



FINANCIAL AUDIT REPORT

9 December 2022

Energy 2022

Report 8: 2022–23

As the independent auditor of the Queensland public sector, including local governments, the Queensland Audit Office:

- provides professional audit services, which include our audit opinions on the accuracy and reliability of the financial statements of public sector entities
- provides entities with insights on their financial performance, risk, and internal controls; and on the efficiency, effectiveness, and economy of public service delivery
- produces reports to parliament on the results of our audit work, our insights and advice, and recommendations for improvement
- supports our reports with graphics, tables, and other visualisations, which connect our insights to regions and communities
- conducts investigations into claims of financial waste and mismanagement raised by elected members, state and local government employees, and the public
- shares wider learnings and best practice from our work with state and local government entities, our professional networks, industry, and peers.

We conduct all our audits and reports to parliament under the *Auditor-General Act 2009* (the Act). Our work complies with the *Auditor-General Auditing Standards* and the Australian standards relevant to assurance engagements.

- Financial audit reports summarise the results of our audits of over 400 state and local government entities.
- Performance audit reports cover our evaluation of some, or all, of the entities' efficiency, effectiveness, and economy in providing public services.

Learn more about our publications on our website at www.qao.qld.gov.au/reports-resources/fact-sheets.

The Honourable C Pitt MP
Speaker of the Legislative Assembly
Parliament House
BRISBANE QLD 4000

9 December 2022

This report is prepared under Part 3 Division 3 of the *Auditor-General Act 2009*.



Brendan Worrall
Auditor-General



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Report on a page

This report summarises the audit results of Queensland's 6 energy entities. These entities generate (CleanCo, CS Energy, and Stanwell), transmit (Powerlink), and distribute (Energy Queensland) most of Queensland's electricity; and Ergon Energy Queensland is the electricity retailer for most customers in regional Queensland.

Financial statements are reliable

The financial statements of the energy entities are reliable and comply with relevant reporting requirements. All energy entities met their legislative deadlines for signing their financial statements, despite the ongoing challenges presented by the COVID-19 pandemic and the volatility in the energy market.

Weaknesses in the security of information systems

The energy entities have resolved a number of deficiencies identified in prior years. However, we continue to identify weaknesses in the entities' information systems, mainly relating to how they assign and monitor user access, and in the upgrades to their information systems. During the year, a cyber security incident disabled one of the energy entity's corporate networks. The entity deployed its business continuity plan and continued to safely generate and dispatch electricity. We carried out additional audit procedures to verify the completeness and accuracy of the data in the finance system once it was restored.

Energy entities rely heavily on information systems for their operations. Recent cyber attacks on the information systems of large Australian corporate entities have resulted in disruptions to their operations and leaked customer data. It is critical for energy entities to establish stronger controls to continue protecting their sensitive information from unauthorised users and cyber criminals.

Sector profits have decreased

The energy sector's total profits have decreased by \$147 million from 2020–21, which is largely due to losses incurred by generators.

During the financial year, average wholesale electricity prices in Queensland increased by 162 per cent from prior year. This increase was due to higher coal and gas prices, increased demand, lower supply of electricity due to outages (both planned and unplanned), and periods of lower output from renewable energy sources.

The generation entities incurred losses on fixed electricity supply contracts because of the volatility in the energy market, but the retail entities recognised gains.

Future challenges and the Queensland energy plan

Extreme weather conditions continue to cause fluctuations in electricity demand, contributing to upward pressure on wholesale market prices. Entities face challenges in balancing the unpredictable supply of renewable energy such as solar and wind, with delivering stable and reliable electricity supply at affordable prices.

On 28 September 2022, the Queensland Government released a \$62 billion energy and jobs plan that aims to provide cleaner and more affordable energy, while committing to a 70 per cent renewable energy target by 2032, and 80 per cent by 2035.

Implementation of this plan will lead to significant investment in renewable energy, storage, and transmission in Queensland. Entities will need to consider the impact of current market conditions on the budgets and timing of these projects.



Recommendation for entities

Status of recommendation made in *Energy 2021* (Report 7: 2021–22)

Energy entities have been taking appropriate action to address the recommendation we made in *Energy 2021* (Report 7: 2021–22). However, we continue to identify significant weaknesses in the security of information systems. All entities must emphasise the importance of strong security practices to protect against fraud or error, cyber attacks, and significant reputational damage. This remains a recommendation for energy entities in 2022.

[Appendix C](#) includes the full recommendation and status.

Reference to comments

In accordance with s.64 of the *Auditor-General Act 2009*, we provided a copy of this report to relevant entities. In reaching our conclusions, we considered their views and represented them to the extent we deemed relevant and warranted. Any formal responses from the entities are included in [Appendix A](#).



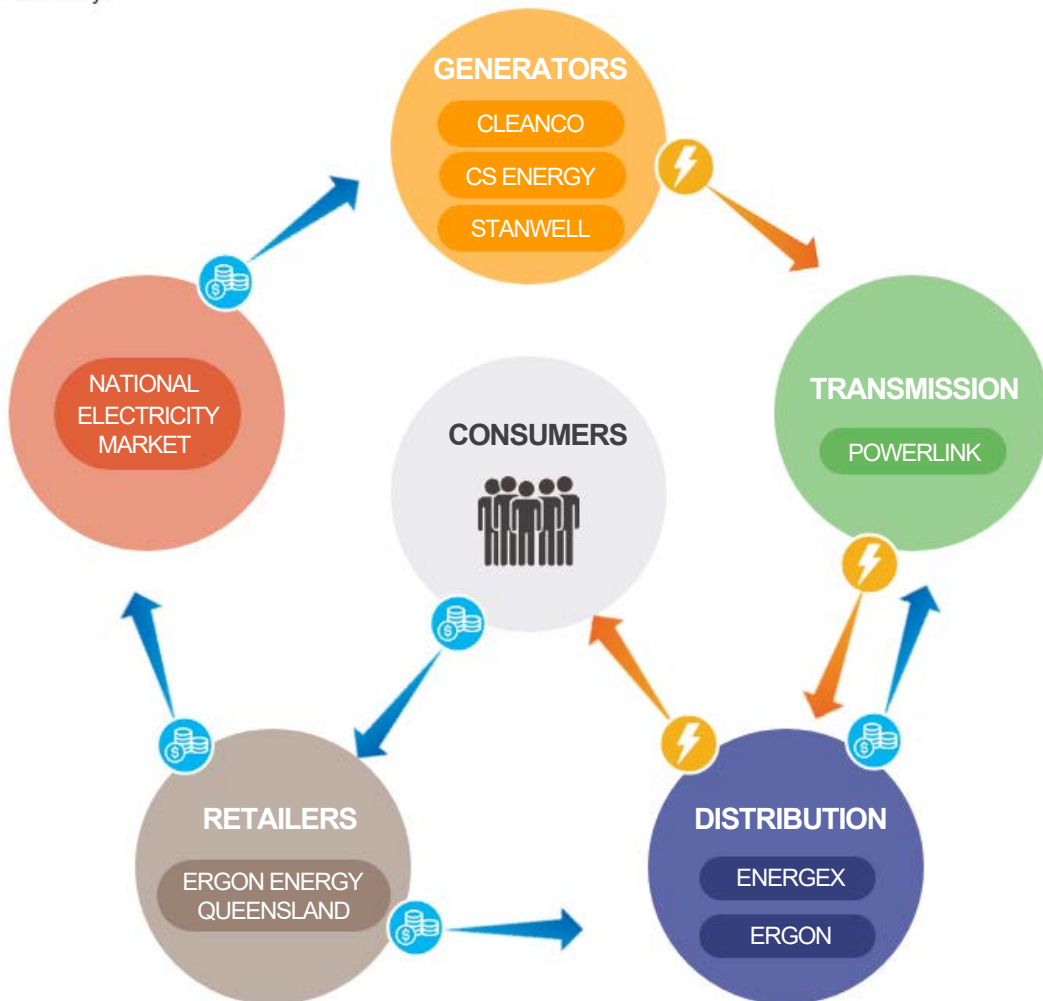
1. Overview of entities in this sector

In Queensland, state government owned corporations generate, transmit, and distribute most of the state’s electricity. The following diagram shows their roles in the Queensland energy sector supply chain.

Figure 1A
Queensland’s energy sector

The electricity supply chain

Electricity is generated by power stations and flows through transmission and distribution lines to consumers. Electricity retailers and the National Electricity Market are also involved in the sale of the electricity.



Notes:

- The National Electricity Market is the wholesale electricity market through which generators and retailers from the eastern and southern Australian states and territories trade electricity. CleanCo, CS Energy, and Stanwell also participate in the retail market.
- Energex, Ergon, and Ergon Energy Queensland are subsidiaries of Energy Queensland Limited.

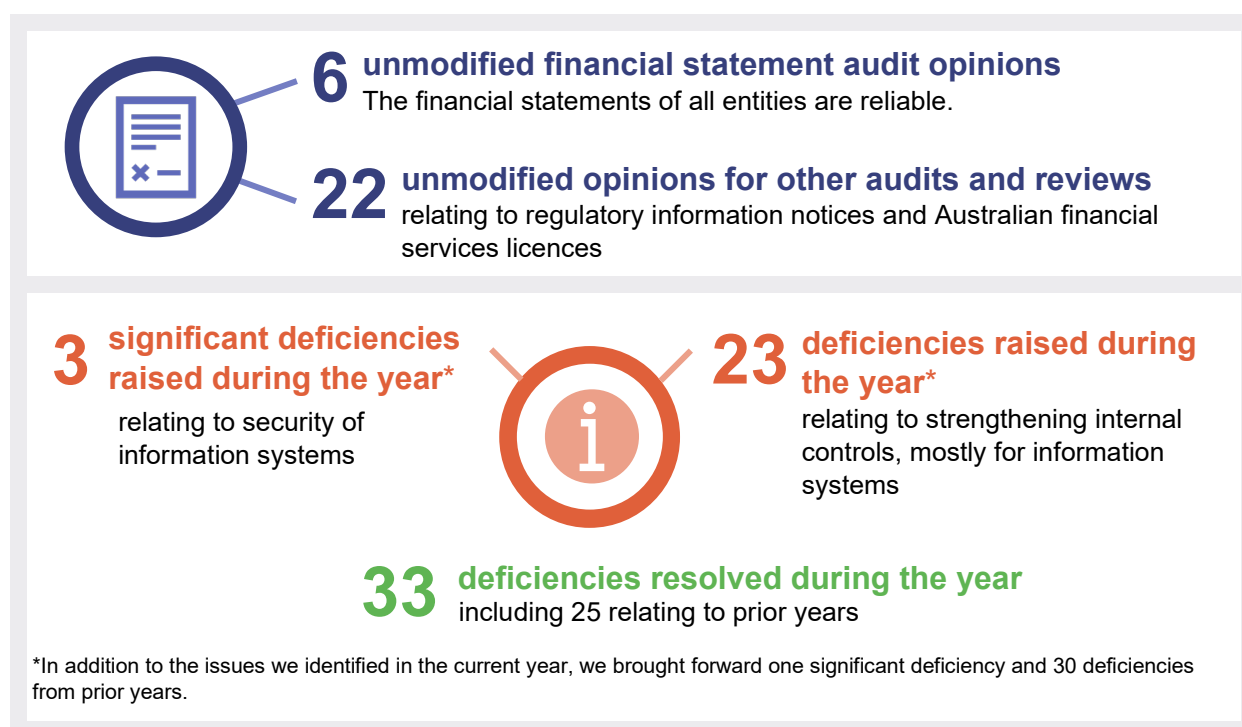
Source: Compiled by the Queensland Audit Office.



2. Results of our audits

This chapter provides an overview of our audit opinions for entities in the energy sector. It also provides conclusions on the effectiveness of the systems and processes (internal controls) entities use to prepare financial statements.

Chapter snapshot



Notes:

- Regulatory information notices are used to collect information from the distribution entities to assist the Australian Energy Regulator (AER) in deciding how much these entities can earn.
- Entities must have Australian financial services licences if they enter into fixed-price contracts to manage the future risk of fluctuating electricity prices. These entities must lodge an annual compliance form with the Australian Securities and Investments Commission.

Financial statements and other reports are reliable

We issued unmodified audit opinions on the financial statements of all 6 energy entities in Queensland. This means their financial statements have been prepared in accordance with the relevant legislative requirements and Australian accounting standards, and their results can be relied on.

In the current year, some of the entities experienced disruptions in their financial statement preparation processes due to the impacts of COVID-19 and complexities caused by volatility in the energy market. Despite these challenges, all energy entities met their legislative deadlines for signing their financial statements.

[Appendix D](#) details the audit opinions we issued for energy entities in 2021–22. [Appendix E](#) lists the entities that are not required to prepare financial statements and the reasons why.

Other audit certifications

[Appendix D](#) also lists the assurances we performed during the year on regulatory information notices and Australian financial services licences.

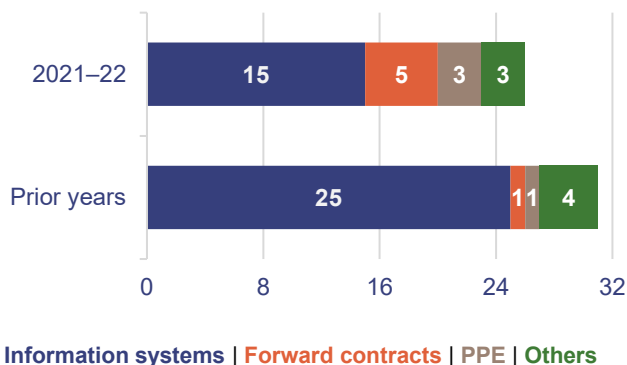
For the regulatory information notices, if the information is based on *actual* data, we conduct an audit. If it is based on *estimated* data, we conduct a review. We have issued 6 unmodified audit opinions and 12 unmodified review conclusions for these audits.

The entities fulfilled their obligations under their financial services licenses during the year.

Entities should continue strengthening their internal controls

We assess whether the internal controls entities use to prepare financial statements are reliable, and report any weaknesses in their design or operation to management for action. We rate these weaknesses as either significant deficiencies (higher risk that require immediate action by management) or deficiencies (lower risk that can be corrected over time). Figure 2A summarises the internal control issues in the current (2021–22) and prior years (from 2018–21).

Figure 2A
Summary of internal control issues raised in the current year and unresolved issues from prior years



We continued to identify significant deficiencies relating to **information systems**. These accounted for most of our findings and continue to be an area of focus for our audits.

The volatility in the energy market resulted in errors in the calculation of **forward electricity contract** values. We also identified deficiencies relating to payroll; expenses; revenue; and property, plant and equipment (PPE) processes.

These deficiencies occurred due to upgrades in information systems, changes in internal processes and controls, and turnover in the people managing those controls.

Source: Compiled by the Queensland Audit Office.

Our most common finding across all energy entities relates to weaknesses in the controls of user access in information systems, which has been an ongoing issue across a range of sectors. Energy entities need to conduct regular monitoring of the internal controls over access to these systems.

As cyber security threats increase in number and sophistication, it is critical that entities promptly address any weaknesses in their information systems. Entities should continue implementing controls to maintain and strengthen the security of their information systems.

As part of our audits, we monitor how entities resolve the weaknesses we have identified. In 2021–22, entities resolved a significant number of prior year and current year deficiencies.

The open issues mainly relate to information systems, which entities expect to resolve within the next 12 months as they refine their controls in new systems, and as new systems come online.

We recommend all entities continue to act on the recommendation from our *Energy 2021* report to strengthen the security of their information systems. [Appendix C](#) provides the full recommendation and status at 30 June 2022.

Energy entities are upgrading their information systems

The energy entities continue to upgrade their information systems. In 2021–22, Powerlink implemented its new information system within its approved budget.

Energy Queensland, however, continues to experience delays in implementing the final components of its digital technology program. When the implementation began in December 2017, the planned completion date was June 2020. While various key components of the program have been delivered, full implementation has been delayed. This is because of:

- changes in the scope of the project
- the complexity in integrating multiple systems
- skill shortages
- the impacts of COVID-19
- challenges with implementation partners and vendors.

The approved budget has been increased to \$717 million. Energy Queensland is currently negotiating additional budget to cover for the delays. Any further increases will affect the cost savings the new system is expected to generate.

The Australian Energy Regulator (AER) plays a part in this. While the AER does not specify what distribution entities are allowed to spend on specific items (such as digital technology programs), it does set the amount of capital expenditure the entities can recover from their customers. To the extent that Energy Queensland cannot meet the extra costs through savings in other areas, the AER will determine how much will be funded by customers and by Energy Queensland's shareholders (the Queensland Government).

CS Energy had a cyber security incident

In 2020–21, the Australian Cyber Security Centre reported that about a quarter of reported cyber security incidents affected entities associated with Australia's critical infrastructure.

This year, CS Energy was subject to a cyber attack that disabled its corporate network. CS Energy enacted its business continuity plan and successfully restored its corporate network. Its power stations were not impacted by the cyber incident and continued to safely generate and dispatch electricity to the National Electricity Market. As a result, the incident did not have a material impact on the financial performance of the business.

When the business continuity plan was in place, the entity accounted for its financial transactions manually, and subsequently transferred these transactions to the restored finance system.

Accordingly, we extended our audit approach to confirm the completeness and accuracy of financial data following the manual recording of the financial transactions. We included this as a key audit matter (an area with higher risk of material misstatement) in our audit opinion.

Our procedures for addressing this risk included:

- reviewing the reports of external experts who supported management in dealing with the incident
- reviewing board minutes and cyber security steering committee minutes to understand the impact of the incident on the business and the recovery process
- validating the completeness and accuracy of balances in the finance system, once it was restored.

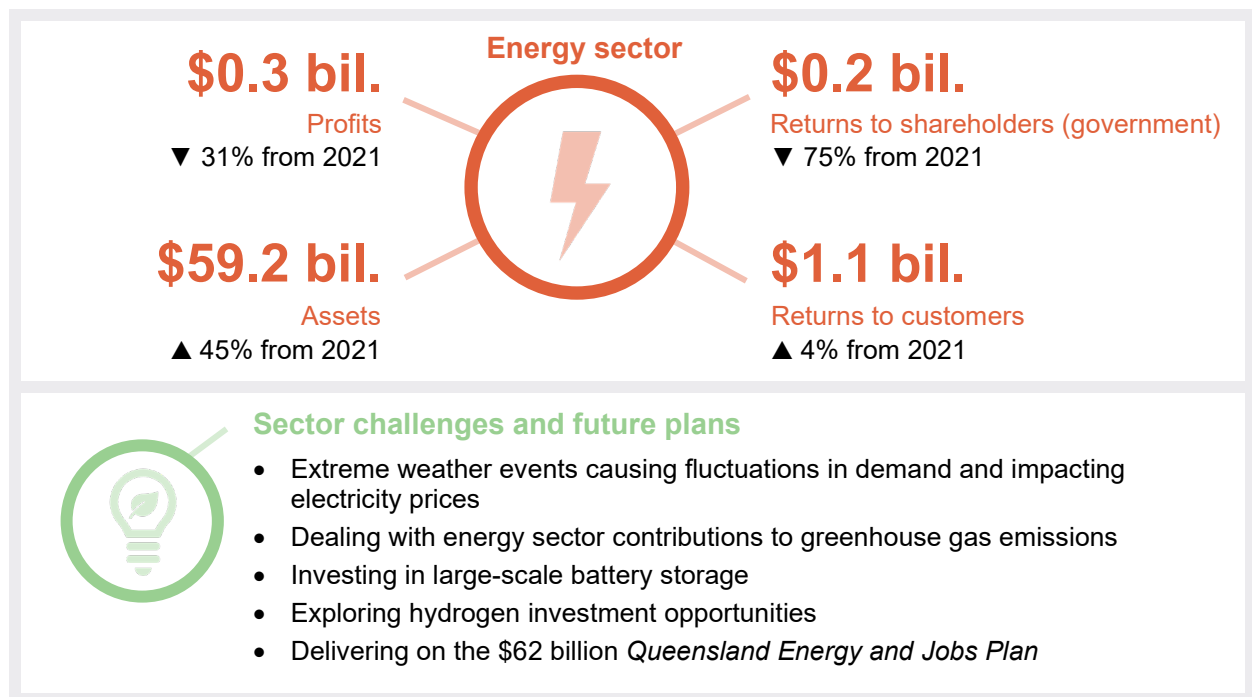
In 2022–23, we plan to complete an audit on responding to and recovering from cyber attacks, which will provide insights into, and lessons learned from, entities' preparedness for these attacks.



3. Financial performance of energy sector entities

This chapter analyses the key financial results and challenges faced by the energy sector.

Chapter snapshot



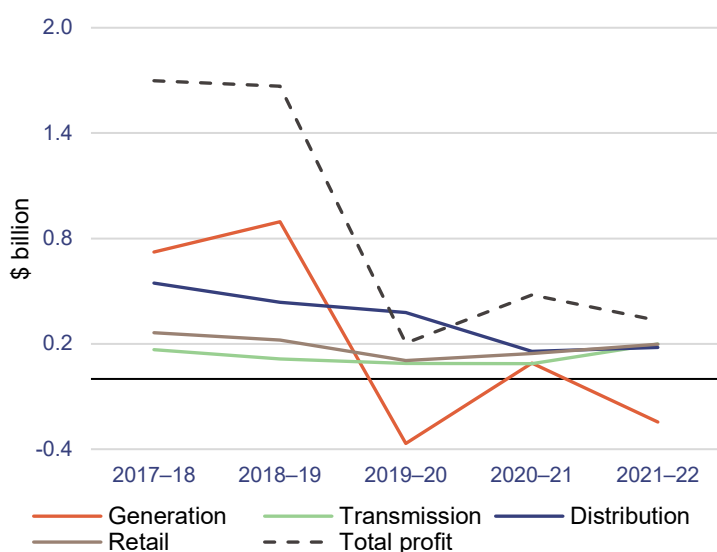
There has been a significant decrease in the sector’s profits due to price volatility in the energy market

In 2021–22, the energy entities recorded a total profit of \$332.2 million, which is a decrease of \$146.7 million (31 per cent) from the previous year.

Figure 3A outlines the performance results of state-owned energy entities – generators, transmitters, distributors and retailers.



Figure 3A
Energy sector's profits – by supply chain element



The decrease has largely been due to the impact of market volatility on the profits of the **generation** entities (CleanCo, CS Energy, and Stanwell).

To achieve revenue certainty in a volatile wholesale electricity market, the generators enter into contracts that lock in a fixed price for the electricity they will sell in the future. Generators recorded losses due to the rise in wholesale electricity prices above the fixed contract prices. This contributed to the generators recording a total loss of \$244.8 million in 2021–22.

The rest of the sector recorded an increase in profits of \$188.1 million from 2020–21.

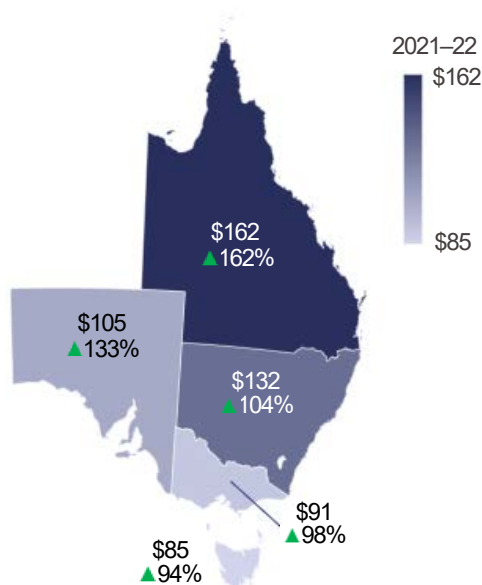
Source: Compiled by the Queensland Audit Office from energy entities' financial statements.

Significant market volatility has resulted in high electricity prices across the National Electricity Market

While future electricity prices were forecast to decrease, unplanned volatility in the energy market during the year resulted in energy prices increasing across the National Electricity Market (NEM). This is the wholesale electricity market where generators and retailers from the eastern and southern Australian states and territories trade electricity.

Figure 3B shows the increase in the wholesale electricity prices in Queensland and across the other NEM regions.

Figure 3B
Wholesale electricity prices per MWh increased across the NEM in 2021–22



In 2021–22, wholesale electricity prices across the NEM increased by 118 per cent on average compared to those reported in 2020–21.

Queensland recorded the highest movement and average wholesale electricity price in the current financial year of \$162 per MWh (it was \$62 in 2020–21). The increase in Queensland's wholesale price was due to greater volatility experienced in the second half of the year as outlined in Figure 3C. Two years ago, Queensland's wholesale electricity price was \$53 per MWh, the lowest of all regions in the NEM.

Notes:

- MWh – a megawatt hour, which is equal to 1,000 kilowatts of energy used continuously for one hour.
- Wholesale electricity prices are one component of retail electricity prices (with the other components being network and retail costs).
- Refer to Appendix G – Figure G1 for further details.

Source: Compiled by the Queensland Audit Office from Australian Energy Market Operator pricing data extracted on 6 December 2022.

Figure 3C outlines the increase in price volatility experienced in Queensland wholesale electricity prices in 2021–22. This was due to a combination of the following factors:





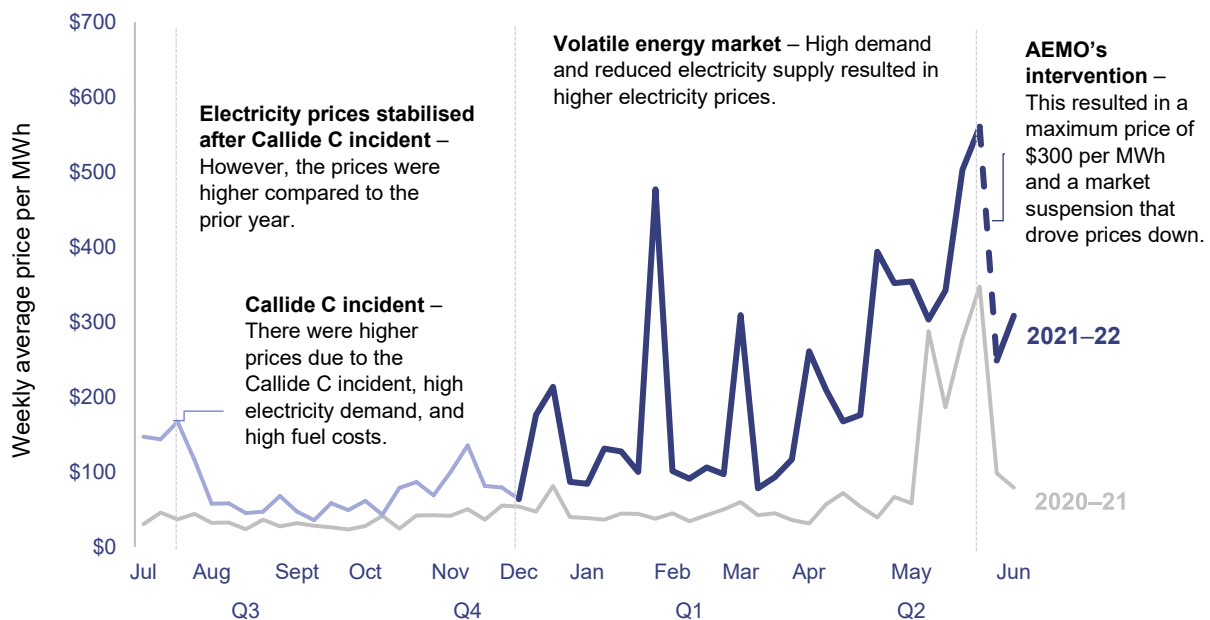
-  **High prices for gas and coal**, which are driven by a number of global factors including the Ukraine conflict, increased the cost of producing energy.
-  **Planned and unplanned coal-fired power station outages across the NEM**, including Callide C and Swanbank, reduced available supply.
-  **Heavy rainfall, heatwaves, and a cooler winter** led to higher demand for electricity and lower output from renewable energy sources.
-  **A transmission lines outage** caused by upgrades to the Queensland–New South Wales Interconnector reduced the transfers of electricity from the NEM into Queensland to meet increased demand.

Figure 3C
The weekly average prices in Queensland for 2021–22 were higher than in the previous year, with greater price volatility in the second half of the year



Notes:

- An incident at Callide C in May 2021 resulted in a generation unit being withdrawn from the market. This contributed to higher prices until mid-July 2021.
- Intervention of the Australian Energy Market Operator (AEMO) – The price cap of \$300 per MWh caused some generators to withdraw their supply of electricity to the market due to higher generation costs. Consequently, AEMO intervened by suspending the market for 9 days and directly scheduling generation across the NEM to ensure secure and reliable supply of electricity.

Source: Compiled by the Queensland Audit Office from AEMO weekly pricing data extracted on 6 December 2022.

Increasing wholesale prices affect the generators' ability to profit from forward electricity contracts

Generators and retailers manage fluctuations in wholesale electricity prices by entering into contracts with each other. They negotiate and lock in a fixed price for electricity they will sell (the generators) and buy (the retailers) in the future. These are called forward electricity contracts, which are traded over the counter (direct contracts between 2 parties) or on the Australian Securities Exchange.

Sale prices in contracts were locked in at lower forward electricity prices than what the actual market price turned out to be. These movements are recognised as unrealised losses as at the financial reporting date. They will only be realised at a future date either as a gain or loss when the electricity is delivered and the contracts are settled, which will be based on the electricity price at that time. As at 30 June 2022, the unfavourable price movements in the contracts held by the generators contributed to operating losses amounting to \$868 million (they had a \$5.5 million operating gain in 2020–21). For the generators to maintain adequate cash to cover these losses, they obtained additional funding from Queensland Treasury Corporation.

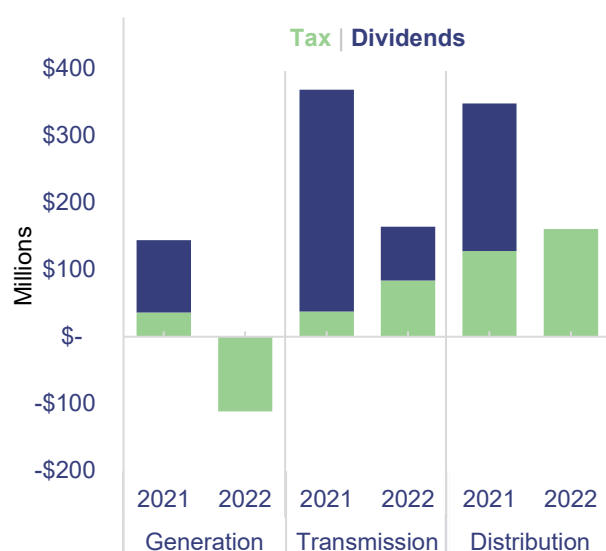
In contrast, retailers such as Ergon Energy Queensland were able to benefit by being on the other side of the forward electricity contract. During the year, movements in the energy market price resulted in a \$517.7 million gain (\$52.5 million in 2020–21), which contributed significantly to the overall profit for Ergon Energy Queensland.

Returns to shareholders have decreased

Returns to shareholders are made up of dividends (a share of profits paid to shareholders) and income tax equivalents (which are taxes payable by commercial operators in government).

Total returns to the state government amounted to \$214 million, a decrease of \$647 million (75 per cent) from the previous year. Figure 3D shows the decline in returns to shareholders from 2020–21 to 2021–22.

Figure 3D
Returns to shareholders have decreased from 2020–21 to 2021–22



In November 2021, Powerlink (a transmission entity) paid a special dividend of \$80 million for 2021–22, which is consistent with the payments made in prior years.

In June 2022, the state government approved the government owned energy corporations to retain their dividends for 2021–22. This was to support investment in their critical infrastructure and grow their businesses.

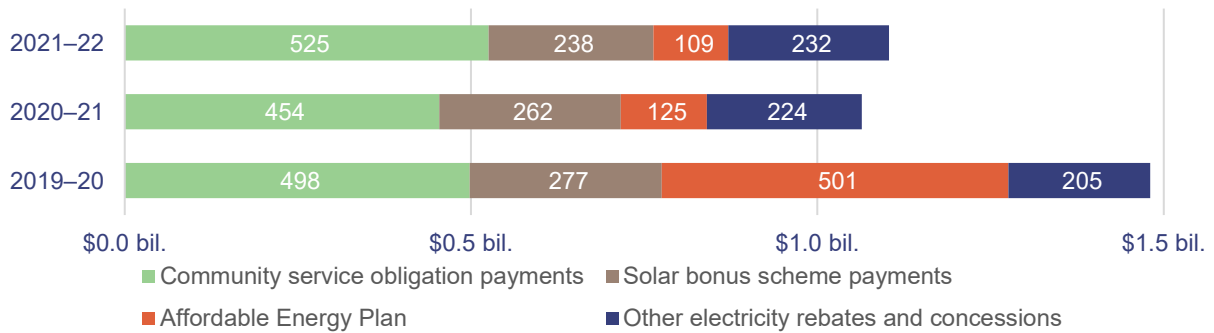
The income tax equivalents payable to the shareholders are based on taxable profits or losses. Generators incurred losses, which were driven by CleanCo's and CS Energy's results in 2021–22. A loss may result in a benefit through a reduction in future tax payments or tax refund.

Source: Compiled by the Queensland Audit Office from Queensland public sector entities' certified financial statements.

Returns to customers have increased

Total returns to customers amounted to \$1.1 billion in 2021–22, an increase of \$39 million (4 per cent) from 2020–21. Figure 3E shows the returns to customers from 2019–20 to 2021–22.

Figure 3E
Total returns to customers have increased since 2020–21



Community service obligation payments (CSO) were made to Energy Queensland to support regional customers by subsidising the high costs of providing electricity to regional Queensland. However, a reduction in retail tariff prices was offset by an increase in the cost to purchase electricity, so CSO payments to Energy Queensland increased by \$71 million compared to 2020–21. Without these payments, Ergon Energy Queensland would have recorded a loss after tax of \$297 million in 2021–22.

The **Affordable Energy Plan** includes the \$50 electricity bill credit to customers and COVID-19 utility relief payments. The COVID-19 relief payments provided to households and eligible small businesses in 2019–20 were not extended.

In response to the higher cost of living caused by increasing electricity prices, the state government will be providing a \$175 Cost of Living Rebate to household electricity bills from September 2022.

Note: The Solar Bonus Scheme relates to payments made by Energy Queensland to customers for the power they contributed to the energy grid through their rooftop solar. The scheme has closed for new applicants and will cease for existing eligible customers on 1 July 2028. Other electricity rebates and concessions mostly consist of payments made to eligible pensioners and seniors.

Source: Compiled by the Queensland Audit Office from Queensland public sector entities' certified financial statements.

The energy sector faces future challenges

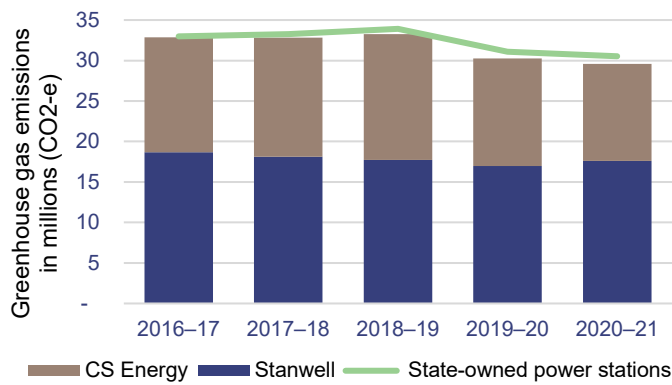
Recent heatwaves and cold weather snaps experienced in Queensland led to higher demand for electricity and placed upward pressure on electricity prices.

Coal, gas, and oil are major sources of greenhouse gas emissions. The Queensland Government is taking steps to cut greenhouse gas emissions. Figure 3F shows the declining emissions by state-owned power stations in Queensland.

The energy sector contributes to greenhouse gas emissions

The state-owned generators – Stanwell and CS Energy – operate coal-fired power stations, which delivered the majority of Queensland's electricity in 2021–22. Based on the Clean Energy Regulator's national greenhouse and energy reporting data, they are among the top 5 emitters in Australia.

Figure 3F
State-owned power stations' emissions are trending downwards



Emissions are declining, but the rate of decline depends on the amount of electricity generated, the quality of coal, and the condition of power station maintenance.

CS Energy and **Stanwell** continue to invest in renewable energy sources and battery storage to offset their emissions and reduce the impact their operations have on the environment.

Notes:

- 2021–22 emissions data has yet to be submitted to the Clean Energy Regulator (the government body responsible for accelerating the reduction of carbon).
- CO2-e is a measure used to compare the emissions from various greenhouse gases by converting them to the equivalent amount of carbon dioxide.

Source: Compiled by the Queensland Audit Office from data submitted by the generators to the Clean Energy Regulator.

As Queensland energy entities become more reliant on renewable energy sources, it is essential that they continue to deliver reliable and affordable electricity. Investments in battery and pumped hydro storage can complement the intermittent output of the renewable energy sources, and stabilise the power grid.

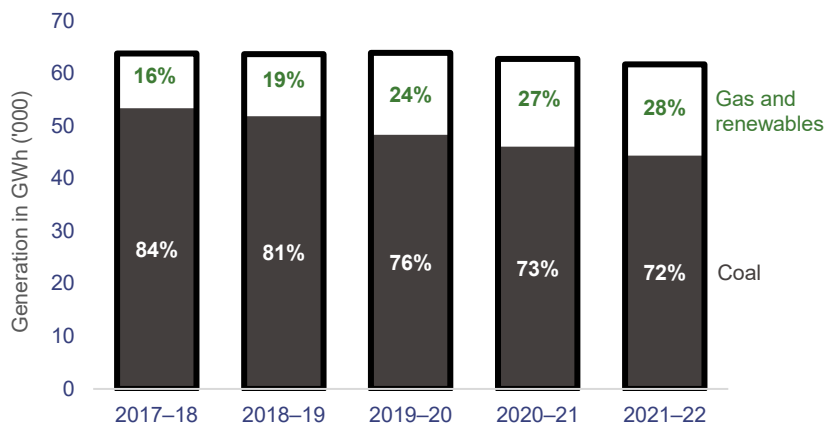
DEFINITION

Pumped hydro storage stores energy. It uses 2 water reservoirs at different elevations to generate power as water moves down through a turbine from one to the other. It acts like a giant battery, storing power during the day and releasing it in peak periods or when needed.

Figure 3G shows the decreasing proportion of coal in Queensland’s generation profile. Over time, the proportion of energy from renewable energy and storage will increase with the reduction in coal-fired generation.



Figure 3G
Coal generation is steadily decreasing, but is still a dominant source of energy in Queensland



The share of electricity generated from coal has decreased by 8,969 GWh (12 per cent) over the past 5 years and in 2021–22 accounted for 72 per cent of energy generated.

The reduction in the reliance on coal is driven by the increasing penetration of renewable energy into the market and outages from coal-fired plants.

The contribution generated from gas has remained relatively stable.

Notes:

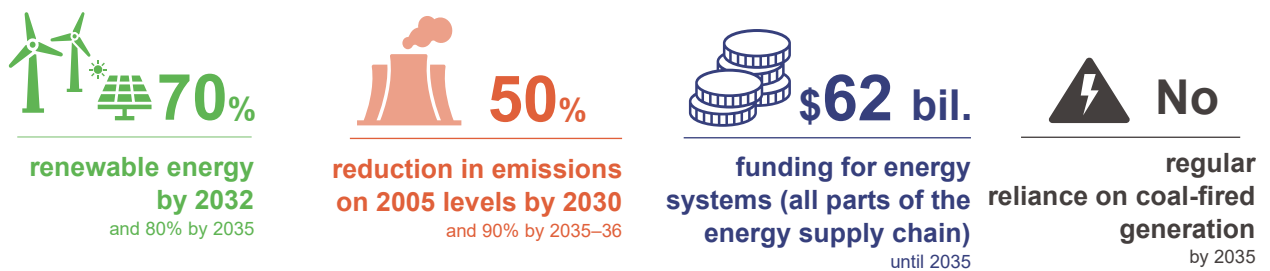
- GWh – a gigawatt hour, which is equal to 1,000 megawatts of energy used continuously for one hour.
- The percentages do not include generation from small-scale generators with capacity of less than 30 MW.

Source: Compiled by the Queensland Audit Office from AEMO and OpenNEM generation data.

Queensland has committed to reaching 70 per cent renewable energy by 2032

On 28 September 2022, the Queensland Government announced the *Queensland Energy and Jobs Plan*, which aims to address some of the challenges faced by the energy sector. Figure 3H sets out the plan’s main commitments.

Figure 3H
Main commitments of the Queensland Energy and Jobs Plan



Source: Compiled by the Queensland Audit Office from the Queensland Energy and Jobs Plan.

Under the *Queensland Energy and Jobs Plan* (the Plan), all state-owned coal-fired power stations will progressively be converted to green energy sources by 2035 to meet the state’s renewable energy targets. They will be used for back-up capacity until new pumped hydro is operational and reliable.

Currently, coal-fired power stations with a generation capacity of 4,465 megawatts (86 per cent of existing state-owned generation capacity) are scheduled for retirement after 2035. The plan does not yet detail how the coal-fired power stations will be converted to green energy sources and the impact on the planned retirement dates.

In 2021–22, the Queensland energy entities announced additional investments in renewable energy projects that include battery storage, power purchase agreements with solar and wind farms, and partnerships with private investors to start feasibility studies for hydrogen projects. These projects were not specifically referenced in the Plan, but they will contribute to achieving the targets for renewable energy and emissions reduction set out in it.

In addition, in August 2022, the state government announced a new entity – Queensland Hydro – that will develop pumped hydro energy storage assets in Pioneer–Burdekin (Mackay–Isaac–Whitsunday region) and Borumba (Wide Bay–Burnett region).

Project assessment and some early works for the new green energy projects will start in 2023. Effective planning is essential for large infrastructure projects. They can be affected by a number of factors, including shortages in skilled labour, increased material costs, and delays in obtaining construction materials. This can mean the projects may not be delivered within approved budgets and target timelines.

In planning for large-scale infrastructure projects as outlined in the Plan, the entities involved will need to comply with relevant government frameworks, such as Queensland Treasury’s *Project Assessment Framework*, for investment proposals and business case development. Compliance with these frameworks will ensure the commercial viability of the projects is appropriately assessed, and that project objectives and benefits are clearly articulated and measured.



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A. Full responses from entities

As mandated in Section 64 of the *Auditor-General Act 2009*, the Queensland Audit Office gave a copy of this report with a request for comments to:

- Minister for Energy, Renewables and Hydrogen and Minister for Public Works and Procurement
- Treasurer and Minister for Trade and Investment
- Under Treasurer, Queensland Treasury.

We also provided a copy of the report to the following entities and gave them the option of providing a response:

- Premier and Minister for the Olympics
- Director-General, Department of the Premier and Cabinet
- Director-General, Department of Energy and Public Works
- chief executive officers for
 - CleanCo Queensland Limited
 - CS Energy Limited
 - Energy Queensland Limited
 - Queensland Electricity Transmission Corporation Limited (trading as Powerlink Queensland)
 - Stanwell Corporation Limited.

This appendix contains the detailed responses we received.

The heads of these entities are responsible for the accuracy, fairness, and balance of their comments.



Comments received from Minister for Energy, Renewables and Hydrogen and Minister for Public Works and Procurement



Minister for Energy, Renewables and Hydrogen
Minister for Public Works and Procurement

Our Ref: MN11154-2022
Your Ref: PRJ03241

22 NOV 2022

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002
By email: qao.mail@qao.qld.gov.au

1 William Street
Brisbane Queensland
GPO Box 2457 Brisbane
Queensland 4001 Australia
Telephone +617 3719 7270
E: epw@ministerial.qld.gov.au

Dear Mr Worrall

Thank you for your email of 31 October 2022 regarding the Queensland Audit Office (QAO) draft *Energy 2022 - Financial Audit Report* (the Draft Report) summarising the audit results of Queensland's six State-owned entities and the opportunity to provide comments.

I welcome that QAO has provided unmodified audit opinions on the 2021-22 financial statements for all the State-owned energy sector entities and I appreciate the consultative approach.

It is an exciting period in the energy sector. I appreciate that the QAO has acknowledged the Queensland Government's announcement of the \$62 billion Queensland Energy and Jobs Plan (the Plan) on 28 September 2022. The Plan sets out Queensland's pathway to a clean, reliable and affordable energy system to provide power for generations while committing to new renewable energy targets of 70% renewable energy by 2032 and 80% by 2035.

I am pleased to advise that the implementation of this Plan is well underway.

This Plan will build the new 'Queensland SuperGrid' – the renewable energy, storage and network infrastructure we need to power our industries, businesses and homes.

The Queensland Government has committed a \$2.5 billion boost to the Queensland Renewable Energy and Hydrogen Jobs Fund to make it a \$4.5 billion fund, to further support the delivery of publicly owned renewables, storage and network investments. This fund will also further support the entities to increase their ownership of Queensland's energy system.

Queensland's publicly owned coal-fired power stations will continue to play an important role in the future energy system as clean energy hubs.

It is noted all energy entities continue to act on the recommendation from QAO's previous report, *Energy 2021 (Report 7: 2021-22)* and *Energy 2020 (Report 11: 2020-21)*, to strengthen the security of their information systems, and while entities took appropriate action on the issues that QAO reported on previous years, energy entities should continue to undertake initiatives to improve their cyber security approaches.

2

Given the ever-increasing threat of cyberattacks and heavy reliance on digital information management systems to the operation of our organisations, it is crucial all energy entities must have stronger security practices to protect against such attacks, related and significant reputational damage.

Entities will be required to include how they are addressing cyber security in regular quarterly updates to shareholding Ministers, along with their Statement of Corporate Intent and Corporate Plan. In addition, the government recently announced a Generator Asset Management and Cyber Security Assurance Review. Key objectives are to ensure current approaches to both asset management and cyber security reflect contemporary practice, appropriately address risks, and ensure the delivery of reliable and secure power to Queensland consumers.

Thank you again for the opportunity to review and respond on the Draft Report. If you need more information or help with this matter, please contact

Yours sincerely



Mick de Brenni MP
Minister for Energy, Renewables and Hydrogen
Minister for Public Works and Procurement



Comments received from Under Treasurer, Queensland Treasury



Queensland Treasury

Our Ref: 04730-2022

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002

Email: QAO.Mail@qao.qld.gov.au

Dear Mr Worrall

Thank you for your correspondence of 31 October 2022 regarding the Queensland Audit Office (QAO) draft *Energy 2022* report (the Report) summarising the audit results of Queensland's six energy entities. I acknowledge the efforts of QAO officers involved in developing the report and their engagement with Queensland Treasury.

I welcome the QAO providing unmodified audit opinions on the 2021–22 financial statements for all energy sector entities and note the QAO's recommendation for all entities to continue to strengthen the security of their information systems.

Queensland's state-owned energy entities play a pivotal role in ensuring Queensland's energy supply remains secure and reliable, which is crucial to Queensland's economy.

As the Report highlights, a confluence of factors during 2021–22 drove significant volatility in energy and commodity markets across the world, including global geopolitical events and extreme weather. Of these, the predominant cause of price volatility has been the increased cost of coal and gas due to the conflict in Ukraine. I acknowledge the work of our energy government-owned corporations throughout this volatile period, whose efforts have ensured Queensland's electricity supply remained secure and reliable.

Wholesale electricity price volatility also impacts generation sector returns, as noted in the Report. Generators seek to manage fluctuations in wholesale electricity prices by entering into contracts to provide revenue and cost certainty. Importantly, balance sheet implications associated with these contracts are expected to reverse as contracts unwind in subsequent years and electricity is delivered.

The *Queensland Energy and Jobs Plan* (the Plan) outlines the State's pathway to transform the Queensland energy system to deliver clean, reliable, and affordable power over the next 10 to 15 years, creating a platform for strong economic growth and continued investment.

1 William Street
GPO Box 611 Brisbane
Queensland 4001 Australia
Telephone +61 7 3035 1933
Website www.treasury.qld.gov.au
ABN 90 856 020 239

The Plan outlines significant investment in renewables, storage and transmission to achieve the 50 per cent Queensland Renewable Energy Target early and attain 70 per cent renewables by 2032 and 80 per cent by 2035. This will support a greater level of energy independence and resilience to guard against future price shocks.

A key enabler of the Plan is the Government's \$4.5 billion *Queensland Renewable Energy and Hydrogen Jobs Fund* for Queensland's energy government-owned corporations to increase investment in commercial renewable energy and hydrogen projects, as well as supporting infrastructure, including in partnership with the private sector.

While current energy market challenges are not unique to Queensland, they do underpin the value of Queensland's energy businesses investing in new battery storage, solar and wind projects, and hydrogen opportunities. These investments will complement the State's existing portfolio of baseload generation assets, which will be critical to ensure security of electricity supply through Queensland's energy transformation.

I also note key observations of the QAO in relation to cyber security and that, while businesses have been taking appropriate actions to address recommendations made by the QAO in the *Energy 2021* report, further work is required to strengthen the security of information systems. This is a key focus for Government and all entities must have strong practices to protect against cyber security threats.

Queensland Treasury, in conjunction with the Queensland Government Chief Information Security Officer and Cyber Security Unit, continues to work with all government businesses (energy, water, and transport) regarding cyber security best practice. This is a critical ongoing work program to ensure entities both achieve desired maturity and sustain an effective position as the sophistication of cyber threats increases.

In addition, the Government recently announced a Generator Asset Management and Cyber Security Assurance Review. Key objectives are to ensure current approaches to both asset management and cyber security reflect contemporary practice, appropriately address risks, and ensure the delivery of reliable and secure power to Queensland consumers.

Thank you again for the opportunity to review and respond to the Report. If you require any further information, please contact

Yours sincerely



Leon Allen
Under Treasurer

21 / 11 / 2022

Comments received from Director-General, Department of Energy and Public Works

Our Ref: MN10875-2022
Your Ref: PRJ03241

21 NOV 2022

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
By email: qao.mail@qao.qld.gov.au



Department of
Energy and Public Works

Dear Mr Worrall

Thank you for your email of 31 October 2022 regarding the Queensland Audit Office (QAO) draft *Energy 2022 - Financial Audit Report* (the Draft Report) summarising the audit results of Queensland's State-owned energy entities and the opportunity to provide comments.

I welcome that QAO has provided unmodified audit opinions on the 2021-22 financial statements for all the State-owned energy sector entities.

I appreciate that QAO has acknowledged the Queensland Government's announcement of the Queensland Energy and Jobs Plan (the Plan) on 28 September 2022, which outlines Queensland's pathway to a clean, reliable and affordable energy system to provide power for generations. The Plan represents a comprehensive roadmap to transform the State's energy system, underpinning future economic growth, jobs and new industries in Queensland.

State-owned energy entities will play an important role in the delivery of the Plan. Implementation is already underway, and the Department of Energy and Public Works (DEPW) will work closely with entities as implementation activity ramps up over the coming years.

I note QAO's advice that all energy entities took appropriate action on the recommendation from QAO's previous report, *Energy 2021 (Report 7: 2020-21)* to strengthen the security of its information systems.

In recognition of the increasing reliance on digital information management systems to the operation of our organisations, it is crucial robust and appropriate controls are in place to protect Queensland's important assets and systems. It is critical for State-owned entities to be prepared for the ever-increasing threat of cyber-attacks.

The safe, secure and reliable operation of the electricity supply system is important for Queensland consumers and industry. That is why – as part of the forthcoming Portfolio Generator Asset Management and Cyber Security Assurance Review – shareholding Ministers have sought independent advice on the security of information systems as it impacts on supply.

Thank you again for the opportunity to review and respond on the draft Report. If you need more information or help with this matter, please contact

Yours sincerely

A blue ink signature of Paul Martyn PSM, written in a cursive style.

Paul Martyn PSM
Director-General

1 William Street
Brisbane Queensland
GPO Box 2457 Brisbane
Queensland 4001 Australia
Telephone +617 3008 2934
Website www.epw.qld.gov.au

B. Legislative context

Frameworks

Energy entities prepare their financial statements in accordance with the following legislative frameworks and reporting deadlines.

Figure B1
Legislative frameworks for the energy sector

Entity type	Entities	Legislative framework	Legislated deadline
Government owned corporations	<ul style="list-style-type: none"> CleanCo Queensland Limited CS Energy Limited Energy Queensland Limited Queensland Electricity Transmission Corporation Limited (trading as Powerlink Queensland) Stanwell Corporation Limited 	<ul style="list-style-type: none"> <i>Government Owned Corporations Act 1993</i> <i>Corporations Act 2001</i> Corporations Regulations 2001 	31 August 2022
Controlled entities	<ul style="list-style-type: none"> Ergon Energy Queensland Pty Ltd 	<ul style="list-style-type: none"> <i>Corporations Act 2001</i> Corporations Regulations 2001 	31 October 2022

Note: A 'controlled entity' is an entity controlled by another entity that does not have capacity to determine its own financial and operating policies.

Source: Compiled by the Queensland Audit Office.

Accountability requirements

The *Government Owned Corporations Act 1993* establishes 4 key principles for government owned corporations:

- clarity of objectives
- management autonomy and authority
- strict accountability for performance
- competitive neutrality (meaning they should not have a competitive advantage over the private sector because they are owned by the government).

Queensland state government financial statements

Each year, Queensland state public sector entities must table their audited financial statements in parliament.

These financial statements are used by a broad range of parties including parliamentarians, taxpayers, employees, and users of government services. For these statements to be useful, the information reported must be relevant and accurate.

The Auditor-General's audit opinion on these entities' financial statements assures users that the statements are accurate and in accordance with relevant legislative requirements.

We express an *unmodified opinion* when the financial statements are prepared in accordance with the relevant legislative requirements and Australian accounting standards. We *modify* our audit opinion when financial statements do not comply with the relevant legislative requirements and Australian accounting standards and are not accurate and reliable.

There are 3 types of modified opinions:

- a qualified opinion – the financial statements as a whole comply with relevant accounting standards and legislative requirements, with the exceptions noted in the opinion
- an adverse opinion – the financial statements as a whole do not comply with relevant accounting standards and legislative requirements
- a disclaimer of opinion – the auditor is unable to express an opinion as to whether the financial statements comply with relevant accounting standards and legislative requirements.

Sometimes we include an *emphasis of matter* in our audit reports to highlight an issue that will help users better understand the financial statements. It does not change the audit opinion.



C. Status of recommendation made in *Energy 2021* (Report 7: 2021–22)

Our report – *Energy 2021* (Report 7: 2021–22) – identified the following recommendation for energy sector entities. These entities have taken appropriate action on the recommendation, but we continue to identify significant control weaknesses in the security of information systems. As a result, this remains a recommendation for energy entities in 2022.

Information systems recommendation requires further action (all entities)		Status
REC 1	<p>Our only recommendation for the energy entities this year is that they address the security of their information systems. This was the same recommendation in <i>Energy 2020</i> (Report 11: 2020–21).</p> <p>While entities took appropriate action to resolve the issues we reported to them last year, the implementation of new information systems meant similar control weaknesses were identified this year.</p> <p>All entities must have strong security practices to protect against cyber attacks, fraud, error, and significant reputational damage. Our report on <i>Managing cyber security risks</i> (Report 3: 2019–20) provides information on effective management of cyber security risks and mitigation strategies.</p>	<p>Further action needs to be taken</p> <p>Energy entities resolved most prior year and current year deficiencies. However, we continue to identify significant control deficiencies relating to information systems, particularly with managing access to the systems. These new issues are usually in different systems or different entities to the ones we identified in previous years.</p> <p>Cyber attacks are a significant risk, with ongoing changes in entities' working environments due to new system implementations, internal restructuring, and high staff turnover.</p> <p>We recommend all energy entities continue implementing policies and processes to strengthen the security of their information systems.</p>

Where a general recommendation has been made for all entities to consider, we have assessed action on issues reported to specific entities in the prior year, as well as any further issues identified in the current year. On this basis, we have concluded whether *appropriate action has been taken* across the sector, or if *further action needs to be taken* to address the risk identified.

Status	Definition
Appropriate action has been taken	Recommendations made to individual entities have been implemented, or alternative action has been taken that addresses the underlying issues and no further action is required. No new issues have been identified across the sector that indicate an ongoing underlying risk to the sector that requires reporting to parliament.
Further action needs to be taken	Recommendations made to individual entities have not been fully implemented, and/or new recommendations have been made to individual entities, indicating further action is required by entities in the sector to address the underlying risk.

D. Opinions for entities preparing financial and other reports

The following table details the types of audit opinions we issued in accordance with Australian auditing standards for the 2021–22 financial year.

Figure D1
Our audit opinions for energy sector financial reports for 2021–22

Entity type	Entity	Date audit opinion issued	Type of audit opinion issued
Generation	CleanCo Queensland Limited	25.08.2022	Unmodified
	CS Energy Limited	26.08.2022	Unmodified
	Stanwell Corporation Limited	26.08.2022	Unmodified
Transmission	Queensland Electricity Transmission Corporation Limited (trading as Powerlink Queensland)	31.08.2022	Unmodified
Distribution	Energy Queensland Limited	19.08.2022	Unmodified
Retail	Ergon Energy Queensland Pty Ltd	17.08.2022	Unmodified

Note: We express an *unmodified opinion* when the financial statements are prepared in accordance with the relevant legislative requirements and Australian accounting standards.

Source: Queensland Audit Office.

Regulatory information notices

The Australian Energy Regulator (AER) regulates the amount of income distribution entities can earn. To monitor outcomes and prepare for future determinations, it uses regulatory information notices.

The AER issued new revenue determinations for Energex and Ergon (the distribution businesses of Energy Queensland) covering the 5-year regulatory control period from 2020–2025. These determinations have reset Energy Queensland’s revenue allowance to the lowest level ever since the businesses became regulated.

For the year ended 30 June 2022, Energex and Ergon have completed a set of templates, along with a ‘basis of preparation’ that describes how each template has been prepared for submission. These notices are subject to an audit (if the information is based on *actual* data) or a review (if the information is based on *estimated* data).

Figure D2
Results of 2021–22 audits and reviews of Energex and Ergon annual regulatory notices

Type of information provided	Certification date	Type of report issued
Financial	28.10.2022 (Energex)	3 unmodified audit opinions 3 unmodified review conclusions
	28.10.2022 (Ergon)	3 unmodified audit opinions 3 unmodified review conclusions
Non-financial	28.10.2022 (Energex)	3 unmodified review conclusions
	28.10.2022 (Ergon)	3 unmodified review conclusions

Source: Compiled by the Queensland Audit Office.

Australian financial services licences

Energy sector entities are required to hold an Australian financial services licence if they enter into fixed-price contracts designed to manage the risk of fluctuating electricity prices. They must meet the requirements set out in their licences.

To confirm their compliance, these entities lodge forms annually, within 4 months of the end of the financial year, to the Australian Securities and Investments Commission.

Figure D3
Results of 2021–22 audit of Australian financial services licences

Entity	Certification date	Type of opinion issued
CleanCo Queensland Limited	31.08.2022	Unmodified
CS Energy Limited	26.10.2022	Unmodified
Ergon Energy Queensland Pty Ltd	06.10.2022	Unmodified
Stanwell Corporation Limited	26.08.2022	Unmodified

Source: Compiled by the Queensland Audit Office.



E. Entities not preparing financial reports

When entities are part of a group and are secured by a deed of cross guarantee (which means other entities in that group agree to cover debts), they are not required by the Australian Securities and Investments Commission (ASIC) to prepare financial statements. Small companies that meet specific criteria under the *Corporations Act 2001* also do not have to prepare financial statements.

Accordingly, the Auditor-General will not issue audit opinions for the following entities for 2021–22, as they were not required to produce financial statements.

Figure E1
Energy sector entities not preparing financial reports in 2021–22

Public sector entity	Reason for not preparing financial statements
Generation	
Controlled entities of CS Energy Limited	
Aberdare Collieries Pty Ltd	Deed of cross guarantee ASIC order
Callide Energy Pty Ltd	Deed of cross guarantee ASIC order
CS Energy Group Holdings Pty Ltd	Dormant
CS Energy Group Operations Holdings Pty Ltd	Dormant
CS Kogan (Australia) Pty Ltd	Deed of cross guarantee ASIC order
CS Energy Kogan Creek Pty Ltd	Deed of cross guarantee ASIC order
CS Energy Oxyfuel Pty Ltd	Deed of cross guarantee ASIC order
Kogan Creek Power Pty Ltd	Deed of cross guarantee ASIC order
Kogan Creek Power Station Pty Ltd	Deed of cross guarantee ASIC order
T75 CS Energy Segregated Cell of White Rock Insurance (SAC) Ltd	Deed of cross guarantee ASIC order
Controlled entities of Stanwell Corporation Limited	
Energy Portfolio 1 Pty Ltd	Dormant
Glen Wilga Coal Pty Ltd	Dormant
Goondi Energy Pty Ltd	Non-reporting
Mica Creek Pty Ltd	Deed of cross guarantee ASIC order
SCL North West Pty Ltd	Deed of cross guarantee ASIC order
Tarong Energy Corporation Pty Ltd	Dormant
Tarong Fuel Pty Ltd	Deed of cross guarantee ASIC order

Public sector entity	Reason for not preparing financial statements
Tarong North Pty Ltd	Non-reporting
TEC Coal Pty Ltd	Deed of cross guarantee ASIC order
TN Power Pty Ltd	Deed of cross guarantee ASIC order
Transmission	
Controlled entities of Powerlink	
Harold Street Holdings Pty Ltd	Non-reporting
Powerlink Transmission Services Pty Ltd	Non-reporting
Queensland Capacity Network Pty Ltd	Non-reporting
Distribution	
Controlled entities of Energy Queensland Limited	
Energex Limited	Deed of cross guarantee ASIC order
Ergon Energy Corporation Limited	Deed of cross guarantee ASIC order
Ergon Energy Telecommunications Pty Ltd	Non-reporting
Metering Dynamics Pty Ltd	Deed of cross guarantee ASIC order
SPARQ Solutions Pty Ltd	Deed of cross guarantee ASIC order
Varnsdorf Pty Ltd	Dormant
VH Operations Pty Ltd	Dormant
Yurika Pty Ltd	Deed of cross guarantee ASIC order

Note: A 'controlled entity' is an entity controlled by another entity that does not have capacity to determine its own financial and operating policies.

Source: Compiled by the Queensland Audit Office.



F. Financial results

Figure F1
Energy sector entities – for the year ended 30 June 2022

Amounts in \$'000								
Entity	Total assets	Total liabilities	Total income	Total expenses (incl. tax)	Operating result after tax	Returns to shareholders	Finance costs	Total borrowings
CleanCo	1,227,885	1,402,461	425,247	723,014	(297,767)	(127,168)	2,415	642,135
CS Energy	7,126,423	7,680,621	1,727,888	1,823,370	(95,482)	(44,007)	41,221	891,778
Energy Queensland	28,437,000	23,613,000	5,415,000	5,037,000	378,000	161,000	625,000	18,473,000
Powerlink	8,751,858	6,540,846	1,128,543	929,514	199,029	164,070	213,432	5,216,846
Stanwell	13,611,568	14,515,691	3,954,081	3,805,674	148,407	59,715	47,079	1,521,543
Total	59,154,734	53,752,619	12,650,759	12,318,572	332,187	213,610	929,147	26,745,302
Ergon Energy Queensland	2,235,556	1,017,509	2,238,993	2,041,300	197,693	129,721	569	–

Note: The results of Ergon Energy Queensland are included in the results of Energy Queensland.

Source: Compiled by the Queensland Audit Office.

Figure F2
Energy sector entities – for the year ended 30 June 2021

Amounts in \$'000 (restated*)								
Entity	Total assets	Total liabilities	Total income	Total expenses (incl. tax)	Operating result after tax	Returns to shareholders	Finance costs	Total borrowings
CleanCo	464,674	237,739	253,615	269,532	(15,917)	(9,277)	1,976	–
CS Energy*	1,858,589	1,697,612	1,084,882	1,354,490	(269,608)	(115,537)	38,450	557,353
Energy Queensland	26,754,000	23,125,000	4,906,000	4,604,000	302,000	348,000	681,000	18,152,000
Powerlink	8,307,647	6,451,815	985,208	898,239	86,969	368,542	220,220	5,242,228
Stanwell	3,555,278	2,592,901	2,735,632	2,360,195	375,437	268,686	54,041	829,236
Total	40,940,188	34,105,067	9,965,337	9,486,456	478,881	860,414	995,687	24,780,817
Ergon Energy Queensland	696,840	475,752	1,890,636	1,745,603	145,033	162,271	533	–

Notes:

- The results of Ergon Energy Queensland are included in the results of Energy Queensland.
- *Prior year figures for CS Energy were restated to account for a change in accounting for software costs.

Source: Compiled by the Queensland Audit Office.

G. Wholesale electricity prices

Figure G1
Historical wholesale electricity prices

Average price by year (\$ per MWh)					
Financial year	NSW	QLD	SA	VIC	TAS
2018–19	\$88.56	\$80.29	\$109.80	\$109.81	\$90.01
2019–20	\$71.95	\$53.41	\$62.04	\$73.74	\$55.05
2020–21	\$64.81	\$61.81	\$44.83	\$45.93	\$43.69
2021–22	\$132.35	\$162.05	\$104.60	\$91.06	\$84.89
Movement from 2020–21 to 2021–22	\$67.54	\$100.24	\$59.77	\$45.13	\$41.20
Movement % from 2020–21 to 2021–22	104%	162%	133%	98%	94%

Notes:

- MWh – a megawatt hour, which is equal to 1,000 kilowatts of energy used continuously for one hour.
- NSW – New South Wales; QLD – Queensland; SA – South Australia; VIC – Victoria; TAS – Tasmania.

Source: Compiled by the Queensland Audit Office from Australian Energy Market Operator pricing data extracted on 6 December 2022.





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qao.qld.gov.au/contact-us

T: (07) 3149 6000
E: qao@qao.qld.gov.au
W: www.qao.qld.gov.au
53 Albert Street, Brisbane Qld 4000
PO Box 15396, City East Qld 4002