

A. Entity responses

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 the:

- Director-General, Department of Energy and Public Works
- Minister for Energy, Renewables and Hydrogen and Minister for Public Works and Procurement.

We also provided a copy of the report to the following entities with an invitation to respond:

- Premier and Minister for the Olympics
- Director-General, Department of the Premier and Cabinet.

The head of the entity is responsible for the accuracy, fairness, and balance of its comments.

This appendix contains its detailed responses to our audit recommendations.



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

Your Ref: PRJ02731
Our Ref: MN08101-2021

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11 NOV 2021

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
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Dear Mr Worrall *Brendan*

Thank you for your report on Managing Queensland's Transition to Renewable Energy.

The Palaszczuk Government has a strong track record in progressing the uptake of renewable energy and in doing so, creating jobs for Queenslanders.

I acknowledge the Director-General of the Department of Energy and Public Works has provided a response to the report recommendations.

Further, I understand the Director-General has also outlined the work the Department does to pursue a nationally consistent agenda for energy policy that benefits Queenslanders.

Additionally, I provide the following commentary on the Palaszczuk Government's ongoing initiatives in renewable energy.

Track Record

In 2016, the Government-appointed Renewable Energy Expert Panel (the expert panel) found a 50 per cent renewable energy target for Queensland by 2030 was feasible. The expert panel estimated 5,500 megawatts of additional renewable capacity would be required by 2030 to meet the target.

The expert panel recommended the Government should pursue the integration of climate and energy policy settings at the national level as the most efficient way to increase the uptake of renewable energy.

The expert panel also recommended against legislating the Queensland Renewable Energy Target (QRET) at that time. The Government accepted the recommendations of the expert panel, and actively advocated for national energy and climate reforms until the failure of national policy development resulted in States having to 'go it alone'.

In 2017, the Government committed to achieving the QRET of 50 per cent renewables by 2030. QRET is not legislated but is supported by planned and measured investments and facilitation work.

The Palaszczuk Government has ensured significant growth in both small and large scale renewables. In 2017, Queensland had just 1,700 megawatts of rooftop solar, this has now reached over 3,700 megawatts in only four years.

Queensland's policy settings have ensured the number of installed residential photovoltaic systems has grown to 676,000 and the total number of installed rooftop systems has now passed the milestone of 700,000.

The Palaszczuk Government's strong record also includes:

- Supporting investment in over 5,100 megawatts of renewable generation with over forty wind and solar farms built and 7,000 construction jobs supported through our 50% renewable energy target
- Taking renewable generation from 7 per cent to more than 20 per cent
- Delivering a Queensland Hydrogen Industry Strategy ahead of the National Hydrogen Roadmap and committing more than \$60 million to support hydrogen projects and training facilities
- Committing \$145 million to develop renewable energy zones, including a \$40 million investment to upgrade over 300km of transmission infrastructure between Cairns and Townsville which will enable up to 500 megawatts of new renewable energy connection capacity including the 157-megawatt Kaban wind farm
- Providing \$147 million to build the transmission line to support the Genex Kidston 250 megawatt pumped hydro project to financial close
- Installing solar panels at more than 800 state schools to generate over 60 megawatts of solar power
- Delivering Australia's first electric vehicle superhighway; and
- Entering into an implementation agreement with CopperString 2.0 on a proposal to connect the North West Minerals Province with the National Electricity Market.

State-based Initiatives

The Queensland Solar Bonus Scheme was committed to and established in 2008. The scheme provided a feed-in-tariff to support residential consumers to increase their uptake of domestic solar systems.

The release of the Powering Queensland Plan in 2017 led to the announcement of numerous renewable energy commitments including:

- A commitment to a 50 per cent renewable energy target by 2030.
- A commitment to establish CleanCo as a government-owned clean energy generator with a goal of achieving 1000 megawatts of new renewable generation by 2025.
- To deliver a reverse auction of 400 megawatts of renewable energy capacity (R400).

I can advise CleanCo was established in 2018 and will exceed its original 1000-megawatt commitment.

Since 2015, enabled by the aforementioned policy initiatives, there are now 48 large scale renewable energy projects in operation or in various stages of delivery, and when complete in approximately 2025 will push Queensland's renewable energy capacity to over 10,000 megawatts or almost 45 per cent of all generation capacity.

The Government's commitments have established the direction and focus for the Queensland market and laid the foundations for the Queensland energy sector ahead of the arrival of COVID-19, which led many Queenslanders and local governments to re-focus their attention on efforts to drive economic recovery and restore Queensland's positive social footing.



Since 2020 however, Queensland has continued to facilitate significant growth in renewables with new policy settings and programs.

These include \$145 million in 2020 to establish Queensland Renewable Energy Zones (QREZ), signalling to energy developers and investors desirable locations for the establishment of renewable energy projects and effective integration of projects into the energy system.

In September 2020, the Government asked for renewable energy projects to register their interest in investing in the Northern, Central and Southern QREZ. The response exceeded expectations, with 192 renewable projects making submissions representing over 60,000 megawatts of renewable energy potential.

Building on this strong investor interest, I have today released a Discussion Paper on QREZ design and access, which as a first stage identifies a combined 3,300 megawatts of new renewable connection capacity. The Government has worked closely with Powerlink Queensland (the publicly-owned transmission business and Jurisdictional Planning Body), to prepare a proposed framework for the first stages of unlocking investment in each QREZ.

A \$500 million commitment to a Queensland Renewable Energy Fund was announced in 2020 to enable government owned corporations to complement private sector investment.

This was expanded to \$2 billion with the announcement of the Queensland Renewable Energy and Hydrogen Jobs Fund in 2021, further signalling the government's intentions to grow the renewables and hydrogen sector and create jobs by supporting government owned corporations to partner with industry to drive the sector forward.

The projects from this fund (yet to be announced) will demonstrate the effectiveness of government investment in this sector.

In 2021, the Palaszczuk Government committed \$22 million to undertake a detailed design and cost analysis for a one gigawatt 24 hour pumped hydroelectric storage facility at Borumba Dam. Tenders for design work are due to open in coming weeks.

A range of other initiatives are underway and include the Government's Queensland Electric Vehicle Strategy and the QFleet Electric Vehicle Strategy.

Green Hydrogen

The Government has ensured positive change in Queensland's renewable energy transformation. What began as small incremental changes in the Queensland energy sector has now translated to significant commitments and the establishment of Queensland as a renewable energy and hydrogen superpower.

In 2019, The Palaszczuk Government released the Hydrogen Industry Strategy 2019-2024 and the \$15M Hydrogen Industry Development Fund (HIDF). The HIDF is supporting further uptake of renewable energy, with the four projects funded so far including a renewable hydrogen gas blending trial, remote renewable hydrogen power systems and renewable hydrogen fuel-cell transport projects. A further round of projects enabled by the HIDF are to be announced shortly.

In October 2021, Fortescue Future Industries (FFI) and the Palaszczuk Government announced a new partnership for one of the world's largest hydrogen-equipment manufacturing facilities to be constructed in Gladstone.

Amongst other initiatives, the Government has supported publicly owned Stanwell Corporation in partnership with Japan's Iwatani Corporation to develop a proposed 3 gigawatt hydrogen electrolyser plant in the state's Gladstone region, and we have formalised our partnership with



Sumitomo Corporation, Gladstone Ports Corporation, Gladstone Regional Council, CQUniversity Australia, Australian Gas Infrastructure Group and publicly owned CleanCo to develop Australia's first hydrogen ecosystem in Central Queensland.

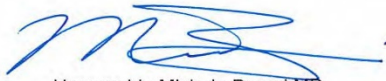
Energy Plan

Thank you for acknowledging the development of the Energy Plan as announced by the Premier and Minister for the Olympics in Townsville in June 2021.

I am pleased to advise that development of the plan is well progressed with stakeholder and community engagement currently underway, including the design and access arrangements for QREZ.

Based on current performance, Queensland is progressing well to meet its 50 per cent QRET, but more work is required, and it is expected the Energy Plan will chart a course to ensure the achievement of the target concurrently with cheaper, cleaner electricity and more jobs, in more industries in Queensland.

If you require any further information or assistance with this matter please contact [REDACTED]



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



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



Department of
Energy and Public Works

Your Ref: PRJ02731

8 November 2021

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
City East QLD 4002

Dear Auditor-General

Thank you for providing the draft Queensland Audit Office (QAO) report on *Managing Queensland's transition to renewable energy*, and associated recommendations for our review and response. The Department of Energy and Public Works (the department) has now reviewed the draft report and considered the recommendations.

In 2017, the Queensland Government committed to achieving the Queensland Renewable Energy Target (QRET) of 50 per cent renewables by 2030. QRET is not legislated but is supported by planned and measured investments and facilitation work.

The QRET is calculated as the state's total amount of renewable electricity output as a proportion of total electricity consumed in Queensland at any time. The calculation is based on energy consumed within Queensland as Queensland is an electricity generation powerhouse and net exporter of electricity across the border to southern states..

National Market Reform

The framework that governs the National Electricity Market (NEM) determines how the physical and financial electricity market operates nationally, including in Queensland, and how effectively it supports the adoption of renewables and other emerging technologies such as battery storage and distributed energy resources.

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In 2019, the former Council of Australian Governments (COAG) Energy Council approved a Strategic Energy Plan for the NEM. This plan built on the recommendations in the 2017 Finkel Review covering the transition in the NEM from large scale thermal generation (mainly coal fired) towards large and small scale renewable generation (mainly wind and solar). The plan identifies Energy Ministers' objectives for the NEM and actions to achieve those objectives ([Strategic Energy Plan - November 2019 \(energyministers.gov.au\)](#)).

The Energy Security Board, which comprises the heads of each of the NEM market bodies (the Australian Energy Market Commission, the Australian Energy Regulator, and Australian Energy Market Operator), is tasked with providing strategic advice to Energy Ministers and reviews progress against the Strategic Energy Plan each year. This annual report (the [Health of the NEM](#)) also summarises the major reform work underway across the NEM.

The Queensland Government is directly involved in work to evolve and reform the NEM to meet the challenges of the transitioning market, through the Energy National Cabinet Reform Committee (ENCRC – replacing the former COAG Energy Council) and Energy Ministers' Meeting.

These two groups are comprised of Energy Ministers from each NEM jurisdiction, and they collectively have oversight of all the major NEM reforms, determining their direction and endorsing major change before it occurs. The Ministers' forums are supported by a working group of Senior Officials (heads of department) from each NEM jurisdiction.

In these forums, Queensland advocates for reform outcomes that deliver value for electricity customers to address Queensland's energy needs. At a departmental level, the Queensland Government also engages directly with the market bodies, who lead much of the reform work on Ministers' behalf. Queensland also participates in working groups, consultations and liaises with industry and consumer groups to advocate for Queensland's interests and to ensure the perspectives of Queensland stakeholders are represented.

A key project for delivering a market design for the NEM, that accommodates the transition to renewables underway and expected in the future, is the Energy Security Board led Post-2025 Market Design project. This is a multi-year project to introduce immediate and long-term changes to the design of the market to ensure that the future market is fit for purpose to accommodate the energy transformation underway.

In addition to the new settings we are pursuing at a national policy and framework level, Queensland has also been highly effective at increasing uptake of renewables through its numerous state-based initiatives. I understand the Honourable Mick de Brenni, Minister for Energy, Renewables and Hydrogen and Minister for Public Works and Procurement is also responding to you on Queensland-based initiatives.

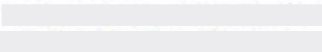
Your recommendations

The government's proposed Energy Plan, announced in June 2021, is progressing and will address recommendation one. During that planning process, consideration will be given to appropriate review points for progress towards 2030 (recommendation two).



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The department notes the differences in methodology for the treatment of data preferred by the QAO in relation to the calculation of QRET (recommendations four and five). Based on QAO's preferred methodology, Queensland is at 20.02 per cent for the past 12 months, as of 1 November 2021, which is a significant achievement in only a few short years. The department will publish the details of the QRET methodology on its website (recommendation three).

If you require any further information about this matter, 

Yours sincerely



Paul Martyn
Director-General



Responses to recommendations



Department of Energy and Public Works

Managing Queensland's transition to renewable energy

Response to recommendations provided by Paul Martin, Director-General, Department of Energy and Public Works on 19 November 2021

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
<p>We recommend that the Department of Energy and Public Works:</p> <ol style="list-style-type: none"> Publicly communicates its overall vision and objectives for the transition to renewable energy and sets out more information on its desired end state. This could include its optimal generation mix, desired locations, and preferred ownership model for new renewable energy in Queensland (Chapter 2). 	Agree	Q2 2022-23	The Queensland Government's proposed Energy Plan, announced in June 2021, is progressing and will address recommendation 1.
<ol style="list-style-type: none"> Conducts an interim review by 2025 to formally assess its progress towards the target and to consider further actions to support its achievement of the target. These could include additional investment on network infrastructure, increased support for generators or other actions to address external factors (Chapter 2). 	Agree	Q4 2025-26	The Queensland Government's proposed Energy Plan, announced in June 2021, is progressing and consideration will be given to appropriate review points for progress towards 2030.
<ol style="list-style-type: none"> Publishes a detailed public statement of how Queensland's renewable energy target is defined and measured (Chapter 1). 	Agree	Q4 2021-22	
<ol style="list-style-type: none"> Updates its calculations of progress against the target to fully account for all relevant renewable energy, such as small-scale renewable, and non-renewable energy, such as diesel generation (Chapter 1). 	Agree	Q4 2021-22	<p>The Department notes the differences in methodology for treatment of data preferred by the QAO in relation to the calculation of QRET.</p> <p>The Department has updated its assumptions around the calculation of QRET.</p>
<ol style="list-style-type: none"> Reports more information on: <ul style="list-style-type: none"> actual renewable generation including, for example, the amount of energy generated from wind, solar and other sources the assumptions which support its renewable energy forecast (Chapter 2) 	Agree	Q4 2021-22	The Department notes the differences in methodology for treatment of data preferred by the QAO in relation to the calculation of QRET.

