Consumer
Challenge
Panel

CCP23

Advice to the AER on the Powerlink Transmission Revised Revenue Proposal and AER Draft Determination for the Regulatory Period 1 July 2022 to 30 June 2027

AER Consumer Challenge Panel – Sub-Panel CCP23

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14 January 2022

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Acknowledgement of Country

We recognise the traditional owners of the lands on which Powerlink operates. We respect the elders of these nations, past and present along with the emerging leaders.

CCP role and CCP23 comments

Acknowledgements

CCP23 wishes to thank and acknowledge the staff from Powerlink, who have been generous with their time, always willing to share insights into the business, and to include us in their engagement activities leading up to the Regulatory Proposal, and subsequent post lodgement engagement.

We also extend our gratitude to the AER staff for their support and guidance throughout this process.

Confidentiality

We wish to advise that to the best of our knowledge this Advice neither presents any confidential material nor relies on confidential information for any aspect of this Advice.

About the Consumer Challenge Panel sub-panel CCP23

The AER established the Consumer Challenge Panel (CCP) in July 2013 as part of its Better Regulation reforms. These reforms aimed to deliver an improved regulatory framework focused on the long-term interests of consumers.

The CCP assists the AER to make better regulatory determinations by providing input on issues of importance to consumers. The expert members of the CCP bring consumer perspectives to the AER to better balance the range of views considered as part of the AER's decisions.

CCP23 is a sub-panel of the AER's Consumer Challenge Panel. The AER established the sub-panel to focus specifically on the AER's regulatory determinations for the Victorian and Queensland electricity transmission business for 2022-2027.

Vale David Headberry

This is the first CCP submission since the passing of our colleague, David Headberry in December 2021.

David was a long-standing energy consumer advocate, both through the Major Energy Users Association, MEU, and as a collaborator with many advocates focused on households, and regional and small businesses. He is particularly recognised for his willingness to provide information, advice and support to advocates who were recent to energy advocacy.

David was a member of the first CCP panel (2013-2016) and maintained close association with many of his CCP colleagues. We honour the substantial contribution that David made during his life and in particular his energy advocacy work and CCP involvement.

We pass on our condolences to David's wife Gaye, to his children, and to his extended family.

Executive Summary

The Powerlink Revised Revenue Proposal has accepted almost all of the AER's Draft Decision, which in turn responded favourably to a proposal that was lodged with the intent that it was 'capable of acceptance'. CCP23 endorses the direction and intent of the Revised Revenue Proposal. This submission does not consider the many topics that have already been resolved. Rather, we focus on a handful of topics that have been discussed and where new positions have emerged since Powerlink's initial revenue proposal was lodged.

There are two particular topics which have been the subject of engagement and discussion since the Draft Decision where there have been commitments to action beyond the timing of the AER's Final Decision. These are the response to the Demand Management Innovation Allowance Mechanism (DMIAM), and aspects of replacement capital expenditure (repex). Clarity is important in regard to expectations, and processes to report on the actioning and outcomes of these commitments. The AER's Final Decision should outline how the AER proposes to monitor these processes, and ensure that the outcomes are consistent with the commitments made by Powerlink to its customers.

We observe that these processes are likely to be relevant to the emerging "Better Resets Handbook" process, which continues the move to regulatory processes that are informed by ongoing engagement, rather than the more discrete five-year processes of recent history. With this in mind, we also make some observations about aspects of this revenue proposal process that we think warrant wider consideration in the Handbook.

We wish to highlight the following topics from the body of this submission.

Consumer Engagement

Powerlink has developed through co-design and has delivered a responsive consumer engagement program. Powerlink has engaged closely with a Revenue Proposal Reference Group (RPRG) that was drawn from Powerlink's Customer Panel (CP), to engage directly with its regulatory proposal. An Iterative approach has been applied, with Powerlink presenting latest thinking about key expenditure areas to the RPRG and CP, and workshopping areas for improvement. The approach was recognised with Powerlink being awarded the 2021 ENA/ECA Consumer Engagement Award.

The engagement process throughout was genuinely two way with significant dedication and energy provided by members of the CP and RPRG.

There are two matters to which Powerlink has provided commitments that reach beyond the Final Decision date. These are:

1. Meeting the intent of DMIAM agreement with the CP; and
2. Reviewing aspects of repex, particularly in outlying areas of the network where Powerlink considers it prudent to undertake 'preventative' repex for some assets that still have some useful life, due to the cost of taking crews to these remote locations.

Whether there are benefits to consumers of Powerlink applying the DMIAM was a question that arose through the Draft Decision, with Powerlink stating that it did not intend to apply the DMIAM. Powerlink agreed to explore further this decision with the CP, proposing that the CP be empowered, in an IAP2 spectrum meaning, to make the decision. This occurred and provided an excellent application of the "empower" aspects of the IAP2 spectrum for public participation.

Capable of Acceptance

Powerlink has been the most forthright of any network business from the beginning of the process in stating that it wanted a proposal that was capable of acceptance. We have given much attention to this question, and recognise that the AER Draft Decision considered the initial proposal to be capable of acceptance. This is a very positive outcome for Powerlink and its customers, and reflects extensive engagement from Powerlink's CP members.

However, we retain some unease about the AER's willingness to accept Powerlink's total capex proposal in its Draft Decision, when it simultaneously expresses concerns about an aspect of Powerlink's repex, while accepting the proposal as "capable of acceptance".

Repex and Post Final Decision Engagement

In Chapter 4 of this submission, we outline concerns about the process whereby the AER states acceptance of the repex proposal, and then qualifies this, including the following wording:

> *…we have had regard, among other things, to Powerlink's commitment to undertake a review of its approach to network asset reinvestment in 2022-23 and to implement the results of this review over the remainder of the 2022-27 regulatory control period.*

In brief, we do not accept that the AER has provided a sufficient basis for accepting the total capex at the Draft Decision stage of the process, when the more standard approach would be to raise questions in the Draft Decision, to be the focus of consumer engagement and updated in the Revised Revenue Proposal. The AER has conducted a very thorough review, and has identified important repex issues. Raising the questions about repex in the Draft Decision would have provided Powerlink's customers, and customer representatives, for example through the RPRG, to engage more fully in the issues identified by the AER in the Draft Decision – before the Final Decision.

In addition, we consider that postponing further investigation with consumers until after the Final Decision (i.e. into 2022-23) sets a likely precedent for future reset processes, particularly as the AER has not clearly defined the basis on which it would accept such a proposal generally, or how it would ensure that another network (other than Powerlink) would follow through on the commitments.

Consequently, we encourage the AER, in its Final Decision of the Powerlink proposal to address:

- General application criteria about when and why it would accept such an 'ex-post agreement';
- The processes it would employ to monitor and enforce such agreement during the forecast period;
- Reporting on ex-post process outcomes; and
- The remedies customers would have if the agreement is not followed to their satisfaction.

We also suggest that there is merit in considering these proposals in the context of the "Better Resets Handbook".

Inflation and why Productivity remains important

The only material cost changes in the Revised Revenue Proposal compared to the initial proposal are adjustments to account for the AER decision about the rates of inflation to be applied. We accept this as reasonable. However, we retain concern regarding price impacts for customers across all network businesses when current low levels of inflation and rate of return rise from these low levels, based on parameters that are largely determined by global markets. Powerlink also identifies this concern in its Revised Revenue Proposal. Rates of return and inflation rates will both almost certainly rise between now and the end of the next Powerlink regulatory period in 2027. Customers pay bills in nominal dollars. To

ensure that customers are not burdened with significantly rising costs, constant improvements in productivity are crucial as a bulwark against future price shocks. Consequently, a focus on productivity is a recurring theme in this submission.

The potential for additional transmission capex investment in the next decade above that which is forecast in the proposal is quite high, given the Queensland Government's ambitious renewable energy target (50% by 2030), and Renewable Energy Zone development. This is recognised in the recent Audit Review of the Queensland Governments renewable energy plan.

Add to this the prospect of additional pressure from any transmission developments under AEMO's Integrated System Plan (ISP) developments, and the importance of focusing strongly on productivity becomes more and more urgent if consumers are not to see even greater increases in electricity prices in the near future.

1 Consumer and Stakeholder Engagement

1.1 Powerlink consumer engagement

In our submission responding to the Powerlink initial proposal and the AER's Issue paper, we commented in some detail about the Powerlink Consumer engagement approach and the high quality and genuine engagement that had been undertaken:[1]

> *An Iterative approach has been applied, with Powerlink presenting latest thinking about key expenditure areas to the RPRG and Customer Panel, and workshopping areas for improvement. We have applied the AER issues paper Table 3 engagement assessment criteria, and conclude that the engagement has been collaborative and detailed, and that Powerlink has applied the advice received.*

The AER wrote in its Draft Determination:[2]

> *Based on our assessment of Powerlink's 2022–27 proposal, stakeholder submissions received, attendance at regular Powerlink meetings with consumer representatives, and regular interaction with Powerlink staff, we are confident that Powerlink is committed to putting consumers at the centre of its business and in ensuring stakeholders' views are reflected in its proposals to us.*

The effectiveness of Powerlink's consumer engagement up to lodgement of its regulatory proposal in January 2021 is clearly evident. Our May 2021 submission provided further commentary and discussion that is not replicate in this submission.

1.2 Powerlink engagement since lodgement

In its Revised Revenue Proposal, Powerlink provided the following table to summarise key engagement activities and the topics considered.

[1] CCP23 Submission to AER, 24 May 2021, page 1

[2] AER Draft Determination https://www.aer.gov.au/system/files/AER%20-%20Powerlink%202022-27%20-%20Draft%20decision%20-%20Overview%20-%20September%202021_0.pdf

Chart 1.1: Powerlink post lodgement consumer engagement

Activity	Description / key topics discussed
Customer Panel and RPRG meetings	We held four Customer Panel and three RPRG meetings[8]. Key topics discussed included: • our Service Target Performance Incentive Scheme (STPIS) position; • capable of acceptance criteria; • operating expenditure productivity initiatives; • Demand Management Innovation Allowance Mechanism (DMIAM); • our Post Revenue Proposal Lodgement Engagement Plan; and • our updated Business Narrative. Our Customer Panel also met three times without Powerlink in attendance to consider its Statement on Capable of Acceptance and the DMIAM. In addition to the above topics, we discussed broader topics at the request of Customer Panel members related to the revenue determination process, but not related specifically to our Revised Revenue Proposal, such as capital productivity, our Cost Allocation Methodology (CAM) and a 1% Weighted Average Cost of Capital (WACC) increase scenario.
AER Public Forums	The AER hosted two public forums on our Revenue Proposal (May 2021) and on its Draft Decision (October 2021)[9]. Questions were raised in relation to the AER's Draft Decision outcomes, capable of acceptance, our key Revenue Proposal forecasts, positions for our Revised Revenue Proposal, our engagement activities and commitment to undertake a review of our asset reinvestment approach (refer Chapter 5 Capital Expenditure).
Response to Revenue Proposal submissions	We published a response to submissions on our Revenue Proposal in August 2021 and sought input from all parties who made a submission[10] to ensure our summary of their views was accurate.
Transmission Network Forum	More than 160 customers and stakeholders attended our November 2021 Transmission Network Forum, online and in-person. At the Forum, we hosted a dedicated stand to inform customers and stakeholders about our revenue determination process and Revised Revenue Proposal forecasts and positions. The timing of the forum was moved from September to November based on customer feedback to allow wider engagement on the Draft Decision and Revised Revenue Proposal.
One-on-one briefings	We had one-on-one discussions with our customers, for example with Aurizon Network, in relation to items raised in its submission to our Revenue Proposal. We also offered one-on-one briefings to all directly-connected customers on our Revised Proposed Pricing Methodology in October 2021.
Informal discussions and feedback	We held monthly meetings with the AER and AER's CCP23 to discuss key matters and provide a further opportunity to provide input and had various informal individual discussions with customers and stakeholders.

Source: Powerlink revised revenue Proposal, December 2021, page 7, https://www.aer.gov.au/system/files/Powerlink%20-%20TRP%202022-27%20-%20Revised%20revenue%20proposal%20-%20November%202021.pdf

Powerlink was the winner of the ENA / ECA Consumer Engagement award for 2021, reflecting the recognition by a diverse group of judges of the value and effectiveness of Powerlink engagement in preparing its 2022-27 regulatory proposal. CCP23 congratulates Powerlink for winning this keenly contested award.

1.2.1 CCP observations of post lodgement engagement

CCP23 is able to ratify that this list of activities and topics is a fair summary of the engagement that CCP members were able to observe. The engagement occurred throughout the year, and we gained a strong sense that the engagement was 'business as usual' and hence embedded in the culture and practice of Powerlink.

After the AER's Draft Determination was released, significant engagement occurred regarding the Demand Management Innovation Allowance Mechanism (DMIAM). We have considered this engagement and outcome in the next section, separately, though the commentary about consumer engagement could equally appropriately be included in this section.

We provided feedback to Powerlink agreeing with members of the CP that engagement with regional consumers and their interests could potentially have been improved. We are aware that Powerlink made

significant efforts to meet with customer groups in regional Queensland but that the hoped for events we not possible, heavily influenced, we suggest, by the tyranny of COVID even more than the tyranny of distance. The Powerlink Board held a meeting in Cairns. We understand that regional Board meetings with local engagement are planned to be at least annual occurrences, as a means by which Powerlink decision makers can maintain a regional perspective.

1.2.2 Some observations about Powerlink's stakeholder engagement

On 9 December 2021, the AER launched the "Better Resets Handbook – Towards consumer-centric network proposals"[3] which *"aims to incentivise networks to develop high quality proposals which are driven by genuine engagement with consumers. This will lead to regulatory outcomes that better reflect the long-term interests of consumers."*

The following comments are made, in part with reference to the emerging 'Handbook' process to recognise that considerable commitment, patience and expertise is needed by consumer representatives and advocates who are engaged.

Powerlink has been recognised and awarded for its approach to engagement in developing this regulatory proposal. It is important to recognise that engagement is a two way process. Powerlink has benefited greatly from having an energetic, capable and informed group of people on its CP and RPRG who have worked closely with them in developing this regulatory proposal and revised revenue proposal. We go as far to surmise that of all energy network engagement process in Australia, Powerlink's CP and RPRG members have probably contributed more hours over the past couple of years than any other people engaged with a reset, apart from the participants in AusNet Services' Customer Forum, through the NewReg trial. CP and RPRG members contributed their time pro bono, or as part of their salaried role.

For example, the volume of hours contributed by CP and RPRG members was considerable, and included individuals spending time to organise / lead CP-only discussions and to report on these discussions.

Robust, respectful and informed consumer engagement, like Rome, is not built in a day. Powerlink's 2022-27 regulatory proposal engagement has benefited enormously from a group of committed and enthusiastic people who are CP and RPRG members, and represent a diversity of consumer interests. This group has met regularly and frequently over a few years, and over this time has developed expertise and the mutually constructive relationships with key Powerlink personnel. The sound regulatory proposal outcomes and Capable of Acceptance intent could not have been achieved with a less committed and informed group of people, backed by their associated businesses and organisational constituencies.

The Powerlink CP and RPRG comprise a well-established, informed and dedicated group of people as any in the nation and so are a valuable group with whom to engage. Powerlink's process to build and support this capability over years is worth noting by other Australian network businesses.

We commend the Powerlink CP and RPRG members for their active engagement, and solution-focused participation.

1.3 Capable of acceptance

A feature of this regulatory process has been the explicit intent of Powerlink to lodge a proposal that is capable of acceptance. While Powerlink has not been the first network business in Australia to have this aspiration (both Australian Gas Networks and TasNetworks have prepared proposals with this goal), it has, in our opinion, been the most overt and systematic in its intention to lodge a proposal capable of acceptance. We also suggest that the notion of 'capable of acceptance' is very relevant to the new 'Handbook' process.

[3] https://www.aer.gov.au/system/files/Better%20Reset%20Handbook%20-%20December%202021.pdf

In our May 2021 submission, we explored the notion of capability of acceptance in some detail, including the extent to which consumer groups and representatives could determine that a proposal was capable of acceptance. In our May 2021 submission, we wrote on page 10:[4]

> *It is important to note at the outset that we consider capability of acceptance and appropriate, responsive consumer engagement to be inextricably linked. This means that for a proposal to be deemed 'Capable of acceptance' by the AER, they are also endorsing the consumer engagement that has helped to form the proposal.*

The AER wrote in its Draft Decision on page 5:[5]

> *We can see Powerlink's efforts reflected in the views expressed in the submissions we received, in terms of Powerlink's consumer engagement approach and its proposed expenditures. As a result, we consider that Powerlink's proposal is capable of acceptance, and we have accepted all major aspects of it in our draft decision.*

This is reflected in the Powerlink Revised revenue Proposal on page iii where it writes:

> *We are pleased that, in its Draft Decision, the AER considered that our Revenue Proposal is capable of acceptance and accepted all major aspects of it. We engaged further with our Customer Panel prior to finalisation of the positions in our Revised Revenue Proposal. Our Customer Panel has since confirmed that capable of acceptance has been met from its point of view (refer Chapter 3 Customer Engagement). We consider that our proposal has been demonstrated as capable of acceptance by our customers, the AER and ourselves.*

We have no doubt that the Powerlink initial proposal, as lodged, has been generally accepted as capable of acceptance, accepting that some modest adjustments will be necessary between initial and revised proposals, and noting the repex matter that is discussed in section 4 below.

The Revised Revenue Proposal is strongly in line with the original proposal and AER's Draft Decision, and so remains capable of acceptance, pending the AER's final assessments.

1.3.1 What is in it for customers?

In our May 2021 submission, we explored the benefits for customers of a proposal that is capable of acceptance, listing the following:

a. Consumer perspectives are explored, heard and applied.
b. There is a solid base of support for the balance between price, reliability, and sustainability. This is most likely achieved through a good level of 'depth' in the consumer voice, because a capable of acceptance proposal can only come through consumer identification of the major topics that are of interest, and over which appropriate briefings and debate occurs in developing a consumer perspective.
c. Price impacts for customers are accepted as being as fair and reasonable.
d. The capacity for the network business to 'get on with the job'
e. Certainty. A Capable of acceptance approach provides consumers with as much predictability about the present and future costs and challenges as possible.
f. No time is wasted being drawn into "gaming consumers and the regulator" by the business. It is recognised that active engagement in developing an acceptable proposal is time consuming for

[4] https://www.aer.gov.au/system/files/CCP23%20-%20Submission%20on%20Powerlink%20Proposal%20and%20AER%27s%20Issues%20Paper%20-%2024%20May%202021.pdf
[5] https://www.aer.gov.au/system/files/AER%20-%20Powerlink%202022-27%20-%20Draft%20decision%20-%20Overview%20-%20September%202021_0.pdf

the consumer advocates directly engaged. This is fine where there are high levels of trust, the consumer representatives assess that their time is well spent and they are adequately resourced to participate.

We continue to have the opinion that these benefits are tangible and are of genuine net benefit to consumers.

We are also convinced by Powerlink's argument that the less time it spends in regulatory proposal development and debate, the more staff time it can allocate to "getting on with running the business", including in Powerlink's case, searching for productivity improvements.

1.3.2 CCP reflections on the consumer engagement process.

Again, with an eye to the "Better Resets Handbook" process, we think that there are some observations from the Powerlink engagement that have ongoing and relevance and application, including:

- Building a group with whom to engage effectively takes time, and yields significant benefits for customers and businesses alike.
- Consumer interests and businesses can work productively together to develop proposals that both can consider to be capable of support / acceptance, this in no way diminishes the AER's role actively to test regulatory proposals and to apply its considerable expertise in making a final decision that is in the best interests of customers.
- Both Powerlink and the RPRG /CP have been open and honest with each other and have had a shared understanding of the goal. For example, the question of depreciation approach was of genuine interest and concern to both parties. Shared problem solving lead to an agreed approach.
- Empowering customers, in the IAP2 spectrum sense, is achievable and has been effectively applied in considering whether Powerlink would seek the DMIAM allowance.
- There are tangible benefits from genuine engagement for both consumers and network.

Our observations suggest that the commitment to engagement clearly demonstrated by Powerlink up to the lodgement of its initial proposal has continued and that the levels of interest from customer groups has been maintained, though appropriately, somewhat more focused during 2021.

We are also confident that robust and respectful consumer engagement is embedded into the culture and practice of Powerlink. Therefore, commitments made for future action over the course of this determination will be honoured, and consumer input valued.

2 Demand Management Innovation Allowance Mechanism (DMIAM) update

CCP23, response to Powerlink confirmed decision not to apply for the Demand Management Innovation Allowance Mechanism (DMIAM)

The Powerlink Revised Revenue Proposal states:

> *While not a key building-block element of our Revised Revenue Proposal, we do not accept the AER's Draft Decision on the DMIAM. We have adopted our Customer Panel's recommendation and propose the DMIAM is not applied to Powerlink in our 2023-27 regulatory period.*

CCP23 proposes that the AER accept this decision from Powerlink, largely because engagement with consumer interests, through the Powerlink CP, has supported the initial Powerlink proposal of not applying the DMIAM.

Key elements of DMIAM process – CCP23 perspective

i. After the initial proposal was lodged, Powerlink wrote to the AER stating that it did not intend to apply the DMIAM on the basis that it was doing what the DMIAM encouraged and could save its customers up to $3.5m.
ii. CCP23 along with some consumers expressed concern about this decision on the basis that:
    a. We had not observed consumer engagement on this topic
    b. DMIAM is innovation focused and innovation exploration has a high probability of being in the long term interests of consumers, even if there is a modest initial cost increase.
    c. A strength of the DMIAM allowance is that it expects sharing of results of projects / trials with other network services providers, saving customers money, across the country as every network does not need to spend money on the research and development that has already been undertaken by another NSP.
iii. Powerlink accepted the feedback and proposed an engagement process that was at the "Empowerment" level on the IAP2 spectrum. The Powerlink CP accepted the challenge.
iv. The Powerlink CP explored the options for DMIAM and advised Powerlink to stay with its initial decision of not seeking an additional allowance, on the basis that Powerlink would undertake all of the DMIAM associated functions as part of 'business as usual', and using the existing budget.

The Powerlink CP wrote to Powerlink on 29 October, 2021 with the letter headed: APPLICATION OF DMIAM TO POWERLINK'S 2023-27 REGULATORY PROPOSAL: "The Customer Panel recommends that Powerlink not seek to apply the DMIAM for the 2023-27 regulatory period." Powerlink accepted this recommendation, as promised.

We highlight that from a process perspective that 'empowerment' from the IAP2 spectrum means that the engaging body, Powerlink in this instance, commits to those engaged that the decisions reached by participants will be fully implemented. Anecdotally, CCP23 members are aware of some networks resisting the notion of 'empowerment' level engagement, for various reasons, including the concern that decision making on matters of budget and operations are the responsibility of owners and the senior managers that owners have appointed. There is also an argument that decision-making cannot be passed on by boards and senior managers for probity and accountability reasons. Powerlink has demonstrated that there are aspects of regulatory proposals and, we suggest, ongoing decision making, where consumers can be appropriately and responsibly empowered to make decisions that are then enacted. Empowerment can apply to a discrete component of a regulatory proposal.

CCP23 congratulates Powerlink on applying an Empowerment level engagement process, and congratulates the CP members for accepting the challenge and actively exploring the DMIAM options.

CCP23 supports the final decision because we are satisfied that:

1. Consumer interests through the CP made the final decision which has been respected and applied by Powerlink
2. It is unlikely that there will be any short or long term consumer detriment, because Powerlink will undertake the appropriate functions to which it could otherwise have applied the DMIAM allowance.

CCP23 supports the AER's DMIAM requirements in principle, noting that these requirements have been developed by the AER in response to policy imperatives for innovation, and after an extensive consultation process. Therefore, CCP23 would not like to see Powerlink's agreement become a de facto precedent for other networks. If the AER accepts Powerlink's process, the AER should accompany this with a clear explanation of why it has accepted Powerlink's proposal, and what the AER would expect as a minimum from other networks should they propose not to implement the DMIAM. The AER should outline how it proposes to monitor this process and ensure that the outcomes are consistent with the commitments made by Powerlink to its customers.

We also observe that this approach to resolving the question of whether or not Powerlink applying for DMIAM gave the likely best outcomes for consumers is a useful example of the intent of the Better Resets Handbook. An established group of customer representatives has been empowered by Powerlink to make the decision, with Powerlink committing to abide by the decision made. The customer representatives have also shown courage in accepting the challenge and providing a carefully considered answer.

3 Business Environment and other Inputs into the Revenue Forecast

3.1 Business and operating environment

Commencing in April 2020, and then throughout the development of its initial revenue proposal and the Revised Revenue Proposal, Powerlink has progressively built up an analysis of its business environment and the changes to this environment. In the course of this process, Powerlink has regularly and openly engaged with its consumer representative bodies. This process has culminated in Powerlink's 'Business Narrative', an appendix to its Revised Revenue Proposal.[6] In the introduction to the narrative, Powerlink suggests that its external business and operating environment is characterised by "*disruption and transformation with increased complexity and change*" and identifies eight key business drivers of disruption and change. These eight business drivers are summarised below and include several examples of the types of challenges facing Powerlink and its plans to address these:

1. Response to Covid-19: Reprioritising work and project delivery schedules, more flexible working arrangements.
2. Customers: Driving customer value, recognising that the cost of electricity remains a key concern and that transmission networks play an increasing role in ensuring customers can access lower cost electricity.
3. Network: Becoming a platform to enable provision of energy services, adapting to changing demand and energy patterns, adopting a market driven REZ model with a focus on delivery through non-regulated funding, the impact of AEMO's Integrated System Plan (ISP).
4. Regulatory and policy: Key reforms, reviews and Rule changes relating for example to system strength, post 2025 market design, transmission planning and investment review, Queensland Government projects and the 2030 50% renewable target.
5. Financial and economic: Volatility in inflation and bond rates and potential impact on electricity prices.
6. Environment: Climate change, extreme weather events, insurance costs and mitigation actions, ensuring a strong and resilient network that enables transition toward further energy and a lower carbon future.
7. Technology: Customers having more choice and control over their energy decisions, differentiated service levels, Powerlink's "Next Generation Network Operations" program to allow more efficient operation of the network; cyber security and Critical Infrastructure Bill requirements.
8. Resource capability and capacity: Increased demand across Australia for skilled workers.

In its Revised Revenue Proposal, Powerlink identified inflation volatility as an ongoing challenge, and one that has had a 'material impact' on its revised proposal. Powerlink also identifies changes to the forecasts of energy and demand, in particular over a 10-year period, Powerlink's updated forecasts set out in its 2021 Transmission Annual Planning Report (TAPR) include:

- Decline in delivered energy at an average rate of 1.1% per annum (0.7% in 2020 TAPR); and
- Growth in maximum demand at an average rate of 0.8% per annum (0.7% in 2020 TAPR).

[6] Powerlink, *Business Narrative*, Appendix 2.01, October 2021

Powerlink states that *"the change in these inputs does not have a material impact on our capital and operating expenditure forecasts for the 2023-27 regulatory period"*. However, the indicative price path does include the impact of these changes.

CCP23's response to the business and operating environment

In this current challenging environment, a clear assessment of the external environment and its impact on the business is an essential component of a revenue proposal. As noted above, CCP23 is therefore pleased to see the progressive development of Powerlink's business narrative and the open engagement with consumers on the content and presentation of the narrative.

It is important that Powerlink continue to develop its business narrative and to draw clear links between the changing external environment and Powerlink's capex and opex plans over 2022-27.

For instance, the Queensland Government has announced a renewable energy target of 50% by 2030 and provided funding for various projects including $145m to establish three Queensland REZs. Achieving the 2030 target will, however, be a significant challenge and require rapid increase in government and private investment in the intervening years.

This was highlighted in a recent report by the Queensland Audit Office, "*Managing Queensland's transition to renewable energy*".[7] The report notes that currently total renewable energy makes up some 19-20% of the Queensland energy supply (depending on definitions). The report concludes that achieving 50% by 2030 which may require the Queensland Government to make direct investments in generation and networks. Figure 3.1 below illustrates this point.

The Audit Report urged the Queensland Government to develop a more detailed plan that sets out how the 50% target could be achieved in a relatively short period. The Audit Report also identified some specific challenges to achieving the 50% target including:[8]

- Coordinating industry and government
- **Network infrastructure must continue to adapt. (**emphasis added)

With respect to the latter challenge, the Audit Report states:[9]

> *There are limited locations with sufficient network conditions for new generation projects across Queensland. Increasing renewable generation is causing network instability in some areas.*
>
> *Network infrastructure challenges will require ongoing management as they evolve. It is likely that further investments will be need as renewable generation increases.*

Given the extent of the challenges arising from the Queensland Government's 2030 target, and from the ISP plans for significant expansion of the Queensland transmission system in the early 2030s, CCP23 would like to see these upside 'risks' to the 2022-27 capex plans more clearly articulated.

Bending the curve on the RAB may well be a greater challenge than anticipated, and it is not clear how Powerlink would respond to these challenges e.g. by postponing some replacement capex until there is more clarity on the Government's and the ISP requirements. We take some comfort that Powerlink will continue to work with its consumer bodies to consider how best to respond to these challenges.

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[7] Queensland Audit Office, *Managing Queensland's transition to renewable energy*, Report 5, 2021-22, 25 November 2021. https://www.qao.qld.gov.au/sites/default/files/2021-11/Managing%20Queensland%27s%20transition%20to%20renewable%20energy%20(Report%205—2021–22).pdf

[8] Queensland Audit Office Report, p 16

[9] Queensland Audit Office Report, p 17

Figure 3.1 Government investments in Queensland Renewable Energy Zones

Queensland Renewable Energy Zones

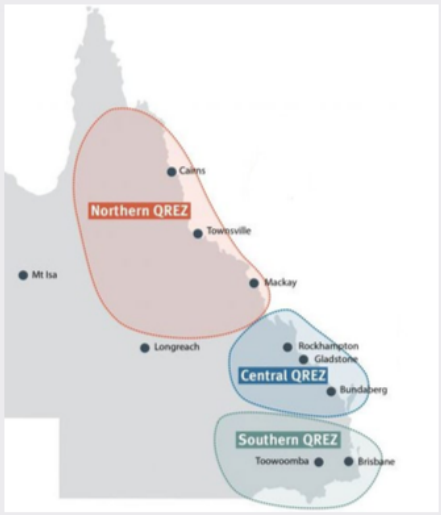
The Queensland Government has committed $145 million to establish three Queensland Renewable Energy Zones (QREZ)—the Northern, Central, and Southern QREZ.

In these areas, the government intends to:

- undertake strategic network investments
- streamline the development of new renewable energy projects
- work to match new and existing industrial energy demand with renewable energy.

The government aims to coordinate investment in transmission and generation infrastructure to support Queensland industries and benefit local communities.

The Northern, Central and Southern zones shown below cover areas identified by the Australian Energy Market Operator as having good quality renewable resources and other characteristics suitable for renewable energy development.



Source: Department of Energy and Public Works.

As an example of what we might expect to see in the current plan, CCP23 refers to AusNet Services' detailed 'mapping' of its investment plans with both the ISP projects and importantly, with the Victorian Government's renewable energy plans. In this way, AusNet Services was able to demonstrate where:

- AusNet Services has been able to postpone or even cancel replacement capex projects, and
- Regions of the network that it needed to reinforce the network to enable the economic expansion of the renewable energy zones.

This type of analysis is particularly important in communicating the risks and benefits of particular investment decisions to consumers.

For example, while the AER has accepted Powerlink's capex proposal in its Draft Decision, the AER has expressed some concern with aspects of Powerlink's replacement capex plans. In particular, Powerlink's approach to replacement or reinforcement of transmission lines (the single largest capex item in the proposal), meant that some transmission towers were replaced before this was required on a technical basis.

Powerlink has offered to conduct a review of its replacement planning approach in 2023-24 and this was accepted by the AER. An important dimension of this review will be to understand how the planning approach is integrated into the Government's and AEMO's plans for upgrading the transmission system including establishing new transmission corridors. CCP23 will discuss this matter further in the assessment of Powerlink's capex proposal and the AER's response to this proposal.

3.2 Other inputs into Powerlink's maximum allowed revenue (MAR)

This section considers the key 'standard' inputs into Powerlink's revenue forecast. It includes the estimate of inflation, rate of return, corporate income tax, regulatory asset base (RAB) and depreciation.

3.2.1 Summary

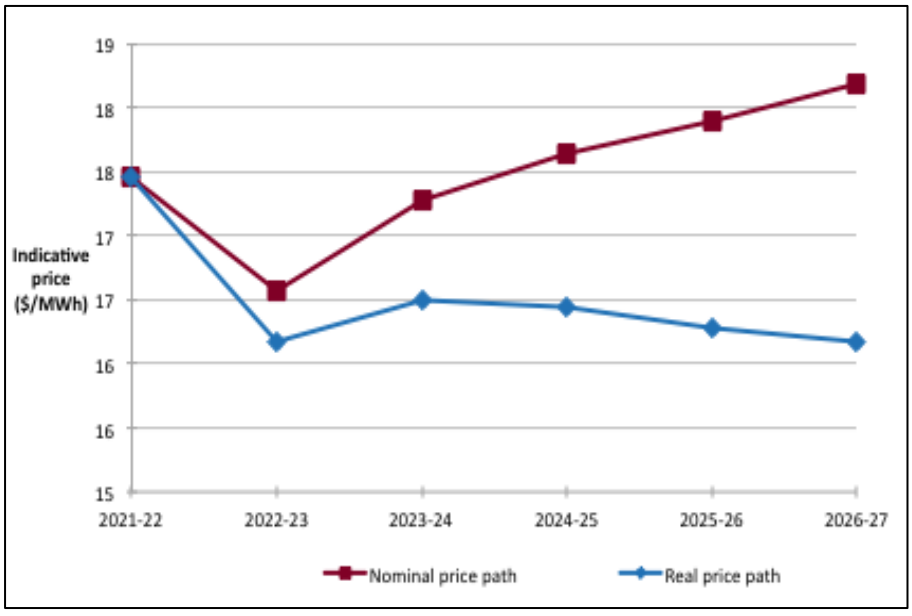
CCP23 appreciates the AER's careful examination in its Draft Decision of Powerlink's proposed estimates of inflation, rate of return, corporate income tax, RAB and depreciation for the 2022-27 regulatory control period (RCP).

CCP23 also appreciates Powerlink's positive response to the AER's Draft Decision. Powerlink has adopted the great majority of the AER's decisions, albeit with an updating of the inflation forecast, and of the parameters that flow from the adjustment to the inflation forecasts. Importantly, this includes alignment of the revised revenue proposal with the AER's Draft Decision on the regulated rate of return.

We expect that these input cost elements are quite likely to result in an increase in the MAR between the AER's Draft Decision, and its Final Decision given the most recent economic forecasts for inflation and bond yields. In particular, while real average prices may remain relatively stable, nominal average prices (which is what customers see on their bills) will increase relative to the average price and price paths set out in the AER's Draft Decision and Powerlink's Revised Revenue Proposal.

Figure 3.2 illustrates the average price path in Powerlink's revised proposal and it is clear that the increase in inflation to 2.37% / year has now driven a growth in nominal prices over the RCP. This increase more than offsets the drop in average prices in the first year (2022-23). Further increases in nominal prices will arise if inflation expectations increase again before the AER's Final Decision, and/or bond yields rise.

Figure 3.2: Powerlink average price per MWh for the 2022-27 RCP – Revised Revenue Proposal



Source: Powerlink, *Revised Revenue Proposal*, Post-tax revenue model (PTRM), November 2021.

The following sections consider these inputs to Powerlink's MAR namely inflation, rate of return and taxation, the regulatory asset base (RAB) and regulatory depreciation.

3.2.2 Inflation

The changes to forecast expected inflation between Powerlink's Revenue Proposal, the AER's Draft Decision and Powerlink's Revised Revenue Proposal are a significant element in the changes in the forecasts on other cost parameters such as the rate of return, the RAB and depreciation.

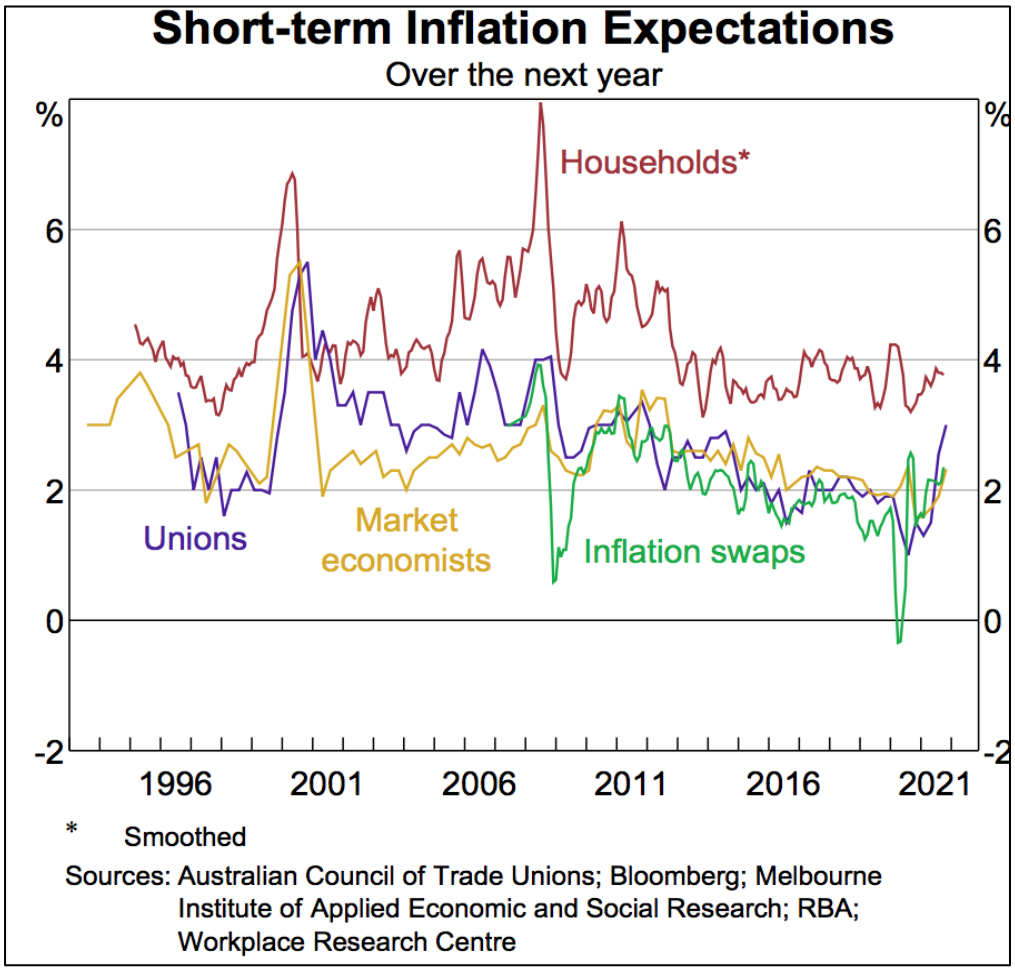
The changing forecasts of inflation over the last year also reflect the significant volatility in the market around expected inflation in the near and longer term. This volatility is illustrated in Figures 3.3 and 3.4 below. These two charts illustrate the short and long term expectations for inflation, and how quickly these expectations have moved from less than 1% in early 2020, to around 2.5%, well within the Reserve Bank of Australia's (RBA) target inflation range.

In addition to the observed volatility in the inflation expectations, in late 2020 the AER changed the way it estimated forecast inflation although the AER did not finalise the associated update of the PTRM models until April 2021. Powerlink's initial revenue proposal was, therefore, based on the AER's previous approach to estimating forecast inflation. The AER's Final Decision will be based on the AER's revised approach to forecasting inflation expectations.[10]

The revised approach to inflation was adopted by the AER in response to the networks' stated concerns with the existing long term model given their view that very low inflation was likely to prevail for some years. The effect of the AER's changed approach to inflation was to give greater weight to the RBA's near term forecasts of inflation when estimating revenue requirements for a five-year regulatory period.

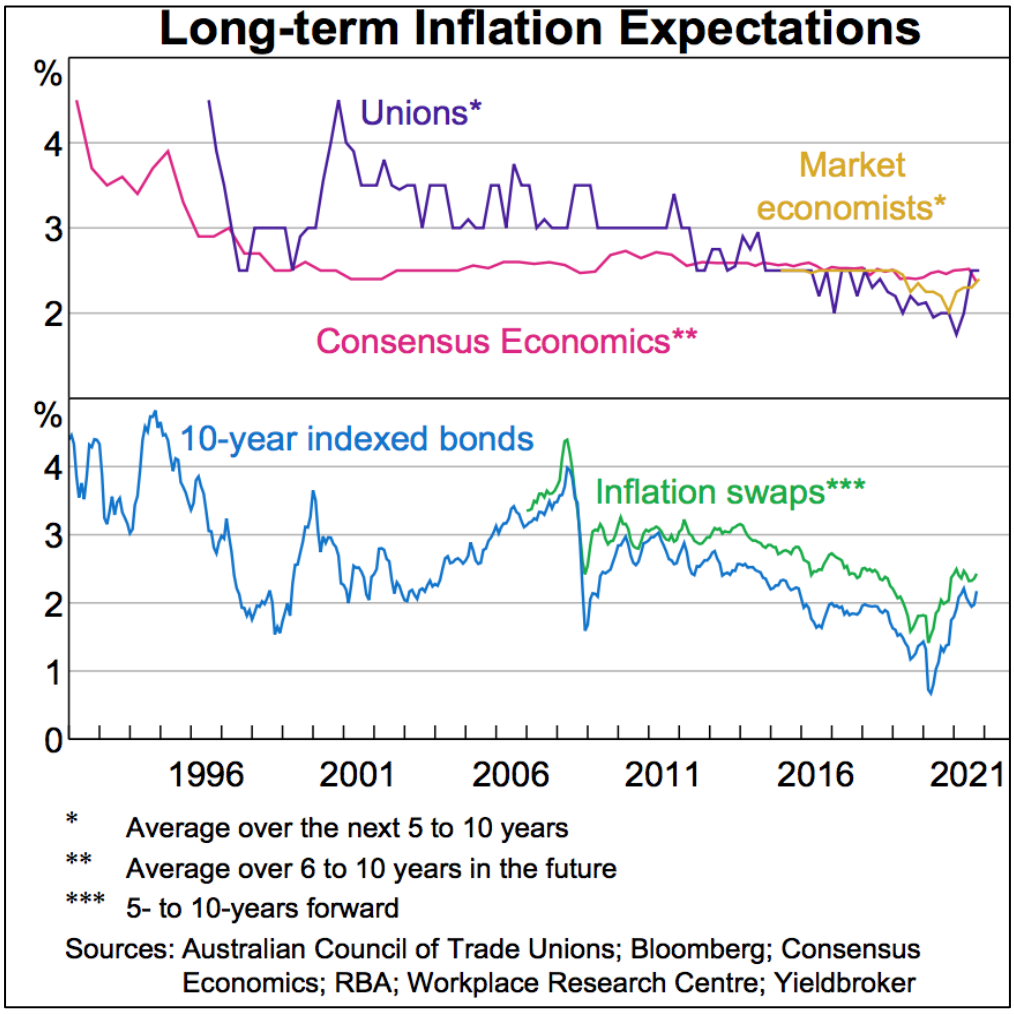
[10] AER, Post-Tax Revenue Model, Version 5, April 2021

Figure 3.3: Short-term inflation expectations



Source: RBA, *Statement of Monetary Policy,* November 2021

Figure 3.4: Long-term inflation expectations



Source: RBA, *Statement of Monetary Policy,* November 2021

Powerlink's Revenue Proposal and the AER's Draft Determination

As noted above, Powerlink's forecast of inflation in its initial revenue proposal was based on the AER's 2018 approach to expected inflation.[11] However, the AER referred in its Draft Decision to advice from Powerlink to use the updated inflation estimates (from the AER's 2020 review) in its Draft Decision. Ultimately, the AER adopted a value of 2.25%.

The forecast of inflation has a significant impact on the forecast total revenues in nominal terms. The inflation forecast flows through to other parameters such as the estimate of the real rate of return, the value of the RAB and regulatory depreciation estimates as well as the capex and opex allowances including the forecasts of labour and non-labour cost inputs.

The changes in actual annualised inflation year on year (July to June) in the current regulatory period (i.e. up to June 2021/22) are set out in Powerlink's Revised Revenue Proposal which is replicated in Table 3.1

[11] See Powerlink, *2023-27 Revenue Proposal*, January 2021, p. 119. The discussion in this section suggests that Powerlink calculated an inflation rate of 2.25% using the 2019 PTRM. Powerlink then suggests that using the AER's updated 2021 PTRM, the inflation rate would be 1.8% (as it is more weighted to recent years of very low inflation- see Table 3.1). In any event, both Powerlink and the AER appear to have adopted an inflation rate of 2.25% for the 2022-27 RCP (For details, see p 119 of the revenue proposal). Powerlink's revised revenue proposal inflation figure is higher again at 2.37%.

below. Table 3.1 also highlights the dramatic change in realised inflation in 2020/21, along with the expectations of higher inflation progressing through to 2021/22.

Table 3.1: Current 2018-22 regulatory period inflation (per cent)[12]

	2017/18	2018/19	2019/20	2020/21	2021/22
Revenue Proposal[(2)]	2.08	1.59	(0.35)	2.25	1.25
AER's Draft Decision[(3)]	2.08	1.59	(0.35)	3.85	1.50
Revised Revenue Proposal[(4)]	2.08	1.59	(0.35)	3.85	2.75
Difference – Revenue Proposal and Draft Decision	-	-	-	1.60	0.25
Difference – Draft Decision and Revised Revenue Proposal	-	-	-	-	1.25

(1) For simplicity, this table only shows the difference in June to June inflation. However, December to December inflation is similarly impacted.
(2) Based on the RBA's Statement on Monetary Policy, November 2020.
(3) Based on the RBA's Statement on Monetary Policy, August 2021.
(4) Based on the RBA's Statement on Monetary Policy, November 2021.

Note: The large difference in inflation between the Revenue Proposal and the Draft Decision, and the difference between the AER's Draft Decision and the Revised Revenue Appraisal in 2021/22, appear to be based on changes in the RBA's *Statement on Monetary Policy* between corresponding publication periods. For example, the RBA forecast of inflation for annual period to June 2022 is now 2.75% compared to its previous forecast for this period of 1.5%, a change of 1.25% (see RBA, *Statement on Monetary Policy*, November 2021 p. 54)

Powerlink's Revised Revenue Proposal

Powerlink updated the forecast of expected inflation using the AER's updated April 2021 PTRM framework that includes the AER's revised approach to estimating expected inflation.

Powerlink's revised estimate of expected inflation for the 2022-27 RCP is 2.37% per annum. This increase reflects the significant changes in the RBA's short-term forecasts for inflation.

CCP23's assessment of the forecast of expected CPI for 2022-27

CCP23 accepts Powerlink's updated forecast of the average CPI for the 2022-27 RCP of 2.37%, as this is consistent with the AER's 2020 inflation forecast methodology.

More generally, we note the volatility of current CPI outcomes and forecasts, and the expectations that inflation could increase relative to the past few years. This poses a further challenge to the AER to determine the 'best' forecast of inflation expectations and, importantly, to ensure that allowed expenditures for Powerlink are no more than that of an efficient and prudent network operator.

3.2.3 Rate of Return and taxation estimates

The AER accepted Powerlink's approach to the estimation of the rate of return and taxation costs as set out in its initial revenue proposal, including its proposed averaging period for the risk free rate and the debt estimation. The AER accepted the proposal because Powerlink applied the AER's 2018 Rate of Return Instrument when it estimated the rate of return. Similarly, Powerlink calculated its tax allowance in accordance with the NER requirements (NER, clause 6A.6.4).

[12] Powerlink, *2023-27 Revenue Proposal*, January 2021, Table 2.1, p 4

CCP23 also accepted Powerlink's approach as set out in its initial proposal for the rate of return and the estimation of its taxation costs which is based on the taxation percentages as set out by the AER in its 2018 taxation review for government owned businesses

The AER's Draft Decision updated all the relevant parameters in the rate of return such as the risk free rate (for equity), the cost of debt and inflation. The market risk premium, equity beta, gearing, gamma and the taxation rate (% of taxable income) are all fixed in the 2018 Rate of Return Instrument and have, therefore, not been updated by either the AER or by Powerlink in its revised revenue proposal.

Powerlink has included the AER's Draft Decision for the rate of return values in its revised revenue proposal.

As such, CCP23 accepts Powerlink's revised rate of return proposal while noting that several of the cost inputs will be further updated in the AER's Final Determination. Similarly, we have accepted the updated estimate of taxation costs which incorporates the changes made to the tax depreciation assumptions set out in the AER's 2018 review of regulatory taxation allowances.[13]

However, there is increasing expectation that bond yields will start to increase through the forecast period from their historically low levels.

For example, the RBA' Statement of Monetary Policy in November 2021 noted: *"Government bond yields have risen markedly over recent months including Australia"* and that *"…uncertainty about the outlook for inflation and monetary policy has increased which has led to a significant rise in risk premia and in the volatility of bond yields."* [14]

Similarly, the RBA's charts of the 10-year Australian Government Bond Yield, ("Australian Non-financial Corporate Bond Yields") and the chart on the spread between the 10-year bond yield and the cash rate ("Spread between Australian 10-year Bond Yield and the Cash Rate") increased by mid December 2021, compared to the lows observed in 2020 and early 2021.[15]

This suggests that there will be further increases in the allowed revenue in the AER's Final Determination due in April 2022.

3.2.4 Regulatory Asset Base (RAB)

Powerlink's Revenue Proposal and the AER's Draft Determination

In its initial proposal, Powerlink forecast a decline in both the nominal value (by -0.3%) and real value of the RAB over the RCP, with an opening RAB of $6,958m (nominal) and closing RAB of $6,939m (nominal).

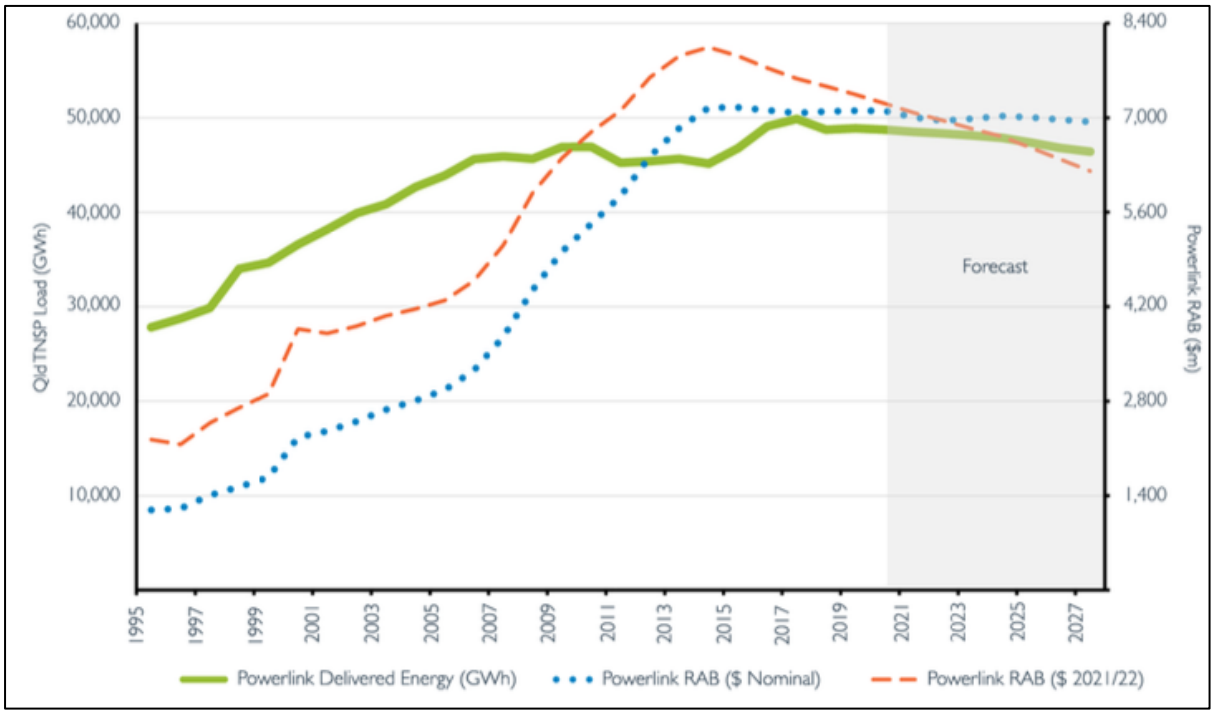
The AER proposed relatively small adjustments in Powerlink's estimate of the opening RAB value that increased the opening RAB to $6,983m (+0.4%). The AER made small adjustments to Powerlink's forecast RAB reflecting updated inflation and small changes in depreciation values. However, the AER did accept Powerlink's new net capex forecast of $924.3 (nominal). CCP23 discusses the capex forecast further in Section 4 below.

The AER states that its approved forecast of net capex increases the RAB by 13.2%, while revised inflation estimate increases the RAB by 11.3% over the forecast RCP. Forecast depreciation reduces the RAB by 24.9%. Following these adjustments the AER's estimate of the value of the RAB declined slightly over the forecast RCP in both nominal (-0.3%) and real dollar terms.

[13] AER, *Tax Review 2018 – Final Report*, 17 December 2018
[14] Reserve Bank of Australia, Statement of Monetary Policy, November 2021, p 3
[15] Reserve Bank of Australia, Chart Pack, Interest Rates – Released 5 January 2022

Figure 3.5 sets out Powerlink's forecast of the RAB, and demonstrates Powerlink's ambition to 'bend the RAB' to ensure it remains relatively consistent with energy growth.

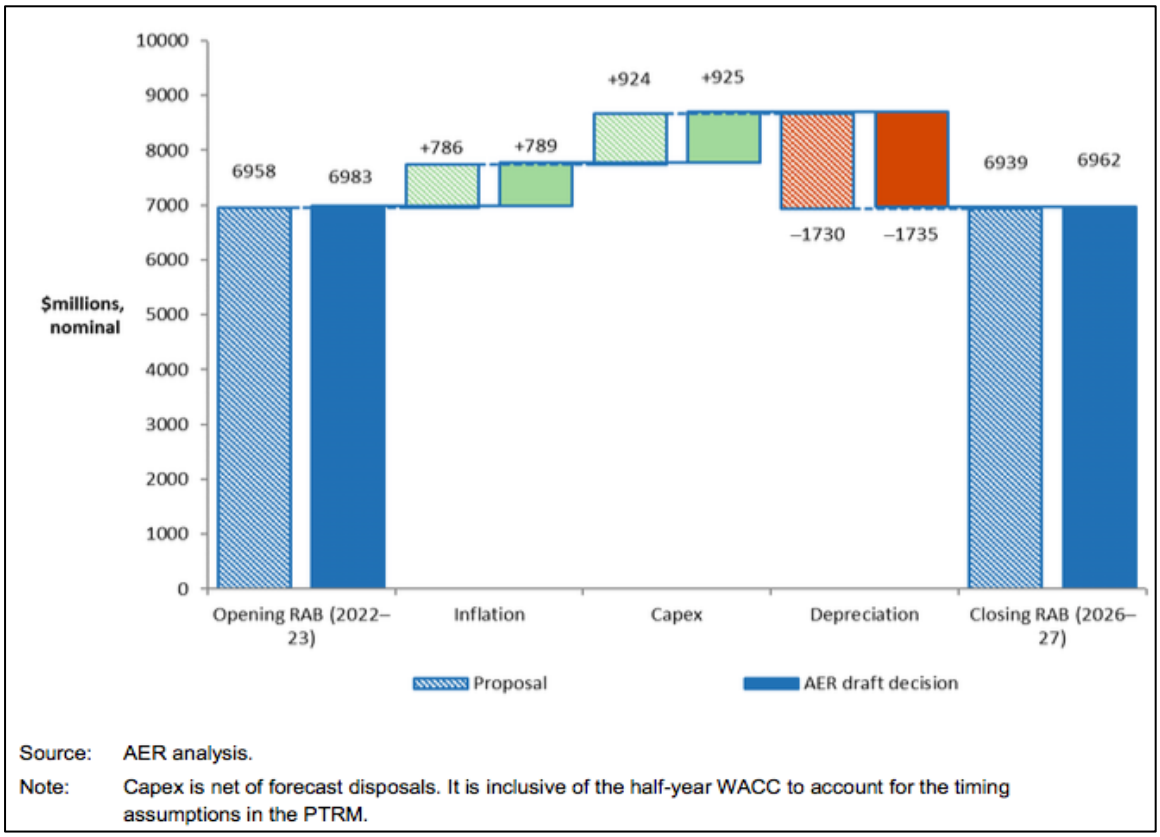
Figure 3.5: Powerlink forecast of delivered energy (GWh) versus RAB ($nominal and $real)



Source: Powerlink, *Revised Revenue Proposal*, Appendix 2.01, Figure 4.

Figure 3.6 illustrates the key drivers of changes in Powerlink's initial revenue proposal and in the AER's Draft Determination.

Figure 3.6: Key drivers of changes in the RAB (2022 to 2027) – Powerlink's initial revenue proposal compared with AER's Draft Decision ($m, nominal)



Source: AER, *Powerlink 2022-27 Draft Decision,* Attachment 2, Figure 2.2, p 19.

Powerlink's Revised Revenue Proposal

In Powerlink's revised revenue proposal, the nominal value of the RAB **increases** over the forecast RCP. This largely reflects:

- an increase in the value of the opening RAB (June 2022) in nominal terms due mainly to higher actual capex spend in the current period and the inclusion of actual inflation outcomes for the preceding years (versus forecast inflation); and
- a further increase in the forecast RAB through to the end of the RCP in June 2027, largely due to the increase in the inflation forecast.

Table 3.2 illustrates the revised forecast RAB in nominal dollar terms, noting that the opening RAB value has increased from $6,958m (initial regulatory proposal) to $7,140m (revised regulatory proposal).

Table 3.2: Revised forecast RAB for the 2023 regulatory period ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27
Opening RAB	7,140.2	7,178.7	7,231.0	7,221.6	7,202.1
Capital expenditure as incurred[(1)]	199.9	225.4	173.3	171.7	177.6
Regulatory depreciation	(161.4)	(173.1)	(182.6)	(191.2)	(197.5)
Closing RAB	**7,178.7**	**7,231.0**	**7,221.6**	**7,202.1**	**7,182.1**

(1) Net of disposals, adjusted for inflation and one-half WACC allowance. The roll forward also reflects forecast capitalised movements in provisions.

There are two other factors that may impact on the value of the RAB (and therefore the cost to consumers) that have been identified by Powerlink. They are:

- A confidential asset transfer matter – Powerlink states that it is still working with the AER on this matter, with the expectation that the AER will make a decision on it as part of the Final Decision.[16]
- A contingent project – Powerlink proposes an upgrade to the Stanwell to Broadsound transmission line as a contingent project, with an estimated additional capex of $52.3m ($2021-22) (see Section 4 for details)

CCP23's assessment of forecast RAB in the AER's Draft Decision and Powerlink's Revised Revenue Proposal

CCP23 has noted previously that there is a significant risk of further upward revisions of the inflation estimate in the Final Decision. These changes will in turn lead to an increase in the **nominal** value of Powerlink's RAB compared to the forecast RAB in the AER's Draft Determination and Powerlink's Revised Revenue Proposal.

This impact on nominal prices arising from increase in the RAB will be exacerbated if (as expected) there is an increase in the cost of equity and the cost of debt because of rising bond yields. Whether wages and social security payments will keep up with this increase is a moot point but overall it is likely to increase pressure on the affordability of electricity to residential and business customers across Queensland.

CCP23 acknowledges that AEMO's 2022 Draft Integrated System Plan (ISP)[17] requires only minimal increases in capex and opex expenditure on new transmission in the 2022-27 RCP. However, the Queensland Renewable Energy Target of 50% renewable energy by 2030 may require significant investment in the transmission network prior to 2030.

This further reinforces CCP23's concerns that the AER's Final Decision reflects these future challenges and only approves prudent and efficient capex and opex, and does so by using the advanced assessment tools that it has developed over the past five years. Focussing on improving productivity will also be crucial for near future customers.

Regulatory Depreciation

Powerlink's Revenue Proposal and the AER's Draft Determination

In its initial revenue proposal, Powerlink proposed two significant changes to the AER's 'standard' approach to regulatory depreciation. They were:

- A change to the depreciation tracking approach from the AER's standard Weighted Average Remaining Life (WARL) approach to a year-by-year depreciation tracking approach. This change resulted in a significant increase in the depreciation allowance for the 2022-27 RCP ($87m), although over the life of the assets, the change in depreciation approach should be NPV neutral.
- Extend the life of 'substations secondary system' asset class by just over a year as a 'transitional' adjustment. Powerlink made this adjustment after consultation with its customer representative groups who were concerned with the impact on consumers of the change to the year-by-year tracking approach. Effectively it reduced the $87m impact in 2022-27 to $57m impact (i.e. a reduction in deprecation costs of $30m), with the $30m to be recovered in subsequent RCP(s).

[16] See AER, *Draft Decision*, Attachment 2, p. 20.
[17] AEMO, *2022 Draft Integrated System Plan*, 10 December 2021.

CCP23 acknowledges the level and quality of Powerlink's consultation with its consumer representative bodies on this issue. Powerlink's revised approach to depreciation was acceptable under the NER. However, Powerlink recognised the importance affordability to its customers and worked closely with its consumer representative groups to find a solution that was acceptable to the AER while reducing reduced the impact on 2022-27 network prices. Other networks have made this same change to their depreciation approach, but have done so with little or no consultation with their customers and without adequately considering the near term impacts on their customers.

The AER's Draft Decision accepted these changes to both the depreciation approach and to the methodology developed by Powerlink in consultation with consumers to modify the impact of this on consumers,

Estimating regulatory depreciation allowance requires the AER to assess the total depreciation amount per year and then subtract from the total depreciation an amount that reflects the impact of annual inflation adjustments on the value of the RAB (to avoid double counting inflation). The AER's final draft regulatory depreciation allowance of $946.5 (nominal) for the 2022-27 RCP includes only some minor adjustments such as the changes to inflation forecast, and is only 0.3% greater than Powerlink's initial proposal.

Powerlink's Revised Revenue Proposal

Powerlink's revised proposal includes an update to the opening RAB along with adjustment for the actual inflation for 2018-22 RCP and the forecast inflation of 2.37% per annum for the 2022-27 RCP. While Powerlink did not provide the forecast depreciation in nominal terms (as practiced by the AER), the PTRM worksheet indicates a total straight-line depreciation cost of $1,760m (nominal), and a regulatory depreciation (after adjustment for inflation) of $905.8m (nominal).[18]

CCP23 Assessment of the Depreciation

Powerlink's revised proposal for regulatory depreciation revenue allowance has decreased in nominal terms largely as a result of adjustment for higher inflation forecasts. Overall, CCP23 considers the revised proposal is reasonable given the changes in the approach and in key inputs into the estimation.

[18] See: Powerlink, *TRP – Revised proposal – Post tax revenue model (PTRM)* – November 2021 – PUBLIC. 'Assets'.

4 Capex

4.1 Summary

CCP23 supports Powerlink's consumer consultation process and recognises the significant effort made by Powerlink has to refine, through many iterations, its capex forecast in consultation with its customer representative bodies.

However, while consumer representatives gave their support to Powerlink's initial regulatory proposal, they did not confirm that the proposal was 'capable of acceptance' by the AER. Rather, being capable of acceptance by consumers depended on the outcome of the AER's detailed technical review of the capex proposal.

The AER's Draft Decision accepts Powerlink's **overall** capex proposal for 2022-27, despite noting some concerns with Powerlink's approach to the replacement of transmission lines / towers, and its recognition of view that there were some potential cost savings.

Powerlink's Revised Revenue Proposal accepts the AER's Draft Decision on the total capex. Powerlink's CEO committed, via a letter to the AER Board, to conduct a formal review of its approach to the transmission line replacement program (an element of repex) in 2022-23 and to share any benefits with consumers in the remainder of the regulatory period. Powerlink stated that it would not include any subsequent reductions in its costs in its assessment of its CESS payments in the next RCP.

CCP23 has previously expressed its concerns to the AER with the AER's Draft Decision to accept Powerlink's total capex proposal even though the AER has acknowledged its concerns with some aspects of Powerlink's approach. Our concerns are based on principle and practice and include:

- The AER's Draft Decision commits the AER to accepting the capex forecast in its Final Decision, leaving little room for consumers and their representatives to engage meaningfully with the issues raised by the AER prior to the AER's Final Decision.
- The AER risks setting a precedent for its decisions on other networks' proposals. It is signalling that important issues can be moved to a process that sits outside the regulatory timetable, while at the same time the AER has not established objective criteria for when it will allow such ex-post processes or any mechanism review the outcomes of this process.[19]
- The AER's reasoning for accepting the total capex forecast despite its concerns with the repex costs (the largest component of the capex proposal) requires further explanation. For example, comparing the proposed capex with the current capex is problematic for assessing the efficiency of a transmission company's proposal given the lumpy nature of transmission capex investment.[20]
- In addition, the AER has relied on a narrow range of benchmarks to assess the prudency and efficiency of Powerlink's current capex. Other benchmarking measures suggest that Powerlink's current capex efficiency has scope for improvement.
- Consumers expect the AER to determine the most efficient cost to achieve the services that they want. Arguably, on the basis of the AER's own analysis, the AER's Draft Decision is not achieving

[19] To be clear, based on Powerlink's strong consumer engagement to date, CCP23 has expressed its confidence that Powerlink will conduct the review as intended in the letter to the Board. Our concern is with the regulatory precedent this may create, particularly given the lack of clearly defined objective parameters for accepting such an 'ex post' commitment.

[20] See Economic Insights, *TNSP Economic Benchmarking Results 2021*, November 2021, for example, p 36

that outcome given that transmission capex is by far the largest component of Powerlink's proposal.

- The fact that the AER states it could not come up with an alternative capex forecast despite its reservations on the efficiency of the repex costs is not a satisfactory basis for accepting a proposal, at least at the Draft Decision stage.

4.2 CCP23's response to Powerlink's initial capex proposal

CCP23 was generally supportive of Powerlink's initial capex proposal. We acknowledged the strength of Powerlink's extensive program of consumer engagement and that Powerlink had responded to the concerns raised by consumers during the development of the proposal. CCP23 also noted the significant improvement in Powerlink's approach to capital investment planning.

On the other hand, we were concerned that Powerlink might be exposed to new challenges over the 2022-27 regulatory period. These challenges include labour cost pressures, Government policy, environmental challenges and system strength issues, particularly with the rapid increase in both small and large scale renewable energy, a process accelerated by the Queensland Government's renewable energy target of 50% renewable energy supply by 2030. While Powerlink's proposal recognised these challenges, the potential impact of these changes, and therefore potential remediation of the risks, is not transparent in the proposal. (see also Section 3.1)

CCP23 also expressed concern with the decline in capex productivity (as measured by the AER's annual benchmarking studies). CCP23 considers continuous Improvements in capex productivity is necessary to address the issue of affordability, particularly given the challenges outlined above.

4.3 The AER's Draft Decision on capex

The AER's Draft Decision approved Powerlink's **total** capex, stating:[21]

> *Our draft decision is that we are satisfied that Powerlink's proposed total forecast capex of $863.9m ($2021-22) reasonably reflects prudent and efficient costs to maintain the safety, reliability and security of the network.*

In approving the total capex, the AER noted Powerlink's "excellent customer engagement", the reduction in total capex compared to the expected capex for the 2017-22 RCP of approximately 3% and the network performance measures were either in line with, or better than, other transmission network service providers (TNSPs). The AER also recognised Powerlink's improved capex planning processes

However, the AER also noted that:

- Between 2005 and 2014 Powerlink's RAB grew by some 91%, an amount that was significantly faster than other transmission service providers during that same period.
- Powerlink's weighted average asset age remained significantly younger than other TNSPs, particularly transmission service lines whose average weighted age was around 34 years compared to over 50 years for most TNSPs.
- Powerlink's 'repex per circuit length' and 'repex per circuit RAB' for the period 2015-20 were less than the other four TNSPs.

More particularly, the AER suggested that while overall Powerlink's planning process had improved, the AER considered there was room for further improvement and that these improvements could potentially result in a lower replacement capex (repex) forecast. In particular:

[21] AER, *Draft Decision*, Attachment 5

- Powerlink's approach to replacement of transmission lines (one of the largest capex category) results in the replacement of transmission lines before the end of their service life. Improvements in this approach could "*potentially result in a lower repex forecast*".[22] The AER stated:[23]

> *…we have identified scope for further improvement in replacement expenditure asset management. In particular, we are concerned that the scope of works for some replacement projects may be overstated. We consider that Powerlink's asset management approach, particularly in relation to the transmission lines replacement expenditure, should encompass a more targeted risk based practice.*

- Powerlink's use of the AER's repex model for some 30% of its total repex costs was not appropriate because the repex model is not well suited to forecasting transmission capex as it relies on *"large homogeneous asset populations that require significant ongoing replacement programs".*[24]

CCP23 understands that the AER undertook an extensive dialogue with Powerlink on these two issues prior to the Draft Decision. While the AER continued to express its concern with these matters in the Draft Decision, the AER concluded that it would accept Powerlink's capex proposal in its totality – with the exception of Powerlink's proposed increase in external labour costs above CPI.

In accepting Powerlink's capex proposal, the AER argued that:

- The AER's task was to approve the total capex forecast.
- Indicators such as the reduction in total capex compared to previous years and relatively low repex per circuit length, suggested that Powerlink's total capex and replacement capex were reasonably prudent and efficient.
- Powerlink's consumer representative bodies generally supported Powerlink's proposal.
- It would be difficult to determine an alternative capex forecast, particularly as the alternative forecast would need to take account of capex/opex trade-offs.[25]
- Powerlink committed, via a letter to the Board, to conducting a review of its approach to replacement capex in 2022-23 with any benefits from this review returned to customers during 2023-27 period.

4.4 Powerlink's Revised Regulatory Proposal

Powerlink accepted the AER's Draft Decision subject to adjustments for the updated estimate of inflation.

Powerlink sought to address the AER's concerns with its replacement capex forecast, specifically the transmission towers/lines. Powerlink stated:[26]

> *While we see merit in this type of analysis (i.e. the AER's repex analysis) to inform the scope of work, we consider* ***it does not reflect a number of important practical limitations and implications****.*

[22] AER, *Draft Decision*, Attachment 5, p 7
[23] AER, *Draft Decision*, Attachment 5, pp 6-7
[24] AER, *Draft Decision*, Attachment 5, p 7
[25] For example, some transmission lines were replaced earlier than their technical life as part of a larger replacement project because Powerlink claimed it reduced the costs to the business over time.
[26] Powerlink, *Revised Revenue Proposal*, Attachment 5, p 13

These "limitations and implications" include capex / opex trade-offs, efficiency of delivery, compliance issues and potential loss of economies of scale.[27]

4.5 CCP23's assessment of the AER's Draft Decision and Powerlink's Revised Revenue Proposal

As noted above, CCP23 is generally supportive of Powerlink's proposed capex, and its engagement with consumers on the proposal. CCP23 also appreciates Powerlink's willingness to accept the AER's Draft Decision including the AER's decision on external labour costs.

Both the consumer representatives and CCP23 looked to the AER to conduct a detailed technical assessment of Powerlink's proposal. Following this technical assessment, CCP23 has concerns with the AER's Draft Decision, that we raised in the public forum on 13th October

In particular, the AER has accepted Powerlink's revenue proposal in the **Draft Decision** while noting that there are areas for improvement that could "*potentially result in a lower repex forecast*"[28].

The AER also makes the following comments on this topic in the Draft Decision, stating: *"…we are satisfied that Powerlink's proposed total forecast capex of $864m ($2021-22) reasonably reflects prudent and efficient costs to maintain the safely, reliably and security of the networks." (Attachment 5, p 5)*

The AER then makes the following statements to qualify this decision.

> … *we have had regard, among other things, to Powerlink's commitment to undertake a review of its approach to network asset reinvestment in 2022-23 and to implement the results of this review over the remainder of the 2022-27 regulatory control period. (Attachment 5, p 5)*
>
> … *In particular, we are concerned that the scope of works for some replacement projects may be overstated. We consider that Powerlink's asset management approach, particularly in relation to the transmission lines replacement expenditure, should encompass a more targeted economic risk based practice. (Attachment 5, p 7)*
>
> *We also have concerns with Powerlink's use of the Repex Model for top-down forecasting]. We consider that the Repex Model is not well suited to use in forecasting transmission capex. (Attachment 5, p 7)*
>
> *While we have identified opportunities for improvement in Powerlink's forecasting approach that could potentially result in lower repex forecast, it is difficult to construct a robust alternative forecast of transmission line expenditure that would result in significantly lower forecast of total capex. (Attachment 5, p 7)*

Our concerns with this aspect of the Draft Decision are based on both principle and practice, as follows.

In our opinion, the AER has unnecessarily locked itself into accepting a proposal at the Draft Decision stage, when under most circumstances a Draft Decision is used to provide focus on unresolved or unacceptable aspects of the initial proposal that can be addressed, after engagement, in the revised revenue proposal. It was open for the AER to reserve its decision to approve the proposed repex until the Final Decision. This would most likely have provided the AER and Powerlink more opportunity for further investigation and resolution of the repex issues.

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[27] For details, see Powerlink, *Revised Revenue Proposal*, Attachment 5, p 13

[28] AER, Draft Decision, Attachment 5, p 7

More significantly, it would have provided Powerlink's customers, and customer representatives, for example through the RPRG, to engage more fully in the issues identified by the AER in the Draft Decision – before the Final Decision.

The AER has limited this opportunity to address these fundamental questions by accepting Powerlink's proposal in total and by agreeing to Powerlink reviewing review its practices in 2022-23, after the Final Decision has been made. CCP23 believes Powerlink will conduct a genuine review process and will do so in discussion with its consumer representatives.

However, the AER's acceptance of an ex-post review process (particularly at the Draft Decision stage) potentially sets a precedent that other networks, with less embedded consumer engagement practice and commitment, may choose to apply. This is particularly so because the AER has not established ex ante:

- Specific criteria about when and why it would accept such an 'ex-post agreement'
- The processes it would employ to monitor and enforce such agreement during the forecast period
- Reporting on ex-post process outcomes; and
- The remedies consumers would have if the agreement is not followed to their satisfaction.

We encourage the AER to address these matters, particularly monitoring and reporting processes, in the Final Decision

We do not believe that the AER's reasons for accepting the proposal despite reservations on repex, are sufficient for accepting the proposal at the Draft Decision stage. For example, the fact that the proposed total capex is less than the expected capex for the current regulatory period is not sufficient, particularly for assessing transmission network capex costs. For example:

- Transmission network capex costs are 'lumpy', and it is not appropriate to use such simple 'total capex' comparisons from one regulatory period to another
- The AER has used a narrow range of 'benchmarks' to suggest that the current capex is suitable as a 'base case' for assessing the total capex forecasts. Other productivity measures suggest that there is still scope for Powerlink to improve on these measures.

Consumers in general expect the AER to determine the most efficient cost to achieve the services that they want. Arguably, on the basis of the AER's own analysis, the AER's Draft Decision has not presented that outcome.

The fact that the AER states it could not come up with an alternative capex forecast despite its reservations on the efficiency of the repex costs should not be (and has not previously been) a basis for accepting a proposal – at least at the Draft Decision stage. As noted above, the AER is now locked into acceptance of the proposal when it did not need to do so at this stage.

Finally, given the importance to the AER of the CEO's letter committing to a review of Powerlink's approach to replacement capex in 2022-23, it is somewhat concerning to CCP23 that:

- The covering letter to Powerlink's Revised Revenue Proposal mentions the future commitments with respect to the alternative to the AER's DMIAM program but fails to mention the commitment to the review of replacement capex processes – a much more significant commitment.

- Similarly, the review is not mentioned in Powerlink's document *"Engagement Plan Post Revenue Proposal Lodgement V2"* (November 2021)[29] which formed part of the documents submitted to the AER in its Revised Revenue Proposal.

CCP23 supports the principle behind the post-revenue engagement plan. However, in recognition of its potential importance, we encourage Powerlink explicitly to include this repex review process in its post revenue determination consumer engagement process.

We have already stated that we have no doubts about Powerlink's intent, commitments, and capacity to engage on delivering the process to which they have committed. Our reasons for highlighting this particular issue in some detail, is to ensure that any precedent setting is carefully explored. This should include considerations of any implications for the "Better Resets Handbook", which we suggest has focussed more on early engagement but says less about processes after a final decision. We also do not want to see future consumer groups and CCP subpanels feeling locked into accepting an approach that, while suitable for Powerlink, may be less appropriate for other networks. These being networks with less embedded consumer engagement processes and possibly less long term and committed consumer representatives with whom to engage.

Consequently, we encourage the AER, in their Final Decision of the Powerlink proposal to address:

- Specific, general application, criteria about when and why it would accept such an 'ex-post agreement'
- The processes it would employ to monitor and enforce such agreement during the forecast period
- Reporting on ex-post process outcomes; and
- The remedies consumers would have if the agreement is not followed to their satisfaction.

We also suggest that there is merit in considering these proposals in the context of the "Better Resets Handbook".

4.6 Powerlink's Proposed Contingent Project

In its initial regulatory proposal, Powerlink proposed one contingent project for the 2022-27 RCP, with an estimated cost of some $52m.

CCP23 supported the contingent project in principle but noted that Powerlink's proposed 'trigger events' did not adequately meet the requirements set out in the NER.

The AER has since been in discussion with Powerlink and Powerlink has revised its definition of the 'trigger events' for the contingent project. The AER's Draft Decision has approved the project on this basis.

Given this change, CCP23 now fully supports the proposed contingent project.

[29] Powerlink, TRP 2022-27, *Post revenue proposal lodgement engagement plan - PUBLIC*, November 2021, Attachment 3.02, p 5

5 Opex

5.1 Overview

The operating cost Revised Revenue Proposal key elements are:

- Proposed Opex: $1,071.4m ($2021–22) for the 2022–27 period, $25m more than Powerlink's actual costs for the 2017–22 period of[30] $1,029.4m (which is the AER approved allowance, excluding debt raising costs), with $17m in debt raising costs to give a total comparable opex for the 2017-22 period of $1046.4m ($2021-22)
- The proposed opex in the revised proposal of $1,071.4 is an increase of $25m on the initial revenue proposal and the Draft Decision. Powerlink's initial opex being the same as for the 2017-22 period.
- Opex increases in the revised revenue proposal are explained by adjustments for inflation as confirmed in the Draft Decision.
- Base: Powerlink proposes 2018–19 as its base year, stating it chose this year as it best reflects a typical year of operations and does not include any COVID-19 cost impacts
- Step: No Step Changes. Category specific: AEMC Levy of $29.7m, debt raising costs of $17.0m
- Trend: Output growth – forecast increase of $11.6m
- Productivity: (0.5) - 0.6 per cent per annum = (estimate $12.2m) - $14.7m decrease. See section 5.3 for our discussion on opex productivity and the productivity factors that have been presented during the development of the revised revenue proposal)

The changes in opex costs between initial and revised proposals are given by Powerlink as:

Table 5.1; changes in Opex from initial to revised revenue proposals

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Revenue Proposal	203.9	206.3	205.8	206.5	206.9	**1,029.4**
Revised Revenue Proposal	209.2	211.8	211.0	211.2	211.2	**1,054.4**
Difference	5.3	5.5	5.2	4.7	4.3	**25.0**

Source: Powerlink Revised Regulatory Proposal, page 15

The net change in operating costs of $25m (real $20/21) from initial to revised proposal is explained by three factors:

1. Application of the AER agreed inflation rate increases operating costs by $30.6 million (real $20/21)
2. Adjustments using AER Draft decision methodologies reduce opex by $1m
3. Productivity improvements committed by Powerlink reduce opex by $4.6m

The adjustments for inflation also have impacts on capex costs, which were discussed in section 4 above. CCP23 accepts the adjustments in opex as given in the revised revenue proposal

[30] Page iii of Powerlink revised revenue proposal.

5.2 Opex methodology: Base – Step - Trend

As is standard practice now across Australian regulated network businesses, operating cost proposals are based on the base - step - trend methodology, these elements are now considered in turn.

5.2.1 Base

The base year for operating costs remains unchanged between initial and revised proposals and was accepted in the draft decision.

5.2.2 Step

Powerlink did not propose any step change in its initial proposal but flagged that there was potential step change in relation to the Australian Energy Market Operator's (AEMO's) participant fees. AEMO's Final Determination on its review of participant fee structures in March 2021 reallocated participant fees from only generators and market customers to include an 18% allocation to Transmission Network Service Providers (TNSPs) from 1 July 2023.

Powerlink says that "for the purposes of our Revised Revenue Proposal, we have not included a step change or specific operating expenditure forecast in relation to AEMO's participant fees."

Powerlink also refers to an ENA rule change lodged during 2021 to allow TNSPs to recover the cost of participant fees levied by AEMO. This rule change is still under consideration and Powerlink has said "we intend to seek recovery of these costs as part of the AEMC's consultation on ENA's Rule change."

We consider Powerlink's approach to AEMO participant fees to be reasonable.

5.3 Opex productivity

Operating cost productivity comes in two parts:

1. Operating cost productivity (as measured through benchmarking); and
2. Productivity improvement over the next regulatory period.

5.3.1 The AER's Draft Decision

The AER's alternative forecast of opex

In its Draft Decision, the AER developed an alternative opex forecast, which it then compared with Powerlink's opex forecast. In developing its alternative opex forecast, one of the parameters that the AER had to consider was what value for productivity growth it should include.

The AER noted that in its initial regulatory proposal "*Powerlink included forecast productivity growth of 0.5 per cent per year in its opex forecast*".[31]

The AER acknowledged stakeholder support for Powerlink's forecast productivity growth of 0.5 per cent per year in its opex forecast. CCP23 "*lauded Powerlink's decision to set a target of zero real opex growth for the next regulatory period and to deliver a 0.5 per cent opex productivity growth dividend to customers*",[32] and EUAA "*welcomed the 0.5 per cent opex stretch productivity growth target*".[33]

The context of Powerlink's proposed productivity growth forecast was that in producing its proposal Powerlink had made a commitment to "constructive discomfort" for itself.

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[31] Draft Decision, Powerlink Queensland Transmission Determination 2022-27, Attachment 6, Operating Expenditure, AER, September 2021, page 20
[32] Ibid., page 8
[33] Ibid.

However, in its alternative opex forecast, the AER did not use the value of 0.5 per cent per year for forecast productivity growth, notwithstanding its proposal by Powerlink and support from stakeholders. Rather, the AER stated: "*We have included forecast productivity growth of 0.3 per cent per year in our alternative estimate of opex*."[34]

The AER stated that it had included the lower forecast productivity growth of 0.3 per cent per year in its alternative opex forecast, as against Powerlink's higher forecast of 0.5 per cent per year, on the following basis:

> *Our productivity growth forecast reflects our expectation of the opex productivity growth an efficient service provider in the transmission industry can achieve. It reflects historic industry opex productivity growth to the extent we consider past performance to be a good indicator of future performance under a business-as-usual situation.*
>
> *We have forecast 0.3 per cent productivity growth based on opex partial factor productivity index analysis over the 2006–19 period.[35] We consider this reflects a reasonable expectation of the benchmark productivity that an efficient and prudent transmission network can achieve for the forecast period.[36]*

We would like to gain a better understanding regarding why the AER used the industry average productivity growth in its alternative forecast rather than the higher forecast provided by Powerlink. This was notwithstanding stakeholder support for the higher proposed productivity growth, and a philosophy of "constructive discomfort" from the network business that should have shown that the network business understood what it was taking on in proposing the higher productivity, and was putting in place the necessary business structures and modus operandi to achieve it.

While it may be true in the general case of a network that does not pursue "constructive discomfort" that 0.3 per cent "*reflects a reasonable expectation of the benchmark productivity that an efficient and prudent transmission network can achieve for the forecast period"*, we suggest that a higher value might also be a reasonable forecast in this case, as proposed by Powerlink.

Comparison of the AER's alternative forecast of opex with Powerlink's opex proposal

Having created its own alternative forecast of opex , the AER compared it with Powerlink's opex proposal, and reached the following conclusion:

> *Our draft decision is to accept Powerlink's transmission opex forecast of $1046.4 million ($2021–22), including debt raising costs, for the 2022–27 regulatory control period. This is because our alternative estimate of $1068.0 million is not materially different ($21.6 million or 2.1 per cent higher) than Powerlink's total opex forecast proposal. Therefore, we consider that Powerlink's total opex forecast satisfies the opex criteria.*[37]

Thus all the parameters in Powerlink's proposal, including Powerlink's proposed forecast productivity growth, were implicitly included in the AER's Draft Decision, notwithstanding the lower value that the AER had placed in its alternative opex forecast. We commend the AER's Draft Decision to accept Powerlink's opex proposal, but that does not deflect from our desire to gain a better understanding regarding why the AER used the industry average productivity growth in its alternative forecast rather than the higher forecast provided by Powerlink.

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[34] Ibid., page 20

[35] Economic Insights, *Economic Benchmarking Results for the Australian Energy Regulator's 2020 TNSP Annual Benchmarking Report*, 15 October 2020, p. 62

[36] Draft Decision, Powerlink Queensland Transmission Determination 2022-27, Attachment 6, Operating Expenditure, AER, September 2021, page 20

[37] Ibid., page 4

5.3.2 Powerlink's Revised Regulatory Proposal

At the CP meeting on 22 October 2021, Powerlink presented that it proposed to apply productivity growth of 0.6 per cent (higher than the figure of 0.5 per cent in its Revenue Proposal). Powerlink further clarified at the meeting that the proposed increase to 0.6 per cent essentially is an adjustment to seek no real growth. It is not an extra productivity initiative or anything like that. Rather, Powerlink wanted to ensure a no real growth forecast to which Powerlink had committed. Powerlink also confirmed that this would increase the discomfort at the business.

Accordingly, the Revised Proposal stated:

> *To ensure we maintained our target of no real growth, we increased (improved) our productivity growth rate from 0.5% to 0.6% per annum, which is above the industry average, and retained our Revenue Proposal position of no step changes.*
>
> *… In October 2021, we discussed our proposed approach to revise our forecast operating expenditure with our Customer Panel. No material issues were raised.*[38]

Meanwhile, since the AER's Draft Decision, the AER's 2021 *Annual Benchmarking Report* has been published.[39] This includes a forecast of 0.5 per cent productivity growth based on opex partial factor productivity index analysis over the 2006–20 period.[40]

On that basis, it would seem that if the AER's considerations for its Final Decision were to include development of an alternative opex forecast, the AER might now incorporate 0.5 per cent as its forecast productivity growth. In that scenario, we would prefer the AER to incorporate instead the Powerlink forecast, recognising Powerlink's philosophy of "constructive discomfort", and, importantly, Powerlink's commitment to a "no real growth forecast".

We also suggest that the AER might consider clarifying the language that was used in the Draft Decision, and provide more guidance to Powerlink (and hence to all network businesses) in the Final Decision that the AER will welcome future proposals to increase productivity growth beyond industry average.

5.4 Overall CCP23 observations on opex

Operating cost considerations, as with capex budget development has benefitted from the iterative approach taken by Powerlink over two and a half years. Powerlink's decision not to seek step changes in its opex budget proposal, coupled with a strong focus on continuing productivity improvements is welcomed.

[38] Minutes of the Customer Panel, Powerlink, October 2021, https://www.powerlink.com.au/customer-panel
[39] See https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/annual-benchmarking-reports-2021
[40] Economic Insights, *Economic Benchmarking Results for the Australian Energy Regulator's 2021 TNSP Annual Benchmarking Report*, 12 November 2021, p. 60

Appendix 1 – Capex Criteria

Extract from NER 6A.6.7

(c) The AER must accept the forecast of required capital expenditure of a Transmission Network Service Provider that is included in a Revenue Proposal if the AER is satisfied that the total of the forecast capital expenditure for the regulatory control period reasonably reflects each of the following (capital expenditure criteria):

. (1) the efficient costs of achieving the capital expenditure objectives;

. (2) the costs that a prudent operator would require to achieve the capital expenditure objectives; and

. (3) a realistic expectation of the demand forecast and cost inputs required to achieve the capital expenditure objectives.

(d) If the AER is not satisfied as referred to in paragraph (c), it must not accept the forecast of required capital expenditure of a Transmission Network Service Provider.

(e) In deciding whether or not the AER is satisfied as referred to in paragraph (c), the AER must have regard to the following (the capital expenditure factors):

. (1) [Deleted]

. (2) [Deleted]

. (3) [Deleted]

. (4) the most recent annual benchmarking report that has been published under clause 6A.31 and benchmark capital expenditure that would be incurred by an efficient Transmission Network Service Provider over the relevant regulatory control period;

. (5) the actual and expected capital expenditure of the Transmission Network Service Provider during any preceding regulatory control periods;

. (5A) the extent to which the capital expenditure forecast includes expenditure to address the concerns of electricity consumers as identified by the Transmission Network Service Provider in the course of its engagement with electricity consumers;

. (6) the relative prices of operating and capital inputs;

. (7) the substitution possibilities between operating and capital expenditure;

. (8) whether the capital expenditure forecast is consistent with any incentive scheme or schemes that apply to the Transmission Network Service Provider under clauses 6A.6.5A, 6A.7.4 or 6A.7.5;

. (9) the extent to which the capital expenditure forecast is referable to arrangements with a person other than the Transmission Network Service Provider that, in the opinion of the AER, do not reflect arm's length terms;

. (10) whether the capital expenditure forecast includes an amount relating to a project that should more appropriately be included as a contingent project under clause 6A.8.1(b);

. (11) the most recent NTNDP, and any submissions made by AEMO, in accordance with the Rules, on the forecast of the Transmission Network Service Provider's required capital expenditure;

. (12) the extent to which the Transmission Network Service Provider has considered and made provision for efficient and prudent non-network alternatives;

. (13) any relevant project assessment conclusions report required under clause 5.6.6; and

. (14) any other factor the AER considers relevant and which the AER has notified the Transmission Network Service Provider in writing, prior to the submission of its revised Revenue Proposal under clause 6A.12.3, is a capital expenditure factor.