

# Darling Downs & Condamine Renewable Energy Industry Profile

July 2018



## Rooftop solar

Over 2017 we estimate rooftop solar installations supported 62 full time jobs across the Darling Downs region. The total installed base of solar systems across the region indicates that around 27% of all residential dwellings have a solar system installed.

**Table 7-1 Uptake of rooftop solar PV in Darling Downs Region**

Number of installations	Proportion of dwellings with solar	Capacity (MWs)	Estimated Generation (MWh)	CO2 Savings (tonnes)
28,585	27%	114	159,526	126,026

Sources: Number of installations, capacity and generation derived by data published by the Clean Energy Regulator as at March 2018. Number of dwellings taken from the 2016 Census.

## Utility-scale projects

The Darling Downs region has just 2 relatively small utility-scale projects operating at present. A power plant utilising agricultural waste at Tong Park and a solar system installed at University of Queensland's Toowoomba campus. These projects are expected to produce almost 6,000 MWh per year on average, which is equivalent to the electricity consumption of 1,132 average Queensland homes.

**Table 7-2 Operational large-scale power projects in Darling Downs Region**

Fuel type	No. plants	MW	Annual generation (MWh)	Avoided CO2 (tonnes)	Households powered
Bioenergy	1	1.2	4,303	3,399	821
Solar	1	1.1	1,631	1,288	311
<b>TOTAL</b>	<b>2</b>	<b>2.3</b>	<b>5,934</b>	<b>4,688</b>	<b>1,132</b>

Sources: Number of projects, their capacity and generation from Green Energy Markets Power Plant Register. Avoided CO2 based on generation displacing the average grid emissions intensity of Queensland electricity according to the Australian Government's National Greenhouse Accounts Factors – July 2017. Households powered derived on the average Queensland household's annual electricity consumption according to the Australian Energy Market Commission's 2017 Residential Electricity Price Trends publication.

However, the region will soon be home to 5 substantial solar farms and the second largest wind farm in the country at Coopers Gap. Table 7-3 also details that there are another 12 under development in the region. These projects' 5,032 megawatts of capacity are capable of producing 12.4m megawatt-hours per annum. This is equal to 23.4% of Queensland's entire annual electricity consumption and equivalent to the annual average electricity consumption of nearly 2.4m Queensland households.

**Table 7-3 Projects under construction and development in Darling Downs**

	Solar		Wind	
	No. plants	MW	No. Plants	MW
Under construction	5	310	1	453
Development - planning approved	11	4,255	1	14
Development - yet to be approved	-	-	-	-
<b>TOTAL</b>	<b>16</b>	<b>4,565</b>	<b>2</b>	<b>467</b>
Annual generation (MWh)	10,838,236		1,551,698	

Source: Green Energy Markets Power Plant Register for project capacity and generation.

Table 7-4 provides estimates of the employment, investment and emissions abatement these projects could be expected to provide if they were all to proceed. All up the \$7.8 billion of investment in these projects could be expected to support 11,256 job years of employment building these projects plus 503 ongoing full-time jobs.

**Table 7-4 Employment, investment and emissions abatement flowing from projects under construction and development in Darling Downs region<sup>1</sup>**

	Solar	Wind	TOTAL
Construction employment (job-years)	10,043	1,213	<b>11,256</b>
Operations employment (FTE)	456	47	<b>503</b>
Investment (\$m)	\$6,847	\$980	<b>\$7,827</b>
Equivalent households powered	2,068,366	296,125	<b>2,364,491</b>
CO2 avoided (tonnes)	8,562,206	1,225,841	<b>9,788,048</b>

Note: job estimates indicated above are not taken from specific estimates for each project cited by developers due to inconsistent methods for estimating a single job between companies. See section 3.4 for information on how employment is estimated.

Note: The Darling Downs – Condamine Region includes the Local Government Areas of Toowoomba; Southern Downs; Goondiwindi; Western Downs; Maranoa (R); Balonne (S).



**SolarCitizens**

This is an extract from the report '**Renewable Energy Across Queensland's Regions**' by industry analyst Tristan Edis of Green Energy Markets, details current at June 2018.

The report was commissioned by community organisation Solar Citizens and can be downloaded at [www.solarcitizens.org.au/qld\\_regions](http://www.solarcitizens.org.au/qld_regions)

For full project list – see next page.

<sup>1</sup> Sources: See section 3.4 for information on how employment is estimated. Avoided CO2 based on generation displacing the average grid emissions intensity of Queensland electricity according to the Australian Government's National Greenhouse Accounts Factors – July 2017. Households powered derived on the average Queensland household's annual electricity consumption according to the Australian Energy Market Commission's 2017 Residential Electricity Price Trends publication.

## Large scale renewable energy projects in the Darling Downs & Condamine region

Current at May 2018, includes projects >2MW<sup>2</sup>

### Under construction

Type	Project name	Company	Capacity MW	Locality
Solar	Darling Downs Solar Farm	APA Group	110	Beelbee
Solar	Chinchilla Solar Farm	Impact Investment Group	19.9	Chinchilla
Solar	Oakey 2 Solar Farm	Foresight Group	55	Oakey
Solar	Oakey Solar Farm	Canadian Solar (Australia)	25	Oakey
Solar	Yarranlea Solar Farm	Risen Energy	100	Yarranlea
Wind	Coopers Gap Wind Farm	AGL	453	Cooranga

### In development<sup>3</sup>

Type	Project name	Company	Capacity MW	Locality
Solar	Bulli Creek Solar Farm Stage 1	Solar Choice Pty Ltd	1000	BULLI CREEK
Solar	Bulli Creek Solar Farm Stage 2	Solar Choice Pty Ltd	1000	BULLI CREEK
Solar	Dalby Solar Farm	Fotowatio Renewable Ventures	30	DALBY
Solar	Western Downs Solar Farm	Tilt Renewables	250	HOPELAND
Solar	Wandoan South Solar Project	Global Infrastructure Partners (Equis)	1000	WANDOAN
Solar	Delga Solar farm	Shell	250	WOLEEBEE
Solar	Columboola Solar Farm	Luminous Energy	310	COLUMBOOLA
Solar	Oakey stage 2	Canadian Solar	55	OAKEY
Solar	Beelbee Solar Farm (Darling Downs II)	APA	240	BEELBEE
Solar	Chinchilla -First Solar	First Solar	100	CHINCHILLA
Wind	Rabbit Ridge	Tm Lucas	13.6	DALVEEN
Solar	Baking Board Solar Farm	Eco Energy World	20	CHINCHILLA

<sup>2</sup> Appendix B - 'Renewable Energy Across Queensland's Regions' Green Energy Markets, 2018

<sup>3</sup> Projects 'in-development' have either: a site identified and landholder consent; submitted a development application to local Council; or have a development approval.