

2022 GREEN BOND ANNUAL REPORT

SUPPORTING QUEENSLAND'S PATHWAY
TO A CLIMATE RESILIENT AND AN
ENVIRONMENTALLY SUSTAINABLE ECONOMY

About this report

This report provides information about the allocation of proceeds from Queensland Treasury Corporation's (QTC's) Green Bond issuance as at 30 April 2022. All proceeds have been allocated against eligible projects and assets that support Queensland's pathway to a climate resilient and an environmentally sustainable economy.

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.

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MESSAGE FROM THE QUEENSLAND TREASURER



The Honourable
Cameron Dick MP

The Queensland Government is acting on climate change to protect our State's precious natural environment, and shape a low carbon, sustainable economy.

Queensland continues to offer attractive green investment opportunities including through the issuance of Queensland Treasury Corporation (QTC) Green Bonds.

On behalf of the Queensland Government, QTC has expanded its Green Bond outstandings this year by AUD3 billion. Global and domestic investors have continued to demonstrate confidence in our State's sustainable investments. QTC received strong offshore investor participation in its new 2032 Green Bond, which was 1.4 times oversubscribed and attracted a number of first time investors.

QTC remains a leading semi-government issuer of Green Bonds in Australia, with AUD6.98 billion in Green Bonds on issue as at 30 April 2022, making a significant contribution to the growth of the Australian Green Bond market.

Highlights supporting climate action and renewable energy targets

QTC Green Bonds are just one initiative supporting our State's pathway to climate resilience and net zero emissions by 2050. The Queensland Government is also:

- partnering with the private sector and directly investing in new clean energy generation, with renewable energy generation through Queensland's publicly owned clean energy generator, CleanCo, and 48 large scale renewable energy projects as at October 2021,¹ which represents approximately AUD11 billion of investment
- delivering the Queensland Government's largest investment in waste management and recycling with a new AUD2.1 billion waste package, including a AUD1.1 billion Recycling and Jobs Fund
- making Queensland a preferred partner for investment in renewable hydrogen generation for both domestic use and export, including a new AUD2 billion Queensland Renewable Energy and Hydrogen Jobs Fund, and
- a commitment of AUD270.1 million over 5 years for the Queensland Reef Water Quality program building on the AUD400 million already invested by the government in the World Heritage-listed Great Barrier Reef.

¹ 48 large scale renewable energy projects as at October 2021 (operating, under construction or financially committed). This represents approximately AUD11 billion of investment and around 7,600 construction jobs.

Queensland's commitment to positive Environmental, Social and Governance (ESG) outcomes

To provide transparency and meet the environmental, social and governance (ESG) expectations of the global community, the Queensland Government released its inaugural Sustainability Report in November 2021. The report demonstrates the Queensland Government's approach to considering ESG risk factors and sustainability issues in our decision-making. It also provides information about the alignment of current policy with ESG outcomes and relevant reporting data for a broad range of ESG factors.

As of July 2021,² Queensland received an ESG rating by MSCI of AA, reflecting the many strengths that we can continue to build on.

Looking forward, the Queensland Government will continue exploring opportunities to deliver positive ESG outcomes and further enable green investment that drives environmental and generational change for the better.

The Honourable Cameron Dick MP

QUEENSLAND TREASURER AND MINISTER FOR TRADE AND INVESTMENT

The Queensland Sustainability Report 2021 outlines the State's commitment to positive environmental, social and governance outcomes www.treasury.qld.gov.au/programs-and-policies/esg/

You can find out more about Queensland Government initiatives and actions to support the State's Climate Change Response at www.des.qld.gov.au/climateaction



² As of July 2021, the State of Queensland received an MSCI ESG Rating of AA, ESG Trend Negative. Certain information ©2021 MSCI ESG Research LLC. Data reproduced with permission from MSCI ESG Research LLC. No use or distribution without written consent. Data provided "as is" without any warranties. MSCI ESG Research LLC and affiliates assume no liability for or in connection with the data. Please see complete disclaimer in www.qtc.com.au/queenslands-sustainability-initiatives/

MESSAGE FROM THE CHIEF EXECUTIVE AND THE HEAD OF FUNDING AND LIQUIDITY



Philip Noble

The global Green Bond market has continued to grow rapidly with a record amount issued in 2021. We have seen strong interest in sustainable funding across our investor base, as evidenced by QTC issuing the largest Australian Green Bond on record in September 2021.

QTC's Green Bond program is of strategic importance to our diversified funding mix, and we have continued to look for ways to expand and grow our offering. Our commitment to QTC's Green Bond issuance reflects the Queensland Government's focus on identifying initiatives that advance the sustainable development of its economy while protecting the environment.

As the State's central financing authority, we work closely with Queensland Treasury and the broader Queensland Government to advance Queensland's continued economic growth and sustainable development. We are committed to responding to feedback and the importance of transparency in providing investors with information to support their investment decisions. In 2021, QTC collaborated with the Queensland Government on the development of the Sustainability Report with information about the State's ESG commitments and outcomes.



Jose Fajardo

Extending QTC's Green Bond curve

In September 2021, we issued our fourth Green Bond line, extending QTC's Green Bond curve for investors—with maturities of 2024, 2029, 2031 and 2032. The AUD3 billion issuance of our new 2032 Green Bond was our largest Green Bond deal to date, demonstrating a growing demand from investors for Green Bonds.

QTC received recognition for its 2032 Green Bond in the 2021 FinanceAsia Deal Achievement Awards in Australia and New Zealand for the Best Local Bond Deal and Best Sustainable Finance Deal for a Financial Institution.

QTC's Green Bond project and asset pool

Green Bonds are of strategic importance for QTC to enable diversification of our investor base and funding mix, and to complement QTC's benchmark bond lines. As the State's central financing authority, QTC is in a unique position to highlight to investors eligible projects and assets with an environmental benefit to the State.

The size of the current eligible project and asset pool allows QTC to remain a regular Green Bond issuer, increasing the liquidity in our Green Bond product to investors. We continue to actively look for ways to further grow and diversify our pool, and support the State in highlighting Queensland's pathway to climate resilience and an environmentally sustainable economy.

Philip Noble
CHIEF EXECUTIVE

Jose Fajardo
HEAD OF FUNDING AND LIQUIDITY

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 Climate Bonds Initiative (CBI), providing a more streamlined certification process. This allows QTC to easily tap its existing CBI Certified Green Bonds—providing greater flexibility to meet investor demand.

QTC Green Bonds:

- are guaranteed by the Queensland Government
- carry the same credit rating as QTC and the Queensland Government of AA+/Stable/A-1+ by S&P Global; Aa1/Stable/P-1 by Moody's and AA+/Stable/F1+ by Fitch, and
- are exempt from Australian interest withholding tax.

QTC Green Bond outstandings as at 30 April 2022

| Maturity ³ | Coupon | ISIN | Credit rating ⁴ | Outstandings AUD million |
|-----------------------|--------|--------------|----------------------------|-----------------------------|
| 22 March 2024 | 3.00% | AU000XQLQAD1 | AA+/Aa1/AA+ | 750 |
| 6 March 2029 | 2.50% | AU3SG0001928 | AA+/Aa1/AA+ | 1,730 |
| 10 March 2031 | 1.25% | AU3SG0002371 | AA+/Aa1/AA+ | 1,500 |
| 2 March 2032 | 1.50% | AU3SG0002561 | AA+/Aa1/AA+ | 3,000 |

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 AUD16.87 billion as at 31 Dec 2021 (for more information about DNV refer to page 19).

QTC Green Bonds are allocated against qualifying green assets that support Queensland's pathway to a climate resilient and an environmentally sustainable economy

How the proceeds can be used

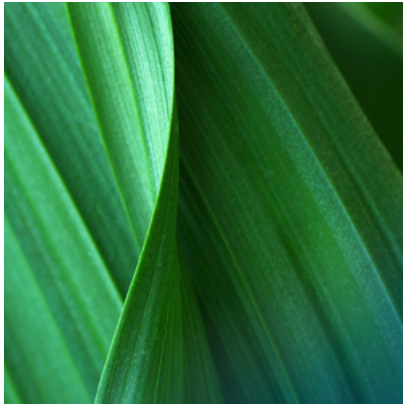
QTC may issue two different types of Green Bonds, which must be issued in accordance with QTC's Green Bond Framework, and either:

- 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 mitigation of, and adaptation to, climate change. At the time of this report QTC has only CBI Certified Green Bonds on issue.

³ Rule 144A Capability.

⁴ Ratings by S&P Global, Moody's Investors Service and Fitch 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.



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.

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 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. This verification was performed by DNV—an independent and approved assurance provider (refer to page 19 for more information).

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

2017

- QTC issues inaugural AUD750 million 22 March 2024 Green Bond
 - Largest AUD Green Bond on issue at the time of issuance
 - Finance Asia Deal Achievement Award in Australia and New Zealand for Best Green Bond Deal of 2017
- New eligible low carbon transport and renewable energy projects and assets added to the pool

2018

- Expanded QTC's Green Bond Framework to facilitate issuance of both CBI certified Green Bonds and Green Bonds that accord with ICMA Green Bond Principles

2019

- QTC issues AUD1.25 billion of a new 6 March 2029 Green Bond
 - Second largest Green Bond issued in the Australian market
 - Placed QTC as joint leader for the largest AUD Green Bond issuer by volume
- QTC achieves programmatic certification from CBI
- First Australian semi-government issuer to tap an existing Green Bond line
- New eligible projects and assets added to the pool
 - Gold Coast Desalination Plant

2020

- Climate Bonds Initiative Green Bond Pioneer Awards:
Largest Subnational Green Bond Deal of 2019
- QTC issues AUD1.5 billion of a new 10 March 2031 Green Bond
- Largest semi-government AUD CBI certified Green Bond issuer by volume, with AUD3.98 billion outstanding
- New eligible projects and assets added to the pool
 - Warwick Solar Farm

2021

- QTC issues AUD3 billion of a new 2 March 2032 Green Bond
 - Largest AUD Green Bond on issue at the time of issuance
 - FinanceAsia Deal Achievement Award in Australia and New Zealand for Best Local Bond Deal and Best Sustainable Finance Deal for a Financial Institution
- New eligible projects and assets added to the pool
 - Seqwater Drought Resilient Network
- QTC's Green Bond Framework updated

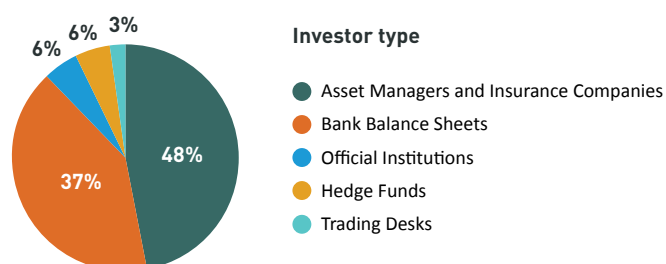
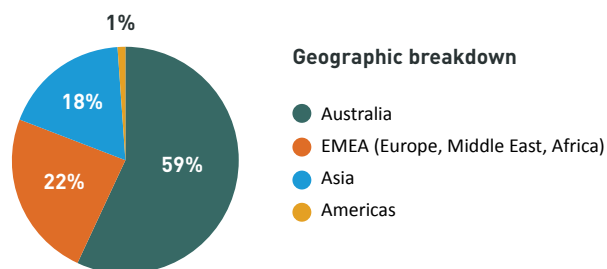
DEAL SPOTLIGHT: 2032 GREEN BOND

In September 2021, QTC issued AUD3 billion of a new 1.50% 2 March 2032 CBI Certified Green Bond through a syndication process. This was the fourth and longest tenor Green Bond for QTC, further diversifying funding alternatives and continuing to build QTC's Green Bond curve.

The transaction was well supported, with a final order book in excess of AUD4.33 billion (including AUD390 million in Joint Lead Manager interest)—the largest orderbook for a QTC Green Bond deal to date. A key highlight was the strong offshore participation of 41 per cent.








Table 1: Green Bond terms

| | |
|---------------|--|
| Issuer rating | <ul style="list-style-type: none"> ■ AA+ (stable) by S&P Global ■ Aa1 (stable) by Moody's Investors Service ■ AA+ (stable) by Fitch Ratings |
| Guarantor | 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) |
| Coupon | 1.50% per annum |
| Issue amount | AUD3 billion |
| Currency | AUD |
| Maturity date | 2 March 2032 |
| Certification | Climate Bonds Standard Board on behalf of the Climate Bonds Initiative |



ALLOCATION OF PROCEEDS

All proceeds from QTC's Green Bonds issued as at 30 April 2022 have been fully allocated against a selection of eligible projects and assets as detailed below.

| Categories of eligible projects/assets ⁵ | Sub category | Project/asset name | Allocation of Green Bond proceeds (AUD M) |
|--|--|---|---|
|    | Water – drought defence, storage, treatment, desalination, and flood defence | Gold Coast Desalination Plant | 684.00 |
| | | Water Treatment Plants | 1,250.00 |
| | | Pipelines and Other | 1,691.35 |
| | | Dams and Weirs | 0.00 |
| | | Western Corridor Recycled Water Scheme ⁶ | 0.00 |
|   | Solar | Sunshine Coast Solar Farm | 30.00 |
| | | Warwick Solar Farm | 73.00 |
|   | Light rail – electrified trams and supporting infrastructure | Gold Coast Light Rail Stage 1 | 283.71 |
| | | Gold Coast Light Rail Stage 2 | 134.80 |
| | Electrified rail, supporting infrastructure and rolling stock | Citytrain network | 1,587.00 |
| | | ■ Redcliffe Peninsula Line | 207.30 |
| | | ■ Citytrain rolling stock | 300.00 |
| | | ■ New generation rolling stock (electric) | 607.81 |
| | | Tilt Trains rolling stock | 20.00 |
| | Cycleways – multiple | Cycleways | 102.00 |
| Total | | | AUD 6,970.97 |

Net proceeds from QTC Green Bonds were AUD6,970,967,800 from AUD6,980,000,000 Face Value of bonds issued.

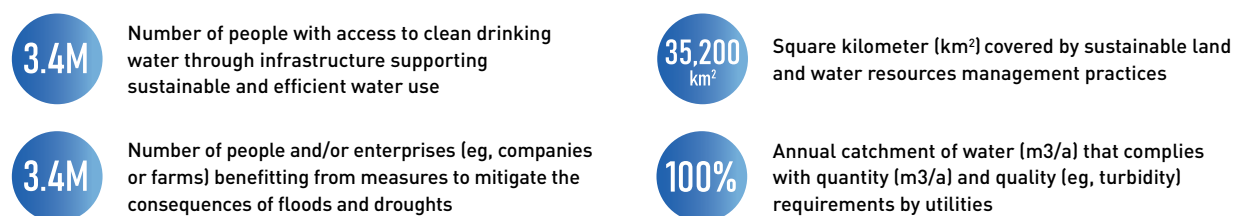
⁵ The icons depict alignment with the United Nations Sustainability Development Goals.

⁶ Any future allocation of Green Bond proceeds to the Scheme may be deferred until it is recommissioned to a 'ready to use' state.

WATER INFRASTRUCTURE

TABLE 2: WATER INFRASTRUCTURE IMPACT REPORTING (1 JAN–31 DEC 2021)

| Year | Subcategory | Project/asset name | Installed capacity | Annual absolute gross water savings (M3/a) ⁹ |
|------|---|-------------------------------|---------------------------|---|
| 2021 | Water – Drought Defence, Storage, Treatment, Desalination, and Flood Defence ⁷ | Gold Coast Desalination Plant | 133ML/day ¹⁰ | 45,632,300 ⁸ |
| | | Water Treatment Plants | 1490ML/day | |
| | | Pipelines and Other | 600km | |
| | | Dams and Weirs | 2,195,849ML ¹¹ | |
| | | Western Corridor Recycled | 180ML/day | |



The Seqwater Drought Resilient Network

The Seqwater Drought Resilient Network (the Network) is a unique water supply asset in Australia valued at approximately AUD10.9 billion, and provides many options to make drinking water available around the region to manage drought and the growing population.

The Network was verified and added to QTC's eligible projects and assets pool in May 2021. This expanded on the 2019 inclusion of one of its core assets, the Gold Coast Desalination Plant (the Desalination Plant).

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). It was created in response to the water supply crisis due to the SEQ Millennium Drought (2001–09), and was the largest urban drought response in Australia at the time. Its foundation 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

The Network:

- connects 315,978 million litres of drinking water supply to more than 3.4 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.

⁷ Sourced from Seqwater – <https://www.seqwater.com.au/>.

⁸ Note – the figure reported in calendar year 2021 was 46,632,300. This number has been corrected by QTC for 1 Jan–31 Dec 2020 as 45,632,300.

⁹ M3/a – meters cubic per annum.

¹⁰ ML/day – million litres per day.

¹¹ ML – million litres.

to the region. 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 the State's single bulk water supplier, Seqwater. The Queensland Government also invested in new drought resilient assets to improve the diversity and security of water supply—the Desalination Plant and the Western Corridor Recycled Water Scheme (the Scheme).

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 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 is a bulk water supply network of:

- 36 conventional water treatment plants
- 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
- a desalination plant, and
- purified recycled water treatment plants (part of the Scheme).

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 SEQ, 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 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 generally

operates in standby mode (at 33 per cent), producing up to 44 million litres per day and, if required, can reach 100 per cent capacity in 72 hours to supply up to 600,000 people with drinking water. In the 2020–21 financial year, the Desalination Plant produced about 19,500 million litres for the Network.

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.



GOLD COAST DESALINATION PLANT Image courtesy of Seqwater.

Western Corridor Recycled Water Scheme

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



More than 200 kilometres of pipelines connect the advanced water treatment plants to the treated wastewater and Wivenhoe Dam. This asset is valued at approximately AUD1.9 billion and was put into care and maintenance mode in 2013 (noting the asset currently supplies up to 23 million litres to industrial customers).

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 the restart of the entire Scheme if the combined Water Grid dam levels fall to 60 per cent, based on seasonal conditions at the time and with a two-year window to return to its full operations. Any future allocation of Green Bond proceeds to the Scheme may be deferred until it is substantially recommissioned to a 'ready to use' state.



Image courtesy of Seqwater.

Legend

- Northern Pipeline Interconnector
- Western Corridor Recycled Water Scheme
- Southern Regional Water Pipeline
- Eastern Pipeline Interconnector
- Network Integration Pipeline
- Other bulk water pipelines connecting the SEQ water grid
- Local government boundary
-  Reservoirs
-  Water Treatment Plants (WTP) – connected to grid
-  Water Treatment Plants (WTP) – off grid
-  Water Treatment Plants (WTP) – other
-  Western Corridor Recycled Water Scheme
-  Desalination plant
-  Power Station

Water Treatment Plants (WTP)

- 1 Amity Point WTP
- 2 Banksia Beach WTP
- 3 Beaudesert WTP
- 4 Boonah Kalbar WTP
- 5 Canungra WTP
- 6 Capalaba WTP
- 7 Dayboro WTP
- 8 Dunwich WTP
- 9 East Bank (Mount Crosby) WTP
- 10 Enoggera WTP
- 11 Esk WTP
- 12 Ewen Maddock WTP
- 13 Hinze Dam WTP
- 14 Image Flat WTP
- 15 Jimna WTP
- 16 Kenilworth WTP
- 17 Kilcoy WTP
- 18 Kirkleagh WTP
- 19 Koorabyn WTP
- 20 Landers Shute WTP
- 21 Linville WTP
- 22 Lowood WTP
- 23 Maroon Dam WTP
- 24 Molendinar WTP
- 25 Moogerah Dam WTP
- 26 Mudgeeraba WTP
- 27 Noosa WTP
- 28 North Pine WTP
- 29 North Stradbroke Island WTP
- 30 Point Lookout WTP
- 31 Rathdowney WTP
- 32 Somerset Dam (Township) WTP
- 33 West Bank (Mount Crosby) WTP
- 34 Wivenhoe Dam WTP

Western Corridor Recycled Water Scheme

- 35 Bundamba Advanced Water Treatment Plant AWTP
- 36 Gibson Island AWTP
- 37 Luggage Point AWTP

Desalination Plant

- 38 Gold Coast Desalination Plant

Reservoirs

- 39 Alexandra Hills Reservoirs
- 40 Aspley Reservoir
- 41 Camerons Hill Reservoir
- 42 Ferntree Reservoir
- 43 Green Hill Reservoirs
- 44 Heinemann Road Reservoirs
- 45 Kimberley Park Reservoirs
- 46 Kuraby Reservoir
- 47 Molendinar Reservoir
- 48 Mt Cotton Reservoir
- 49 Narangba Reservoirs
- 50 North Beaudesert Reservoirs
- 51 North Pine Reservoirs
- 52 Robina Reservoir
- 53 Sparkes Hill Reservoirs
- 54 Stapylton Reservoir
- 55 Wellers Hill Reservoirs

Power Stations

- 56 Tarong Power Station
- 57 Swanbank Power Station



RENEWABLE ENERGY

TABLE 3: RENEWABLE ENERGY IMPACT REPORTING (1 JAN–31 DEC 2021)

| Year | Subcategory | Project/asset name | Renewable electricity generation (MWh/a) ¹⁴ | GHG emissions avoided (kt/a) ¹³ |
|------|-------------|---------------------------|--|--|
| 2021 | Solar | Sunshine Coast Solar Farm | 28,965 ¹⁵ | 23.322 ¹⁵ |
| | | Warwick Solar Farm | 37,634 ¹⁶ | 28.022 ¹⁶ |

Warwick Solar Farm

The 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 in 2018 at a ready-to-build status, enabling them to become the first major university in the world to offset 100 per cent of their electricity use with renewable power produced from their own assets. The University of Queensland also use the project as a research and teaching facility.

The Warwick Solar Farm uses low impact solar photovoltaic technology, and once fully commissioned, the farm is expected to generate approximately 160,000 MWh of clean energy every year, reducing emissions in the electricity sector by approximately 119,000 tonnes of carbon dioxide equivalent (CO₂e) annually.¹²

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



Image courtesy of The University of Queensland.

¹² Actuals for 1 Jan–31 Dec 2021 37,634 MWh energy generated, and 28,022 annual GHG emissions reduced (in tonnes of CO₂ equivalent).

¹³ “GHG emissions reduced” represents the project-specific replacement of fossil fuel use and “GHG emissions avoided” refers to a baseline/alternative reference scenario. Amounts are expressed as thousands of tons per annum (kt/a).

¹⁴ MWh/a – megawatt hours per annum.

¹⁵ Sourced from Sunshine Coast Regional Council – <https://www.sunshinecoast.qld.gov.au/>

¹⁶ Sourced from the University of Queensland. Figures during the Solar Farm's commissioning phase. During 2021, the asset was still in the commissioning phase, with full completion expected in 2022 – www.uq.edu.au.

Sunshine Coast Solar Farm

The Sunshine Coast Regional Council is 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 offset more than 108 per cent of the Council's electricity use. From July 2017 to 31 December 2021, the Sunshine Coast Solar Farm has generated 127,338 megawatt hours (MWh) of electricity, more than offsetting the 117,707 MWh of energy used by Council. By taking a proactive approach, Council is successfully combating the impacts of the cost of its operations from rising electricity costs. The solar farm has avoided 102,753 tonnes of carbon dioxide (CO₂) emissions since operating.

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



Image courtesy of the
Sunshine Coast Council.

LOW CARBON TRANSPORT

TABLE 4: LOW CARBON TRANSPORT IMPACT REPORTING (1 JAN–31 DEC 2021)

| Year | Subcategory | Project/asset name | Passenger ride (count) ¹⁷ | Passenger distance travelled (km) | Impact metrics |
|------|-------------|--|--------------------------------------|-----------------------------------|----------------|
| 2021 | Rail | Gold Coast Light Rail (Stage 1 and 2) | 6,193,962 ¹⁸ | 33,735,166 ¹⁸ | N/A |
| | | Citytrain network | 34,015,19 ¹⁸ | 665,567,901 ¹⁸ | N/A |
| | | <ul style="list-style-type: none"> ■ Redcliffe Peninsula Line ■ Citytrain rolling stock ■ New generation rolling stock (electric) | | | |
| | | Tilt Trains rolling stock | 142,200 ¹⁹ | 49,900,000 ¹⁹ | N/A |
| | Cycle | Cycleways ²⁰ | N/A | N/A | N/A |

Gold Coast Light Rail

The Gold Coast Light Rail (branded G:link) eases traffic congestion and reduces emissions by taking cars off the road. The project improves accessibility between Brisbane and the Gold Coast, while providing a low carbon public transport alternative on the Gold Coast, where population growth is expected to increase.

Since revenue operating services began in June 2014, more than 59.6 million passenger trips have been taken on the Gold Coast Light Rail. The completed stages are a major step forward in supporting the Gold Coast and its continued growth with 20.3 kilometres of rail lines, 19 new electric stations, and 18 electric trams. In addition, 1,400 ‘Park and Ride’ spaces were also provided.

Further information on the Gold Coast Light Rail and future stages can be found on the City of Gold Coast website.



Image courtesy of the City of Gold Coast.

¹⁷ Passenger trips and kilometres decreased during the period 1 Jan–31 Dec 2021 due to COVID-19.

¹⁸ Sourced from Translink – www.translink.com.au.

¹⁹ Sourced from Queensland Rail – www.queenslandrail.com.au.

²⁰ For further information please refer to the Queensland Government “Queensland State of Cycling Report 2019”.



Kippa-Ring station on the Redcliffe Peninsula Line.
Image courtesy of the Department of Transport and Main Roads.

Citytrain network

The Citytrain network is an integrated passenger rail service connecting SEQ's population centres and Brisbane's domestic and international airports by electrified rail. It provides low carbon transport options in the SEQ region, which contains around 70 per cent of the State's population.

The Citytrain network includes 207 Citytrain network and 75 New Generation rolling stock trains, 152 stations, 880 kilometres of tracks, platforms, signaling, and other infrastructure crucial to the operation of the network. This urban network includes the Redcliffe Peninsula Line opened in 2016.

The annual patronage was approximately 34 million trips in 2021 and each week, more than 8,300 services are operated on the Citytrain network.

The New Generation rolling stock electric trains also feature energy efficient light-emitting diode cabin lighting and braking technology that recovers heat energy from braking that would otherwise be lost.

The project includes a purpose-built maintenance centre that uses solar panels to supplement power usage and manages storm water with dedicated bio-basins.

Further information on the Citytrain network can be found on the Queensland Rail website.

Tilt trains rolling stock

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 cover approximately 330,000 kilometres annually. Patronage was affected in 2021 by COVID-19, although these recently refurbished tilt trains carry approximately 200,000 passengers per year in a normal year.

Further information can be found on the Queensland Rail website.

Various cycleways

These cycleway projects are part of the Queensland Government's Principal Cycle Network Plan that creates marked bicycle lanes, dedicated crossing facilities, cycle paths, shared paths, continuous networks and end of trip facilities.

So far, more than 538 kilometres of principal cycling network cycleways has been created around the State.²¹

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



Images courtesy of the Department of Transport and Main Roads.

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 approved assurance provider. DNV is an approved verifier under 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.

ABOUT QTC

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 global capital markets,
- advance the financial interest and development of Queensland – partnering to solve complex commercial, policy and economic issues, and
- protect Queensland's financial interests and delivering better financial outcomes – helping identify opportunities for clients to minimise costs and risks, working closely with them on their balance sheet management and centralising the management of borrowings, cash investments and foreign exchange.

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