

# CLEAN ENERGY AT WORK IN QUEENSLAND

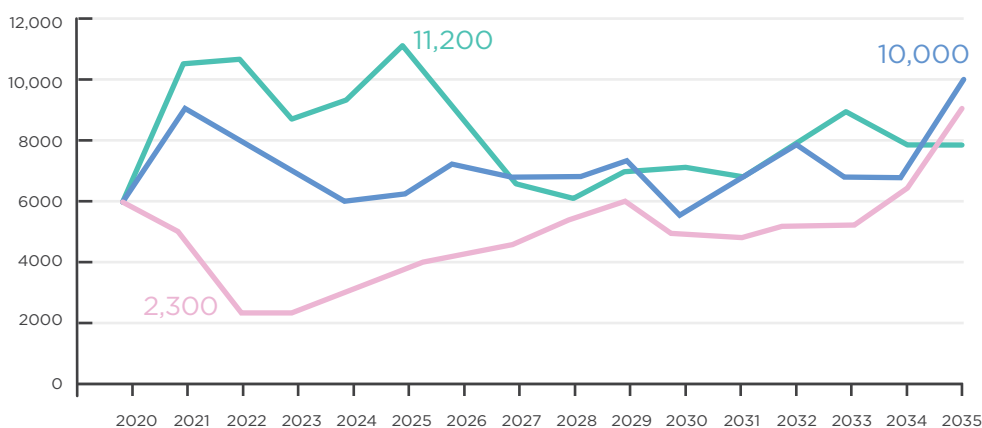
## INTRODUCTION

This snapshot highlights the jobs and skills supporting the Queensland renewable energy sector from now to 2035. It is the result of a study commissioned by the Clean Energy Council, and undertaken by the Institute for Sustainable Futures, to understand the size and characteristics of the Australian renewable energy workforce. The research covered those engaged in the development, installation, operation and supply chains of Australian wind and solar energy, hydro and pumped hydro power, and batteries.

### ★ KEY FINDINGS

- Currently, the renewable energy sector provides at least 6000 direct and indirect jobs in Queensland.
- With strong policy settings, this could almost double to over 11,000 jobs within a few years. But under the business-as-usual Australian Energy Market Operator (AEMO) scenario, it could drop to below 2500 by 2022, taking more than 3000 jobs out of the Queensland economy.
- Under any scenario, solar represents half the workforce and will be an important source of jobs across Queensland.
- Currently, 86 per cent of the Queensland clean energy workforce is involved in manufacturing, development, construction, or installation of renewable energy projects. With ambitious policy settings, over half the workforce could be employed in ongoing roles in operations and maintenance by 2035. These represent quality and enduring skilled jobs for regional Queensland.
- Regional and rural Queensland economies stand to gain the most, with up 75 per cent of jobs based outside of Brisbane. Some areas, such as the Darling Downs and Far North Queensland Renewable Energy Zones (REZs), could become hotspots with the creation of between 1000 and 2000 jobs.

### TOTAL QUEENSLAND RENEWABLE ENERGY JOBS BY SCENARIO 2020-2035



#### AVERAGE JOB NUMBERS:

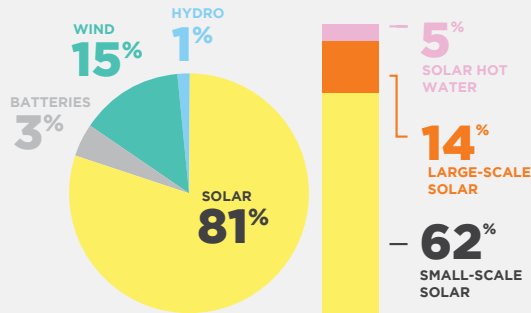
- CENTRAL (BAU) SCENARIO: 5000
- STEP CHANGE SCENARIO: 8300
- HIGH DISTRIBUTED ENERGY SCENARIO: 7300

\* See page 3 for a description of each scenario.

## JOBS IN 2020 BY TECHNOLOGY

Currently, 62 per cent of the clean energy workforce in Queensland is employed in small-scale rooftop solar, followed by wind, which accounts for 15 per cent, and utility-scale solar at 14 per cent of the workforce.

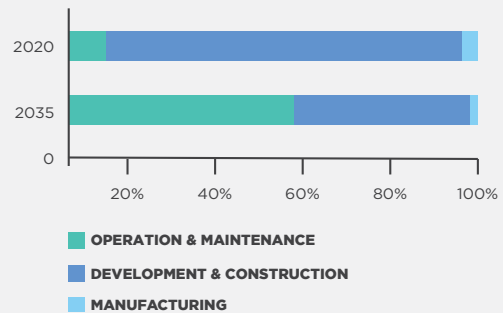
### TOTAL RENEWABLE ENERGY JOBS BY TECHNOLOGY-TYPE 2020



## ONGOING RENEWABLE ENERGY JOBS TO 2035

By 2035, jobs in the operation and maintenance of renewable energy installations could account for over half of all jobs in the sector.

### CONSTRUCTION AND MANUFACTURING VS OPERATION AND MAINTENANCE JOBS, STEP CHANGE SCENARIO, 2020 AND 2035



## RENEWABLE ENERGY OCCUPATIONS

The occupational mix of the renewable energy sector shows diversity and a strong need for electricians, with electrical workers representing the single biggest trade required for the expansion of the renewable energy sector in Queensland. The types of occupations vary with the technologies; hydro and pumped hydro requires more civil labourers whereas wind power involves a higher proportion of specialist skills and knowledge. The study did not include renewable hydrogen which is likely to be another major opportunity.

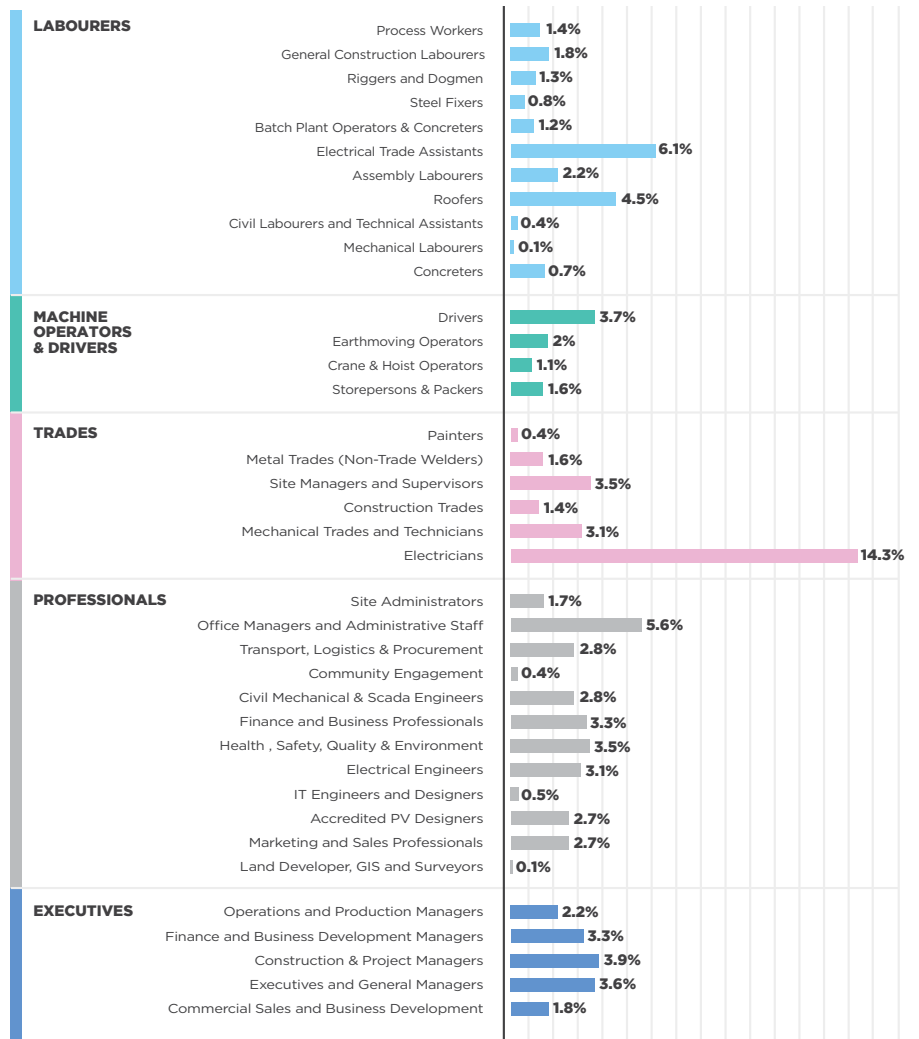
## CLEAN ENERGY JOB IN THE SPOTLIGHT



Transporting over-sized wind turbine components to site has proven to be a job like no other for Lowwood-based truck driver Robert Liston.

[READ MORE](#)

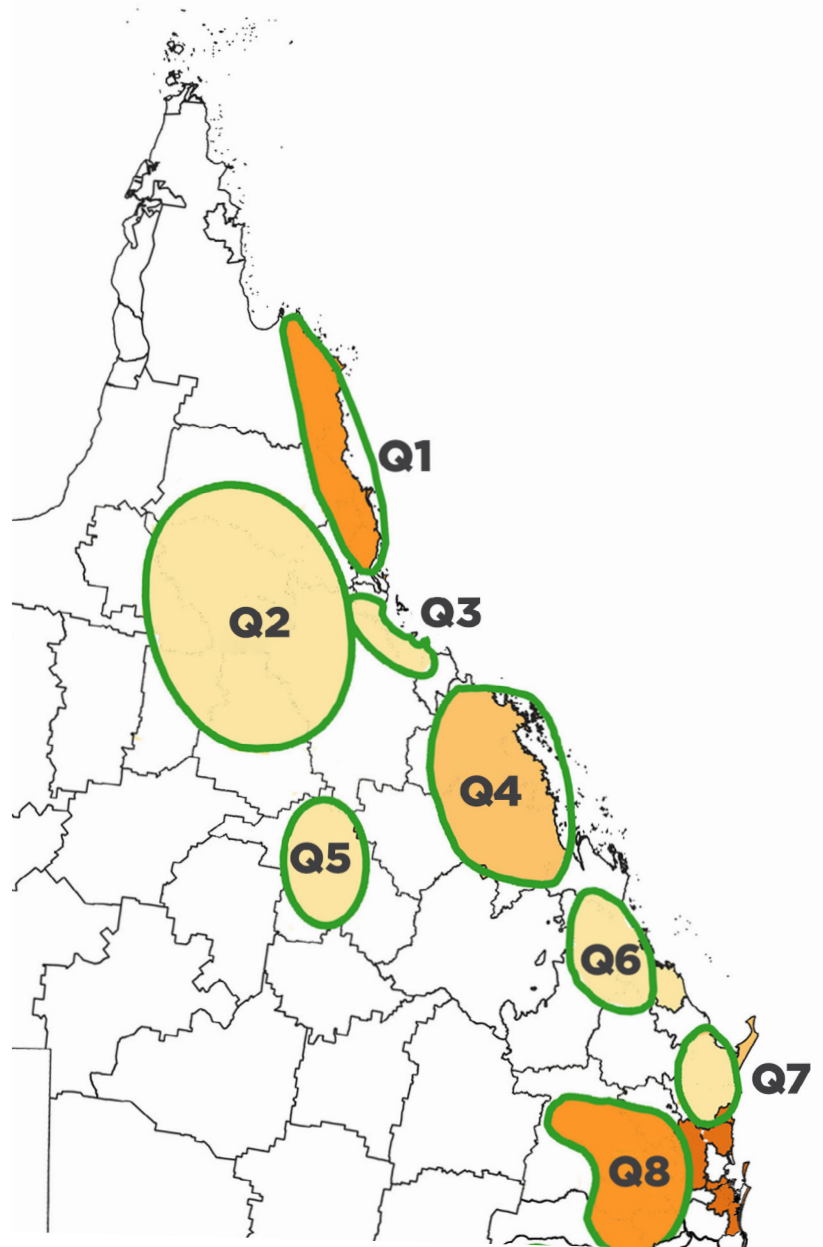
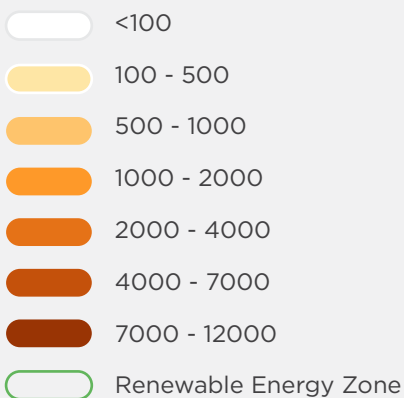
## RENEWABLE ENERGY TECHNOLOGIES, STEP CHANGE SCENARIO 2025: OCCUPATIONAL COMPOSITION %



## QUEENSLAND'S RENEWABLE ENERGY ZONES

AEMO's Renewable Energy Zones (REZs) provide a way to start to understand the opportunities of clean energy employment for regional Australia, which the study suggests could be as much as 75% of the sector's employment in Queensland. In particular, the **Darling Downs** and **Far North Queensland** proposed REZs could become employment hotspots, with the creation of between 1000 and 2000 jobs associated with large-scale wind and solar and small-scale rooftop solar. Wind, pumped hydro and small-scale rooftop solar represent the major employment opportunities in the Far North Queensland REZ. In the case of hydro, there are also likely to be new opportunities for local businesses to provide materials such as concrete. In the Darling Downs REZ large-scale solar and wind projects could employ as many as 800 workers each by 2025.

### NUMBER OF JOBS



The national *Clean Energy at Work* report and accompanying methodology is available to download separately.

### DOWNLOAD

This report is based on research by Chris Briggs, Jay Rutovitz, Elsa Dominish, and Kriti Nagrath of the Institute for Sustainable Futures, University of Technology Sydney.

#### \* AEMO forecasting scenarios

The **Central Scenario** reflects a business-as-usual approach that includes all current government policies and best estimates of key drivers without any additional policy.

The **Step Change Scenario** assumes policy commitments towards decarbonisation in Australia in line with Paris Agreement objectives and in concert with similar efforts internationally.

#### The **High Distributed Energy Resources (DER) Scenario**

assumes a consumer-led transition of the energy sector to more decentralised systems including rooftop solar, household batteries and electric vehicles.

[Australian Energy Market Operator draft ISPs](#)