

A wide-angle photograph of a city skyline at dusk. The sky is a mix of soft pinks, oranges, and blues, with scattered clouds. The city buildings are illuminated with various lights, including warm yellow and orange lights from windows and cooler blue and white lights from some modern structures. In the foreground, a calm body of water reflects the sky and the city lights. The overall mood is serene and modern.

International Education

The Role of International Education in Fuelling WA's
Energy Transition



Future State

Accelerating Diversify WA



Supercharging the Energy Transition and Decarbonisation in WA

Western Australia (WA) is on the verge of a transformative shift in its energy sector, poised to become a beacon of global clean energy leadership.



KEY WA GOVERNMENT DECISIONS

The State Government has made a number of strategic decisions to pursue the energy transition & decarbonisation. Among these long-term, strategic decisions are:

1. Reduce Government emissions by 80% by 2030.
2. Retire Government coal-fired stations by 2030.
3. Promote renewable energy and batteries for the South-West Interconnected Systems (SWIS) and the North-West Interconnected System (NWIS).
4. Utilise natural gas for 'firming' capacity to electricity grids.
5. Major increase in transmission lines.



Economic Impact and Job Creation

The IEA states “*The transition to net-zero brings substantial new opportunities for employment*”. WA’s transition to a green energy future is set to deliver substantial economic benefits:



Economic Growth

The energy transition will add approximately \$55 billion annually to WA’s economy by 2035.



Job Creation

The development of renewable facilities will generate 20,000 direct jobs in construction, operation, and maintenance.



Research and Development

Significant employment opportunities will arise in research, technology development, and industrial transformation.

The Port Hedland Green Steel Proposal exemplifies how WA’s strategies can translate into economic and environmental benefits, reinforcing WA’s role as a leader in green energy and sustainable development.

Four Industrial Revolutions



1765

1st revolution

MECHANIZATION

led by the steam engine

1870

2nd revolution

MASS PRODUCTION

driven by electricity and oil-based power

1969

3rd revolution

AUTOMATED PRODUCTION

supported by electronics and information technologies

Today

4th revolution

NEW TECHNOLOGIES

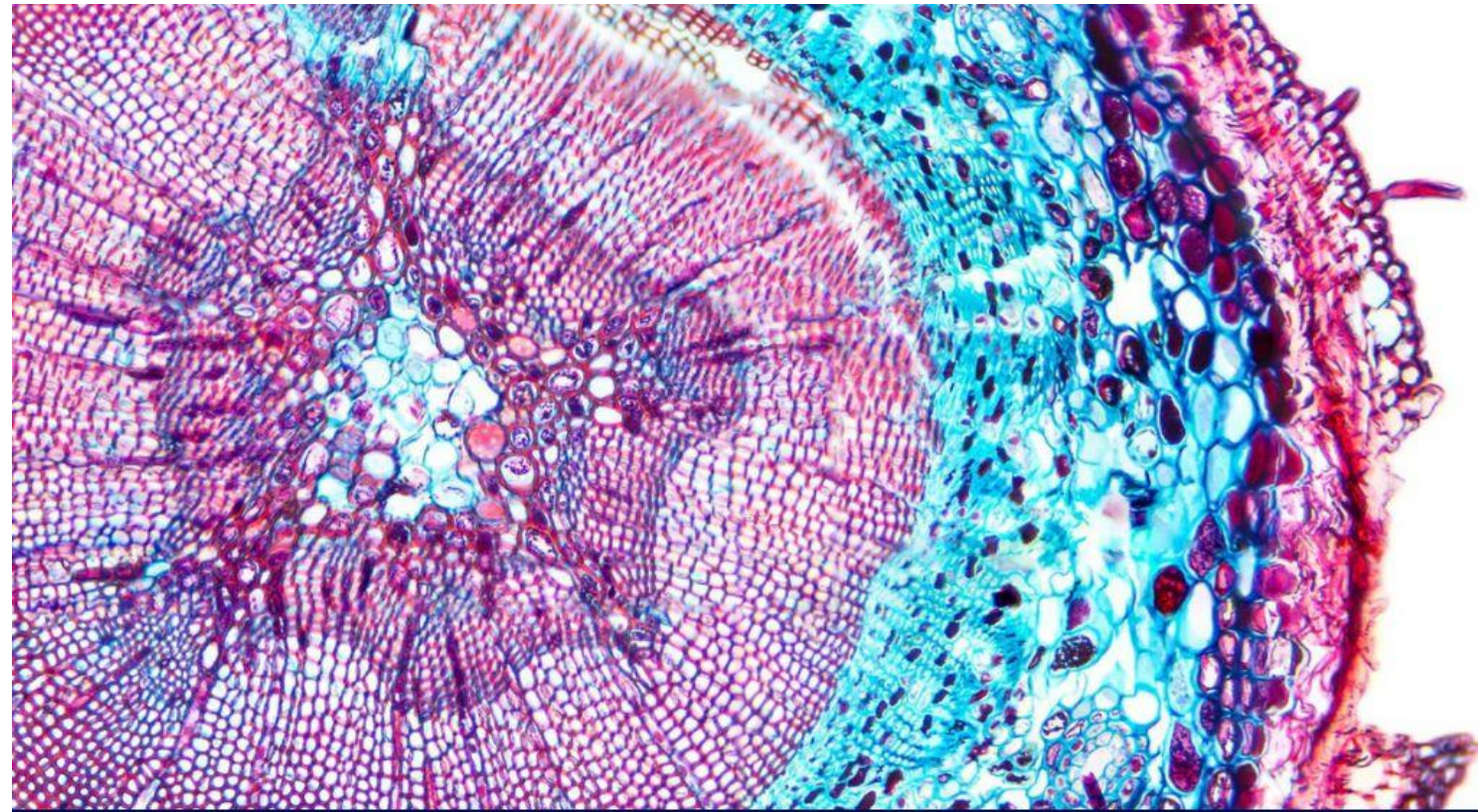
Internet of Things (IoT), Artificial Intelligence (AI); Big Data, Cloud, Cyber-Physical Systems...



The SKA project in Australia

The SKA is a global project to build the world's largest and most capable radio telescopes.

WESTERN AUSTRALIA
IT'S LIKE NO OTHER.





10 Year Science and Technology Plan

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WA 10-Year Science and Technology Plan

 **Vision:** Western Australia as a world leader in science and technology, driving community wellbeing, economic resilience, and environmental sustainability.

 **Focus Areas:** Addressing global challenges like energy transition, decarbonisation, food security, and health, while leveraging WA's unique strengths in mining, agriculture, biodiversity, and more.

Strategic Action Areas:

- 1 Talent, skills, and workforce development
- 2 Funding and investment
- 3 Infrastructure (physical and digital)
- 4 Leadership, collaboration, and communication
- 5 Translation, commercialisation, and procurement
- 6 Policy, regulation, and governance



Advancing Industry, Workforce, and R&D

Western Australia's resilient and versatile workforce is vital for its transition to a low-carbon economy. The state's world-class educational institutions and collaborative R&D centers are creating pathways for international talent to contribute to advancements in renewable energy, hydrogen, and carbon capture technologies.



Opportunities in Western Australia

- **BATTERY TECHNOLOGY LEADERSHIP**

Exciting roles in the rapidly evolving battery technology sector, from lithium and vanadium battery production to recycling initiatives.

- **CRITICAL MINERALS AND ESG STANDARDS**

Opportunities for students and professionals in mining, environmental sciences, and industrial processes to participate in the transformative era for the minerals sector.

- **GREEN MANUFACTURING AND SUPPLY CHAIN INNOVATION**

Roles in engineering, manufacturing, and supply chain management for advancements in green steel, alumina production, and wind turbine manufacturing.

- **HYDROGEN INNOVATION**

Exciting research and career opportunities in renewable energy systems and electrochemical processes for hydrogen applications in gas blending, heavy vehicle fuel, and green iron production.

- **CARBON CAPTURE AND BIO-SEQUESTRATION**

Collaborative roles with international organisations in onshore and offshore initiatives for bio-sequestration and geo-sequestration.

- **WORKFORCE EDUCATION AND R&D HUBS**

Streamlined visa facilitation, housing initiatives, and world-class fellowships ensure international students are integral to building a skilled workforce for the green technology sector.



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**Western Australia's
sustainable energy future**



Autumn/Winter 2023

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