2023-27
Powerlink Queensland Revised Revenue Proposal

November 2021

Powerlink QUEENSLAND

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Executive summary

This Revised Revenue Proposal provides the Queensland Electricity Transmission Corporation Limited's (Powerlink's) revised revenue requirements for prescribed transmission services in our next regulatory period from 1 July 2022 to 30 June 2027 (our 2023-27 regulatory period). Our Revised Revenue Proposal has been prepared in response to the Australian Energy Regulator's (AER's) Draft Decision, published on 30 September 2021.

We consider our proposal will enable us to continue to provide safe, secure, reliable and cost-effective transmission services to our directly-connected customers and almost five million Queenslanders.

Capable of acceptance

Our overarching goal has been to deliver a Revenue Proposal that is capable of acceptance by our customers, the AER and Powerlink. It has been the guiding objective for our extensive engagement throughout the development and review of our Revenue Proposal since mid-2019 and built on the strong foundations we undertake in the normal course of business.

Our Revenue Proposal committed to driving further affordability through a 3% reduction in forecast capital expenditure and no real growth in operating expenditure.

We are pleased that, in its Draft Decision, the AER considered that our Revenue Proposal is capable of acceptance and accepted all major aspects of it[1].

We engaged further with our Customer Panel prior to finalisation of the positions in our Revised Revenue Proposal. Our Customer Panel has since confirmed that capable of acceptance has been met from its point of view (refer Chapter 3 Customer Engagement).

We consider that our proposal has been demonstrated as capable of acceptance by our customers, the AER and ourselves.

Response to the AER's Draft Decision

We have accepted all major aspects of the AER's Draft Decision in our Revised Revenue Proposal. Overall, our Revised Revenue Proposal results in a $12.7m, or less than half a per cent difference in revenue compared to the AER's Draft Decision. For comparative purposes, a snapshot of our key forecasts is shown in Figure 1.

Figure 1: Revenue Proposal, AER Draft Decision and Revised Revenue Proposal comparison

	Capital Expenditure	Operating Expenditure	Rate of Return	Regulatory Asset Base	Maximum Allowed Revenue	Electricity prices
Revenue Proposal	$863.9m	$1,046.4m	4.44%	$6,958.4m	$3,333.9m	11% decrease
Draft Decision	$863.9m	$1,046.4m	4.65%	$6,983.4m	$3,415.0m	9% decrease
Revised Revenue Proposal	$882.4m	$1,071.4m	4.65%	$7,140.2m	$3,427.6m	5% decrease

Notes:

- Figures are in $m real, 2021/22 and are for the full five-year regulatory period unless otherwise stated.
- Rate of return is nominal vanilla.
- Regulatory Asset Base reflects the opening RAB value for 1 July 2022.
- Capital expenditure figures are net of disposals.
- Operating expenditure includes debt raising costs.
- Electricity transmission prices reflect the nominal, indicative impact to the transmission component of electricity prices in the first year of the next regulatory period for average residential and small business customers.

[1] Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Overview, Australian Energy Regulator, page 5.

Overview of Revised Revenue Proposal

A brief overview of the approach we took to key aspects of our revised forecasts is set out in Table 1, with a more detailed summary of all Revised Revenue Proposal responses in Attachment 1. The primary difference between our Revised Revenue Proposal forecasts and the AER's Draft Decision figures is due to updates for inflation, actual expenditure for 2020/21 and revised forecast expenditure for 2021/22. Further details are available in each relevant chapter.

Table 1: Overview of our approach to key elements

Element	Overview of our approach and key differences
Capital expenditure	We **accept the AER's Draft Decision on total capital expenditure**, with an update for inflation. This results in revised total forecast capital expenditure of $882.4m, which is $18.4m (2.1%) higher than the AER's Draft Decision. We have not made any other changes.
Operating expenditure	We **accept the AER's approach to estimate operating expenditure** set out in its Draft Decision except for productivity where we adopt a higher target. We also **accept the AER's Draft Decision on network support costs and debt raising costs**. We have revised our forecast operating expenditure to be consistent with the AER's Draft Decision approach, to reflect the latest inflation information and to retain our no real growth target. We have not proposed any step changes. As a result, our revised total forecast operating expenditure is $1,071.4m, which is $25.0m (2.4%) higher than the AER's Draft Decision.
Rate of return	**No difference** – we have applied the AER's Draft Decision rate of return estimate of 4.65%. The AER will update the rate of return in its Final Decision.
Regulatory Asset Base (RAB)	We **accept the AER's minor amendments to our RAB**[2]. We have also applied updates to reflect our current capital expenditure actuals/forecast for the 2018-22 regulatory period. As a result, our revised RAB is $7,140.2m, which is $156.9m (2.2%) higher than the AER's Draft Decision.
Maximum Allowed Revenue (MAR)	We have updated our MAR to reflect our updates to all other building-block elements. Our revised MAR is $3,427.6m, which is $12.7m (0.4%) higher than the AER's Draft Decision.
Electricity prices	We forecast a reduction of 5% in average indicative transmission prices for both residential and small business customers in the first year of the next regulatory period (2022/23), and price growth over the remainder of the regulatory period to be in line with forecast inflation of 2.37%.
Demand Management Innovation Allowance Mechanism (DMIAM)	While not a key building-block element of our Revised Revenue Proposal, we **do not accept the AER's Draft Decision on the DMIAM**. We have adopted our Customer Panel's recommendation and propose the DMIAM is not applied to Powerlink in our 2023-27 regulatory period.

2 *Ibid*, Attachment 2 Regulatory Asset Base, Australian Energy Regulator, pages 4-8.

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1. Introduction

Powerlink lodged its Revenue Proposal with the Australian Energy Regulator (AER) on 28 January 2021. Our Revenue Proposal set out our revenue requirements for prescribed transmission services for our next regulatory period from 1 July 2022 to 30 June 2027 (our 2023-27 regulatory period).

The AER published its Issues Paper on our Revenue Proposal on 24 March 2021 and sought submissions by 24 May 2021. Four submissions[1] were lodged in response to the AER's consultation, all of which were broadly positive of our Revenue Proposal with some areas of improvement identified. We summarised and published our response to these submissions in August 2021[2].

Between February and September 2021, the AER reviewed our Revenue Proposal in detail. During this time we responded to numerous AER Information Requests and questions and continued to engage with our customers (refer Chapter 3 Customer Engagement).

The AER published its Draft Decision on our Revenue Proposal on 30 September 2021. In its Draft Decision, the AER considered our Revenue Proposal was capable of acceptance and accepted all major aspects of it, including our capital and operating expenditure forecasts and Proposed Pricing Methodology[3]. On 13 October 2021 the AER held its Pre-Determination Conference on its Draft Decision where the AER, its Consumer Challenge Panel 23 (CCP23) and Powerlink made presentations.

Our Revised Revenue Proposal is lodged in response to the AER's Draft Decision and in accordance with the National Electricity Rules (the Rules)[4].

We have accepted the majority of the AER's Draft Decision with standard updates (e.g. for inflation, actual expenditure for Year 4 (2020/21) and revised forecast expenditure for Year 5 (2021/22) of our current regulatory period). For some areas, such as our Service Target Performance Incentive Scheme (STPIS), we have accepted the AER's Draft Decision in the context of the overall Revenue Proposal package. However, we do not necessarily agree with the AER's position on certain matters.

Our Executive Summary provides an overview of key areas of the AER's Draft Decision and our Revised Revenue Proposal responses. A summary of all positions is included in Attachment 1.

1.1 Structure of this document

For clarity and ease of reference, we have structured our Revised Revenue Proposal the same way as our Revenue Proposal, as outlined in Table 1.1. Each chapter provides a brief overview of our Revenue Proposal positions, the AER's Draft Decision and our Revised Revenue Proposal response.

1 Submissions were received from the Australian Energy Regulator's Consumer Challenge Panel 23, Powerlink's Customer Panel, Energy Users Association of Australia and Aurizon Network.

2 Response to Revenue Proposal Submissions, Powerlink, https://www.powerlink.com.au/2023-27-regulatory-period.

3 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Overview, Australian Energy Regulator, page 5.

4 National Electricity Rules, clause 6A.12.3.

Table 1.1: Structure of this document

Chapter	Content
1	Introduction.
2	Business and operating environment – for context only and focused on changes since our Revenue Proposal.
3	Customer engagement – engagement undertaken between our Revenue Proposal and Revised Revenue Proposal.
4	Historical capital and operating expenditure – focused on updates to our current 2018-22 regulatory period actuals for 2020/21 and forecast for 2021/22.
5	Capital expenditure forecast for the 2023-27 regulatory period.
6	Operating and maintenance expenditure forecast for the 2023-27 regulatory period.
7	Cost escalation rates and project cost estimation.
8	Calculation of our Regulatory Asset Base (RAB).
9	Rate of return, taxation allowance and inflation forecast.
10	Depreciation forecast.
11	Maximum Allowed Revenue (MAR), based on our building-block forecasts and revenue adjustments.
12	Pass through arrangements.
13	Assessment of shared assets.
14	Efficiency Benefit Sharing Scheme (EBSS) and Capital Expenditure Sharing Scheme (CESS) forecasts for the 2023-27 regulatory period and net carryovers from the 2018-22 regulatory period.
15	Service Target Performance Incentive Scheme (STPIS) 2023-27 regulatory period targets.
16	Revised Proposed Pricing Methodology.
17	Approach to the Demand Management Innovation Allowance Mechanism (DMIAM).

1.2 Conventions

In our Revised Revenue Proposal we have applied the following number conventions, unless otherwise specified:

- negative figures are presented in brackets;
- historical and forecast expenditure is presented in end-year (to 30 June) real 2021/22 dollars; and
- our revenue building-blocks from the Post-Tax Revenue Model (PTRM) are presented in end-year (to 30 June) nominal dollars.

Totals presented in tables may not add due to rounding.

The source of all figures and tables is Powerlink, unless otherwise specified.

1.3 Confidential information

We do not claim confidentiality over any part of this Revised Revenue Proposal document. Where confidential information has been identified in separate appendices and supporting information, a confidential version has been provided to the AER and registered consistent with the AER's Confidentiality Guideline[5].

[5] Better Regulation: Confidentiality Guideline, Australian Energy Regulator, November 2013.

1.4 Governance and compliance

Our Board has issued a resolution in relation to this Revised Revenue Proposal to certify that the key assumptions that underlie our revised operating expenditure forecast are reasonable (refer Appendix 1.01). A similar resolution for capital expenditure was not required from the Board as we have accepted the AER's Draft Decision, with an update for inflation, and have not changed the capital expenditure key inputs and assumptions that were certified as part of our Revenue Proposal[6].

We also provide a Statutory Declaration from our Chief Executive in relation to historical STPIS data contained in our Revised Revenue Proposal Reset Regulatory Information Notice (RIN) return (refer Appendix 1.02). We have provided a document register, consistent with the requirements of Section 1.6 of the Reset RIN, in Appendix 1.03 Document Register.

[6] Powerlink 2023-27 Revenue Proposal, Appendix 1.01 Board Certification of Key Inputs and Assumptions, Powerlink, January 2021.

2. Business and Operating Environment

2.1 Introduction

There are a range of key external drivers that currently impact Powerlink, or are expected to impact Powerlink, over the 2023-27 regulatory period and beyond.

2.2 Key changes since our Revenue Proposal

In October 2021, we published an update to our Business Narrative (refer Appendix 2.01 Business Narrative), after engagement with our Customer Panel. Our Business Narrative provides details about the key drivers of our business and operating environment. These key drivers remain similar to those in our Revenue Proposal and include:

- customer affordability;
- volatile economic and financial markets;
- energy market operations and technology changes such as the impacts of system strength, minimum demand and network security;
- industry reviews which drive market and regulatory changes; and
- government policy and legislative changes.

Of these drivers, there is one key financial change in our operating environment that has had a material impact on our Revised Revenue Proposal, which is inflation.

Inflation

The COVID-19 pandemic continues to influence Australia's economy and financial markets. In particular, the introduction of government support measures related to COVID-19 in 2019/20, and subsequent unwinding of those measures in 2020/21, has resulted in a material shift in inflation[1]. In addition, commodity and producer prices have risen sharply in recent months due to constrained global supply chains and logistics networks, which has also placed upward pressure on inflation[2]. This is relevant to our Revised Revenue Proposal forecasts of capital and operating expenditure.

In Table 2.1, we outline actual and forecast inflation adopted in our Revenue Proposal, the Australian Energy Regulator's (AER's) Draft Decision and our Revised Revenue Proposal for the current regulatory period. This table shows the material difference in inflation between our Revenue Proposal and Revised Revenue Proposal.

Table 2.1: Current 2018-22 regulatory period inflation (per cent)(1)

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

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

1 Statement on Monetary Policy August 2021, Reserve Bank of Australia, page 1.
2 Statement on Monetary Policy November 2021, Reserve Bank of Australia, page 1.

Due to the material shift in inflation, we have updated our capital and operating expenditure forecasts for actual 2020/21 inflation and revised forecast inflation for 2021/22. This is explained further in Chapter 5 Forecast Capital Expenditure and Chapter 6 Forecast Operating Expenditure.

In addition, we have applied an update to forecast inflation for the 2023-27 regulatory period, consistent with the AER's current approach[3]. Forecast inflation has increased from 2.25% in our Revenue Proposal and the AER's Draft Decision[4] to 2.37% (refer Chapter 9 Rate of Return, Taxation and Inflation).

Demand and energy forecasts

At the end of October 2021, we published our 2021 Transmission Annual Planning Report (TAPR) and provided updated forecasts of energy and demand over a 10-year period[5]. Our updated forecasts show:

- a decline in delivered energy at an average rate of 1.1% per annum (0.7% in our 2020 TAPR); and
- growth in maximum demand at an average rate of 0.8% per annum (also 0.7% in our 2020 TAPR).

Our 2020 TAPR forecast a significant reduction in both maximum demand and delivered energy for 2020/21, due to the expected impact of the COVID-19 pandemic on the Queensland economy, followed by a step up recovery in 2021/22. In reality, the forecast reductions in 2020/21 did not eventuate. Given the disconnect in starting point data values arising from Queensland's better than expected recovery from the pandemic we have not adjusted our capital and operating expenditure forecasts in the Revised Revenue Proposal for the updated delivered energy and maximum demand forecasts. For clarification, the change in these inputs does not have a material impact on our capital and operating expenditure forecasts for the 2023-27 regulatory period.

We have updated delivered energy forecasts in line with the 2021 TAPR to calculate the indicative price path over the regulatory period. The impact of this update is explained further in Chapter 11 Maximum Allowed Revenue and Price Impact.

3 Final Position Regulatory Treatment of Inflation, Australian Energy Regulator, December 2020.
4 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 3 Rate of Return, Australian Energy Regulator, page 6.
5 Consistent with the 2021 Energy Statement of Opportunities transmission delivered steady progress scenario, Australian Energy Market Operator, August 2021.

3. Customer Engagement

3.1 Introduction

Powerlink has undertaken significant customer and stakeholder engagement in the development of our Revenue Proposal and Revised Revenue Proposal. This is part of our commitment to place customers at the centre of our business, and is an extension of our approach to engage with our customers and other stakeholders as an integral part of our business operations.

3.2 Powerlink Revenue Proposal

Our engagement has been driven by our overall objective to deliver a Revenue Proposal that is capable of acceptance by customers, the Australian Energy Regulator (AER) and Powerlink. Throughout our Revenue Proposal development process, we engaged early, often and deeply on key issues with our customers, stakeholders and the AER to meet this objective. This included:

- to co-design our Revenue Proposal engagement approach with our customers and stakeholders;
- publication of a Draft Revenue Proposal for input and feedback some four months before we lodged our formal Revenue Proposal;
- early engagement with the AER on our key positions and input on our models before lodgement; and
- a Statement on Engagement from our Customer Panel as part of our Revenue Proposal[1].

3.3 Response to AER's Draft Decision

In its Draft Decision, the AER considered our Revenue Proposal is capable of acceptance and accepted all major aspects of it[2]. We reflect further on achievement of our capable of acceptance objective in section 3.4.

The AER also commended Powerlink on its consumer engagement approach and was confident that we are committed to putting customers at the centre of our business and in ensuring stakeholders' views are reflected in our proposals[3].

Given the significant engagement undertaken in the development of our Revenue Proposal, and the short timeframe available between publication of the AER's Draft Decision and lodgement of our Revised Revenue Proposal (45 business days), our post Revenue Proposal lodgement engagement has focused primarily on our Customer Panel and Revenue Proposal Reference Group (RPRG), the AER's Consumer Challenge Panel 23 (AER CCP23) and the AER. We also offered broader engagement opportunities where feasible, for example with our directly-connected customers on our Proposed Revised Pricing Methodology.

We provide further details of our post Revenue Proposal lodgement engagement in section 3.5 and how customer and stakeholder input has influenced our Revised Revenue Proposal in section 3.6.

3.4 Capable of acceptance

Genuine engagement with our customers and stakeholders is fundamental to achieve capable of acceptance. Our Revenue Proposal outlined the significant steps we took over a period of 12-18 months to engage with and seek input and feedback from our customers and stakeholders prior to lodgement. We also provided a self-assessment of our engagement approach against a set of capable of acceptance criteria in our Revenue Proposal[4], which the AER considered reflected positively on us as it invites open and transparent evaluations of our engagement by consumers[5].

We appreciate the AER's Draft Decision statement that our Revenue Proposal is capable of acceptance[6].

Consistent with our overarching goal for our Revenue Proposal, we requested that our Customer Panel provide a Statement on Capable of Acceptance for inclusion in our Revised Revenue Proposal. Our Customer Panel has taken this step and said that, based on the information it has been provided, the Revised Revenue Proposal is capable of acceptance (refer Appendix 3.01).

1 Powerlink 2023-27 Revenue Proposal, Appendix 3.03 Customer Panel Statement on Engagement, Powerlink, January 2021.
2 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Overview, Australian Energy Regulator, page 5.
3 *Ibid*, page 19.
4 Powerlink 2023-27 Revenue Proposal, Chapter 3 Customer Engagement, Powerlink, January 2021, pages 18-19.
5 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Overview, Australian Energy Regulator, page 19.
6 *Ibid*, page 5.

We consider that our work to achieve capable of acceptance has provided greater clarity across the energy industry about the criteria that needs to be met and the potential benefits of such an approach for customers, networks and the AER.

3.5 Revised Revenue Proposal engagement

We developed, engaged on and published a Post Revenue Proposal Lodgement Engagement Plan in August 2021, which we updated in November 2021. This Plan provides details about the engagement activities we undertook over the period February to November 2021[7] and is included in Appendix 3.02. We have summarised key engagement activities in Table 3.1.

Table 3.1: Key engagement activities – February to November 2021

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

We have included a timeline of key engagement activities and discussion topics between lodgement of our Revenue Proposal in January 2021 and Revised Revenue Proposal in November 2021 in Figure 3.1. For details on engagement activities prior to January 2021, refer to the timeline published in our Revenue Proposal[11].

7 This is the period between lodgement of our Revenue Proposal on 28 January 2021 and lodgement of our Revised Revenue Proposal on 19 November 2021 with the Australian Energy Regulator.

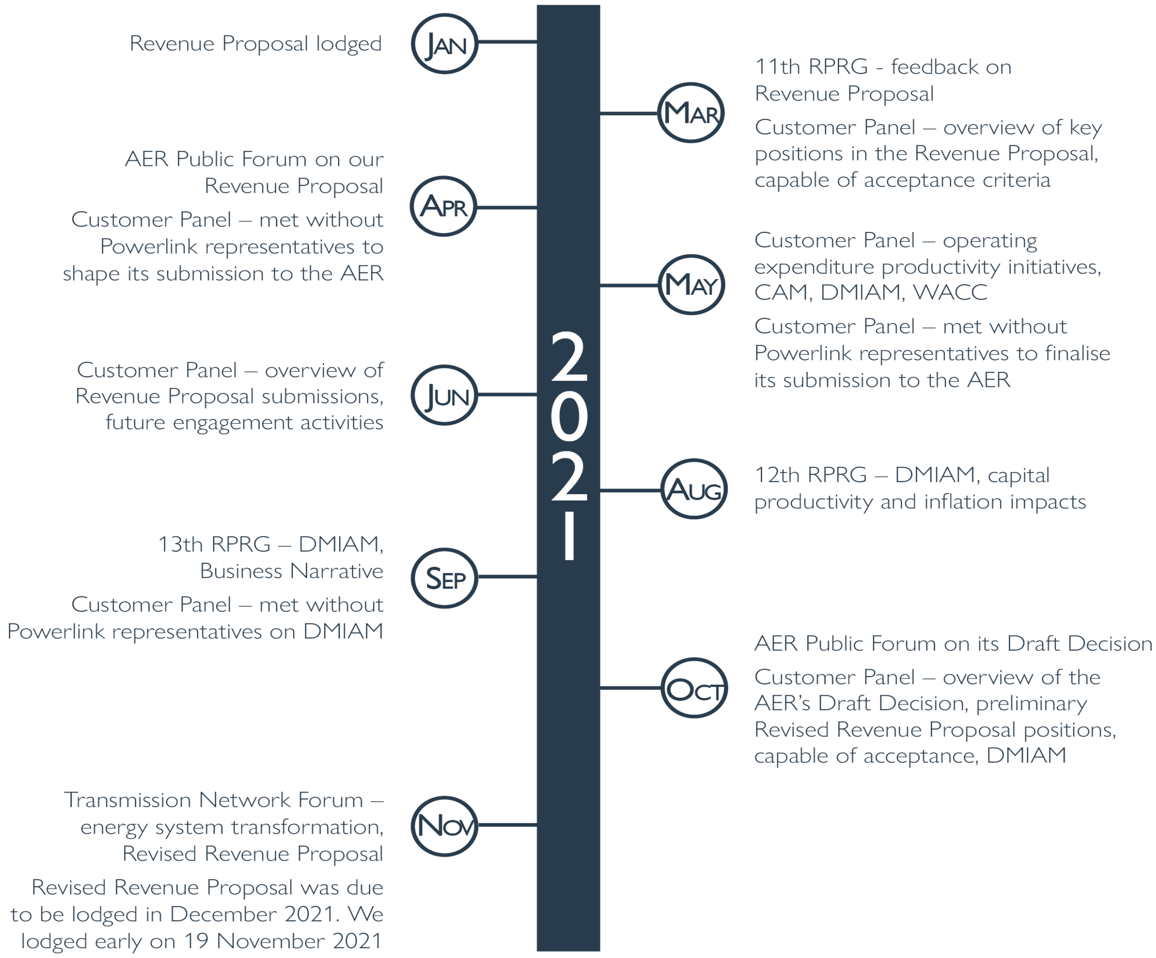
8 Minutes of the Customer Panel and Revenue Proposal Reference Group, Powerlink, https://www.powerlink.com.au/customer-panel.

9 Stakeholder forum and Pre-determination conference presentations, Australian Energy Regulator, https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/powerlink-determination-2022-27.

10 This included the Australian Energy Regulator's Consumer Challenge Panel 23, our Customer Panel, Energy Users Association of Australia and Aurizon Network.

11 Powerlink 2023-27 Revenue Proposal, Chapter 3 Customer Engagement, Powerlink, January 2021, page 29.

Figure 3.1: Engagement timeline



Acronyms in this timeline:

AER	Australian Energy Regulator
CAM	Cost Allocation Methodology
DMIAM	Demand Management Innovation Allowance Mechanism
RPRG	Revenue Proposal Reference Group
WACC	Weighted Average Cost of Capital

3.6 How feedback influenced our Revised Revenue Proposal

We genuinely considered all input and feedback from customers and stakeholders in the development of our Revised Revenue Proposal. We have summarised feedback on key engagement topics in Table 3.2. This is not intended to be a comprehensive list of all items raised or discussed, rather it focuses on items that have directly influenced our Revised Revenue Proposal. Our engagement has been targeted as we have largely accepted the AER's Draft Decision.

Table 3.2: How feedback influenced our Revised Revenue Proposal

Topic	Feedback received and what we've done
Capable of acceptance (March and October 2021)	We received feedback, both before and after lodgement of our Revenue Proposal that customers were not in a position to provide a view on capable of acceptance until after the AER had undertaken its review of our Revenue Proposal and published its Draft Decision. With this in mind, we requested that the Customer Panel consider providing a Statement on Capable of Acceptance for lodgement with our Revised Revenue Proposal. This would occur after we discussed the AER's Draft Decision outcomes and our preliminary positions for our Revised Revenue Proposal with them. The Customer Panel's view is that capable of acceptance has been met (refer Appendix 3.01).
Revised Revenue Proposal preliminary positions (October 2021)	We presented an overview of the AER's Draft Decision outcomes and our preliminary Revised Revenue Proposal positions in October 2021[12]. We discussed our preliminary key positions (for example, on capital expenditure, operating expenditure and our Revised Proposed Pricing Methodology) in detail. Our Customer Panel's view was that our preliminary positions were reasonable. Our Revised Revenue Proposal is consistent with the positions discussed with our Customer Panel.
DMIAM (August, September and October 2021)	The DMIAM was an area of significant engagement. We received feedback from our Customer Panel, the AER's CCP23, the AER, and Queensland Energy Users Network (QEUN) on our proposal not to apply the DMIAM to our 2023-27 regulatory period. In light of this feedback, we proposed that our Customer Panel be empowered to decide whether we should seek to apply (or not apply) the DMIAM in our Revised Revenue Proposal[13]. The Customer Panel provided us with its recommendation in October 2021, which was that we should not seek to apply the DMIAM in our 2023-27 regulatory period (refer Appendix 17.01). Consistent with our commitment to empower our Customer Panel and implement its decision on this matter in our Revised Revenue Proposal, we do not accept the AER's Draft Decision and retain our position that the DMIAM not be applied to Powerlink in our 2023-27 regulatory period. We provide further detail in Chapter 17 Demand Management Innovation Allowance Mechanism.

3.7 Future direction and continuous improvement on engagement

In the context of our revenue determination process engagement over the last 2.5 years, we have identified three key learnings. We outline these learnings and our response in Table 3.3.

Table 3.3: Key learnings

Learning area	Powerlink response
Clarify the criteria for capable of acceptance up-front	We acknowledge and agree with our customers on the need to engage further on capable of acceptance up-front. We will continue to have regard to other relevant developments, such as the AER's Better Resets Handbook[14] and good practice engagement activities from other networks.
Consider providing additional resources for customers involved in intensive engagement processes	We have commenced a review of the Terms of Reference and representation on our Customer Panel, with a focus on regional representation and the need to provide further support to customers (e.g. via sitting fees).
Consider ways to gain input and involvement from regional stakeholders	In addition to the review of our Customer Panel to focus on more regional representation, we commit to more regular face-to-face engagement activities with stakeholders and customers across Queensland. This will include customer forums in key regional areas including Cairns, Townsville and Gladstone to discuss current and future projects.

We have also committed to:

- engage with our customers, stakeholders and the AER as part of a review of our network asset reinvestment practices (refer Chapter 5 Forecast Capital Expenditure). Work will commence on the plan/scope of this review in early 2022; and
- further engagement on topics raised throughout our revenue determination process, such as operating expenditure productivity initiatives, demand management initiatives, our CAM, potential cost pass through applications and insurance.

12 Minutes of the Customer Panel, Powerlink, October 2021, http//www.powerlink.com.au/customer-panel.

13 As per the International Association of Public Participation (IAP2) framework. Engagement at the empower level of the framework means our Customer Panel has decision-making power on this item and we commit to implement our Customer Panel's decision.

14 Better Resets Handbook – Towards Consumer-centric Network Proposals, Australian Energy Regulator, September 2021.

4. Historical Capital and Operating Expenditure

4.1 Introduction

Powerlink's capital and operating expenditure performance during the current 2018-22 regulatory period provides context for forecast expenditure in the 2023-27 regulatory period. It is also a key input to a range of building block elements such as the Efficiency Benefit Sharing Scheme (EBSS), Capital Efficiency Sharing Scheme (CESS) and Regulatory Asset Base (RAB).

Our Revised Revenue Proposal includes updates to capital and operating expenditure for 2020/21 and 2021/22.

4.2 Revised capital expenditure for the 2018-22 regulatory period

Our revised actual/forecast capital expenditure for the 2018-22 regulatory period is $911.5m. This is $4.8m (0.5%) lower than the Australian Energy Regulator's (AER's) total allowance for the 2018-22 regulatory period and is $20.2m (2.3%) higher than our Revenue Proposal forecast. The difference between our Revenue Proposal and Revised Revenue Proposal reflects:

- actual inflation for 2020/21 and updated forecast inflation for 2021/22 of $20.7m;
- slightly higher actual capital expenditure in 2020/21 of $4.3m; and
- slightly lower forecast capital expenditure in 2021/22 of -$4.7m.

Table 4.1: Capital expenditure – AER allowance vs actual/forecast ($m real, 2021/22)(1)

	2017/18	2018/19	2019/20	2020/21	2021/22 (forecast)	Total
Allowance	180.3	180.9	184.2	191.7	179.3	**916.3**
Actual/forecast	162.8	179.5	177.1	187.1	204.9	**911.5**
Difference ($m)	(17.4)	(1.3)	(7.1)	(4.5)	25.7	**(4.8)**
Difference (%)	(9.7)	(0.7)	(3.9)	(2.4)	14.3	**(0.5)**

(1) This data is net of disposals.

4.3 Revised operating expenditure for the 2018-22 regulatory period

Our revised actual/forecast operating expenditure for the 2018-22 regulatory period is $1,061.6m (excluding debt raising costs). This is $4.0m (0.4%) higher than the AER's allowance for the 2018-22 regulatory period and is $26.0m (2.5%) higher than our Revenue Proposal forecast. The difference between our Revenue Proposal and our Revised Revenue Proposal reflects:

- actual inflation for 2020/21 and updated forecast inflation for 2021/22 of $25.2m;
- a change of -$0.2m to reflect the use of actual self-insurance premiums included in historical operating expenditure, as opposed to our notional self-insurance premium. This approach aligns with the AER's Draft Decision[1]; and
- higher actual operating expenditure in 2020/21 of $1.0m.

Table 4.2: Operating expenditure – AER allowance vs actual/forecast ($m real, 2021/22)(1)

	2017/18	2018/19	2019/20	2020/21	2021/22 (forecast)	Total
Allowance	213.1	212.2	211.3	210.5	210.4	**1,057.6**
Actual/forecast	205.3	212.1	214.3	218.7	211.2	**1,061.6**
Difference ($m)	(7.8)	(0.2)	3.0	8.2	0.8	**4.0**
Difference (%)	(3.7)	(0.1)	1.4	3.9	0.4	**0.4**

(1) Figures exclude debt raising costs.

[1] Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 8 Efficiency Benefit Sharing Scheme, Australian Energy Regulator, pages 8-9.

5. Forecast Capital Expenditure

5.1 Introduction

Powerlink's capital expenditure consists of investment in new assets that increase network capability or capacity, reinvestment in existing assets that are forecast to reach the end of their serviceable life, and investment in other supporting assets.

5.2 Powerlink Revenue Proposal

Our Revenue Proposal included total forecast capital expenditure of $863.9m for the 2023-27 regulatory period. We consider this amount reasonably reflects prudent and efficient costs to maintain a safe, secure and reliable transmission network.

We proposed one contingent project for the Stanwell to Broadsound transmission line.

We also adopted the Australian Energy Regulator's (AER's) benchmark approach to estimate equity raising costs, which are costs associated with funding capital investments. This resulted in a $0 forecast.

5.3 Response to the AER's Draft Decision

In its Draft Decision, the AER accepted our total forecast capital expenditure[1]. The AER found our capital expenditure forecasting methodology to be a significant improvement on the methodology used in our previous 2018-22 Revenue Proposal and that our risk-cost based analysis and supporting economic modelling are a significant step forward[2].

The AER also identified potential opportunities for a more targeted economic risk based approach, particularly for overhead transmission lines reinvestment, and raised concerns with our use of the Repex Model for forecasting purposes[3]. In light of this feedback and consistent with our drive for continuous improvement, we committed to a review of our approach to network asset reinvestment. We intend to publish the outcomes of the review and adopt improvements over the remainder of the 2023-27 regulatory period[4].

The AER accepted our one proposed contingent project including our suggested amendment to the load related contingent project trigger.

The AER reviewed our capital expenditure performance within-period and were satisfied that our actual capital expenditure should be rolled into the Regulatory Asset Base (RAB)[5].

The AER's estimate of equity raising costs in its Draft Decision was also $0[6].

We accept the AER's Draft Decision, updated for actual 2020/21 inflation and the latest forecast inflation for 2021/22 and over the 2023-27 regulatory period.

We outline our revised capital expenditure forecast in section 5.4. We have also responded to some of the specific matters raised by the AER in relation to our transmission lines reinvestment forecast and provide an outline of our proposed reinvestment review in section 5.5.

We have maintained the same benchmark approach to calculate equity raising costs in our Revised Revenue Proposal, which results in a $0 forecast.

5.4 Revised capital expenditure forecast

Our revised total forecast capital expenditure is $882.4m and is set out in Table 5.1. This forecast is consistent with our Revenue Proposal and the AER's Draft Decision, updated for inflation. To be clear, there have been no other changes.

1 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Overview, Australian Energy Regulator, page 32.
2 *Ibid,* Attachment 5 Capital Expenditure, Australian Energy Regulator, page 5.
3 *Ibid,* page 7. Note, we have used the Repex Model to forecast some elements of capital expenditure in the context of our Revenue Proposal.
4 Letter to the Australian Energy Regulator, Review of Powerlink's approach to network asset reinvestments, Powerlink, 8 September 2021.
5 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 5 Capital Expenditure, Australian Energy Regulator, page 39.
6 *Ibid,* Attachment 8 Rate of Return, Australian Energy Regulator, pages 7-8.

We have updated our capital expenditure forecast for actual 2020/21 inflation, revised forecast inflation for 2021/22 and updated forecast inflation for the 2023-27 regulatory period. Inflation is now materially higher than the Reserve Bank of Australia's (RBA's) forecasts included in our Revenue Proposal (refer Chapter 2 Business and Operating Environment for further details). As a result, when the same capital expenditure forecast is expressed in updated real, 2021/22 dollars, the figure has increased by $18.4m (2.1%). We have also made a similar update to our operating expenditure (refer Chapter 6 Forecast Operating Expenditure).

In August 2021, we discussed this issue with AER staff, the AER's Consumer Challenge Panel (CCP23) and our Customer Panel prior to the release of the AER's Draft Decision. In October 2021, we discussed the issue again with our Customer Panel and sought input on our proposal to update our forecast capital expenditure for inflation. No material issues were raised[7].

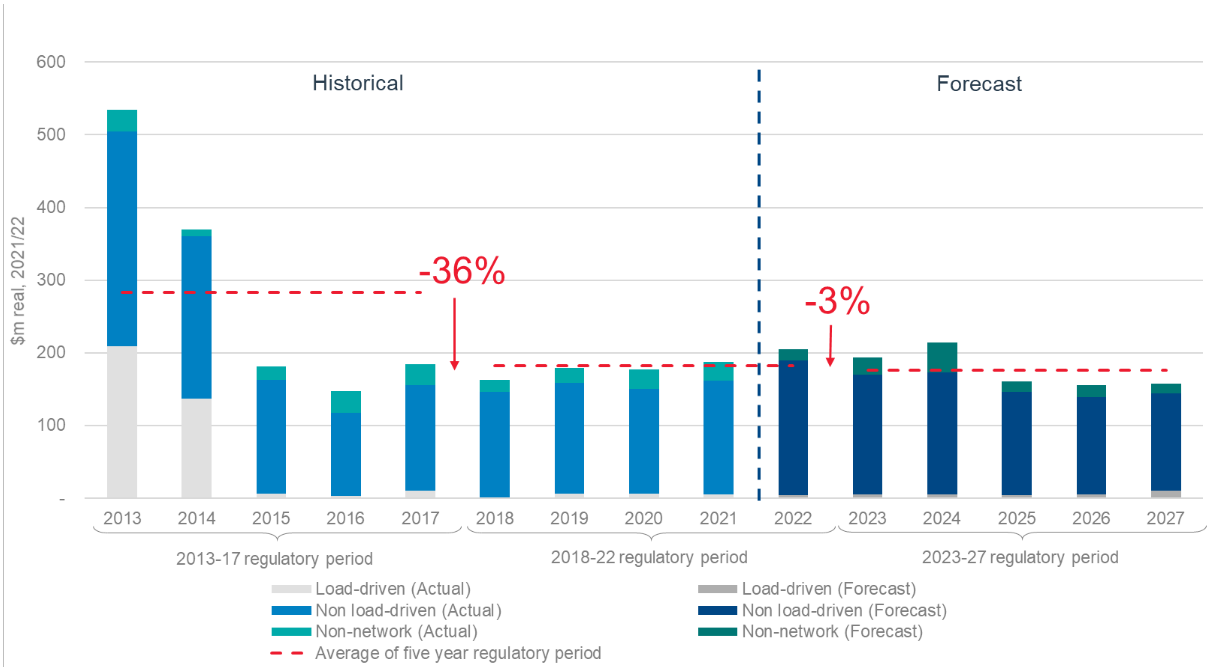
Table 5.1: Revised forecast capital expenditure ($m real, 2021/22)[(1)]

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Revenue Proposal	190.9	209.4	157.2	152.4	154.0	**863.9**
Revised Revenue Proposal	194.1	213.8	160.9	155.9	157.6	**882.4**
Difference	3.2	4.4	3.7	3.6	3.6	**18.4**

(1) This data is net of disposals.

Our revised total forecast capital expenditure for the 2023-27 regulatory period, along with our updated actual/forecast expenditure for the previous and current regulatory periods, is shown in Figure 5.1.

Figure 5.1: Revised actual and forecast total capital expenditure ($m real, 2021/22)[(1)]



(1) This figure is net of disposals.

7 Minutes of the Customer Panel, Powerlink, October 2021, https://www.powerlink.com.au/customer-panel.

5.5 Transmission lines reinvestment

In its review of the forecast capital expenditure set out in our Revenue Proposal, the AER identified issues with Powerlink's repex forecast for transmission lines, the Repex Model and external labour cost escalators[8].

For each transmission line reinvestment project the AER's analysis used Powerlink's overall project cost estimate to derive an estimated cost per tower for life extension works on the relevant transmission line. The resultant estimated average cost per tower was then used, together with the tower by tower risk cost analysis we provided, to derive an incremental cost benefit analysis for the life extension of each structure along that transmission line. From this, the AER identified what it considered to be a more efficient scope of reinvestment works.

While we see merit in this type of analysis to inform the scope of work, we consider it does not reflect a number of important practical limitations and implications. For further context, we include several examples of this below[9]:

- **Capex/opex trade-offs** – towers excluded from the AER's identified scope of works will still have some proportion of their nuts and bolts that will need to be replaced within the 2023-27 regulatory period due to advancing corrosion. This work would need to be conducted under maintenance and require an increase in operating expenditure.
- **Efficiency of delivery** – a number of our transmission lines traverse quite remote areas and the mobilisation of heavy equipment and skilled workers to these areas on multiple occasions over a 10 to 15 year period is considered to be highly inefficient. Some transmission lines are also located within environmentally sensitive areas, such as the World Heritage Listed Wet Tropics, where multiple mobilisations for planned work may not be possible.
- **Compliance aspects** – if safety improvements, such as upgraded climbing aids, are only implemented on the specific towers being life extended and not across the whole transmission line it will introduce inconsistencies in safety systems from one tower to the next, with increased risks to linespersons when they climb. We consider such an outcome would not meet our obligations to reduce these types of risks so far as reasonably practicable.
- **Use of average costs** – our transmission line life extension projects have significant fixed costs for both Powerlink and our contractors. A reduction in the number of towers within the scope of work will not reduce the total project cost in the same proportion[10].

We intend to discuss and consider these practical considerations in further detail with our customers and the AER.

Review

Our commitment to review our approach to asset reinvestment is consistent with our culture of continuous improvement, and to ensure we continue to provide safe, secure, reliable and cost-effective electricity transmission services.

We intend to work with our customers and other stakeholders, including the AER, at the 'Involve' level of the International Association of Public Participation (IAP2) framework. Engagement at this level ensures that the concerns and aspirations of customers and the AER are understood and reflected in the alternatives developed through the review.

We intend to commence preparations for the review in early 2022 with the development of a detailed scope of work. We had an initial discussion about the review with our Customer Panel in October 2021, including on how we involve customers[11]. In our letter to the AER, we identified a number of matters that we consider will be relevant to the review:

- the role of deterministic criteria in an economic assessment framework;
- maintenance of social licence to operate over the asset life;
- treatment of uncertainty, in both costs and benefits;
- predictability and repeatability of the framework;
- management of input quantity limits (e.g. skilled workers) in assessing prudency, including the appropriate investment timing and inclusion of compliance elements within project scopes;
- the extent to which an economic risk based framework informs network asset reinvestment decisions (e.g. identification of the efficient scope of works for reinvestment projects and bundling works to achieve efficient delivery); and
- trade-offs between the ongoing costs of improved asset management systems and the available benefits that may result.

We also consider that the review will need to have regard to what is reasonably required to deliver network reinvestment works in the Queensland operating environment.

8 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 5 Capital Expenditure, Australian Energy Regulator, page 16.
9 Capital expenditure analysis response provided to the Australian Energy Regulator, Powerlink, 10 August 2021.
10 Additional response on transmission line reinvestment provided to Australian Energy Regulator, Powerlink, 19 August 2021.
11 Minutes of the Customer Panel, Powerlink, October 2021, https://www.powerlink.com.au/customer-panel.

6. Forecast Operating Expenditure

6.1 Introduction

Powerlink's operating expenditure enables the operation and maintenance of our network, as well as the business activities that support the delivery of prescribed transmission services.

6.2 Powerlink Revenue Proposal

In our Revenue Proposal, we targeted a forecast of no real growth in operating expenditure for the 2023-27 regulatory period of $1,029.4m (excluding debt raising costs), relative to our underlying actual/forecast operating expenditure over the current 2018-22 regulatory period. We consider this amount reasonably reflects prudent and efficient costs to maintain a safe, secure and reliable transmission network.

To meet this target, we proposed a productivity factor of 0.5% (above the industry average of 0.3%) and no step changes. We also proposed a $0 allowance for network support costs and $17.0m for debt raising costs, which resulted in total forecast operating expenditure of $1,046.4m.

6.3 Response to the AER's Draft Decision

In its Draft Decision, the Australian Energy Regulator (AER) accepted our total forecast operating expenditure, including debt raising costs, as it was lower than and not materially different to its alternative estimate of $1,068.0m[1]. The AER also applied a $0 network support cost allowance[2].

To derive its alternative estimate, the AER updated inputs such as inflation and price growth for the latest market information. The AER noted that the key driver of its higher alternative estimate was inflation and that we may wish to update our Revised Revenue Proposal to account for updated inflation forecasts[3]. Other key differences between the AER's approach to estimate operating expenditure and our own included:

- the Australian Energy Market Commission (AEMC) Levy - we forecast the AEMC Levy on a category specific (i.e. bottom-up) basis, whereas the AER included this cost in the base year[4];
- self-insurance - we included a notional self-insurance premium in our base year while the AER used actual self-insured losses[5]; and
- productivity growth - we adopted a higher than industry average productivity growth rate of 0.5% per annum whereas the AER applied its standard approach of using the latest industry average rate of 0.3%[6].

We accept the AER's approach to estimate operating expenditure set out in its Draft Decision other than productivity for which we have retained a higher than industry average growth rate. We also accept the AER's Draft Decision on network support costs and debt raising costs.

We have revised our forecast operating expenditure to be consistent with the AER's Draft Decision approach, to reflect the latest inflation information and to retain our no real growth target. This is outlined in section 6.4.

6.4 Revised operating expenditure forecast

Our revised operating expenditure forecast for the 2023-27 regulatory period is $1,054.4m (excluding debt raising costs), which targets no real growth from our 2018-22 regulatory period. With debt raising costs of $17.0m included, our forecast is $1,071.4m.

1 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 6 Operating Expenditure, Australian Energy Regulator, pages 4-5.
2 *Ibid*, page 23.
3 *Ibid*, page 4.
4 *Ibid*, pages 23-24.
5 *Ibid*, page 6.
6 *Ibid*, page 20.

We have updated our operating expenditure forecast for actual 2020/21 inflation, revised forecast inflation for 2021/22 and updated forecast inflation for the 2023-27 regulatory period. Inflation is now materially higher than the Reserve Bank of Australia's (RBA's) forecasts included in our Revenue Proposal (refer Chapter 2 Business and Operating Environment for further details). As a result, when the same operating expenditure forecast is expressed in updated real, 2021/22 dollars, the figure has increased by $30.6m (3.0%). We have also made a similar update to our capital expenditure (refer Chapter 5 Forecast Capital Expenditure).

Further, we adjusted our approach to forecast total operating expenditure for consistency with the AER's Draft Decision. Specifically, we have:

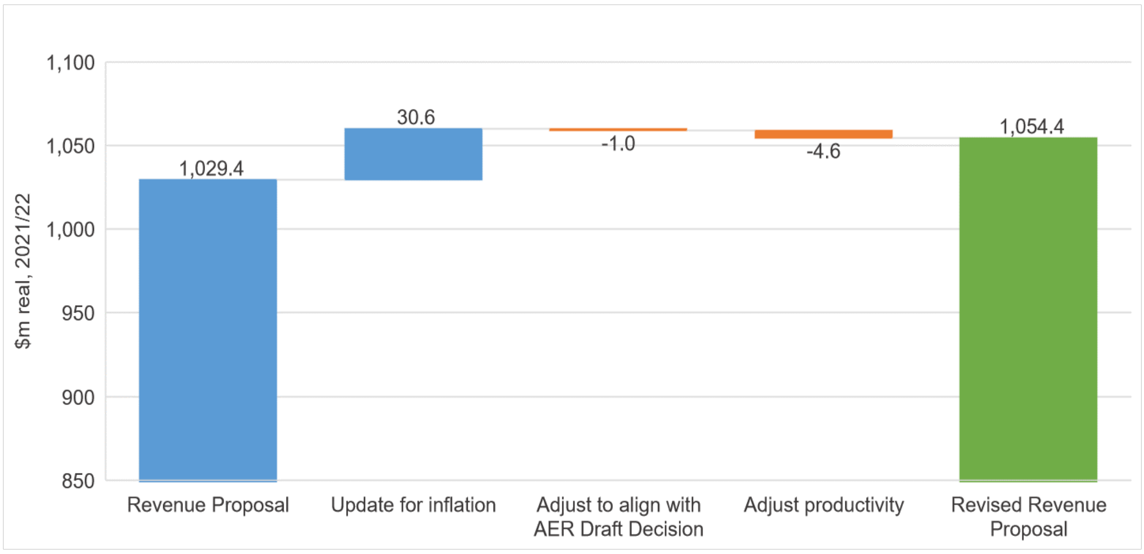
- included AEMC Levy costs as part of our 2018/19 base year;
- adjusted our base year to reflect actual self-insured losses; and
- adopted the AER's Draft Decision price growth trend, which the AER updated for the latest Deloitte Access Economics (DAE) Queensland Wage Price Index forecasts.

To ensure we maintained our target of no real growth, we increased (improved) our productivity growth rate from 0.5% to 0.6% per annum, which is above the industry average, and retained our Revenue Proposal position of no step changes.

In August 2021, we discussed the latest inflation data impact with AER staff, the AER's Consumer Challenge Panel (CCP23) and our Customer Panel prior to the release of the AER's Draft Decision. In October 2021, we discussed our proposed approach to revise our forecast operating expenditure with our Customer Panel. No material issues were raised[7].

The impact of the updates and adjustments we have applied is shown in Figure 6.1.

Figure 6.1: Updates to forecast operating expenditure ($m real, 2021/22)(1)



(1) Figure excludes debt raising costs.

Our revised total forecast operating expenditure, compared to our Revenue Proposal forecast, is set out in Table 6.1.

Table 6.1: Revised forecast operating expenditure ($m real, 2021/22)(1)

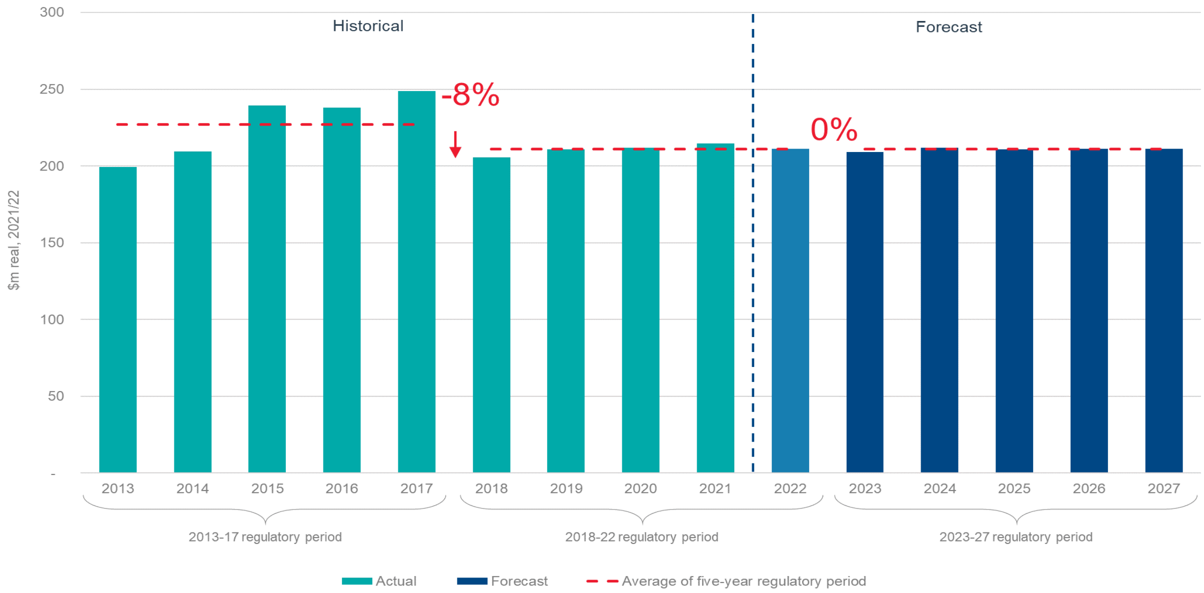
	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Revenue Proposal	203.9	206.3	205.8	206.5	206.9	**1,029.4**
Revised Revenue Proposal	209.2	211.8	211.0	211.2	211.2	**1,054.4**
Difference	5.3	5.5	5.2	4.7	4.3	**25.0**

(1) This table excludes debt raising costs of $17.0m for both our Revenue Proposal and Revised Revenue Proposal.

Our revised total forecast operating expenditure for the 2023-27 regulatory period, along with our updated actual/forecast expenditure for the previous and current regulatory periods, is shown in Figure 6.2.

7 Minutes of the Customer Panel, Powerlink, October 2021, https://www.powerlink.com.au/customer-panel.

Figure 6.2: Revised actual and total forecast operating expenditure ($m real, 2021/22)(1)



(1) Reflects underlying operating expenditure, excluding movements in provisions, debt raising, network support and Network Capability Incentive Parameter Action Plan (NCIPAP) costs.

6.5 AEMO Participant Fees

In our Revenue Proposal, we raised a potential step change in relation to the Australian Energy Market Operator's (AEMO's) participant fees[8].

AEMO's Final Determination on its review of participant fee structures in March 2021[9] reallocated participant fees from only generators and market customers to include an 18% allocation to Transmission Network Service Providers (TNSPs) from 1 July 2023. AEMO recognised that there would be implementation implications for TNSPs to recover these fees[10].

In July 2021, Energy Networks Australia (ENA) lodged a Rule change proposal[11] with the AEMC. The proposal will enable TNSPs to recover the actual cost of participant fees levied by AEMO through an adjustment to prescribed transmission prices each year. The adjustment mechanism is similar to the AEMC's recent determination[12] on the treatment of AEMO's National Transmission Planner (NTP) fees, which occurs outside the AER's revenue determination process.

We estimate that AEMO's participant fees would be approximately $19m in total over the 2023-27 regulatory period. We supplied this estimate as well as a copy of ENA's Rule change directly to the AER prior to release of its Draft Decision.

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

At the time of lodging our Revised Revenue Proposal with the AER in November 2021, the AEMC had not commenced formal consultation on ENA's Rule change proposal. We also do not expect the AEMC will make its Final Determination on this matter prior to publication of the AER's Final Decision on our Revenue Proposal in April 2022. However, given the materiality of these additional fees, we intend to seek recovery of these costs as part of the AEMC's consultation on ENA's Rule change.

8 Powerlink 2023-27 Revenue Proposal, Chapter 6 Forecast Operating Expenditure, page 100.
9 Final Determination Electricity Market Participant Fee Structure Review, Australian Energy Market Operator, March 2021.
10 *Ibid*, page 35.
11 Recovering the Cost of AEMO's Participant Fees, Energy Networks Australia, July 2021.
12 Rule Determination National Electricity Amendment (Reallocation of National Transmission Planner costs) Rule 2020, Australian Energy Market Commission, October 2020.

7. Escalation Rates and Project Cost Estimation

7.1 Introduction

Powerlink uses escalation rates as an input to forecast our capital and operating expenditure. External labour costs are an input to our capital expenditure forecast, while internal labour costs and materials are inputs to both our capital and operating expenditure forecasts.

7.2 Powerlink Revenue Proposal

In our Revenue Proposal, we applied[1]:

- an average annual growth rate of 0.7% for internal labour costs;
- an average annual growth rate of 0.7% for external labour costs; and
- an annual increase in the cost of materials based on the Consumer Price Index (CPI). This resulted in a zero real (or inflation-adjusted) increase.

7.3 Response to the AER's Draft Decision

In its Draft Decision, the Australian Energy Regulator (AER):

- accepted our approach to the calculation of internal labour costs and updated the average annual growth rate to 0.8%. This reflected updated forecasts from Deloitte Access Economics (DAE)[2];
- did not accept our use of an annual growth rate for external labour costs above CPI. However, given external labour cost escalation is a small component of total capital expenditure, the AER did not adjust our capital expenditure forecast[3]; and
- accepted our use of CPI for the annual increase in the cost of materials[4].

We accept the AER's Draft Decision.

We have applied the AER's updated internal labour costs to our revised operating expenditure forecast.

We have not made a similar update for internal labour costs to our capital expenditure forecast as such an update would result in an immaterial increase of $0.5m (0.06%), and we accept the AER's Draft Decision for capital expenditure.

Notwithstanding our acceptance, we remain of the view that in the current labour market a forecast of external labour escalation above CPI is reasonable and appropriate.

1 Powerlink 2023-27 Revenue Proposal, Chapter 7 Escalation Rates and Project Cost Estimation, Powerlink, January 2021, pages 106-111.
2 Powerlink transmission draft determination 2022 to 2027, Attachment 6 Operating Expenditure, Australian Energy Regulator, pages 16-18.
3 *Ibid*, Attachment 5 Capital Expenditure, Australian Energy Regulator, pages 21-22.
4 *Ibid*, Attachment 6 Operating Expenditure, Australian Energy Regulator, pages 16-18.

8. Regulatory Asset Base

8.1 Introduction

Powerlink's Regulated Asset Base (RAB) is the value of the assets used to provide prescribed (regulated) transmission services. We must calculate an opening RAB at the start of our next regulatory period (as at 1 July 2022) and a forecast RAB for each year of the 2023-27 regulatory period.

8.2 Powerlink Revenue Proposal

Our Revenue Proposal forecast an opening RAB of $6,958.4m (nominal). We also proposed to transfer $2.4m, in net terms, of assets out of our RAB as at 30 June 2022.

8.3 Response to the AER's Draft Decision

In its Draft Decision, the Australian Energy Regulator (AER) largely accepted our proposed RAB values, with minor adjustments (e.g. corrections for rounding and indexation of our proposed RAB additions/removals) and updates to the rate of return and inflation[1].

We accept the AER's Draft Decision approach.

For our Revised Revenue Proposal, we have applied the AER's minor adjustments in its Draft Decision as well as several standard updates to derive our revised opening RAB value as at 1 July 2022 and revised forecast RAB for each year of the 2023-27 regulatory period.

8.4 Our revised opening and forecast RAB

The standard updates we have applied to determine our revised opening and forecast RAB are outlined in Table 8.1.

Table 8.1: Updates applied to revise our RAB values

Element	Updates applied
Opening RAB as at 1 July 2022	• actual capital expenditure incurred in 2020/21; • updated forecast capital expenditure for 2021/22; • actual inflation for 2020/21 and updated forecast inflation for 2021/22[2]; • actual capitalised movements in provisions for 2020/21; and • proceeds from asset disposals in 2020/21.
Forecast RAB for 2023-27 regulatory period	• updated depreciation forecasts based on the adjusted opening RAB value and revised forecast capital expenditure; and • forecast inflation.

Based on these updates, we forecast:

- a revised opening RAB as at 1 July 2022 of $7,140.2m in nominal terms; and
- a revised closing RAB as at 30 June 2027 of $7,182.1m in nominal terms.

The calculations to derive these values are set out in Table 8.2 and Table 8.3.

1 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 2 Regulatory Asset Base, Australian Energy Regulator, pages 4-6.
2 Statement on Monetary Policy November 2021, Reserve Bank of Australia.

Table 8.2: Revised opening RAB as at 1 July 2022 ($m nominal)

	2017/18	2018/19	2019/20	2020/21	2021/22 (forecast)
Opening RAB	7,069.4	7,094.5	7,105.5	7,103.2	7,030.1
Capital expenditure as incurred(1)	151.4	1070.5	170.1	180.2	203.3
Regulatory depreciation(2)	(126.3)	(159.5)	(172.4)	(253.3)	(89.2)
Closing RAB	7,094.5	7,105.5	7,103.2	7,030.1	7,144.1
Difference between forecast and actual capital expenditure in 2016/17					(4.5)
Return on capital for the difference between forecast and actual expenditure 2016/17					(1.4)
Final year asset adjustment					2.0
Opening RAB as at 1 July 2022					**7,140.2**

(1) Net of disposals, adjusted for inflation and one-half Weighted Average Cost of Capital (WACC) allowance[3]. The roll forward also reflects forecast capitalised movements in provisions.
(2) Depreciation is based on forecast depreciation as approved by the AER for the 2018-22 regulatory period and is net of indexation applied to the RAB.

Table 8.3: Revised forecast RAB for the 2023-27 regulatory period ($m nominal)

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

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

8.5 Historical and forecast RAB

In our Revenue Proposal, we forecast a decrease in our RAB in both nominal and real terms. Based on the revised inputs identified above, we continue to forecast a decrease in our RAB in real terms. However, due to the impact of higher inflation, our RAB is forecast to:

- decrease by $636.7m in real terms and increase by $70.8m in nominal terms[4] over the current 2018-22 regulatory period; and
- decrease by $753.4m in real terms and increase by $41.9m in nominal terms[5] over the next 2023-27 regulatory period.

8.6 Potential change in service classification of assets

In its Draft Decision, the AER noted it was seeking additional information from Powerlink about the use of some assets[6]. This relates to a confidential asset transfer matter which arose outside our 2023-27 revenue determination process. We have provided additional information to the AER on a confidential basis for its consideration and to inform its Final Decision. To be clear, we do not propose, and have not included any transfer amount into the RAB related to these assets in our Revised Revenue Proposal.

3 The Post-Tax Revenue Model calculates the return on capital based on the opening Regulatory Asset Base and capital expenditure is assumed to occur half-way through the year. To address this timing difference, one-half Weighted Average Cost of Capital is added to compensate for the six-month period before capital expenditure is included in the Regulatory Asset Base.
4 Based on a comparison of 1 July 2017 opening Regulatory Asset Base to 30 June 2022 closing Regulatory Asset Base.
5 Based on a comparison of 1 July 2022 opening Regulatory Asset Base to 30 June 2027 closing Regulatory Asset Base.
6 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 2 Regulatory Asset Base, Australian Energy Regulator, page 20.

9. Rate of Return, Taxation and Inflation

9.1 Introduction

The rate of return (also referred to as the Weighted Average Cost of Capital or WACC) is an estimate of the cost of funds required to attract and retain investment in a business. In a regulatory determination context, the rate of return is applied to the opening value of our Regulatory Asset Base (RAB) in each year to calculate our return on capital allowance.

For regulatory determination purposes we also developed an estimate of corporate taxation and forecast inflation for the 2023-27 regulatory period.

9.2 Powerlink Revenue Proposal

In our Revenue Proposal we applied the Australian Energy Regulator's (AER's) binding 2018 Rate of Return Instrument to estimate our forecast rate of return, calculated our tax allowance consistent with the National Electricity Rules (the Rules)[1] and applied forecast inflation consistent with the AER's methodology at the time we lodged our Revenue Proposal[2].

9.3 Response to the AER's Draft Decision

In its Draft Decision, the AER:

- accepted our proposed averaging periods for the risk free rate and debt as well as our proposed estimate for the value of imputation credits (or gamma). These elements were calculated consistent with the AER's 2018 Rate of Return Instrument[3];
- accepted our year-by-year tracking approach to calculate tax depreciation, our standard tax asset lives, application of diminishing value tax depreciation and immediate expensing of capital expenditure approach[4]; and
- applied its updated forecast inflation approach, consistent with its 2021 Post-Tax Revenue Model (PTRM) Version 5, which was released after our Revenue Proposal was lodged in January 2021[5].

The AER also applied standard updates to the rate of return and taxation to reflect the latest inflation and market data and to account for other minor adjustments made in the Draft Decision, such as to our RAB[6].

We accept the AER's Draft Decision approach.

For simplicity and following input from the AER, we have applied the AER's Draft Decision placeholder rate of return of 4.65% (nominal, vanilla)[7] in our Revised Revenue Proposal. We have also made standard updates to forecast inflation and taxation, which are explained in section 9.4.

1 National Electricity Rules, clause 6A.6.4.

2 In December 2020, the Australian Energy Regulator released its Final Position Paper on the regulatory treatment of inflation, which changed the approach used to estimate forecast inflation. However, for the purposes of the Revenue Proposal, we were required to apply the Australian Energy Regulator's forecast inflation approach consistent with the version of the Post-Tax Revenue Model available at that time (version 4). In April 2021, the Australian Energy Regulator released version 5 of the Post-Tax Revenue Model and has applied the revised forecast inflation approach in its Draft Decision.

3 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 3 Rate of Return, Australian Energy Regulator, page 5.

4 *Ibid*, Attachment 7 Corporate Income Tax, Australian Energy Regulator, page 4.

5 *Ibid*, Attachment 3 Rate of Return, Australian Energy Regulator, page 6.

6 *Ibid*, Attachment 2 Regulatory Asset Base, Australian Energy Regulator, pages 4-5.

7 *Ibid*, Attachment 3 Rate of Return, Australian Energy Regulator, page 4.

9.4 Revised taxation and forecast inflation

We have revised our taxation forecast to reflect our revised annual revenue requirement, as set out in Table 9.1.

Table 9.1: Revised taxation ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Corporate tax	10.7	7.6	15.4	31.6	31.0	**96.4**
Value of imputation credits	(6.2)	(4.5)	(9.0)	(18.5)	(18.2)	**(56.4)**
Taxation	4.4	3.2	6.4	13.1	12.9	**40.0**

We have applied the AER's current approach to forecast inflation as specified in its 2021 PTRM Version 5, with an update to reflect the Reserve Bank of Australia's (RBA's) latest Statement on Monetary Policy[8]. As a result, our revised forecast inflation for the 2023-27 regulatory period is 2.37%, which represents a 0.12% change from the AER's Draft Decision forecast of 2.25%[9].

9.5 Summary

We have provided an overview of the key estimates for each element of our revised rate of return (which reflects the placeholder rate of return in the AER's Draft Decision), inflation and taxation in Table 9.2.

Table 9.2: Rate of return, inflation and taxation estimates

Parameter	Estimate
Risk-free rate – return on equity	1.53%
Market risk premium	6.1%
Equity beta	0.6
Gearing	60%
Return on equity	5.19%
Return on debt	4.29%
WACC – post-tax nominal	**4.65%**
Inflation	**2.37%**
Gamma	**0.585**
Taxation rate	**30%**

[8] Statement on Monetary Policy November 2021, Reserve Bank of Australia.
[9] Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 3 Rate of Return, Australian Energy Regulator, page 6.

10. Depreciation

10.1 Introduction

Regulatory depreciation (also referred to as the return of capital) is an allowance that enables capital investors to recover their investment over the economic life of the asset.

10.2 Powerlink Revenue Proposal

In our Revenue Proposal we calculated a depreciation forecast consistent with the National Electricity Rules (the Rules)[1] and relevant Australian Accounting Standards[2]. We proposed a change in our depreciation tracking approach from a Weighted Average Remaining Life (WARL) approach to a more accurate year-by-year depreciation tracking approach, after consultation with our customers. We also proposed to extend the life of secondary systems assets by just over a year as a transitional adjustment to smooth the revenue impact of this change on customers.

10.3 Response to the AER's Draft Decision

In its Draft Decision, the Australian Energy Regulator (AER) accepted our approach to calculate depreciation, as well as our proposed change to year-by-year depreciation tracking and transitional adjustment[3]. The AER also accepted our proposed asset classes and standard asset lives[4] that will apply over the next regulatory period. In addition, the AER's depreciation calculation reflected minor adjustments it made to our Regulatory Asset Base (RAB)[5], which are detailed further in Chapter 8 Regulatory Asset Base.

We accept the AER's Draft Decision approach.

We have applied standard updates to our depreciation forecast in our Revised Revenue Proposal.

10.4 Revised depreciation forecast

We have revised our depreciation forecast to reflect our revised opening RAB and applied updates for actual/forecast inflation for the 2018-22 and 2023-27 regulatory periods. Our revised depreciation forecast is set out in Table 10.1.

Table 10.1: Revised forecast regulatory depreciation ($m real, 2021/22)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Straight-line depreciation(1)	323.3	327.8	330.3	330.2	327.7	**1,639.3**
Less inflation(2) adjustment on opening RAB	(165.6)	(162.7)	(160.1)	(156.1)	(152.1)	**(796.6)**
Regulatory depreciation	**157.6**	**165.1**	**170.2**	**174.1**	**175.7**	**842.7**

(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 2.37% (refer Chapter 9 Rate of Return, Taxation and Inflation).

1 National Electricity Rules, clause 6A.6.3.
2 Australian Accounting Standard AASB 116 Property, Plant and Equipment.
3 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 4 Regulatory Depreciation, Australian Energy Regulator, page 4.
4 *Ibid.*
5 *Ibid*, Attachment 2 Regulatory Asset Base, Australian Energy Regulator, pages 14-15.

11. Maximum Allowed Revenue and Price Impact

11.1 Introduction

Powerlink's Maximum Allowed Revenue (MAR) is set as part of the revenue determination process using the building-block approach outlined in the National Electricity Rules (the Rules)[1]. Our MAR is the primary driver of the price impact of our revenue determination on customers.

11.2 Powerlink Revenue Proposal

Our Revenue Proposal forecast MAR was $3,333.9m. This amount was based on the application of each of the revenue building-blocks and was then smoothed over the 2023-27 regulatory period based on an X-factor for the purpose of setting our final MAR and indicative prices.

11.3 Response to the AER's Draft Decision

In its Draft Decision, the Australian Energy Regulator's (AER's) estimated MAR was $3,415.0m, which was $81.1m (2.4%) higher than our proposed MAR. This was primarily due to a higher rate of return used by the AER, which reflected more recent market data[2]. The X-factor used by the AER to determine the smoothed MAR was consistent with our Revenue Proposal[3].

We have revised our forecast MAR consistent with updates made to each building-block element in our Revised Revenue Proposal. Our revised MAR is $3,427.6m, which is $12.7m (0.4%) higher than the AER's Draft Decision. This is primarily due to higher inflation.

11.4 Revised total revenue

The application of each of the revenue building-blocks in our Revised Revenue Proposal, results in a total unsmoothed revenue requirement over the five year regulatory period of $3,677.9m, shown in Table 11.1. The calculation of each building-block element is outlined in section 11.5. Figures in sections 11.4 to 11.6 are shown on a nominal basis, consistent with the AER's models and regulatory practice.

Table 11.1: Revised unsmoothed revenue requirement ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Return on capital	332.2	324.2	316.8	306.6	295.9	**1,575.7**
Return of capital	161.4	173.1	182.6	191.2	197.5	**905.8**
Operating expenditure	217.8	225.6	230.1	235.6	241.1	**1,150.2**
Taxation allowance	4.4	3.2	6.4	13.1	12.9	**40.0**
Efficiency Benefit Sharing Scheme (EBSS) carryover	5.1	(6.1)	-	2.4	6.4	**7.8**
Capital Efficiency Sharing Scheme (CESS) carryover	(0.3)	(0.3)	(0.3)	(0.3)	(0.4)	**(1.6)**
Unsmoothed revenue requirement	**720.6**	**719.6**	**735.5**	**748.6**	**753.5**	**3,677.9**

11.5 Building-block components

We have used the AER's 2021 Post-Tax Revenue Model (PTRM) (Version 5) to calculate the MAR. The AER will update its revenue building-blocks for the relevant inputs and forecasts that underpin the MAR in its Final Decision.

1 National Electricity Rules, clause 6A.5.4.

2 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 1 Maximum Allowed Revenue, Australian Energy Regulator, page 4.

3 *Ibid*, pages 13-14.

11.5.1 Regulatory Asset Base

Our revised forecast RAB roll-forward is summarised in Table 11.2 and detailed in Chapter 8 Regulatory Asset Base.

Table 11.2: Revised forecast RAB roll-forward 2023-27 regulatory period ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27
Opening RAB	7,140.2	7,178.7	7,231.0	7,221.6	7,202.1
Capital expenditure, as incurred(1)	199.9	225.4	173.3	171.7	177.6
Regulatory depreciation	(161.4)	(173.1)	(182.6)	(191.2)	(197.5)
Closing RAB	**7,178.7**	**7,231.0**	**7,221.8**	**7,202.1**	**7,182.1**

(1) Net of disposals, adjusted for inflation and one-half Weighted Average Cost of Capital (WACC) allowance[4]. The roll-forward also reflects capitalised movements in provisions.

11.5.2 Return on capital

Our revised return on capital is summarised in Table 11.3 and detailed in Chapter 9 Rate of Return, Taxation and Inflation.

Table 11.3: Revised return on capital ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Opening RAB	7,140.2	7,178.7	7,231.0	7,221.6	7,202.1	N/A
Rate of return	4.65%	4.52%	4.38%	4.25%	4.11%	N/A
Return on capital	**332.2**	**324.2**	**316.8**	**306.6**	**295.9**	**1,575.7**

11.5.3 Return of capital

A summary of our return of capital is included in Table 11.4 and detailed in Chapter 8 Regulatory Asset Base.

Table 11.4: Revised return of capital ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Straight-line depreciation(1)	331.0	343.6	354.4	362.8	368.6	**1,760.2**
Indexation on opening RAB	(169.6)	(170.5)	(171.7)	(171.5)	(171.1)	**(854.4)**
Return of capital	**161.4**	**173.1**	**182.6**	**191.2**	**197.5**	**905.8**

(1) Straight-line depreciation is a method of calculating depreciation whereby an asset is expensed consistently throughout its useful life.

11.5.4 Operating expenditure

Our revised total forecast operating expenditure is shown in Table 11.5 and detailed in Chapter 6 Forecast Operating Expenditure.

4 The Post-Tax Revenue Model calculates the return of capital based on the opening Regulatory Asset Base and capital expenditure is assumed to occur half-way through the year. To address this timing difference, one-half Weighted Average Cost of Capital is added to compensate for the six-month period before capital expenditure is included in the Regulatory Asset Base.

Table 11.5: Revised operating expenditure ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Controllable operating expenditure and insurances	214.2	222.0	226.4	232.0	237.5	**1,132.0**
Debt raising costs	3.6	3.6	3.7	3.7	3.6	**18.2**
Total operating expenditure	**217.8**	**225.6**	**230.1**	**235.6**	**241.1**	**1,150.2**

11.5.5 Taxation

Our revised taxation estimate is set out in Table 11.6 and detailed in Chapter 9 Rate of Return, Taxation and Inflation.

Table 11.6: Revised taxation ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Corporate tax	10.7	7.6	15.4	31.6	31.0	**96.4**
Value of imputation credits	(6.2)	(4.5)	(9.0)	(18.5)	(18.2)	**(56.4)**
Taxation	**4.4**	**3.2**	**6.4**	**13.1**	**12.9**	**40.0**

11.5.6 EBSS and CESS

Our revised EBSS and CESS carryover amounts are set out in Table 11.7 and detailed in Chapter 14 Expenditure Incentive Schemes.

Table 11.7: Revised EBSS and CESS carryover amounts ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
EBSS carryover	5.1	(6.1)	-	2.4	6.4	**7.8**
CESS carryover	(0.3)	(0.3)	(0.3)	(0.3)	(0.4)	**(1.6)**

11.6 X-factors and smoothed revenue

We have applied an X-factor to our revised unsmoothed revenue requirement for each year of the 2023-27 regulatory period. Consistent with the Rules[5], the smoothed and unsmoothed revenue requirements are equivalent in net present value terms.

The difference between the smoothed and unsmoothed revenue in the final year of the 2023-27 regulatory period is 1.7%. This is consistent with the AER's expectations that a divergence of up to 3% is appropriate to achieve smoother price changes for users over the regulatory control period[6].

Our X-factors and revised smoothed MAR is summarised in Table 11.8.

Table 11.8: Revised X-factors and smoothed MAR ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Unsmoothed revenue requirement	720.6	719.6	735.5	748.6	753.5	**3,677.9**
X-factors	10.63%	0.33%	0.33%	0.33%	0.33%	N/A
Smoothed MAR	**706.7**	**721.0**	**735.7**	**750.7**	**766.0**	**3,680.2**

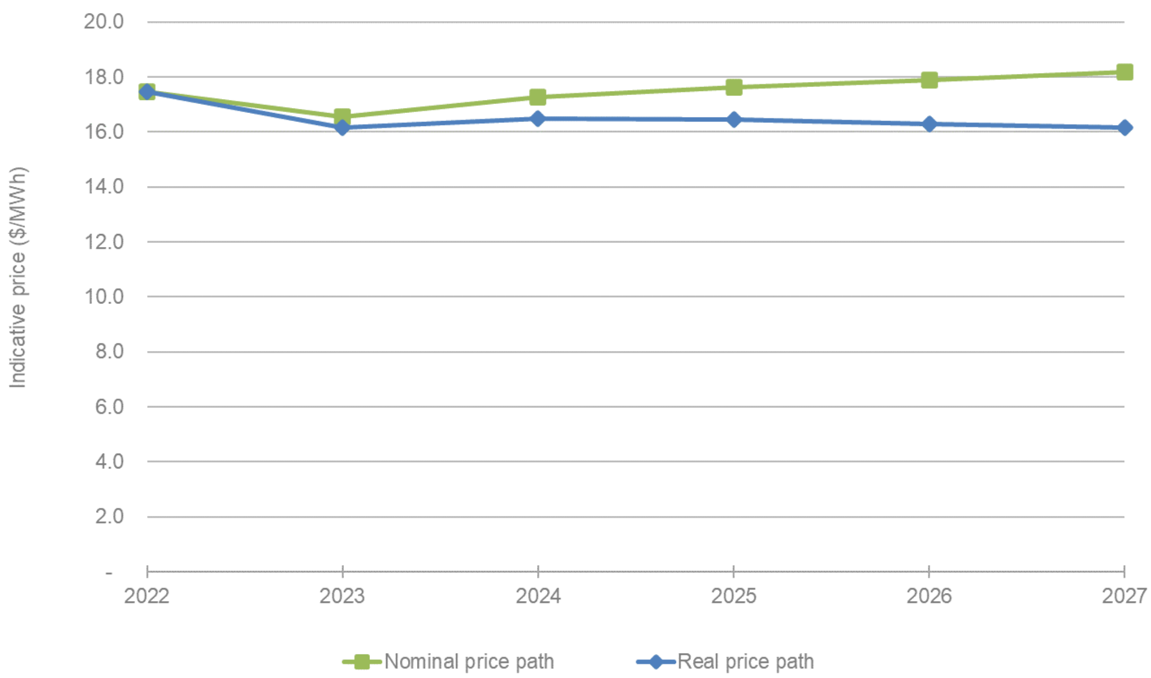
5 National Electricity Rules, clause 6A.6.8(c).

6 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 1 Maximum Allowed Revenue, Australian Energy Regulator, page 14.

11.7 Average price path

We have estimated the impact of our Revised Revenue Proposal on average indicative transmission prices, as shown in Figure 11.1. This has been done by dividing our revised forecast MAR with forecast delivered energy in Queensland in each year of the 2023-27 regulatory period. We have updated forecast delivered energy to reflect the most recent forecast from our 2021 Transmission Annual Planning Report (TAPR)[7].

Figure 11.1: Indicative price path from 2021/22 to 2026/27



Based on our revised forecast revenue, the indicative impact on the transmission component of electricity prices in the first year of the next regulatory period (2022/23) would be:

- *Residential*: a nominal reduction of $7 (5%), real reduction of approximately $10 (7%).
- *Small Business*: a nominal reduction of $10 (5%), real reduction of approximately $14 (7%).

On average, price increases for these customers will remain in line with inflation (assumed forecast of 2.37%) for the remainder of the 2023-27 regulatory period.

Comparison to the AER's Draft Decision

The AER's Draft Decision estimated a reduction of 9% in nominal terms and 11% in real, 2021/22 dollar terms for both residential and small business customers[8].

The primary driver of the difference in first year price reductions between our Revised Revenue Proposal and the AER's Draft Decision is our update to forecast delivered energy, which is forecast to decline predominantly due to continued installation of variable renewable energy (VRE) generation embedded in distribution networks and continued installation of rooftop photovoltaic (PV) systems[9]. With reduced delivered energy, the average indicative transmission price represented on a $/MWh basis increases.

7 2021 Transmission Annual Planning Report, Table 3.4, Powerlink Queensland, October 2021, page 57. The delivered energy forecast in our Transmission Annual Planning Report is consistent with the 2021 Energy Statement of Opportunities transmission delivered steady progress scenario, Australian Energy Market Operator, August 2021.

8 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Post-tax revenue model, Australian Energy Regulator, Revenue Summary, rows 43 and 55.

9 2021 Transmission Annual Planning Report, Powerlink Queensland, October 2021, page 48.

Average price impact

Our contribution to the average Queensland electricity bill is currently 9% for households and small businesses[10]. The estimated impact of our revised forecast revenue on the transmission component of average annual electricity bills in each year of the 2023-27 regulatory period is shown in Table 11.9. The final year of the current regulatory period is included in the table to show the change relative to the first year of the next regulatory period.

Table 11.9: Revised estimated impact to transmission component of average annual electricity bills ($ nominal)

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Residential annual bill(1)	129.7	123.0	128.4	131.0	132.9	135.1
Annual change	-	**(6.7)**	**5.3**	**2.7**	**1.9**	**2.2**
Small business annual bill(2)	185.9	176.3	183.9	187.8	190.4	193.6
Annual change	-	**(9.6)**	**7.6**	**3.8**	**2.7**	**3.1**

(1) Based on the AER's 2021-22 Default Market Offer representative residential customer annual energy usage of 4,600kWh per annum, April 2021.
(2) Based on the Queensland Competition Authority (QCA) Tariff 20 (small business) median energy usage of 6,443kWh per annum, June 2021.

[10] Residential Electricity Price Trends Report 2020, Australian Energy Market Commission, December 2020.

12. Pass Through Events

12.1 Introduction

The pass through event mechanism in the National Electricity Rules (the Rules) is intended to provide an efficient means for a network service provider to recover the efficient costs of uncontrollable, material events that either cannot be insured or where the establishment of self-insurance is not economically viable.

12.2 Powerlink Revenue Proposal

In our Revenue Proposal, we nominated three pass through events, namely Insurance Coverage, Insurer Credit Risk and Natural Disaster. We also proposed a $0 network support allowance in our operating expenditure.

12.3 Response to the AER's Draft Decision

In its Draft Decision, the Australian Energy Regulator (AER):

- accepted our three nominated pass through events with minor amendments to achieve consistency in definitions across Network Service Providers (NSPs)[1]. The AER considered that the existing definitions capture the intent of our proposed wording changes[2] ; and
- accepted our proposed $0 network support allowance[3].

We accept the AER's Draft Decision.

12.4 Current network support cost pass through application

In September 2021, we lodged a network support pass through application with the AER for approximately $2.3m, nominal. This amount reflects actual network support expenditure incurred in 2020/21, which would be recovered from customers in 2022/23. We discussed our application with our Customer Panel prior to lodgement in June 2021. Our application is currently subject to AER consideration.

This application does not form part of our revenue determination process. However, we have provided this information here to be transparent about the process currently underway.

1 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 12 Pass through events, Australian Energy Regulator, page 4.
2 *Ibid*, page 11.
3 *Ibid,* Attachment 6 Operating Expenditure, page 23.

13. Shared Assets

13.1 Introduction

Shared assets are used to provide both regulated (prescribed) and non-regulated transmission services, or services that are not transmission services.

13.2 Powerlink Revenue Proposal

In our Revenue Proposal, we included an assessment of Shared Asset Unregulated Revenues (SAUR) for the 2023-27 regulatory period. This assessment identified that our forecast average SAUR was between 0.4-0.5% of the Maximum Allowed Revenue (MAR) each year. As a result, we concluded that no adjustment was required to our proposed annual prescribed revenues, based on the Australian Energy Regulator's (AER's) 2013 Shared Asset Guideline (the 2013 SA Guideline) approach[1].

13.3 Response to the AER's Draft Decision

In its Draft Decision, the AER considered our forecast SAUR was reasonable and it did not apply a shared asset revenue adjustment to our MAR[2]. The AER also stated it must compare the materiality of forecast SAUR against the MAR it determines, rather than that proposed by Powerlink[3], which we expect it will do for the Final Decision.

We accept the AER's Draft Decision approach.

We have assessed our SAUR relative to our Revised Revenue Proposal MAR forecast and reconfirm our forecast SAUR remains under the 1% materiality threshold for all years of the 2023-27 regulatory period. Therefore, we maintain our position that no adjustment to MAR should apply. This is shown in Table 13.1.

Table 13.1: Revised materiality assessment ($m nominal)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Proposed smoothed MAR	706.7	721.0	735.7	750.7	766.0	**3,680.2**
1% of smoothed MAR	7.1	7.2	7.4	7.5	7.7	**36.8**
Average annual SAUR	3.2	3.2	3.2	3.2	3.2	**16.0**
SAUR as % MAR	0.4%	0.4%	0.4%	0.4%	0.4%	N/A
Exceed 1% Materiality Test	**No**	**No**	**No**	**No**	**No**	N/A

1 Powerlink 2023-27 Revenue Proposal, Chapter 13 Shared Assets, January 2021, pages 137-138.
2 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 1 Maximum Allowed Revenue, Australian Energy Regulator, page 16.
3 *Ibid.*

14. Expenditure Incentive Schemes

14.1 Introduction

The Efficiency Benefit Sharing Scheme (EBSS) and the Capital Expenditure Sharing Scheme (CESS) provide a continuous incentive for Network Service Providers (NSPs) to pursue efficiency improvements in operating and capital expenditure, respectively. Efficiency gains (or losses) are typically shared between a NSP and its network users.

14.2 Powerlink Revenue Proposal

In our Revenue Proposal, we included forecast net carryover amounts for the EBSS and CESS for the current 2018-22 regulatory period and targets for the 2023-27 regulatory period. These amounts were calculated consistent with the Australian Energy Regulator's (AER's) 2013 EBSS (Version 2) and 2013 CESS (Version 1). We proposed to exclude the Australian Energy Market Commission (AEMC) Levy from our EBSS target given we forecast these costs on a category-specific basis[1].

14.3 Response to the AER's Draft Decision

In its Draft Decision, the AER:

- made several adjustments to our proposed EBSS (e.g. to reverse our self-insurance adjustments and remove losses on certain disposals and asset write-offs)[2] and applied standard updates for inflation;
- did not accept our proposal to exclude the AEMC Levy from the EBSS target, as it considered these costs should be forecast on a single year revealed cost basis[3]; and
- updated the CESS for inflation and rate of return adjustments[4].

We accept the AER's Draft Decision approach.

Our Revised Revenue Proposal incorporates the AER's minor adjustments to the EBSS and applies standard updates to the net carryover amounts from the current regulatory period and targets for both the EBSS and CESS in the next regulatory period. These updates are set out in sections 14.4 and 14.5 respectively.

14.4 Efficiency Benefit Sharing Scheme

Our revised EBSS net carryover for the 2018-22 regulatory period is positive $7.0m as shown in Table 14.1. This amount reflects updates for actual 2020/21 and forecast 2021/22 operating expenditure, as well as the AER's minor Draft Decision adjustments[5].

Table 14.1: Revised EBSS carryover amount from the 2018-22 regulatory period ($m real, 2021/22)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
EBSS carryover	5.0	(5.9)	-	2.2	5.7	**7.0**

Our revised EBSS target for the 2023-27 regulatory period is $1,054.4m as shown in Table 14.2. Our target has been updated to reflect our revised operating expenditure forecast and treatment of the AEMC Levy consistent with the AER's Draft Decision[6].

1 Powerlink 2023-27 Revenue Proposal, Chapter 6 Forecast Operating Expenditure, Powerlink, January 2021, page 102.
2 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 8 Efficiency Benefit Sharing Scheme, Australian Energy Regulator, page 4.
3 *Ibid*, page 12.
4 *Ibid*, Attachment 9 Capital Expenditure Sharing Scheme, Australian Energy Regulator, page 8.
5 *Ibid*, Attachment 8 Efficiency Benefit Sharing Scheme, Australian Energy Regulator, page 4.
6 *Ibid*, page 12.

Table 14.2: Revised EBSS target for the 2023-27 regulatory period ($m real, 2021/22)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Operating expenditure forecast	212.7	215.3	214.4	214.5	214.4	**1,071.4**
Adjustments						
Debt raising costs	(3.5)	(3.5)	(3.4)	(3.3)	(3.2)	**(17.0)**
Network support costs	-	-	-	-	-	-
EBSS target	**209.2**	**211.8**	**211.0**	**211.2**	**211.2**	**1,054.4**

14.5 Capital Expenditure Sharing Scheme

Our revised CESS net carryover for the 2018-22 regulatory period is negative $1.5m as shown in Table 14.3. This amount reflects updates for actual 2020/21 and forecast 2021/22 capital expenditure.

Table 14.3: Revised CESS carryover amount from the 2018-22 regulatory period ($m real, 2021/22)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
CESS carryover	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	**(1.5)**

Our revised CESS target for the 2023-27 regulatory period is $877.4m as shown in Table 14.4. Our target was updated for our revised capital expenditure forecast, inclusive of inflation (refer Chapter 5 Forecast Capital Expenditure).

Table 14.4: Revised CESS target for the 2023-27 regulatory period ($m real, 2021/22)

	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Capital expenditure forecast	194.1	213.8	160.9	155.9	157.6	**882.4**
Adjustments						
Movement in provisions	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	**(5.0)**
CESS target	**193.1**	**212.8**	**159.9**	**154.9**	**156.6**	**877.4**

15. Service Target Performance Incentive Scheme

15.1 Introduction

The Service Target Performance Incentive Scheme (STPIS) is designed to incentivise a network business to improve or maintain a high level of service for the benefit of participants in the National Electricity Market (NEM) and end users of electricity (customers).

The three components to the STPIS are the Service Component (SC), Market Impact Component (MIC) and Network Capability Component (NCC).

15.2 Powerlink Revenue Proposal

In our Revenue Proposal[1], we:

- proposed SC and MIC targets consistent with the Australian Energy Regulator's (AER's) historical data ranges. We also proposed an alternative data range for the MIC, which incorporated the most recent calendar year data. We did this to ensure our 2023-27 MIC target, which would be set in the AER's Final Decision, would incorporate recent changes in our operating environment;
- proposed an alternative target of one (in lieu of zero) for the large loss of supply event sub-parameter of the SC. We consider our proposed alternative target better reflects the intent and design principles of the scheme; and
- did not propose any Network Capability Incentive Parameter Action Plan (NCIPAP) projects. We also noted that we may pursue such projects within the 2023-27 regulatory period if they become viable.

15.3 Response to the AER's Draft Decision

In its Draft Decision, the AER:

- calculated targets, caps and floors for the SC parameters consistent with those in our Revenue Proposal[2];
- did not accept our proposed alternative target of one (in lieu of zero) for the large loss of supply threshold element of the SC and adjusted our target for this sub-parameter to zero[3];
- did not accept our proposal to include the most recent available calendar year to calculate the MIC target[4];
- adjusted our historical data for the 2015 and 2019 calendar years, and substituted our proposed MIC target as a result[5]; and
- noted we did not propose any NCIPAP projects in our Revenue Proposal and may propose projects within period[6].

We consider that our proposed alternative target for the SC and MIC target setting years in our Revenue Proposal were reasonable and in the long-term interests of consumers. However, we acknowledge the AER's Draft Decision on these matters and, notwithstanding our residual concerns, **we accept the AER's Draft Decision approach** in the interests of the overall Revised Revenue Proposal package.

We have submitted revised SC and MIC values and targets to align with the AER's Draft Decision and consistent with the 2015 STPIS[7]. Our revised values and targets are outlined in section 15.4.

Consistent with our Revenue Proposal and as noted in the AER's Draft Decision, we have not proposed any NCIPAP projects in our Revised Revenue Proposal. We will consider and may propose NICPAP projects to the AER within the 2023-27 regulatory period.

In addition, we remain of the view that our operating environment has changed significantly and that the STPIS should be reviewed as a matter of urgency to have regard to such changes. Our reasons for advocating for this review are set out in section 15.5.

1 Powerlink 2023-27 Revenue Proposal, Chapter 15 Service Target Performance Incentive Scheme, Powerlink, January 2021, pages 151-157.
2 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 10 Service Target Performance Incentive Scheme, Australian Energy Regulator, page 5.
3 *Ibid*, page 14.
4 *Ibid*, page 15.
5 *Ibid*, pages 15-17.
6 *Ibid*, page 6.
7 Final STPIS Version 5 (corrected), Australian Energy Regulator, October 2015.

15.4 Revised STPIS values

For the SC, we have revised our proposed target for the large loss of supply event sub-parameter to be zero, consistent with the AER's Draft Decision.

For the MIC, we applied two adjustments to our historical data to align with the AER's Draft Decision, which will be used for 2023-27 regulatory period target setting purposes. Specifically, we:

- excluded 38 Dispatch Interval (DI) performance counts in 2015[8]; and
- excluded 655 DI performance counts in 2019[9].

We have also lodged independently reviewed SC and MIC data as part of our Revised Revenue Proposal Reset RIN return, consistent with the AER's Reset Regulatory Information Notice (RIN) requirements[10].

Our revised SC and MIC values and targets are outlined in Table 15.1 and are based on the following date ranges:

- for the SC – calendar years 2016-20; and
- for the MIC – calendar years 2014-20.

Details of the target calculation methodology are included in Appendix 15.01 Setting STPIS Values.

Table 15.1: Revised SC and MIC values

SC Parameter (±1.25% Maximum Allowed Revenue (MAR))	Floor	Target	Cap	Distribution
Unplanned outage circuit event rate (±0.75% MAR)				
Lines event rate - fault	24.99	17.03	8.79	Weibull
Transformer event rate – fault	23.94	16.81	5.49	Triangular
Reactive plant event rate – fault	29.04	25.65	22.52	LogNormal
Lines event rate – forced	21.13	17.02	12.15	Weibull
Transformer event rate – forced	22.34	14.82	9.37	LogLogistic
Reactive plant event rate – forced	22.79	21.21	19.00	Weibull
Loss of supply event frequency (±0.30% MAR)				
Greater than 0.05 system minutes (x)	6	2	0	Geometric
Greater than 0.40 system minutes (y)	1	0	0	Poisson
Average Outage Duration (±0.20% MAR)				
Average outage duration	59.00	33.23	14.06	Gamma

MIC Parameter (±1.0% MAR)	Performance Target	Unplanned Outage Event Limit	Dollar per Dispatch Interval Incentive
MIC	3,364	572	$2,052

15.5 Need for STPIS review

In our Revenue Proposal we expressed the firm view that the transmission STPIS should be reviewed as a matter of urgency[11]. We considered that the current version of the transmission STPIS is not fit-for-purpose to be applied to our 2023-27 regulatory period. While we have accepted the AER's Draft Decision approach on STPIS we remain of this view and have set out our reasons for this below.

8 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 10 Service Target Performance Incentive Scheme, Australian Energy Regulator, page 16.

9 *Ibid.*

10 Reset Regulatory Information Notice: Powerlink, clauses 11.1 and 11.2, Australian Energy Regulator, October 2020.

11 Powerlink 2023-27 Revenue Proposal, Chapter 15 Service Target Performance Incentive Scheme, Powerlink, January 2021, page 143.

The electricity supply system in Australia is undergoing profound and rapid change. The drive to decarbonise electricity supply has already seen significant amounts of new variable renewable energy (VRE) generation investments start to replace the existing baseload coal-fired generation fleet. In Queensland we have experienced significant growth in transmission connected solar and wind farms as well as distributed rooftop photovoltaic (PV) installed behind the meter. This unprecedented and rapid turnover of generation sources has implications for the performance of the transmission network.

The existing Powerlink transmission network is the result of decades of investment to progressively interconnect the previously separated, local power systems located across Queensland and to facilitate the bulk transfer of electrical energy from a small number of large centralised power stations to the major load centres. This paradigm provided a relatively high degree of predictability of power flows across the network, both seasonally and from year to year.

The current design of the transmission STPIS largely reflects this previous paradigm. It is predicated on a transmission business' ability to reasonably forecast when transmission network capacity is of most value to network users and to plan network outages around these times, with some capability to respond to short notice variability. This has been facilitated by the relatively slow change in the usage characteristics of the transmission network. With the energy transition leading us to a power system with a large number of smaller VRE generators distributed widely across the network, including embedded on distribution networks and within customer premises, the previous paradigm has shifted rapidly.

The target setting arrangements under the transmission STPIS, for both the SC and MIC, uses between five and seven years of historical data to set targets that will apply for each year of the next five year regulatory period. In our experience the historical data used to set future targets now bears no relationship to the current state of the power system, much less the needs over the next five years. There is a risk that the incentive scheme will drive behaviours that do not align with customers' current expectations. Given the rapid and large scale changes that have occurred on the power system, and that are expected to continue to occur over the medium to long-term, we can see no validity in maintaining such an approach.

In contrast to the SC and MIC we note that the NCC part of the STPIS adopts a forward looking approach. In addition, the NCC provides greater flexibility in that existing priority projects can be removed and new priority projects can be introduced, if circumstances change within the regulatory period. While the activities that are targeted by the NCC are very different to those under the SC and MIC, we consider the SC and MIC elements of the transmission STPIS need to be reformed to also adopt a more forward looking approach.

For the transmission STPIS to remain consistent with the National Electricity Objective and provide long-term benefits to customers, the rewards or penalties resulting from the scheme should be referable to conscious decisions on the part of the transmission business. They also need to be consistent with the current performance of the power system and not the result of past years' performance, which in recent years has been heavily influenced by weather driven VRE generation, whether grid connected or on customer rooftops. We are also still coming to understand the impact on network performance and usage, of newer technologies, such as large scale batteries and virtual power plants.

These concerns are not confined to Powerlink as similar concerns have been expressed by most transmission businesses over the past two years, including:

- Energy Networks Australia (ENA) letter to the AER in February 2020[12];
- ElectraNet[13] and TransGrid[14] requests to update their respective Framework and Approach papers;
- AusNet Services' Revised Revenue Proposal[15]; and
- TransGrid's Preliminary Revenue Proposal[16].

For these reasons we again urge the AER to progress an urgent review of the transmission STPIS to ensure it remains fit-for-purpose and provides ongoing benefits to customers.

12 Powerlink Queensland 2023-27 Revenue Proposal, Appendix 15.02, January 2021.
13 Request for Revised Framework and Approach, ElectraNet, November 2020, page 1.
14 Request for Revised Framework and Approach, TransGrid, October 2020, page 2.
15 Transmission Revenue Review 2023-27 Revised Revenue Proposal, AusNet Services, September 2021, page 146.
16 Preliminary Revenue Proposal 2023-2028, TransGrid, October 2021, page 46.

16. Pricing Methodology

16.1 Introduction

Our Pricing Methodology describes how we allocate our annual prescribed revenue to the various categories of prescribed transmission services and transmission network connection points and determines the structure of our prescribed transmission charges.

16.2 Powerlink Revenue Proposal

Our Proposed Pricing Methodology, lodged with our Revenue Proposal, included one key amendment following extensive consultation to progressively transition customers to locational charges based on peak demand only. This transition was proposed to occur over the next two regulatory periods (10 years), commencing 1 July 2022. We also proposed five other, minor amendments to reflect recent regulatory developments at that time and to improve clarity[1].

16.3 Response to the AER's Draft Decision

In its Draft Decision, the Australian Energy Regulator (AER) accepted our Proposed Pricing Methodology as:

- it gives effect to, and is consistent with, the pricing principles in the National Electricity Rules (the Rules)[2]; and
- it complies with the AER's Pricing Methodology Guidelines[3].

We acknowledge and agree with the AER's Draft Decision to accept our Proposed Pricing Methodology.

However, following changes to the Rules[4] post lodgement of our Revenue Proposal in relation to dedicated and designated connection assets, we consider there is benefit in providing further clarity to our customers on how pricing arrangements will operate. Consequently, we have proposed an additional minor amendment to our Proposed Pricing Methodology, which is simply a direct extract from the Rules. There are also minor, consequential updates to the Pricing Methodology to reflect the new Rules. This is explained further in section 16.4.

We have lodged a Revised Proposed Pricing Methodology (refer Appendix 16.01) to give effect to these changes.

16.4 Revised Proposed Pricing Methodology

In July 2021 the Australian Energy Market Commission (AEMC) made its Final Determination on Connection to Dedicated Connection Assets (DCA). The Rule change resulted in significant amendments to the Rules[5], four of which related to the calculation of prescribed transmission prices.

One of the Rule change amendments is to the description of the process to adjust the non-locational component of prescribed transmission prices by applicable settlements residues. Specifically, the amendment reflects that the settlements residue adjustment should not include amounts that accrue on designated network assets[6] and must be distributed or recovered from the owner of each designated network asset[7].

To provide clarity to our customers on how the DCA Rule change impacts the transmission pricing arrangements, we have proposed that our Revised Proposed Pricing Methodology reflect this additional amendment as follows (see blue text, which is marked up in section 6.8.3.2 of our Pricing Methodology):

[1] Powerlink 2023-27 Revenue Proposal, Chapter 16 Pricing Methodology, Powerlink, January 2021, pages 177-184.
[2] National Electricity Rules, clause 6A.10.1(e)(1).
[3] Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 11 Pricing Methodology, Australian Energy Regulator, page 4.
[4] Connection to dedicated connection assets Rule determination, Australian Energy Market Commission, July 2021.
[5] National Electricity Amendment (Connection to dedicated connection assets) Rule 2021, Australian Energy Market Commission, No. 7, Australian Energy Market Commission, July 2021.
[6] National Electricity Rules, clause 6A.23.3(e)(2).
[7] National Electricity Rules, clause 3.6.2B(f).

6.8.3.2 Prescribed TUOS services – non-locational component

The remainder of the ASRR (the pre-adjusted non-locational component) is adjusted in accordance with clause 6A.23.3(e) of the Rules by:

- *adding or subtracting any remaining settlements residue (not being settlements residue referred to in the determination of the locational component or settlements residue that accrue on a designated network asset due to boundary point loss factors, but otherwise including the portion of settlements residue due to intra-regional loss factors) which is expected to be distributed or recovered (as the case may be) to or from the TNSP in accordance with clause 3.6.5(a); and …*

We consider that this change makes it clear to customers that the settlement residue adjustment to non-locational charges will be made in a manner consistent with the new Rules[8].

Three other amendments to the transmission pricing Rules were made for the avoidance of doubt that identified user shared asset or designated network asset values should not be considered in the calculation of the locational component of prescribed transmission prices[9]. Given our Proposed Pricing Methodology already references the Cost Reflective Network Pricing (CRNP) methodology defined in the Rules[10] and the description of the calculation of locational prices[11] remains consistent with the Rules, we do not consider that further change to our Pricing Methodology is necessary.

In October 2021, we advised AER staff, engaged with our Customer Panel and wrote to our directly-connected customers about the additional minor amendment to our Proposed Pricing Methodology and minor consequential updates to the Pricing Methodology to reflect the new Rules. No concerns were raised by AER staff, our Customer Panel[12] or our directly-connected customers.

8 National Electricity Rules, clause. 6A.23.3(e)(2).

9 National Electricity Rules, clauses, 6A.23.3(c), S6A.3.2(1) and S6A.3.2(4).

10 National Electricity Rules, clause. S6A.3.2.

11 Revised Proposed Pricing Methodology, section 6.8.3.1 and Appendix C.

12 Minutes of the Customer Panel, Powerlink, October 2021, https://www.powerlink.com.au/customer-panel.

17. Demand Management Innovation Allowance Mechanism

17.1 Introduction

The Demand Management Innovation Allowance Mechanism (DMIAM) is intended to provide a Transmission Network Service Provider (TNSP) with access to funds to research and develop demand management projects that have the potential to reduce long-term network costs.

17.2 Powerlink Revenue Proposal

In our Revenue Proposal[1], we:

- sought to have the DMIAM apply to us during our 2023-27 regulatory period;
- noted we would consider the detailed operation of the mechanism after it was finalised by the Australian Energy Regulator (AER); and
- wanted to ensure that any potential demand management initiatives are not already captured or better catered for under our operating expenditure or other relevant incentive schemes.

After the AER's Final DMIAM Guideline was published in May 2021[2], we reviewed the potential application of the DMIAM and considered the types of projects we might undertake. We concluded we should either pursue these projects in the normal course of business or, if they are not efficient, they should not be pursued. This approach was consistent with our commitment to drive ongoing efficiency in our business and affordability for customers. Therefore, in July 2021 we wrote to the AER to request that the DMIAM not apply to our 2023-27 regulatory period[3].

17.3 Response to the AER's Draft Decision

In its Draft Decision, the AER determined it would apply the DMIAM to Powerlink in our next regulatory period without any modification[4]. The AER encouraged further consultation on our proposal not to have the DMIAM apply to us to inform its Final Decision[5] and noted the only submission on the subject from Queensland Energy Users Network (QEUN) did not support our request[6].

We engaged with our Customer Panel on this matter both before and after release of the AER's Draft Decision[7]. In light of this feedback, we proposed that our Customer Panel be empowered to decide whether we should seek to apply (or not apply) the DMIAM in our Revised Revenue Proposal[8].

In October 2021, our Customer Panel wrote to Powerlink and recommended we should not seek to apply the DMIAM in our 2023-27 regulatory period[9]. We have included our Customer Panel's full statement in Appendix 17.01 and further details about our engagement activities in section 17.4.

Consistent with our commitment to empower our Customer Panel and implement its decision on this matter in our Revised Revenue Proposal, **we do not accept the AER's Draft Decision** and retain our position that the DMIAM not be applied to Powerlink in our 2023-27 regulatory period.

We recognise that demand management is an important, sector-wide issue, particularly given the trends of increasing maximum demand, decreasing minimum demand and declining energy throughput. Notwithstanding our position, we will continue to undertake initiatives to respond to these issues and pursue innovation in demand management as part of our normal business operations. We will also continue to share knowledge with our industry peers where appropriate to help ensure that customers benefit from these arrangements.

1 Powerlink 2023-27 Revenue Proposal, Chapter 17 Demand Management Innovation Allowance Mechanism, January 2021, pages 166-167.
2 Demand Management Innovation Allowance Mechanism Electricity Transmission Network Service Providers, Australian Energy Regulator, May 2021.
3 Letter to the Australian Energy Regulator on Non-application of the Demand Management Innovation Allowance Mechanism to the 2022-27 regulatory control period, Powerlink, 9 July 2021.
4 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Attachment 13 Demand Management Innovation Allowance Mechanism, Australian Energy Regulator, page 4.
5 *Ibid*, page 6.
6 Submission on Powerlink's Application to Exclude the DMIAM from 2022-27 Revenue Proposal, Queensland Energy Users Network, August 2021.
7 Revenue Proposal Reference Group Meetings, 10 August 2021, 17 September 2021 and Customer Panel Meeting 22 October 2021, www.powerlink.com.au/customer-panel.
8 As per the International Association of Public Participation (IAP2) framework. Engagement at the empower level of the framework means our Customer Panel has decision-making power on this item and we commit to implement our Customer Panel's decision.
9 Application of the Demand Management Innovation Allowance Mechanism to Powerlink's 2023-27 Regulatory Proposal, Powerlink Customer Panel, page 1.

17.4 Engagement on the DMIAM

We engaged with our Revenue Proposal Reference Group (RPRG) and Customer Panel members on the DMIAM on 10 August, 17 September and 22 October 2021 and had regard to QEUN's submission. Initial feedback included:

- interest in what work we are already doing in relation to demand management and how we are responding to demand management issues as part of business-as-usual; and
- how learnings and innovations are shared with customers and other network businesses, which is a key feature of the DMIAM.

In response, we provided further information which highlighted our existing demand management initiatives and how this knowledge is shared with others outside Powerlink (refer Appendix 17.02)[10]. We spoke to this information at our 17 September RPRG meeting[11] and proposed that our Customer Panel be empowered to make a decision on whether or not the DMIAM should apply to us in our 2023-27 regulatory period. We invited a representative of QEUN to attend this meeting. We proposed to empower our Customer Panel for three primary reasons:

- to ensure the DMIAM position in our Revised Revenue Proposal directly reflected customer views;
- we were indifferent to either option (apply or do not apply the DMIAM), given we intend to continue to undertake such works where efficient in the normal course of business; and
- we genuinely did not want to impose any additional costs (approximately $3.5m) on customers.

Customer Panel Recommendation

Our Customer Panel considered this matter in October 2021 and recommended that Powerlink not seek to apply the DMIAM for the 2023-27 regulatory period (refer Appendix 17.01). As part of its deliberations, the Customer Panel requested and we provided further information about why we now consider the potential DMIAM projects identified in our Revenue Proposal to not be appropriate for funding under the DMIAM at this time (refer Appendix 17.02). In brief, our Customer Panel:

- support Powerlink's position and are of the view that the necessary innovation/research projects will be executed without the need for access to a DMIAM allowance, and that this will assist in keeping electricity prices to Queensland consumers as low as possible;
- are confident that demand management innovation is managed as part of business-as-usual work at Powerlink, and this will continue to meet future demands for this type of investigation and research;
- are of the view that Powerlink will continue to freely share information on these activities and will adopt innovations from other businesses; and
- request that we brief the Customer Panel in around 18-months, on the studies undertaken and learnings gained from other TNSPs participating in the DMIAM.

While our Customer Panel also identified a number of potential risks if the DMIAM is not applied to Powerlink, on balance, it concluded that these risks were unlikely to eventuate.

We thank our Customer Panel for its consideration and recommendation on this matter. We will continue to engage on our demand management related activities in the normal course of business.

[10] Revenue Proposal Reference Group Meetings, 10 August 2021, 17 September 2021 and Customer Panel Meeting 22 October 2021, www.powerlink.com.au/customer-panel.

[11] Revenue Proposal Reference Group Meeting, 17 September 2021, www.powerlink.com.au/customer-panel.

Attachment 1 Summary of Revised Revenue Proposal Responses

We have provided a brief summary of the Australian Energy Regulator's (AER's) Draft Decision outcomes and our Revised Revenue Proposal responses in the following table.

Where we refer to application of "standard updates" in the table below, we mean for things such as forecast inflation and/or to reflect the most recent actual/forecast operating and capital expenditure for the current regulatory period. Further detail is included in relevant chapters.

Chapter and element	AER Draft Decision outcomes	Revised Revenue Proposal responses
Chapter 3 Customer engagement	Recognised our strong consumer engagement approach and commitment to put consumers at the centre of our business[1].	Continued to engage with our customers to ensure their views are reflected in our Revised Revenue Proposal.
Chapter 4 Historical capital and operating expenditure	N/A.	Updated our capital and operating expenditure for 2020/21 actuals and latest 2021/22 forecast.
Chapter 5 Forecast capital expenditure	Accepted our total forecast capital expenditure of $863.9m and our one proposed contingent project[2]. Identified potential opportunities for a more targeted economic risk based approach, particularly for transmission line reinvestment, and noted we have committed to a review of our approach. Estimated equity raising costs of $0, consistent with our estimate[3]. Found our actual capital expenditure within-period should be rolled into the Regulatory Asset Base (RAB)[4].	**Accept**, with an update for inflation.
Chapter 6 Forecast operating expenditure	Accepted our total forecast operating expenditure, including debt raising costs, of $1,046.4m[5]. Applied a $0 allowance for network support costs[6], consistent with our Revenue Proposal. Updated several input parameters and made minor adjustments to derive its alternative estimate[7].	**Accept** the AER's approach to estimate operating expenditure except for productivity where we adopt a higher target. Also accept the AER's Draft Decision on network support and debt raising costs. Our revised forecast operating expenditure is consistent with the AER's approach, reflects latest inflation information and retains our no real growth target.

1 Draft Decision Powerlink Queensland Transmission Determination 2022 to 2027, Overview, Australian Energy Regulator, pages 5-10.
2 *Ibid*, Attachment 5 Capital Expenditure, Australian Energy Regulator, pages 5-8.
3 *Ibid*, Attachment 3 Rate of Return, Australian Energy Regulator, pages 7-8.
4 *Ibid*, Attachment 5 Capital Expenditure, Australian Energy Regulator, page 39.
5 *Ibid*, Attachment 6 Operating Expenditure, Australian Energy Regulator, pages 4-6.
6 *Ibid*, page 23.
7 *Ibid*, pages 11-24.

Chapter and element	AER Draft Decision outcomes	Revised Revenue Proposal responses
Chapter 7 Escalation Rates and Project Cost Estimation	Accepted and updated our approach to estimate internal labour costs and accepted our use of CPI for the annual cost of materials[8]. Did not accept our use of an annual growth rate for external labour costs above CPI. However, given external labour cost escalation is a small component of total capital expenditure, the AER did not adjust our capital expenditure forecast[9].	**Accept.**
Chapter 8 Regulated Asset Base (RAB)	Largely accepted our proposed RAB values, with minor adjustments and updates[10]. Noted it is seeking additional information from Powerlink about the use of some of our assets[11].	**Accept** and apply standard updates. Provided further information confidentially to the AER to inform its view about the use of some of our assets. We have not included any transfer amount in the RAB related to these assets in our Revised Revenue Proposal.
Chapter 9 Rate of Return, Tax, Inflation	Accepted our proposed gamma and averaging periods for the risk-free rate and debt[12]. Accepted our tax approach[13]. Updated our approach to calculate forecast inflation[14].	**Accept** and apply standard updates. Applied the AER's Draft Decision rate of return of 4.65%. The AER will update the rate of return in its Final Decision.
Chapter 10 Depreciation	Accepted our approach to calculate depreciation as well as our proposed depreciation tracking change and transitional adjustment[15].	**Accept** and apply standard updates.
Chapter 11 Maximum Allowed Revenue (MAR) and Price Impact	Estimated MAR of $3,415.0m[16]. Applied the same X-factors as our Revenue Proposal[17].	Updated MAR to reflect all other building-block updates and updated our X-factors to smooth price changes for customers over the 2023-27 regulatory period.
Chapter 12 Cost pass through events	Accepted our three nominated pass through events with minor amendments to achieve consistency across Network Service Providers (NSPs)[18].	**Accept**.

8 *Ibid*, pages 16-18.
9 *Ibid*, Attachment 5 Capital Expenditure, Australian Energy Regulator, pages 21-22.
10 *Ibid*, Attachment 2 Regulatory Asset Base, Australian Energy Regulator, pages 4-8.
11 *Ibid*, page 20.
12 *Ibid*, Attachment 3 Rate of Return, Australian Energy Regulator, page 5.
13 *Ibid*, Attachment 7 Corporate Income Tax, Australian Energy Regulator, pages 4-5.
14 *Ibid*, Attachment 3 Rate of Return, Australian Energy Regulator, page 6.
15 *Ibid*, Attachment 4 Regulatory Depreciation, Australian Energy Regulator, page 4.
16 *Ibid*, Attachment 1 Maximum Allowed Revenue, Australian Energy Regulator, pages 4-6.
17 *Ibid*, pages 13-15.
18 *Ibid*, Attachment 12 Pass through events, Australian Energy Regulator, page 4.

Chapter and element	AER Draft Decision outcomes	Revised Revenue Proposal responses
Chapter 13 Shared Assets	Did not adjust our MAR[19].	**Accept** and apply standard updates.
Chapter 14 Expenditure Incentive Schemes	Applied minor adjustments to our Efficiency Benefit Sharing Scheme (EBSS) 2018-22 carryover[20]. Did not accept our proposal to exclude the Australian Energy Market Commission (AEMC) Levy from the EBSS 2023-27 target[21]. Updated the Capital Expenditure Sharing Scheme (CESS) for inflation and rate of return adjustments[22].	**Accept** and apply standard updates.
Chapter 15 Service Target Performance Incentive Scheme (STPIS)	On the Service Component (SC), did not accept our proposed alternative target setting (one in lieu of zero) for the large loss of supply sub-parameter[23]. On the Market Impact Component (MIC), did not accept our proposed use of 2015-21 as target setting years and have applied the 2014-20 years[24]. Noted we did not propose any Network Capability Incentive Parameter Action Plan (NCIPAP) projects.	**Accept** and apply standard updates. We remain of the view that an urgent review of the STPIS is required.
Chapter 16 Proposed Pricing Methodology	Accepted our Proposed Pricing Methodology[25].	**Acknowledge and agree** with the AER's Draft Decision. Propose an additional minor amendment, and consequential updates, to provide further clarity to our customers on how pricing arrangements will operate consistent with recent changes to the National Electricity Rules (the Rules).
Chapter 17 Demand Management Innovation Allowance Mechanism (DMIAM)	Applied the DMIAM to Powerlink in our next regulatory period without any modification[26].	**Do not accept.** We have adopted our Customer Panel's recommendation and propose the DMIAM is not applied to Powerlink in our 2023-27 regulatory period.

19 *Ibid*, Attachment 1 Maximum Allowed Revenue, Australian Energy Regulator, page 16.
20 *Ibid*, Attachment 8 Efficiency Benefit Sharing Scheme, Australian Energy Regulator, pages 4-5.
21 *Ibid*, page 12.
22 *Ibid*, Attachment 9 Capital Expenditure Sharing Scheme, Australian Energy Regulator, pages 7-9.
23 *Ibid*, Attachment 10 Service Target Performance Incentive Scheme, Australian Energy Regulator, pages 11-14.
24 *Ibid*, pages 15-18.
25 *Ibid*, Attachment 11 Pricing Methodology, Australian Energy Regulator, page 4.
26 *Ibid*, Attachment 13 Demand Management Innovation Allowance Mechanism, Australian Energy Regulator, page 4.

Glossary

Glossary list	
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASRR	Annual Service Revenue Requirement
CAM	Cost Allocation Methodology
CCP	AER's Consumer Challenge Panel
CCP23	AER's Consumer Challenge Panel, sub-panel 23
CESS	Capital Expenditure Sharing Scheme
CPI	Consumer Price Index
CRNP	Cost Reflective Network Pricing
DAE	Deloitte Access Economics
DCA	Dedicated Connection Assets
DMIAM	Demand Management Innovation Allowance Mechanism
EBSS	Efficiency Benefit Sharing Scheme
ENA	Energy Networks Australia
GWh	Gigawatt hours
IAP2	International Association for Public Participation
MAR	Maximum Allowed Revenue
MIC	Market Impact Component
MNSP	Market Network Service Provider
MWh	Megawatt hours
NCC	Network Capability Component
NCIPAP	Network Capability Incentive Parameter Action Plan
NEM	National Electricity Market
NSP	Network Service Provider
NTP	National Transmission Planner
PFP	Partial Factor Productivity
PTRM	Post-Tax Revenue Model
PV	Photovoltaic
QCA	Queensland Competition Authority
QEUN	Queensland Energy Users Network
RAB	Regulatory Asset Base
RBA	Reserve Bank of Australia
Repex	Replacement Expenditure
Reset RIN	AER's Reset Regulatory Information Notice

RIN	Regulatory Information Notice
RPRG	Powerlink's Revenue Proposal Reference Group
the Rules	National Electricity Rules
SAUR	Shared Asset Unregulated Revenues
SC	Service Component
STPIS	Service Target Performance Incentive Scheme
TAPR	Transmission Annual Planning Report
TNSP	Transmission Network Service Provider
TUOS	Transmission Use of System
VRE	Variable Renewable Energy
WACC	Weighted Average Cost of Capital
WARL	Weighted Average Remaining Life

Appendices

The following table lists all appendices associated with Powerlink's Revised Revenue Proposal. The author of all documents is Powerlink unless otherwise stated. Appendices can be accessed via the Australian Energy Regulator's website for Powerlink's revenue determination under the Proposal tab.

List of appendices	
1.01	Board Certification of Key Inputs and Assumptions
1.02	Statutory Declaration on Powerlink's Reset RIN Return
1.03	Document Register
2.01	Business Narrative
3.01	Customer Panel Statement on Capable of Acceptance
3.02	Post Revenue Proposal Lodgement Engagement Plan
15.01	Setting STPIS Values
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17.01	Customer Panel Statement on DMIAM
17.02	Powerlink Background Information on DMIAM

Models

All models associated with Powerlink's Revised Revenue Proposal are provided in the list below. Models can be accessed via the Australian Energy Regulator's website for Powerlink's revenue determination under the Proposal tab.

List of models
Capital Expenditure Model
Capital Expenditure Sharing Scheme (CESS) Model
Depreciation Tracking Module
Efficiency Benefit Sharing Scheme (EBSS) Model
Operating Expenditure Model
Post-Tax Revenue Model (PTRM)
Roll Forward Model (RFM)

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