

Consumer

Challenge

Panel

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**Powerlink Draft Revenue Proposal (DRP) for the Regulatory  
Control Period from 1 July 2022 to 30 June 2027 (FY 2023 to  
FY 2027)**

Advice to the Australian Energy Regulator (AER)

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**Consumer Challenge Panel (CCP) Sub-Panel CCP23**

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## 1. Context, Background and the Business Narrative

This Advice to the AER follows the Powerlink template questions from the Draft Revenue Proposal (DRP), in the order that they were presented, and are shown in italics, with the first questions considered in the next section.

### Context

Powerlink is developing its regulatory proposal in a period of significant uncertainty. All parties have recognised that COVID-19 has substantially impacted many aspects of the preparation of the regulatory proposal, including some limiting of consumer engagement options. There is currently considerable uncertainty about future demand, with more people potentially working from home, increasing household demand, while demand for electricity from some businesses will reduce. The length of time for which COVID-19 will be a significant influence is unknown, as is the mechanism and timeframe for the economy to recover to reach stable equilibrium in a new “normal”, which may differ from the old “normal” in ways that are also unknown.

The future of the electricity market is also uncertain as renewable generation becomes more prevalent at both transmission grid and low voltage distribution network levels. The increase in renewable generation is leading to more periods of two-way flow, and changing load shapes for demand, along with other technical challenges associated with maintaining voltage, declining minimum demand levels, inertia and associated “grid security” challenges. Queensland has a high level of domestic-scale PV penetration by global standards, a reality that requires Powerlink responsiveness.

In response to changing market structures, the market bodies are driving changes including a post-2025 market development process and the AEMO Integrated System Plan (ISP). Powerlink’s analysis suggests that the ISP is unlikely to have significant impact on the Queensland transmission network over the next regulatory period.

In recognising the uncertainty associated with the development of this regulatory proposal, we also continue to emphasise the importance of maintaining active engagement with customers and other stakeholders and seeking shared solutions as issues and choices arise.

### Background

This DRP is unlike the draft plans produced by some other network businesses, in that it is a draft of the actual planned Revenue Proposal rather than an outline of issues to be considered in the Revenue Proposal, a reasonable approach undertaken by some businesses.

The DRP is the latest in a series of iterations of key aspects of the Revenue Proposal that have been developed by Powerlink and discussed with its Customer Panel (CP) and Revenue Proposal Reference Group (RPRG) on an ongoing basis. These iterations have been taking all stakeholders ever closer to the Revenue Proposal that will be lodged with the AER. Powerlink has a goal that its Revenue Proposal should be “capable of acceptance”.

### Business Narrative

An important aspect of the DRP is the inclusion of a separate business narrative, which helps to set context and direction for the business during and beyond the next revenue period, and through uncertainty.

In the business narrative, Powerlink states that the 2023-27 Revenue Proposal objectives are to:

- Deliver a Revenue Proposal that is capable of acceptance by its customers, the Australian Energy Regulator (AER) and Powerlink.
- Balance the needs of:
  - A reasonable price for customers;
  - Expenditure to manage the network; and
  - Appropriate returns to shareholders.
- Meaningfully engage with its customers and stakeholders.
- Ensure the 30 Year Network Vision is considered within determination forecasts and plans.
- Improve efficiency and robustness of determination process for Powerlink, customers, stakeholders and the AER.

Powerlink identifies “Customer Drivers” as being an important part of the businesses modus operandi, and in the business’s narrative states:

*Our organisation is shifting from a ‘technical’ organisation to a ‘learning’ organisation, with greater importance placed on how we engage with our customers to gain insights and improve our decision making.*

*We aim to build relationships with customers connected directly to the transmission network, through a dedicated team that manages those relationships and works to meet those customers’ needs.*

This approach is to be commended.

The business narrative includes some focus on the network vision, which Powerlink describes as follows:

*We developed the Network Vision, with input from customers, stakeholders and energy industry experts, to provide a long-term view across a range of plausible scenarios and understand what services future customers will value. This Vision will directly influence our approach to our Revenue Proposal.*

*Future investment will need to take a ‘whole of system’ perspective, with greater coordination of investment strategies between generation, transmission and distribution businesses to deliver reasonable outcomes for customers. A particular focus will be how transmission and distribution can coordinate investment taking into account the impact of homes and businesses generating their own power, often referred to as Distributed Energy Resources (DER). A focus of AEMO’s 2020 Integrated System Plan (ISP) is the potential need for greater interconnection between Queensland and the National Electricity Market (NEM). This document highlights the potential need for further expansion of the transfer capacity on the interconnector between Queensland and New South Wales (QNI Medium Project), with the potential for larger upgrades in the future.*

The network vision has been developed with reference to future scenarios:

*We’ve explored how external trends will affect our customers and network, and clustered them into themes. By analysing these themes, we’ve identified which ones are the most uncertain and will have the most impact. These key uncertainties (decarbonisation, decentralisation and changing electricity patterns) have become the framework we use to identify a plausible range of future scenarios for the electricity supply industry.*

Powerlink has also produced the following graphic as part of the network vision that summarises the key insights.

**Figure 1: Key insights**



Source: Powerlink Draft Revenue Proposal

Powerlink also states:

*From a longer term perspective, our Network Vision will inform how we develop the future network with customer interests front of mind. For example, in the future, development and uptake of battery storage, electric vehicles and hydrogen production technology will impact the network. Although the exact timing and impact of these evolving technologies on the network is uncertain and creates greater complexity, we need to consider these future needs as part of our long-term investment decision making.*

*The network of the future will need to achieve a balance between customer needs, generation diversity, batteries and storage solutions, demand management and greater interconnection. We see our role in the future as being a platform to enable the provision of these, and many other, energy services for customers.*

### CCP23 Observations

CCP subpanels have highlighted the importance of a consistent and forward-looking business narrative as being valuable to consumers as well as the business. We commend Powerlink on the development of their business narrative.

We are impressed with the statement that “Powerlink regards itself as a learning organisation”, as this focus is significant in how the business is organised, and particularly its approach to engaging with customers and with other stakeholders.

The “business narrative” and associated “network vision” documents are valuable, and we think they will add valuable context and focus for the regulatory proposal.

The narrative is sound, and from our perspective would benefit from a stronger, more forward looking approach and could expand, at “high level” on the nature of both the business narrative and network vision. Some greater specificity about what these high level elements will mean in practice for the business and their customers would also be helpful. These do not need to be wordy additions, rather short indicative ‘word pictures’.

## 2. Capable of Acceptance

*Questions from the Powerlink draft revenue proposal (we have changed the numbering to improve the reference point for our discussion of the various sections from the draft revenue proposal)*

*Q2.1 As an overall Revenue Proposal package, do you think our draft Revenue Proposal is capable of acceptance? Note - the overall package could be assessed in terms of the total revenue and price impact to customers.*

*Q2.2 What elements of the draft Revenue Proposal are capable of acceptance? What elements are not?*

Q2.1.

CCP23 is well aware of Powerlink's stated objective of presenting a regulatory proposal to the AER that is "capable of acceptance". This has been a clear objective from our early discussions with Powerlink and we consider it to be an appropriate goal. While the notion of a proposal that is capable of acceptance has had currency for at least the last five years, the intent is moving from 'aspirational' to 'achievable'.

There is active current consideration of capability of acceptance in the AER's assessment of the AGN gas Access Arrangement proposal while the Draft Decisions regarding Victorian electricity distribution regulatory proposals provide clear commentary and intent regarding the approach that the AER is intending to take in assessing the extent to which consumer engagement has influenced those regulatory proposals. The AER says "Regardless of the approach taken, we believe that proposals which have been developed with the influence of consumers, and their preferences, are more likely to be in the long-term interests of consumers than those which have not."<sup>1</sup> We interpret this statement as also saying that proposals which have been developed with the influence of consumers, and their preferences, are more likely to be in the long-term interests of consumers and consequently capable of acceptance. These are our words, not the AER's, and we stand by them as our understanding of the relationship between capability of acceptance and consumer engagement.

Capability of acceptance will continue to be a useful topic for further dialogue between consumer interests, Powerlink and the AER. CCP23 has previously said that we intend to take into account CCP24 thinking when considering the Powerlink proposal's "Capability of Acceptance".

CCP24 said: "In considering the question about whether the AGN Access Arrangement proposal is capable of acceptance we return to our initial list of criteria that we said we would use to consider the proposal, at the public forum:

1. Demonstrated consumer support across the diversity of consumer interests
2. Addresses affordability concerns
3. Follows AER guidelines and regulatory models
4. Efficient business expenditure
5. Demonstrated, responsive leadership engagement
6. Further engagement re market expansion capex, Vulnerable Customer Strategy, Innovation Incentive Scheme
7. the business presented a Clear business narrative –
8. Evidence that the network business has critically assessed the options available to it."

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<sup>1</sup> [https://www.aer.gov.au/system/files/AER%20-%20Draft%20decision%20-%20United%20Energy%20distribution%20determination%202021-26%20-%20Overview%20-%20September%202020\\_0.pdf](https://www.aer.gov.au/system/files/AER%20-%20Draft%20decision%20-%20United%20Energy%20distribution%20determination%202021-26%20-%20Overview%20-%20September%202020_0.pdf)

These eight criteria have been the basis for CCP considerations of capability of acceptance so far.

More recently, the AER has released its five Victorian DNSP Draft Determinations and included a table about how elements of consumer engagement might be assessed.

**Table 1: Elements of consumer engagement and how they might be assessed**

Element	Examples of how this could be assessed
<b>Nature of engagement</b>	<ul style="list-style-type: none"> <li>• Consumers partner in forming the proposal rather than asked for feedback on distributor’s proposal</li> <li>• Relevant skills and experience of the consumers, representatives, and advocates</li> <li>• Consumers provided with impartial support to engage with energy sector issues</li> <li>• Sincerity of engagement with consumers</li> <li>• Independence of consumers and their funding</li> <li>• Multiple channels used to engage with a range of consumers across a distributor’s consumer base</li> </ul>
<b>Breadth and depth</b>	<ul style="list-style-type: none"> <li>• Clear identification of topics for engagement and how these will feed into the regulatory proposal</li> <li>• Consumers consulted on broad range of topics</li> <li>• Consumers able to influence topics for engagement</li> <li>• Consumers encouraged to test the assumptions and strategies underpinning the proposal</li> <li>• Consumers were able to access and resource independent research and engagement</li> </ul>
<b>Clearly evidenced impact</b>	<ul style="list-style-type: none"> <li>• Proposal clearly tied to expressed views of consumers</li> <li>• High level of business engagement, e.g. consumers given access to the distributor’s CEO and/or board</li> <li>• Distributors responding to consumer views rather than just recording them</li> <li>• Impact of engagement can be clearly identified</li> <li>• Submissions on proposal show consumers feel the impact is consistent with their expectations</li> </ul>
<b>Proof point</b>	<ul style="list-style-type: none"> <li>• Reasonable opex and capex allowances proposed               <ul style="list-style-type: none"> <li>○ In line with, or lower than, historical expenditure</li> <li>○ In line with, or lower than, our top down analysis of appropriate expenditure</li> <li>○ If not in line with top down, can be explained through bottom up category analysis</li> </ul> </li> </ul>

Source: AER “Table 7” from Victorian DNSP Draft Determinations 2020



The AER also said the following have referenced the wording from the United Energy Draft Determination:

*We used the results of each distributor’s consumer engagement to inform our draft decisions. High quality consumer engagement can take a range of forms and we encourage distributors to consider which approach best suits them and consumers in their network. The best approach to take may depend on the nature of a distributor’s consumer base and the issues of importance to those consumers.*

*... Taking this into account, the elements outlined in (the table below) represent a range of considerations that we think can clearly demonstrate whether consumers have been genuinely engaged in the development of the proposals.*

*The elements of consumer engagement which informed how we viewed this engagement and the weight we were able to place on the outcomes in our consideration of the regulatory proposal are summarised in Table 7. The rest of this section discusses our assessment of each distributor’s engagement against this framework. These elements are intended to show how our thinking has evolved since our 2013 Consumer Engagement Guideline but are not intended to provide a fixed view. Our framework will continue to evolve as distributors’ models of consumer engagement mature over time.*

We have compared the CCP capable of acceptance criteria and the AER elements (for consumer engagement) and examples of how they could be assessed and find high levels of correlation.

The only two CCP criteria not directly covered in the AER elements are:

1. Clear Business Narrative
2. Evidence of critical assessment of a range of options available to the network

The business narrative criterion was considered in the previous section, while “Evidence of critical assessment of a range of options available to the network” is considered in the CAPEX section of this Advice.

The other CCP criteria are incorporated into the AER “elements” table with some initial CCP23 observations relating to our view of proximity to capability of acceptance in the following table. We consider this preliminary table to contain useful topics for discussion between Powerlink, consumers, the AER and CCP23.

**Table 2: AER elements for consumer engagement and CC23 observations**

<p>Nature of engagement</p>	<ul style="list-style-type: none"> <li>• Consumers partner in forming the proposal rather than asked for feedback on distributor’s proposal</li> <li>• Relevant skills and experience of the consumers, representatives, and advocates</li> <li>• Consumers provided with impartial support to engage with energy sector issues</li> <li>• Sincerity of engagement with consumers</li> <li>• Independence of consumers and their funding</li> <li>• Multiple channels used to engage with a range of consumers across a distributor’s consumer base</li> </ul>	<ul style="list-style-type: none"> <li>• Process co-design, RPRG</li> <li>• Reps on Customer panel include Consumer groups, C&amp;I, community service orgs &amp; other</li> <li>• Yes</li> <li>• Yes</li> <li>• Range of channels, some scope for broadening</li> </ul>
<p>Breadth and depth</p>	<ul style="list-style-type: none"> <li>• Clear identification of topics for engagement and how these will feed into the regulatory proposal</li> <li>• Consumers consulted on broad range of topics</li> <li>• Consumers able to influence topics for engagement</li> <li>• Consumers encouraged to test the assumptions and strategies underpinning the proposal</li> <li>• Consumers were able to access and resource independent research and engagement</li> </ul>	<ul style="list-style-type: none"> <li>• Achieved to date, further engagement on Insurance planned.</li> <li>• Achieved</li> <li>• Customer Panel and RPRG, in particular, able to influence</li> <li>• Customer Panel and RPRG, have robust, active engagement</li> <li>• We don’t know</li> </ul>

Clearly evidenced impact	<ul style="list-style-type: none"> <li>• Proposal clearly tied to expressed views of consumers</li> <li>• High level of business engagement, e.g. consumers given access to the distributor’s CEO and/or board</li> <li>• Distributors responding to consumer views rather than just recording them</li> <li>• Impact of engagement can be clearly identified</li> <li>• Submissions on proposal show consumers feel the impact is consistent with their expectations.</li> </ul>	<ul style="list-style-type: none"> <li>• Achieved, commencing with co-design</li> <li>• CEO has good profile</li> <li>• Achieved</li> <li>• Iterative process and documented ‘impacts’</li> <li>• Being tested through the Draft Revenue Proposal</li> </ul>
Proof Point	<ul style="list-style-type: none"> <li>• Reasonable opex and capex allowances proposed <ul style="list-style-type: none"> <li>o In line with, or lower than, historical expenditure</li> <li>o In line with, or lower than, our top down analysis of appropriate expenditure</li> <li>o If not in line with top down can be explained through bottom up category analysis</li> </ul> </li> </ul>	Capex draft proposal probably has scope for trimming. Early engagement with AER to continue to test against regulatory models

Source AER and CCP

*Q2.2. What elements of the draft Revenue Proposal are capable of acceptance? What elements are not?*

We do not directly answer the questions of capability of acceptance in this Advice, as we consider that as the DRP is a significant element of the Powerlink Consumer Engagement strategy it is up to Powerlink customers to be answering this question at this stage of the process.

In response to question 2.1 we have outlined the criteria that we expect that we will apply when we provide advice to the AER about capability of acceptance of the revenue proposal, which will be influenced by Powerlink customer responses to this DRP.

The aspects of this Draft Revenue Proposal that we consider warrant further consideration before lodgement include:

- Capex, with an overall increase of 12% (excluding proposed contingent projects) for capex compared to likely actual expenditure for the current period
- Further analysis of total replacement capex, being the largest source of increase in capex
- The inclusion of contingent reinvestment capex

- Links between the proposed IT capex and delivered service and cost benefits to consumers
- Opex Step Changes
  - Insurance (we recognize that further engagement is already planned for this topic)
- Demand Forecasts, due particularly to the uncertainty posed by COVID-19

#### CCP23 Observations

We support the objective of Powerlink lodging a revenue proposal that is capable of acceptance, and we also recognise that this concept is currently being given active consideration by the AER as well as other network businesses and consumer groups.

We suggest that Powerlink would be well advised to consider how the elements from the Victorian distribution business draft determination, “table 7” would apply to Powerlink.

Regarding the question about whether the draft revenue proposal is considered to be capable of acceptance, we do not consider it to be CCP’s role to make this assessment at this stage. Our observations of customer views about capability of acceptance in responding to the draft revenue proposal, will heavily inform CCP advice to the AER regarding the revenue proposal that is submitted to the AER.

### 3. Customer Engagement

Customer Engagement – Chapter 3 Question guide:

*Q3.1 Do you support Powerlink’s engagement approach to date?*

*Q3.2 Have we demonstrated how engagement has influenced the draft Revenue Proposal?*

*Q3.3 What areas do you believe require further engagement in the lead up to the submission of our Revenue Proposal? (Note – for practical reasons we are unlikely to be able to undertake any formal engagement beyond mid-December 2020).*

CCP23 has been observing Powerlink’s engagement for about 16 months, with initial meetings and discussions occurring in July 2019. Powerlink summarises their engagement program with the following table from the DRP.

**Table 3: Powerlink’s engagement timetable**

	2019					2020												2021	
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	
<b>Regulatory milestones</b>			Powerlink notifies the AER on need for Framework and Approach (F&A) stage				AER publishes Preliminary F&A Paper					Powerlink submits Expenditure Forecasting Methodology to the AER	AER publishes Final F&A Paper						Powerlink lodges Revenue Proposal
<b>Engagement activities</b>	Customer Panel Meeting Engagement Plan	Annual Transmission Network Forum			Customer Panel Meeting Business narrative benchmarking	Customer Panel Meeting Contingent and ISP projects, IT capex				Customer Panel Meeting Expenditure forecasting methodology		Customer Panel Meeting RFP and Deep Dive Topics		Annual Transmission Network Forum			Customer Panel Meeting Detailed session on Revenue Proposal		
			Revenue Proposal Reference Group monthly meetings			Revenue Proposal Reference Group monthly meetings													
	Finalisation of engagement plan		Webinars/workshops on key elements of the Revenue Proposal such as: <ul style="list-style-type: none"> <li>Capital expenditure forecasts and methodology</li> <li>Operational expenditure forecasts and methodology</li> <li>Integrated System Plan (ISP) and contingent projects</li> <li>Service Target Performance Incentive Scheme (STPIS)</li> </ul>									Powerlink releases Preliminary Reasons and Forecasts Paper (PRFP)	Deep Dive on aspects based on submissions received on PRFP Regional forum						
One-on-one briefings – ongoing as required																			

Source: Powerlink Draft Revenue Proposal

This is considered to be a fair representation of what we have either observed directly or been satisfied has occurred.

We were also able to observe the 2019 “Transmission Network Forum” a significant annual event held by Powerlink with over 200 participants and coverage for a wide range of transmission issues. The 2019 forum included seeking initial thoughts about the regulatory proposal for 2022-27. The recent 2020 “Transmission Network Forum” was well structured and appeared to be also well received by participants in the Forum.<sup>2</sup>

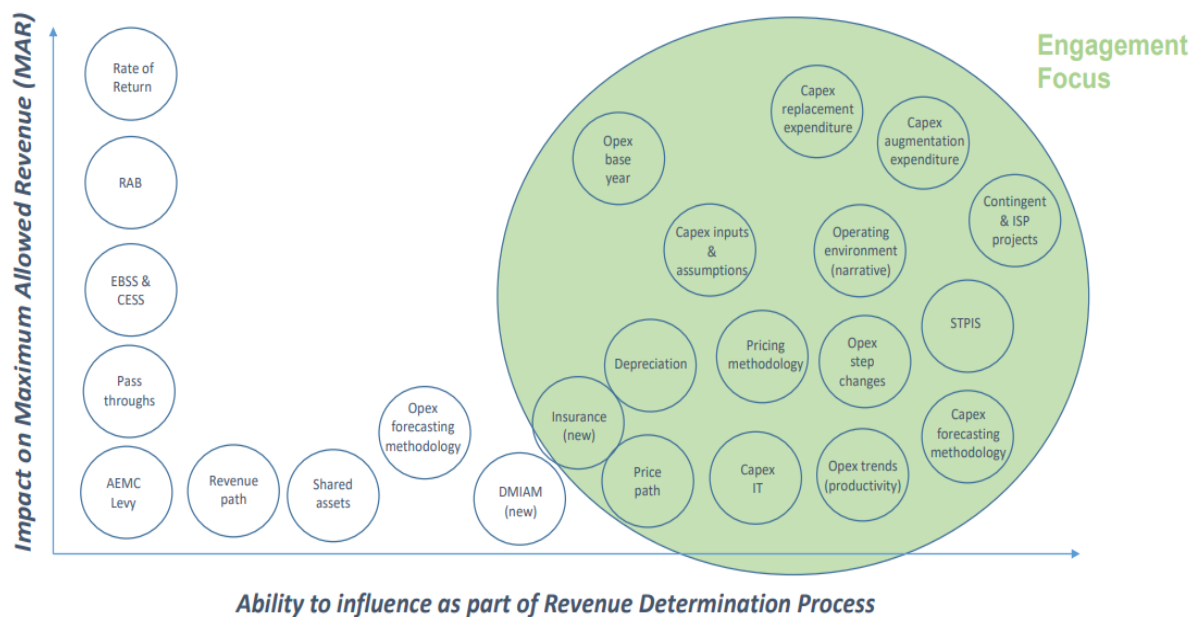
CCP23 was pleased to see Powerlink engage directly with a broader range of consumers beyond its Customer Panel and Revenue Proposal Reference Group (RPRG) members.

<sup>2</sup> The Forum was conducted over the internet due to COVID-19 constraints. CCP23 considers that Powerlink went to considerable effort to maximise stakeholder participation in the forum.

CCP23 has also observed Powerlink’s Customer Panel and RPRG meetings, being able to attend meetings and meet participants during 2019 and joining by online video link for 2020 meetings. The Customer Panel is a significant ongoing source of consumer perspective for Powerlink. It comprises twelve members from a range of stakeholder interest areas, and includes representatives with household, SME and C&I perspectives. The Customer Panel meets about quarterly for half a day. To provide greater focus for the revenue proposal, a subgroup of five Customer Panel members meets monthly with senior Powerlink staff as the Revenue Proposal Reference Group (RPRG).

One of the initial customer engagement activities undertaken in preparation for the revenue proposal was a “co-design” process that centred on a workshop in May 2019 including ‘consumer interests’ stakeholders, Powerlink board and staff members. The co-design process included consideration of engagement scope as well as techniques and sequencing of consideration. The outputs of the process being the following ‘map’ of topic areas considered against the ability to influence decision making by Powerlink and the relative importance for maximum allowed revenue (MAR). This led to identification of the topics that would be the initial focus of the engagement process.

**Figure 2: Engagement focus**



Source: Powerlink Preliminary Positions and Forecasts Paper (PPFP)

While CCP23 had not been appointed at the time of the co-design workshop, so we were unable to observe this process, its importance has been demonstrated through the engagement we have observed both by regular reference to the focus topics and to consumer representative reference back to the priority topics during subsequent engagement. For us, the impact of this co-design process has been evident throughout the engagement strategy that Powerlink has implemented.

We are also impressed that Powerlink has made an effort to map its engagement topics against the appropriate level on the IAP2 spectrum, with the business considering that it has reached the high

engagement level of ‘collaboration’ with some topics and associated engagement. This is summarised in the PFP with the following chart.

**Table 4: Powerlink engagement measured against the IAP2 spectrum**

Level of IAP2 Spectrum	Aspect of Revenue Determination Process
<b>Empower</b> <i>To place the final decision-making in the hands of customers and stakeholders</i>	
<b>Collaboration</b> <i>To partner with customers to formulate alternatives and incorporate their advice into final decisions to the maximum extent possible</i>	Engagement approach and evaluation (Co-design) Contingent & ISP projects Operating environment ( <a href="#">Business Narrative</a> )
<b>Involve</b> <i>To work directly with customers and stakeholders to ensure their concerns and aspirations are directly reflected in the alternatives developed</i>	Capex – Augmentation expenditure, replacement expenditure, forecasting methodology Opex – Efficient base year, step changes – cyber security and insurance Service Target Performance Incentive Scheme (STPIS) Depreciation
<b>Consult</b> <i>To obtain feedback on alternatives and draft proposals</i>	Capex – Key inputs and assumptions, Information Technology (IT) Opex – Forecasting methodology, trends (productivity) Price path Revenue path Pricing methodology AEMC Levy
<b>Inform</b> <i>To provide balanced information to keep customers and stakeholders informed</i>	Rate of return Efficiency Benefit Sharing Scheme (EBSS) and Capital Expenditure Sharing Scheme (CESS) Regulated asset base Shared assets Pass throughs



Source: Powerlink PFP

Engagement strategy to date

The mainstay of Powerlink’s engagement for about the past 16 months has been its Revenue Proposal Reference Group (RPRG) which has met for about three hours for each of 8-10 meetings. This means that each of the participants of the RPRG have been engaging directly with senior Powerlink staff for somewhere between 24 and 30+ hours so far, with more detailed engagement to come, particularly in association with the draft revenue proposal. This number of hours can be considered against a deep dive which might be four hours or a deliberative forum methodology which normally is of the order of magnitude 3 -4 hours. This level of direct participation would be among the highest of any network engagement process, outside of the AusNet Services Customer Forum, which is the focus of the NewReg trial. The JEN People’s Panel is the other engagement process of which we are aware that has had comparable levels of hours of input per participant. The RPRG members all have considerable background in energy markets and bring a diversity of perspective and significant depth of understanding to the engagement. The detail of engagement undertaken coupled with the iterative approach is recognised and supported.

From a methodological perspective, the RPRG has not been a negotiation process per se, which was a focus of the NewReg trial, it has been a more iterative process with Powerlink progressively presenting current thinking about key regulatory parameters to each meeting. This means that the RPRG has been able to significantly influence the thinking of Powerlink and that all parties have had the opportunity to review and revise thinking and update estimates on a rolling basis. It also means that Powerlink has not been presenting consumers with “fait accompli” decisions to simply endorse. Rather, it has been a strong two-way engagement. This DRP can be regarded as the third major iteration of Powerlink thinking, the previous two iterations being the focus of PFP and Customer Forum consideration and debate.

The reporting back by the RPRG to the Powerlink Customer Panel, a broader group, has also been an important part of the process allowing another phase of review of thinking and imposing a discipline on both the RPRG and the business.

#### What's planned?

Powerlink says that it has identified four specific topics for deeper engagement during August-December 2020, along with responses from consumers and stakeholders about this DRP. The future topics are:

1. Contingent reinvestment projects – RPRG discussion
2. Productivity – RPRG discussion
3. Cyber security – deep dive workshop
4. Insurance – deep dive workshop

With the engagement techniques that they plan to apply between August and December 2020 being described by Powerlink as follows:

- “Ongoing CP and RPRG meetings – 1 x CP meeting and 4 x RPRG meetings August-December.
- Transmission Network Forum – our annual Transmission Network Forum in September.
- Deep dives – we will host deep dive workshops focused on detailed exploration of a single topic related to the Revenue Proposal, for at least a 2 hour session, which will be open to customers/stakeholders beyond the CP/RPRG.
- Webinar/s – at least one webinar will be held providing a overview of the key elements of the Draft Revenue Proposal. More will be offered if there is significant interest from customers.
- One-on-one briefings – we will proactively offer these to direct connect customers, and to other relevant customers/stakeholders who have made a previous submission to recent Queensland revenue determination processes.
- Leverage existing opportunities – we will contact our Government Owned Corporation (GOC) counterparts to leverage existing engagement opportunities with their customer groups, where timely and appropriate. We also request CP members identify opportunities for us to talk directly with their members, if interested.”

In the DRP, Powerlink asks about appropriate engagement techniques with the following question and explanation:

#### Range of techniques

“The following sections outline the range of techniques Powerlink will use for engagement on its Revenue Determination process. This list is not intended to be exhaustive and Powerlink welcomes suggestions for new techniques from customers and stakeholders. Identified techniques include:

- Customer Panel
- Revenue Proposal Reference Group (RPRG)
- Preliminary Positions and Forecasts Paper
- Transmission Network Forum
- Workshops/webinars
- Deep Dives
- Regional Engagement Forums
- Digital engagement



- Formal research
- Site tours
- Information development.”

We’ve already identified the customer panel and the RPRG as being mainstays of the Powerlink engagement process and we would expect that these processes are maintained up to and after lodgement of the revenue proposal. We can also confirm that the preliminary positions and forecasts paper was circulated in the transmission network forum conducted.

### CCP23 observations

We have no doubt that Powerlink has made a strong commitment to engage meaningfully with customer interests and that the RPRG group has provided a deep level of engagement as topics have evolved over the past year and a half. Powerlink has succeeded in conducting a proactive, iterative and informed engagement process. We would be exceedingly surprised if Powerlink were to submit a regulatory proposal that was not actively shaped by the detailed consumer engagement that has been undertaken so far and that will occur in response to the draft revenue proposal.

With the draft revenue proposal providing the last major phase of engagement before finalising the regulatory proposal, we would anticipate some greater breadth to the engagement to support the depth of engagement which has happened to date, particularly through the RPRG. We suggest that there would be merit in Powerlink actively seeking some regional consumer perspectives on the draft revenue proposal and would anticipate that much of the engagement that has occurred with ‘directly connected’ commercial and industrial customers will also be reported in the revenue proposal that is lodged.

Our summary responses to the Powerlink questions regarding consumer engagement are based on discussion above.

#### *Q3.1 Do you support Powerlink’s engagement approach to date?*

We consider that Powerlink’s engagement approach to date has been appropriate and has provided high-quality input for Powerlink’s consideration.

Noting the AER elements of engagement framework and the apparent preference in the AER’s Victorian electricity DNSP decisions for “depth” of engagement as having a somewhat higher priority than “breadth” of engagement, we suggest that the RPRG has provided considerable depth. We think that there is some scope to add some further breadth to engagement to be undertaken, which we understand as part of the objective of the draft revenue proposal and associated engagement. In response to the revenue proposal to be lodged by late January, we will look with interest to see the extent to which further breadth has been added to the engagement processes.

#### *Q3.2 Have we demonstrated how engagement has influenced the draft Revenue Proposal?*

The iterative approach applied by Powerlink means that engagement influence has been observable over time and culminating, at this stage in the draft revenue proposal. The DRP clearly documents suggestions and proposals that have been made during engagement so far, and clearly provides Powerlink’s responses.

*Q3.3 What areas do you believe require further engagement in the lead up to the submission of our Revenue Proposal? (Note – for practical reasons we are unlikely to be able to undertake any formal engagement beyond mid-December 2020).*

Given the length of Powerlink’s transmission lines and the changing flows north and south, we think there is some scope for further engagement that is targeted to regional communities in mid and northern Queensland.

While there is solid representation of C&I perspectives on the RPRG, we understand that there is ongoing dialogue between Powerlink and major C&I customers. A description of these meetings would be valuable as part of the draft or final regulatory proposal. We also suggest that some reflection of views of landowners with transmission line easements is also likely to be informative.

We support the further engagement proposed on priority topics, including insurance.

CCP23 considers that there are opportunities for Powerlink to work with its customers to further reduce its capex proposal, particularly with respect to reinvestment capex. Powerlink’s investment to date appears to have delivered an extremely high level of performance relative to its regulatory requirements and demand growth has stabilised. As such, it is an appropriate time to reassess the level of reinvestment.

Without additional actions to reduce its capex forecast, Powerlink’s capital productivity will decline further. We consider that Powerlink would benefit from a broader discussion with its customers on the trade-offs between efficient delivery of services to regulatory standards and the level of investment in replacement of its existing assets. The affordability of Powerlink’s services, and the ongoing impact of high levels of investment in previous regulatory periods on its costs, should frame this discussion.

## 4. Capital Expenditure

Question guide:

- *Is our capital expenditure forecasting approach (Hybrid+) reasonable?*
- *Have we explained the key drivers for our capital expenditure forecast?*
- *Do you have any material concerns with our proposed increase in capex to manage our ageing fleet of transmission lines?*
- *Do you support our proposal for contingent reinvestments as an appropriate means to minimise cost impacts on customers up-front?*

### **Background to CCP23's assessment of Powerlink's capex**

As noted above, CCP23 won't comment on whether a draft capital expenditure is capable of acceptance, at a draft proposal stage..

We acknowledge that Powerlink has provided a high level explanation of their proposed capital expenditure. We also acknowledge Powerlink has progressively reduced its capex proposal over the last 12 months and has indicated it will continue to seek additional opportunities to reduce its capex before submitting its revenue proposal in January 2021. Powerlink has sought advice from its CAP and RPRG about its capex proposal and has responded to many of the questions raised by the CAP and RPRG.

However, further reductions in capex may require provision of more detailed information on the various capex building blocks, most particularly with respect to the modelling of reinvestment capex. CCP23 has sought further information from Powerlink on these matters and we appreciate Powerlink's responsiveness to our queries.

In assessing Powerlink's draft capex proposal, CCP23 has reviewed documents published by Powerlink in conjunction with the Draft Revenue Proposal, and documents published by the AER, as follows:

- Powerlink: 2020 Draft Revenue Proposal, Attachment 6, Capital Expenditure, October 2020.
- Powerlink: Expenditure Forecasting Methodology, Appendix 5.01, June 2020.
- Powerlink: Business Narrative, Appendix 2.01
- Powerlink, Transmission Annual Planning Report, 2019.
- AER, Final Determination 2017-2022, Attachment 6, Capital Expenditure, April 2017.
- AER, Industry practice application note; Asset replacement planning, January 2019.
- AER, *2019 Transmission Network Service Provider Benchmarking Report*, November 2019.

Our analysis of Powerlink's capex proposal begins with an assessment of Powerlink's forecast of delivered demand, the multiple factors that influence demand and the linkages between demand and Powerlink's forecast capex.

### Powerlink's forecast of delivered demand<sup>3</sup>

Powerlink's Draft Revenue Proposal has provided a comprehensive review of the factors that may impact on the demand forecasts for the 2023-27 regulatory period, and beyond. Powerlink's forecasts of maximum and, minimum demand and delivered energy are generally consistent with AEMO's most recent 2020 Statement of Opportunities, Electricity. CCP23 therefore accepts the basic elements of Powerlink's demand forecasts.

However, while recognising the complexity and uncertainty of forecasts in the current period, Powerlink has not published a corresponding range of demand scenarios that reflect these uncertainties. In addition, there are no clear links between the forecasts and the capex program. For instance, Powerlink correctly highlights the changes in flows along the main transmission lines. However, it does not provide a linkage between these trends and its plans for a substantial replacement of transmission lines. CCP23 considers that Powerlink's proposal would benefit from explicit scenario and option development, in conjunction with its stakeholders, to assist it to manage uncertainty and risk.

#### Details of Powerlink's demand forecasts

*Question 4.1 Have we explained the key drivers for our capital expenditure forecast?*

Powerlink has provided a comprehensive analysis of factors that are likely to have an impact on delivered electricity in Queensland and Powerlink's capex requirements. CCP23 considers that Powerlink has clearly explained these drivers of its capex forecast.

For example, Powerlink has identified the following interrelated factors that underpin its forecasts:

- *Decarbonisation of energy supply:* Powerlink reports that some 1,600MW of large-scale renewable generation capacity has been added to the transmission network since 2016. Some 3,000MW of rooftop solar has been installed in the two Queensland distribution networks.<sup>4</sup> Powerlink identifies the following challenges arising from these developments:
  - Maintaining the balance of supply and demand;
  - Coordination with the two Queensland distributors on generator connections within the distribution networks;
  - Maintaining system strength, particularly in North Queensland; and
  - Obligations under AEMO's 2020 Integrated System Plan (ISP).
- *Decentralisation of generation:* Powerlink reports significant changes in flow rates across major transmission flow paths, which it attributes to rapid installation of renewables and the forecast closure of ageing coal generation assets. Powerlink states that: "This introduces a high degree of uncertainty around the need for investment in major network flow paths".<sup>5</sup>

Figure 3 illustrates this point, with a growing number of constraints on the Central to South Queensland (CQ-SQ) transmission path, while flows on the South West Queensland (SWQ) path have declined steeply since 2014. Large scale renewable development has driven the increase on

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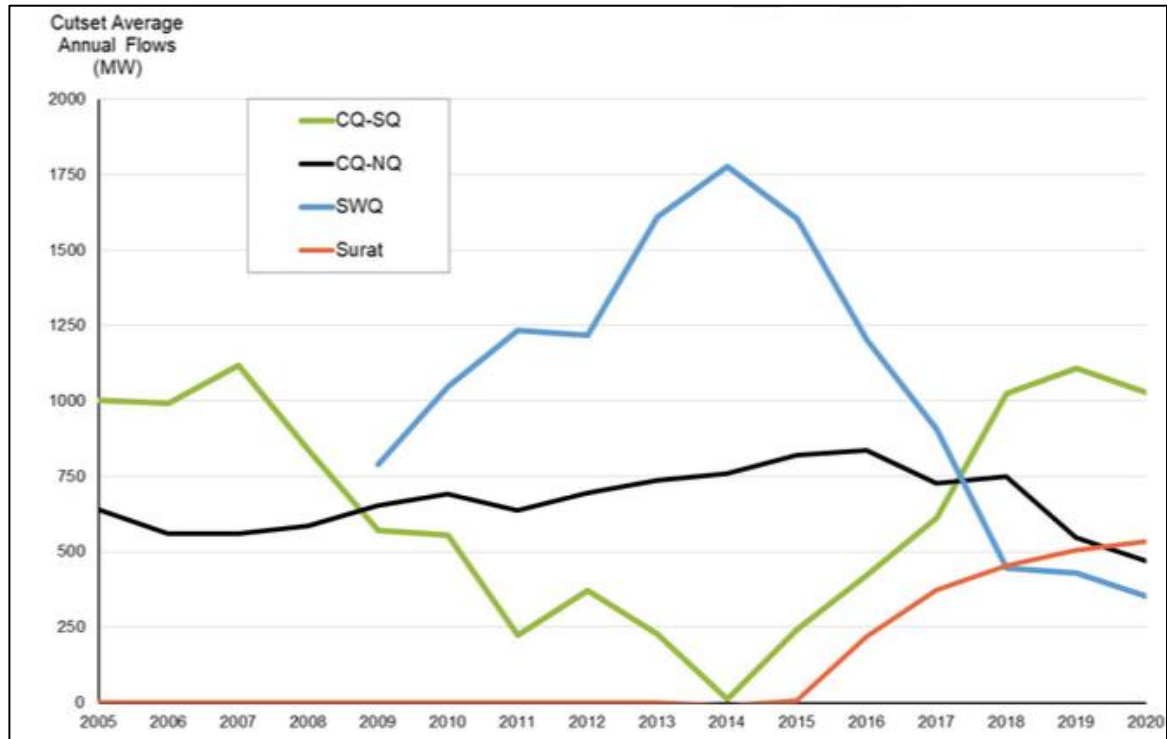
<sup>3</sup> Delivered demand refers to electricity delivered through the transmission network.

<sup>4</sup> Powerlink, Draft Revenue Proposal, p 9.

<sup>5</sup> Ibid, p 10.

the CQ-SQ flow path, while generation embedded in the distribution network drives the decline in the SWQ flow path.

**Figure 3: Average annual power flow across major transmission flow paths (MW)**



Source: Powerlink, Draft Revenue Proposal, Figure 2.3, p 10

- *Demand Disruption*: In line with AEMO’s 2020 Statement of Opportunities,<sup>6</sup> Powerlink highlights three trends that have important implications for Powerlink’s optimal investment strategy, such as life extension, replacement, other reinvestment opportunities or decommissioning.

These trends for Queensland over the next 10 years are:<sup>7</sup>

- Maximum delivered demand to grow by 0.7% per annum;
- Minimum delivered operational demand to decline by 1.9% per annum; and
- Delivered energy to decline by 0.7% per annum.

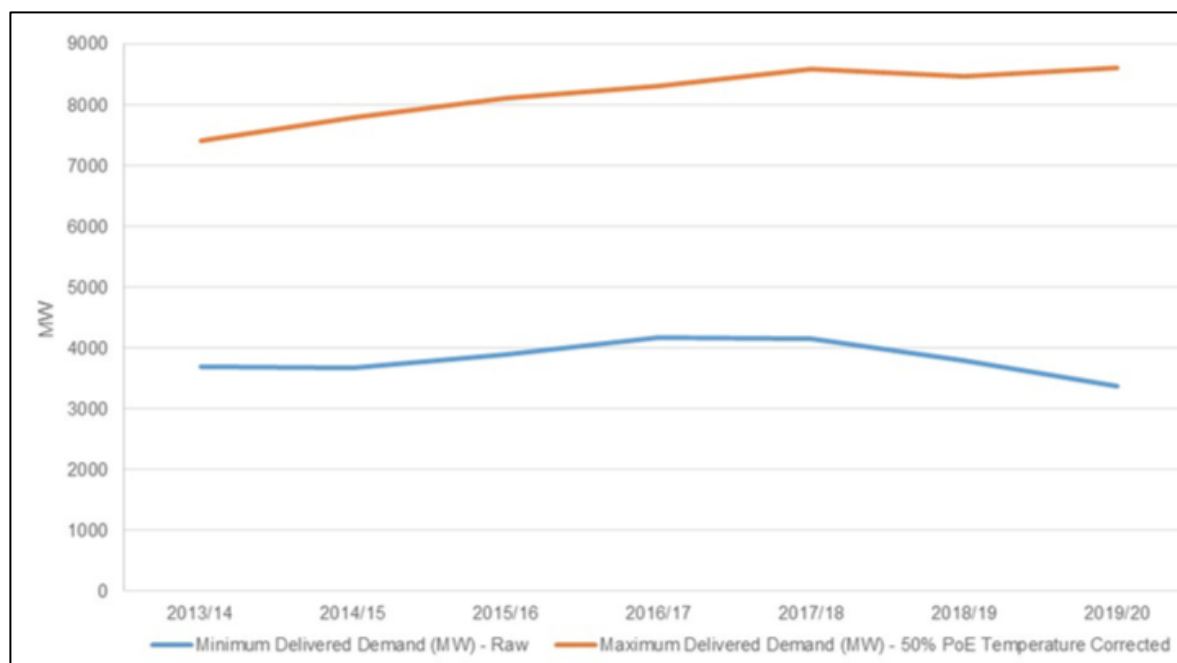
Powerlink highlights these trends in the chart below. Similarly, to many other electricity networks in Australia, Powerlink has seen a rapid change in electricity demand and the utilisation of the regulated networks.

These changes flow directly from the changes in the generation mix and changes in user behaviour towards DER as highlighted previously. The changes have implications not only for investment in physical assets but also for the control systems that operate the physical assets as identified by Powerlink in figure 4 (below).

<sup>6</sup> AEMO, 2020 Statement of Opportunities, August 2020.

<sup>7</sup> Powerlink, Draft Revenue Proposal, pp 11-13.

Figure 4: Trends in maximum and minimum delivered demand in Queensland



Source: Powerlink, Draft Revenue Proposal, Figure 2.4, p 12.

- *Digitisation*: Powerlink recognises the opportunities that digitisation of data provides for improvements in operations and processes and the reduction in risks for customers. Powerlink identifies two key business initiatives to support this change:<sup>8</sup>
  - Next Generation Network Operations – a program designed to “modernise our network operations and be able to adapt to the changing energy landscape”,
  - SAP Transform – the replacement of the legacy Enterprise Resources Planning system, which is designed to support increasing digitisation and automation of routine business processes.

CCP23 expects that these trends will continue through the 2023-27 regulatory period. Digitisation, for instance, will become increasingly important to provide real time data and to manage complex flow patterns arising from the increase in renewable generation.

Beyond these four trends, Powerlink’s revenue proposal also recognises the potential impact of the general economic environment, COVID-19 (on both near and medium term forecasts), environmental factors, government policy and changes to energy market regulation.

However, while Powerlink has highlighted the many factors that may influence the operation, design and utilisation of its network, the draft regulatory proposal does not clearly link these factors to its specific capex plans. Nor has Powerlink demonstrated in its draft revenue proposal how it proposes to manage and adapt to the uncertainties and challenges through (for example) scenario testing.

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<sup>8</sup> Ibid, p 13.

AEMO's 2020 Statement of Opportunities also emphasises the uncertainty in its forecasts of demand and supply, and its projections of the impact of the economic, environmental and policy drivers. AEMO has also highlighted these in the development of the 2020 ISP.

In conjunction with energy stakeholders, AEMO's 2020 ISP has developed its transmission planning using 5 high level scenarios (central, slow change, step change, high DER, fast change), designed to provide a flexible investment path to a defined "future state".<sup>9</sup> AEMO's ISP pathway also includes various "decision rules" that allow for adaption of the plan if circumstances change. AEMO's summary of how it addresses uncertainty is instructive:<sup>10</sup>

*"The NEM is constantly evolving and inevitably forecasts require assumptions to be made. A well designed ISP is robust, so changes don't invalidate the development path but rather signal a pre-determined change in direction. An integrated plan must also reflect the time it takes to design and construct major transmission and incorporate the ability and willingness of market participants to invest in resources that diminish the risk of uncertainty and delay"*

CCP23 would like to see Powerlink's Revenue Proposal for 2023-27 provide more analyses of these uncertainties and the impact of these on their plans. More specifically, we expect to see Powerlink develop alternative scenarios around the key drivers of its plans, including forecasts of demand, and to indicate how its investment plans can respond effectively to these changes.

For example, before accepting Powerlink's forecast, CCP23 would like to see Powerlink explain:

- How might the scope and timing of key parts of Powerlink's replacement capex program change as a result of different network flow projections.
- Similarly, how might Powerlink's capex change if there is a faster/slower development of the renewable energy zones (REZ)

While CCP23 does not expect Powerlink to develop scenarios to the extent that AEMO has in the ISP, we believe that the process adopted in the ISP, including stakeholder consultation and scenario development, provides some useful guidance to how Powerlink might progress and enrich its revenue proposal.

#### CCP23 observations on the demand forecast

CCP23 is pleased that Powerlink has largely adopted AEMO's forecasts for delivered demand in Queensland as set out in AEMO's 2020 Statement of Opportunities. In addition, Powerlink has presented a comprehensive description of the multiple factors that impact on demand and supply, the utilisation of the transmission system and, by extension, the capex requirements.

Powerlink's analysis also demonstrates the significant challenges it faces in forecasting transmission delivered electricity and the future requirements on the transmission network to efficiently and prudently respond to these challenges. However, we have not observed in the Draft Revenue Proposal any clear linkages between these 'factors' and the specific capex proposals. CCP23 believes that Powerlink's revenue proposal would benefit from extending its analysis of drivers to explore exploring a range of future state scenarios.

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<sup>9</sup> The Future State is defined as "power system needs are met in best interest of consumers".

<sup>10</sup> AEMO, Our 20-year plan for the National Electricity Market, an overview of AEMO's 2020 Integrated System Plan (ISP), June 2020, p 8. <https://aemo.com.au/-/media/files/major-publications/isp/2020/2020-isp-overview.pdf?la=en>

## Assessment of Powerlink's capex proposal

### *Q4.1: Is the capital expenditure forecast capable of acceptance?*

As highlighted in the introduction to this submission, CCP23 does not comment on whether Powerlink's draft capital expenditure regulatory proposal is capable of acceptance. Our advice to the AER on this will be part of our formal response to Powerlink's Regulatory Proposal and Revised Regulatory Proposal. However, in the discussion that follows, CCP23 does identify areas of its draft capex proposal for further consideration.

At this point in time, we are concerned that Powerlink's proposed capex for 2023-27 regulatory period is 12% higher (in real, \$2021/22 terms) than the actual/forecast expenditure for 2018-22 regulatory period.

This increase in the capex forecast is despite Powerlink's forecast of "minimal growth in peak demand" for the 2023-27 period. The proposed increase is also troubling because of the low number of transmission network outages over the last 5 years, the relatively short duration of the outages in most years and minimal market impact.<sup>11</sup>

This increase in proposed capex for 2022-27 period also puts at risk any improvements in Powerlink's capital productivity as discussed below.

In addition, Powerlink has proposed up to \$1,400m of contingent projects. Not all of these will proceed, but even if only half do, it will add further impetus to the decline in capex productivity. The emerging capex obligations arising from AEMO's ISP means that Powerlink must be more focused than ever on spending only that capex that is required to efficiently and prudently meet its current regulatory service obligations.

### Capital expenditure: historical and forecast trends

The actual/estimated capex for 2018-22 regulatory period is significantly smaller than actual capex for the 2013-17 regulatory period. The 2013-17 regulatory period saw very significant capex on both load-driven and non-load driven capex. Figure 5 below illustrates Powerlink's actual and forecast capex over the three regulatory periods.

Powerlink's proposal should also be seen in the context of its capex over the two regulatory periods 2008-2012 and 2013-2017. In the regulatory period 2008-2012, Powerlink's actual capex was around \$3,300m,<sup>12</sup> making a total of around \$4,700m invested over a 10-year period.

Consumers have been and will continue to pay both the return on capital and return of capital for the extraordinary expansion in Powerlink's regulatory asset base that followed this dramatic increase in capital investment. Should interest rates rise, these costs will increase even further.

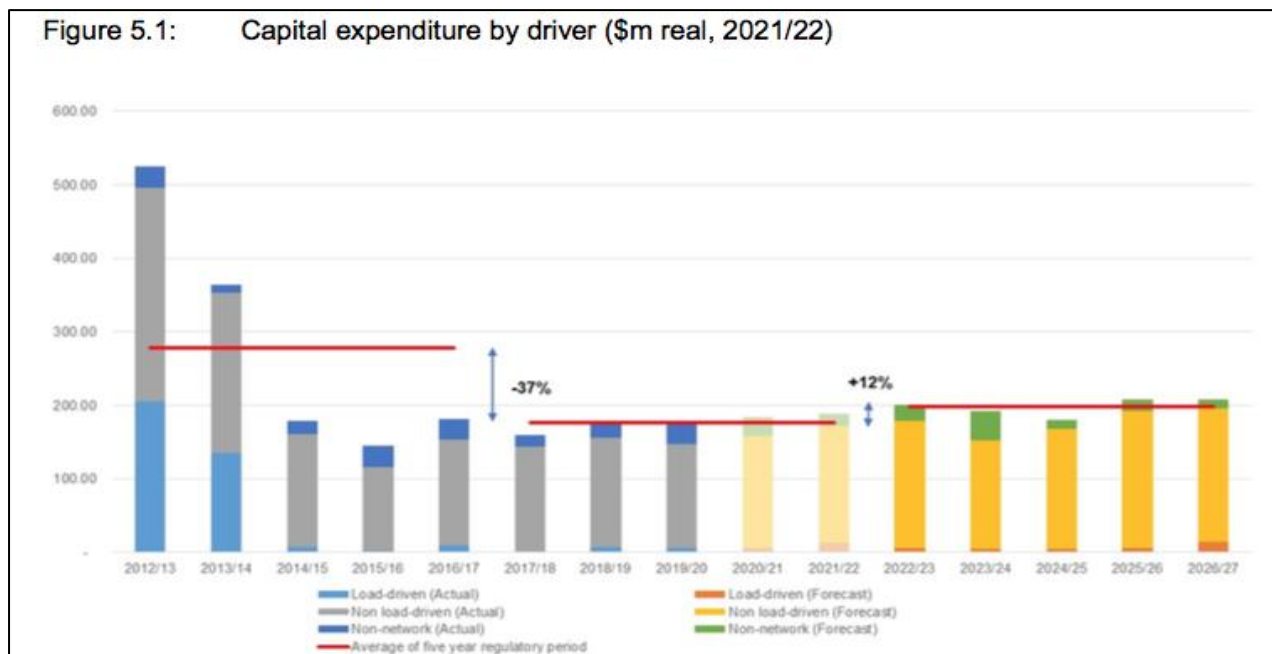
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<sup>11</sup> See for instance, AER, Electricity TNSP Operational performance data, 2006-2019.xlsm. In the latest report, for 2018 there was 1 outage event, 36 minutes off supply, and market impact of 0.4%, which is lower than most of the transmission companies.

<sup>12</sup> These figures are estimated from the AER's Final Decision, Attachment 6, Capital Expenditure, April 2017, Figure 6.1.



**Figure 5: Capital expenditure by driver - actual and forecast (2013-2027)**



Source: Powerlink, Draft Regulatory Proposal, p 47.

While it is pleasing to see that Powerlink’s expenditures have reduced since then, we remain concerned that Powerlink has increased its proposed expenditure for 2023-17 by 12% compared to the 2018-22 actual/estimated expenditure (excluding contingent projects).

Figure 5 above illustrates that replacement capex is the major component of this increase in the 2023-27 capex forecast. Given flat demand, and relatively high reliability of supply by Powerlink, CCP23 is looking for very clear explanation from Powerlink about why it proposes a significant real increase in its replacement capex for the 2023-27 regulatory control period. In our view, these explanations for an increase in replacement costs relative to the current expenditure need to go beyond reference to the aging of the transmission line assets

Figure 5 also excludes contingent reinvestment expenditure. If the AER rejects the application of contingent reinvestment capex, then it is possible that Powerlink’s ex-ante replacement capex may include some of this additional capex. This will further highlight the increases in replacement capex.

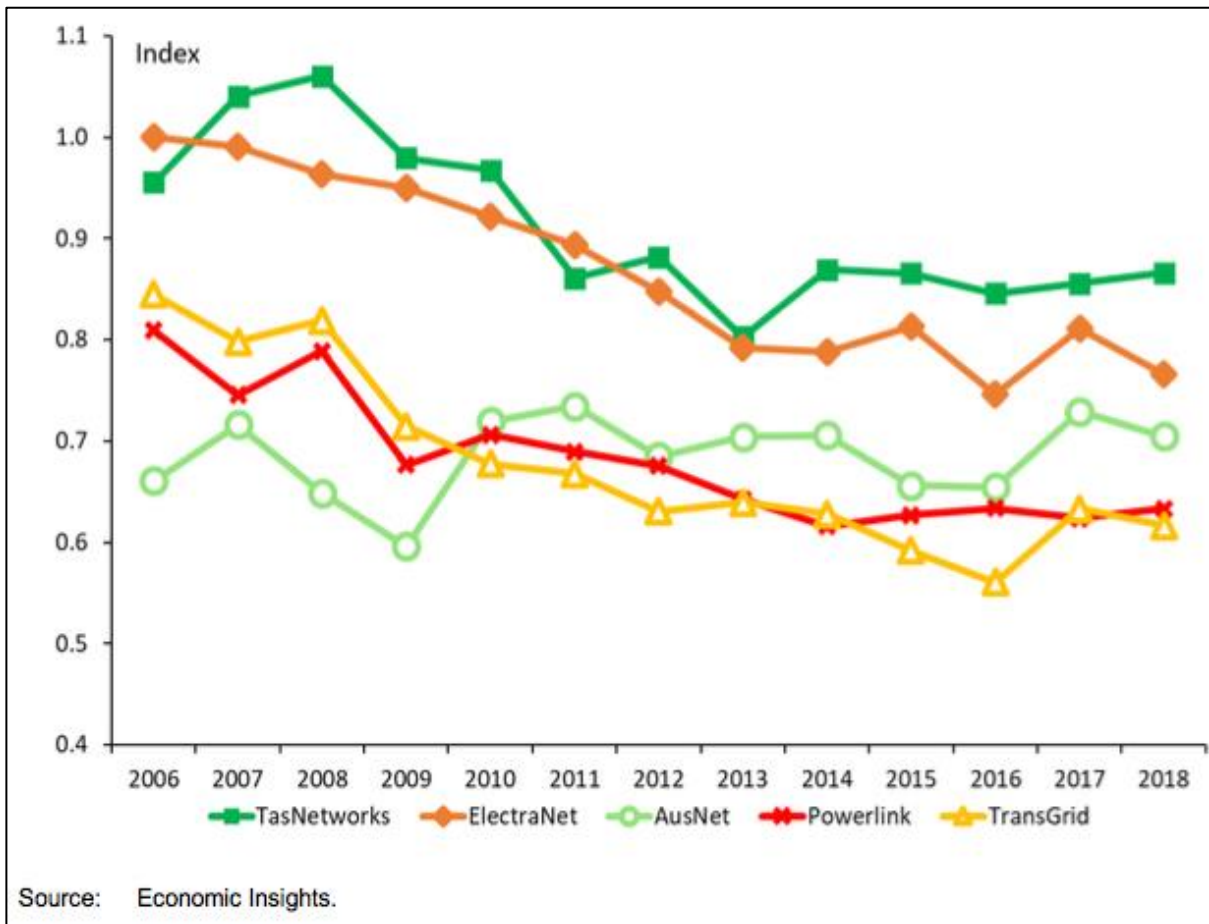
Impact of proposed capex increase on Powerlink’s capex productivity benchmark

An important insight into Powerlink’s progress over the last decade or so is the measure of total factor productivity and, more particularly, the capital “multilateral partial factor productivity” (MPFP). Figure 6 below illustrates the changes in Powerlink’s MPFP between 2016 and 2018.

Powerlink’s capital MPFP declined significantly between 2006 and 2014 reflecting the very high level of capital investment over this period noted above. Since 2014, Powerlink has reduced its capex and this is reflected in the stabilisation of the MPFP up to 2017-18. However, Powerlink continues to be one of the networks with the lowest capex productivity score.

Powerlink’s minimal demand growth forecast, when combined with the proposed 12% (real \$) increase in capex for 2023-27 (excluding any further growth from contingent replacement projects), puts at risk the prospect of any productivity improvement in the future.

**Figure 6: Capital MPFP Index 2006-2018**



Source: AER, *2019 Transmission Benchmarking Report*, November 2019, Figure 4.2, p 15.

Table 5 below from Powerlink’s Draft 2023-27 Revenue Proposal summarises Powerlink’s forecast capital expenditure by expenditure category. As noted above and discussed below, the largest increase in expenditure is expenditure on non-load driven capex, primarily reinvestments.

**Table 5: Powerlink’s forecast capital expenditure by asset category**

Table 5.3: Forecast capital expenditure by category (\$m real, 2021/22) <sup>(1)</sup>						
Category	2022/23	2023/24	2024/25	2025/26	2026/27	Total
<b>Network capital expenditure</b>						
<i>Load-driven capital expenditure</i>						
Augmentations	3.4	2.1	1.1	0.1	-	<b>6.7</b>
Connections	-	-	-	-	2.3	<b>2.3</b>
Easements	2.0	2.5	3.4	5.1	12.1	<b>25.1</b>
<b>Total: load-driven</b>	<b>5.4</b>	<b>4.6</b>	<b>4.5</b>	<b>5.1</b>	<b>14.5</b>	<b>34.1</b>
<i>Non load-driven capital expenditure</i>						
Reinvestments	153.5	134.4	155.2	180.2	174.6	<b>797.8</b>
System Services	11.8	5.5	0.5	-	-	<b>17.8</b>
Security/compliance	2.9	2.9	2.9	2.9	2.9	<b>14.4</b>
Other	4.8	4.5	4.3	4.0	3.7	<b>21.3</b>
<b>Total: non load-driven</b>	<b>173.0</b>	<b>147.3</b>	<b>162.8</b>	<b>187.0</b>	<b>181.2</b>	<b>851.3</b>
<b>Non-network capital expenditure</b>						
Business IT	15.3	14.0	8.7	11.5	9.0	<b>58.5</b>
Support the Business	7.0	25.7	4.4	4.4	3.5	<b>45.0</b>
<b>Total: non-network</b>	<b>22.3</b>	<b>39.7</b>	<b>13.2</b>	<b>16.0</b>	<b>12.4</b>	<b>103.5</b>
<b>TOTAL</b>	<b>200.7</b>	<b>191.5</b>	<b>180.4</b>	<b>208.2</b>	<b>208.1</b>	<b>988.9</b>

(1) This table is net of disposals.

**Source: Powerlink, Draft Revenue Proposal 2023-27, Table 5.3, p 48.**

*Question 4.2: Do you have any material concerns with our proposed increase in capex to manage our ageing fleet of transmission lines?*

CCP23 considers that Powerlink has not satisfactorily substantiated the need for an increase in investment in replacement capex for the 2023-27 regulatory period. We are particularly concerned with the increase in replacement of transmission towers and the lack of clarity on how this has been assessed in the Hybrid + model. We also did not see evidence that Powerlink has sought alternatives to like-for-like replacement consistent with their Asset Planning paper.

This proposed 12% increase in Powerlink’s capex in 2023-27 appears to be driven by:

- Increases in ‘non-load’ driven capex, which mainly consists of replacement capex; and
- Smaller increases in non-network expenditure

Powerlink suggests one of the most significant drivers of this replacement capex is the replacement of ageing steel lattice transmission towers. Powerlink states: “a large number of these towers [20%] are now approaching the end of their asset life”<sup>13</sup> having been constructed between 1977 and 1981.

<sup>13</sup> Powerlink, Draft Regulatory Proposal, p 55.

In Figure 7 below, Powerlink presents a chart of the transmission towers' age profile, showing the surge in towers constructed during the period 1977-1981. Towers constructed in 1977 would be some 50 years old by the end of the next regulatory period in 2027.

The average age for tower replacement will vary according to the location of the towers. For this reason, towers are allocated to specific corrosion zones. We note, for instance, that the repex modelling used by the AER in its 2017 Final Decision (Table 6.5, p 6-20) suggests the modelled mean replacement years for transmission towers were:

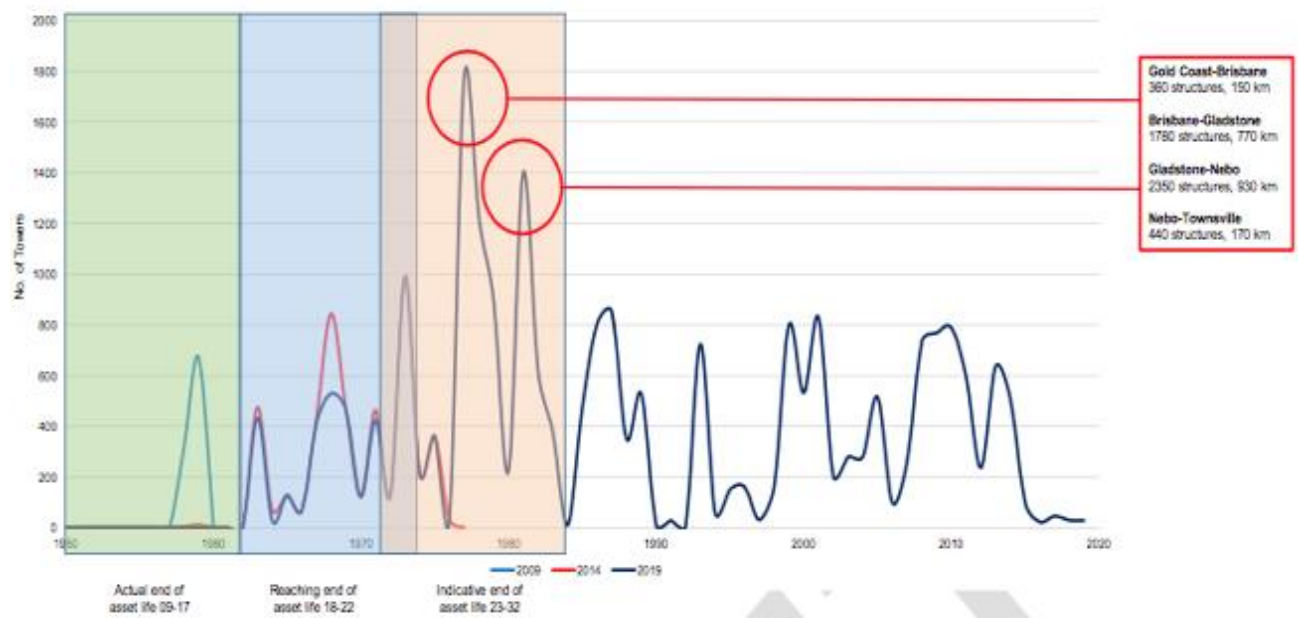
- 78.2 years for corrosion zone B
- 61.1 years for corrosion zone C
- 45.8 years for corrosion zone DEF

CCP23's concerns with the forecast of transmission tower replacements are discussed further in this submission. We note here the potential contradiction between:

- the mean average replacement years by corrosion zone that was identified by the AER in its 2018-22 decision, and
- the indication that the large block of transmission towers referred to by Powerlink and illustrated in Figure 7 below would average around 45-50 years by the end of the 2023-27 regulatory period.

In this context, it would be helpful if Powerlink published the transmission age profile by corrosion zone as only the DEF zone would appear to require some additional investment during 2023-27, above investment levels in 2018-22.

**Figure 7: Transmission towers age profile**



Source: Powerlink, Draft Regulatory Proposal, p 56.

Powerlink's 2019 Transmission Annual Planning Report (TAPR) also highlights some issues that require further clarification by Powerlink.

For example, the TAPR states that a critical element of asset management is to consider the life cycle of assets.<sup>14</sup> The TAPR correctly identifies factors such as consideration of the ongoing need for an asset, what form those assets should take and what assets and configurations are appropriate (including non-network options).<sup>15</sup>

The draft revenue proposal does not clearly explain how Powerlink has considered these options, including options for asset life extension, non-network options and assessment of the long-term need for the particular asset type or capacity.<sup>16</sup> Given the significant increase in expenditure on replacement capex compared to 2018-22 regulatory period, CCP23 would expect to see greater analyses of these issues to ensure that all opportunities for improving efficiency and responsiveness to future challenges are addressed.

In the following section, we further consider this matter by examining Powerlink's new "Hybrid+ approach to forecasting its capex requirements for 2023-27.

*Question 4.3: Is Powerlink's capital expenditure forecasting approach (Hybrid+) reasonable?*

CCP23 is seeking additional information before commenting on whether the Hybrid+ approach is reasonable. In particular, we are seeking to clarify Powerlink's approach to forecasting replacement of transmission towers given this represents a significant component of the total replacement capex ("reinvestment expenditure"). Our reasons are set out below.

As noted previously, the main driver of Powerlink's capex proposal is replacement capex, which **accounts for 81% of Powerlink's total proposed capex**. One of the main drivers of replacement capex is the increased rate of replacement of steel lattice transmission towers. For example, Powerlink states that:<sup>17</sup>

*A main driver of our reinvestment is our steel lattice transmission towers. This reflects the age profile of our transmission towers ... Given the number of towers approaching their end of life, we expect there will be a need to undertake an extended investment program over several regulatory periods. As the rate of corrosion and deterioration is not uniform, replacement decisions will be based on an assessment of asset condition. This is more prudent and efficient than simply basing these decisions on individual asset age.*

For these reasons, CCP23 has focused its attention on whether the Hybrid+ approach is a reasonable approach to forecasting replacement expenditure, particularly with respect to replacement of transmission towers.

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<sup>14</sup> Powerlink, 2019 Transmission Asset Planning Report, p 56.

<sup>15</sup> Ibid, Figure 4.2, p 56.

<sup>16</sup> CCP23 appreciates that Powerlink has provided 7 Draft Proposal Packs on its web-site. These provide information such as a condition based assessment and recommendations for additional maintenance or replacement within the 2023-17 period (usually expressed in terms of a problem to be addressed within 5 years (or 5-10 years) ). These provide some insights into Powerlink's assessment process. However, we were unable to link these to the draft capex proposal and there is a need for more quantified benefit statements in terms of consumer outcomes. <https://www.powerlink.com.au/2023-27-regulatory-period>

<sup>17</sup> Powerlink, Draft Revenue Proposal, pp 55-56.

Before considering this issue further, CCP23 notes that ‘load-driven’ capex accounts for only 3.4% of Powerlink’s total capex forecast. We also accept that load-driven capex for a transmission network may best be forecast using a bottom-up approach.

For these reasons, we do not discuss Powerlink’s forecast of load-driven capex further in this advice. However, we do discuss ‘non-network’ capex further in this submission.

#### What is the Hybrid+ approach?

The Hybrid+ approach is an extension of the hybrid approach that Powerlink adopted to forecast its total capex requirements in its 2018-22 Revenue Proposal. Powerlink states that it has “refined and improved” its hybrid approach by making (inter alia) the following changes:<sup>18</sup>

- Project-specific supporting justification for at least 60% of the total forecast capital expenditure.
- Extending its approach to ‘merging’ bottom-up and top-down forecasts.
- Using the greater of bottom-up project expenditure and the top-down forecast as the forecast for that year for each year for each asset class in each expenditure category.
- Removing assets which are the subject of a bottom-up forecast from the input data for top-down forecasts, to ensure no double counting of reinvestment assets.

There are two items on this list, which require further explanation by Powerlink They are:

- Whether it is reasonable that 60% of total capex is assessed primarily on a ‘bottom-up’ basis
- Whether it is appropriate for Powerlink to use a rule that specifies that it will adopt the greater of the bottom up or top down estimate (where both methods have been used).

#### *Interpreting the 60% bottom-up approach:*

CCP23 recognises that there are strengths and weaknesses in both the bottom-up and the top-down methodologies when forecasting future capex requirements.

The concern here is that some 81% of Powerlink’s total capex relates to replacement capex, and replacement of transmission towers represents a significant proportion of the replacement capex. Replacement capex has previously been largely forecast on a top-down basis on the assumption that replacement capex would tend to be similar year on year, regulatory period by regulatory period.

This assumption is confirmed in the Draft Regulatory Proposal. For example, Powerlink states that:<sup>19</sup>

*In addition to specific project investments for significant investments, we use the Repex Model. The Repex Model takes a top-down approach to forecast part of our network reinvestment expenditure under our Hybrid+ approach...”*

Table 6 below, also appears to confirm that in the most part, replacement of transmission lines (which include transmission towers), are estimated using a top-down approach. We note that there was some criticism of Powerlink’s approach to its top-down forecasting of the replacement of transmission towers in the AER’s 2018-22 decision.

In particular, it was noted by the AER’s consultant (EMCa) that Powerlink’s revised regulatory proposal continued to overestimate the number and mean replacement life of transmission

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<sup>18</sup> Ibid, p 49.

<sup>19</sup> Ibid, p 48.

towers.<sup>20</sup> This in turn increased the expenditure forecast in the repex model by \$72.91 million over the 2018-22 regulatory period.

There was also some concern that using the repex model may not be applicable for Powerlink because the model assumes that previous investment in replacement capex was prudent and efficient and, therefore, a guide to future efficient investments.

With respect to the first of these issues, we have sought assurance from Powerlink that EMCA's concerns have been addressed (to the extent that Powerlink relies on top-down modelling of transmission towers). On the second matter, CCP23 is less concerned as the replacement capex has dropped significantly from 2013/14, suggesting that historical data should not distort the outcomes of the top-down approach as much as in the previous regulatory periods.

CCP23 has also recently received advice that under the hybrid+ model, Powerlink's ratio of bottom-up and top-down for transmission lines (including transmission towers) is now 80/20. That is, 80% of the costs for these particular activities are based on a bottom-up estimate.<sup>21</sup> Powerlink has confirmed that this represents a significant change in approach, and we are advised the change was in response to queries by the RPRG.<sup>22</sup>

CCP23's concern is that this is a substantial change in approach to the item (transmission towers) that seems to provide most of the explanation for the increase in replacement capex for 2023-27 compared to 2018-22. We would like to see further examination of this issue before fully endorsing the hybrid+ methodology.

#### *Adopting the greater of the bottom-up and top-down assessments*

Powerlink suggests that there are some cases where it is appropriate to merge both methods and, in these instances, it will follow a series of four steps, one of which is the proposal to use the greater of the bottom-up or top-down approach to forecast for the particular asset class, in each expenditure category, for that year.<sup>23</sup>

Powerlink then suggests that:<sup>24</sup>

*Where expenditure in an asset class for bottom-up projects is greater than the top-down forecast in any year, an amount equal to the difference will be removed from the top-down forecast in adjacent years.*

Bottom-up estimates also have their issues. First, they add greatly to the work-load for Powerlink and the AER (and other readers). With (say) 600 forecast tower replacements, the task is problematic. Second, it is widely accepted that a forecast based (largely) on multiple bottom-up estimates tends to overstate the total costs. Notwithstanding the second rule quoted above, CCP23 believes that this emphasis on selecting the 'higher of' the two approaches, may also be leading to an excessive estimate of the total cost for replacement transmission towers.

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<sup>20</sup> See EMCA, Review of Powerlink's replacement capital expenditure, March 2017, pp 11-14. The overestimation of the number of towers arose because of Powerlink's calibration of the repex model, which included maintenance intervention data in the calculation of the number of towers replaced. (p 12).

<sup>21</sup> Emails from Powerlink to CRG member,, 26 and 27 October, 2020.

<sup>22</sup> Ibid.

<sup>23</sup> For details see, Powerlink, Draft Revenue Proposal, p 49.

<sup>24</sup> Ibid, p 49.



In the current draft proposal, it is not clear how Powerlink has prepared its forecast of transmission towers. For example, table 6 below provides a summary of how Powerlink applies the Hybrid+ approach to forecasting different asset classes. It is not clear from this table, how Powerlink categorises the **replacement of transmission towers**, although it would appear from the table that Powerlink has adopted a ‘Top-down’ approach to forecasting transmission lines (that include tower replacements).

**Table 6: Application of the Hybrid+ approach**

Approach	Application	Method
Bottom-up	<ul style="list-style-type: none"> <li>Approved projects.</li> <li>Load-driven capital expenditure.</li> <li>Power transformer and Static Var Compensator (SVC) reinvestment.</li> <li>Any major one-off expenditure needs.</li> <li>System services such as system strength and inertia.</li> <li>Significant network projects (indicative threshold of &gt;\$12 million project cost).</li> <li>Contingent projects (these do not form part of the capital expenditure forecast and may include ISP projects).</li> </ul>	<ul style="list-style-type: none"> <li>Analysis of need, preparation of project scope, estimate, planning statement and risk/cost assessment</li> </ul>
Top-down	<ul style="list-style-type: none"> <li>Network assets including transmission lines, substations (excluding transformers which are bottom-up) and secondary systems.</li> </ul>	<ul style="list-style-type: none"> <li>Use of the AER’s Repex Model</li> </ul>
Trend analysis	<ul style="list-style-type: none"> <li>Security/compliance.</li> <li>Other network capital expenditure, including reinvestment in substation auxiliary systems and buildings.</li> </ul>	<ul style="list-style-type: none"> <li>Trend of recent expenditure with outliers removed.</li> </ul>

Source: Powerlink, Draft Revenue Proposal, Table 5.4, p 50.

This appears to conflict with other statements by Powerlink, which suggest that the replacement costs of the majority of transmission towers are based on bottom-up analyses. CCP23 has sought further advice from Powerlink on this matter. We are concerned that Powerlink appears to have changed its methodology for forecasting tower replacements since 2017 particularly given that:

- Powerlink indicates that transmission tower replacement was a main component of the total replacement capex proposal.
- That the AER’s repex model allowed for different environmental conditions by using different replacement ages according to a corrosion classification (see above).
- The AER uses Powerlink’s historical replacement rates to populate and calibrate its repex model.

In addition, CCP23 notes Powerlink’s claim that it uses **the greater** of the bottom-up forecast and the top-down forecast for each asset class in each expenditure category (see above).

This bottom-up approach is appropriate for forecasting one-off large expenditures.

However, replacement of transmission towers is a continuing business process and should normally be forecast on a top-down basis in the first place. The AER’s repex approach would allow Powerlink to forecast on the basis of the historical trends in mean age replacement rate by corrosion zone. The fact that there was a surge in the installation of towers between the late 1970’s and 1980’s does not, in itself, sufficiently justify a change in approach.



The bottom-up approach also increases the risk of over-estimating the numbers and/or costs of the towers as it misses opportunities for synergy between individual decisions and the subsequent opportunities for cost savings.

In addition, assessing projects on an individual basis means that investment decisions are only constrained by passing a net benefit test. In practice, efficient capital investment occurs within an overall capital constraint and individual net positive programs may need to be constrained or deferred as a result.

*Q4.4: Do you have any material concerns with our proposed increase in capex to manage our ageing fleet of transmission lines?*

CCP23 does have concerns with Powerlink's proposed increase to managing its ageing fleet of transmission lines.

As discussed above, Powerlink has not demonstrated that its fleet of transmission lines has aged sufficiently to justify an increase in replacement expenditure in this category. We do not believe that this assessment can be best made on the basis of multiple bottom-up assessments of the age and condition of transmission lines. Rather, we would prefer to have additional evidence from the AER's repex model, which takes account of the average age and average age for replacement for the total of each asset class, and by corrosion zone.

Second, there is no evidence that the performance of the transmission network is experiencing a growing trend of failures. Rather, the evidence from the AER's performance report suggests that Powerlink is performing above the regulatory standards and has improved its performance relative to earlier years. Powerlink does not appear to have presented this information in a way that would allow consumers to make a reasoned judgement on the trade-off between performance and cost.

Third, Powerlink's chart demonstrating the historical trends in transmission tower installations suggests that the first wave of installed towers would be reaching 50 by the end of the 2023-27 regulatory period. Given the expected life of steel transmission towers is generally longer than 50 years, Powerlink needs to more clearly demonstrate the risks and benefits of delaying at least some of these replacements.

Fourth, it is apparent that in many instances it is not necessary to replace the whole of the tower. Powerlink has options to replace or repair specific parts of the tower as it has outlined in its Asset Planning documents. It is not clear how Powerlink has made those decisions and how this has influenced the number of towers designated as requiring replacement.

#### CCP23 observations on the capex forecast

CCP23 appreciates that Powerlink has worked over many months with the Consumer Forum, the RPRG and the AER, and has recently consulted with a wider range of stakeholders, on its capex proposal. As a result, it has progressively refined its proposal.

Nevertheless we remain concerned that Powerlink's current proposal is 12% higher than the current expected capex in real dollar terms. Our analysis suggests that an important driver of this increase relates to replacement capex, and in particular, replacement of transmission towers.

This was an area of significant concern to the AER and its advisors in the 2018-22 decision. Powerlink has advised us that it has addressed some of the AER's concerns in this process. However, at this stage there is little visibility at this level of detail and we therefore consider the AER and Powerlink should further investigate the matter.

One area that may be a factor in this relates to Powerlink's advice to us that 80% of the forecast of transmission line replacements is based on bottom-up estimations as part of its new Hybrid+ approach. We respect the fact that consumers have sought more bottom-up investigation of costs. However, we believe that a top-down assessment based on age and corrosion area would also provide valuable insights.

CCP23 would also like to see some greater clarity regarding how Powerlink considers alternative approaches to replacement of a tower, such as replacement of parts or repairs to the tower.

*Q4.5 Do you support our proposal for contingent reinvestments as an appropriate means to minimise cost impacts on customers up-front?*

CCP23 supports the proposal to introduce contingent reinvestments when these arise in the context of an ISP project defined by AEMO as either "Actionable ISP", or "Actionable ISP projects with decision rules". We believe there is sufficient basis for defining clear and objective trigger mechanisms for contingent replacements. CCP23 does, however, have some concerns with extending this to ISP projects defined by AEMO as "Future ISP projects". Unlike the previous two categories, the network is not required by AEMO to take any more immediate action on these projects and defining objective decision rules becomes more problematic. At this stage, we do not support the extension of contingent replacement beyond the ISP related projects.

Powerlink proposes three categories of contingent projects. They are:

- Local demand increase and/or generation reduction;
- Integrated System Plan (ISP); and
- Contingent reinvestment.

Subject to meeting the requirements of the trigger mechanism, CCP23 agrees with the first two categories of contingent projects as they fit within typical contingent augmentation projects and the requirements under the NER that an ISP project is automatically treated as a contingent project if AEMO declares it to be 'actionable' even if it is not specified in the ex-ante regulatory proposal.

Powerlink states:<sup>25</sup>

*We also propose to apply the contingent projects framework to network reinvestment projects where the timing of the condition based reinvestment trigger remains uncertain, or where the expected solution to the condition trigger is not sufficiently certain.*

Powerlink suggests the relevant contingent reinvestment projects relate to transmission line assets or transmission flow paths that are aligned with ISP identified needs. Powerlink also states that: "The

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<sup>25</sup> Powerlink, Draft Revenue Proposal, p 58

optimal asset reinvestment strategy can depend on the timing and scale of those ISP identified needs".<sup>26</sup> These are clearly matters outside Powerlink's direct control.

The stated objective of this proposal is to: "prevent customers from paying for the forecast cost of some large reinvestment projects within the capital expenditure allowance where the quantum and timing of these costs is still uncertain

CCP23 confirms Powerlink has undertaken engagement with stakeholders on its proposal for contingent reinvestment and that stakeholders have cautiously supported this proposal as it would potentially limit consumers' exposure to funding capex when the quantum and timing of the reinvestment capex project is uncertain.

Table 7 below sets out Powerlink's proposed contingent projects. Of the six projects, four clearly relate to reinvestment projects with indicative total capital costs of between \$325m and \$1450m.

**Table 7: Proposed contingent projects**

Project name	Type of trigger	Indicative capital cost (\$m)
Galilee Basin coal mining load	Additional customer demand	130
Central to North Queensland Reinforcement / Bouldercombe to Nebo Reinvestment	Additional customer demand <sup>(1)</sup> / Asset condition	50-100
QNI Medium Upgrade	ISP	580 (Qld component only)
Far North Queensland Renewable Energy Zone / Ross to Chalumbin Reinvestment	ISP / Asset condition	100-700
Gladstone Reinforcement / Bouldercombe to Calliope River Reinvestment	ISP / Asset condition	45-300
Central to Southern Queensland Reinforcement / Calliope River to South Pine Reinvestment	ISP / Asset condition	180-350

(1) This could include additional customer demand from Mount Isa should the Copperstring project proceed.

Source: Powerlink Draft Revenue Proposal, Table 5.7, p 59.

However, to date the AER has not accepted the proposal to allow a network to propose a contingent reinvestment project.

CCP23's assessment of Powerlink's proposal

As a matter of general principle, we consider the contingent project process is a useful mechanism for large-scale augmentation projects when the scope and timing are uncertain. However, the contingent project scheme can reduce transparency in the regulatory determination process. In particular, it may reduce the ability of consumers to scrutinize the real costs and benefits associated with the investment if it proceeds<sup>27</sup> and for consumers to have an overall perspective of a network's total capital plan and its impact on consumers.

<sup>26</sup> *ibid*, p 58.

<sup>27</sup> In most instances, before a contingent project proceeds it is subject to a regulatory investment test (RIT) which examines the costs and benefits of the project. However, to date, consumers have had limited time and resources to engage in this additional regulatory process.

For these reasons, we support the AER's focus on requiring the network to provide a very clearly defined set of trigger mechanisms to action the contingent project and for these to be set out in a network's ex-ante revenue proposal. More recently, however, there has been an important change to this process. AEMO's ISP process now specifies that if AEMO 'actions' an ISP project then it satisfies the definition of a trigger event, even if the event was not specified in the network's original revenue proposal.

The first ISP project that will have a direct relevance to Powerlink's capex is the QNI Medium (or Major) project.<sup>28</sup> Currently, the QNI Medium project is not due to commence before the early 2030's and is defined by AEMO as an "Actionable ISP with decision rules".<sup>29</sup> The decision rules will define the scope of the QNI Medium project and when it will commence. AEMO also categorises the Central to Southern Queensland ISP project as an "Actionable ISP with decision rules" and this project is also set to commence in the "early 2030s".<sup>30</sup>

However, AEMO requires Powerlink to commence preliminary works to be undertaken during the 2023-27 regulatory period. Powerlink's Draft Regulatory Proposal therefore includes some \$25m capex for the acquisitions of easements, and this is primarily related to the QNI Medium ISP project.<sup>31</sup>

Against this background, and as highlighted above, Powerlink has sought to expand the contingent investment process beyond augmentation to replacement (reinvestment) expenditure. CCP23 considers there are two questions to be considered here. They are:

1. If the contingent project framework can be applied to reinvestment capex when an ISP project potentially displaces the need for reinvestment in the network; and
2. If the contingent project approach can be extended to any large reinvestment project.

CCP23 would at this stage, support the AER considering the first of these matters. However, we have more concerns with the extension of the contingent project framework to any large reinvestment project.

Our reasons are outlined below and primarily relate to the certainty with which the trigger event can be defined ex-ante, and the transparency for consumers over this process.

CCP23 also notes that Powerlink claims: "*Our proposed contingent reinvestment projects relate to those transmission line assets on major transmission flow paths aligned with ISP identified needs*".<sup>32</sup>

#### Contingent reinvestment in the context of an ISP project.

As noted, AEMO currently considers that the QNI Medium and Central to Southern Queensland ISP projects are not required until the early 2030s although they could be brought forward – or postponed - subject to the defined decision rules. Although the exact timings of the two projects are uncertain and subject to AEMO's decision rules, it would require Powerlink to invest an estimated

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<sup>28</sup> Powerlink is also involved with TransGrid on the QNI minor project which will be undertaken in 2021-22. The capex costs associated with this project have been largely allocated to TransGrid and are not part Powerlink's 2023-27 capex proposal.

<sup>29</sup> See for instance, <https://aemo.com.au/-/media/files/major-publications/isp/2020/2020-isp-overview.pdf>

<sup>30</sup> *ibid*.

<sup>31</sup> Powerlink, Draft Regulatory Proposal, p 55.

<sup>32</sup> *Ibid*, p 58.

\$580m capex for QNI Medium and \$180m to \$350m for the Central to Southern Queensland projects (see Table 5 above).

As they are “Actionable ISP projects”, albeit ones where the final scope and timing are subject to decision rules, AEMO also requires Powerlink to undertake preliminary works in the next few years.

A major project such as QNI Medium may, however, displace the need for reinvestment in the network that would otherwise be required. For instance, Powerlink could upgrade its maintenance program along the proposed route rather than completely replacing parts of the transmission network in line with its ‘normal’ replacement cycle.

CCP23 believes it is in consumers’ long-term interests that all such opportunities for more efficient investment planning should be encouraged by the AER.

In addition, CCP23 considers that the AER and Powerlink could work together to define a clear and objective trigger mechanism for such projects. For instance, the trigger mechanism for a contingent replacement project may relate to significant postponements by AEMO of the actionable projects, and therefore a requirement for Powerlink to progress some defined quantum of replacement activity.

While we support the use of contingent replacement projects in this relatively defined process of AEMO’s category of “Actionable, subject to decision rules”, CCP23 does have some concerns about its application to other projects that are categorised by AEMO as “Future ISP projects”, for instance, the Far North Qld REZ project. AEMO states that these projects are not yet ‘actionable’ but are part of ISP’s “optimal development path”, and are expected to be actionable some time in the future.<sup>33</sup>

CCP23 considers that further analysis of the requirement for contingent replacement capex linked to these “Future ISP projects” is required, as projects in this category place no immediate obligation on the network to take action.

Finally, with respect to the more general application of contingent reinvestment, CCP23 believes that adopting this approach is significantly more problematic. In the first instance, defining an objective trigger point for enacting the reinvestment project is more difficult than the ISP related replacement projects discussed above.

More generally, the issue becomes a trade-off between potential savings in capex and the loss of transparency for consumers in the process. Moreover, it has the potential to undermine the integrity and value of the ex-ante capex review process as potentially, many projects could be put in that ‘contingent replacement bucket’.

In addition, this should be seen in the broader context of the regulatory incentives for efficient capex investment. If a network does not proceed with a replacement project, then presumably it will underspend its regulatory capex allowance. However, it will also have a lower regulatory asset base (RAB) in the future and overall, consumers will receive some compensation through a reduction in future prices.

CCP23 would therefore be interested in Powerlink and the AER closely examining the risks and benefits to consumers of introducing contingent replacement projects outside the ISP framework outlined above.

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<sup>33</sup> *ibid.*

### CCP23's assessment of Powerlink's proposal for contingent replacement capex

There is a strong case for the AER allowing contingent replacement capex when this replacement requirement arises directly from AEMO's decisions on an ISP project that it has categorised as either "Actioned" or "Actionable, subject to decision rules".

If AEMO specifies that an ISP augmentation project is actionable, the project can automatically become a contingent project whether or not the relevant network(s) has included it in its ex-ante regulatory proposal. It seems reasonable, therefore, that the same logic should apply to replacement expenditure that becomes necessary if, for instance, a relevant ISP project is postponed by AEMO (following AEMO's decision rules). In either case, it would appear that a 'trigger' event(s) could be defined by reference to a specific set of decisions by AEMO.

However, we believe the following situations are more problematic. They are:

- Where an ISP project has been categorised as a "Future ISP Project". This places no obligation on AEMO to action the project or for the network to undertake preliminary actions. In this context, it would be difficult to define a 'trigger event'.
- Other capex replacement investment that is not certain and is also not linked to a specific objective and definable event (such as an ISP decision). Again, it would be very difficult to define a "trigger event", and could open the door to multiple proposals thus reducing transparency and potentially undermining the integrity of the ex-ante regulatory process.

### **Non-network Capex**

Powerlink's proposed total IT expenditure is in line with previous years and the proposed projects are clearly defined in the plan, along with cost estimates. However, CCP23 expects that the major projects will be supported by a more detailed business case in Powerlink's final revenue proposal. It is also important that the IT plan is linked clearly to other aspects of Powerlink's final revenue proposal. For instance, any cost savings or enhanced services should be identified in the operating cost proposal and other relevant areas of the plan. The proposed inclusion of a 'benefits management' step in the IT program framework is an encouraging development in providing transparency for consumers. CCP23 is also pleased to see a table that outlines progress on current approved projects.

The Draft Revenue Plan provides little detail on the proposed expenditure on Business Services, although it appears that a significant element of this will relate to implementing a refit to Powerlink's office. CCP23 has no issue with this. We are also pleased to see that Powerlink plans to refund the associated revenue allowance to customers in 2021/22, thus avoiding double charging customers.

Powerlink proposes a total of \$103.5m for non-network expenditure. This includes \$58.5m for Business IT and \$45m for Business Support. The main Business Support cost item is the cost of a major refit of Powerlink's office facilities.<sup>34</sup>

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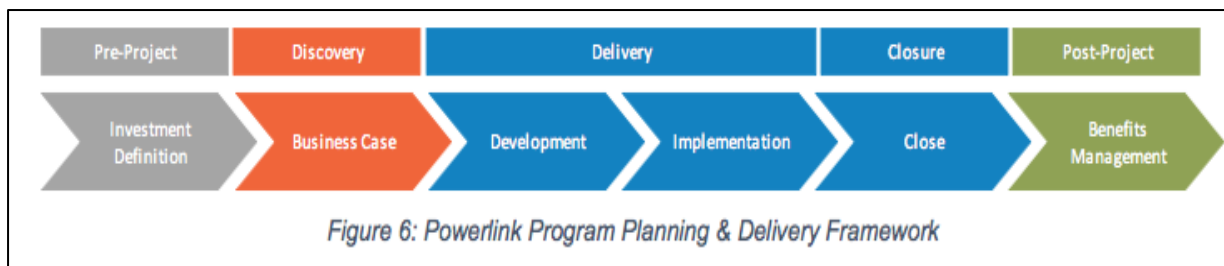
<sup>34</sup> *ibid*, p 57

## Information technology

CCP23 has briefly reviewed Powerlink’s IT Draft Plan.<sup>35</sup> We note that the IT capex is less than the expected IT capex in 2018-22 as some elements have been brought forward into the current period. The decision to bring these programs forward into the current 2018-22 appears prudent.

Powerlink’s plan sets out what it calls its “cyclic framework” for program planning and delivery as illustrated in Figure 8 below.

**Figure 8: Powerlink’s IT planning and delivery framework**



Overall, the framework is sound. CCP23 is particularly pleased to see Powerlink’s commitment to “Benefits Management” as part of this process and this process is overseen by the Powerlink Executive Committee. Powerlink explains this as follows:<sup>36</sup>

*Powerlink’s approach to benefits delivery has developed and improved through 2019-2020 in collaboration with our Customer Panel. The process spans from benefits identification through to post-project realization and review. This process is therefore embedded across the stages of our Program Planning and Delivery Framework.*

The final stage of the framework, the “Benefits Management” stage, focuses on the realisation of the benefits identified and refined through the Investment Definition, Business Case, Development and Implementation stages.

The Draft IT plan also helpfully provides a table that identifies how Powerlink has progressed against the IT works program described in the revenue proposal for 2018-22.<sup>37</sup> This provides much improved transparency for consumers and accountability for Powerlink.

Unfortunately, the table does not describe the service or cost saving benefits to consumers that have been or will be delivered to these consumers. It is not sufficient to describe the benefits to the network without explaining how these benefits will flow through to consumers in the form of lower prices or better services. However, as noted above, we are pleased that benefits management is now being built into the process and hopefully, Powerlink will in future be able to set out these benefits to consumers in quantitative terms.

Overall, CCP23 reiterates our strong view that the IT capex plan must be very clearly integrated with other aspects of the revenue proposal, particularly opex and services. With respect to opex, we expect to see a line of sight between claimed efficiencies from an IT project and cost savings for consumers who have funded the capex.

<sup>35</sup> Powerlink, IT Plan 2023-27 (Draft), September 2020.

<sup>36</sup> Ibid, p 15.

<sup>37</sup> Ibid, pp 18-20.

Some IT projects are also relevant to enhanced service delivery for consumers. Again, there needs to be a clear line of sight between the expenditure and the enhanced service delivery. For instance, what is the expected reduction in time to respond to an outage. In addition, we expect to see evidence that consumers value this enhanced service delivery, commensurate with the cost of the service, and/or it is a legislative requirement.

CCP23 observes the trend for network companies to adopt cloud based IT solutions. As the IT Draft Plan identifies, cloud services can be provided in various ways, including Infrastructure as a Service, Platform as a Service and Software as a Service.<sup>38</sup> Each approach has different benefits and risks. CCP23 expects the final revenue proposal to provide an assessment of each of these options for different IT requirements and including the impact on costs and services to consumers.

### Business Services

Powerlink's draft plan does not provide a detailed breakdown of these costs, although the plan identifies that a component of these costs is the refit of Powerlink's offices.

CCP23 recognises that a refit of an existing office may be a reasonable expenditure item and we note Powerlink's reference to the need to change accommodation arrangements in the light of COVID 19 impacts.

Powerlink also states that this project was part of its 2018-22 regulatory proposal and the AER approved an expenditure of \$16.1m (\$2016) on an "office fitout replacement project," noting that it was more than 15 years since the last fitout and changes in office functionality and practices.<sup>39</sup>

As a general rule, CCP23 does not accept that projects that were funded by consumers in one regulatory period should be funded again in another regulatory period, unless there was clear evidence that this deferral was prudent and in the interests of consumers. It is pleasing therefore to observe that Powerlink intends to return the revenue attributable to the capital expenditure for this project to customers in 2021/22.<sup>40</sup>

### CCP23 Observations on the non-network capex

Powerlink's IT plan appears reasonable and aligned with previous period IT capex. The IT plan includes some important features such as the 'ex-post' audit of progress on IT plans presented in 2018-22 regulatory proposals. The Plan also recognises in its "benefits management" – the last stage of an IT project plan - the importance of close management of a project in order to ensure the project is delivered and provides the benefits to consumers who have funded the project.

Based on the information provided, CCP23 observes one gap in the process. It is important that the IT proposal clearly links to other aspects of the regulatory proposal, such as reductions in the proposed opex or improved operational performance. Consumers need to be able to clearly see the links between all the components that make up the allowed revenues and/or the networks' performance targets. Similarly, benefits should be defined in terms of consumer outcomes, not just business outcomes.

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<sup>38</sup> Ibid, p 8.

<sup>39</sup> AER, Final Determination 2017, Attachment 6, p 6.28.

<sup>40</sup> See, Powerlink, Draft Regulatory Proposal, p 39.



CCP23 has no objection to the proposed office refit. We appreciate that Powerlink has accepted that consumers have already funded the capex for this project in 2018-22 and plans to refund this revenue to consumers in 2021/22.

## 5. Operating expenditure

Powerlink provides the following as the key highlights from their operating expenditure proposal for 2023-27

- “
- We have targeted no real growth in total operating expenditure over the 2023-27 regulatory period. This target is compared to actual/forecast operating expenditure over the current 2018-22 regulatory period and excludes debt raising costs
    - o Customer feedback on productivity, affordability and the impacts of the current economic climate has been central to this decision.
    - o To meet this target, we have proposed a productivity factor of 0.8% per annum, which is above the industry benchmark average of 0.14%<sup>57</sup>, and no step changes.
  - Our total operating expenditure forecast for the 2023-27 regulatory period is \$1,038.9m (excluding debt raising costs) and \$1,054.9m (including debt raising costs). This represents: o no change from actual/forecast operating expenditure for the 2018-22 regulatory period (excluding debt raising costs); and o a \$13.1m (or 1.3%) increase from actual/forecast operating expenditure for the 2018- 22 regulatory period (including debt raising costs).
  - As a result of our no real growth approach, no step changes and forecast insurance cost pressures, there is potentially up to \$35.2m of cost increases over the 2023-27 regulatory period that we may absorb.
  - HoustonKemp performed an independent efficiency assessment of our proposed base year expenditure (2018/19). Their analysis suggests that our 2018/19 revealed operating expenditure is efficient.
  - Our forecasts are based on the Australian Energy Regulator’s (AER’s) base-step-trend methodology. We have also developed a category-specific forecast for the Australian Energy Market Commission (AEMC) Levy.”

In presenting their operating cost proposals, Powerlink consider controllable and non-controllable opex separately with controllable expenditure being: Field maintenance, Operational refurbishment, Maintenance support, Network operations, Asset management support and Corporate support. Powerlink state that “all current expenditure is in line with (regulated) allowance”.

Non controllable operating costs are listed as being: Insurance premiums, Self-insurance, Network support, AEMC Levy , Debt raising costs, with each of these being more variable than controllable categories.

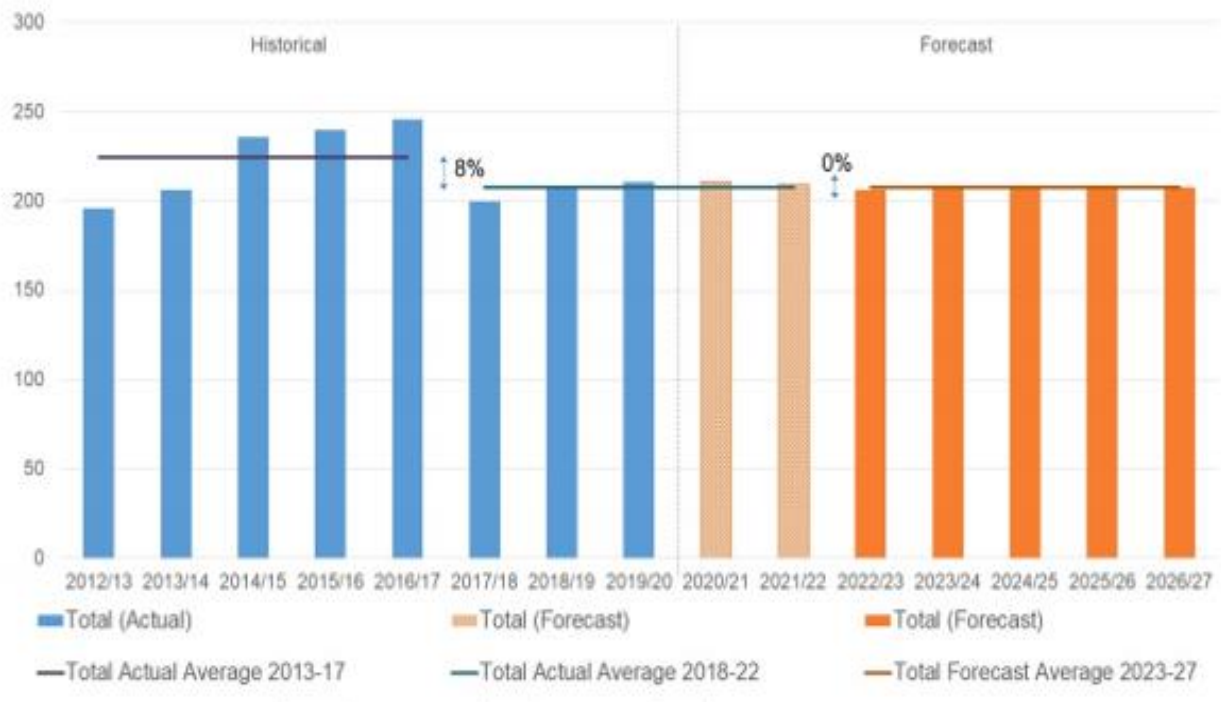
### **Base Step Trend**

In developing their revenue proposal, Powerlink have applied the standard base-step-trend methodology with some of the key elements of each of these building blocks being considered below.

**Base**

The following figure from the draft revenue proposal shows actual historical and forecast operating expenditure in real dollars and shows a modest decline from the past period to the current period and no net change for the forecast period, from the current period. This means that real operating expenditure is virtually unchanged from 2017/18 through the end of the next regulatory period 2026/27.

**Figure 9: Total actual historical and forecast operating expenditure (\$m real, 2021/22)**



Powerlink has proposed 2018/19 as their efficient base year, stating that “we have reviewed our expenditure in this year on a category basis, and have had the efficiency of this base year independently assessed”

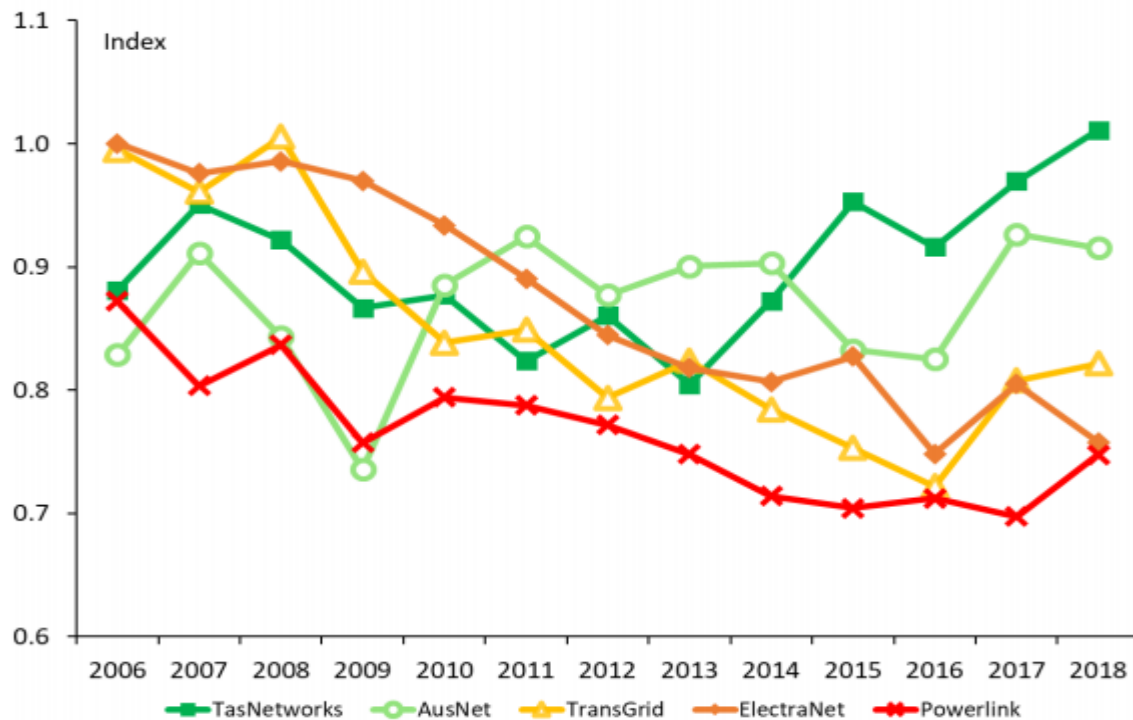
The following expenditure item adjustments for the proposed 2018/19 base year are provided with a note that operating costs associated with the AEMC Levy, network support and debt raising costs are not included in the base year as these are dealt with through the category specific approach to forecasting.

Operating expenditure category	\$m nominal
2018/19 unadjusted base year operating expenditure	193.3
Operational refurbishment: adjusted to remove NCIPAP project costs	(0.3)
2018/19 base year operating expenditure – efficient base year	193.0

## Benchmarking

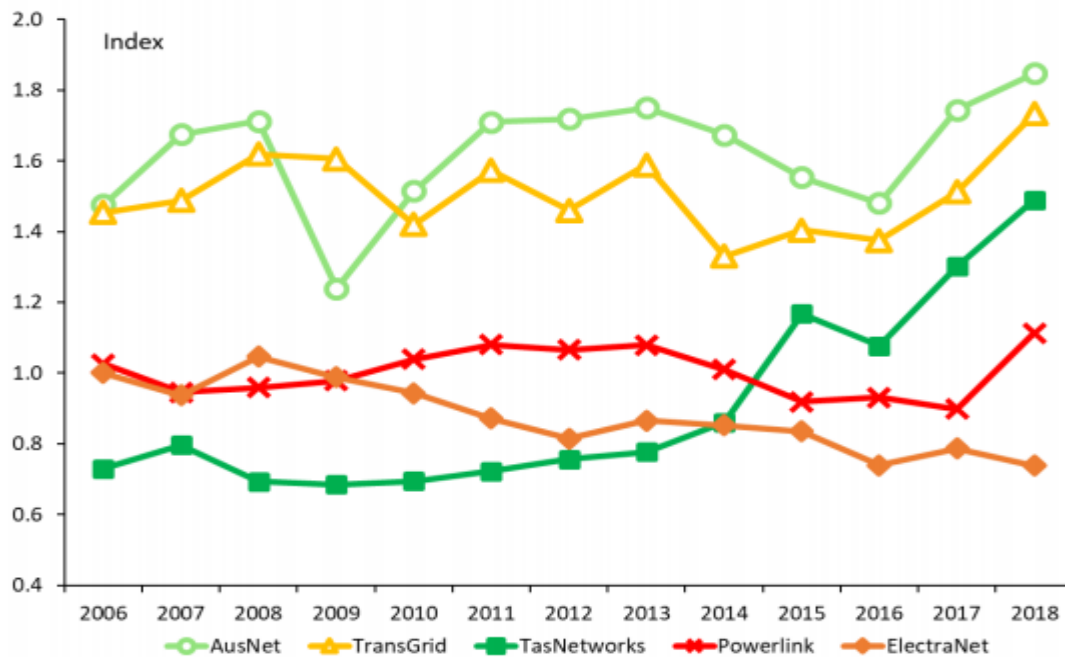
One of the starting points for considering whether a network businesses costs, including operating cost are efficient is through consideration of the AER's annual benchmarking report. A chart from most recent report for transmission businesses is copied below and indicates that Powerlink generally has lower total (capital plus operating cost) productivity levels than the majority of other Australian electricity transmission businesses. The data also shows an improvement in productivity for Powerlink over recent years with 2017/18 having the best productivity outcome since 2012/13.

**Figure 10: Electricity transmission productivity levels by state 2006-2018**



The opex multilateral partial factor productivity shows a better result for Powerlink with the strong recent improvement evident and a result for 2018 that puts Powerlink nearer the 'middle of the pack,' albeit a pack of 5 electricity transmission network service providers.

Figure 11: TNSP Opex MPFP Index, 2006-16



Source: AER Transmission benchmarking report 2019

In its Draft Revenue Proposal, Powerlink openly discusses its benchmarked productivity and the efficiency of its proposed base year with the following discussion.

*“Benchmarking plays a substantive role in the AER’s assessment of TNSP performance and expenditure forecasts, particularly with respect to base year operating expenditure efficiency and trends (refer Chapter 4 Historical Capital and Operating Expenditure). The AER has acknowledged that with only a small number of TNSPs, benchmarking and efficiency comparisons are difficult<sup>66</sup>. We understand that to address this in part, the AER has moved towards a line-of-best-fit approach for productivity benchmarking rather than an average annual growth rate method (which measured the productivity growth rate between the first and last observations). This is a more appropriate method to examine the productivity of TNSPs over time.*

*We engaged HoustonKemp to undertake an independent review of our base year operating expenditure. As part of its review, HoustonKemp benchmarked our expenditure against other TNSPs and examined productivity trends. HoustonKemp’s report key findings were:*

- *A detailed category analysis of Powerlink’s operating expenditure suggests that its 2018/19 revealed operating expenditure is efficient.*
- *Powerlink’s 2018/19 revealed operating expenditure does not appear to be materially inefficient. This conclusion held under several adjusted scenarios and after consideration of key network differences and capitalisation practices.”*

## TREND

This component of the operating expenditure building blocks is the most challenging to determine in the current environment particularly due to the uncertainty of future demand due to COVID-19.

Powerlink summarises their trend estimates by saying that “the annual average operating expenditure is identical at \$207.8m per annum (excluding debt raising costs) between the 2018-22 and 2023-27 regulatory periods.”

The key factors in determining operating expenditure trend forecasts are: Output change, Real price change and Productivity change with Powerlink’s proposal under these headings summarised in the following table:

**Table 8: Forecast real annual rate of change (\$m, 2021/22)**

Rate of change components	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Output change	0.7	3.4	3.5	3.8	4.1	15.5
Real price change	0.8	1.6	2.7	3.9	5.0	14.0
Productivity change	(1.7)	(3.2)	(4.7)	(6.3)	(8.0)	(23.9)
<b>Total rate of change</b>	<b>(0.2)</b>	<b>1.9</b>	<b>1.6</b>	<b>1.3</b>	<b>1.0</b>	<b>5.6</b>

It is important to note that while the total rate of change within base-step-trended operating expenditure is greater than zero, when we take into account the AEMC Levy category-specific forecast, there is no real growth in total operating expenditure between the 2018-22 and 2023-27 regulatory periods.

Source: Powerlink revised revenue proposal

The result being that increased expenditure in some categories is approximately offset by productivity improvements.

The overall real rate of change in the base-step-trend model is a function of the forecast change in network output, real input costs (labour and materials) and productivity.

### Output Change

In the Draft Revenue Proposal, output growth factors are listed but some weighting and estimates redacted due to alignment with the AER 2020 benchmarking report, that will be released November 2020.

### Real Price Change

For the two main drivers of real price change, Powerlink makes the following estimates of increases over the next regulatory period:

- Materials: 0% pa change,
- Labour 0.7%pa change

We note that near future estimates of labour productivity will be better placed to consider the likely impacts of COVID-19 on labour costs

## Productivity

in proposing a productivity improvement of 0.8% per annum, Powerlink provides the following commentary in their draft revenue proposal about areas of expenditure that are likely areas for contribution to this productivity improvement:

*“• rationalisation of our direct purchasing and supply chain practices to reduce frequency of procurement outside of standing agreements with suppliers, to drive down costs;*

*• to explore options to reduce costs in vegetation management contracting arrangements;*

*• application of emergent technologies to optimise field delivery and staff activities through improved work planning;*

*• delivery of our proposed office refit project (refer Chapter 5 Forecast Capital Expenditure), which will produce direct savings in utilities costs through reductions in the size of the occupied space and allow us to make more efficient use of available office space;*

*• core business Information Technology (IT) improvements and software upgrades which transition our core IT services to a more efficient operating platform. This will allow for programs to be modernised which is critical to support innovative technology applications, and will help Powerlink avoid increased licence and operating costs associated with continued use of the old operating environment;*

*• establishment of an In-Vehicle Asset Management System (IVAMS) program across fleet vehicles to improve safety and driver education, as well as to enhance fleet management and reduce operating costs through savings on fuel, maintenance and vehicle insurance; and*

*• ongoing delivery of value driven maintenance practices, which have also been explored over the 2018-22 regulatory period. This involves further optimisation of maintenance works to deliver the most value for networks and customers at least cost.”*

In summarising their approach to productivity improvement Powerlink also says *“we recognise the need to identify ways to deliver further efficiency and productivity improvements during the 2023-27 regulatory period and commit to doing this as part of business-as-usual operations.”* We agree.

## STEP CHANGES

In responding to customer advice about the importance of keeping prices low as practical, Powerlink says that they are not planning to propose step changes for their operating costs and have provided analysis of areas where they believe price pressures from exogenous factors are likely to arise during the 2023/27 regulatory period. These are listed in the following table which is taken from the draft revenue proposal.

On the vexed question of likely future insurance costs, Powerlink makes the following comments:

*“There are potential increases in operating expenditure requirements expected over the 2023-27 regulatory period that may impact our ability to meet this target. These include potential cost increases in insurance, cyber security and new outage management complexities to maintain system strength as new Inverter-Based Resources (IBR) are commissioned. If for any reason we cannot continue to deliver safe, secure and reliable services within our target forecast, we will overspend our allowance. This will be a last resort for the business.”*



We understand that Powerlink is planning to host a deep dive in the near future, to specifically engage with consumers about the options they confront over insurance costs including to ask consumers to indicate risk preferences so that a full range of insurance, non-insurance and self-insurance options can be considered.

Insurance costs, cyber security responses and AEMC levy are all cost challenges that are being faced by all regulated network businesses at the moment and so we would anticipate that the situation with these charges for Powerlink may be somewhat more resolved by the time their revenue proposal is lodged, due to pending AER decisions for other regulated businesses

**Table 9: Potential costs uplifts over the 2023-27 period (\$real, 2021/22)**

Name	Estimated cost uplift	Description
Cyber security	\$1.1m-\$2.5m per annum (depending on maturity level uplift required. This uplift represents the potential increase above existing activities)	There is a potentially significant increase in operating expenditure required to maintain different levels of cyber security readiness under the Australian Energy Sector Cyber Security Framework (AESCSF). There may be a future formal obligation tied to this. <b>This is discussed further below.</b>
Transmission ring-fencing	Unknown	The AER's Electricity Transmission Ring-fencing Guideline Review may result in additional obligations and operating expenditure. The quantum of these costs will depend on the nature and extent of changes proposed. <b>This is discussed further below.</b>
Nature Conservation Act (NCA) fees	\$1m (2023/24), \$70k per annum thereafter	Potential new fees for co-location of assets within national parks. The timing of this new obligation is uncertain and may not arise before the AER's Final Decision in April 2022.
Generator Technical Performance Standards (GTPS)	\$63k per annum	Increased costs (above those already realised in 2018-22) related to the provision of operational advice on system-related matters due to the National Electricity Amendment (Managing Power System Fault Levels) Rule 2017 No. 10. This was originally forecast to have a larger impact (~\$250k per annum). However further analysis revealed the majority of this cost has been realised in our base year.
Corporations Law Whistle-blower Protections	\$150k per annum	Additional administrative and compliance costs related to new whistle-blower legislation. We decided not to pursue this potential step change as the cost was not considered material.
Modern Slavery Act	\$130k per annum	New administrative compliance costs related to the Modern Slavery Act 2018. We decided not to pursue this potential step change as the cost was not considered material.

Source: Powerlink Draft Revenue Proposal

### CCP23 Observations

*Q6.1 Is the operating expenditure forecast capable of acceptance?*

We will observe consumer and other stakeholder responses to this question in providing advice to the AER about the revenue proposal once it is lodged in January 2021.

*Q6.2 Have we explained the key drivers for our operating expenditure forecast?*



Since this document is a draft revenue proposal rather than a draft plan or an ‘issues for consideration’ paper, it provides more detail than draft plans from other network businesses to date and so we suggest provides more detail than any other network has provided about the key drivers for their operating expenditure forecast. We observe that the target audience for a draft revenue proposal is small, but significant. So the readers of the draft revenue proposal will mainly be well informed customers, advocates or regulators and so the level of detail provide is appropriate.

One observation is that perhaps Powerlink could have explained relationships between opex and capex in a little more detail, for some ‘key drivers.’

*Q6.3 Is our operating expenditure forecasting approach (base-step-trend) reasonable?*

Uncertainty makes forecasting a more awkward process now than has been the case in the past. Our observation here is that Powerlink has engaged effectively with customers and has explored a range of options and so, for the point of time when it was produced, this expenditure forecasting approach is reasonable. We certainly expect changes particularly for trend aspects of operating costs between the time of release of the draft revenue proposal and the final revenue proposal when lodged.

The choice of 2018/19 as base year is reasonable in an opex environment of minimal change from year to year. The year however is some distance from 2022/23, the commencement of the next regulatory control period, and so a more recent base year may be more optimal in narrowing the time gap to the commencement of the next regulatory period. The HoustonKemp analysis is also helpful.

The ‘trend’ component of the operating expenditure building blocks is the most challenging to determine in the current environment particularly due to the uncertainty of future demand due to COVID-19. The output change modelling will need to be revisited by consumers once the information redacted from the draft revenue proposal is available. Demand estimates will also need to be revised due to COVID based uncertainty.

Regarding labour cost escalators, we expect further information to be available soon to better inform estimates. We note that Deloitte Access Economics estimates have been used as place holder with a 0.7% pa rate. We urge Powerlink to be acutely aware of the income levels of their customers in setting labour cost increases. Increases are not reasonable when many customers are struggling to cope with declining real incomes. Labour price movements should be sympathetic with customer experiences.

*Q6.4 Do you support our no real growth in total operating expenditure target?*

The no real growth target for operating expenditure is appreciated by customer interests and would appear to be reasonable, noting that at this stage we have not had the benefit of seeing how the targets proposed compare with AER modelling, the “proof point” considered in the earlier section about “Capable of Acceptance.”

*Q6.5 Do you support our proposal of no opex step changes?*

The intention of having no operating costs step changes is supported and we think it is appropriate particularly given the cost pressures on many customers - household and business and the associated uncertainty particularly as result of COVID-19.

*Q6.6 Have we explained the key drivers for our operating expenditure forecast?*

We consider that the key drivers for operating expenditure forecasting have been explained to those customers who have been able to participate in the discussions, particularly on the customer panel and the RPRG

*Q6.7 Is our productivity target appropriate?*

While the productivity target appears most reasonable, certainly in comparison with productivity targets being proposed by other network businesses over recent years, a clearer picture about the appropriateness will most likely emerge once the AER's 2020 benchmarking report is released. This will give a clearer perspective about Powerlink's operating cost efficiency and will be available to customers and interested stakeholders.

*Q6.8 How should we manage the risk of significant increases in insurance costs?*

The approach taken by Powerlink and foreshadowed a deep dive involving interested customer representatives is an appropriate approach to exploring and managing the risk of significant increase in insurance costs. We also note that insurance costs tend to be cyclical and so there is a chance that by the time the 2023-27 regulatory period commences, the insurance cost cycle may well be in a phase of more underwriters, more competition and lower premium costs. On the other hand, it may be that by 2022/23 it is more evident that the nature of the insurance industry has changed and that coverage for bushfire and natural disaster events, for example, are even more expensive or potentially unobtainable.

For these reasons, exploring all possible options and a range of risk appetites with customer groups is the appropriate process.

## 6. Financials

Question guide:

- Do you support our change in depreciation tracking approach?
- Is our approach to forecasting inflation reasonable?
- Do you have any feedback on our indicative price path over the 2023-27 regulatory period?

CCP23 supports Powerlink's proposed approach to calculating the rate of return, inflation estimation, and the taxation cost allowance. Our support is based on Powerlink's approach aligning with the AER's 2018 Rate of Return Instrument, and the AER's 2018/19 review of regulatory taxation and its current review of regulatory inflation..

CCP23 also supports Powerlink's approach to the average annual price increases. Given the current economic circumstances, it is appropriate that the real price reductions are delivered in the first year, with remaining years increasing by CPI.

CCP23 is concerned that Powerlink's proposed return of capital (depreciation) is \$273m higher than depreciation costs in the current regulatory period. The reasons for this increase are complex relating to both the proposed change in depreciation approach, revaluation of the RAB and the recovery of prior years' indexation. CCP23 expects the AER to examine in some detail each of these aspects of Powerlink's proposal.

### **Rate of Return, estimated inflation, taxation costs and depreciation**

Powerlink forecasts a weighted average cost of capital (WACC) for 2022/23 of 4.47%. By 2026/27, WACC is forecast to be 4.00%.<sup>41</sup> The return on equity component is estimated at 4.55% for each year of the 2023-27 regulatory period. The return on debt declines from 4.42% in 2022/23 to 3.64% in 2026/27 reflecting the 10-year trailing average approach to estimating the cost of debt.<sup>42</sup> The final WACC assessment for Powerlink will also be influenced by the AER's decision on the treatment of regulatory inflation (due in December 2020).<sup>43</sup>

CCP23 observes that Powerlink has correctly applied the AER's 2018 Rate of Return instrument. As a result, CCP23 endorses Powerlink's estimated WACC while noting that the WACC will be further updated in the AER's Final Determination for Powerlink in April 2022.

Similarly, Powerlink has adopted the AER's approach to estimating its taxation allowance, including the value of imputation credits. In particular, Powerlink states that it has adopted the two key changes the AER made since 2018,<sup>44</sup> being:

- Adoption of immediate expensing of certain costs for taxation purposes; and
- Application of diminishing value depreciation for new assets and capital expenditure (with exceptions as specified by the Australian Taxation Office rulings).

Powerlink also states that it has changed its approach to both regulatory and tax depreciation.<sup>45</sup>

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<sup>41</sup> Vanilla WACC – post tax nominal.

<sup>42</sup> Powerlink, Draft Revenue Proposal, p 95.

<sup>43</sup> For details, refer to AER's 2020 Review of treatment of inflation. <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/review-of-treatment-of-inflation-2020>

<sup>44</sup> For details, refer to AER, Regulatory Tax Approach Review, 2018 and version 4 of the PTRM (2019) .

<sup>45</sup> See Powerlink, Draft Revenue Proposal, p 96.

CCP23 endorses Powerlink’s proposed approach although we expect the AER to confirm the details of the calculations.

Response to Questions

*Q6.1: Do you support our change in depreciation tracking approach?*

Powerlink is proposing a total regulatory depreciation of \$897.6m (\$ real) for the 2023-27 regulatory period. The table below sets out the forecast regulatory depreciation.

**Table 10: Forecast regulatory depreciation 2023-27 (\$real, 2021/22)**

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Straight-line depreciation <sup>(1)</sup>	320.6	325.7	329.9	330.5	332.5	1,639.2
Less inflation <sup>(2)</sup> adjustment on Opening Regulatory Asset Base (RAB)	(154.0)	(151.4)	(148.5)	(145.2)	(142.6)	(741.6)
<b>Regulatory depreciation</b>	<b>166.7</b>	<b>174.3</b>	<b>181.4</b>	<b>185.3</b>	<b>189.9</b>	<b>897.6</b>

(1) We have adjusted for forecast capital expenditure and asset disposals in each year of the regulatory period. Depreciation is calculated on these adjusted RAB values.

(2) Based on an inflation estimate of 2.25% (refer Chapter 9 Rate of Return, taxation and inflation).

Source: Powerlink, *Draft Regulatory Proposal*, Table 10.1, p 98.

Powerlink’s proposed regulatory depreciation is \$272.9m (44%) higher than the depreciation allowance for 2018-22 regulatory period. Powerlink explains this increase as follows:<sup>46</sup>

- Change in its depreciation forecasting approach to a year-by-year tracking approach for new capital investments;
- Lower forecast inflation, reducing the inflation adjustment; and
- An increase in depreciation from the recovery of prior years indexation.

These changes to the forecasting approach are consistent with the rule requirements on depreciation and the AER’s Post-tax Revenue Model (Version 4). Other networks have applied the year-by-year tracking approach for new capex and the AER has accepted this as an alternative to their current methodology using the weighted average remaining life (WARL). Powerlink advises that it has retained the AER’s WARL approach for existing assets.

CCP23 also recognises that Powerlink has discussed this change in approach extensively with its RPRG and Customer Panel because of the impact of prices in the 2023-27 regulatory period. As a result of these discussions, Powerlink has made some “minor adjustments” to extend the WARL of the existing secondary systems assets by around a year. It claims that this will reduce the impact of the change in approach on customers.

While the CCP23 acknowledges the work that Powerlink has undertaken to reduce the impact of its change in approach, nevertheless, the change in approach will drive up prices in 2023-27 relative to the AER’s WARL approach. At the same time, if the AER adopts any of the changes it is considering to its estimation of inflation, this will add further unwelcome pressure on prices in 2023-27. For this reason, it is important that the AER undertake a detailed analysis of Powerlink’s total regulatory depreciation costs.

<sup>46</sup> Powerlink, *Draft Regulatory Proposal*, p 98.

*Q6.2: Is our approach to forecasting inflation reasonable?*

The AER’s estimate of expected inflation plays an important role in the determination of a network’s real rate of return on its assets and is relevant to the returns to the network equity owners and to consumer prices.

Powerlink’s Draft Revenue Proposal adopts an estimate of expected inflation of 2.25%. However, the AER is currently conducting a review of its approach to estimating expected inflation and this may result in a change to the estimated inflation.<sup>47</sup> If there is a change, this will also impact on consumer prices.

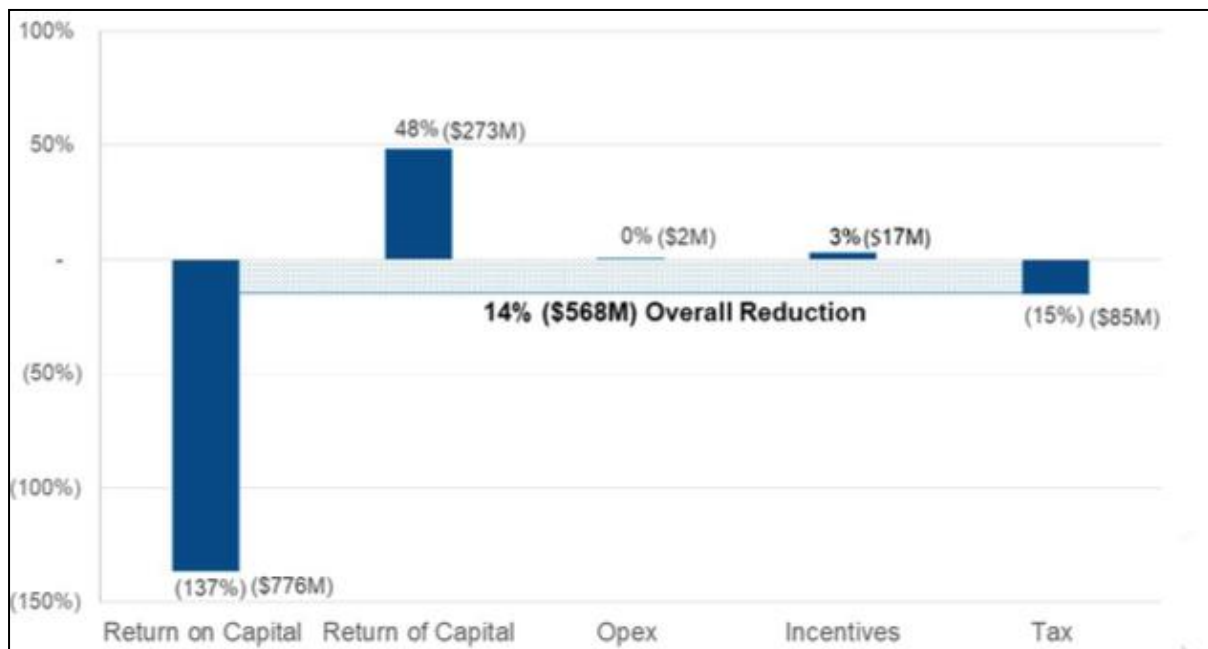
Powerlink states that it will adopt the outcome of the AER’s review. CCP23 supports Powerlink’s approach.

However, we note that all the changes to the estimation of inflation that are currently set out in the AER’s Draft Inflation Review will result in some increases in Powerlink’s allowed real rate of return, allowed revenues and prices to consumers.<sup>48</sup>

*Q6.3: Do you have any feedback on our indicative price path?*

Overall, Powerlink’s forecast maximum average revenue (MAR) decreases by \$567.8m (nominal) or 14% compared to the allowed MAR for the 2018-22 regulatory period. The largest contributor to this decline is return on capital with changes to tax also contributing to reductions in MAR and offsetting increases in the return of capital (depreciation), opex and incentives. The chart below illustrates the significance of the return on capital

**Figure 12: Drivers of Revenue Change**



Source: Powerlink, Draft Revenue Proposal, Figure 11.2, p 103.

<sup>47</sup> Powerlink, Draft Revenue Proposal, p 97

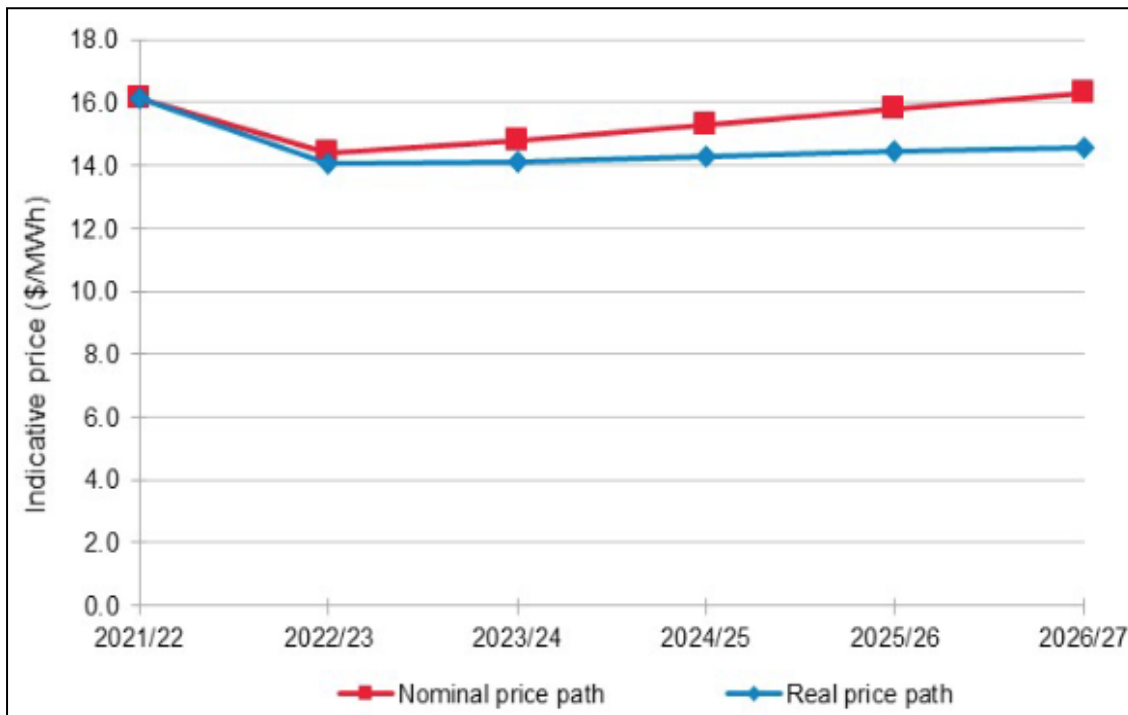
<sup>48</sup> See AER, Draft Position Paper - Regulatory Treatment of Inflation, October 2020. For example, the AER has estimated the impact on of their draft position in inflation estimation on their determination for the Victorian distribution electricity distribution networks. The AER states it would result in about an extra \$300m (\$real 2021) in allowed revenue over the next five years. (p 67).

Reflecting these reductions in the overall MAR, Powerlink has chosen to implement a “smoothed” revenue path based on a large price reduction in the first year, followed by CPI increases in subsequent years.

The chart below illustrates the proposed price path from 2021/22 to 2026/27, with 2021.22 being the indicative average price for the last year of the current regulatory control period (2018-22). Powerlink reports that the price path would result in the following reductions in price in the first year (2022/23):<sup>49</sup>

- Residential: A nominal price reduction of 12% (\$14) or real price reduction of 14% (\$16).
- Small Business: A nominal price reduction of 12% (\$24), real price reduction of 14%. (\$27).

**Figure 13: Indicative price path from 2021/22 to 2026/27**



Source: Powerlink, Draft Revenue Proposal, Figure 11.3, p 106.

CCP23 supports Powerlink’s proposed price path given the reductions in MAR. In particular, current market conditions and the extended impact of COVID19 policy decisions, support an early introduction of the savings, with a CPI increase for the following four years, rather than a straight line reduction.

The proposed price path is also providing some buffer to the risk of a significant increase in prices in 2028-32 regulatory control period, particularly the first year of that period, as the ISP projects come into consideration and cost of capital increases from the current record lows.

<sup>49</sup> Powerlink Draft Revenue Proposal, p 106. Residential \$ savings based on median energy usage of 4,061kWh per annum on Tariff 11. Small business savings based on median energy usage of 6,31kWh per annum on Tariff 20.

## 7. Incentive Schemes (EBSS and CESS)- Chapter14

We note that incentive schemes were not discussed in the Webinar on Powerlink's Draft Revenue Proposal that was held on 19 October 2020. However, it is on the agenda for the RPRG on 29 October. This response is being finalised before that meeting on 29 October so does not take into account any discussion on that topic in that meeting.

Question guide:

- Do you support our approach to the EBSS and CESS?

Chapter 14 of the Draft Revenue Proposal outlines net carryover amounts for the current 2018-22 regulatory period and Powerlink's targets for the Efficiency Benefit Sharing Scheme (EBSS) and the Capital Expenditure Sharing Scheme (CESS) for the 2023-27 regulatory period. The EBSS relates to operating expenditure and the CESS relates to capital expenditure.

These incentives are intended to encourage Powerlink to develop and implement improvements for the benefit of its customers.

For each of the two schemes, Powerlink

- Has estimated net carryover amounts from the 2018-22 regulatory period to be included as an adjustment to the Maximum Allowed Revenue (MAR) for the 2023-27 regulatory period; and
- Proposes to continue the schemes in the 2023-27 regulatory period
  - Proposes that \$1,007.6m of its forecast operating expenditure for the 2023-27 regulatory period be subject to the EBSS; and
  - Proposes that \$988.9m of its forecast capital expenditure for the 2023-27 regulatory period be subject to the CESS.

In its Final Framework and Approach Paper for Powerlink, the AER proposed to apply its 2013 EBSS (Version 2) and 2013 CESS (Version 1) in the 2023-27 regulatory period. Powerlink's Draft Revenue Proposal aligns with that approach of the AER.

We have not checked Powerlink's estimates of the net carryover amounts from the 2018-22 period under each of the two schemes. That is something the CCP sub-panels generally do not check. It is simply a matter of modelling accuracy which the AER handles.

CCP23 concurs with the approach of Powerlink to align its scheme proposals with the AER's Framework and Approach.

We note that the EBSS and CESS targets for the 2023-27 regulatory period are based on Powerlink's operating and capital expenditure forecasts for that period respectively. To the extent that those forecasts change between Draft and Final Regulatory Proposals, and in the AER's draft and final decisions, we would expect the EBSS and CESS targets to be modified accordingly.

## 8. Service Target Performance Incentive Scheme (STPIS) – Chapter 15

Question guide:

- Is our proposed alternative target of 1 (versus a target of 0) for the large loss of supply sub-parameter of the Service Component of STPIS reasonable?
- Do you agree with our proposal not to include NCIPAP projects at this time?
- Do you think it is important that the AER use the most recent data to set targets for us over the next regulatory period, especially for the Market Impact of Congestion component of the scheme?

Chapter 15 of the Draft Revenue Proposal outlines Powerlink's performance under the Service Target Performance Incentive Scheme (STPIS) in the current 2018-22 regulatory period, as well as its proposed STPIS values and targets for the 2023-27 regulatory period. The three components to the STPIS are the Service Component (SC), Market Impact Component (MIC) and Network Capability Component (NCC).

The Rules require the AER to develop and publish a STPIS that complies with specified principles. Powerlink is required to include proposed values for the STPIS parameters as part of its Revenue Proposal.

Powerlink is currently subject to the AER's 2015 STPIS (Version 5). In its Final Framework and Approach paper for Powerlink, the AER confirmed that it will apply this version of the scheme for the 2023-27 regulatory period.

The Draft Revenue Proposal notes that there have been some significant changes to Powerlink's operating environment as Australia's energy market transitions to a low carbon future (refer Chapter 2 of the Draft Revenue Proposal – Business and Operating Environment). These changes, which have occurred since the AER's 2015 STPIS was published, are said to have presented challenges in the management of Powerlink's network performance.

Regarding a possible review of STPIS, we have not found reason to differ from AER's July 2020 Final F&A Paper, where the AER concluded that the STPIS is operating appropriately.



## 9. Demand Management Incentive Allowance Mechanism (DMIAM) – Ch 17

Question guide:

- Do you have any suggestions Powerlink should consider as potential DMIAM projects?

The objective of the Demand Management Innovation Allowance Mechanism (DMIAM) is to provide Transmission Network Service Providers (TNSP) with funding for research and development in demand management projects that have the potential to reduce long-term network costs.

The AER released an Issues Paper in August 2020, which commenced consultation on the development of the DMIAM. The AER intends to publish its draft decision on the DMIAM in January 2021 and Final DMIAM and Explanatory Statement in June 2021.

The DMIAM will not be finalised before Powerlink submits its Revenue Proposal to the AER in January 2021.

In its Final Determination that introduced the DMIAM, the AEMC specifically discussed the question of transitional arrangements for Powerlink, given the likely timing of finalisation of the DMIAM. The AEMC concluded that Powerlink could highlight its intention to propose application of the DMIAM in the Revenue Proposal and then provide the formal requirements under the scheme in its Revised Revenue Proposal. The AEMC sought the AER's feedback on this arrangement. The AER confirmed it will allow Powerlink to follow this approach.

Powerlink's request to the AER to amend or replace the Framework and Approach (F&A) paper for the 2023-27 revenue determination process included that the DMIAM should apply to Powerlink. In its Final F&A paper the AER stated its intention to apply the DMIAM to Powerlink for the 2023-27 regulatory period.

The expected timing for the release of the draft DMIAM (January 2021) means that Powerlink will be unable to provide any finalised information relating to the DMIAM as part of its 2023-27 Revenue Proposal. The AER also noted, given the expected timing for the finalisation of the transmission DMIAM, that Powerlink will have an opportunity to fully reflect the finalised DMIAM in its Revised Revenue Proposal, which will be due around November 2021.

We agree with the approach of Powerlink to provide information to the AER as part of its Revised Revenue Proposal. This will provide time for Powerlink the time to firm up its proposals, informed by further targeted stakeholder engagement.

## 10. Pricing methodology – chapter 16

Powerlink's question guide does not include any specific question on its pricing methodology. We note that Powerlink has targeted release of a Final Positions Paper and marked-up version of its proposed Pricing Methodology for the 2023-27 regulatory period in late October 2020. The outcome of this final version will be reflected in the January 2021 Revenue Proposal.

We will comment on the pricing methodology in those timeframes.

## 11. Further Comments

1. Do you have any further comments on our draft Revenue Proposal?

### Forecasts

For its electricity demand forecast, Powerlink is using the Central Scenario in AEMO's 2020 Electricity Statement of Opportunities (ESOO). We concur with this approach, noting the uncertainties of forecasts given COVID-19 and other factors.

2. Do you want this feedback to be published on our website?

"Yes," once the AER has passed this "Advice" on to Powerlink, we are happy for Powerlink to publish it on its website along with other responses to the Draft Revenue Proposal that are received.