GOVERNMENT OF WESTERN AUSTRALIA

Department of
Energy and Economic Diversification

South West Interconnected System Transmission Plan Summary

Powering our State's future

September 2025

Acknowledgement of Country

The Government of Western Australia acknowledges Traditional Custodians throughout Western Australia and their continuing connection to the land, waters and community. We pay our respects to all members of Aboriginal communities and their Cultures, and to Elders both past and present.

Minister's Foreword

Our State's largest energy system, the South West Interconnected System (SWIS), is changing as we move towards a clean energy future for all.

To meet our decarbonisation commitments and build a stronger, more diversified and resilient economy, we're advancing our vision to make Western Australia a renewable energy powerhouse. From mining the critical minerals needed to develop battery energy storage systems, to progressing the Made in WA plan and manufacturing the transmission infrastructure required to connect new wind and solar projects, this marks one of the most significant economic, infrastructure and energy transformations in our State's history.

Ultimately, it will mean a decarbonised energy system delivering clean, cost-competitive energy to Western Australian households and businesses - powering industries that underpin our State's economic prosperity for generations to come.

New and upgraded transmission infrastructure is essential to the energy transition. With the phase-out of all State-owned coal generation by 2030, the continued integration of households' distributed renewables, and the emergence of new industries driving economic diversification, it is time to reimagine how Western Power's network will continue to support our prosperity - now, and into the future.

The South West Interconnected System Transmission Plan (the Plan) sets out the State Government's plan for the transmission network in the SWIS, along with the immediate and future projects needed to make it a reality.

We've taken our long-term vision for the SWIS and mapped the transmission needed to deliver it. We have aligned our plans to connect new renewable energy generation with the economic opportunity set in the Made in WA plan and Diversify WA framework, prioritising the delivery of clean electricity to our Strategic Industrial Areas (SIAs).

The result is exciting. It is the transmission backbone that will support the phased transition away from coal generation, drive the decarbonisation and electrification of existing industries, and provide the certainty industry needs to invest in the new sectors that will diversify and strengthen our State's economy. From expanding network capacity in the Perth metropolitan area and strengthening local infrastructure in regional communities, to powering SIAs and driving our economic growth, the Plan presents a strategically designed, future-ready vision for WA's main transmission network.

The Cook Government looks forward to continuing to work together with Western Australian communities and industries to deliver on this plan, building a modern and decarbonised electricity network and powering our State's future.

Hon Amber-Jade Sanderson MLA

Minister for Energy and Decarbonisation; Manufacturing; Skills and TAFE; Pilbara

WA's Energy Transition

Affordable and low emissions energy is key to driving the economic growth that will secure the long-term prosperity of our State - making a fit-for-purpose transmission network a crucial enabler for a growing economy.

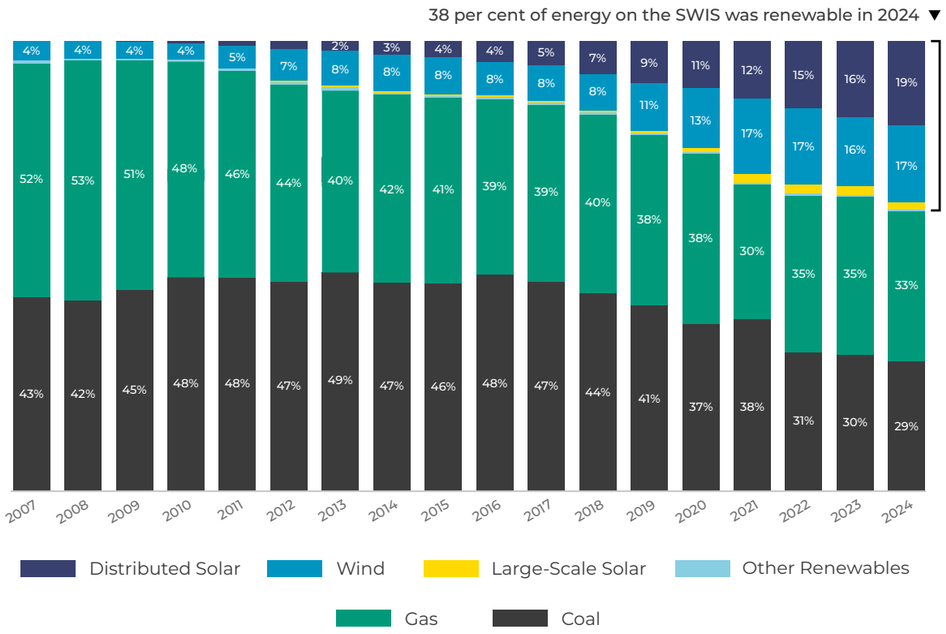
WA has already made considerable progress toward a low emissions energy future.

In 2024–25, renewable energy supplied 39 per cent of electricity used on the SWIS - nearly triple the share in 2016. This growth has been driven by increased rooftop solar uptake and the connection of large-scale renewable generation projects like Warradarge Wind Farm, Flat Rocks Wind Farm, and the Cunderdin Hybrid Solar-Battery Project. Growing renewable penetration is supported by our growing energy storage capacity. By the end of 2025, the SWIS will host around 1.5 GW of grid-scale battery capacity, mostly located in Kwinana and Collie.

To support the next phase of the transition, the State Government is upgrading Western Power's transmission network. More than $1.6 billion has been committed in recent years, and Western Power has already begun construction of Clean Energy Link – North.

Further transmission augmentation is required to realise WA's ambition to become a renewable energy powerhouse. This Plan outlines the development and investment needed to get there.

SWIS generation output (%) by calendar year and fuel



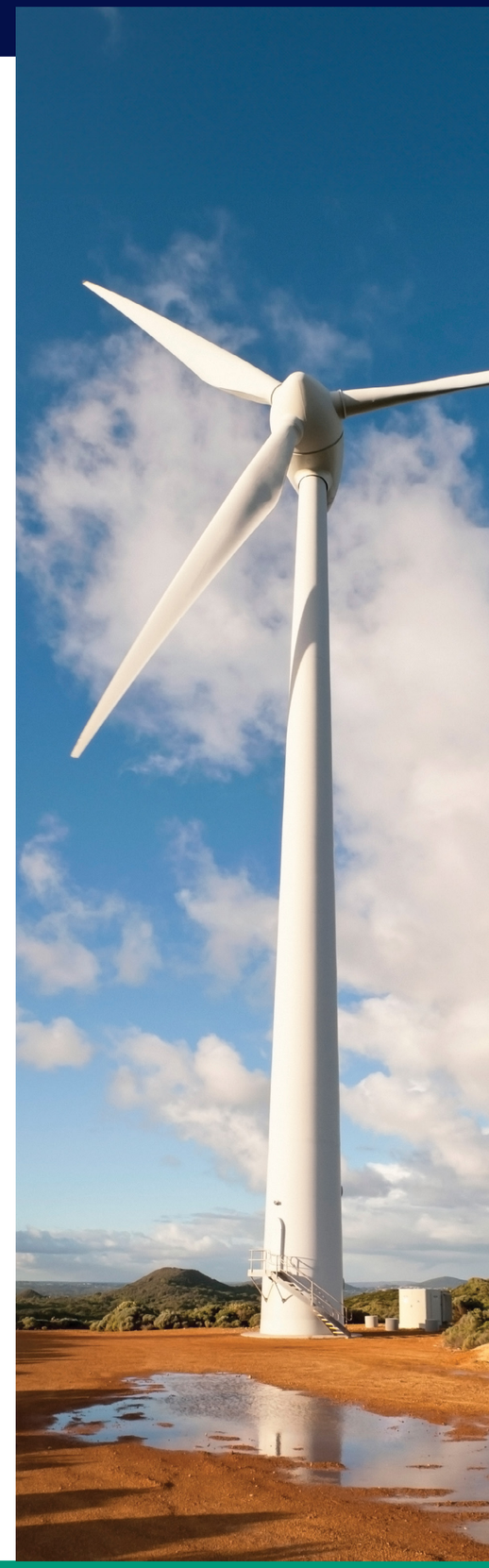
Beyond Coal: A Cleaner, More Sustainable Energy System

We are retiring all State-owned coal generation in the SWIS by 2030 as we work to achieve our decarbonisation objectives.

But decarbonisation is not the only imperative - the coal retirements are also being driven by operational and economic realities. Growing rooftop solar penetration has shifted demand and generation patterns on the SWIS, lowering daytime wholesale prices and fundamentally changing coal's role within the power system.

This means coal is no longer fit-for-purpose for WA - but removing it from the system still represents a process of transformational change. We need to replace coal with new renewable generation projects, supported by storage and modern gas generation, and this means there will be significant opportunities for investment in the projects needed to maintain energy security and affordability in the lead up to 2030.

At the same time, demand for electricity is growing rapidly, driven by WA's growing economy and population, hotter summers, and the increased use of household appliances like air conditioners. Renewable energy is vital to meeting this demand - and this means investment in Western Power's transmission network is an important enabler for a reliable, affordable, low emissions energy mix on the SWIS.



WA's Pathway to Becoming a Renewable Energy Powerhouse

WA has the renewable energy resources to power our households, communities and major industries - as well as the materials needed to support new green technologies and industries in our region and across the globe. By leveraging these strengths, we can become a leader in the global clean energy transition.

To realise this vision, the Cook Labor Government has invested in major job-creating industries and projects through the Made in WA plan and Diversify WA framework. This includes advanced manufacturing like making railcars, transmission infrastructure and electric buses locally in WA, and clean energy projects, including battery manufacturing, lithium and rare earth refineries, and green iron smelting.

Made in WA

The Made in WA plan outlines the investments and policies that will keep WA at the forefront of global market shifts, driving a more diverse and more resilient economy. This includes training, industry support and infrastructure for local manufacturing, renewable energy and job-creating industries.

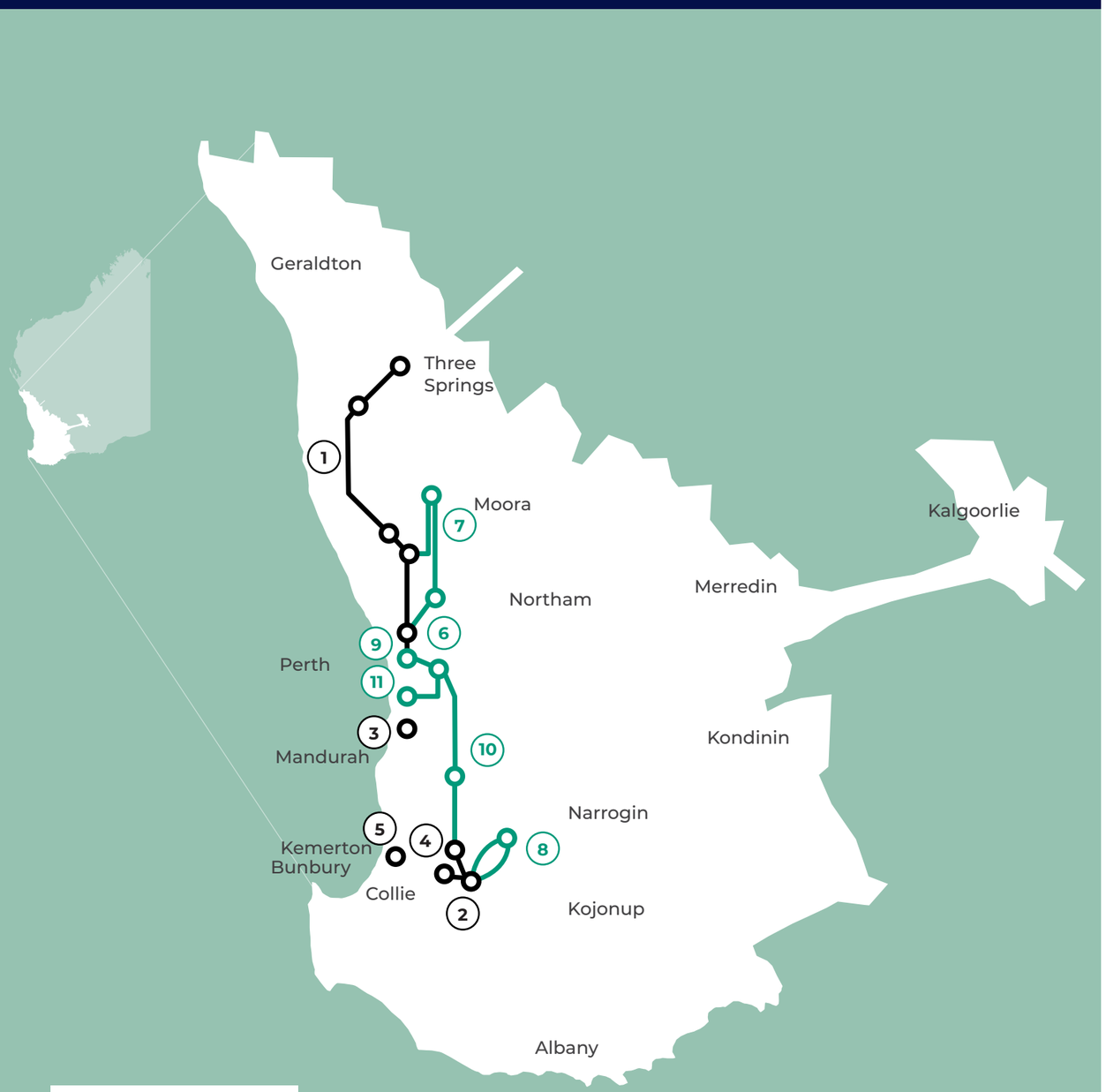
Diversify WA

As WA transitions away from carbon-intensive power sources, investment in a diverse range of industries will ensure a strong and resilient economy. The Diversify WA framework outlines the State Government's approach to economic diversification and key priority sectors, such as energy and critical minerals.

Strategic Industrial Areas

Strategic and priority industrial areas are important components of the Made in WA plan and Diversify WA agenda, and transmission infrastructure is a critical enabler for these areas. The Plan reflects this - aligning network expansion with our economic priorities and outlining the works required to unlock the full potential of the Western Trade Coast, Coolangatta Industrial Estate and Kemerton SIA.

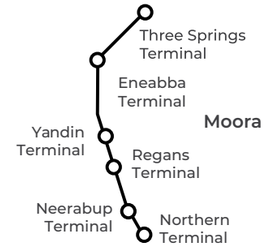
Clean Energy Link Program
Phases 1 and 2



Note: locations (eg. Moora, Chittering and Collie) reflect general project geography.

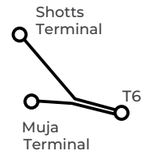
1 CEL - North (2027)

Transmission capacity: 1,000 MW



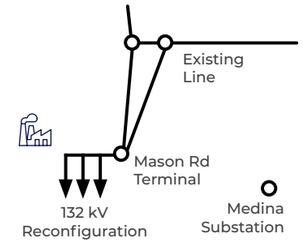
2 CEL - East Stage 1 (2029)

Transmission capacity: 1,600 MW



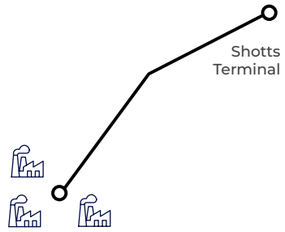
3 CEL - Kwinana Strengthening (Stage 1: 2029 and Stage 2: 2032)

Connect up to: ~900 MW



4 Augmentation - Coolangatta Industrial Estate (Collie Just Transition) (2028-2030)

Connect up to: ~500 MW



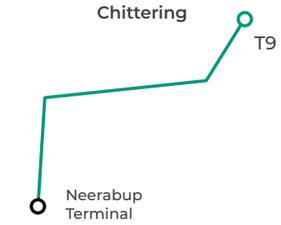
5 Augmentation - Kemerton Strategic Industrial Area (2030-2032)

Connect up to: ~100 MW

Upgrade existing transmission infrastructure to connect industrial loads in Kemerton.

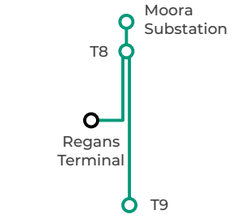
6 CEL - Chittering (2032-2035)

Transmission capacity: 1,600 MW



7 CEL - Moora (2032-2035)

Transmission capacity: 1,600 MW

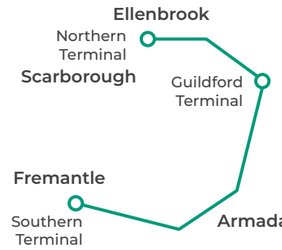


8 CEL - East Stage 2 and 3

Transmission capacity: 3,000 MW

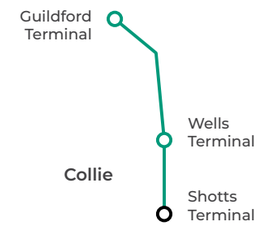
9 CEL - Perth Circuit

Transmission capacity: 400 MW



10 CEL - Collie

Transmission capacity: 1,800 MW



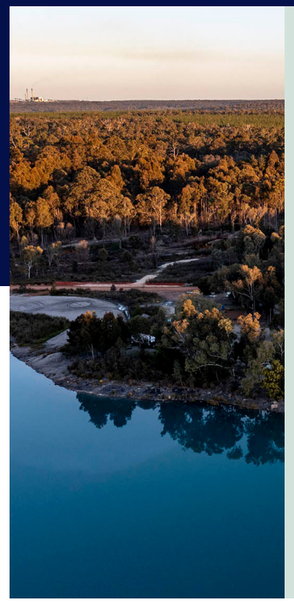
11 CEL - Metro

Transmission capacity: 400 MW

Upgrade existing transmission infrastructure across the metropolitan region.

Phase One: 2025-2030:
Retiring Coal and Meeting Growing Industrial Demand

Phase One Clean Energy Link projects will connect the new generation capacity we need as coal retires while also meeting growing electricity demand and connecting the industrial loads we need to drive a more diverse economy.

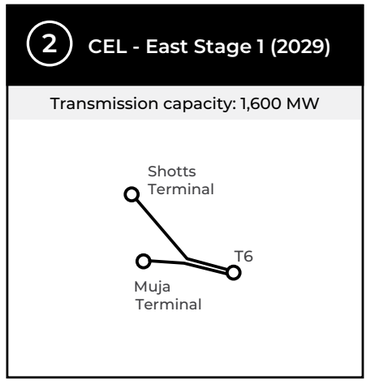


A Just Transition for Collie

The State Government has committed to a Just Transition for Collie, working to manage the town's phased shift away from coal-powered energy by encouraging new opportunities for economic diversification and supporting the local community's engagement in its future. New transmission infrastructure in the region, complemented by upgrades to the existing network, will help realise this vision by supporting industry operations on the priority Coolangatta Industrial Estate. New projects in emerging green economy sectors on the Estate - including green steel and critical mineral processing - could collectively deliver around 500 local jobs, supporting Collie's workforce transition.

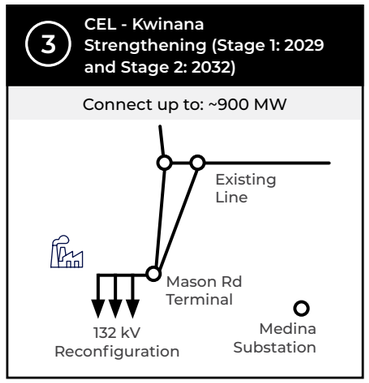
Activating the Kemerton Strategic Industrial Area

Kemerton SIA will be unlocked in two stages. The first will install a new transformer and upgrade the surrounding network to support up to 100 MW of additional transfer capacity. In the second stage, Western Power will establish a new terminal to support industry development in the SIA, creating opportunities for economic diversification and local employment.



Clean Energy Link - East (Stage One)

- Leverages existing infrastructure by connecting a new transmission terminal east of Collie to the existing Shotts and Muja terminals via two new high-voltage transmission lines.
- Builds on the region's historic status as WA's energy hub in south west by facilitating the establishment of renewable energy facilities in the region.
- Scoping and planning works are already underway, with a target of project completion and energisation by late 2029.



Clean Energy Link - Kwinana Strengthening

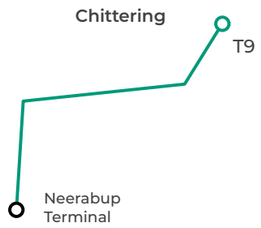
- Delivers two new terminals and new transmission lines to unlock network capacity on the WTC.
- Enables new industrial load connections and energy storage projects in the region.
- Supports WA's Made in WA and Diversify WA plans by connecting new industry operations.

Phase Two: 2030-2035: Economic Growth and Diversification

Clean Energy Link - Phase Two will deliver the transmission infrastructure needed to deliver clean energy to households, schools, hospitals and small businesses in the Perth suburbs, while also supporting new industries like green steel and battery production and unlocking renewable generation to the north and southeast of Perth.

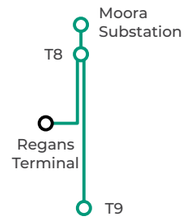
6 CEL - Chittering (2032-2035)

Transmission capacity: 1,600 MW



7 CEL - Moora (2032-2035)

Transmission capacity: 1,600 MW

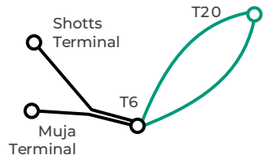


Clean Energy Link - Chittering and Clean Energy Link - Moora

- Grows transfer capacity in the northern SWIS, allowing more energy to move more efficiently.
- Connects more renewable energy projects to the grid, supporting WA's clean energy future.
- Enables new industrial connections, growing a diverse economy and creating local jobs.

8 CEL - East Stage 2 and 3

Transmission capacity: 3,000 MW

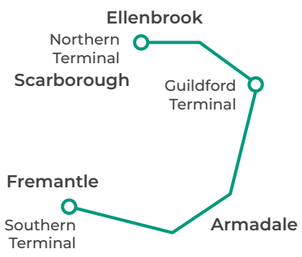


Clean Energy Link - East (Stages Two and Three)

- Boosts network capacity by adding up to 3,000 MW of transfer capacity to the network.
- Enables new renewable energy projects to connect around Darkan and Williams.
- Strengthens WA's clean energy future by enabling more power to flow where it's needed.

9 CEL - Perth Circuit

Transmission capacity: 400 MW

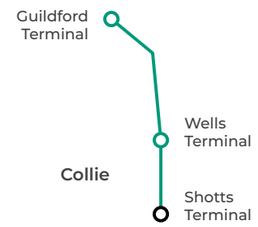


Clean Energy Link - Perth Circuit and Clean Energy Link - Metro

- Increases transfer capacity on the network in Perth's southern and northern suburbs.
- Delivers clean energy for our hospitals, households, schools and businesses across Perth.
- Enhances reliability and system security around metropolitan area.

10 CEL - Collie

Transmission capacity: 1,800 MW



Clean Energy Link - Collie

- Increases capacity to deliver more clean energy from the south west to Perth and Kwinana.
- Helps power WA's growing economy and new clean industries.
- Strengthens reliability and security of the electricity system for households and businesses.

Phase Three

WA will play a major role in global decarbonisation, driven by our abundant supply of critical minerals and world class renewable energy resources. Our natural resources and skilled workforce mean we can support global supply chains for electric vehicles, household and grid-scale batteries, as well as solar panels, and wind turbines. These advantages mean there is an opportunity to unlock transformative economic growth for our State. Phase Three Clean Energy Link projects would expand Western Power's network to support economic diversification through the development of new green industries. Planning for Phase Three projects will include close consultation with industry and comprehensive system modelling and planning exercises to ensure our evolving energy needs inform the build.

Building Opportunity

The three phases of the Plan are designed to transform our transmission network while also supporting local communities, industry and the WA economy. This strategic, phased approach is only possible because Western Power is owned by the people of WA. This ensures that the investments we make toward transmission infrastructure ultimately benefit our households, communities, and small businesses - creating opportunity while driving change.

That's why our plan for the Western Power network is not just about poles and wires. It's also about creating jobs and opportunities. We don't just want a network that serves WA - we are more ambitious than that. We want a fit-for-purpose network that has been, wherever possible, designed, built and delivered by WA businesses and workers.

As part of realising this vision, the State Government is supporting the development of a local transmission manufacturing industry, investing $75 million to establish and grow manufacturing facilities in the Picton and Forrestfield areas. This is a commitment to help build the capability we need to deliver locally made transmission components for the Clean Energy Link projects.

Beyond 2030, Clean Energy Link Phases Two and Three will include at least 500km of transmission lines and around 1,700 individual poles. This work will provide a firm pipeline of projects that gives our workforce and businesses the certainty and confidence they need to grow their transmission manufacturing capacity.

Skills and training are vital to empowering WA workers to realise these opportunities. That is why the State Government is investing in our local workforce through training and education.

We are providing financial assistance to our apprentices and trainees, helping them complete their training and enter the workforce through schemes like the Workforce Development Travel and Accommodation Allowance and the Construction Training Fund. We have partnered with the Federal Government to fund the Clean Energy Skills National Centre of Excellence to grow the capability of our TAFE colleges and training institutes to build the skilled workforce needed to support the transition to a renewable energy economy. And we are actively removing financial barriers to training in priority sectors - including in energy, construction and manufacturing - by offering 130 fee-free TAFE courses.

Looking Forward

The future of the SWIS is clear: we are retiring coal, we are connecting renewable energy, and we are building the infrastructure we need to power a more diverse and resilient WA economy. The Plan provides a blueprint for making this vision a reality, outlining the projects and sequencing needed to deliver a future-proofed transmission network. With the network owned by the WA public, we can make sure our investments benefit all of us - creating opportunity for local businesses and workers, powering our economic growth and diversification agenda, and keeping energy affordable for our homes and communities

Together, we are building a better energy future, not just for the SWIS, but for the whole of Western Australia.

GOVERNMENT OF
WESTERN AUSTRALIA

Department of
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