

# GREEN BOND

ANNUAL REPORT 2024



QUEENSLAND  
TREASURY  
CORPORATION

Supporting Queensland's pathway to climate resilience  
and an environmentally sustainable economy





An aerial photograph of a lush green forest with a winding river or stream cutting through it. The river is dark and reflects the sky. The forest is dense and vibrant green. In the top left corner, there is a decorative graphic element consisting of a series of white, stylized, leaf-like shapes arranged in a curved pattern.

## Acknowledgment of Country

Queensland Treasury Corporation (QTC) acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and Custodians of the land. We recognise their connection to land, sea and community, and pay our respects to Elders past, present and emerging.



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## About this report

Queensland Treasury Corporation (QTC) green bonds support Queensland's transition to a low carbon, climate resilient and environmentally sustainable economy. QTC's Green Bond Framework sets out the governance and processes that underpin QTC's issuance of green bonds.

In line with the Framework's reporting commitments, this report provides information about the allocation of net proceeds from QTC's green bonds as at 31 March 2024 and impact reporting on environmental impacts where available. All proceeds have been allocated against eligible projects and assets that provide environmental benefits for the State of Queensland.

## We welcome your feedback

As sustainable finance markets continue to evolve, so too will our approach as we respond to changing investor and market expectations. We strive for continuous improvement and welcome your feedback on our reporting approach and initiatives.

You can contact us at:  
[investorrelations@qtc.com.au](mailto:investorrelations@qtc.com.au)

# Message from the Queensland Deputy Premier and Treasurer



**The Honourable  
Cameron Dick MP**

The Queensland Government is delivering the energy and economic transformation needed to ensure a sustainable future for our state.

Queensland's targets to reduce greenhouse gas emissions have set a benchmark for action that is strongly supported by industry. Through the Clean Economy Jobs Act 2024, the Queensland Government has enshrined into law emissions reduction targets of 30 per cent below 2005 levels by 2030, 75 per cent below by 2035 and net zero by 2050. Based on the latest Australian Government data, Queensland reached a 35 per cent reduction in emissions in 2022. This means, the state has not only met its 2030 emissions target eight years earlier, but has overachieved this target by 5 percentage points.

Queensland is tracking towards a low emissions future. Our clean economy plan presents an incredible opportunity.

The renewable energy projects that are delivering on our decarbonisation plans also support regional communities with new investment and jobs. We are planning for the future while maintaining a strong focus on growing and diversifying Queensland's economy that delivers benefits for all Queenslanders. The Queensland Government recognises a strong economy is the foundation of effective service delivery for climate change resilience and adaptation.

Queensland Treasury Corporation (QTC) plays an important role in aiding the Queensland Government to protect and advance the state's financial interests through its Green Bond Program. QTC issued its first green bond in 2017 and continues its commitment to the program with AUD12.545 billion of total outstandings across five bond lines. Debt raised through QTC green bonds is notionally allocated to government projects and assets that support Queensland's pathway to climate resilience and an environmentally sustainable economy.

This year, 13 new assets have been added to QTC's green bond pool, comprising low carbon transport, electrical grids, renewable energy and land conservation assets. Three of these assets are co-funded by the Australian Government in support of its Green Bond Program.

Government ownership of critical infrastructure enables the state to develop, own and operate large scale, long-life assets as Queensland's electricity system becomes increasingly decentralised.

QTC's Green Bond Program supports government climate action initiatives, including the Queensland Energy and Jobs Plan released in September 2022. Key initiatives include the SuperGrid Infrastructure Blueprint which is designed to implement foundational infrastructure to decarbonise Queensland's existing electricity system, and the Queensland Renewable Energy Zones to coordinate positive outcomes for developers and communities. Initial expenditure for these projects has been included in QTC's green bond pool.

I commend this report and QTC for its stewardship and oversight in managing the Green Bond Program and supporting the government to maximise opportunities for the people of Queensland.

**The Honourable Cameron Dick MP**

**QUEENSLAND DEPUTY PREMIER, TREASURER AND MINISTER FOR TRADE AND INVESTMENT**

The annual [Queensland Sustainability Report](#) provides information on current policy responses supporting the management of ESG focus areas and relevant reporting data for a broad range of ESG factors.



You can find out more about Queensland Government initiatives and actions to support the State's Climate Change Response on the Department of Energy and Climate website.



# Message from the Chief Executive Officer and the Managing Director of Funding and Markets



**Leon Allen**

**CHIEF EXECUTIVE  
OFFICER**



**Susan Buckley**

**MANAGING DIRECTOR,  
FUNDING AND MARKETS**

Queensland Treasury Corporation continues to support the Queensland Government's transition to a climate resilient and environmentally sustainable economy. As the largest green bond issuer in Australia<sup>1</sup>, QTC has contributed to the development of Australia's sustainable finance market.

Extending our green bond curve remains an important priority at QTC, as well as broadening our investor base. With QTC's inaugural green bond maturing in March 2024, we now have five CBI-certified green bonds on issue, with maturities of 2029, 2031, 2032, 2033 and 2034, and total outstandings of AUD12.545 billion.

We continue to see support from investors domestically and offshore. In early 2024, QTC issued a AUD2.75 billion new 2034 green bond. The issue garnered solid investor demand from a diverse investor base, including 30% allocated to offshore participants. The deal was significantly oversubscribed with a final order book of more than AUD6.0 billion.

As the state's central financing authority, QTC works closely with the Queensland Government and Queensland Treasury to advance the state's continued economic growth and sustainable development. We partner with Government stakeholders to identify eligible projects and assets for inclusion in QTC's green bond pool.

This year, 13 new eligible assets and projects have been added to our green bond pool, reflecting continued collaboration between QTC and numerous Government Departments and Government Owned Corporations.

## Expanding QTC's green bond pool

Increasing future green bond issuance remains an important priority. With new assets added to the pool, QTC's eligible green bond asset pool now stands at AUD18.561 billion, of which AUD12.546 billion of green bond net proceeds have been allocated.

The size of QTC's eligible asset pool allows us to remain a regular green bond issuer, with the aim of increasing the liquidity in our green bond product to investors.

This year's new assets reflect the Queensland Government's focus on decarbonising the economy, including ongoing delivery of significant energy transformation programs, while supporting improved environmental and community outcomes.

The 13 new assets, mostly in development, relate to key Government policy areas including:

- Queensland Energy and Jobs Plan – six new assets in transmission, solar and wind sectors.
- Queensland Protected Areas Strategy – two new assets supporting land conservation.
- Queensland Transport Strategy – five new assets in low carbon transport, including three transport assets co-funded in support of the Federal Government's Green Bond Program.

We extend our appreciation to Queensland Treasury and relevant Government entities for their efforts to enable the addition of these new assets to our green bond pool. Moving forward, we will continue to work with our Government stakeholders to proactively grow and diversify our green bond pool to support the state's sustainability objectives.

We also reiterate our commitment to providing investors with transparent and regular communications. In addition to publishing this green bond annual report, QTC collaborates with the Queensland Government on the development and delivery of the Queensland Sustainability Report (QSR) that includes data and information about the state's ESG commitments and outcomes. The latest edition of the QSR was published in February 2024.

Finally, we would like to thank our investors and bank partners for their ongoing support. Investor engagement is a key priority for our team and we very much welcome feedback and questions.

<sup>1</sup> Source: Bloomberg, May 2024



# QTC green bonds

QTC green bonds enable investors to support Queensland's pathway to a climate resilient and an environmentally sustainable economy. QTC has achieved programmatic certification from the Climate Bonds Initiative (CBI), providing a streamlined certification process. This allows QTC to easily tap its existing CBI Certified green bonds, providing greater flexibility to meet investor demand.

## QTC GREEN BOND OUTSTANDINGS AS AT 31 MARCH 2024

Maturity <sup>2</sup>	Coupon	ISIN	Credit rating <sup>3</sup>	Outstandings AUD million
6 March 2029	2.50%	AU3SG0001928	AA+/Aa1	1,730
10 March 2031	1.25%	AU3SG0002371	AA+/Aa1	1,500
2 March 2032	1.50%	AU3SG0002561	AA+/Aa1	3,065
9 March 2033	4.50%	AU3CB0297547	AA+/Aa1	3,500
2 February 2034	4.75%	AU3SG0002959	AA+/Aa1	2,750

QTC green bonds:

- are guaranteed by the Queensland Government
- carry the same credit rating as QTC and the Queensland Government, and
- are exempt from Australian interest withholding tax.

At the time of this report, all QTC green bonds on issue are certified by the Climate Bonds Standard Board on behalf of the CBI.

QTC's eligible project and asset pool, as verified by DNV totals AUD18.561 billion as at 31 March 2024 (for more information about DNV refer to page 28).

## How the proceeds can be used

QTC may issue two different types of green bonds, which must be issued in accordance with QTC's Green Bond Framework, and either:

- the Climate Bonds Standard (CBI Certified green bonds), or
- the ICMA Green Bond Principles (ICMA green bonds).

This flexible approach enables QTC to finance and re-finance a broad range of eligible projects and assets that contribute to the mitigation of, and adaptation to, climate change. At the time of this report, QTC has only CBI Certified green bonds on issue.

The net proceeds of green bonds may be allocated against eligible projects and assets that have an environmental benefit associated with the State of Queensland. This may include proceeds used for partially or wholly financing or re-financing new and existing eligible projects and assets.

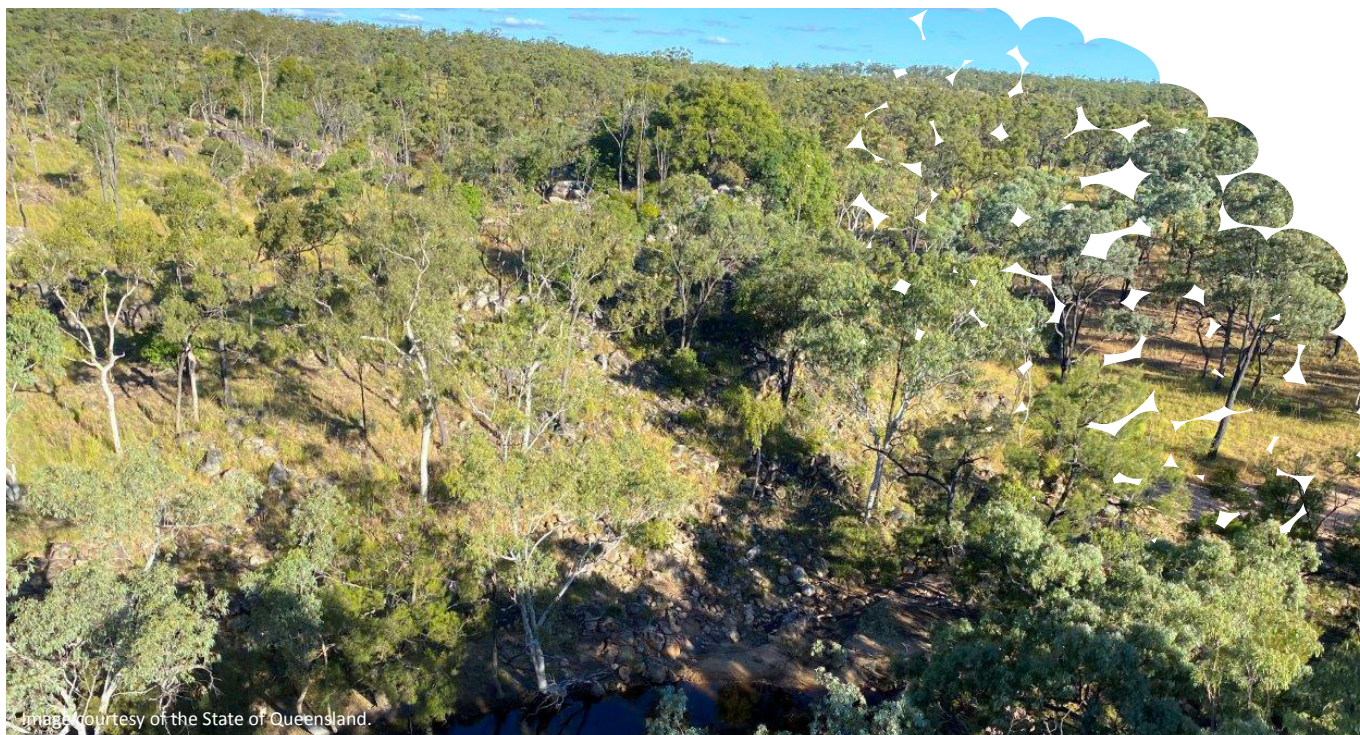
The eligible project and asset guidelines are set out in the QTC Green Bond Framework, which is available to qualified investors on QTC's website.

QTC green bonds are allocated against eligible projects and assets that support Queensland's pathway to a climate resilient and an environmentally sustainable economy.

<sup>2</sup> Rule 144A eligibility.

<sup>3</sup> Ratings by S&P Global and Moody's Investors Service respectively. Credit ratings should not be taken as recommendations by a rating agency to buy, sell or hold securities (including QTC green bonds). They may be revised, suspended or withdrawn at any time by the rating agency.





QTC's green bond pool is currently comprised of refinanced eligible assets and projects. To date, where an eligible asset or project in QTC's green bond pool is under development, the valuation attributed to that asset or project reflects capital expenditure already incurred. On that basis, QTC classes both its existing and new eligible projects and assets as refinanced.

The physical eligible assets and projects within QTC's green bond pool may continue to be notionally refinanced throughout their operational life subject to the ongoing delivery of their intended environmental benefits, including climate change mitigation, adaptation, and resilience.

The link between QTC's funding pools and eligible projects and assets are managed through an internal register and an earmarking process that accounts for funding allocated against eligible projects and assets.

## Governance

QTC's Green Bond Committee has representatives from across QTC and is accountable for evaluating potential eligible projects and assets, maintaining a register of approved eligible projects and assets, approving the allocation of net proceeds, and for ensuring ongoing compliance with all aspects of the QTC Green Bond Framework.

## Independent assurance and reporting

QTC is committed to a high standard of transparency. Our Framework is intended to provide transparency in QTC's green bond issuance, use of proceeds and reporting.

Our well-established processes and reporting guidelines include independent third-party assurance of our Framework, eligible project and asset pool, and bonds on issue.

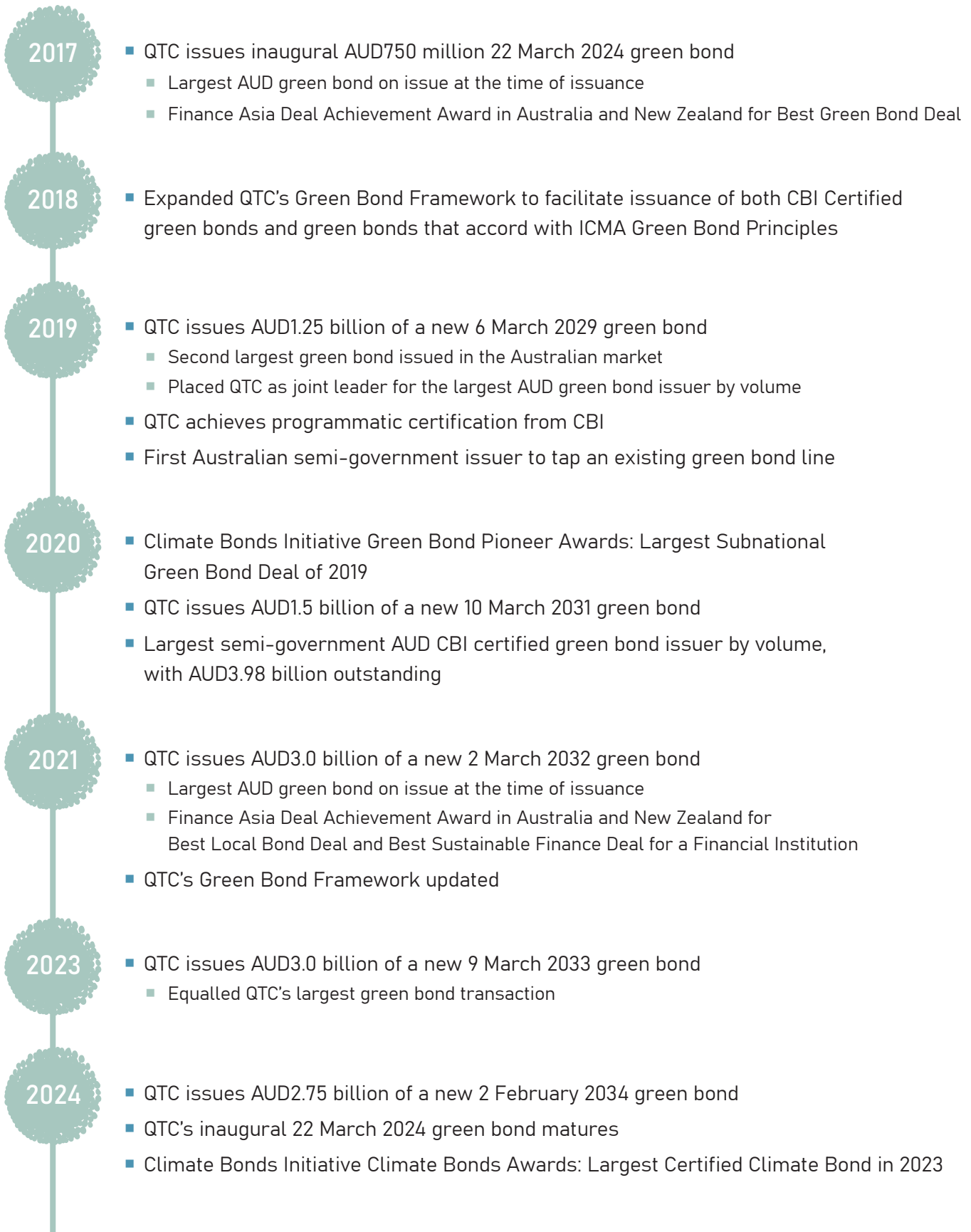
In addition to the green bond annual report, QTC discloses the following to qualified investors on QTC's website:

- Annual verification statement from an external verifier.
- Assurance Opinion in relation to QTC's Green Bond Framework from an external verifier.
- CBI certification for CBI Certified green bonds.

We have maintained a consistent reporting framework since our first green bond issuance and remain adaptive to investor feedback as we continue to monitor market developments in reporting.



## Timeline





## Deal spotlight: 2034 green bond

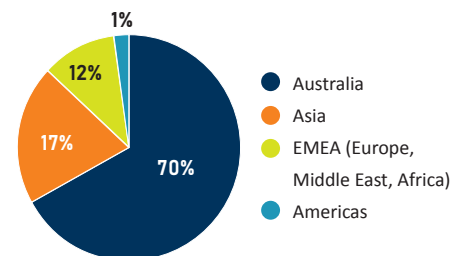
In January 2024, QTC issued AUD2.75 billion of a new 4.75% 2 February 2034 CBI Certified green bond through a syndicated process. This was the sixth and longest maturity green bond issued by QTC, further diversifying funding alternatives and continuing to build QTC's green bond curve.

The final order book was more than AUD6.0 billion. The transaction was well supported across both geography and investor type, particularly by asset managers and balance sheets with 78 per cent of the issue placed to those investors. There was solid participation from offshore investors, with 30 per cent of the transaction allocated offshore.

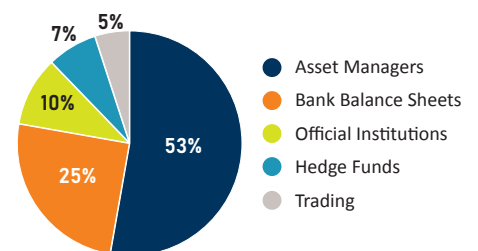
### GREEN BOND TERMS

<b>Issuer rating</b>	<ul style="list-style-type: none"> <li>AA+ (stable) by S&amp;P Global</li> <li>Aa1 (stable) by Moody's Investors Service</li> </ul>
<b>Guarantor</b>	Guaranteed by the Treasurer on behalf of the Government of Queensland under the terms of the <i>Queensland Treasury Corporation Act 1988</i> (the QTC Act)
<b>Coupon</b>	4.75% per annum
<b>Issue amount</b>	AUD2.75 billion
<b>Currency</b>	AUD
<b>Maturity date</b>	2 February 2034
<b>Certification</b>	Climate Bonds Standard Board on behalf of the Climate Bonds Initiative (CBI)

### Geographic breakdown



### Investor type



Figures are rounded



Image courtesy of the State of Queensland

# Allocation of proceeds

All net proceeds from QTC's green bonds issued as at 31 March 2024 have been fully allocated against a selection of eligible projects and assets as detailed below.

Queensland Government policies	Categories of eligible projects/ assets <sup>4</sup>	Sub category	Project/asset name <sup>5</sup>	Asset Valuation <sup>6</sup> (AUD M)	Allocation of green bond proceeds (AUD M)
<div>Queensland Energy and Jobs Plan (QEJP)</div> <div></div>	<div>Electrical Grids</div> <div></div>	Transmission	SuperGrid Infrastructure <b>NEW</b>	18.66	0.00
			Queensland Renewable Energy Zones <b>NEW</b>	17.85	0.00
			CopperString 2.0 <b>NEW</b>	50.17	0.00
	<div>Renewable Energy</div> <div></div>	Solar	Advancing Clean Energy Schools <b>NEW</b>	168.10	0.00
			Sunshine Coast Solar Farm	34.87	29.64
			Warwick Solar Farm	68.00	55.00
		Wind	Wambo Wind Farm Stage 1 <b>NEW</b>	169.50	0.00
			Wambo Wind Farm Stage 2 <b>NEW</b>	44.80	0.00
<div>Queensland Protected Areas Strategy</div> <div></div>	<div>Land Conservation and Restoration</div> <div></div>	Conservation of non-forested land	The Lakes <b>NEW</b> and Daisy Hill <sup>7</sup> <b>NEW</b>	20.62	0.00
<div>Queensland Transport Strategy</div> <div></div>	<div>Low carbon transport</div> <div></div>	Light rail – electrified trams and supporting infrastructure	Gold Coast Light Rail Stage 1 & 2	703.20	632.88
			Gold Coast Light Rail Stage 3 <b>NEW</b>	259.55	0.00
		Electrified passenger transport and rolling stock	New generation rolling stock (electric)	949.50	854.55
			Tilt Trains rolling stock	27.10	20.00
			Citytrain rolling stock	496.80	375.00
			Queensland Train Manufacturing Program <b>NEW</b>	705.81	0.00
		Electrified rail and supporting infrastructure	Citytrain network + infrastructure	3,195.16	2,162.45
			Redcliffe Peninsula Line	290.80	261.72
			Beerburum to Nambour Rail Upgrade <b>NEW</b>	43.25	0.00
			Logan and Gold Coast Faster Rail <b>NEW</b> (Kuraby to Beenleigh) Upgrade	189.51	0.00
		Electric vehicles	QFleet Electric Vehicle Transition Strategy <b>NEW</b>	35.67	0.00
		Cycleways – multiple	Cycleways	201.98	181.78
<div>Queensland Water Strategy</div> <div></div>	<div>Water infrastructure</div> <div></div>	Water – drought defence, storage, treatment, desalination, and flood defence	Southeast Queensland Desalination Plant	780.20	684.00
Water Treatment Plants			1,719.30	1,547.37	
Pipelines and Other			2,983.80	2,685.42	
Dams and Weirs			3,479.90	3,056.22	
Western Corridor Recycled Water Scheme <sup>8</sup>			1,907.40	0.00	
Total				AUD18,561.49	AUD12,546.03

<sup>4</sup> The icons depict alignment with the United Nations Sustainability Development Goals.

<sup>5</sup> All projects/assets designated as 'new' are all new to QTC's green bond pool in 2024 and are under development with the exception of Advancing Clean Energy Schools, which has been completed.

<sup>6</sup> QTC green bond pool valuations as at 31 March, 2024. For assets under development, valuations are based on expenditure incurred as at 31 March 2024 and not forecasted project costs.

<sup>7</sup> Any future allocation of green bond net proceeds to these assets may be deferred until confirmation of the assets' national park status.

<sup>8</sup> Any future allocation of green bond net proceeds to the Scheme may be deferred until it is substantially recommissioned to a 'ready to use' state.



## Queensland Government Policy

### Queensland Energy and Jobs Plan (QEJP)

The strategy sets out Queensland's vision to achieve 70 per cent renewable energy by 2032 and 80 per cent by 2035. Queensland has the ideal landscape for solar, wind and large-scale pumped hydro projects, and the critical underground minerals to support the renewable energy transformation. Since the QEJP's release in 2022, the Department of Energy and Climate, alongside Government Owned Corporations and the broader energy industry, have worked together to achieve key milestones as detailed in the QEJP 2023 Update.

## Electrical Grids

### Queensland SuperGrid Transmission Infrastructure

NEW ASSET

The Queensland SuperGrid Infrastructure Blueprint, delivered as part of the QEJP, is designed to implement foundational infrastructure to enable Queensland to decarbonise the electricity system. The Blueprint outlines the optimal infrastructure pathway to Queensland's renewable energy and emissions targets. Powerlink is a Queensland Government Owned Corporation that owns, develops, operates and maintains the high voltage electricity transmission network in Queensland. The transmission network is designed to build long-life foundational infrastructure to provide additional capacity to transfer large amounts of power from renewable generation located in new areas to storage, and from storage to load. The transmission network will provide the platform to enable variable renewable generation and storage to reliably meet customer electricity demand.

In addition to supporting renewable energy capacity, the QEJP establishes Queensland SuperGrid Training Centre and Transmission Hubs. The first, established in Gladstone in 2023 within the Central Queensland Renewable Energy Zone, will act as a regional base for training 500 energy workers per year, improving skills for a growing workforce and supporting the changing focus in the Gladstone Area.

More information on the SuperGrid Infrastructure Blueprint can be found on the Department of Energy and Climate website.



Image courtesy of Powerlink.

## Queensland Renewable Energy Zones

NEW ASSET

The Queensland Government, working with Powerlink, has identified 12 potential Renewable Energy Zones (REZs) across Southern, Central and Northern Queensland regions. These REZs will strategically connect around 22 gigawatts (GW) of new grid-scale renewable energy in a co-ordinated way to optimise renewable development, network connections and associated local infrastructure.



Image courtesy of Powerlink.

Powerlink, in its nominated capacity as the Transmission Network Service Provider (TNSP) for a REZ, will build, own, operate and maintain the REZ transmission network. As a REZ Delivery Body, Powerlink will perform functions that include identifying and recommending areas suitable to locate REZs, developing REZ Management Plans which identify key technical components of a REZ, and support the Queensland Government in conducting REZ Readiness Assessments to identify regional opportunities and manage potential local impacts.

Across the regions, Powerlink has three in-flight<sup>9</sup> REZs under development that are expected to deliver the following installed generation capacity:

Location	Generation Capacity
<b>Southern Downs REZ</b>	2,000–2,600MW
<b>Western Downs REZ</b>	2,000–2,600MW
<b>Far North Queensland REZ</b>	500–700MW

Coordinating network connections within a REZ will facilitate better outcomes for communities, environment, and industry in the region.

More information on Queensland Renewable Energy Zones can be found on the Department of Energy and Climate website.

## CopperString 2032

NEW ASSET

The Powerlink-led CopperString 2032 project will build 840km of new electricity transmission lines from just south of Townsville in the Burdekin region to Mount Isa that will connect Queensland's North West Minerals Province (NWMP) to the National Electricity Market. The project will unlock critical minerals and new renewable capacity in the corridor to Mount Isa.

The overall project includes:

- 500 kilovolt (kV) transmission line from just south of Townsville to Hughenden
- 330kV transmission line from Hughenden to Cloncurry
- 220kV transmission line from Cloncurry to Mount Isa
- up to five new substation sites.

Powerlink progressed early works on the project in 2023 ahead of construction commencing in mid-2024. Construction is expected to be completed by 2029.

More information on CopperString 2032 can be found on the Powerlink website.

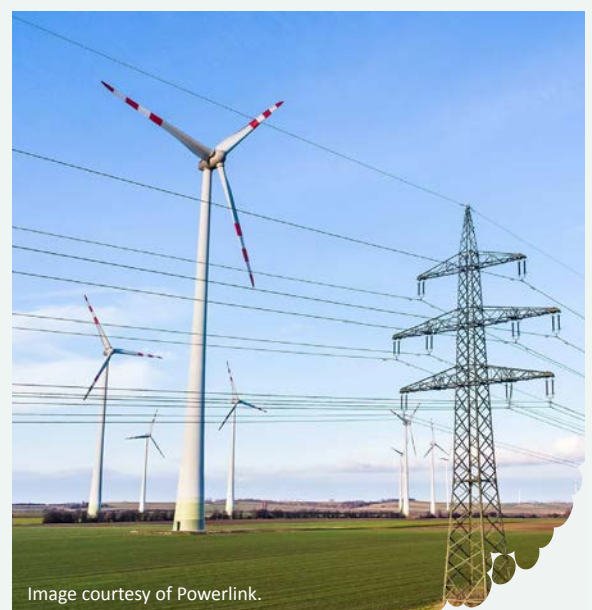


Image courtesy of Powerlink.

<sup>9</sup> In-flight REZs are renewable energy developments that Powerlink is already progressing under the existing National Electricity Rules with some degree of coordination and may be converted to a declared REZ in the future.



# RENEWABLE ENERGY

## RENEWABLE ENERGY IMPACT REPORTING (1 JAN–31 DEC 2023)

Year	Subcategory	Project/asset name	Renewable electricity generation (MWh/a) <sup>a</sup>	GHG emissions avoided (kt/a) <sup>b</sup>
2023	Solar	<b>Operational</b>		
		Advanced Clean Energy Schools (ACES) Program <sup>c</sup>	77,784	56,782
		Sunshine Coast Solar Farm <sup>d</sup>	24,094	17,588
		Warwick Solar Farm <sup>e</sup>	102,498	74,824
	Wind	<b>Under Development</b>		
		Wambo Wind Farm Stage 1 & 2		

<sup>a</sup> MWh/a – megawatt hours per annum.

<sup>b</sup> “GHG emissions avoided” refers to a baseline/alternative reference scenario using Queensland Scope 2 Emissions Factors. Source: 2023 Australian National Greenhouse Accounts Factors Workbook, Australian Government Department of Climate Change, Energy, the Environment and Water. Amounts are expressed as thousands of tons per annum (kt/a).

<sup>c</sup> Figures sourced directly from the Department of Education.

<sup>d</sup> Figures sourced directly from Sunshine Coast Regional Council.

<sup>e</sup> Figures sourced directly from the University of Queensland.

## Wambo Wind Farm **NEW ASSET**

Wambo Wind Farm is a project under development and located near Jandowae, in the Western Downs region of Queensland. Consisting of 83 wind turbines (across Stages 1 and 2), the project will add more than 500 megawatts (MW) of clean energy to Queensland’s energy system. The project’s wind turbines will be some of the largest installed in Australia, at 247 meters tall. Powerlink is currently constructing a new 50km transmission line to connect the wind farm to the grid.

The Wambo Wind Farm is being constructed through a joint venture partnership between Queensland Government Owned Corporation, Stanwell Corporation Limited (Stanwell) and global renewables developer Cubico Sustainable Investments (Cubico). Under the joint venture arrangement, Stanwell will own 50 per cent of the wind farm and offtake the remaining 50 per cent of the power generated under a power purchase agreement with Cubico. Stanwell’s interest in the project is backed by \$455.8 million of Queensland Government funding through the Queensland Renewable Energy and Hydrogen Jobs Fund.



Image courtesy of Stanwell.



Image courtesy of Stanwell.

### Stage 1

Stage 1 of Wambo Wind Farm is expected to be operational by 2025 and consist of 42 wind turbines, delivering 252MW of clean energy. The project will employ approximately 200 people during construction, and in the long term, up to 20 maintenance and operational staff.

### Stage 2

Stage 2 commenced in 2024 and is expected to be operational by early 2026 and consists of 41 wind turbines delivering 252 MW of clean energy. Similar to Stage 1, Stage 2 will support more than 200 jobs during construction and a further eight ongoing jobs during operation.

More information can be found on the Wambo Wind Farm website.



Advanced Clean Energy Schools (ACES) program **NEW ASSET**

Completed in June 2023, the Advancing Clean Energy Schools (ACES) program is reducing energy costs across Queensland public schools through solar and energy efficiency measures. The initiative, implemented over three years, saw approximately 200,000 solar panels installed and a range of other power and energy efficiency measures delivered across 912 existing schools.

This project has led to a reduction in the Department of Education’s electricity costs and emissions while supporting approximately 1,000 jobs as part of the project’s implementation. ACES supports the Government’s renewable energy targets by providing additional renewable energy capacity of approximately 70,480KW.

Further information can be found on the Department of Education website.

ACES program overview	
Cost to acquire and install the solar panels	\$168.1m
Renewable energy capacity installed	70,480 KW
Average operational life of assets	20 years for solar panels 10 years for inverters
Project delivery year (financial year)	2023
Number of schools included in the program	912







Image courtesy of the Sunshine Coast Council.

## Sunshine Coast Solar Farm

The Sunshine Coast Regional Council was Australia's first local government to offset its entire electricity consumption across all its facilities and operations from renewable energy generated at the 15 megawatt (MW) Sunshine Coast Solar Farm.

Since the Sunshine Coast Solar Farm began generating power in July 2017, it has avoided<sup>10</sup> 141,058 tonnes of carbon dioxide (CO<sub>2</sub>) emissions. From July 2017 to 31 December 2023, the Sunshine Coast Solar Farm has generated 178,605 megawatt hours (MWh) of electricity, more than offsetting the 169,101 MWh of energy used by Council. Through the Sunshine Coast

Solar Farm, the Council has successfully insulated the cost of its operations from rising electricity costs.

Current site management practices include regular vegetation slashing to minimise bushfire risks and maintenance of drainage channels to manage stormwater runoff. In addition, endemic tree buffers 10-20m wide have been planted along boundaries of the site.

Further information can be found on the Sunshine Coast Council website.

## Warwick Solar Farm

Warwick Solar Farm is a 64 megawatt of alternating current (MWac) and 78 megawatt of direct current (MWdc) renewable energy facility in the Southern Downs Region of Queensland, which is approximately 160 kilometres west of Brisbane. The project was acquired by the University of Queensland (UQ) in 2018 and moved to 100% operating capacity in April 2023.

Warwick Solar Farm uses low impact solar photovoltaic technology and the farm is expected to generate approximately 160,000 MWh of clean energy every year. Vegetation control occurs via an agreement with a local grazier, enabling dual energy and agriculture purpose of the land, reducing the need for contract mowing.

Further information can be found on the University of Queensland website.



Image courtesy of the University of Queensland.

<sup>10</sup> "Emissions avoided" refers to a baseline/alternative reference scenario using Queensland Scope 2 Emissions Factors. Source: 2023 Australian National Greenhouse Accounts Factors Workbook, Australian Government Department of Climate Change, Energy, the Environment and Water. Amounts are expressed as thousands of tons per annum (kt/a).

## Queensland Government Policy

### Queensland's Protected Area Strategy 2020–2030

Queensland's Protected Area Strategy supports the growth, better management, and sustainability of the state's protected areas, including national parks and private protected areas. Priority actions of the Strategy include:

- accelerating growth of the protected area system to further protect natural, cultural and heritage values,
- partnering with First Nations peoples to deliver the best care for Country through traditional knowledge and expertise, and introducing new co-stewardship arrangements, and
- implementing an adaptive management model for protected areas, based on an area's values.

## The Lakes NEW ASSET

As part of growing the State's Protected Area Estate (PAE), 'The Lakes' acquisition was completed in 2022. This involved the purchase of a 35,300-hectare parcel of pastoral land approximately 260km west of Townsville with the intention of transitioning the land from a grazing property into a Queensland national park.

The property, partly located on the traditional Country of the Gudjala People, consists of forests and woodlands, combined with large refugia areas and riparian corridors, providing significant habitat connectivity across the bioregion. The four hypersaline lakes from which the property takes its name are classed as wetlands of high ecological significance.

The process of transitioning the land into a Queensland national park began in 2022 and is expected to be completed by June 2024.

As part of the asset conversion:

- The purchase ensures the future preservation of relatively undisturbed ecosystems and habitats that significantly add to the existing network of protected areas in the region.
- Queensland Parks and Wildlife Service and Partnerships staff have engaged with Gudjala First Nations People to work together on land conservation and indigenous cultural heritage management projects.

Additional information can be found on the Department of Environment, Science and Innovation website.

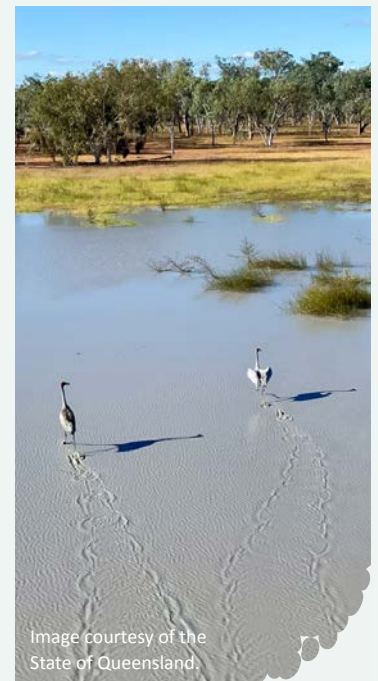


Image courtesy of the State of Queensland.

## Daisy Hill NEW ASSET

Daisy Hill Conservation Park's 213-hectare expansion protects bushland around the Kimberley Plateau that consolidates the forests between Daisy Hill Conservation Park and Venman Bushland National Park, south-east of Brisbane City.

The park is a significant habitat for koalas and other wildlife and has an extensive trail network, barbecue and picnic facilities, and caters for a variety of recreational activities including horse riding, mountain biking and bush walking.

The Department of Environment, Science and Innovation has commenced planning a range of new capital works on the land, including new boundary fences, fire trails and signage.

Additional information can be found on the Department of Environment, Science and Innovation website.



Image courtesy of the State of Queensland.



## Queensland Government Policy

### Queensland Transport Strategy

This strategy outlines Queensland's 30-year vision to deliver accessible, efficient, safe and sustainable transport and freight systems. It guides new ways of transporting people and goods through electric vehicles and low and zero emission vehicles to contribute to a safer, greener, and more efficient Queensland.

#### LOW CARBON TRANSPORT IMPACT REPORTING (1 JAN–31 DEC 2023)

Year	Sub-category	Project/asset name	Passenger trips (count)	Passenger distance travelled (km)	Emissions (tCO2e) <sup>a</sup>
2023	Rail	<b>Operational</b>			
		Citytrain Network <sup>b</sup>	44,662,353	901,826,468	190,865
		Electric Tilt Train Rollingstock <sup>b</sup>	179,123	65,132,164	4,907
		Gold Coast Light Rail (Stage 1 and 2) <sup>c</sup>	11,079,625	53,864,613	9,331
		<b>Under Development</b>			
		Queensland Train Manufacturing Program			
		Beerburrum to Nambour Rail Upgrade			
		Gold Coast Light Rail (Stage 3)			
		Logan and Gold Coast Faster Rail (Kuraby to Beenleigh) upgrade			

<sup>a</sup> Emissions from electricity purchased.

<sup>b</sup> Figures sourced directly from Queensland Rail.

<sup>c</sup> Figures sourced directly from Translink.



## Queensland Train Manufacturing Program

NEW ASSET

- **Expected cost (Queensland Government share): \$9.5 billion**
- **First train expected to be completed and begin testing: 2026**

The Queensland Train Manufacturing Program (QTMP) aims to enhance the state's rail network by manufacturing 65 new six-car electric passenger trains to improve reliability and comfort. QTMP will support South East Queensland's growing population and economic growth, as well as support Cross River Rail<sup>11</sup> and the 2032 Brisbane Olympic and Paralympic Games.

The new trains are expected to use less energy compared to the existing fleet, arising from more efficient lighting, improved efficiency in the traction and power systems, and the potential for trains to be switched into lower power use modes at night and when not in use.

The QTMP includes construction of a purpose-built manufacturing facility in the Fraser Coast region for major manufacturing works for the new fleet, and construction of a new facility for maintenance and stabling in Ormeau.

As part of establishing this infrastructure:

- A 55ha area at Torbanlea will be established to offset the removal and impact on protected flora/fauna.

- A Cultural Heritage Management Plan will be implemented with the indigenous First Nations groups for the Torbanlea and Ormeau facilities. This includes commitments on engagement and cultural heritage monitoring amongst other matters. Furthermore, carbon dating of discovered artefacts has occurred at the Ormeau rail facility.
- There is a requirement for the contractor to obtain an Infrastructure Sustainability Council (ISC) As Built Excellent rating with a minimum score of 65 for both facilities.
- Subject to final design and grid capability aspects, 1.5MW solar panels are proposed to be installed.
- Local employment and training opportunities are expected to include:
  - full time jobs, apprenticeships, traineeships and Aboriginal and Torres Strait Islander workforce participation outcomes, and
  - school-based pathway programs.

Further information can be found on the Department of Transport and Main Roads website.

<sup>11</sup> Cross River Rail is a new 10.2km rail line that includes 5.9km of twin tunnels running under the Brisbane River and CBD.



Images courtesy of the State of Queensland.



## Beerburrum to Nambour Rail Upgrade Stage 1 NEW ASSET

### ■ Expected completion: 2027 (subject to weather and construction conditions)

The Beerburrum to Nambour Rail Upgrade (Stage 1) is a co-funded project between the Queensland Government (29% share) and the Australian Federal Government (71% share) to duplicate and straighten around 13 km of track between Beerwah and Beerburrum. The project will also address three level crossings on the alignment, expand the Park 'n' Ride facility in Beerburrum and undertake associated road works. The upgrade will provide additional track capacity delivering greater efficiency and reliability to the growing Sunshine Coast region.

Project scope, cost and timing are subject to further planning, consideration and negotiation following the Australian Government's Independent Strategic Review of its Infrastructure Investment Program. A revised total project cost of \$1,004.2 million was announced on 22 December 2023 and is subject to further consideration.

Early works were completed in late 2023 with the opening of new park 'n' ride facilities at Landsborough and Nambour (300 car park spaces at Landsborough and 50 car park spaces

at Nambour), a new bus interchange at Landsborough station and realignment of a section of Steve Irwin Way to allow for track duplication.

Further information can be found on the Queensland Department of Transport and Main Roads website.



Image courtesy of the State of Queensland.

## Logan and Gold Coast Faster Rail (Kuraby to Beenleigh) Upgrade NEW ASSET

### ■ Expected cost (Queensland Government share): \$2.875 billion

### ■ Expected start of construction: 2025

The Logan and Gold Coast Faster Rail is a co-funded project between the Queensland Government (50% share) and the Australian Federal Government (50% share) designed to enhance the rail transport connectivity between South East Queensland's two largest population centres, Brisbane and the Gold Coast. The project will address the existing bottleneck of a single track in each direction for trains between Kuraby and Beenleigh, which limits peak services.

The project will deliver:

- double the capacity of the Gold Coast rail line and reduce waiting times at stations between Brisbane, Logan and the Gold Coast,
- approximately 20km of new tracks and rail systems between Kuraby station and Beenleigh station, increasing the corridor from two to four tracks,
- better connected communities through accessible upgrades at stations, and
- new train signalling technology between Salisbury and Varsity Lakes.

Further information can be found on the Queensland Department of Transport and Main Roads website.

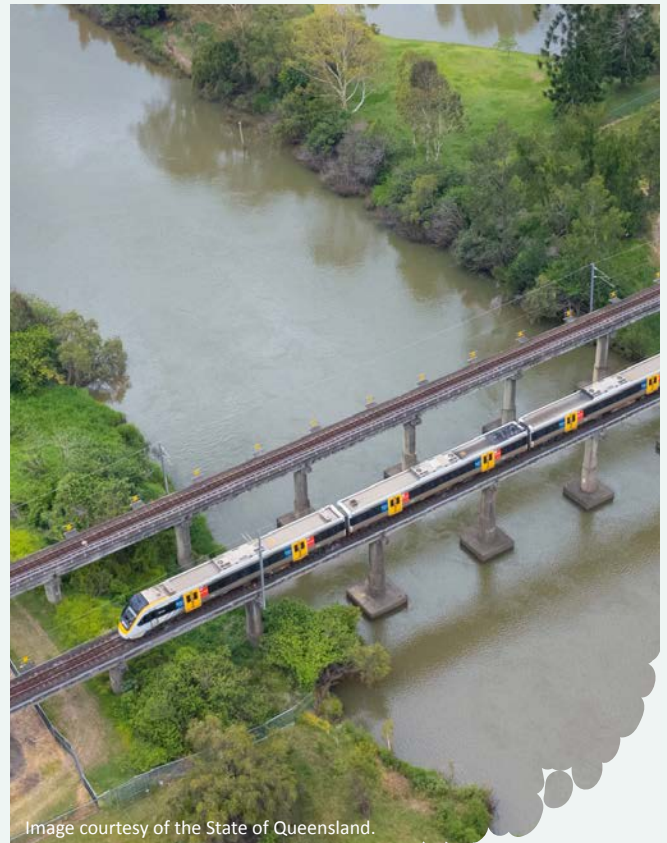


Image courtesy of the State of Queensland.

## Gold Coast Light Rail

Year	Subcategory	Project/asset name <sup>a</sup>	Passenger trips (count)	Passenger distance travelled (km)	Emissions (tCO2e)
2023	Clean Transportation - Rail	Gold Coast Light Rail (Stages 1 & 2)	11,079,625	53,864,613	9,331
2022	Clean Transportation - Rail	Gold Coast Light Rail (Stages 1 & 2)	8,581,279	44,913,263	8,933

<sup>a</sup> Figures sourced directly from Translink.

Gold Coast Light Rail is the largest transport project undertaken on the Gold Coast in Queensland co-funded by the Queensland Government, the Federal Government and Local Governments. The Gold Coast Light Rail network (branded G:link) eases traffic congestion and reduces emissions by taking cars off the road. Furthermore, light rail vehicles produce less noise than diesel or other fuel-burning buses and much less noise than the equivalent volume of automobile traffic. A single 43.5-metre tram is able to carry over 309 passengers, equivalent to six standard buses, and has the potential to remove up to 235 cars from the road during peak periods.



### Gold Coast Light Rail Stages 1 and 2

The completed Stages 1 and 2 of the Gold Coast Light Rail includes 20.3 kilometres of rail lines, 19 tram stations and 18 electric trams. In addition, 1,400 'Park and Ride' spaces have been provided. These stages are a major step in supporting the Gold Coast and its continued growth.

### Gold Coast Light Rail Stage 3 NEW ASSET

- **Expected Cost (Queensland Government share): \$713 million**
- **Expected Completion: 2025**

Gold Coast Light Rail Stage 3 is an extension of the existing tram network from Broadbeach South to Burleigh Heads and is funded by the Queensland Government (59% share) and the Australian Federal Government (33% share), in partnership with the City of Gold Coast (8% share). Stage 3 will add 6.7 kilometres of dual light rail track, eight tram stations, and five electric trams to the existing 20.3 kilometre light rail network (Stages 1 and 2). The project includes an upgrade and expansion of the existing depot and stabling facilities, new light rail and bus connections at Burleigh Heads and Miami, and supporting works and improvements, including signalised traffic intersections and upgrades, safer signalised pedestrian crossings and improved pedestrian and bicycle facilities.

Stage 3 continues to invest in green initiatives, such as the electrification of the contractor's fleet, using biodiesel for eligible equipment and encouraging construction crew to reduce emissions by using public transport, carpool or use forms of active transport to travel to work. These initiatives are designed to accelerate project sustainability.

Further information can be found on the Gold Coast Light Rail Stage 3 (GCLR3) website.





# LOW CARBON TRANSPORT

## Citytrain Network

Queensland Rail's Citytrain Network is an integrated passenger rail service connecting South East Queensland's population centres. It provides a sustainable transport option in the South East Queensland region, which is home to around 70 per cent of the state's population.

The Citytrain Network incorporates 152 stations, 880 kilometres of track, extensive signalling systems and other infrastructure crucial to support its safe and reliable operation. It supports the operation of 145 three-car Citytrain units (city train rollingstock) and 75 six-car New Generation Rollingstock (NGR) units. Almost 420,000 Citytrain services ran on the Citytrain Network during 2023. The network includes the Redcliffe Peninsula Line.

The Citytrain Network is entirely electric powered and operates on a high voltage traction network. The purchase of electricity to support the operation of the fleet on Queensland Rail's SEQ traction network, generated 190,865 tonnes of CO2 equivalent emissions during 2023, associated with the delivery of 901.8 million passenger kilometres.

### New Generation Rollingstock

New Generation Rollingstock (NGR) units are fitted with technologies designed to improve operational efficiency. In 2023, NGR units accounted for 65% of the total Citytrain passenger kilometres travelled. These modern and more powerful trains are key to providing a significant increase to the capacity to cater for South East Queensland's growing population.



Images courtesy of the State of Queensland.

## Electric Tilt Train Rollingstock

Queensland Rail operates and owns two electric powered tilt trains for long distance travel between Brisbane, Bundaberg, and Rockhampton. The trains consist of six cars each and operate on the electrified portion of the North Coast Rail Line, servicing both tourists and commuters, with services run most days of the week. The tilt trains are currently operating a reduced timetable due to routine electrical maintenance works and are expected to resume a full service in September 2024.

The Bundaberg and Rockhampton electric tilt-trains delivered 65.1 million passenger kilometres during 2023 with electricity consumed by these services resulting in 4,907 tonnes of CO2 equivalent emissions.



Image courtesy of the State of Queensland.

## Performance summary

Below is a summary of Queensland Rail's annual performance across several impact metrics – provision of sustainable transport capacity and emissions – over the past three years.

### PROVISION OF SUSTAINABLE TRANSPORT CAPACITY

		2021	2022	2023
Citytrain Network	Total services	408,276	396,898	418,474
	Total passenger kilometres	665.6 M	689.6 M	901.8 M
	Total train kilometres	16.9 M	16.4 M	17 M
	Total seat kilometres provided	6,769 M	6,462 M	6,394 M
	Total capacity (seat + standing) kilometres	14,011.3 M	13,585.0 M	13,655.5 M
Electric Tilt Train	Total services	1,186	1,136	822 <sup>a</sup>
	Total passenger kilometres	49.9 M	68.2 M	65.1 M
	Total train kilometres	0.6 M	0.6 M	0.5 M
	Total seat kilometres provided	190 M	183 M	140 M

### EMISSIONS (CO2E) – CITYTRAIN NETWORK (FROM ELECTRICITY PURCHASED)

		2021	2022	2023
Citytrain Network	Emissions (tCO2e)	223,947	197,944	190,865
	Emissions (kgCO2e) per passenger kilometre	0.336	0.287	0.212
	Emissions (kgCO2e) per seat kilometre	0.033	0.031	0.030
	Emissions (kgCO2e) per capacity kilometre	0.016	0.015	0.014

### EMISSIONS (CO2E) – ELECTRIC TILT TRAINS (FROM ELECTRICITY PURCHASED)

		2021	2022	2023
Electric Tilt Trains	Emissions (tCO2e) from the Traction Network	6,437	6,189	4,907
	Emissions (kgCO2e) per passenger kilometre	0.129	0.091	0.075
	Emissions (kgCO2e) per seat kilometre	0.034	0.034	0.035

<sup>a</sup> The Electric Tilt Trains are currently operating a reduced timetable due to scheduled maintenance works and are expected to resume a full service in September 2024.

#### Data Sources

- Electricity usage data is collated from traction substation billing. The carbon equivalent emissions are calculated as per the *National Greenhouse and Energy Reporting (Measurement) Determination 2008*.
- Train and seat kilometre data have been obtained from Queensland Rail's internal monthly capacity reporting, with data drawn from electronic train scheduling and monitoring systems.
- Total services and total passenger kilometre data is supplied to Queensland Rail by Translink.
- Electricity consumption for the Electric Tilt Trains while travelling on third party managed and SEQ Citytrain networks (amongst Citytrain services) is estimated based on train modelling outputs.



## QFleet Electric Vehicle Transition Strategy NEW ASSET

Motor vehicles are essential to delivering government programs to Queenslanders and supporting critical frontline services. QFleet is the Queensland Government's fleet manager overseeing almost 11,000 government vehicles.

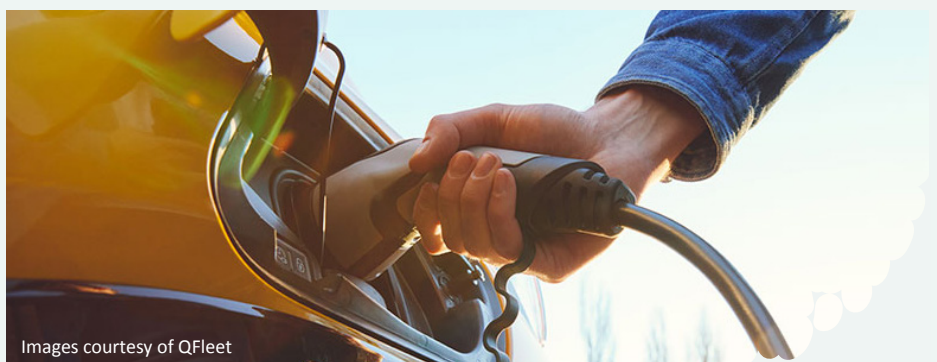
Under Queensland's Zero Emission Vehicle Strategy 2022– 2032 and Queensland's Zero Emission Vehicle Action Plan 2022– 2024, key initiatives and actions are being implemented that will shift Queensland to Zero Emission Vehicles (ZEVs). This includes transitioning the Queensland government fleet to ZEVs, whereby QFleet will transition 100 per cent of its eligible fleet passenger vehicles including SUVs to be zero emission vehicles by 2026.

The Queensland Government has mandated an approach across government whereby all eligible QFleet passenger vehicles will transition to zero emission as leases expire, where there is a ZEV alternative and sufficient charging infrastructure is available.

Beyond actively reducing vehicle emissions in line with government targets, this accelerated transition provides additional benefits including:

- assisting the broader community to transition their own vehicles to ZEVs as QFleet will make them available to the public to purchase when they reach their end-of-lease;
- a commitment to purchase volumes, providing manufacturers with certainty and increase ZEV supply to the market;
- operational savings from lower fuel and maintenance costs; and
- promoting broader ZEV technology and adoption.

During 2023, QFleet spent approximately \$35.67 million implementing the strategy<sup>12</sup>.

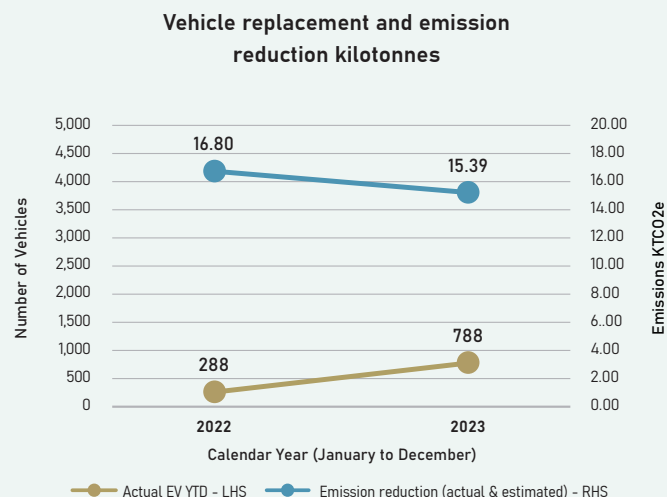


Images courtesy of QFleet

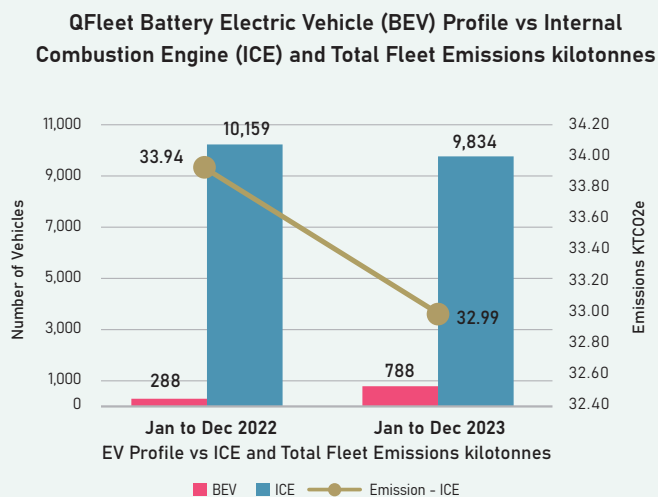
<sup>12</sup> Represents the total procurement cost of purchasing Battery Electric Vehicles and replaces the cost of procuring Internal Combustion Engine vehicles.

## Performance summary

Below is a summary of QFleet's performance across several metrics over the past two years, including emission reductions resulting from the transition of eligible passenger vehicles to ZEVs.



Source: Department of Energy and Climate.



Source: QFleet Electric Vehicle Transition Strategy 2023-2026.

For more information on the methodology used to calculate estimated emissions reduction, see page 3 of the QFleet Electric Vehicle Transition Strategy 2023-2026.

For more information on the initiative please see QFleet Electric Vehicle Transition Strategy 2023–2026.

## Key Metrics

Percentage of QFleet eligible passenger vehicles transitioned to ZEV	22% <sup>a</sup>
Overall emission reductions achieved by the strategy	1.41 kilotonnes reduction as at 31 Dec 2023 <sup>b</sup>
Number of second hand EVs presented for auction	14 vehicles sold as of 31 December 2023

<sup>a</sup> Based on actual Battery Electric Vehicles replaced.

<sup>b</sup> Based on eligible passenger to Battery Electric Vehicles replaced.



Images courtesy of QFleet





# LOW CARBON TRANSPORT

## Cycleways

The Queensland Government continues to invest in the highest priority connections on principal cycle networks across Queensland through the Department of Transport and Main Roads Active Transport Investment Program (ATIP). The ATIP funds projects which deliver infrastructure that supports a safe, direct and connected cycling network.

These projects support the Queensland Government's vision for more cycling, more often as set out in the Queensland Cycling Strategy 2017-2027. Safe and connected cycling infrastructure enables people to choose cycling as a convenient, healthy and low carbon mode of transport.

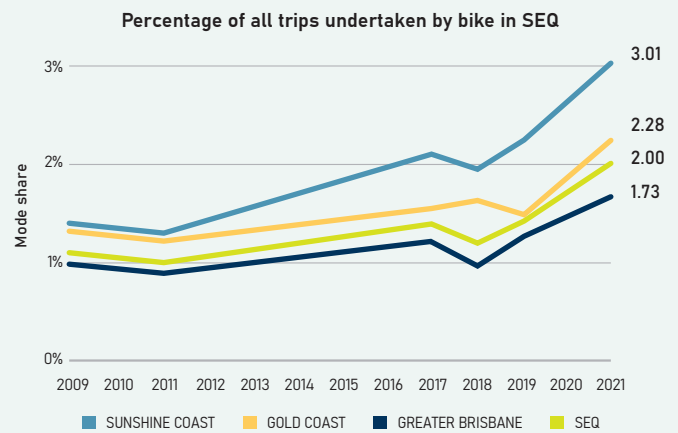
In continuing to invest in cycling infrastructure, the Queensland Government aims to:

- provide the state with a more sustainable transport system,
- reduce traffic congestion and help reduce Queensland's carbon footprint, and
- encourage physical activity and generate health benefits.

The Queensland State of Cycling Report 2022 shows the progress made in delivering the Queensland Cycling Strategy 2017-2027, including:

- the number of Queenslanders who ride a bicycle in a typical week has increased from 13.5% in 2019 to 19.2% in 2021,
- the number of kilometres of principal cycle network built as part of the ATIP has increased from 538km in 2019 to 637km in 2022, and
- the percentage of all trips undertaken by bicycle in South East Queensland (SEQ) has been increasing since 2009.

The State of Cycling Report is updated and published approximately every two years. Further information can be found on the Department of Transport and Main Roads website.



Source: Department of Transport and Main Roads 2022 Household Travel Survey Brisbane.



New England Highway Cycleway



Images courtesy of the Department of Transport and Main Roads.

## Queensland Government Policy

### Queensland Water Strategy

The long-term security and efficient use of water are central to Queensland's sustainability. The Queensland Water Strategy is a sector-wide strategy for the future of water management encapsulating initiatives to improve how to deliver a sustainable and more secure water system for Queensland. Water infrastructure projects within QTC's green bond asset pool support the strategy by providing large volumes of water to support increased agriculture production, improve water security for numerous communities and underpin the future prosperity of current and future industry sectors across the region.

#### WATER INFRASTRUCTURE IMPACT REPORTING (1 JAN–31 DEC 2023)

Year	Subcategory	Project/asset name <sup>a</sup>	Installed capacity	Absolute gross water savings (M3/a) (potential)	Absolute gross water savings (M3/a) (realised)
2023	Water - Drought Defence, Storage, Treatment, Desalination, and Flood Defence	Gold Coast Desalination Plant	133ML/day	45,632,300	7,240,000
	Treatment Plants	The Seqwater Drought Resilient Network	1490ML/day		
	Pipelines and other	The Seqwater Drought Resilient Network	600 kms		
	Dams and Weirs	The Seqwater Drought Resilient Network	2,195,849 ML		
	Treatment Plants (water recycling)	Western Corridor Recycled Water Scheme	180ML/day	65,700,000	5,308,000

<sup>a</sup> Figures sourced directly from Seqwater



Images courtesy of Seqwater.





## The Seqwater Drought Resilient Network

The Seqwater Drought Resilient Network (the Network) is a unique water supply asset in Australia and provides many options to make drinking water available around the region to manage drought and the growing population.

The Network enables Seqwater to move treated drinking water around the region and to supplement local water supplies. As part of normal operations, Seqwater manages the region's water supply by changing the water flow direction in the pipelines to move water around in an efficient and cost-effective way.

The Network's bulk water supply pipelines connect the region's major water treatment plants and water sources—providing sustainable water security for South East Queensland (SEQ). The Network was created in response to the water supply crisis following the SEQ Millennium Drought (2001–09) and was the largest urban drought response in Australia at the time. At its inception, various bulk water assets (water treatment plants, dams, reservoirs, pumping stations and pipes) were owned by multiple local councils and were not interconnected, significantly impacting the water supply to the region. The Network also included drought resilient assets to improve the diversity and security of water supply – the Gold Coast Desalination Plant (Desalination Plant) and the Western Corridor Recycled Water Scheme (the Scheme).

Following the accelerated construction of a network of bulk water pipelines, the State Government assumed ownership and operational responsibility for the integrated Network from 1 July 2008 through a number of bulk water authorities.

After further consolidation of the sector in 2013, the Network is now owned by South East Queensland's single bulk water supplier, Seqwater.



Image courtesy of Seqwater.

The Scheme and the Desalination Plant are critical parts of the Seqwater Drought Resilient Network and form part of the long-term water sources for the region. They help take pressure off dam supplies and will be increasingly used to meet growing demand in SEQ as the population increases. They also help delay or even avoid the introduction of water restrictions and the need to construct additional drought contingency infrastructure, at a cost to water users, should the region experience long-term drought.

Seqwater's Water Security Program 2023, the third revision since 2016, guides the delivery of enhancements to the Network to balance the needs of one of the fastest-growing population areas in Australia with a water supply that will become more impacted by climate change over time.

Further information can be found on the Seqwater website.

### The Network:

- supplied 319,579 million litres of drinking water to more than 3.6 million people living in SEQ
- enables a coordinated drought response to minimise its impact and maintain supplies during weather events that impact local sources, and
- supplies bulk treated drinking water to five retailers; Unitywater, Urban Utilities; and the water businesses of the Logan, Redland and Gold Coast Councils.

### The Network is a bulk water supply network of:

- 36 water treatment plants including
  - 32 conventional water treatment plants
  - a desalination water treatment plant
  - 3 purified recycled water treatment plants (part of the Scheme)
- 12 key dams that make up nearly 90 per cent of SEQ's total water storage volume
- 28 bulk water reservoirs
- 22 pump stations
- 600 km+ of pipelines

## Gold Coast Desalination Plant

The Gold Coast Desalination Plant (the Desalination Plant) turns sea water into drinking water. Unlike the majority of drinking water produced in South East Queensland, desalination does not rely on rainfall and is a critical, climate-resilient water source.

The Desalination Plant regularly supplies drinking water to the Network and use increases in times of flood or drought, or when conventional water treatment plants are offline.

Located in Tugun on the southern part of the Gold Coast, the plant uses an advanced technology called reverse osmosis to remove the salt and produce drinking water for the Gold Coast, Logan and southern Brisbane regions.

The plant first supplied water into the Network in 2009 and is capable of producing up to 133 million litres of pure drinking water a day—equivalent to about 15 per cent of the region's daily water use or 50 Olympic-sized swimming pools. It is designed to operate in standby mode, and if required,

can reach 100 per cent capacity in 72 hours to supply up to 600,000 people with drinking water. In 2023, the Desalination Plant produced about 7,240 million litres for the Network, less than the previous year's 12,714 million litres due to a significant rain event in February 2023. The plant uses energy recovery devices to improve the energy efficiency of producing drinking water. Energy recovery is achieved by reusing the high-pressured salty water, or brine, produced in the first pass of the reverse osmosis process, to continue to force water through the reverse osmosis membranes. This process recovers about 97 per cent of energy that would otherwise be lost.

The plant's intake and outlet structures are located out to sea and have become artificial reefs, which are home to a variety of small plants and sea animals.

Further information can be found on the Seqwater website.



Image courtesy of Seqwater.



## Western Corridor Recycled Water Scheme

The Western Corridor Recycled Water Scheme (the Scheme) includes advanced water treatment plants at three locations, which convert wastewater into quality drinking water that can be pumped into Wivenhoe Dam during severe drought.

More than 200 kilometres of pipelines connect the advanced water treatment plants to the treated wastewater and Wivenhoe Dam, as well as industrial customer supply points. The Scheme was put into care and maintenance mode in 2013 to minimise both costs and wear and tear on the Scheme assets when not required due to drought. When fully operational, the Scheme can produce around 180 million litres per day, or around 15 to 20 per cent of the region's daily urban water demand. As part of the SEQ Drought

Response Plan, Seqwater will consider recommissioning the entire Scheme to be operable when the Water Grid dam levels fall to 40 per cent. Any future allocation of green bond proceeds to the Scheme may be deferred until it is substantially recommissioned to a 'ready to use' state.

One of the Scheme's treatment plants has been partially recommissioned and can currently supply up to 46 million litres per day to industrial customers. This enables water quality monitoring of purified recycled water to be resumed and identifies any potential issues that may arise during a full restart.

Further information can be found on the Seqwater website.



Images courtesy of Seqwater.

## Independent third-party assurance

QTC is committed to complying with its Green Bond Framework and ensuring the use of proceeds are appropriately allocated. Accordingly, QTC has appointed DNV as an independent and accredited assurance provider. DNV is an accredited verifier with the Climate Bonds Standard.



DNV contributes to the development of best practice across green bond issues. Their assessment examines at least three aspects of a green bond, including that there is a robust and clearly documented procedure for selecting projects and assets, that the funds are allocated against activities which demonstrate enhanced sustainability performance, and that once the green bond is issued, there are safeguards in place to ensure that the funds raised will be allocated against the selected projects and assets.

DNV provides:

- Annual verification that QTC CBI Certified green bonds meet the CBI Standard and associated sector criteria.
- Verification that QTC's Green Bond Framework is in accordance with the ICMA Green Bond Principles and is consistent with the Climate Bonds Standard.
- A methodology for the selection and measurement of eligible projects and assets.
- An independent assessment of the accuracy and integrity of green bond information and data that are used for strategic decision making by investors.

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**QTC is committed to protecting and advancing the financial interests of Queensland.**

QTC is the central financing authority for the Queensland Government and provides financial resources and services for the state.

With a statutory role to advance the financial interests and development of the state, QTC works in partnership with Queensland Treasury and its clients to:

- deliver sustainable and cost-effective borrowings for its clients – managing the state's funding program in the global capital markets,
- advance the financial interest and development of Queensland – partnering to deliver financial, economic and social outcomes, and
- protect Queensland's financial interests and delivering better financial outcomes – helping identify opportunities for clients to minimise costs and risks by centralising the management of our clients' borrowings, cash investments and financial risks.



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