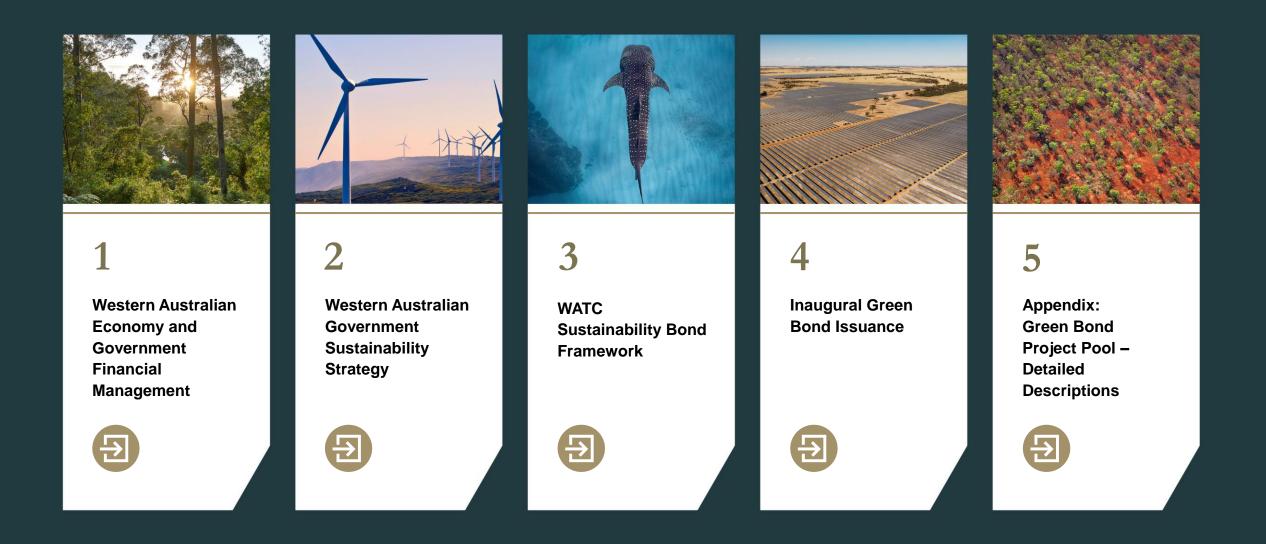
# WATC Sustainability Bond Framework and Inaugural Green Bond Issue

/ MAY 2023



Financial Solutions for the Benefit of All Western Australians

# Contents





# 1

Western Australian Economy and Government Financial Management

Providing a strong financial base to support continuous improvement in ESG outcomes for Western Australia

## WATC IS THE CENTRAL BORROWING AUTHORITY FOR THE WESTERN AUSTRALIAN GOVERNMENT

# Supports financing expenditure approved through the Western Australian State Budget.

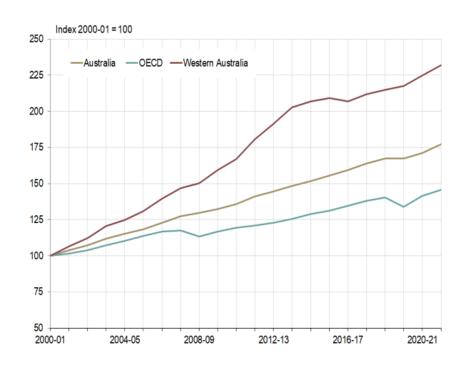
- Government Owned Established as the central borrowing authority for the State of Western Australia by the Western Australian Treasury Corporation Act 1986.
- Borrows on behalf of the general government sector, government-owned trading enterprises, local governments and universities.
- The Treasurer of Western Australia, authorised under the *WATC Act 1986* on behalf of the State of Western Australia, guarantees all financial liabilities incurred or assumed by the WATC.

Credit rating of WATC and Western Australia:

	Standard and Poor's	Moody's Investor Service
Short Term	A-1+	Prime-1
Long Term	AAA	Aa1
Outlook	Stable	Positive

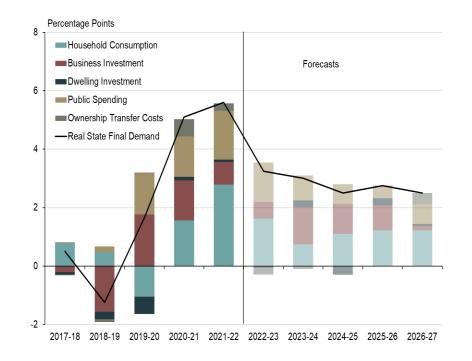
#### ECONOMIC OUTPERFORMER

Western Australia has a long history of economic outperformance, driven by strong household consumption, business and public sector investment and export growth.



Real GDP / GSP

#### Western Australia Real State Final Demand Contributions to Growth

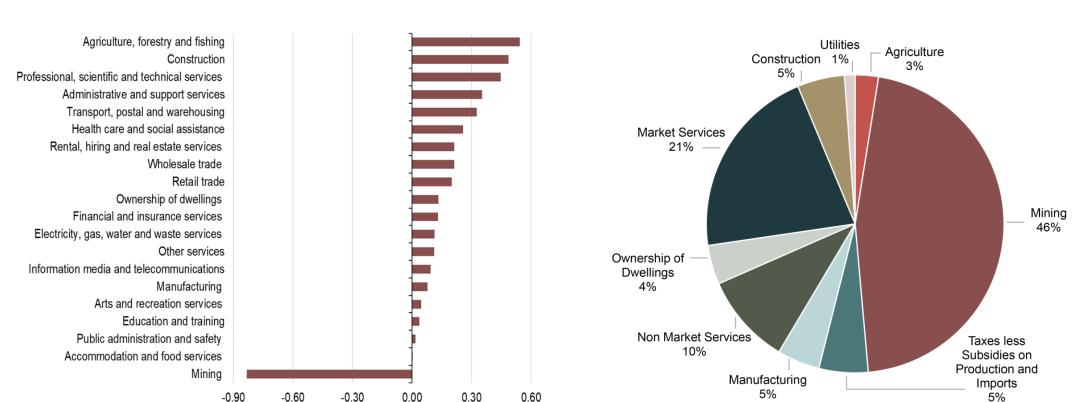


#### **INDUSTRY CONTRIBUTIONS**

**Industry Contribution to Western Australian** 

Real GSP Growth in 2021-22

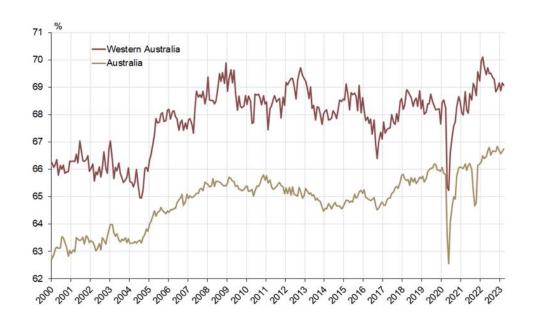
# While mining remains essential, Western Australia's growth was broad-based in 2021-22.



#### Western Australian Gross State Product 2021-22 Current Prices

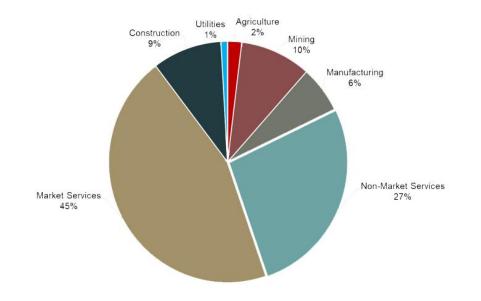
**ROBUST LABOUR MARKET** 

Strong labour force participation, low unemployment and high average weekly earnings support a robust economy.



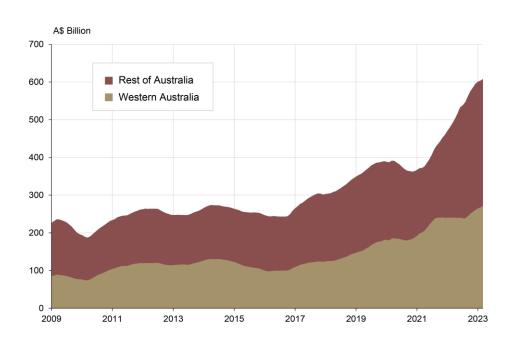
Labour Force Participation Rate

#### Industry Employment Share February 2023



#### STRONG EXPORTS

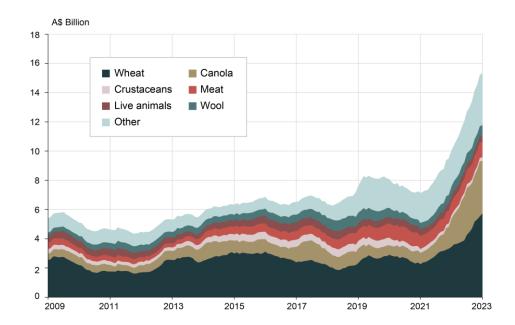
# Strong global demand for a wide range of Western Australian exports is supporting economic growth and government revenue.



**Merchandise Exports** 

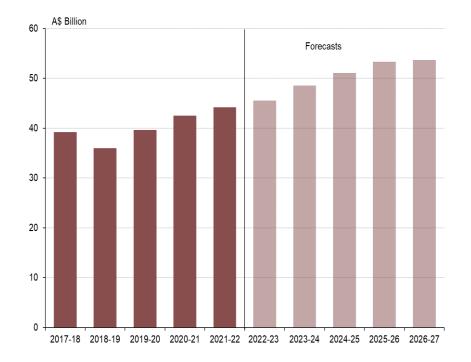
**Rolling Annual Level** 





#### PRIVATE AND PUBLIC SECTOR INVESTMENT

# High levels of private and public investment will continue to add to the State's capital stock, supporting growth going forward.



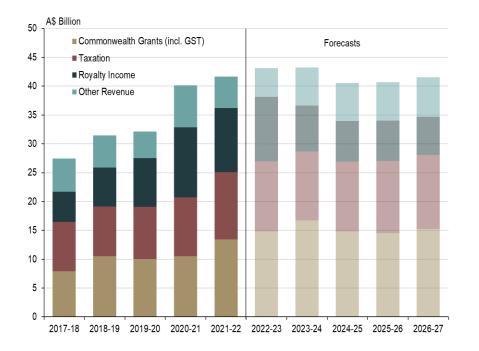
#### **Business Fixed Investment**

## 

#### **Public Sector Asset Investment Program**

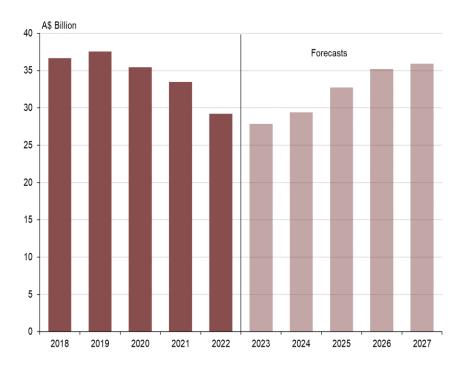
#### WESTERN AUSTRALIAN GOVERNMENT FINANCES

# Strong and diversified revenue supporting ongoing operating surpluses and low levels of net debt.



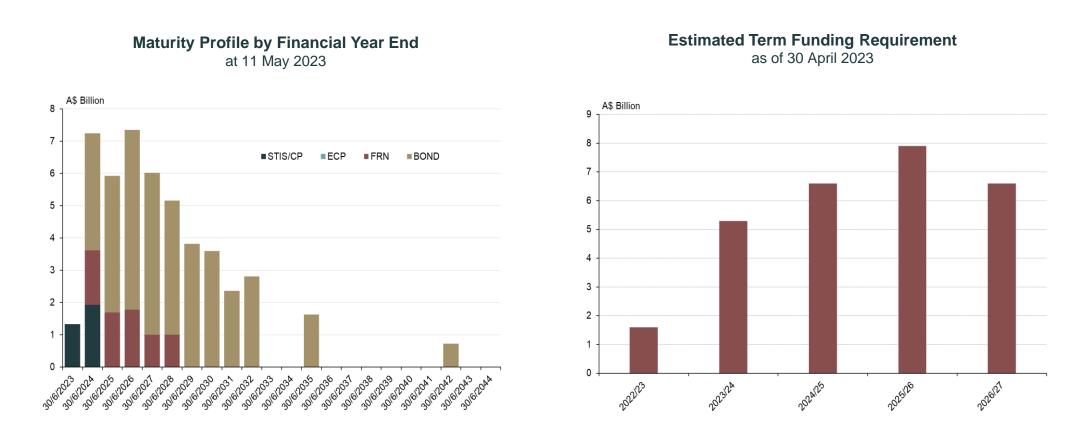
#### **Total General Government Revenue**

#### Total Public Sector Net Debt at 30 June



#### WATC AND FINANCIAL MARKETS

WATC is a valued and long standing financing partner, accessing markets through a panel of trusted intermediaries in support of primary issuances and secondary markets.



/ 11



Western Australian Government Sustainability Strategy

2

Committed to Western Australia achieving the Paris Agreement objective of net-zero emissions by 2050 and contributing to Australia's pursuit of the objectives of the United Nations Sustainable Development Goals

#### WESTERN AUSTRALIAN GOVERNMENT'S SUSTAINABILITY STRATEGY

Proactively communicating to investors over the past 18 months. Demonstrates ESG leadership in own activities and support to industry.



**ESG Information Pack** Nov 21 Release

**ESG Update** May 22 Post-Budget Update

Industry ESG Information Pack Oct 22 Release

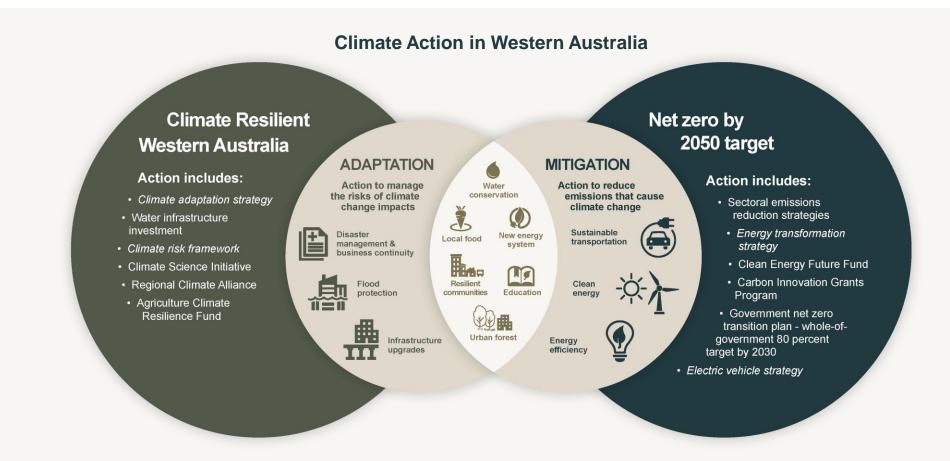
- Inform on key policy commitments and actions in progress supporting continuous improvement in ESG outcomes for Western Australia and approach for addressing recognised global challenges.
- Disclosures to aid investor due diligence for ESG Integration within capital allocation decisions.



Demonstrating commitment to the Paris Agreement and UN Sustainable Development Goals.

#### **CLIMATE ACTION PRIORITIES**

Credible action to reduce the State's emissions is an urgent priority. Climate resilience activity is building from a strong base.



Legislating net-zero by 2050 and requirement for interim targets with supporting action plans

## EFFECTIVE ENGAGEMENT WITH THE PRIVATE SECTOR

# Working closely with industry stakeholders to help facilitate their transition to net-zero.



## Sectoral Emissions Reduction Strategies

Working with industry to identify opportunities and effective government support to achieve emission reduction.

Analysis undertaken by a broad range of economic sectors to cater for different challenges.





- Involvement of leading science institutes (including CSIRO and Climateworks).
- Broad-based consultation with private companies by economic sector to inform tangible actions for reducing emissions consistent with the State Government's target of net-zero emissions by 2050.
- Detailed whole-of-economy modelling to inform credible state-wide interim emissions reduction targets that will be required by legislation.
- Policies, programs and initiatives to support and facilitate economy-wide action to be released by end of 2023.

### EFFECTIVE ENGAGEMENT WITH THE PRIVATE SECTOR

# Working closely with industry stakeholders to help facilitate their transition to net-zero.

## Western Australia's net-zero commitments

### **Federal Level**

In September 2022, Australia updated its Nationally Determined Contribution **legislating** to reduce GHG emissions to **43% below 2005 levels by 2030 –** with **large emitters to reduce scope 1 emissions by minimum 4.9% p.a.** under the Safeguard Mechanism.

## **Mining Industry**

Mining industry contributes circa 20% to Australian direct emissions but circa 50% to Western Australian direct emissions. Majority of large WA mining companies have **set targets for net-zero emissions by 2050.** 

## State Government

Western Australian Government has:

- Set an emissions reduction target for its own activities of 80% on 2020 levels by 2030.
- Committed to legislate the setting of interim targets and net-zero by 2050 for the State.

Western Australian mining companies hold a unique position to execute on the low-carbon transition given:

- These companies are facing the **same pressures from stakeholders on ESG**, and are motivated to transition to low carbon business models.
- Companies are responding to these pressures by setting targets for net-zero emissions by 2050 or earlier.
- The relatively **large balance sheets** of these companies provides capacity to **meet the significant investment required** for the transition and deployment into low-carbon technologies.
- These companies have **extensive experience** on successfully bringing **large-scale transition** across their supply chains and investments.

Western Australia is a key beneficiary of these commitments, given the size of its mining industry.

## WESTERN AUSTRALIA'S MINING INDUSTRY IS ESSENTIAL FOR GLOBAL DECARBONISATION

Western Australia is a major supplier of battery and critical minerals crucial for moving to a net-zero emissions world.

#### Western Australia's battery and critical minerals production 2021-22



- The value of Western Australian mining sector output was \$186.8 billion in 2021-22, 46% of the value of Western Australian gross state product.
- The State is a leading producer of battery and critical minerals with sales rising 117% to \$15.3 billion in 2021-22 – representing 8.2% of the total value of Western Australian mining sector output.
- Western Australia is the largest lithium supplier in the world accounting for 54% of global supply in 2022.

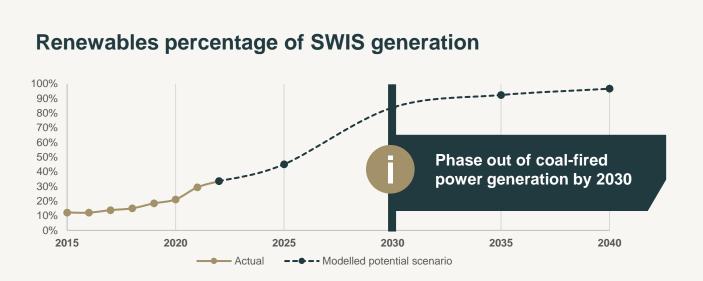
#### WESTERN AUSTRALIAN GOVERNMENT IS PROACTIVE WITH DIRECT ACTION

Showing leadership in policy and direct investment to support a sustainable future.



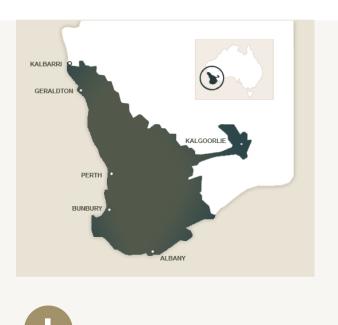
## OWNERSHIP OF METROPOLITAN ELECTRICITY GENERATION AND DISTRIBUTION SYSTEMS

Western Australian Government in unique position to materially impact emissions reduction.



- Committed at least \$3.8 billion investment in supporting infrastructure to expand renewables and phase out coal-fired power generation by 2030.
- In 2021-22 34% of generation in the SWIS was renewable, a large increase from 15% just five years earlier.
- Possible future scenarios that consider industry's decarbonisation ambitions suggest the SWIS could reach 90% renewable energy by 2035\*.

\* Refer SWIS demand assessment published May 2023.



# South-West Interconnected System (SWIS)

Provides electricity to > 85% of resident population.

#### WESTERN AUSTRALIAN GOVERNMENT HAS BEEN PROCATIVE IN BROADER ENVIRONMENTAL ACTION

# A nation or world leader in many areas of environmental management.

6 GLEAN WATER

**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE

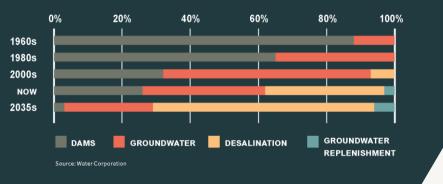
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## Water management

Responding proactively to climate change over many years:

- Diversification in water supply sources.
- Significant reduction in usage through community education.
- Sophisticated usage of technology to support wastewater recycling and replenishment.
- Innovations in drought tolerant crops.

#### **Greater Perth Water Sources**





## Internationally recognised for:

- Environment impact assessment policy.
- Leading sustainable and ethical management of fisheries – Western Australia was 1<sup>st</sup> in the world to attain international MSC Certification.

## Waste and Pollution

- Waste to Energy facilities.
- Roads to Reuse.
- Plan for Plastics.

- recognised as Nation leader by WWF Australia.

## **Biodiversity**

 Expanding conservation estate to 30 million hectares



**10** RESPONSIBLE

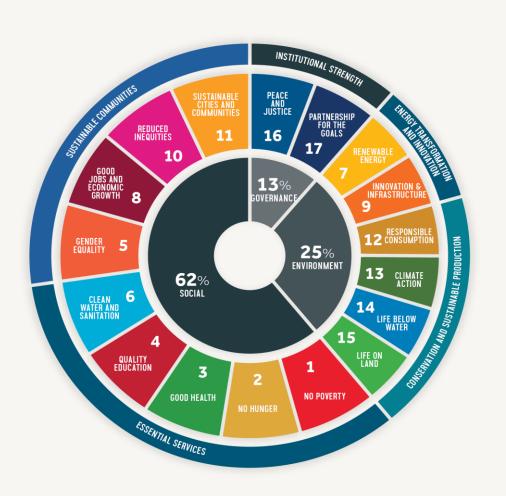






STATE BUDGET IS THE OUTCOME OF WESTERN AUSTRALIAN GOVERNMENT EXPENDITURE DECISIONS

# Continually driving positive change across the breadth of SDGs.







# Large and perpetual spender on ESG initiatives and projects

 \$65 billion capital and recurrent expenditure planned for FY2023-24.



## Progressing each of the United Nations Sustainable Development Goals

 FY2023-24 State Budget expenditure has been indicatively aligned to progression of the United Nations Sustainable Development Goals – demonstrates the breadth of issues addressed by expenditure in the State Budget. COMMITTED TO IMPROVING SOCIAL EQUITY FOR ALL WESTERN AUSTRALIANS

Clear targets and initiatives to drive outcomes for diversity groups.

# Increasing Aboriginal People engagement and cultural recognition through the **Aboriginal Empowerment Strategy** and **Closing the Gap Implementation Plan**



Improving outcomes for Aboriginal people

Native Title Settlements: Recognising Aboriginal people rights and interests in the land and waters.

Delivering jobs, training and community development providing social and economic benefits. Supporting Aboriginal businesses with mandated targets for government procurement. Significant infrastructure investments to improve living conditions in remote communities.

Showing leadership through a broad range of policies and initiatives to support diversity and equal opportunity



Diversified workforce targets within the WA Public Sector workforce. Improving digital inclusion to support the most vulnerable in today's increasingly digital world. Providing young people with the opportunities they need to flourish in the future. Ensuring people with disability participate meaningfully in all aspects of society.



Supporting diversity and equal opportunity

## COMMITTED TO IMPROVING SOCIAL EQUITY FOR ALL WESTERN AUSTRALIANS

# Creating a safe and thriving community to support our citizens.

The Western Australian Government continues to improve the social cohesion of society with multiple programs addressing:



Aiding those requiring

assistance

Mental Health Immediate priorities to reform mental health services and address alcohol and other drug dependencies. Inclusive Education Extensive investment in education support centres.

#### Homelessness

Support facilities for vulnerable Western Australians experiencing, or at risk of, homelessness.

#### Reducing Domestic Violence Targeted programs to provide support and reduce incidences.

Continuing to support a high standard of living for all Western Australians.



**Developing sustainable** 

communities

#### Health

Providing world class facilities and programs aiming to prevent disease, illness, injury, disability and premature death. Education and Training Equipping students with the skills of the future and supporting affected workers and communities in the transition from emissions-intensive industries.

#### Housing

Improving housing choices and access to suitable and affordable homes – particularly for the most vulnerable.

#### Modern Slavery

Contributing to the global fight against modern slavery and complying with the International Labour Organisation Protocol.



## **ROBUST GOVERNANCE DELIVERED BY EFFICIENT AND COORDINATED INSTITUTIONS**

# Exemplary track record provides assurance that sustainability commitments will be delivered.



Institutional Strength

- The key pillars for good governance rule of law, transparency, responsibility and accountability are amplified by a strong financial framework, robust parliamentary and electoral system and underpinned by freedom of information.
- The Western Australian Government employs a rigorous budget management framework, underpinned by annual budgets including medium term financial forecasts supported by a comprehensive Mid-year Review and audited final outcomes within three months of period-end.



**Climate Action Coordination** 

Ministerial Taskforce on Independent authority for environment assessment **Climate Action** reporting to of both government and Climate Action to oversee private sector projects. implementation of Climate

Climate Risk Assessment Framework (based on TCFD) commencing pilot application over 2023-24 & 2024-25 for government agencies with material climate risk exposures.



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Supporting Western Australia's strong management is the institutional framework within which all Australian States and Territories operate. We consider this framework to be one of the strongest and most predictable for sub-sovereign governments globally. It promotes a robust management culture and high levels of financial disclosure and transparency.

inaugural Minister for

Policy initiatives.

Western Australia Government is aware of and engages with third-party ESG ratings providers

- Standard and Poor's



## WATC Sustainability Bond Framework

Our Sustainability Bond Framework has been designed to support the financing and delivery of the Western Australian Government's sustainability strategy, including the commitment to reach net-zero greenhouse gas emissions by 2050

### OVERVIEW OF THE WATC SUSTAINABILITY BOND FRAMEWORK (FRAMEWORK)

Sets out the governance and process which supports the issuance of Green, Social and Sustainability (GSS) bonds.

### The Framework is aligned to the four pillars of the ICMA Principles



### WATC has obtained a Second Party Opinion from Sustainalytics

- Sustainalytics has evaluated WATC's Sustainability Bond Framework and its alignment with ICMA Green Bond Principles 2021, Social Bond Principles 2021 and Sustainability Bond Guidelines 2021.
- Sustainalytics has deemed the Framework to be credible and impactful, aligning with the relevant ICMA principles.
- The Second Party Opinion can be accessed on both the <u>WATC</u> and <u>Sustainalytics</u> websites.

The Framework is aligned with the WA Government's overall sustainability strategy and will further action on its key environmental and social priorities. Sustainalytics considers the WATC to be well

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positioned to issue green and social bonds.

- Sustainalytics Second Party Opinion (April 2023)

# Broad range of initiatives identified that meet ICMA Green Bond Principles.

Eligible projects reflect breadth of Western Australian Government's sustainability strategy and contribution to advancing UN SDGs

ICMA Green Bond Principles Category	Examples of Western Australian Government's initiatives in progress	Key SDGs Contribution
Sustainable Water and Wastewater Management	Renewably-powered desalination plant	6 DELAWARE
Sustainable Water and Wastewater Management	Advanced water recycling - groundwater replenishment	
Ponowable Energy and Energy Efficiency	100MW Flat Rocks wind farm	
Renewable Energy and Energy Efficiency	100MW/200MWh Big Battery	
Clean Transportation	Significant expansion of Perth metropolitan rail network	11 Incomment comes
Clean Transportation	Electric vehicle charging network across whole of Western Australia	
Circular Fromerow, Pollution Provention and Control	Biosolids recovery for agricultural use	
Circular Economy, Pollution Prevention and Control	Air quality forecasting system	
Climate Change Adaptation	Bushfire warning system	13 dinkit
Climate Change Adaptation	Restore and protect coastal environment against the increasing impacts of coastal hazards	
Environmentally Sustainable Management of Living Natural	Sustainable agriculture and fisheries management	12 ESPIRERE Inframetrum Are Productions
Resources and Land Use	Carbon farming projects	
Torrectric Aquetic Biodiversity Concernation	Land and waterway conservation and restoration	6 GERNANDER MEISAMILIERIN 14 LEEUW KUTER 15 UHE 15 UHE
Terrestrial Aquatic Biodiversity Conservation	Expansion of the State's conservation estate	
Green Buildings	Upgrades of social housing with energy efficiency appliances	

WATC intends to allocate the net proceeds from any GSS bond issuance to finance expenditures for eligible projects, which are delivered by Western Australian Government Agencies.

# Broad range of initiatives identified that meet ICMA Social Bond Principles.

Also indicates the breadth of activities the existing WATC borrowing program is already supporting

ICMA Social Bond Principles Category	Examples of Western Australian Government's initiatives in progress	Target population	Key SDGs Contribution	
Access to Essential Services	Women and Babies hospital	Women		
	Special education services and facilities	People with disability		
Affordable Basic Infrastructure	Provision of essential and municipal services for regional and remote Aboriginal communities	Aboriginal people Regional or remote communities		
	Social housing new buildings, maintenance and upgrades	Low-income household		
Affordable Housing	Permanent housing to address homelessness	People experiencing, or at risk of homelessness		
Employment Generation	Training and reskilling of workforce affected from the Western Australian Government's decision to transitioning away from dependence on coal industry	Regional communities	8 EDENKERAND 9 MERRY MARKAND 9 MERRY MARKAND	
	Training and upskilling opportunities in pastoral activities	Youth Aboriginal people	1 North 5 Incest 8 Incentering 9 Million American	
Socioeconomic Advancement and Empowerment	Aboriginal ranger program to undertake sea and land management activities	Aboriginal people Women	tititit 🥰 🐔 🚷	

**Exclusions:** Consistent with ICMA requirements, expenditures which knowingly cause or are likely to cause significant negative social or environmental impacts, will be excluded from eligible projects.

### **PROJECT EVALUATION AND SELECTION**

# Whole of government involvement and oversight ensures robust governance.

### Project Evaluation and Selection Process is overseen by the Climate Action and Environment Portfolio Oversight Group (POG)

# Initial Project Review and Selection

- WATC gathers an initial list of potential eligible projects approved through the State Budget process in collaboration with relevant agencies.
- Sustainability Bond Working Group (SBWG) will undertake a detailed review of the shortlisted potential projects and identify eligible projects as per the eligibility criteria set out in the Framework.

#### **POG Review and Advice**

- POG is chaired by the Department of Water and Environmental Regulation and consists of senior officers from a broad range of Western Australian Government agencies responsible for implementation of eligible green and social projects.
- On a quarterly basis, POG reviews the list of potential eligible projects provided by the SBWG.
- POG provides advice to the WATC Board.



#### **Endorsement from Board**

- The final list of eligible projects is approved by WATC's Board for inclusion in the project pool for external release.
- WATC's Board is Chaired by the Head of Department of Treasury.

#### MANAGEMENT OF PROCEEDS, REPORTING AND EXTERNAL REVIEW

Leveraging established Western Australian Government processes and systems to provide frequent and robust reporting.

Management of Proceeds	Reporting
<ul> <li>WATC expects to fully allocate net proceeds raised for a financial year within six months of year end.</li> <li>State Government agencies responsible for project delivery compile information via agency systems and are required to report quarterly expenditure to a centrally managed information system.</li> <li>Expenditures recorded in the various agency systems are subject to an annual external audit.</li> <li>In the unlikely event of proceeds remaining unallocated within two years of issuance, these will be invested in cash or assets that are not greenhouse gas intensive.</li> </ul>	<ul> <li>WATC intends to publish a Sustainability Bond Framework Report within one year of issuance, and annually thereafter, until maturity of the bonds.</li> <li>Allocation data will include: <ol> <li>Net proceeds raised</li> <li>Balance of unallocated proceeds (if any)</li> <li>Net proceeds allocated per eligible project.</li> </ol> </li> <li>Impact data may include: <ol> <li>Project description – including qualitative information</li> <li>Quantitative impact data (where relevant).</li> </ol> </li> </ul>

## **Post-issuance External Review**

- Within one year of issuance, an independent verification reviewer will provide confirmation that the proceeds have been allocated in accordance with the Framework.
- WATC has committed to conduct an external review annually until full allocation of any GSS bond.



## Inaugural Green Bond Issuance

Accelerating climate action in areas the Western Australian Government can directly influence through transformational investments of large scale

## INITIAL GREEN BOND PROJECT POOL OBJECTIVES

WATC to issue an inaugural green bond that supports accelerating climate action through transformation investments of large scale.

Projects were chosen within the following three themes prioritised as part of the Framework's Project Evaluation and Selection Process. Investment in renewables will power the once in multiple generations expansion in electrified public transport and other energy intensive infrastructure

and Selection Process.		Eligibility Window: 1-year lookback period *	Forward outlook
	Transport infrastructure to support net-zero transition	\$2.2 billion	Circa \$2.1 billion
2	Reducing emissions from electricity generation	\$725 million	Circa \$2 billion
3	Enhancing climate resilience through proactive water supply management	\$15 million	Circa \$2 billion

#### **INITIAL GREEN BOND PROJECT POOL**

# Making a significant contribution to a sustainable future for Western Australia.

Green Bond Principles	Key SDGs	Projects	Impact Indicators	
Transport infras	ructure to support net	-zero transition		
44.5710001700	METRONET Major expansion of the electrified public transport rail network in the Perth metropolitan area	Passenger trips or Passenger- kilometres		
Clean Fransportation	ortation	Electric Vehicle charging infrastructure and rebates Construction of Australia's longest EV charging network of more than 7,000 km and rebates to encourage consumers' EV uptake	Number of EV charging stations	
	Active infrastructure Delivery of a network of safe, high-quality paths for cyclists and pedestrians connecting key activity and education centres	Total in kilometres of new dedicated pedestrian / bicycle lane		
Reducing emiss	ons from electricity ge	eneration		
		Development of wind farms Initially two new wind farms, 150MW in the Wheatbelt and 100MW in the Great Southern region, two of WA's largest renewable wind energy projects to date	Annual GHG emissions reduced/avoided in tCO <sub>2</sub> -e p.a.	
Renewable Energy	Standalone Power Systems Replace traditional poles and wires infrastructure vulnerable to climate events in regional and isolated areas with off-grid renewables based energy supply	Annual renewable energy generation in MWh/GWh		
Lifergy	nergy	Remote Communities Photovoltaics Reduce reliance on diesel generated power and deliver cleaner energy to remote communities		
		Solar Schools Program Deliver solar panels in regional and remote schools whilst providing students with important STEM learning outcomes		
		Big Batteries Three big batteries with a total capacity of 800MW to increase penetration of renewable energy sources connected to the grid – in particular household rooftop solar	Energy sent out during peak (IRCI intervals (MWh)	
Energy Efficiency		Advanced Metering Infrastructure (AMI) Install AMI for all households and businesses by 2027, increasing efficient use of rooftop solar generation and enablement of emerging technologies	Number of AMI installed	
			LED Streetlights Replace all standard streetlights with LED lights by 2029 within southwest WA (covering > 85% of the State's resident population)	% reduction in streetlight emission achieved from LED deployment
Enhancing clima	te resilience though p	roactive water management		
Sustainable Water and	6 CLEAN WATER AND SANITARION AND REALSTRY, ANDIVISION	Renewable energy powered desalination plant Construction of a 50 billion litres-a-year desalination plant powered by renewable energy	Annual absolute (gross) amount of water output in GL	
Wastewater Management		Annual GHG emissions reduced/avoided in tCO <sub>2</sub> -e p.a.		

#### **INAUGURAL GREEN BOND ISSUE**

# Size, tenor and liquidity to support a broad investor base.



- Syndicated in benchmark size
- Target bond maturity July 2033
- Issuance timing current financial year
- Represents WATC's 10 year benchmark funding point
- Liquidity a key intention: over time activity in the bond will reflect benchmark status (i.e. reverse enquiry, taps, tenders, etc).

Asset allocation and impact indicators to be disclosed in inaugural Sustainability
 Bond Framework Annual Report by end 2023.



# Appendix Green Bond Project Pool: Detailed Descriptions

# METRONET: Major expansion of the electrified public transport rail network.



## A well connected Perth with more transport, housing and employment choices:

- Launched in 2017 to help the transition to low-emissions transport, METRONET is the single largest investment in public transport that Perth has seen.
- Adding approx. 40% of new passenger rail (approx. 72 kms) and 23 new stations.
- Sustainability Strategy guides project delivery including ISC and Green Star targets and outcomes aligned to UN SDGs.
- Aboriginal empowerment is a key focus with targets for Aboriginal employment and Aboriginal businesses in contract procurement.
- Urban planning for higher density sustainable housing in close proximity to stations including provision for social and affordable housing.

## Recent outcomes in 2022 and direct social co-benefits:

#### New Airport line: Sustainability Rating



Awarded "Leading As Built" rating – the highest possible rating from the Infrastructure Sustainability Council.

#### Introducing capped fare



- More than 60% savings for passengers living in outer suburbs.
- Increasing use of public transport.
- Ease cost of living.

# Integrated sustainable transport infrastructure across Western Australia.



### **Active Transport Infrastructure**

Making Western Australia a place where walking and bike riding is a safe, connected, convenient and widely accepted form of transport, key investments:

- Expansion of multi-use paths designed for use by people of all ages and abilities including people with disability.
- Two new bridges dedicated to pedestrians and cyclists in high traffic areas to provide safer access to Perth's CBD.



## Electric Vehicle Charging Network

- Creating Australia's longest electric vehicle fast charging network at 49 locations across the State.
- Stretching over 7,000 kms.
- 150kW 20 minute fast chargers.
- Electric vehicle purchase rebates for consumers.



# Standalone Power Systems (SPS).

## Redefining how we deliver power to our remote customers

- Western Australia is a world-leader in standalone power technology.
- SPS replaces traditional overhead powerlines and provides a more reliable, renewables based, cost-effective power supply to customers in regional and remote areas.
- Deployment of up to 4000 SPS to be rolled out in the coming decade across the government owned network – one of the largest isolated electricity networks in the world.
- Key benefits include:
  - Improved power reliability: power is generated on-site eliminating need for long powerlines. Power outages have been reduced by up to 90%.
  - More renewables: up to 90% of the SPS power comes from solar panels and energy stores in the battery.
  - Reduced bushfire risk: significantly reduced by removing powerlines and poles.



## Increase renewable energy generation

and optimise Western Australia's natural resources with energy storage.





## Investment in wind energy technology

- Adding at least 810MW of new wind generation capacity by 2030.
- Initial projects committed include two new wind farms:
  - 150MW in the Wheatbelt region.
  - 100MW in the Great Southern region.



# Harnessing clean energy into battery storage

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- Over a third of households have rooftop solar PV systems and this may increase towards 50% - combined generation > three times WA's largest power station.
- Adding 1100MW of battery energy storage systems by the end of this decade.
- Batteries store excess generation for use in peak demand (e.g. evening), significantly increasing renewable penetration.
- Major initiatives in progress are the near completed "Big Battery" project (100MW/200MWh) and development of two large-scale batteries, adding 700MW of capacity.

# Harnessing solar energy and implementing energy efficiency programs



### **Remote Communities Photovoltaics**

- Remote Aboriginal communities in Western Australia are situated in some of the most isolated areas with limited access to reliable power infrastructure and challenging climatic conditions.
- Western Australian Government has projects aimed at addressing these unique challenges to improve the power quality, safety and cost to these communities.
- Initiatives in progress include delivery of solar farm and battery energy storage solutions - reducing reliance on diesel generated power.
- Cost savings from projects will be re-invested in the community for further renewable energy initiatives.





#### **Solar Schools Program**

- Provide clean energy solutions, including solar panels and other energy saving technologies to public schools.
- Enables each school to save around 24% on electricity costs.
- Allows students to acquire STEM knowledge and skills.
- Since the launch in 2021, almost 200 schools have benefited from this initiative and committed to a more sustainable future.



#### **Advanced Metering Infrastructure**

- Support the increased use of rooftop solar by installing AMI for all households and businesses by 2027.
- Enabling customers to take advantage of emerging technologies, including community batteries, microgrids, embedded networks and electric vehicles – with greater control over how they use and manage their energy consumption.
- Over 500,000 AMI are already installed on track to reach 1.2 million by 2027.



### LED Streetlights Replacement

- Replace all metropolitan standard streetlights with LED lights by 2029 – significantly reducing carbon emissions.
- Provides energy savings, removes mercury from the environment and reduces waste.
- So far 13.1% of the streetlights have been converted, estimated to have reduced total streetlight emissions by 7.7% from FY21 to FY23.

# Renewably-powered Desalination Plant.

## Secure sustainable water supply to support Western Australia's growing population.

- In response to climate change, the Western Australian Government delivered Australia's first potable water desalination plant in 2006. On average, Perth has relied on desalinated seawater over the past 5 years for around half of its drinking water supply and demand for this source is increasing with population growth and climate change.
- In response, in 2022 the Western Australian Government committed to deliver a new 100 billion litres-a-year desalination plant powered by renewable energy. Delivery will be in two stages, with 50 billion-litre capacity expected to be completed by 2028.
- The new plant will cater for the growing drinking water needs of Perth and surrounding regions, supporting future economic development.

#### Net-zero by 2035 target for Western Australian Government's water operations

- Desalination plants are extremely energy intensive.
- Intention to secure 400MW of renewable wind energy will enable Perth's planned new and two existing desalination plants and other water infrastructure to become renewably-powered.
- Demonstrates WA Government leadership in committing to earlier net-zero target.





## Disclaimer

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