



Institute for
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Futures



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Renewable Energy Jobs in Australia 2020

Western Australia summary

June 2020

Background

The first National survey of Renewable Energy jobs in Australia

Objectives

- Improve estimates and understanding of renewable energy employment
- Facilitate better workforce planning to avoid future skill shortages
- Identify opportunities for regional jobs and managing energy transition
- Fully study and methodology available from https://bit.ly/REjobs_Au

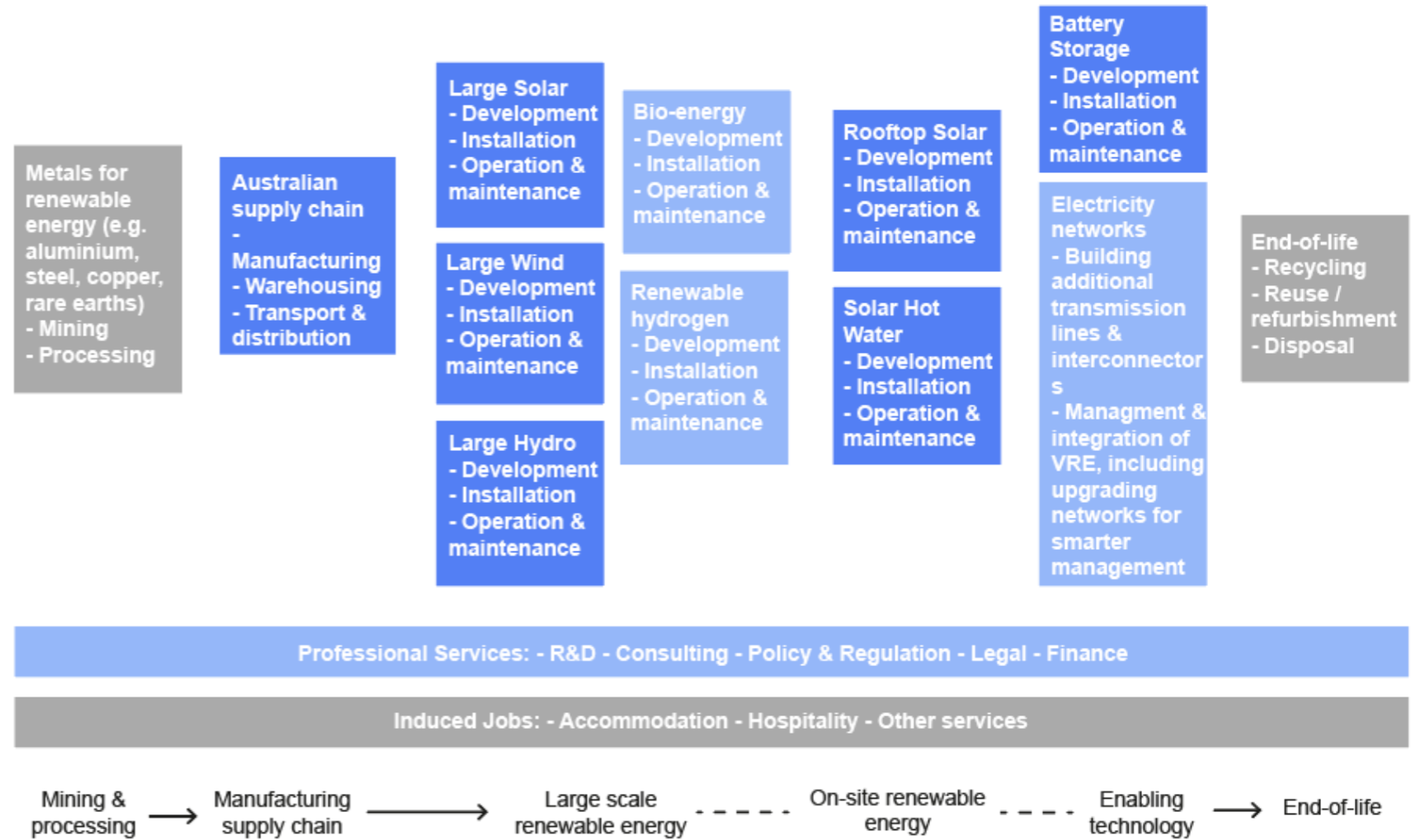


Scope of study

1. All direct jobs (development, construction/installation, operation and maintenance, manufacturing)
2. Some indirect jobs are included (transport, warehousing, but not professional services, or R&D)
3. Induced jobs are not included (e.g. expenditure of construction workers in regional towns)
4. Some areas were not covered
 - Renewable hydrogen
 - Metals for renewable energy
 - Bio-energy
 - Electricity networks
 - Professional services (R&D etc)
 - End of life recycling, reuse and disposal

Study scope figure

Legend: Phase One Phase Two Out of scope



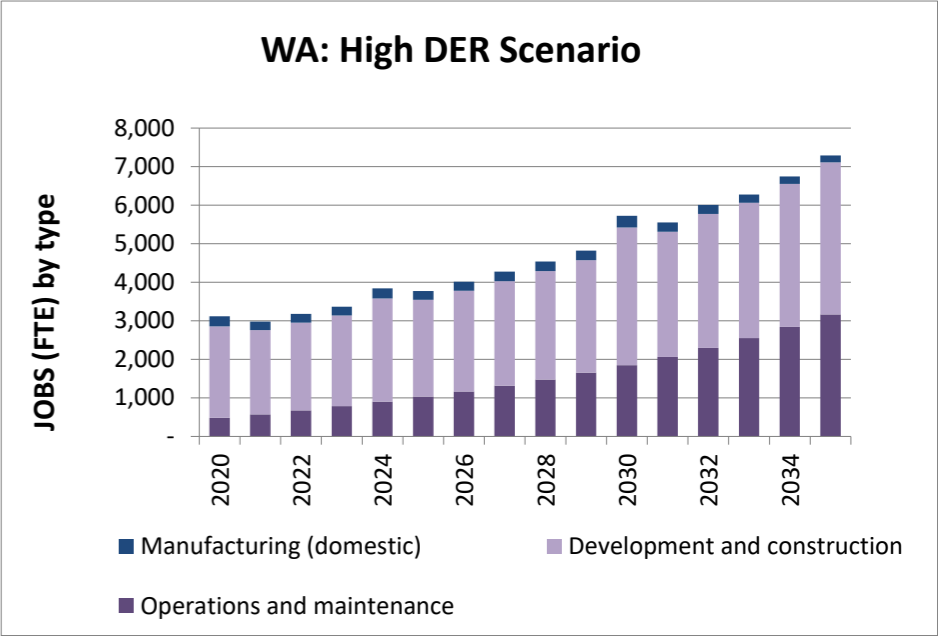
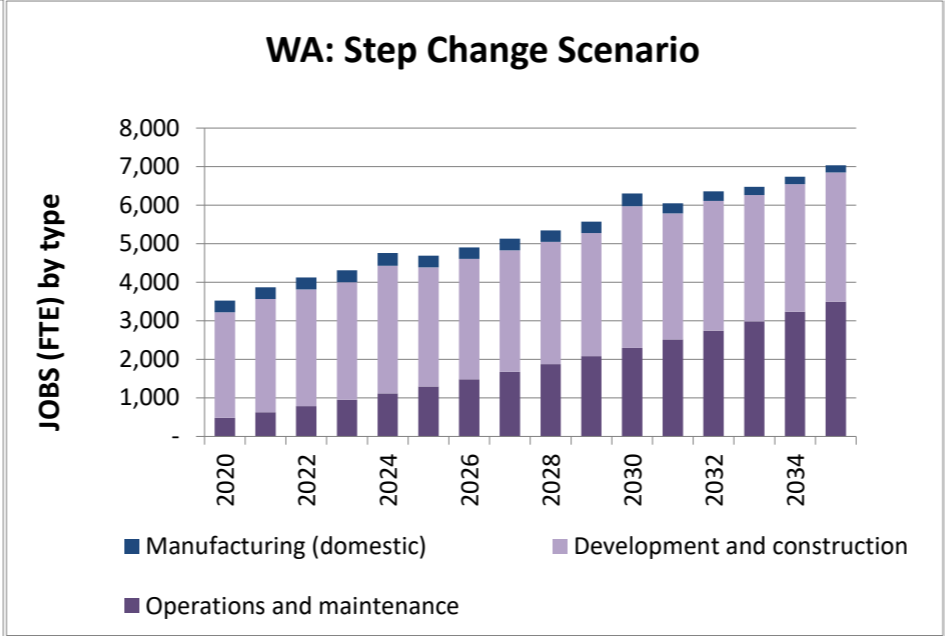
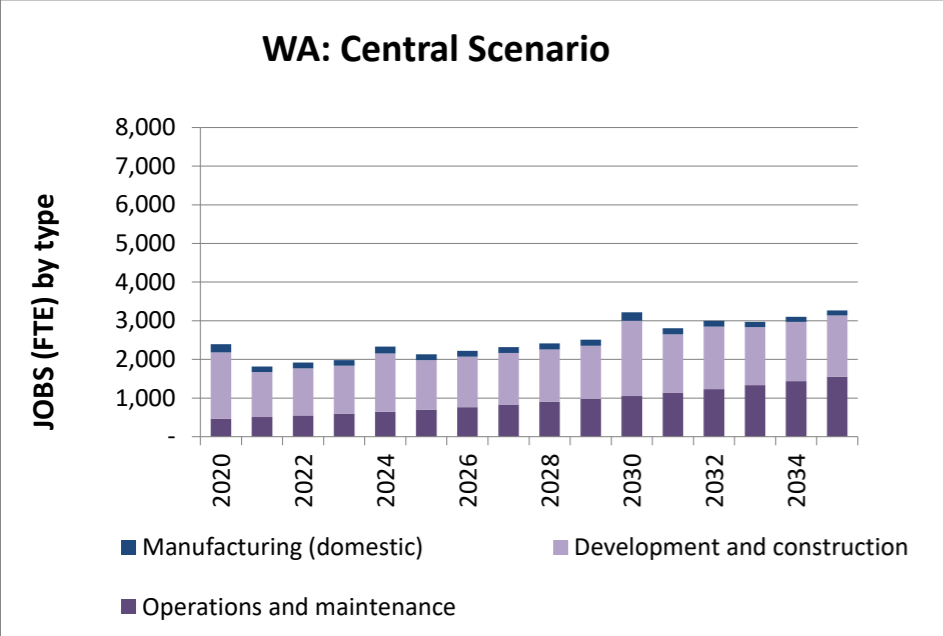
Renewable Energy Scenarios – Western Australia

Scenarios to approximate the AEMO Central, Step Change, and High DER were constructed using data from the draft Whole of System Plan for distributed generation and batteries, and from AEMO and various announced renewable projects for Utility scale capacities. Projects within the Pilbara as well as the SWIS are included.

- Under the **Central Scenario** (i.e. BAU), there is modest

incremental growth in renewable capacity over time to just under 3 GW

- Under the **Step Change** scenario, there is strong growth in renewable capacity, reaching up to 7GW by 2035
- Installed capacity under the **High DER** scenario also grows strongly, to just over 7 GW by 2035.

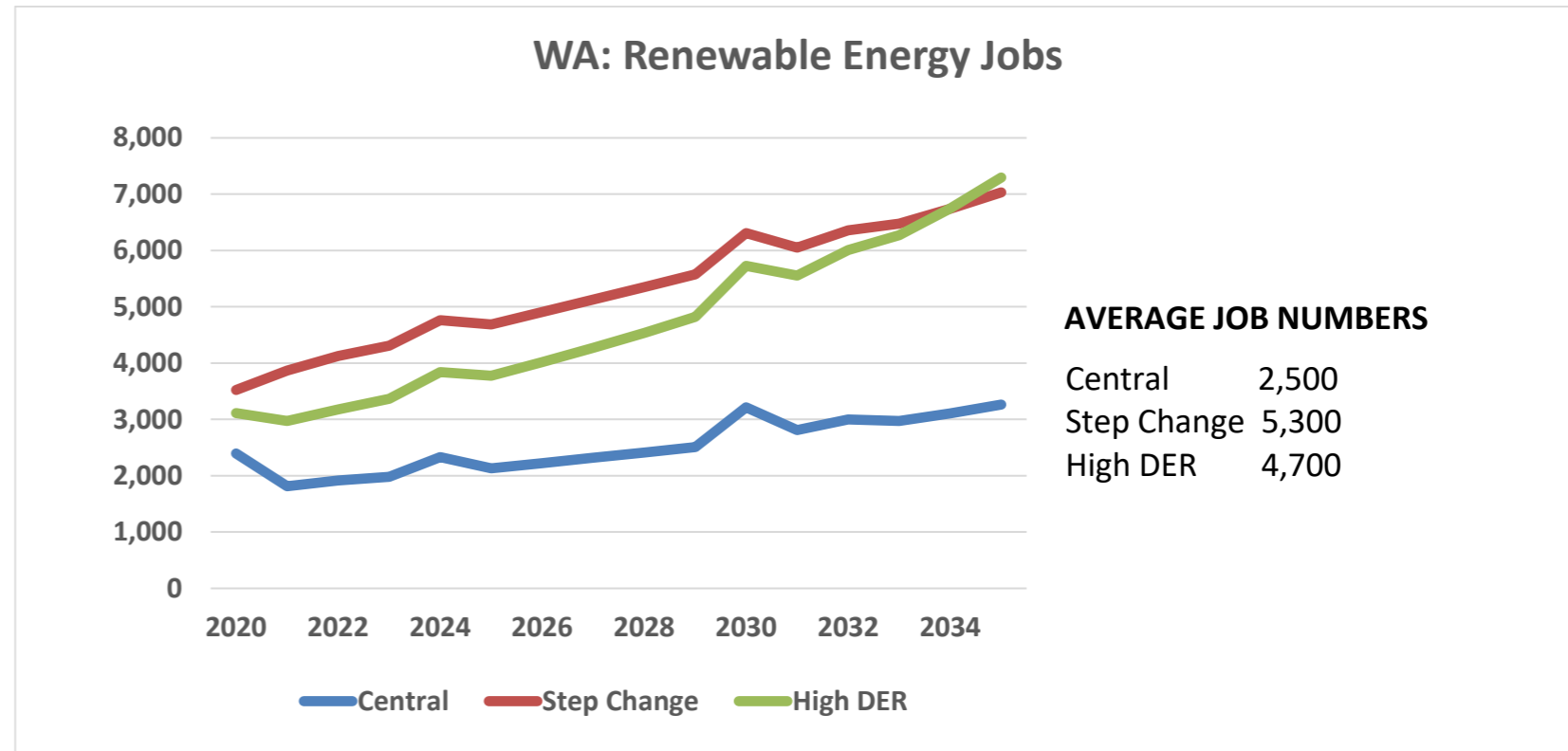


How many Renewable Energy jobs?

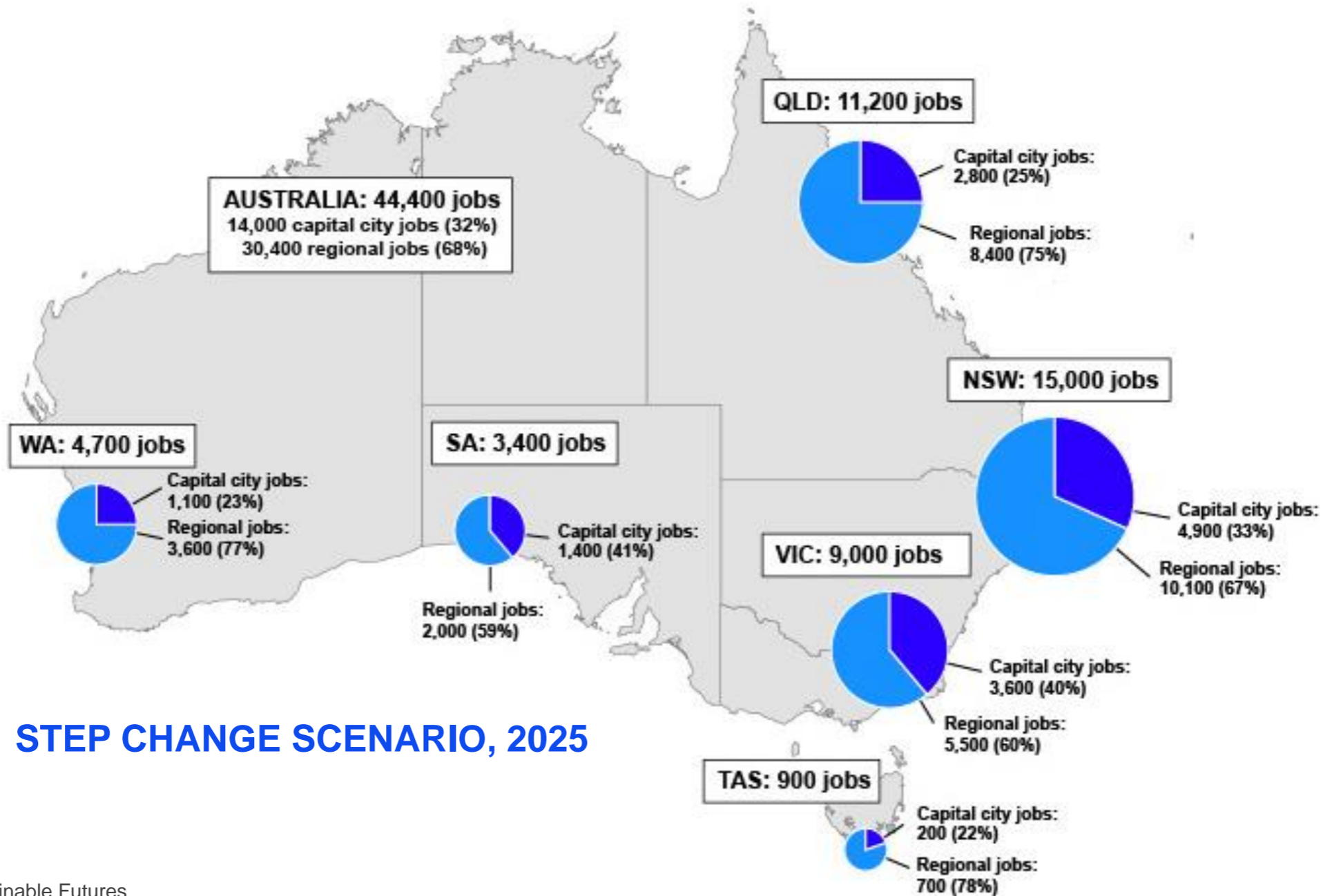
Based on data from the draft Whole of System Plan for distributed generation, and from AEMO and various announced renewable projects, there would be increased job numbers under all scenarios. These are generally the highest in the Step Change scenario.

- Under the **Central Scenario** (i.e. BAU), there could be 5,000 job losses in coming years. Jobs average 2,500 over the period.
- Under the **Step Change** scenario, jobs grow steadily to reach close to 7,000. Jobs average 5,300 over the period.
- Jobs growth is also strong in the **High DER** scenario. Jobs average 4,700 over the period.

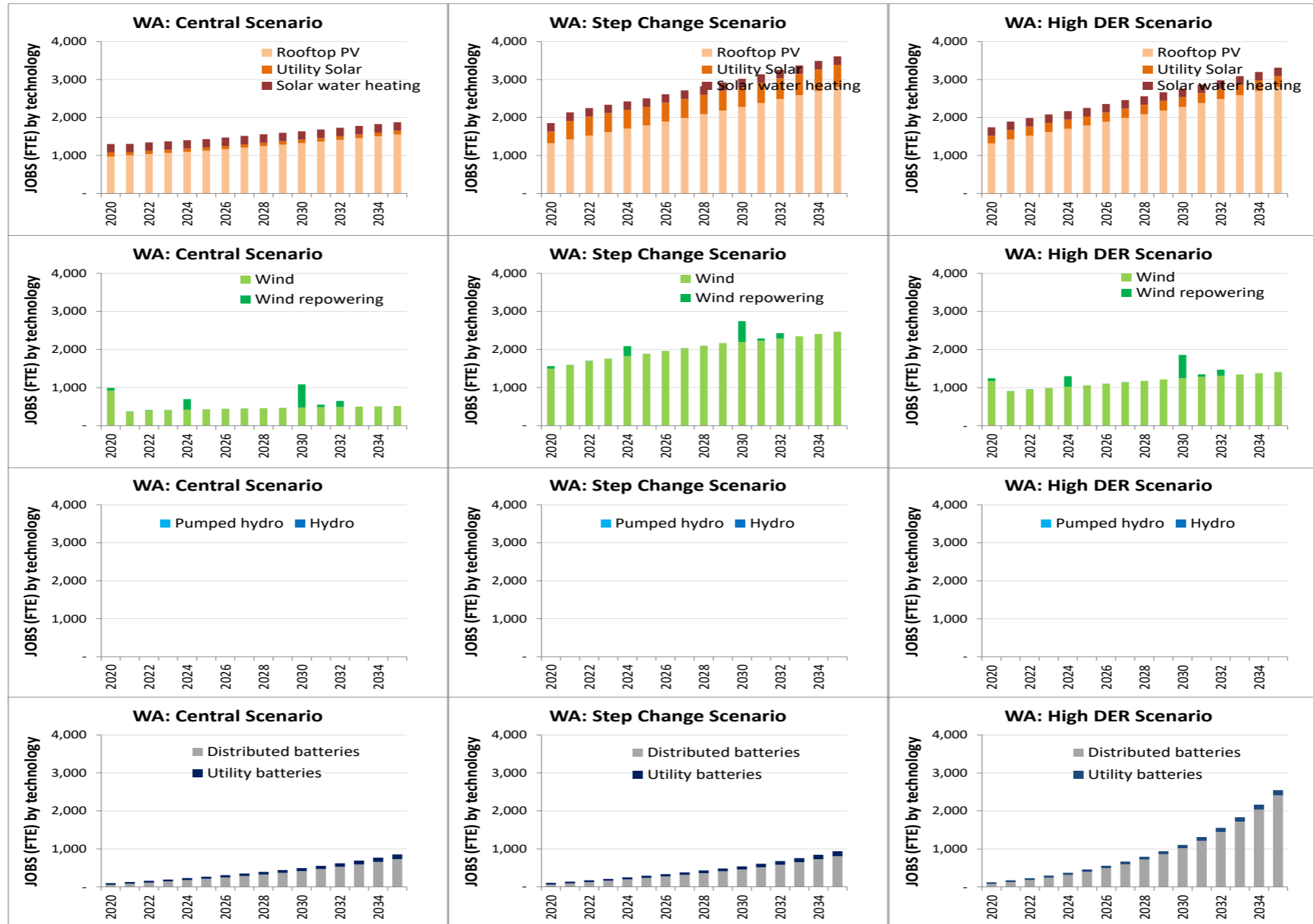
Note that these do not use the Whole of System Plan scenarios for the utility scale capacities, as the modelling is not complete.



Where are the Renewable Jobs – capital cities vs regions?

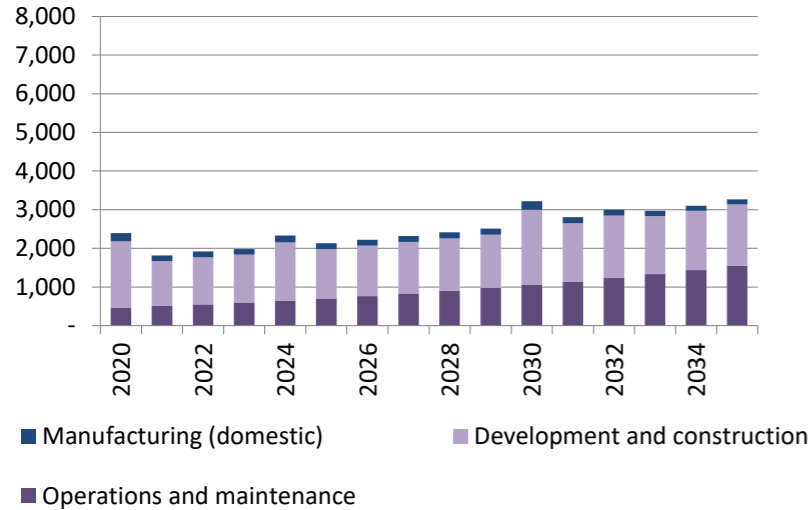


Jobs growth by technology and scenario

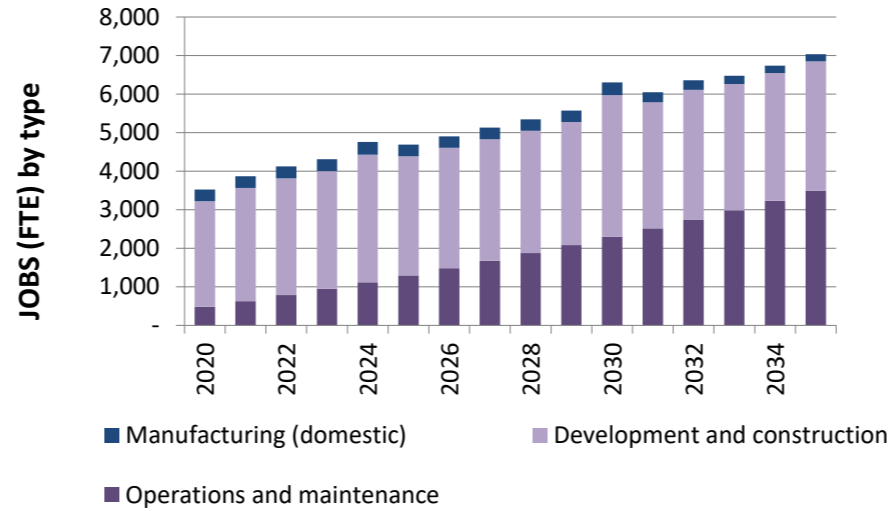


O&M jobs will grow in importance

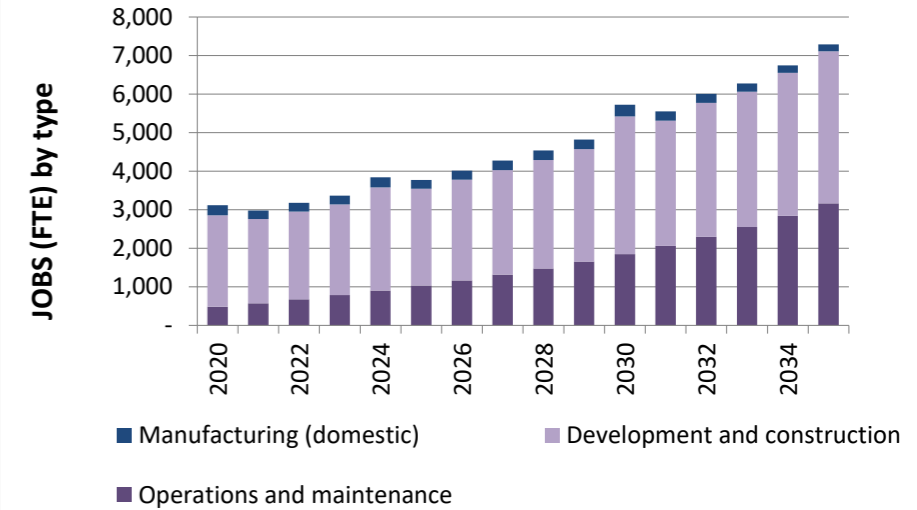
WA: Central Scenario



WA: Step Change Scenario

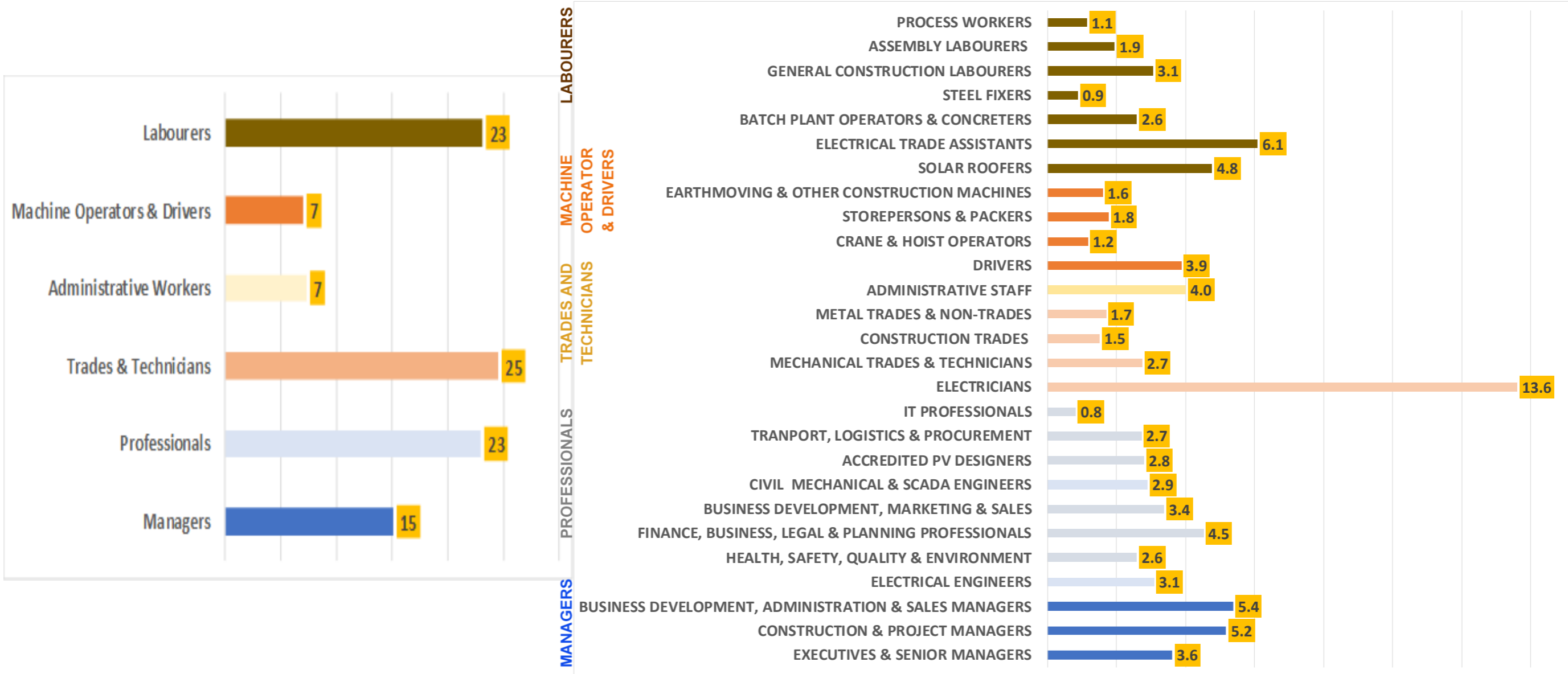


WA: High DER Scenario



- By 2035, O&M jobs could be close to half of renewable energy jobs
- Trend driven by wind farms – good quality blue-collar jobs
- O&M a growing trend in rooftop solar, lower proportion of jobs in solar farms
- The Step Change scenario performs best: by 2035 O&M jobs are 50% of RE jobs, compared to 48% in the Central and only 43% in the High DER scenario (noting that jobs growth overall in the Central scenario is very low)

What are the key occupations across renewable energy (%)?



Note: the figures are an average for each occupation in the Step Change Scenario 2020-2035 across Australia. Some of the minor occupations have not being included in the detailed figure.