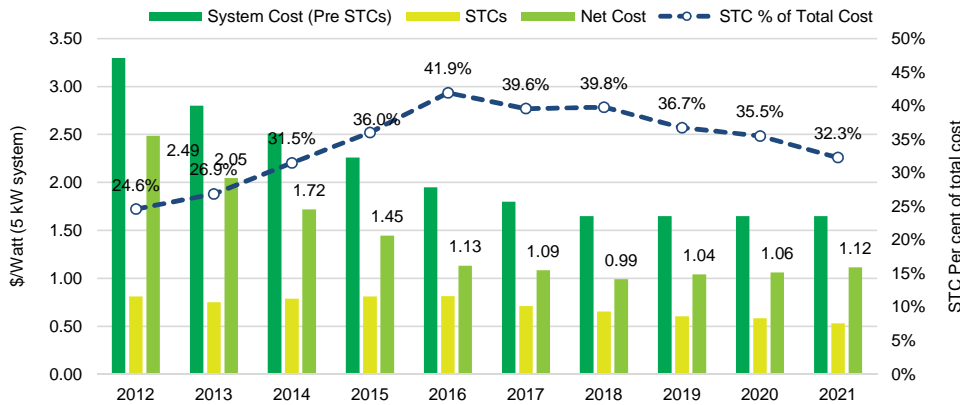
Base Case

Year of installation	Actual 2015	Actual 2016	Actual 2017	Estimate 2018	Forecast 2019	Forecast 2020	Forecast 2021
Total SWH Systems							
Number of Systems Installed	58,704	62,018	64,126	65,588	67,211	69,004	69,477
Avg Certificate/System	30.6	30.7	30.1	30.3	30.2	30.2	30.2
Eligible Certificates ('000)	1,797	1,905	1,931	1,989	2,031	2,086	2,101
3. Small Wind/Hydro Systems							
Number of Systems	10	10	10	2	2	2	2
Avg Certificate/System	26.8	26.8	20.4	20.4	20.4	20.4	20.4
Eligible Certificates ('000)	0	0	0	0	0	0	0
TOTAL Certificates ('000)	15,963	16,972	23,005	30,346	32,772	26,153	23,064

Year of installation	Actual 2015	Actual 2016	Actual 2017	Forecast 2018	Forecast 2019	Forecast 2020	Forecast 2021
STCs for systems installed in the year							
Solar PV	14,166	15,067	21,073	28,357	30,741	24,067	20,963
SWH	1,797	1,905	1,931	1,989	2,031	2,086	2,101
Total	15,962	16,972	23,004	30,346	32,772	26,153	23,064
Less STCs submitted following year (lag)	1,321	1,897	2,580	3,357	3,625	2,893	2,551
Add Previous year installs created this year	1,409	1,321	1,897	2,580	3,357	3,625	2,893
STCs submitted for creation	16,051	16,396	22,322	29,569	32,504	26,885	23,405

PV Financial Attractiveness

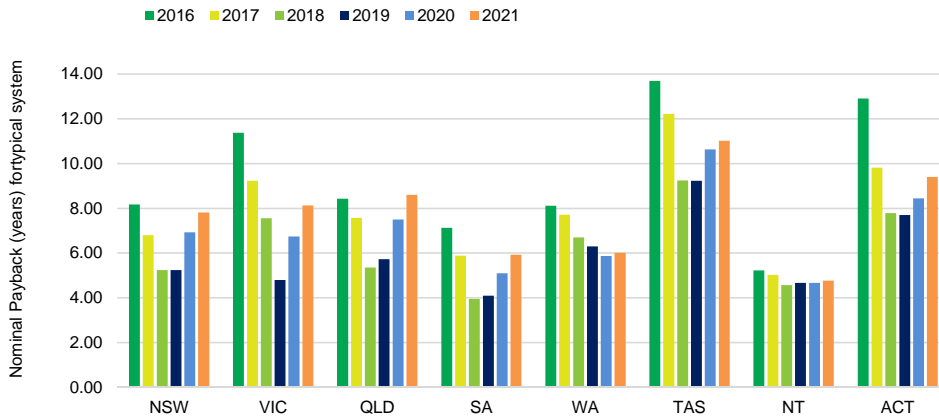
Projected Installed cost of solar PV



Average Nominal Payback (assuming 5 kW system - 73% export)

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
2016	8.17	11.38	8.43	7.12	8.11	13.68	5.22	12.89
2017	6.80	9.23	7.57	5.88	7.71	12.22	5.02	9.80
2018	5.24	7.55	5.35	3.95	6.69	9.23	4.57	7.78
2019	5.24	4.79	5.71	4.09	6.29	9.22	4.66	7.70
2020	6.92	6.74	7.50	5.09	5.86	10.63	4.67	8.43
2021	7.80	8.12	8.60	5.91	6.01	11.01	4.76	9.39

Average simple paybacks on an annual basis



Solar PV Residential Systems by State

		2	3	4	5	6	7	8	9	
		NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
Systems installed										
2009		13,990	18,131	18,260	8,594	11,142	1,452	206	802	72,577
2010		69,667	35,658	48,548	16,666	22,209	1,883	620	2,311	197,562
2011		79,158	58,950	92,968	62,212	50,235	2,402	368	6,766	353,059
2012		52,937	64,769	123,257	41,022	40,734	6,000	475	1,472	330,666
2013		31,518	31,598	62,220	27,579	19,787	6,878	976	2,267	182,823
2014		33,022	37,545	49,146	13,194	21,158	3,804	954	1,177	160,000
2015		28,677	28,293	33,800	10,291	18,733	1,830	1,084	976	123,684
2016		22,616	23,140	28,520	10,715	21,818	2,272	1,530	850	111,461
2017		31,267	26,234	38,485	13,348	28,213	2,106	1,709	1,718	143,080
2018		47,712	40,235	47,093	18,253	30,722	2,198	2,118	2,918	191,249
2019		48,291	65,000	54,717	19,591	27,589	3,248	1,537	1,610	221,585
2020		34,083	65,000	37,214	14,192	28,802	2,984	1,468	1,379	185,121
2021		30,439	65,000	32,405	12,570	25,497	2,847	1,390	1,280	171,428
Cumulative Installations										
2011		191,919	121,168	187,680	103,431	100,664	7,112	2,217	12,043	726,234
2012		244,856	185,937	310,937	144,453	141,398	13,112	2,692	13,515	1,056,900
2013		276,374	217,535	373,157	172,032	161,185	19,990	3,668	15,782	1,239,723
2014		309,396	255,080	422,303	185,226	182,343	23,794	4,622	16,959	1,399,723
2015		338,073	283,373	456,103	195,517	201,076	25,624	5,706	17,935	1,523,407
2016		360,689	306,513	484,623	206,232	222,894	27,896	7,236	18,785	1,634,868
2017		391,956	332,747	523,108	219,580	251,107	30,002	8,945	20,503	1,777,948
2018		439,667	372,982	570,201	237,833	281,829	32,200	11,063	23,421	1,969,197
2019		487,959	437,982	624,918	257,424	309,419	35,448	12,600	25,032	2,190,781
2020		522,042	502,982	662,131	271,616	338,221	38,432	14,068	26,411	2,375,903
2021		552,480	567,982	694,537	284,186	363,718	41,279	15,458	27,691	2,547,331
Penetration rates										
2011		13.1%	9.5%	20.3%	25.2%	19.4%	5.4%	9.0%	14.5%	15.0%
2012		16.6%	14.4%	33.3%	34.9%	26.7%	9.9%	10.6%	15.7%	21.6%
2013		18.7%	16.6%	39.6%	41.3%	29.7%	15.0%	14.0%	17.6%	25.1%
2014		20.8%	19.3%	44.4%	44.2%	32.8%	17.8%	17.2%	18.4%	28.1%
2015		22.6%	21.1%	47.5%	46.3%	35.3%	19.1%	20.6%	19.0%	30.2%
2016		24.0%	22.6%	49.9%	48.5%	38.5%	20.7%	25.4%	19.5%	32.1%
2017		25.6%	23.9%	52.6%	50.7%	42.3%	21.9%	30.7%	21.0%	34.1%
2018		28.2%	26.1%	56.1%	54.0%	46.4%	23.2%	37.1%	23.7%	37.0%
2019		30.9%	30.0%	60.1%	57.5%	49.9%	25.3%	41.2%	25.1%	40.4%
2020		32.6%	33.7%	62.2%	59.6%	53.3%	27.0%	44.9%	26.1%	43.0%
2021		34.0%	37.3%	63.7%	61.4%	56.0%	28.7%	48.1%	27.0%	45.2%

Attachment 4

Certificate Creation - Solar PV Residential

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
Residential Systems installed (No.)									
2010	69,667	35,658	48,548	16,666	22,209	1,883	620	2,311	197,562
2011	79,158	58,950	92,968	62,212	50,235	2,402	368	6,766	353,059
2012	52,937	64,769	123,257	41,022	40,734	6,000	475	1,472	330,666
2013	31,518	31,598	62,220	27,579	19,787	6,878	976	2,267	182,823
2014	33,022	37,545	49,146	13,194	21,158	3,804	954	1,177	160,000
2015	28,677	28,293	33,800	10,291	18,733	1,830	1,084	976	123,684
2016	22,616	23,140	28,520	10,715	21,818	2,272	1,530	850	111,461
2017	31,267	26,234	38,485	13,348	28,213	2,106	1,709	1,718	143,080
2018	47,712	40,235	47,093	18,253	30,722	2,198	2,118	2,918	191,249
2019	48,291	65,000	54,717	19,591	27,589	3,248	1,537	1,610	221,585
2020	34,083	65,000	37,214	14,192	28,802	2,984	1,468	1,379	185,121
2021	30,439	65,000	32,405	12,570	25,497	2,847	1,390	1,280	171,428
Average system size (kW/system)									
2010	2.13	1.64	1.84	1.95	1.81	1.55	1.83	2.10	1.91
2011	2.34	2.32	2.30	2.56	2.25	2.25	2.52	2.38	2.35
2012	2.52	3.04	3.21	3.21	2.29	3.09	3.62	3.09	2.95
2013	3.30	3.63	3.86	4.43	2.99	4.08	4.38	4.03	3.73
2014	3.67	3.79	4.26	4.47	3.61	4.30	4.61	3.80	3.96
2015	4.27	4.03	4.61	4.66	3.96	4.02	4.73	4.46	4.30
2016	4.52	4.24	5.06	4.90	4.56	3.94	4.84	5.20	4.64
2017	5.24	4.87	5.68	5.48	5.11	4.83	5.81	5.45	5.29
2018	6.09	5.68	6.47	6.23	5.50	5.36	6.70	5.96	6.01
2019	6.28	5.85	6.66	6.41	5.66	5.52	6.90	6.14	6.18
2020	6.47	6.03	6.86	6.60	5.83	5.00	7.11	6.32	6.28
2021	6.66	6.21	7.07	6.80	6.01	5.00	7.32	6.51	6.46
Installed Capacity (MW)									
2010	148.6	58.6	89.2	32.5	40.3	2.9	1.1	4.8	378.0
2011	185.0	137.0	213.4	159.3	112.8	5.4	0.9	16.1	829.9
2012	133.4	196.9	395.6	131.8	93.2	18.6	1.7	4.5	975.8
2013	104.1	114.8	240.1	122.1	59.3	28.0	4.3	9.1	681.8
2014	121.3	142.2	209.5	59.0	76.4	16.3	4.4	4.5	633.5
2015	122.6	114.0	155.8	48.0	74.2	7.4	5.1	4.4	531.3
2016	102.3	98.1	144.4	52.5	99.5	9.0	7.4	4.4	517.5
2017	163.7	127.8	218.7	73.2	144.1	10.2	9.9	9.4	756.9
2018	290.8	228.7	304.5	113.6	168.8	11.8	14.2	17.4	1149.8
2019	303.2	380.5	364.4	125.6	156.2	17.9	10.6	9.9	1368.3
2020	220.4	391.9	255.3	93.7	167.9	14.9	10.4	8.7	1163.3
2021	202.7	403.7	229.0	85.5	153.1	14.2	10.2	8.3	1106.7
2018 Avge Zone Rating									
	1.378	1.192	1.376	1.371	1.376	1.178	1.537	1.376	1.339
Average Certificates/kW installed									
2010	70.1	56.1	74.0	66.5	66.2	38.7	74.2	65.0	67.8
2011	70.1	55.7	65.6	56.8	65.0	55.3	69.9	68.6	63.2
2012	39.6	31.5	34.9	35.7	41.6	29.9	36.9	36.4	35.5
2013	21.5	18.3	21.3	20.8	21.2	18.1	23.6	20.9	20.6
2014	20.6	17.8	20.7	20.5	20.6	17.6	23.3	20.6	19.9
2015	20.7	17.8	20.6	20.6	20.6	17.6	23.2	20.6	20.0
2016	20.7	17.9	20.7	20.6	20.6	17.6	23.1	20.6	20.1
2017	19.3	16.7	19.3	19.2	19.3	16.5	21.6	19.3	18.8
2018	17.9	15.5	17.9	17.8	17.9	15.3	20.0	17.9	17.4
2019	16.5	14.3	16.5	16.5	16.5	14.1	18.4	16.5	16.1
2020	15.2	13.1	15.1	15.1	15.1	13.0	16.9	15.1	14.7
2021	13.8	11.9	13.8	13.7	13.8	11.8	15.4	13.8	13.4
Calculated Certificates ('000) ###									
2010	10,410	3,291	6,600	2,157	2,666	113	84	315	25,637
2011	12,968	7,628	13,986	9,048	7,334	298	65	1,103	52,430
2012	5,290	6,192	13,813	4,700	3,881	554	63	165	34,659
2013	2,237	2,096	5,116	2,535	1,257	507	101	191	14,040
2014	2,503	2,532	4,326	1,212	1,573	288	102	92	12,628
2015	2,535	2,033	3,215	986	1,527	130	119	90	10,635
2016	2,117	1,753	2,982	1,079	2,049	158	171	91	10,401
2017	3,158	2,133	4,215	1,406	2,774	167	214	180	14,247
2018	5,208	3,543	5,449	2,025	3,021	180	284	311	20,022
2019	5,012	5,442	6,019	2,067	2,579	254	196	163	21,732
2020	3,340	5,138	3,865	1,414	2,542	193	176	132	16,801

Notes

These are certificates that are eligible to be created on a generation year basis and do not allow for the a delay from system installation to certificate approval

New Non Residential PV installations

Attachment 5

		2015	2016	2017	2018	2019	2020	2021
Systems								
	ACT	41	71	79	114	137	133	136
	NSW	2,419	2,161	2,950	4,152	4,974	4,408	4,432
	NT	75	167	139	173	201	203	204
	QLD	1,192	1,785	2,680	3,398	3,849	3,246	3,189
	SA	702	816	1,235	1,757	2,016	1,785	1,735
	TAS	88	98	150	212	251	233	233
	VIC	1,540	2,063	2,794	3,558	4,253	3,709	3,676
	WA	846	1,177	1,557	1,879	2,281	2,388	2,413
		6,903	8,338	11,584	15,243	17,961	16,105	16,018
kw/System								
	ACT	34.91	29.01	31.48	30.24	30.24	30.24	30.24
	NSW	18.00	20.11	19.65	19.88	19.88	19.88	19.88
	NT	41.04	28.70	36.13	32.42	32.42	32.42	32.42
	QLD	18.52	19.15	21.06	20.10	20.10	20.10	20.10
	SA	18.31	22.57	25.75	24.16	24.16	24.16	24.16
	TAS	19.99	24.31	23.80	24.06	24.06	24.06	24.06
	VIC	18.80	18.81	22.84	20.82	20.82	20.82	20.82
	WA	22.05	20.20	21.90	21.05	21.05	21.05	21.05
		19.17	20.13	22.03	21.06	21.06	21.09	21.09
Installed capacity (kW)								
	ACT	1,431	2,060	2,487	3,454	4,145	4,008	4,119
	NSW	43,533	43,460	57,960	82,533	98,874	87,622	88,114
	NT	3,078	4,794	5,022	5,611	6,508	6,574	6,604
	QLD	22,072	34,176	56,433	68,307	77,370	65,250	64,095
	SA	12,854	18,419	31,798	42,456	48,696	43,134	41,916
	TAS	1,759	2,383	3,571	5,090	6,043	5,611	5,608
	VIC	28,952	38,796	63,821	74,090	88,570	77,243	76,549
	WA	18,653	23,770	34,095	39,541	48,003	50,251	50,777
		132,331	167,857	255,186	321,081	378,209	339,694	337,781
			26.8%	52.0%	25.8%	17.8%	-10.2%	-0.6%
Certificates/kW								
	ACT	20.72	20.71	18.97	17.62	16.26	14.91	13.55
	NSW	20.77	20.80	19.39	18.01	16.62	15.24	13.85
	NT	23.23	23.22	21.64	20.09	18.55	17.00	15.46
	QLD	20.77	20.78	19.40	18.02	16.63	15.25	13.86
	SA	20.69	20.60	19.28	17.90	16.52	15.15	13.77
	TAS	17.74	17.75	16.57	15.39	14.20	13.02	11.83
	VIC	18.18	18.24	16.88	15.67	14.47	13.26	12.06
	WA	20.75	20.62	19.37	17.98	16.60	15.22	13.83
		20.21	20.18	18.75	17.44	16.09	14.77	13.43
Valid RECs created								
	ACT	29,646	42,656	47,188	60,847	67,409	59,758	55,824
	NSW	904,251	904,174	1,124,082	1,486,315	1,643,630	1,335,198	1,220,630
	NT	71,494	111,299	108,671	112,741	120,700	111,775	102,066
	QLD	458,368	710,262	1,095,006	1,230,726	1,286,787	994,783	888,333
	SA	265,927	379,468	612,984	759,995	804,645	653,340	577,175
	TAS	31,211	42,298	59,160	78,305	85,829	73,042	66,374
	VIC	526,343	707,746	1,077,212	1,161,217	1,281,379	1,024,390	922,887
	WA	387,026	490,083	660,282	711,052	796,818	764,620	702,389
		2,674,266	3,387,986	4,784,585	5,601,197	6,087,196	5,016,906	4,535,677
			26.7%	41.2%	17.1%	8.7%	-17.6%	-9.6%

Residential PV Upgrades

Attachment 6

		2015	2016	2017	2018	2019	2020	2021
Systems								
	ACT	41	71	147	187	218	207	194
	NSW	2,175	4,452	8,668	8,728	10,038	7,925	7,319
	NT	30	36	88	142	161	167	171
	QLD	4,334	3,864	4,915	5,667	6,107	4,855	4,411
	SA	994	948	1,462	2,039	2,265	1,899	1,703
	TAS	96	106	119	232	267	242	243
	VIC	1,399	1,389	2,045	2,576	4,674	3,463	2,995
	WA	1,152	1,118	1,524	2,048	2,506	2,807	2,849
		10,221	11,984	18,968	21,619	26,235	21,565	19,884
kw/System								
	ACT	3.11	5.29	4.43	5.35	5.35	5.35	5.35
	NSW	3.39	3.52	3.94	4.85	4.85	4.85	4.85
	NT	3.89	3.19	3.33	3.52	3.52	3.52	3.52
	QLD	2.95	3.99	4.88	5.68	5.68	5.68	5.68
	SA	4.40	4.23	4.77	5.43	5.43	5.43	5.43
	TAS	3.83	3.99	4.14	4.56	4.56	4.56	4.56
	VIC	3.42	3.48	3.99	4.51	4.51	4.51	4.51
	WA	2.20	3.04	3.77	4.73	4.73	4.73	4.73
		3.17	3.69	4.24	5.06	5.02	5.01	5.01
Installed capacity (kW)								
	ACT	127	376	652	1,002	1,165	1,110	1,038
	NSW	7,371	15,683	34,151	42,336	48,690	38,439	35,498
	NT	117	115	293	502	566	589	602
	QLD	12,766	15,420	23,990	32,196	34,698	27,585	25,063
	SA	4,371	4,009	6,973	11,065	12,293	10,307	9,241
	TAS	368	423	493	1,057	1,217	1,102	1,108
	VIC	4,786	4,827	8,150	11,624	21,089	15,627	13,513
	WA	2,531	3,396	5,742	9,687	11,854	13,276	13,477
		32,437	44,249	80,443	109,468	131,571	108,035	99,539
					36.1%	20.2%	-17.9%	-7.9%
Certificates/kW								
	ACT	20.58	20.64	19.24	17.88	16.49	15.12	13.74
	NSW	20.81	20.83	19.32	17.96	16.56	15.18	13.80
	NT	23.60	23.35	21.67	20.04	18.57	17.03	15.48
	QLD	20.59	20.62	19.28	17.89	16.52	15.15	13.77
	SA	20.53	20.57	19.24	17.86	16.49	15.12	13.74
	TAS	17.64	17.63	16.44	15.29	14.09	12.92	11.75
	VIC	17.85	17.95	16.74	15.55	14.35	13.16	11.96
	WA	20.51	20.55	19.22	17.86	16.47	15.10	13.73
		20.20	20.37	19.02	17.65	16.17	14.85	13.51
Valid RECs created								
	ACT	2,623	7,751	12,539	17,915	19,208	16,781	14,262
	NSW	153,402	326,642	659,733	760,393	806,225	583,456	489,833
	NT	2,754	2,685	6,344	10,051	10,507	10,027	9,316
	QLD	262,812	318,014	462,459	576,086	573,329	417,815	345,100
	SA	89,712	82,482	134,156	197,565	202,715	155,804	126,989
	TAS	6,493	7,458	8,105	16,156	17,157	14,236	13,018
	VIC	85,453	86,642	136,457	180,788	302,663	205,587	161,611
	WA	51,911	69,786	110,356	173,031	195,282	200,470	185,006
		655,160	901,460	1,530,149	1,931,984	2,127,086	1,604,175	1,345,134
			37.6%	69.7%	26.3%	10.1%	-24.6%	-16.1%

Non Residential Upgrade PV installations

Attachment 6

		2015	2016	2017	2018	2019	2020	2021
Systems								
	ACT	8	9	5	14	17	16	17
	NSW	207	285	400	618	708	627	659
	NT	8	12	14	10	12	12	13
	QLD	181	256	382	568	624	526	540
	SA	96	126	150	295	331	293	298
	TAS	6	11	18	37	44	40	42
	VIC	137	163	295	411	470	410	425
	WA	66	86	112	115	141	148	156
		709	948	1,376	2,068	2,346	2,073	2,150
kw/System								
	ACT	23.20	13.83	28.29	10.65	19.47	19.47	19.47
	NSW	13.69	18.60	17.87	20.83	19.35	19.35	19.35
	NT	42.91	32.09	14.41	36.48	25.45	25.45	25.45
	QLD	11.66	21.77	19.78	21.10	20.44	20.44	20.44
	SA	15.20	21.73	22.60	29.39	25.99	25.99	25.99
	TAS	6.32	8.03	20.07	26.42	23.25	23.25	23.25
	VIC	15.26	17.12	19.00	20.31	19.65	19.65	19.65
	WA	13.47	16.60	23.64	20.56	22.10	22.10	22.10
		14.04	19.44	19.66	22.12	20.91	20.94	20.92
Installed capacity (kW)								
	ACT	186	124	141	147	322	311	334
	NSW	2,835	5,301	7,147	12,864	13,694	12,135	12,758
	NT	343	385	202	377	305	308	323
	QLD	2,110	5,572	7,558	11,993	12,753	10,756	11,045
	SA	1,459	2,738	3,390	8,670	8,605	7,622	7,744
	TAS	38	88	361	971	1,014	942	982
	VIC	2,091	2,791	5,605	8,347	9,237	8,055	8,346
	WA	889	1,427	2,647	2,360	3,120	3,266	3,444
		9,952	18,427	27,052	45,728	49,050	43,396	44,976
			85.2%	46.8%	69.0%	7.3%	-11.5%	3.6%
Certificates/kW								
	ACT	20.71	20.70	19.33	17.93	16.56	15.18	13.80
	NSW	20.84	20.79	19.45	18.07	16.67	15.28	13.90
	NT	23.45	23.82	21.98	20.89	18.84	17.27	15.70
	QLD	20.73	20.77	19.40	17.98	16.63	15.25	13.86
	SA	20.66	20.61	19.29	17.88	16.53	15.16	13.78
	TAS	17.71	17.72	16.56	15.39	14.20	13.01	11.83
	VIC	17.96	18.55	17.05	15.67	14.62	13.40	12.18
	WA	20.83	20.69	19.40	17.95	16.63	15.24	13.86
		20.26	20.46	18.90	17.53	16.21	14.86	13.51
Valid RECs created								
	ACT	3,844	2,576	2,734	2,630	5,333	4,727	4,608
	NSW	59,064	110,215	139,044	232,498	228,332	185,485	177,277
	NT	8,050	9,172	4,436	7,874	5,745	5,321	5,070
	QLD	43,749	115,748	146,649	215,641	212,116	163,982	153,090
	SA	30,159	56,418	65,395	155,065	142,268	115,516	106,688
	TAS	671	1,565	5,985	14,937	14,399	12,253	11,619
	VIC	37,558	51,759	95,583	130,788	135,020	107,941	101,665
	WA	18,523	29,537	51,360	42,353	51,885	49,789	47,725
		201,618	376,990	511,186	801,786	795,097	645,013	607,742
			87.0%	35.6%	56.8%	-0.8%	-18.9%	

SWH Systems - New Buildings

Attachment 7

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SWH systems installed															
ACT	39	113	507	236	422	432	190	135	266	374	364	255	295	323	326
NSW	3,276	3,675	3,361	5,098	4,522	2,579	2,646	2,946	3,076	3,464	3,576	3,436	3,303	3,424	3,441
NT	548	410	346	436	522	653	578	525	655	581	547	340	363	396	419
QLD	10,414	12,631	10,652	10,497	9,359	9,042	6,529	5,219	4,419	4,900	5,461	5,811	6,035	6,474	6,444
SA	903	1,023	1,126	1,669	1,677	1,060	765	801	546	554	459	365	376	391	385
TAS	113	172	177	266	192	137	83	111	208	278	236	327	343	355	344
VIC	7,480	12,449	17,124	20,119	20,559	17,726	16,873	18,058	20,490	21,494	22,906	24,089	23,528	23,805	23,450
WA	4,535	3,606	4,123	5,728	5,077	4,710	4,652	4,000	3,603	2,537	1,803	1,710	1,751	1,888	1,954
Total	27,308	34,079	37,416	44,049	42,330	36,339	32,316	31,795	33,263	34,182	35,352	36,333	35,994	37,055	36,764
SWH certificates created															
ACT	1,111	3,641	18,125	7,501	13,138	12,503	6,071	4,684	9,304	12,528	12,509	7,926	9,666	10,568	10,673
NSW	100,171	130,824	131,981	172,125	145,841	83,654	87,769	97,782	98,380	110,068	108,922	108,311	102,359	106,107	106,655
NT	16,672	13,851	10,468	13,429	13,929	18,070	15,734	15,266	19,750	17,451	15,961	10,735	11,042	12,018	12,720
QLD	330,947	418,149	374,016	339,788	275,585	259,317	198,795	171,276	145,694	151,905	168,901	177,330	185,408	198,881	197,965
SA	28,075	36,438	38,281	54,845	51,074	29,642	22,678	25,088	17,466	17,122	14,229	11,764	11,889	12,368	12,177
TAS	3,301	8,056	11,377	8,115	4,994	3,889	2,401	3,429	6,115	8,356	7,047	9,878	10,298	10,654	10,341
VIC	184,040	325,693	457,839	533,397	531,095	434,730	461,636	511,680	589,200	626,379	672,817	713,425	693,951	702,125	691,650
WA	150,930	121,986	142,995	188,152	162,535	144,164	143,109	131,865	126,916	91,052	60,810	55,857	58,121	62,676	64,877
Total	815,247	1,058,638	1,185,082	1,317,352	1,198,191	985,969	938,193	961,070	1,012,825	1,034,861	1,061,196	1,095,226	1,082,735	1,115,398	1,107,060
Certificates per SWH System															
ACT	28.5	32.2	35.7	31.8	31.1	28.9	32.0	34.7	35.0	33.5	34.4	31.1	32.7	32.7	32.7
NSW	30.6	35.6	39.3	33.8	32.3	32.4	33.2	33.2	32.0	31.8	30.5	31.5	31.0	31.0	31.0
NT	30.4	33.8	30.3	30.8	26.7	27.7	27.2	29.1	30.2	30.0	29.2	31.6	30.4	30.4	30.4
QLD	31.8	33.1	35.1	32.4	29.4	28.7	30.4	32.8	33.0	31.0	30.9	30.5	30.7	30.7	30.7
SA	31.1	35.6	34.0	32.9	30.5	28.0	29.6	31.3	32.0	30.9	31.0	32.2	31.6	31.6	31.6
TAS	29.2	46.8	64.3	30.5	26.0	28.4	28.9	30.9	29.4	30.1	29.9	30.2	30.0	30.0	30.0
VIC	24.6	26.2	26.7	26.5	25.8	24.5	27.4	28.3	28.8	29.1	29.4	29.6	29.5	29.5	29.5
WA	33.3	33.8	34.7	32.8	32.0	30.6	30.8	33.0	35.2	35.9	33.7	32.7	33.2	33.2	33.2
Total	29.9	31.1	31.7	29.9	28.3	27.1	29.0	30.2	30.4	30.3	30.0	30.1	30.1	30.1	30.1

SWH Systems - Replacement Market

Attachment 8

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SWH systems installed															
ACT	414	888	1,467	724	616	302	263	316	306	303	341	375	379	382	386
NSW	5,489	16,528	82,095	33,427	20,809	8,231	6,499	6,695	5,536	5,147	5,388	5,134	5,185	5,237	5,289
NT	866	826	1,385	867	745	518	306	501	408	339	418	480	484	489	494
QLD	6,416	10,699	26,007	23,765	21,578	9,931	6,881	8,214	7,386	6,542	6,562	6,702	6,769	6,837	6,905
SA	1,966	4,080	7,668	5,143	3,767	2,413	2,218	1,129	2,011	1,727	2,157	2,378	2,402	2,426	2,450
TAS	237	734	2,092	1,167	1,533	762	744	851	595	669	797	778	786	794	802
VIC	1,677	8,759	24,996	7,614	5,887	3,868	2,735	2,555	2,597	6,208	6,213	6,672	8,407	8,911	9,446
WA	6,604	8,792	11,569	10,337	7,785	7,102	6,337	6,672	6,602	6,901	6,898	6,736	6,804	6,872	6,940
Total	23,669	51,306	157,279	83,044	62,720	33,127	25,983	26,933	25,441	27,836	28,774	29,256	31,216	31,949	32,714
SWH certificates created															
ACT	12,141	28,397	50,169	22,897	19,099	9,354	8,345	10,163	10,135	11,177	11,177	12,050	12,292	12,415	12,539
NSW	170,768	713,696	3,021,137	1,167,325	662,471	262,431	210,361	212,620	173,598	165,374	165,374	158,934	159,837	161,435	163,050
NT	26,915	26,505	65,827	31,740	20,807	14,673	8,781	13,514	11,362	12,288	12,288	13,426	13,900	14,039	14,179
QLD	191,928	346,445	1,045,900	793,279	666,758	309,804	217,464	256,632	231,221	202,000	202,000	209,737	210,110	212,211	214,333
SA	60,666	133,496	321,816	170,271	109,047	68,624	64,718	34,607	59,195	62,987	62,987	70,155	70,501	71,206	71,918
TAS	6,653	58,209	143,895	61,940	40,289	22,502	23,303	25,070	18,256	24,859	24,859	24,207	24,483	24,728	24,975
VIC	47,899	578,923	1,652,280	398,889	184,229	118,345	85,835	79,966	83,416	186,059	186,059	202,536	253,473	268,681	284,802
WA	184,539	287,502	385,193	310,613	220,545	198,832	185,532	194,235	196,657	205,085	205,085	203,156	203,733	205,770	207,828
Total	701,509	2,173,173	6,686,217	2,956,954	1,923,245	1,004,565	804,339	826,807	783,840	869,829	869,829	894,200	948,328	970,485	993,623
Certificates per SWH System															
ACT	29.3	32.0	34.2	31.6	31.0	31.0	31.7	32.2	33.1	36.9	32.8	32.1	32.5	32.5	32.5
NSW	31.1	43.2	36.8	34.9	31.8	31.9	32.4	31.8	31.4	32.1	30.7	31.0	30.8	30.8	30.8
NT	31.1	32.1	47.5	36.6	27.9	28.3	28.7	27.0	27.8	36.2	29.4	28.0	28.7	28.7	28.7
QLD	29.9	32.4	40.2	33.4	30.9	31.2	31.6	31.2	31.3	30.9	30.8	31.3	31.0	31.0	31.0
SA	30.9	32.7	42.0	33.1	28.9	28.4	29.2	30.7	29.4	36.5	29.2	29.5	29.3	29.3	29.3
TAS	28.1	79.3	68.8	53.1	26.3	29.5	31.3	29.5	30.7	37.2	31.2	31.1	31.1	31.1	31.1
VIC	28.6	66.1	66.1	52.4	31.3	30.6	31.4	31.3	32.1	30.0	29.9	30.4	30.2	30.2	30.2
WA	27.9	32.7	33.3	30.0	28.3	28.0	29.3	29.1	29.8	29.7	29.7	30.2	29.9	29.9	29.9
Total	29.6	42.4	42.5	35.6	30.7	30.3	31.0	30.7	30.8	31.2	30.2	30.6	30.4	30.4	30.4

Solar PV (by Property Installation Type)
(Including Pending Registration)

Summary of REC-Registry Data
(Certificates created as at 1 January 2019)

Solar PV (New) Systems

State	2015			2016			2017			2018		
	Residential	Non-Residential	Total	Residential	Non-Residential	Total	Residential	Non-Residential	Total	Residential	Non-Residential	Total
Installed Capacity												
ACT	4,357	1,431	5,789	4,421	2,060	6,480	9,368	2,487	11,855	15,909	3,212	19,121
NSW	122,554	43,533	166,087	102,316	43,460	145,776	163,729	57,960	221,689	266,053	72,451	338,504
NT	5,129	3,078	8,207	7,404	4,794	12,198	9,928	5,022	14,950	12,984	4,900	17,884
QLD	155,775	22,072	177,846	144,363	34,176	178,539	218,704	56,433	275,137	278,606	60,232	338,838
SA	47,970	12,854	60,823	52,512	18,419	70,931	73,197	31,798	104,994	103,961	37,836	141,797
TAS	7,361	1,759	9,120	8,951	2,383	11,333	10,162	3,571	13,733	10,784	4,419	15,202
VIC	113,984	28,952	142,936	98,097	38,796	136,893	127,764	63,821	191,585	200,060	68,739	268,799
WA	74,167	18,653	92,820	99,455	23,770	123,225	144,057	34,095	178,152	154,483	33,256	187,739
	531,298	132,331	663,628	517,518	167,857	685,375	756,909	255,186	1,012,096	1,042,840	285,045	1,327,884
Valid RECs created												
ACT	89,795	29,646	119,441	91,033	42,656	133,689	180,393	47,188	227,581	284,550	57,656	342,206
NSW	2,534,511	904,251	3,438,762	2,116,823	904,174	3,020,997	3,158,437	1,124,082	4,282,519	4,765,278	1,306,298	6,071,576
NT	119,140	71,494	190,634	171,139	111,299	282,438	214,097	108,671	322,768	259,512	98,266	357,778
QLD	3,215,293	458,368	3,673,661	2,981,886	710,262	3,692,148	4,214,535	1,095,006	5,309,541	4,985,244	1,084,561	6,069,805
SA	986,063	265,927	1,251,990	1,079,426	379,468	1,458,894	1,405,521	612,984	2,018,505	1,853,002	675,424	2,528,426
TAS	129,832	31,211	161,043	157,869	42,298	200,167	167,424	59,160	226,584	165,106	67,986	233,092
VIC	2,032,748	526,343	2,559,091	1,753,346	707,746	2,461,092	2,133,068	1,077,212	3,210,280	3,099,694	1,079,273	4,178,967
WA	1,527,391	387,026	1,914,417	2,049,269	490,083	2,539,352	2,773,894	660,282	3,434,176	2,763,855	597,411	3,361,266
	10,634,773	2,674,266	13,309,039	10,400,791	3,387,986	13,788,777	14,247,369	4,784,585	19,031,954	18,176,241	4,966,875	23,143,116
Systems												
ACT	976	41	1,017	850	71	921	1,718	79	1,797	2,670	95	2,765
NSW	28,677	2,419	31,096	22,616	2,161	24,777	31,267	2,950	34,217	43,652	3,454	47,106
NT	1,084	75	1,159	1,530	167	1,697	1,709	139	1,848	1,938	144	2,082
QLD	33,800	1,192	34,992	28,520	1,785	30,305	38,485	2,680	41,165	43,086	2,827	45,913
SA	10,291	702	10,993	10,715	816	11,531	13,348	1,235	14,583	16,700	1,462	18,162
TAS	1,830	88	1,918	2,272	98	2,370	2,106	150	2,256	2,011	176	2,187
VIC	28,293	1,540	29,833	23,140	2,063	25,203	26,234	2,794	29,028	35,201	2,960	38,161
WA	18,733	846	19,579	21,818	1,177	22,995	28,213	1,557	29,770	28,108	1,563	29,671
	123,684	6,903	130,587	111,461	8,338	119,799	143,080	11,584	154,664	173,366	12,681	186,047
Average kW/system												
ACT	4.46	34.91	5.69	5.20	29.01	7.04	5.45	31.48	6.60	5.96	33.81	6.92
NSW	4.27	18.00	5.34	4.52	20.11	5.88	5.24	19.65	6.48	6.09	20.98	7.19
NT	4.73	41.04	7.08	4.84	28.70	7.19	5.81	36.13	8.09	6.70	34.03	8.59
QLD	4.61	18.52	5.08	5.06	19.15	5.89	5.68	21.06	6.68	6.47	21.31	7.38
SA	4.66	18.31	5.53	4.90	22.57	6.15	5.48	25.75	7.20	6.23	25.88	7.81
TAS	4.02	19.99	4.76	3.94	24.31	4.78	4.83	23.80	6.09	5.36	25.11	6.95
VIC	4.03	18.80	4.79	4.24	18.81	5.43	4.87	22.84	6.60	5.68	23.22	7.04
WA	3.96	22.05	4.74	4.56	20.20	5.36	5.11	21.90	5.98	5.50	21.28	6.33
	4.30	19.17	5.08	4.64	20.13	5.72	5.29	22.03	6.54	6.02	22.48	7.14

Solar PV (by Property Installation Type)
(Including Pending Registration)

Summary of REC-Registry Data
(Certificates created as at 1 January 2019)

Solar PV (Upgrade/Replacement) Systems

State	2015			2016			2017			2018		
	Residential	Non-Residential	Total	Residential	Non-Residential	Total	Residential	Non-Residential	Total	Residential	Non-Residential	Total
Installed Capacity												
ACT	127	186	313	376	124	500	652	141	793	873	128	1,000
NSW	7,371	2,835	10,205	15,683	5,301	20,984	34,151	7,147	41,298	36,878	11,205	48,084
NT	117	343	460	115	385	500	293	202	495	437	328	765
QLD	12,766	2,110	14,876	15,420	5,572	20,992	23,990	7,558	31,547	28,046	10,447	38,492
SA	4,371	1,459	5,830	4,009	2,738	6,747	6,973	3,390	10,363	9,638	7,553	17,191
TAS	368	38	406	423	88	511	493	361	854	921	846	1,766
VIC	4,786	2,091	6,877	4,827	2,791	7,618	8,150	5,605	13,754	10,126	7,271	17,397
WA	2,531	889	3,420	3,396	1,427	4,823	5,742	2,647	8,390	8,438	2,056	10,493
	32,437	9,952	42,388	44,249	18,427	62,676	80,443	27,052	107,495	95,356	39,833	135,189
Valid RECs created												
ACT	2,623	3,844	6,467	7,751	2,576	10,327	12,539	2,734	15,273	15,605	2,291	17,896
NSW	153,402	59,064	212,466	326,642	110,215	436,857	659,733	139,044	798,777	662,363	202,524	864,887
NT	2,754	8,050	10,804	2,685	9,172	11,857	6,344	4,436	10,780	8,755	6,859	15,614
QLD	262,812	43,749	306,561	318,014	115,748	433,762	462,459	146,649	609,108	501,817	187,841	689,658
SA	89,712	30,159	119,871	82,482	56,418	138,900	134,156	65,395	199,551	172,095	135,074	307,169
TAS	6,493	671	7,164	7,458	1,565	9,023	8,105	5,985	14,090	14,073	13,011	27,084
VIC	85,453	37,558	123,011	86,642	51,759	138,401	136,457	95,583	232,040	157,481	113,927	271,408
WA	51,911	18,523	70,434	69,786	29,537	99,323	110,356	51,360	161,716	150,724	36,893	187,617
	655,160	201,618	856,778	901,460	376,990	1,278,450	1,530,149	511,186	2,041,335	1,682,913	698,420	2,381,333
Systems												
ACT	41	8	49	71	9	80	147	5	152	163	12	175
NSW	2,175	207	2,382	4,452	285	4,737	8,668	400	9,068	7,603	538	8,141
NT	30	8	38	36	12	48	88	14	102	124	9	133
QLD	4,334	181	4,515	3,864	256	4,120	4,915	382	5,297	4,936	495	5,431
SA	994	96	1,090	948	126	1,074	1,462	150	1,612	1,776	257	2,033
TAS	96	6	102	106	11	117	119	18	137	202	32	234
VIC	1,399	137	1,536	1,389	163	1,552	2,045	295	2,340	2,244	358	2,602
WA	1,152	66	1,218	1,118	86	1,204	1,524	112	1,636	1,784	100	1,884
	10,221	709	10,930	11,984	948	12,932	18,968	1,376	20,344	18,832	1,801	20,633
Average kW/system												
ACT	3.11	23.20	6.39	5.29	13.83	6.25	4.43	28.29	5.22	5.35	10.65	5.72
NSW	3.39	13.69	4.28	3.52	18.60	4.43	3.94	17.87	4.55	4.85	20.83	5.91
NT	3.89	42.91	12.10	3.19	32.09	10.42	3.33	14.41	4.85	3.52	36.48	5.75
QLD	2.95	11.66	3.29	3.99	21.77	5.10	4.88	19.78	5.96	5.68	21.10	7.09
SA	4.40	15.20	5.35	4.23	21.73	6.28	4.77	22.60	6.43	5.43	29.39	8.46
TAS	3.83	6.32	3.98	3.99	8.03	4.37	4.14	20.07	6.24	4.56	26.42	7.55
VIC	3.42	15.26	4.48	3.48	17.12	4.91	3.99	19.00	5.88	4.51	20.31	6.69
WA	2.20	13.47	2.81	3.04	16.60	4.01	3.77	23.64	5.13	4.73	20.56	5.57
	3.17	14.04	3.88	3.69	19.44	4.85	4.24	19.66	5.28	5.06	22.12	6.55

Solar Hot Water by Segment
(Includes Pending Registration)

Summary of REC-Registry Data
(Certificates created as at 1 January 2019)

SWH Certificates																						
New Building												Replacement										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ACT	3,641	18,125	7,501	13,138	12,503	6,071	4,684	9,304	12,528	12,509	6,226	28,397	50,169	22,897	19,099	9,354	8,345	10,163	10,135	9,535	11,177	11,055
NSW	130,824	131,981	172,125	145,841	83,654	87,769	97,782	98,380	110,068	108,922	85,083	713,696	3,021,137	1,167,325	662,471	262,431	210,361	212,620	173,598	158,119	165,374	145,811
NT	13,851	10,468	13,429	13,929	18,070	15,734	15,266	19,750	17,451	15,961	8,433	26,505	65,827	31,740	20,807	14,673	8,781	13,514	11,362	9,709	12,288	12,317
QLD	418,149	374,016	339,788	275,585	259,317	198,795	171,276	145,694	151,905	168,901	139,301	346,445	1,045,900	793,279	666,758	309,804	217,464	256,632	231,221	203,310	202,000	192,419
SA	36,438	38,281	54,845	51,074	29,642	22,678	25,088	17,466	17,122	14,229	9,241	133,496	321,816	170,271	109,047	68,624	64,718	34,607	59,195	51,229	62,987	64,362
TAS	8,056	11,377	8,115	4,994	3,889	2,401	3,429	6,115	8,356	7,047	7,760	58,209	143,895	61,940	40,289	22,502	23,303	25,070	18,256	20,408	24,859	22,208
VIC	325,693	457,839	533,397	531,095	434,730	461,636	511,680	589,200	626,379	672,817	560,428	578,923	1,652,280	398,889	184,229	118,345	85,835	79,966	83,416	188,755	186,059	185,813
WA	121,986	142,995	188,152	162,535	144,164	143,109	131,865	126,916	91,052	60,810	43,878	287,502	385,193	310,613	220,545	198,832	185,532	194,235	196,657	204,032	205,085	186,382
	1,058,638	1,185,082	1,317,352	1,198,191	985,969	938,193	961,070	1,012,825	1,034,861	1,061,196	860,350	2,173,173	6,686,217	2,956,954	1,923,245	1,004,565	804,339	826,807	783,840	845,097	869,829	820,367

SWH Systems Installed																						
New Building												Replacement										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ACT	113	507	236	422	432	190	135	266	374	364	200	888	1,467	724	616	302	263	316	306	303	341	344
NSW	3,675	3,361	5,098	4,522	2,579	2,646	2,946	3,076	3,464	3,576	2,699	16,528	82,095	33,427	20,809	8,231	6,499	6,695	5,536	5,147	5,388	4,710
NT	410	346	436	522	653	578	525	655	581	547	267	826	1,385	867	745	518	306	501	408	339	418	440
QLD	12,631	10,652	10,497	9,359	9,042	6,529	5,219	4,419	4,900	5,461	4,565	10,699	26,007	23,765	21,578	9,931	6,881	8,214	7,386	6,542	6,562	6,149
SA	1,023	1,126	1,669	1,677	1,060	765	801	546	554	459	287	4,080	7,668	5,143	3,767	2,413	2,218	1,129	2,011	1,727	2,157	2,182
TAS	172	177	266	192	137	83	111	208	278	236	257	734	2,092	1,167	1,533	762	744	851	595	669	797	714
VIC	12,449	17,124	20,119	20,559	17,726	16,873	18,058	20,490	21,494	22,906	18,923	8,759	24,996	7,614	5,887	3,868	2,735	2,555	2,597	6,208	6,213	6,121
WA	3,606	4,123	5,728	5,077	4,710	4,652	4,000	3,603	2,537	1,803	1,343	8,792	11,569	10,337	7,785	7,102	6,337	6,672	6,602	6,901	6,898	6,180
	34,079	37,416	44,049	42,330	36,339	32,316	31,795	33,263	34,182	35,352	28,541	51,306	157,279	83,044	62,720	33,127	25,983	26,933	25,441	27,836	28,774	26,840

Certificates per SWH System																						
New Building												Replacement										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ACT	32.2	35.7	31.8	31.1	28.9	32.0	34.7	35.0	33.5	34.4	31.1	32.0	34.2	31.6	31.0	31.0	31.7	32.2	33.1	31.5	32.8	31.7
NSW	35.6	39.3	33.8	32.3	32.4	33.2	33.2	32.0	31.8	30.4	31.0	43.2	36.8	34.9	31.8	31.9	32.4	31.8	31.4	30.7	30.7	30.5
NT	33.8	30.3	30.8	26.7	27.7	27.2	29.1	30.2	30.0	29.2	31.0	32.1	47.5	36.6	27.9	28.3	28.7	27.0	27.8	28.6	29.4	27.7
QLD	33.1	35.1	32.4	29.4	28.7	30.4	32.8	33.0	31.0	30.9	30.3	32.4	40.2	33.4	30.9	31.2	31.6	31.2	31.3	31.1	30.8	30.7
SA	35.6	34.0	32.9	30.5	28.0	29.6	31.3	32.0	30.9	31.0	31.9	32.7	42.0	33.1	28.9	28.4	29.2	30.7	29.4	29.7	29.2	29.2
TAS	46.8	64.3	30.5	26.0	28.4	28.9	30.9	29.4	30.1	29.9	29.5	79.3	68.8	53.1	26.3	29.5	31.3	29.5	30.7	30.5	31.1	31.0
VIC	26.2	26.7	26.5	25.8	24.5	27.4	28.3	28.8	29.1	29.4	29.5	66.1	66.1	52.4	31.3	30.6	31.4	31.3	32.1	30.4	29.9	30.1
WA	33.8	34.7	32.8	32.0	30.6	30.8	33.0	35.2	35.9	33.7	32.4	32.7	33.3	30.0	28.3	28.0	29.3	29.1	29.8	29.6	29.7	29.4
	31.1	31.7	29.9	28.3	27.1	29.0	30.2	30.4	30.3	30.0	30.1	42.4	42.5	35.6	30.7	30.3	31.0	30.7	30.8	30.4	30.2	30.6

Solar Hot Water by Segment
(Includes Pending Registration)

Summary of REC-Registry Data
(Certificates created as at 1 January 2019)

SWH Certificates

	Total Market										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ACT	32,038	68,294	30,398	32,237	21,857	14,416	14,847	19,439	22,063	23,686	17,281
NSW	844,520	3,153,118	1,339,450	808,312	346,085	298,130	310,402	271,978	268,187	274,296	230,894
NT	40,356	76,295	45,169	34,736	32,743	24,515	28,780	31,112	27,160	28,249	20,750
QLD	764,594	1,419,916	1,133,067	942,343	569,121	416,259	427,908	376,915	355,215	370,901	331,720
SA	169,934	360,097	225,116	160,121	98,266	87,396	59,695	76,661	68,351	77,216	73,603
TAS	66,265	155,272	70,055	45,283	26,391	25,704	28,499	24,371	28,764	31,906	29,968
VIC	904,616	2,110,119	932,286	715,324	553,075	547,471	591,646	672,616	815,134	858,876	746,241
WA	409,488	528,188	498,765	383,080	342,996	328,641	326,100	323,573	295,084	265,895	230,260
	3,231,811	7,871,299	4,274,306	3,121,436	1,990,534	1,742,532	1,787,877	1,796,665	1,879,958	1,931,025	1,680,717

SWH Systems Installed

	Total Market										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ACT	1,001	1,974	960	1,038	734	453	451	572	677	705	544
NSW	20,203	85,456	38,525	25,331	10,810	9,145	9,641	8,612	8,611	8,964	7,409
NT	1,236	1,731	1,303	1,267	1,171	884	1,026	1,063	920	965	707
QLD	23,330	36,659	34,262	30,937	18,973	13,410	13,433	11,805	11,442	12,023	10,714
SA	5,103	8,794	6,812	5,444	3,473	2,983	1,930	2,557	2,281	2,616	2,469
TAS	906	2,269	1,433	1,725	899	827	962	803	947	1,033	971
VIC	21,208	42,120	27,733	26,446	21,594	19,608	20,613	23,087	27,702	29,119	25,044
WA	12,398	15,692	16,065	12,862	11,812	10,989	10,672	10,205	9,438	8,701	7,523
	85,385	194,695	127,093	105,050	69,466	58,299	58,728	58,704	62,018	64,126	55,381

Certificates per SWH System

	Total Market										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ACT	32.0	34.6	31.7	31.1	29.8	31.8	32.9	34.0	32.6	33.6	31.8
NSW	41.8	36.9	34.8	31.9	32.0	32.6	32.2	31.6	31.1	30.6	31.2
NT	32.7	44.1	34.7	27.4	28.0	27.7	28.1	29.3	29.5	29.3	29.3
QLD	32.8	38.7	33.1	30.5	30.0	31.0	31.9	31.9	31.0	30.8	31.0
SA	33.3	40.9	33.0	29.4	28.3	29.3	30.9	30.0	30.0	29.5	29.8
TAS	73.1	68.4	48.9	26.3	29.4	31.1	29.6	30.3	30.4	30.9	30.9
VIC	42.7	50.1	33.6	27.0	25.6	27.9	28.7	29.1	29.4	29.5	29.8
WA	33.0	33.7	31.0	29.8	29.0	29.9	30.6	31.7	31.3	30.6	30.6
	37.8	40.4	33.6	29.7	28.7	29.9	30.4	30.6	30.3	30.1	30.3

Delay in Certificate creation

Attachment 11

1. Determining total number of STCs to be created for 2017 and 2018 generation years

Data up to and Including 2 Jan 2019

	Created in 2016	Created in 2017	Created in 2018	To be created in 2019	Total	% created in following year	Following year as % of Dec TD
New Residential PV							
2016 Installation year	9,578,371	822,420			10,400,791	7.91%	8.59%
2017 Installation year		13,034,436	1,212,933		14,247,369	8.51%	9.31%
2018 Installation year			18,176,241	1,691,409	19,867,650	8.51%	9.31%
New Non-Residential PV							
2016 Installation year	2,830,784	557,202			3,387,986	16.45%	19.68%
2017 Installation year		3,979,948	804,637		4,784,585	16.82%	20.22%
2018 Installation year			4,966,875	1,004,167	5,971,042	16.82%	20.22%
Upgrade PV							
2016 Installation year	1,088,721	189,729			1,278,450	14.84%	17.43%
2017 Installation year		1,777,569	263,766		2,041,335	12.92%	14.84%
2018 Installation year			2,381,333	353,356	2,734,689	12.92%	14.84%
Total PV							
2016 Installation year	13,497,876	1,569,351			15,067,227	10.42%	11.63%
2017 Installation year		18,791,953	2,281,336		21,073,289	10.83%	12.14%
2018 Installation year			25,524,449	3,048,932	28,573,381	10.67%	11.95%
New Building SWH							
2016 Installation year	780,734	254,127			1,034,861	24.56%	32.55%
2017 Installation year		833,802	227,394		1,061,196	21.43%	27.27%
2018 Installation year			860,350	234,634	1,094,984	21.43%	27.27%
Replacement SWH							
2016 Installation year	770,856	74,241			845,097	8.78%	9.63%
2017 Installation year		798,351	71,478		869,829	8.22%	8.95%
2018 Installation year			820,367	73,449	905,796	8.11%	8.95%
Total SWH							
2016 Installation year	1,551,590	328,368			1,879,958	17.47%	21.16%
2017 Installation year		1,632,153	298,872		1,931,025	15.48%	18.31%
2018 Installation year			1,680,717	308,083	1,988,800	15.49%	18.33%

Following Year Creation as % of STCs
created to end Dec

Installation Year	2016	2017	2018
New Residential PV	8.6%	9.3%	9.3%
New Non-Residential PV	19.7%	20.2%	20.2%
Upgrade PV	11.6%	14.8%	14.8%
New Building SWH	32.5%	27.3%	27.3%
Replacement SWH	9.6%	9.0%	9.0%