QUEENSLAND resources COUNCIL

QRC **STATE OF THE SECTOR**

MARCH 2021 QUARTER


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QRC CEOs PLAN TO RESOURCE THE FUTURE

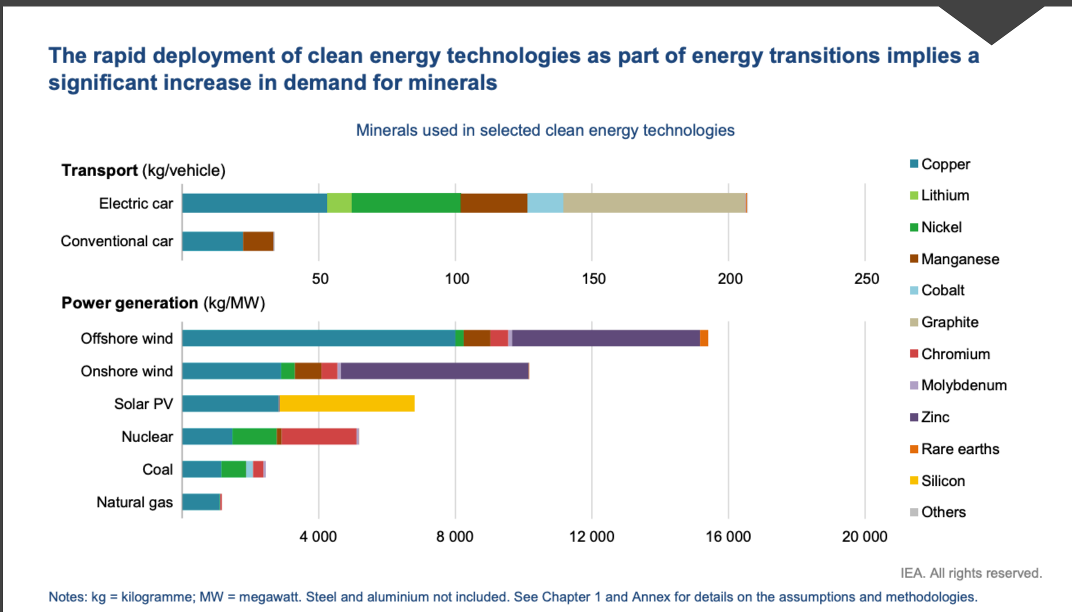
Queensland has long produced the raw materials for our everyday lives. The world's demand for our resources has underpinned Queensland's economic recovery from COVID and will power the sector's bright future.

Queensland's traditional resource exports of coal, LNG and metals will remain major contributors to the economy for many years to come. Across Queensland Treasury's forward estimates to 2024-25, the state budget projects Queensland coal export volumes to increase by 23% while LNG and metals export volumes are expected to remain stable. But looking further ahead, Queensland Treasury anticipates a broadening of the resources sector:

> *"While Queensland's economy has long relied on traditional resources such as coal and gas, there is also an increasing demand for new economy minerals used to make the products of the future."*
>
> Queensland Budget Strategy and Outlook 2021-22

The opportunity created by these new sources of demand is substantial. A recent International Energy Agency (IEA) report said that a concerted effort to reach the goals of the Paris Agreement would mean a quadrupling of mineral demand for clean energy technologies by 2040. An even faster transition, to hit net-zero globally by 2050, would require six times more demand for minerals in 2040 than today (see chart).[1] Electric vehicles and battery storage are the driving force behind the demand, growing at least thirty times to 2040.

CHART 1: IEA - ROLE OF CRITICAL MINERALS



Source: IEA

QRC member CEOs are optimistic that Queensland can capture much of this low emissions-led growth. According to the latest QRC CEO sentiment survey, 72% of CEOs said the demand for Queensland's resources will grow in line with the world's increasing demand for low emission technologies and more than half (56%) of CEOs agreed that hydrogen presents another resource export opportunity for Queensland.

[1] IEA The Role of Critical Minerals in Clean Energy Transitions

But the same trends that are driving global demand for Queensland's resources are also shaping Queensland's resource operations. QRC member CEOs said they are already looking to be part of a low emissions future on site, with nearly a quarter (22%) of CEOs currently using renewable energy to power parts of their operations and almost two-thirds (65%) of CEOs expecting to undertake investments to reduce emissions from their own operations over the next 12 months.

The resource industry is already well down the path of electrification, which is a critical first step in reducing the emission footprint of operations. Compressor stations, conveyor belts, draglines, grinding mills and reverse osmosis plants are already electrified.

CEOs said everything from green power contracts to battery-operated underground vehicles is under consideration. In May, Coronado said it is "assessing options for a "behind the meter" type solar farm and opportunities to harvest incidental coal seam gas (fugitive emissions - Scope 1) to generate electric power on site at Curragh."[2]

Meanwhile QRC member Sojitz, together with ENEOS, recently announced the construction of a 204MW solar farm at Edenvale, 300 kilometres west of Brisbane. The project will create 400 jobs during construction and once complete, the solar farm will sell 70% of its electricity to a local electricity retailer, while part of the remaining 30% will be supplied to Sojitz's Gregory Crinum coal mine.[3]

Source: Sojitz | Rendering Image of the Solar Farm

The key message from QRC member CEOs is that Queensland's low emissions future will need to be customised for local conditions. 94% of CEOs said that a range of technologies will be needed for Queensland to transition to a low emission economy.

The pipeline of low emissions investments by the sector is likely to grow. According to this quarter's survey, 71% of CEOs said they are currently undertaking or contributing to research and development of low emission technology or practices for their operations. That's over three quarters or 31 percentage points higher than the 40% of QRC CEOs that reported undertaking research and development in 2019.

It's clear that through their operations and investment, QRC members are working to lower emissions and reduce costs by improving energy efficiency, adopting renewable energy, investing in co-generation or the latest low-emission research. The Queensland resources sector is committed to being part of the global effort to reduce emissions. Given a stable and supportive policy environment, these technologies can drive a sustainable future for the sector and just as importantly, deliver more opportunities for Queenslanders.

[2] Coronado 2020 Sustainability Report [3]Sojitz , The Queensland Cabinet and Ministerial Directory

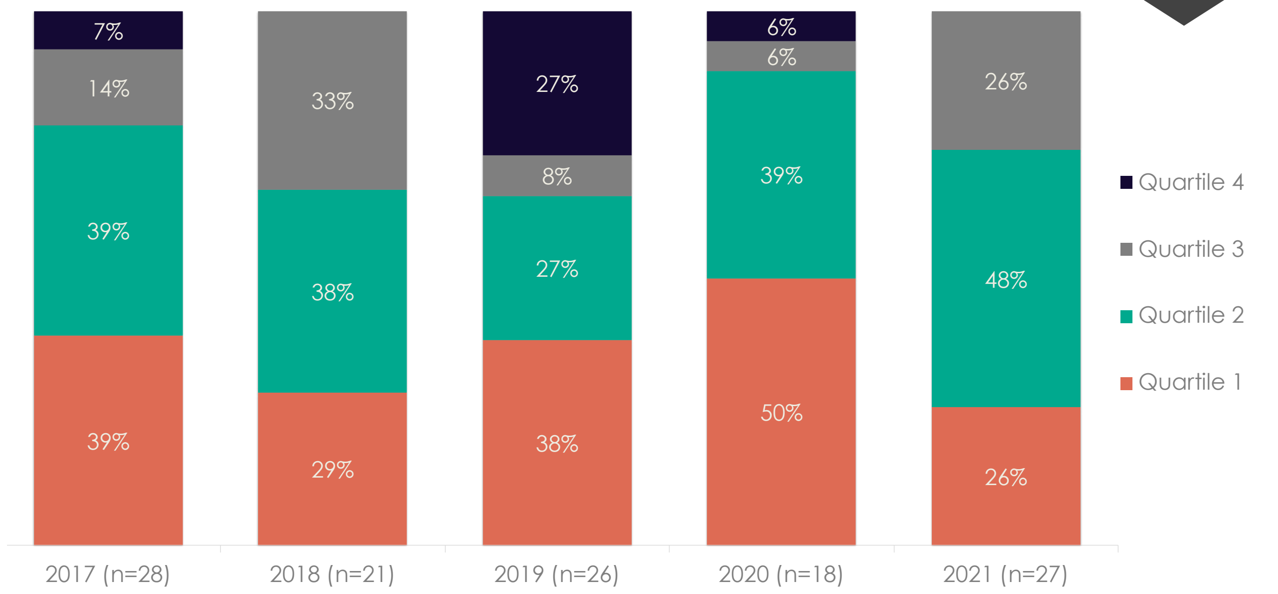
CUTTING QUEENSLAND COSTS - KEY TO GROWTH

Queensland's resources sector is reliant on exports to achieve the scale necessary for growth and efficiency. To grow to their market share and attract global investment, Queensland's resources operators must remain competitive and contain costs.

Each year the QRC asks member CEOs to rate their Queensland operations against global competitors. The March 2021 quarter results show that several QRC members have struggled to contain costs in the year since COVID began.

Queensland's mining operations went into COVID in a strong position, with almost 90% of operations sitting in quartiles 1 and 2 — or the bottom half of the cost curve. However, in the year since COVID began this strong position has deteriorated, with around one quarter of operations now sitting in the higher cost quartiles. That's more than double the 12% of mining operations reported as high cost in 2020.

CHART 2: QUEENSLAND MINING OPERATIONS COST QUARTILE COMPARISON 2017-21

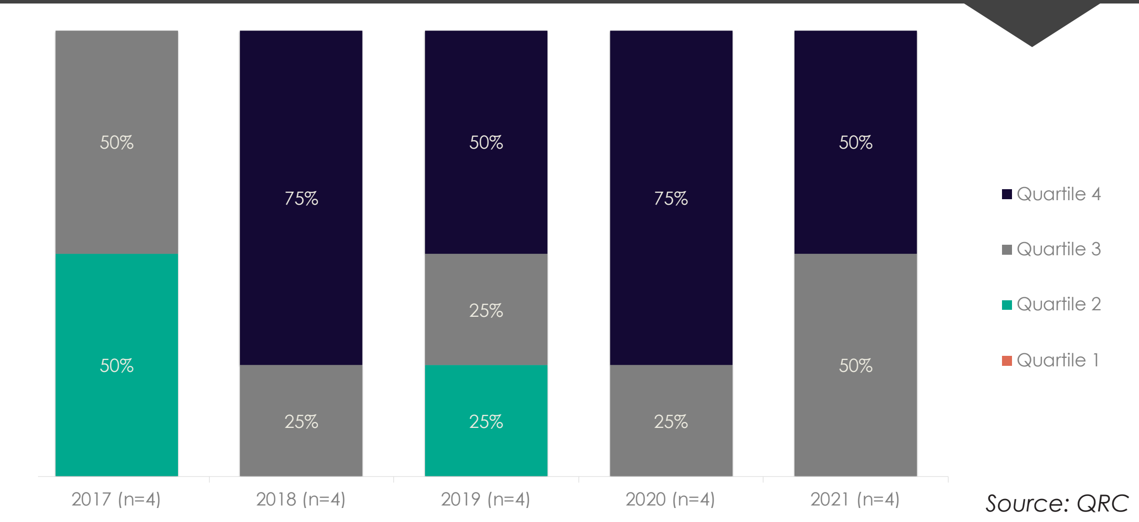


Source: QRC

> *An easing of coal price pressure will enable more projects to proceed to the feasibility stage"*
> QRC member CEO, May 2021

Queensland's oil and gas producers improved their cost position slightly, with half of producers sitting in the highest cost quartile, down from 75% in 2020. Yet it's clear that Queensland oil and gas producers face substantial cost pressures, with all operations remaining in the top half of the cost curve. This year's result is a strong deterioration from five years ago, where half of Queensland's oil and gas operations were in quartile 2, or in the low-cost half of global producers, and no operations sat in the highest cost quartile.

CHART 3: QUEENSLAND OIL AND GAS OPERATIONS COST QUARTILE COMPARISON 2017-21



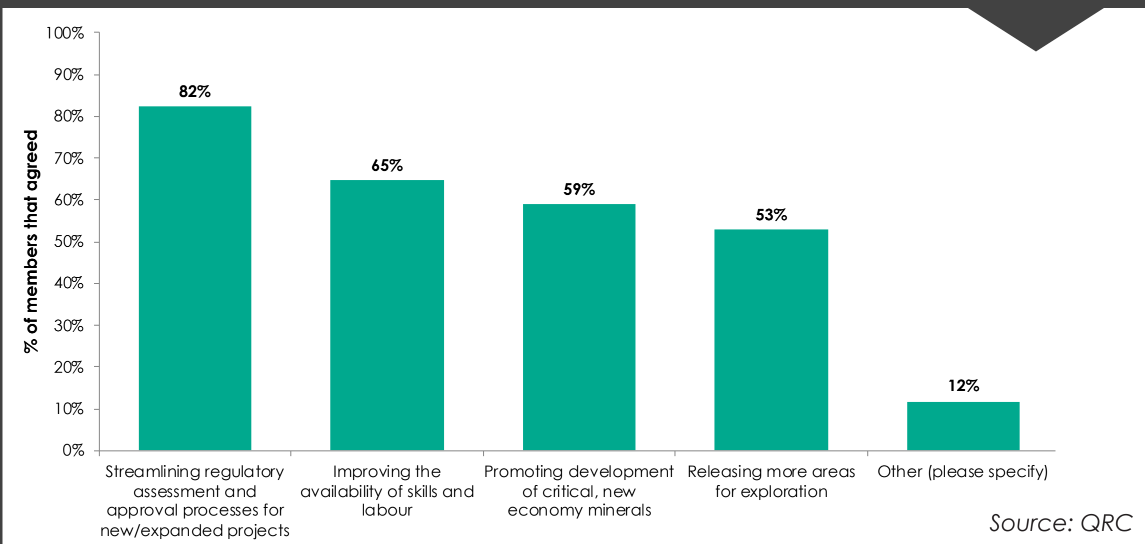
Source: QRC

Looking ahead, QRC member CEOs expect costs to remain a challenge for at least the next 12 months. More than a quarter (28%) of QRC member CEOs said their operations will not have positive cash margins for the next 12 months, up from the 16% reported at the beginning of the COVID pandemic.

Given the cost challenges, the Queensland Government's willingness to support the sector is a strong cause for optimism. In April, the Queensland Government launched its Queensland Resources Industry Development Plan (QRIDP), which will focus on removing barriers to growth, creating opportunities and streamlining processes to boost our global profile without compromising Queensland's reputation as a safe and sustainable resources producer.

This quarter's QRC CEO sentiment survey asked CEOs to turn their minds to the QRIDP and identify the opportunities for growth. The results clearly indicate that the fundamental ingredients needed to support the sector have not changed, with 82% of CEOs calling out streamlining regulatory assessment and approval processes for new or expanded projects as an opportunity. Almost two thirds of CEOs said improving the availability of skills and labour was a priority and more than half agreed that promoting development of critical, new economy minerals and releasing more areas for exploration were important for growth (see chart).

CHART 4: CEOs POINT TO QRIDP'S OPPORTUNITIES FOR GROWTH



Source: QRC

While it's early in the QRIDP's development, the resources sector welcomes the genuine opportunity to work with the Queensland Government to cut costs, remove unnecessary red tape and identify pathways for growth. Maximising the potential from our resources in a world-leading and sustainable way is in the best interests of all Queenslanders. This is certainly positive news for a sector that supports one in six Queensland jobs.

[16]ABS, Labour Force, Australia, Detailed [17]qrc.org.au

KEY INDICATORS

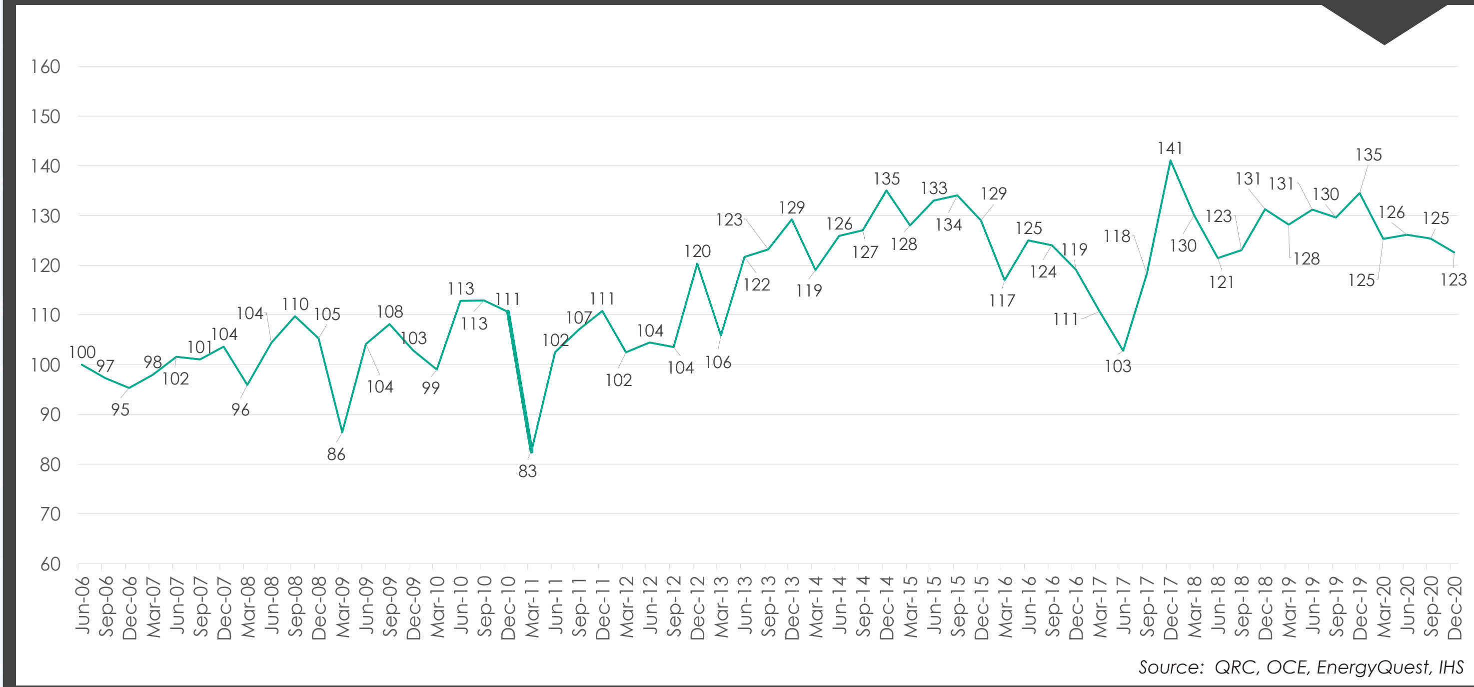
QRC PRODUCTION VOLUME INDEX -
STEADY OVER THE QUARTER

The QRC's quarterly Production Volume Index tracks changes in the total production of Queensland's major commodity exports—alumina, aluminium, bauxite, coal, copper, gold, lead, LNG, silver and zinc.

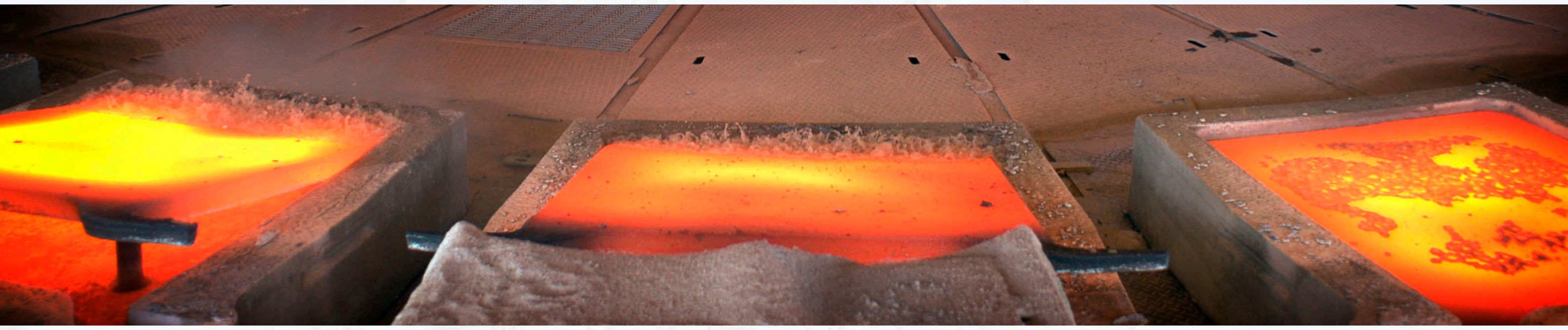
The Production Volume Index is weighted by the production volume of each commodity. This means changes in the volume of coking coal - which is over half of the total index value - has a larger impact on the quarterly index result than, for example, changes in thermal coal volumes which represent approximately 10–15 % of total value).

For the December 2020 quarter (latest available data), the QRC's Production Volume Index decreased slightly to 123 points — two points down on the September 2020 quarter and twelve points down on the same quarter in 2019. Queensland's bauxite (-16%), coal (-12%) and silver (-8%) production led the decline over the quarter while LNG production increased strongly (21%), achieving record monthly exports in December 2020.[4] Despite the quarter's slight decline, Queensland's resources production is 24% higher than when the index first began in 2006.

CHART 4: QRC PRODUCTION VOLUME INDEX - DECEMBER 2020 QUARTER (A$) (QUARTERLY) (INDEX BASE JUNE 05/06=100)



Source: QRC, OCE, EnergyQuest, IHS



[4] Gladstone Ports Corporation media release

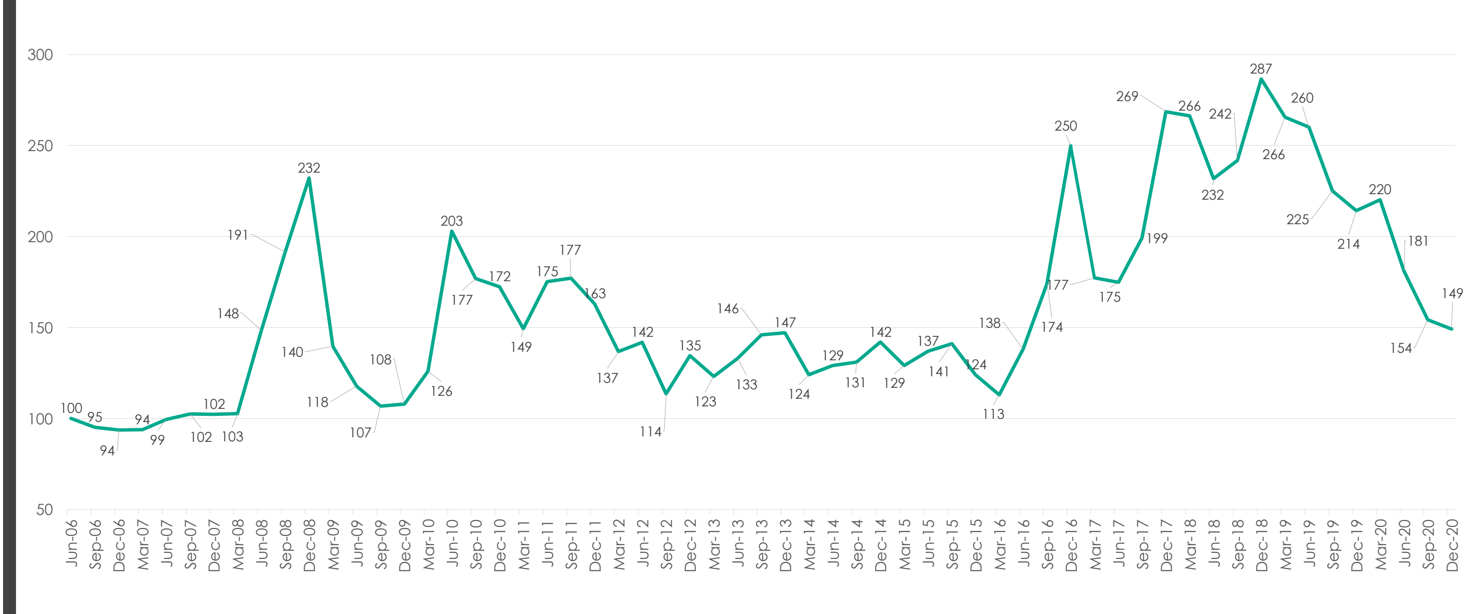
QRC VALUE OF PRODUCTION INDEX

QRC's Value of Production Index reflects changes in the prices of the resources that Queensland produces. The weighted index reflects the same mix of commodities as the QRC Production Volume Index, which includes LNG production from the December 2016 quarter.

Over the December 2020 quarter, the QRC's Value of Production Index remained relatively steady after a 27-point decline in the September 2020 quarter. Increasing benchmark prices for thermal coal (32%), zinc (13%), aluminium (12%) and LNG (8%) offset much of the impact of declining production, while gold was the only commodity to see a small price decline over the quarter (-2%).

This index result shows Queensland's resources production value remains over 50% higher than when the index first began in 2006.

CHART 5: QRC VALUE OF PRODUCTION INDEX - DECEMBER 2020 QUARTER (A$) (QUARTERLY) (INDEX BASE JUNE 05/06=100)



Source: QRC, OCE, EnergyQuest, IHS

CEO SENTIMENT INDEX

Each quarter, the QRC prepares its CEO Sentiment Index by surveying its full member CEOs. The survey typically receives between 20-35 responses from mining and energy, minerals processing, contracting, exploration, electricity generation and oil and gas extraction members in Queensland.

The survey asks CEOs to nominate the extent to which they expect a series of eleven factors will impact on their organisation's objectives over the next 12 months. Since the March 2020 edition, the QRC has also included "Public Health Impacts of COVID-19" as an additional sentiment factor.

The QRC weights the responses to create a single sentiment value for each of the sentiment factors. The weighting means the factors generating the greatest concern receive the lowest scores and are lower on the negative axis.

The global economy remains the single greatest concern for member CEOs, the category's seventh consecutive quarter as the number one concern. Sentiment towards the global economy has improved by 21 points since the beginning of the pandemic, yet CEOs clearly remain troubled by conditions:

> *"Australian coal exports are now more dependent on global post covid growth in non-China economies such as India, North Asia"*

> *"We require an easing of coal price pressure to enable more projects in the feasibility stage to progress"*

QRC member CEOs, May 2021

Negative sentiment towards social licence to operate has increased over the past 12 months, taking the sentiment category from 8th to equal second with uncertain or poor regulation. Several member CEOs pointed to the link between social licence and regulatory uncertainty:

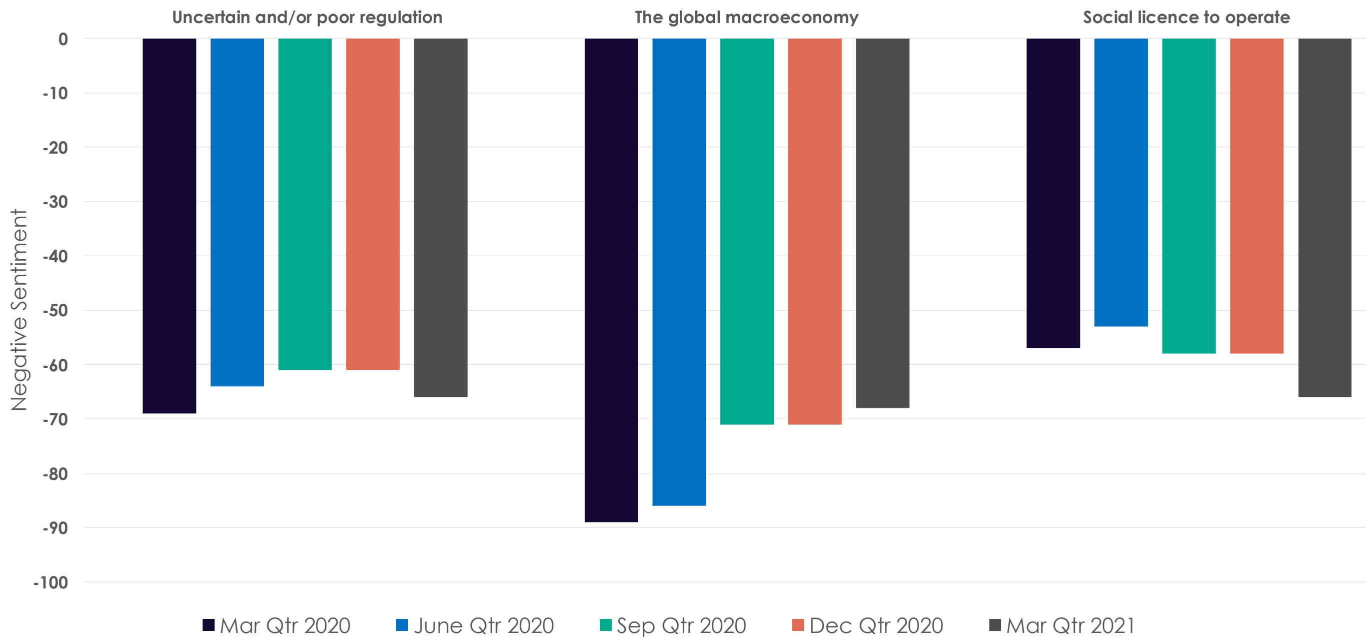
> *"Social licence matters have an ever-increasing focus in the industry and influence government regulation and approvals, as well as community expectations."*

> *"We see ESG matters, and in particular how ESG matters are being used by activist investors with banks and insurers as an increasing area of concern for industry. The pressure being applied (and rhetoric) is disconnected from the reality of how industry is managing impacts to the environment and the community."*

QRC member CEOs, May 2021

Chart 5 illustrates the change in sentiment over recent quarters for our member CEOs' top three concerns.

CHART 5: CEO SENTIMENT INDEX RESULTS-TOP 3 CONCERNS FOR QRC MEMBER CEOs



Note: Public health impacts of COVID-19 was included as a new sentiment factor for the March 2020 quarter.
Source: QRC

> *We face continuing uncertainty and risk of government intervention into the gas market"*
> QRC member CEO, May 2021

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