

# RENEWABLE ENERGY INDUSTRY PROFILE

FAR NORTH QUEENSLAND  
2018



**With an abundance of sun, wind and water, Far North Queensland is poised to become a renewable energy powerhouse.**

For years, Far North Queensland has generated more renewable energy than anywhere else in Queensland, and new opportunities abound.

On top of the 12 clean energy power plants already operating in the region, there are 11 renewable energy projects under construction or being planned right now.

These new wind and solar farms will be able to provide electricity for the local area and export it to the rest of the state. If all proceed, they could generate almost 9% of Queensland's current electricity needs.

This renewable energy boom is already creating new jobs, supporting local businesses and providing benefits for local communities.

## Queensland's energy system is changing – fast – and Far North Queensland has a vital role to play.

In the past, most of Queensland's electricity was generated in the south-east, but in the future we can expect to see more and more clean energy power stations spread out across the state.

Few places in the world have such a powerful combination of solar, wind, hydro and bioenergy resources as FNQ. The region has dozens of sites suitable for off-river pumped hydro that can store and release clean power on demand. Wind and solar farms here generate 20-50% more electricity per unit than

most other countries. What's more, wind generators in FNQ often operate at times when southern wind farms are idle, helping balance out the national electricity grid.

This gives us a competitive advantage, so we could even export electricity to neighbouring countries.

The map and table at right provide a snapshot of large-scale renewable energy projects that are already operating, under construction or currently planned. We can expect to see many more projects like these proposed in the future.

**“We're the Saudi Arabia of renewable energy, we've got it all.”**

Simon Holmes à Court, Melbourne University<sup>1</sup>



### LARGE-SCALE RENEWABLES

**12** solar, wind, bioenergy & hydro power stations already operational **& 11** more renewable energy projects planned or under construction

If they all proceed, these new renewable energy projects will deliver:

#### ELECTRICITY

**4.6M** megawatt hours of electricity.

That's enough to power

**880,000**

of Qld's 1.98 million homes<sup>2</sup>.



#### JOBS & INVESTMENT

**4,000** jobs during construction<sup>3</sup>.

**226** ongoing full-time jobs.



An estimated

**\$3 billion** investment.



#### RELIEF FOR THE REEF

Climate pollution reductions of

**3.6 mega-tonnes**

per year.

That's like taking **780,000** of

Qld's 3.8 million cars off the road<sup>4</sup>.



In Far North Queensland

**21%**

of homes have rooftop solar.

#### ROOFTOP SOLAR

Each saves around

**\$720**

a year on electricity.

That's over

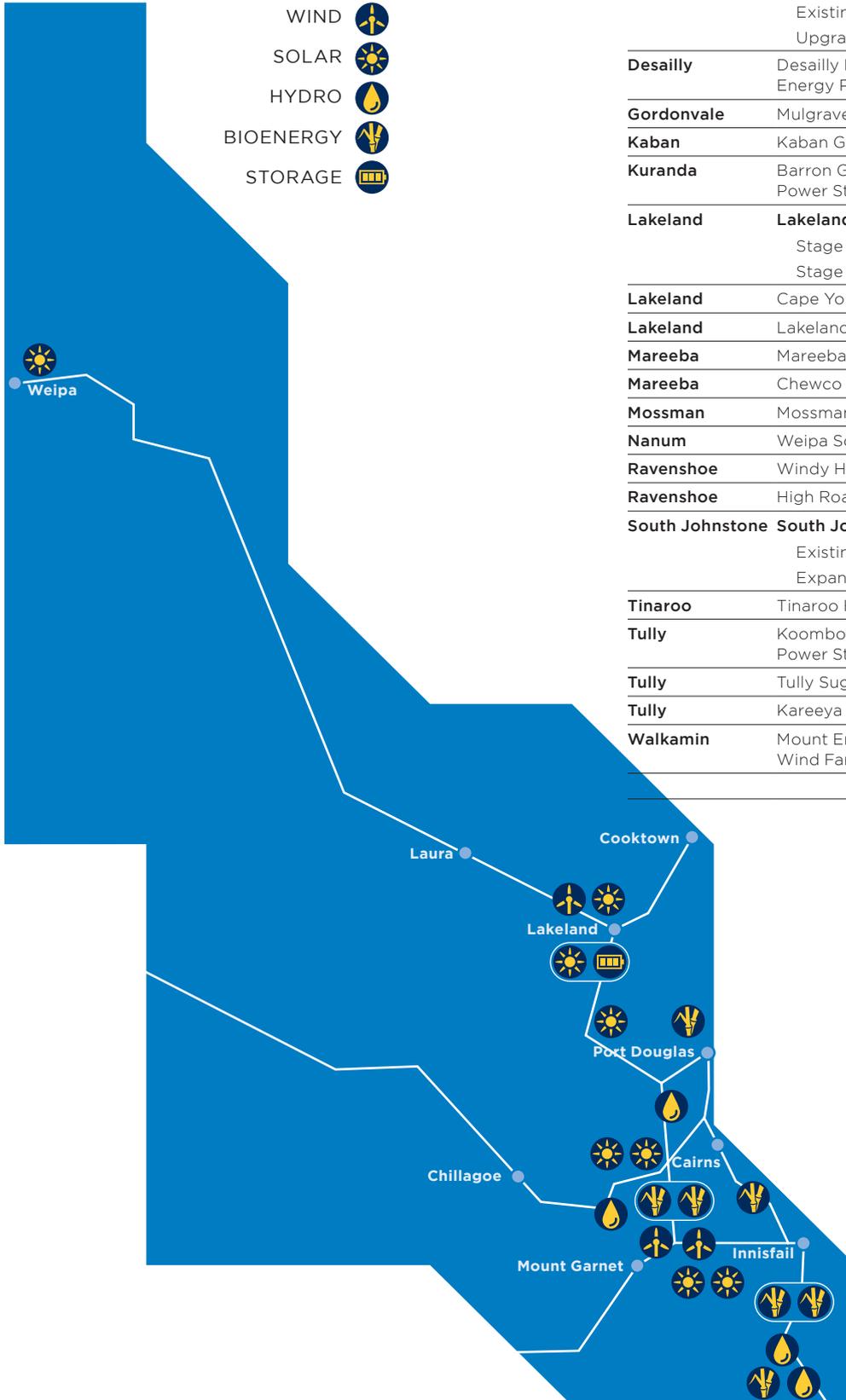
**\$17m**

NOT spent on power bills!



# FAR NORTH QUEENSLAND

## RENEWABLE ENERGY POWER STATIONS



- WIND 
- SOLAR 
- HYDRO 
- BIOENERGY 
- STORAGE 

Location	Project Name	Status	Capacity (MW)
Arriga	Tableland Mill		
	Existing mill	Operating	7
	Upgrade	Construction	24
Desailly	Desailly Renewable Energy Park	Planning	1000
Gordonvale	Mulgrave Mill	Operating	9
Kaban	Kaban Green Power Hub	Approved	130
Kuranda	Barron Gorge Power Station	Operating	66
Lakeland	Lakeland Solar & Storage		
	Stage 1	Operating	11
	Stage 2	Approved	17
Lakeland	Cape York Solar Farm	Approved	55
Lakeland	Lakeland Wind Farm	Approved	104
Mareeba	Mareeba Solar Farm	Approved	60
Mareeba	Chewco Solar Farm	Approved	75
Mossman	Mossman Mill	Operating	12
Nanum	Weipa Solar Farm	Operating	2
Ravenshoe	Windy Hill Wind Farm	Operating	12
Ravenshoe	High Road Wind Farm	Approved	80
South Johnstone	South Johnstone Mill		
	Existing mill	Operating	19
	Expansion	Approved	32
Tinaroo	Tinaroo Hydro	Operating	2
Tully	Koombooloomba Power Station	Operating	7
Tully	Tully Sugar Mill	Operating	21
Tully	Kareeya Power Station	Operating	86
Walkamin	Mount Emerald Wind Farm	Construction	181
<b>TOTAL CAPACITY (MW)</b>			<b>2012</b>



The Lakeland solar farm and big battery north of Cooktown  
Photo courtesy of Conergy Australia

## 24/7 ON-DEMAND CLEAN POWER

The largest “hybrid” renewable energy projects planned for north Queensland will be capable of providing electricity around the clock, even when “the sun don’t shine and the wind don’t blow”.

**Solar, Wind and Big Battery** Combining a wind or solar farm with large scale battery storage means the clean energy they generate can be captured and stored until its needed. The Lakeland Solar Farm north of Cooktown combines solar and battery storage while the Kaban Green Power Hub near Ravenshoe will use wind turbines and big-batteries to deliver electricity around the clock.

**Kidston Renewable Energy Hub:** The old Kidston gold mine near Eidsleigh, 360km south west of Cairns, is about to be transformed into a hybrid renewable energy power station. The two large pits left behind by the mine will be used as dams, connected by a tunnel that runs water through a turbine to generate electricity. The pumps will be powered by a solar farm and wind turbines on-site. Once all the components are complete, the station will be able to provide energy day and night.

Cover photo: Electricians at work on the Ross River Solar Farm, by **Rosana Kersh**.

Unless otherwise specified, all figures in this leaflet are from the report *Renewable energy across Queensland’s regions* by Green Energy Markets industry analyst Tristan Edis. The report can be downloaded at [solarcitizens.org.au/qld\\_regions](http://solarcitizens.org.au/qld_regions). Details current at June 2018.

- 1 *Renew Economy* 20 August 2018.
- 2 Australian Bureau Statistics 2016 Census.
- 3 Construction jobs are estimated in job years, where 1 job year = 1 person working full time for one year.
- 4 Estimated using US Government EPA greenhouse gas equivalencies calculator. Total cars in Qld – Dept of Transport & Main Roads 2017.

**Solar Thermal for north Queensland?** Investigations are underway to find the best site for a possible solar thermal plant in north Queensland. Solar Thermal technology collects and stores heat from the sun and uses it to run steam turbines 24/7.

## MAKE FNQ A CLEAN ENERGY POWERHOUSE!

Renewable energy is set to become an important part of the economy in Queensland’s far north. However, it’s uncertain how many of the development projects described here will go ahead. The Queensland Government has a target of at least 50% renewable energy by 2030 but is yet to put forward a plan to reach that goal. Meanwhile our Federal politicians are still debating the nation’s future energy policy. The decisions our leaders make over the next months and years are vital for the future of the renewable energy industry in north Queensland.

To find out more about Solar Citizens campaigns to support renewable energy visit [solarcitizens.org.au](http://solarcitizens.org.au)



**SolarCitizens**



Solar Citizens is an independent community organisation working to protect and grow solar and other forms of renewable energy in Australia. We advocate for the rights of more than five million solar owners and the millions more who wish to go solar. Visit [solarcitizens.org.au](http://solarcitizens.org.au)