QUEENSLAND resources COUNCIL

Resourcing Queensland's future

28 February 2022

The Honourable Mick de Brenni MP
Minister for Energy, Renewables & Hydrogen, and
Minister for Public Works & Procurement
via email: NWMPoptions@epw.qld.gov.au

Dear Minister de Brenni

Thank you for the opportunity to provide a submission on the consultation regulatory impact statement (CRIS), *Electricity supply options for the North West Minerals Province*, which you released on 17 December 2021.

As you would be aware, the Queensland Resources Council (QRC) is a not-for-profit industry association representing the commercial developers of Queensland's minerals and energy resources. QRC is Queensland's peak body for the explorers, producers, and suppliers of resources including coal, metals, petroleum & gas, minerals processors and electricity generators. QRC members include large energy users, so the options contemplated in the paper have material consequences for their future energy costs.

Thanks to the support of resource communities and the diligence of our people, Queensland's resource industry has not yet missed a beat during the ongoing challenges of the COVID-19 pandemic. QRC's latest economic contribution data details industry's ubiquitous spending across Queensland down to the postcode level. The 2020-21 data shows that Queensland's resource industry collectively:

- supported one in six Queensland jobs,
- contributed one in every five dollars to the State economy,
- generates around 80% of the value of Queensland exports;
- supports more than 15,000 local Queensland businesses;
- contributes to more than 1,400 charities and local sports clubs; and
- all from just 0.1 percent of Queensland's land.

In short, Queensland's resource sector is a world-class engine of regional prosperity.

As you know, the role of the QRC is to work to secure an environment conducive to the long-term sustainability of the minerals and energy sectors in Queensland. We see renewable energy and the downstream value-adding industries it enables, as emerging examples of fresh new resource export opportunities for the Queensland economy.

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QRC supports the Paris Agreement and its emissions reductions goals and supports action to achieve those goals. Our shared challenge is to reduce emissions at the least cost to society and the economy. Queensland's resources sector can continue to grow under a low emissions economy and has a clear role to play in facilitating global emissions reductions ambitions.

The International Energy Agency (IEA) has forecast a quadrupling of demand for the minerals required for clean energy technologies over the next two decades. Last year, Queensland produced 220,500 tonnes of copper – enough to make around 2.75 million electric vehicles – so the potential for this already strong demand to grow by 400 percent is an incredible opportunity for Queensland.

Queensland also has known world-class deposits of cobalt, copper, scandium, bauxite and vanadium, and as more exploration continues with the latest technologies, fresh opportunities continue to emerge for the extraction, processing and value adding for other new economy minerals. QRC believes that Queensland is well placed to service the needs of the global transition.

As the Queensland Resource industry Development Plan (QRIDP) released by the Premier on 24 November says (page 13).

> "*Right now, the greatest contribution Queensland can make to the world's efforts to meet emissions targets is to find, mine, process and manufacture the metals, minerals and equipment needed to decarbonise the global economy.*"

QRC welcomes the Government's new commitment to the North West region (in December 2021):

> "…*to* ***delivering*** *reliable, affordable energy in the North West to unlock new mining opportunities and create regional jobs.*" (emphasis added)

Providing scalable long-term energy security for Queensland's North West Minerals Province has been a longstanding challenge since operations commenced in the region, almost a century ago back in 1924. QRC commends the Government on their clear focus on regional development in this new commitment, which refreshes and strengthens the Government's previous commitment in the *Powering North Queensland Plan* (June 2017):

> *"The Queensland Government will commit $150 million to* ***develop strategic transmission infrastructure*** *in North and North-West Queensland to support a clean energy hub, subject to a feasibility study. This will unlock around 2000 megawatts of renewable energy projects and support up to 4,600 jobs."* (emphasis added)

QRC congratulates the Queensland Government's new commitment to delivering a solution for the North West Minerals Province.

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As QRC said in our submission to the Queensland Resource Industry Development Plan (11 February 2022) in the context of recommendation eight on multi-user infrastructure:

> *"In terms of the North-West Minerals Province, QRC recommends the Queensland and Australian Governments continue to investigate the CopperString 2.0 high voltage network to connect the region with the National Electricity Market near Townsville."*

Kim Wainwright, Chair of the Queensland Exploration Council (QEC) has highlighted the global scale of the value of this highly prospective region (31 July 2022):

> *"We know Queensland's North West Mineral Province is world-class with substantial potential, particularly in new economy minerals to the value of $500 billion.*
>
> *"These up-and-coming new economy minerals are in high demand due to the development of new technologies and renewables, such as solar panels, batteries, and wind turbines, and in transport such as electric vehicles."*

The Premier in launching the $2 billion Queensland Renewable Energy and Hydrogen Jobs Fund on 10 June 2021 was very specific about her laudable aspirations for Queensland:

> *"Queensland is positioned better than anywhere in Australia to capitalise on the jobs and industries that will flow from this cheaper, cleaner energy."*
>
> *"That means not just mining the minerals for batteries and renewables in Queensland – it means processing the minerals and making batteries here as well."*

QRC is proud to be an active member of the Ministerial Energy Council (MEC). QRC looks forward to working closely with the Queensland Government on delivering energy for the North West as an integral part of the forthcoming Queensland Energy Plan (QEP). QRC sees the release of the energy plan as an important opportunity to integrate currently disparate but vital reform initiatives such as the Queensland Renewable Energy Zones (QREZ) and the electricity supply options canvassed for the North West into a cohesive and enduring energy policy platform for Queensland.

QRC regards an integrated energy plan as the best way to manage the upheavals of the next decade's transformation of how Queenslanders generate, consume, transport, store and export energy. As the Premier has described, the North West Minerals Province has a pivotal role to play in this national and global transformation.

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Background:

QRC's experience is that the overlapping commercial, structural, timing, contractual and regional development challenges of supplying energy to the North West should not be underestimated. QRC has almost an entire shelf of reports, stretching back for decades, and each has noted the energy constraints on new mining and minerals processing operations in the North West – particularly in terms of securing reliable energy at a reasonable cost.

As a result of discussions which arose from the (then) Queensland Government's energy working group over the course of 2007 and 2008, in December 2008; the QRC and the (then) Department of Infrastructure & Planning jointly commissioned Rod Sims, (then) of Port Jackson Partners, to conduct a high-level study of efficient energy infrastructure development. In 2009 the "*Sims Review*" as it was known, provided independent advice and analysis to both industry and the Queensland Government.

Launched in Mount Isa on 26 August 2009 by the (then) Queensland Treasurer Andrew Fraser, the (then) Federal Treasurer Wayne Swan, and the (then) QRC Chief Executive, Michael Roche – the "Sims Review" found that the (then) future of the North-West's energy supply was at a crossroad.

The joint press release said:

> *"A decision is needed on whether to expand local generating capacity or to construct a high-voltage transmission line connecting the region to the national grid.*
>
> *"The ultimate solution must be capable of supporting the future development of the North-West Minerals Province, which is vital to the state's economy.*

Then—just as the CRIS does for the North West now—the Sims Review weighed up uncertainties around the economic lives of existing operations, the prospect of new operations commencing, the relative economics of local generation versus a transmission connection to the East Coast electricity markets and the possible future trajectories of the price of gas versus the price of electricity.

The slide below was taken from a joint Departmental/QRC presentation to the Queensland Major Projects conference in October 2009 (slide 9). It's remarkable just how similar the baseline in the CRIS in 2022 looks to the situation presented as the future projections of the Sims Review back in 2009.

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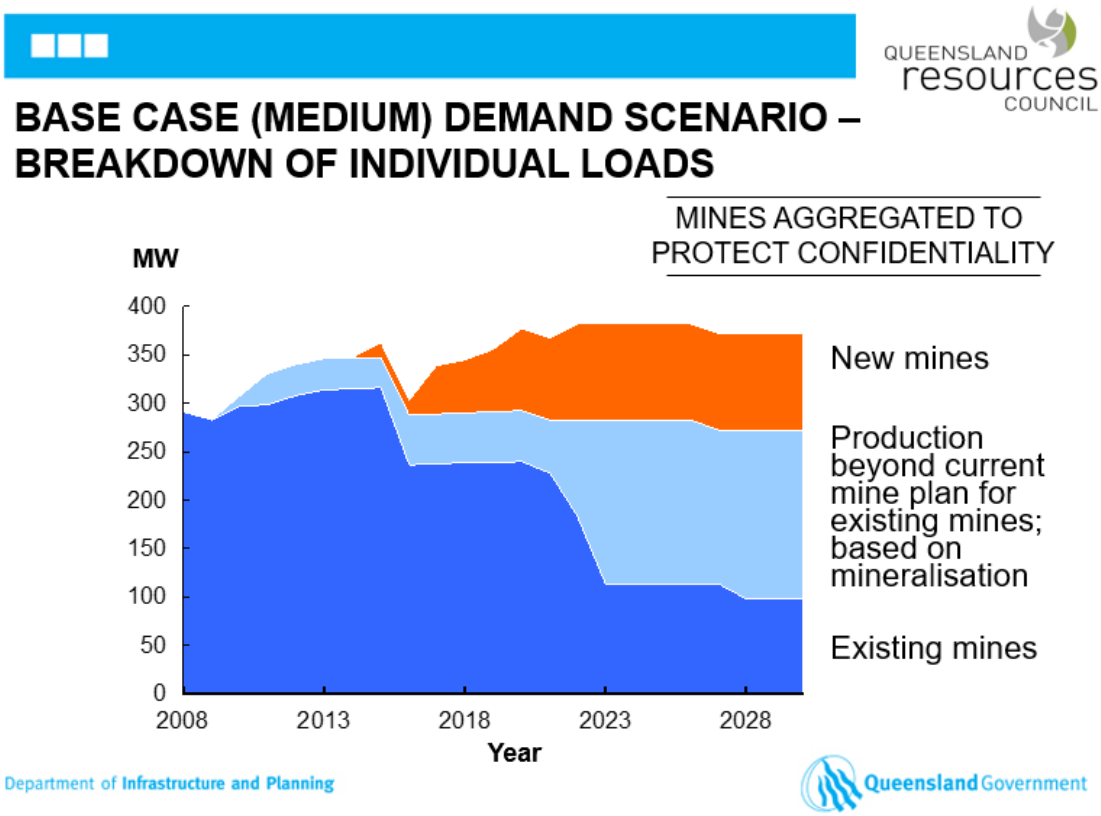

The CRIS notes (page 11) that the base level of electricity demand for the region today sits at around 360 MW. It's a bit humbling to consider that updating the chart for next two decades may not even require the energy demand axis to be redrawn.

The enduring resilience of mineral production in the region, and the resulting energy demand that drives, should give some confidence that the low demand case canvassed in the CRIS is included to indicate the sensitivity of transmission pricing to falling demand rather than representing a likely outcome.

Mount Isa Mines as the (then) foundation customer for the region ultimately opted on 6 October 2011 to sign an agreement to 2030 with both gas supply and pricing fixed for the first 13 years. The company's press release at the time said:

> *"Our agreement with the Diamantina Power Station consortium provides the security of a long-term energy price, increased total capacity and a reduced carbon footprint."*

It's remarkable how little the industry's priorities have changed over the 11 years since that agreement was signed. In 2022, the industry is still very focussed on finding an enduring energy solution that combines a reasonable energy price with options to increase energy supply and reduce emissions.

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Response to CRIS

The consultation regulation impact statement (CRIS) requests stakeholder feedback on a few key themes (pages 3-4). Unfortunately, while the paper gives some insights into the broad implications of the three options presented, there is insufficient information to offer a definitive view.

1. Evidence of inefficiency?

The CRIS asks for stakeholder feedback on:

> *What is the evidence of inefficiently high electricity prices in the NWMP? Are there enduring barriers (or market failures) to efficient electricity prices for industrial customers in the NWMP?*
>
> - *Does the difference in the delivered price of electricity between NWMP and NEM connected customers indicate a market failure that requires Government intervention to address?*

In a typical market, high prices are often a signal of high demand and point to the need to invest in more capacity. The information presented in the CRIS doesn't make it clear that the electricity prices in the North West are either inefficient or are a result of market failure, simply that they are high. The CRIS's problem definition says,

> "…*due to its remoteness, there is a lack of competition*…"

QRC suggests that in the case of the North West – high electricity prices are a symptom of the underlying issue and not a problem to be solved in isolation. Market failure alone is not a sufficient case for government intervention. QRC believes that to justify intervention, the following conditions must also be met:

- it must be technically feasible to address and overcome the market failure;
- non-government means are unable to resolve the market failure in an equally effective manner; and
- the benefits of intervention must outweigh the costs.

It is difficult to see that the CRIS has established a clear form of market failure and then built a systematic case for Government intervention.

QRC's feedback is that the pricing question in the paper is too narrow. The consistent feedback from QRC members has been that the region suffers also from an information coordination failure.

It's not just the high cost of electricity, but what also bedevils the region are the multiple uncertainties around securing electricity at a time, term and reliability that allows a new project to be presented to investors. A key problem with the status quo is the lack of liquidity in terms of the demand and supply of electricity in the region. One of the major non-price benefits of a transmission link to the NEM is that it provides liquidity to replace the status quo of a carefully balanced stack bilateral contracts.

When expensive electricity is available in the mineral province, it is unlikely to be scalable as a new minerals project grows. If an ore body proves to be higher quality or more extensive than was first thought, it is difficult for operations to react to these unforeseen opportunities. If other economic ores are uncovered as operations

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proceed, it is difficult for operations to build a business case around also recovering and processing those opportunities. There's significant option value for a fledgling mineral operation in having access to more liquid electricity markets.

Currently, securing electricity supply is often predicated on paying for connection and or transmission infrastructure to be installed or upgraded. Often the timing and price of this construction is also subject to negotiation, including whether any indemnity for the project is considered for delay.

A perennial issue for the region has been the mismatch between the economic life of electricity generation and transmission assets with the economic life of mines. While transmission or generation assets routinely can have a life of forty years or more, the economics of new mining operations tend to focus on the nearer term, with mine plans for five to ten years.

In an ideal world, mine production would be carefully staged, so that as one mine finished, then next would commence and a sequence of mines could share the efficient costs of the electricity infrastructure. In reality, the first mine (or existing operations) faces a cost penalty, as a rationally risk-adverse electricity supplier looks to amortise the cost of their investment from the only counterparty they can see across the table. This first mover penalty is one of the hidden costs of the status quo driven by bilateral contracts for building captive generation capacity.

QRC believes that direct Government intervention is necessary to address this issue of energy availability and access in the North West. We would have liked to see this option explicitly assessed in the CRIS.

Government can act as a patient investor, assuming the future long-tail risk of electricity infrastructure on behalf of the Australian and/or Queensland tax-payers. If this investment is made in a transparent way, it sends a powerful signal to investors about the future prospects of resource operations in the region. The private confidence engendered by the Government intervention can work to reduce and defer public risk from eventuating.

As the resources of the North-West belong to the people of Queensland, QRC believes that the Queensland Government is best placed to lead any intervention to realise the potential of the region. While option 2 in the paper considers spreading some of the risk and costs of CopperString 2.0 across the electricity bills of all connected customers, in the interests of transparency, QRC would prefer to see a direct investment made by the Queensland Government, ideally in an equal partnership with the Commonwealth.

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2. Feasible facilitation?

The CRIS asks for stakeholder feedback on:

> *How can the Queensland Government facilitate an affordable, secure, reliable and sustainable supply of electricity in the NWMP? What are the feasible options that best address the issue, while considering:*
>
> - ***Equity** (does the option fairly distribute costs, benefits and risks between different stakeholder groups, including electricity customers and taxpayers?).*
> - ***Cost-effectiveness** (does the option improve electricity price outcomes for customers, and by how much and at what cost?).*
> - ***Practicality** (can the option be implemented and is it robust to changing demand and technology developments?).*

Unfortunately, the CRIS doesn't provide enough information to fully assess the three options that are presented in terms of the complex multi-factor criterion described above. The performance of options in terms of price, reliability, security and sustainability are all highly technical issues which would require much greater information about the status quo and possible future scenarios.

This quandary – the need to understand the commercially confidential agreements which existing energy users and producers have signed – is exactly what inspired QRC and the (then) Department of Infrastructure & Planning to jointly commission the Sims Review in 2009. The team at Port Jackson Partners could be privy to these commercial details and make recommendations to industry and Government without revealing any of the commercially sensitive details. In an islanded market of limited generation options and several large customers, it is difficult to see how else stakeholders can weigh up which options are feasible.

Similarly, QRC is aware on detailed technical modelling which has been commissioned to try and back-solve the numbers presented in the CRIS. QRC understand that there are credible arguments that the cost & pricing figures for the three options are not compatible with each other. The modelling of the incumbent energy generators casts doubts on the viability of options 2 & 3; while the modelling of the project proponents also raises fundamental questions about how the costs of status quo has been modelled in the CRIS.

QRC suggests that the CRIS would have been far more constructive if it had allowed a platform for these duelling technical critiques to be transparently assessed so that stakeholders could reach their own conclusions on the merits and risks of each of the three options presented in the CRIS.

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3. Transmission?

The CRIS asks for stakeholder feedback on:

Is a physical transmission connection to the NEM required for the NWMP?

- *The contribution the NWMP should make to the connection.*
- *The contribution the rest of Queensland should make to the connection.*

QRC's 14 January 2022 submission on the Queensland Renewable Energy Zones (QREZ) technical paper emphasised the importance of delivering lowest overall system costs as new investments are considered in either generation or transmission assets. Below are some quotes from pages 3-4 of QRC's submission:

> *"It is the delivered cost, including transmission, of electricity which drives international competitiveness."*
>
> *QRC supports this centrally managed approach to the development of REZ in Queensland. We see the development of the REZ as an important, but temporary, planning instrument in managing the transformation of Queensland's energy systems to provide rapid emission reductions at the lowest system cost. During this transformation, Queensland should endeavour to keep the REZ frameworks consistent with the National Electricity Objective (NEO) and the National Electricity Market (NEM) rules.*
>
> *There is a need to ensure co-ordinated changes in the transmission and generation investments align with the optimal development path for the power system in a way that has regard to the needs of electricity users.*
>
> *A "causer-pays" approach to ensure transmission network expansions are only built only when to do so, is more cost effective than building new storage or firming generation would help ensure this is achieved. This optimisation will not occur if consumers write a blank cheque for future transmission costs.*

QRC's earlier submission argued that that if a transmission link to the national electricity market (NEM) needed to be built our expectation would be that the link would pass the regulatory investment test for transmission (RIT-T) conducted by the Australian Energy Regulator) (AER).

If there are other benefits which would accrue to Queensland, beyond the electrical factors considered by the RIT-T, then QRC's expectation would be that the Queensland Government would make a direct payment to secure these benefits. To be efficient, that public payment should be commensurate with the public benefits.

As the resources of the North-West belong to the people of Queensland, QRC believes that the Queensland Government is best placed to lead any intervention to realise the potential of the region. Outside of electricity pricing, there are some clear benefits from a transmission link including the regional development opportunities from an East-West easement carrying high-capacity fibre optic, the benefits of unlocking the renewable energy capacity around Hughenden, from a region which is less likely to be correlated with renewable energy generation on the coast.

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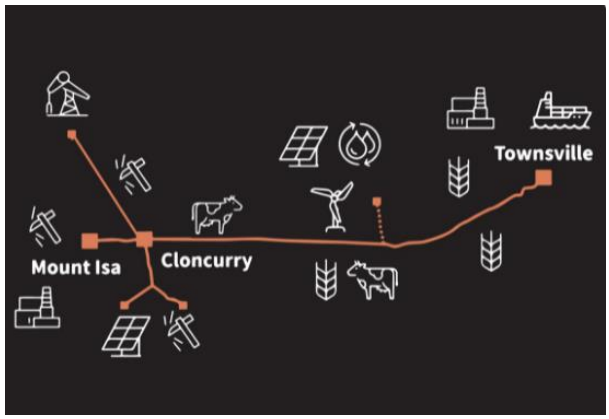
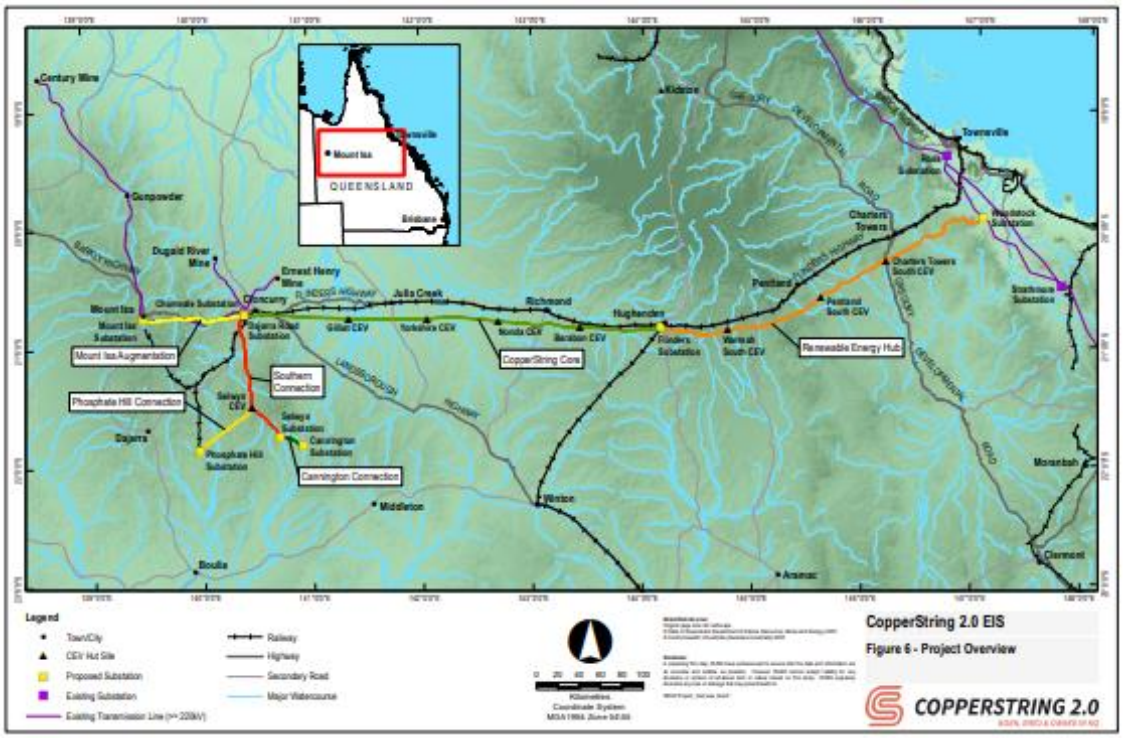
The stylised icons from Powerlink 2.0's website do a good job of conveying the benefit to a whole host of diverse economic activities that might accrue from the right infrastructure connection. Many of these industries and opportunities along the corridor may not yet be thinking of a connection to the national electricity market as part of their path to market.



Ironically, realising many of these regional benefits may well create fresh risks for the revenue stream to fund CopperString 2.0. Increased local generation and increased local demand, may well translate into lower volumes of transmission demand. These beneficial risks are where QRC sees a role for an explicit Government investment, rather than reallocating pricing risks through bespoke derogations.

The ambitious (almost Continental) scale of the CopperString 2.0 infrastructure proposal is perhaps better appreciated in the GHD map from their EIS (Volume 3, Appendix D, page 16).



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While option 2 in the paper considers spreading some of the risk and costs of CopperString 2.0 across the electricity bills of all connected customers, this seems to create a fresh risk of creating inefficient transmission price signals in the rest of the state. Instead, QRC would prefer to see a direct investment made by the Queensland Government, ideally in partnership with the Commonwealth.

It is very difficult for QRC to offer a view on the extent to which other electricity users (not in the North West Minerals Province) might benefit, or should contribute, to the cost of building CopperString 2.0 based on the extremely limited information presented in the consultation paper.

QRC was surprised that the consultation paper made no reference to the QREZ consultation paper which preceded it. The route of CoperString 2.0 would presumably pass through the Northern REZ and it seems strange to QRC that the consultation paper presented no analysis of whether there would be any interaction between the two contemporaneous policy consultations from the same Department.

In conclusion

QRC supports the idea of CopperString 2.0, of unlocking a highly prospective region, by providing a connection to the national electricity market. QRC welcomes the Government's commitment to:

> "…***delivering*** *reliable, affordable energy in the North West to unlock new mining opportunities and create regional jobs.*" (emphasis added)

Despite our shared enthusiasm for the Government's new commitment to the region, QRC has struggled to support any of the options presented in the CRIS. Reluctantly, we see the CRIS largely as a missed opportunity for stakeholders to really grapple with the issues at hand.

The three options presented in the CRIS are not described on a like-for-like basis and none of the alternatives are presented in sufficient detail to form an opinion on the best path forward. The CRIS is also atypical in that the Government's preference is not made clear amongst the three options presented.

This dearth of regulatory detail does not seem commensurate with the size, scale, longevity, economic importance and complexity of the projects described in the CRIS. As a result, QRC cannot be confident that each of the regulatory consequences have been systematically identified, assessed and measured.

What is clear is that none of the transmission options presented in the CRIS provide a compelling case for investment on the grounds of electricity price alone. If the North West is to be connected to the National Electricity Market, it will require a transfer of risks and costs to enable that investment. While the existing electricity customers in the North West should contribute to the infrastructure that services their needs, the resulting price should not be punitive.

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QRC believes this is the natural role of Governments – as a patient investor, ideally coordinated investments made by the Commonwealth and Queensland Governments. If this investment is made in a transparent way, it sends a powerful signal to investors about the future prospects of resource operations in the region. The private confidence engendered by the Government intervention would work to reduce and defer public risk from eventuating.

In conclusion—thank you again for the opportunity to make a submission on the CRIS, *Electricity supply options for the North West Minerals Province*. Given the importance of the questions canvassed in the CRIS, QRC expects that several members will also make their own corporate submissions providing far more detailed and specific feedback.

If you have any questions or would like any further information on any of the issues raised in this QRC submission, please feel free to contact QRC's Andrew Barger on andrewb@qrc.org.au or 0417 403 822.

Yours sincerely

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Chief Executive

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