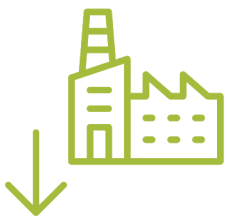


Powering the transition:

The net-zero workforce challenge

Governments should support workers and communities rather than subsidise businesses to get the best employment outcomes in the transition to net zero.

Between 2016 and 2021...



Employment in fossil-fuel electricity generation fell by **18%**



Employment in hydroelectric and other renewable generation increased by **81%**

Estimates suggest there will be a shortfall of 70,000 welders by 2030 due to the need to build new renewable-energy infrastructure.



The energy-efficiency and demand-management workforce will need to grow from just over 200,000 workers today to as many as 400,000 by 2030.



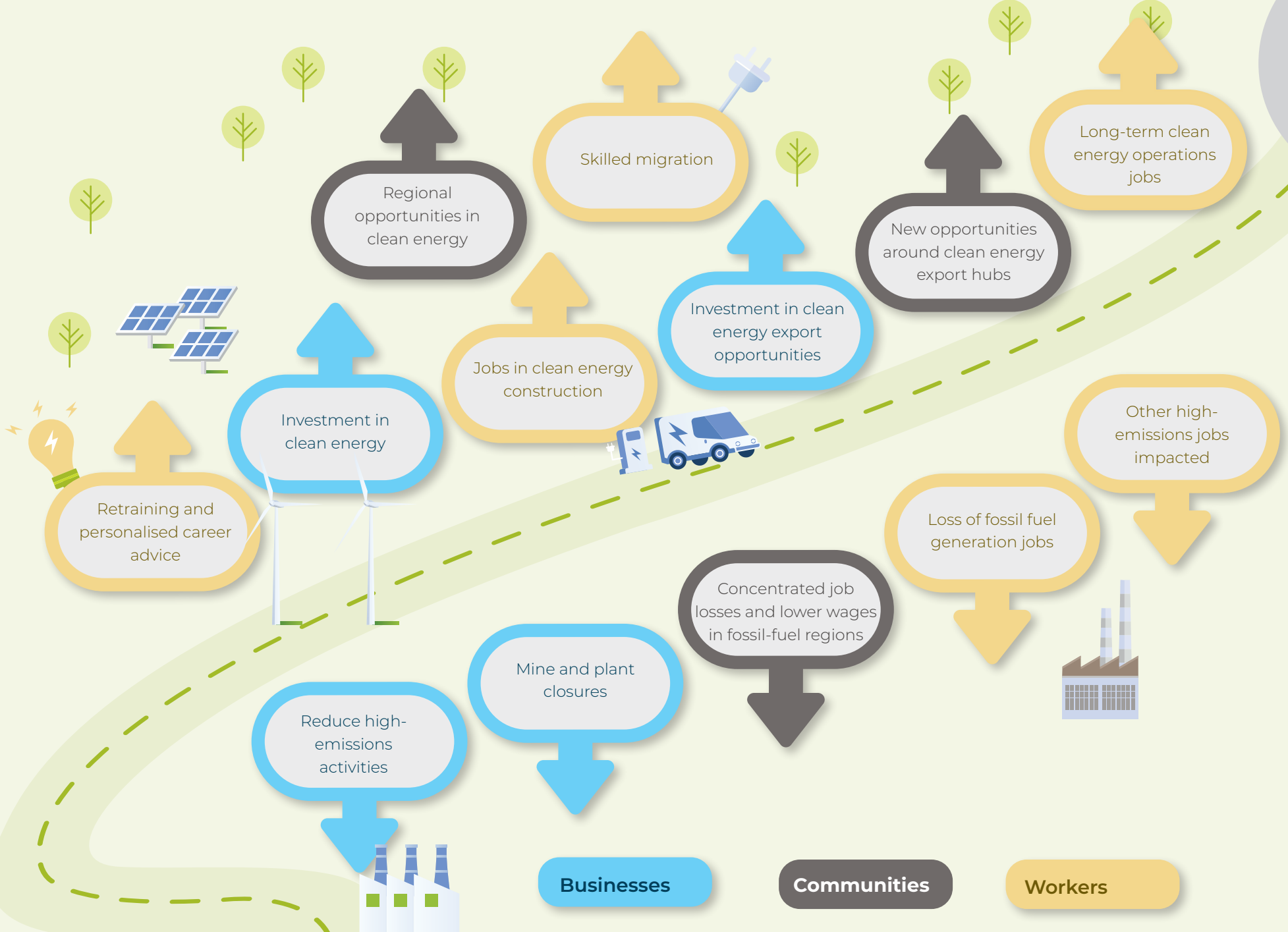
Australia's significant reserves of critical minerals needed to power the transition globally mean by 2040 we could generate as many as 100,000 jobs in this area.



More than half of all coal mining and oil and gas jobs in Australia are located in just eight of 107 regions of Australia.



NET-ZERO
BY 2050



Businesses

Communities

Workers

THE PATH TO NET-ZERO



EXECUTIVE SUMMARY



**43% by
2030**

Australia's commitment to cut greenhouse gas emissions by 43 per cent from 2005 levels by 2030 and reach net-zero emissions by 2050 will require significant change to the way energy is generated and used

Australia's commitment to cut greenhouse-gas emissions by 43 per cent from 2005 levels by 2030 and reach net-zero emissions by 2050 will require significant change to the way energy is generated and used, and have wide-ranging implications for the skills and people needed in the labour market. There will be direct effects on those working in energy, but also for energy-using sectors such as buildings/ construction, transport and agriculture.

Modelling suggests the energy transition will change the nature of jobs across a broad range of sectors, without having a big impact on the total number of jobs.

There will be opportunities for high quality work in renewables, electricity networks and energy performance across utilities, agriculture, mining and transport.

But those with low or medium skill levels in fossil-fuel industries will likely struggle to find jobs with similar wages, as a greater share of clean-energy roles require post-secondary education. Certain regions are also more exposed, as clean-energy jobs are likely to be more geographically dispersed than coal mining and power stations.

The level of disruption to workers in traditional energy jobs will be determined by how easily they can transfer their skills. This will vary considerably across roles. Our analysis finds that energy industries such as fossil-fuel generation and renewables require relatively similar skills on average, but it will be easier for high-skilled workers such as engineers to retrain than those in highly specialised roles such as power-plant operators.

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Displaced employees with strong foundational skills (literacy, numeracy, communication and digital skills) will be best placed to retrain, ideally for jobs that use similar skills to their previous roles. Pervasive skill shortages in clean energy could delay the transition, making it doubly important to enable reskilling. Not all traditional energy employees will transition directly to clean-energy roles, however, as their skills will also be valued in other industries such as mining or construction.

Job mobility in Australia has declined over several decades and is low by international comparison. Removing barriers to changing jobs is thus critical. Governments must act immediately to remove regulatory barriers to developing new skills and training courses adapted to industry needs and the specific safety risks of new technologies. State-based occupational licensing needs to be updated, streamlined and nationally harmonised.

Immigration can help to fill skill shortages in clean energy and transfer expertise to local workers. Fast, simple pathways for highly skilled temporary workers should urgently be implemented. Governments must also improve the consistency of skills recognition. The separate processes to access a labour migration visa and satisfy occupational licensing are complex and burdensome.

Support for the most affected communities should prioritise assisting workers and communities rather than subsidies for businesses. Governments should avoid long-term income support, as this reduces incentives for diversification, and financial compensation for owners closing high-emissions facilities.

The Federal Government's May 2023 announcement that it will establish a new Net Zero Authority should help to smooth the transition for affected workers and communities. With clearly defined objectives and a more targeted function than initially proposed, the authority should complement and enable local initiatives by:

- Ensuring access to personalised support and career planning for all affected workers, concentrated on those with the greatest need;
- Coordinating across different levels of government, industry, unions and education and training providers to ensure new training meets demand;
- Investing in local initiatives to catalyse new job opportunities through economic diversification in the most severely affected communities; and
- Using data to evaluate and reprioritise transition policy.

Australia's low job mobility and mixed success during past structural adjustments, such as the end of car manufacturing, mean we must act now to enable as many people as possible to take advantage of new opportunities.

RECOMMENDATIONS

1

SUPPORT FOR WORKERS AND COMMUNITIES

Governments should support workers and communities rather than businesses, and avoid policies that reduce incentives to move jobs and retrain, such as job guarantees.

2

NATIONALLY HARMONISE OCCUPATIONAL LICENCES

State and Federal governments must take immediate action to update, streamline and nationally harmonise relevant occupational licences to reduce barriers to labour mobility where this will not jeopardise safety. Licensing should enable modern training pathways in new technologies such as small-scale renewables and electric vehicles.

3

CLEAR OBJECTIVES FOR NET ZERO AUTHORITY

The new Net Zero Authority must have clear objectives to focus on the structural adjustment challenge in the most affected communities.

- Ensure all adversely affected workers receive personalised support and career planning;
- Coordinate across different levels of government, industry, unions and education and training providers to improve clarity around clean-energy skills and retraining pathways, and enable new courses to keep up with demand;
- Invest in locally-driven projects to create new jobs through economic diversification in the most severely affected communities; and
- Use data to evaluate and reprioritise transition policy.

4

REFORM TEMPORARY SKILLED MIGRATION

The Federal Government should proceed with risk-based reform of temporary skilled migration to enable fast, simple pathways for highly skilled clean energy workers, including via intra-company transfers.

5

COMMUNICATE THE TRANSITION CHALLENGE

Governments must do more to communicate the transition challenge through forward-looking policies to cut emissions, detailed jobs-market modelling and clearly outlining what the transition will look like in the most affected communities.