

Powerlink Final Submission to the Responsible Ministers

This submission has been prepared by Powerlink in response to a direction from the Responsible Ministers under section 22 of the *Energy (Renewable Transformation and Jobs) Act 2024* (the Act).

Key information from Responsible Ministers' direction

Date of direction from the Responsible Ministers to Powerlink, to prepare a submission in relation to the Gladstone Project (in accordance with sections 22(1) and 22(2) of the Act, the direction was given immediately after the Responsible Ministers declared the Gladstone Project a candidate priority transmission investment, on 10 July 2024).	13 August 2024*
Anticipated date for completion of construction of the investment stated in the direction (section 22(3)(b) of the Act).	Pursuant to section 22(3) of the Act, we, the Responsible Ministers, require the submission to address when construction of the Gladstone Project must commence in order to meet the construction completion date of March 2029.
Due date for submission to be provided to Responsible Ministers (section 22(6) of the Act).	16 August 2024

* The Responsible Ministers re-issued the direction on 13 August 2024 to confirm (a) Powerlink's requirement to consult with the Queensland Energy System Advisory Board on the identified need for the Gladstone Project, (b) consultation timeframes for the submission, and (c) indicative base case assumptions.

Information Powerlink is required to provide to the Responsible Ministers' in its submission

When construction of the CPTI must commence in order to meet - the anticipated date for completion of construction of the investment stated in the direction (in accordance with section 22(3) of the Act).

The elements of the identified need are dependent upon a range of factors relating to the anticipated speed of decarbonisation of the electricity network in the Gladstone Region. For this reason, it is proposed that candidate PTI network components be staged in line with the current expected need date for each specific element of the identified need, thereby maximising efficiency of delivery.

The first stage (new double-circuit line between Calvale and Calliope River; new transformer at Calliope River; and installation of up to two synchronous condensers and two static var compensators) is required by December 2028.

The second stage (new double circuit line between Larcom Creek and Bouldercombe) is required by December 2029, while the third stage (rebuild Calliope River to Larcom Creek transmission line as a double circuit line) is required by March 2031.

The required commencement dates are provided consistent with these staged completion dates.

Construction of the components of the Gladstone Project must commence in line with the following dates:

- build a new 275kV high-capacity double-circuit line between Calvale and Calliope River (1 June 2026);
- install a new (third) 275/132kV transformer at Calliope River (1 June 2026);
- rebuild Larcom Creek to Bouldercombe transmission line as a 275kV high-capacity double circuit line (1 June 2027);
- rebuild Calliope River to Larcom Creek transmission line as a 275kV high-capacity double circuit line (1 October 2029);
- install up to two synchronous condensers in Central Queensland (or system strength solution equivalent (1 June 2026); and

install up to two static Var Compensators in Central Queensland (or voltage support solution equivalent) (1 June 2026).

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The identified need Powerlink proposes for the candidate priority transmission investment (in accordance with section 22(4)(a) of the Act).

Powerlink's proposed identified need for the Gladstone project:

Ensure ongoing reliability and security of supply in the Gladstone area to:

1. meet the forecast electrical load in anticipation of the closure of the Gladstone Power Station;
2. support the decarbonisation of major industries;
3. compensate for loss of essential system services, such as inertia, system strength and voltage control capability, following the closure of Gladstone Power Station.

The assessment documents Powerlink recommends the Responsible Ministers should direct Powerlink under section 24(4)(a) to use to assess the investment and reasons for that recommendation (in accordance with section 22(4)(b) of the Act).

Powerlink's recommended assessment documents for the Gladstone project (as they are prescribed in Part 3, section 8 of the Regulation):

- the document called 'Regulatory investment test for transmission' dated August 2020, developed and published by the AER under the National Electricity Rules, clause 5.15A.1(a); and
- the document called 'Regulatory investment test for transmission / application guidelines', dated October 2023, developed and published by the AER under the National Electricity Rules, clause 5.16.2(a).

Powerlink's reason/s for recommendation:

- they provide for the assessment to progress in isolation of the ISP development and publication process; and
- they are likely to require fewer modifications to make them fit for Queensland's purposes, given that the Blueprint rather than the ISP is central to the candidate PTI's identified need.

The modifications to the assessment documents Powerlink recommends the Responsible Ministers should include in a direction to Powerlink under section 24(4)(a) to assess the investment and reasons for that recommendation (in accordance with section 22(4)(c) of the Act).

Powerlink's recommended modifications to the assessment documents and the reasons for them are:

- refer to Tables 1 and 2 in this submission.

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Any other matter the Responsible Ministers consider relevant:

- **Consultation timeframes:**

Confirmation that prior to making the submission Powerlink consulted with those parties it considered to be key stakeholders in relation to the Gladstone Project, adopting a consultation best-practice approach, and taking into account the timeframes and relevant confidentiality obligations.

- **Indicative base case assumptions:**

Confirmation that as part of the base case assumptions proposed for the assessment of the Gladstone Project, Borumba Pumped Hydro Energy Storage (PHES) is assumed to have first power in 2030 and that the Callide Renewable Energy Zone is assumed to be declared in the 2024-2025 financial year.

- **Confirmation of consultation with the Board:**

Confirmation that prior to making the submission that Powerlink has consulted with the Queensland Energy System Advisory Board on the identified need for the proposed Gladstone Project.

(in accordance with section 22(4)(d) of the Act).

Powerlink undertook consultation:

- 10 July to 7 August 2024 for submissions on the consultation paper and draft submission.

To facilitate industry and consumer engagement on the project, Powerlink published a consultation paper in mid-July, including a draft of the section 22 submission. Powerlink also held a public webinar on the project, to which approximately 50 representatives of customers and other interested parties attended. Powerlink has also engaged closely with its PTI Expert Panel, and representatives of the Australian Energy Regulator (AER), who will provide independent advice on the submission to Responsible Ministers.

Powerlink received seven submissions on the consultation paper and draft submission, including from the PTI Expert Panel. All submissions expressed support for the project, and no material concerns were raised regarding Powerlink's draft section 22 submission.

- 10 July to 4 October 2024 for submissions from potential non-network solution providers (ongoing).

Submissions received on potential non-network options will be assessed and will inform alternative credible options, which will be consulted on under the formal Assessment of the project, together with other inputs and assumptions, including the indicative base case assumptions directed by the Responsible Ministers.

Powerlink consulted the Board on the identified need for the Gladstone Project on 1 August 2024 as required under section 22(5) of the Act.

Table 1: Powerlink’s recommended modifications to the Regulatory Investment Test for Transmission assessment document

The following recommended modifications apply to the Regulatory Investment Test for Transmission, issued by the Australian Energy Regulator in August 2020. Each modification is considered to be appropriate and as minimal as practical.

Provision or general topic	Recommended modification	Reason for modification
Throughout	<p>Any reference to Regulatory Investment Test for Transmission (RIT-T) should be read as candidate PTI assessment.</p> <p>Any reference to RIT-T proponent should be read as a reference to Powerlink.</p> <p>Any reference to RIT-T project should be read as a reference to candidate priority transmission investment.</p> <p>Any reference to the AER should be read as a reference to the Responsible Ministers.</p>	<p>The <i>Energy (Renewable Transformation and Jobs) Regulation 2024</i> (the Regulation) (schedule 1, section 1) provides that the RIT-T does not apply to Powerlink in respect of a candidate priority transmission investment, eligible priority transmission investment or priority transmission investment.</p> <p>The PTI assessment process is overseen by the Responsible Ministers, as set out in the Act. Therefore, it is not applicable to refer to the AER in relation to the PTI assessment.</p> <p>Only Powerlink may be directed to undertake an assessment of a candidate priority transmission investment. Therefore, the term ‘RIT-T proponent’ is not applicable.</p>
Throughout	<p>The relevant circumstances in which a preferred option may have a negative net economic benefit also includes the assessment of a candidate PTI.</p> <p>A preferred option may also have a negative net economic benefit where the identified need relates to a candidate PTI.</p>	To reflect section 24(3) of the Act.
Nature and Authority, Application (page 3)	Delete	The Regulation (schedule 1, section 1) provides that the RIT-T does not apply to Powerlink in respect of a candidate PTI, eligible PTI or PTI.
Paragraph 4	Replace paragraph 4 with the following:	To ensure that the value of reductions to Australian greenhouse gas emissions

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	<p>Any <i>cost</i> or <i>market benefit</i> that cannot be measured as a cost or <i>market benefit</i> to those who produce, consume and/or transport electricity in the <i>market</i>, other than for changes in Australia's greenhouse gas emissions, must not be included in any analysis under the RIT-T. The allocation of <i>costs</i> and <i>market benefits</i> between electricity and other markets must be based on the <i>cost allocation principles</i>.</p>	<p>that are not realised by National Electricity Market (NEM) participants can be included in the assessment. This change is consistent with:</p> <ul style="list-style-type: none"> • the National Electricity Objective; • the <i>Clean Economy Jobs Act 2024</i>; and • the <i>Energy (Renewable Transformation and Jobs) Act 2024</i>. <p>It is also consistent with recent amendments made to clauses 5.15A.1 and 5.15A.2, and the definition of net economic benefit, in the NER.</p>
Paragraph 7	<p>Replace first sentence of paragraph 7 with the following:</p> <p><i>A market benefit</i>, other than for changes in Australia's greenhouse gas emissions, must be a benefit to those who consume, produce and/or transport electricity in the <i>market</i>, that is, the change in producer plus consumer surplus</p>	As per modification to paragraph 4.
Paragraph 11	<p>Add to paragraph 11:</p> <p>(i1) the value of Australia's greenhouse gas emissions reduction gained or foregone from implementing the credible option;</p>	As per modification to paragraph 4.
Paragraph 22(a)	<p>Add to paragraph 22(a):</p> <p>A reasonable forecast of electricity demand may also reflect assumptions regarding technologies to meet economy wide emissions reductions targets or goals.</p> <p>Note: this modification does not mean this type of demand forecast must be used across all analysis.</p>	To ensure that any additional scenarios developed are consistent with the analysis that underpinned the OIP identified in the Blueprint, or subsequent changes to the inputs, assumptions and scenarios relied on by the QESAB in the development of any subsequent OIP to reflect emerging technologies.

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<p>Paragraphs 22(b) and (c)</p>	<p>Add to paragraphs 22(b) and 22(c): Include projects that form the optimal infrastructure pathway in the list of types of projects – both transmission (eligible PTI) and generation (REZ), unless there is good reason not to.</p>	<p>To ensure that any additional scenarios developed are consistent with the analysis that underpinned the OIP identified in the Blueprint.</p>
<p>Paragraphs 24-29</p>	<p>Apply the following overarching principle to paragraphs 24 to 29: The states of the world must consider for inclusion those projects that form the optimal infrastructure pathway identified in the Blueprint, unless there is good reason not to, and must not consider any projects, including ISP projects, which are inconsistent with the OIP</p>	<p>To avoid the inclusion of identified projects that are incompatible with the OIP identified in the Blueprint</p>

Table 2: Powerlink’s recommended modifications to the Regulatory Investment Test for Transmission Application Guidelines assessment document

The following recommended modifications apply to the Regulatory Investment Test for Transmission Application Guidelines, issued by the Australian Energy Regulator in October 2023. Each modification is considered to be appropriate and as minimal as practical.

Provision or general topic	Recommended modification	Reason for modification
Section 3.1 (Identified need)	<p>Replace the first two paragraphs in section 3.1 with the following:</p> <p>An identified need must be in service to the OIP’s power system needs; that is, an OIP need which a candidate PTI seeks to address, and support other elements of Queensland’s optimal infrastructure pathway, such as PHES and REZ.</p> <p>An identified need may additionally include the following, provided that they have been identified as relevant to Queensland’s OIP:</p> <ul style="list-style-type: none"> • an increase in the sum of consumer and producer surplus in the NEM; • reliability corrective action; • the provision of inertia network services; or • the provision of system strength services. 	<p>Each candidate PTI has been identified as being part of Queensland’s OIP, and must serve a specific need of the OIP. That need is the PTI assessment’s identified need. While the candidate PTI may serve other needs; for example, a need that is relevant to the NEM, it must at all times serve the specific need associated with it, in the OIP.</p>
Section 3.2.4 (Number and range of credible options)	<p>Add the following principle:</p> <p>Credible options should, where practicable, include the option described in the most recent Blueprint’s OIP. Other credible options that meet the identified need should also be assessed.</p>	<p>Each candidate PTI has been identified as being part of Queensland’s OIP, hence must be considered a credible option in the PTI assessment together with any alternative credible options identified.</p>
Section 3.3 (Characterising the base case)	<p>Add the following principle:</p> <p>The Queensland Government may require Powerlink include in a PTI assessment’s base case specific projects from the OIP.</p>	<p>The indicative base case assumptions to be included in the PTI assessment for the Gladstone Project are:</p> <ul style="list-style-type: none"> • Borumba PHES – first power 2030.

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<p>Section 3.4 (Selecting reasonable inputs)</p>	<p>Add in section 3.4:</p> <p>The assessment may include inputs, assumptions and scenarios relied on by the QESAB in the development of the OIP, taking into account QESAB updates since the latest Blueprint was published, alone or in addition to other inputs and assumptions.</p>	<ul style="list-style-type: none"> Callide REZ – declared in 2024/2025. <p>The assessment’s inputs, assumptions and scenarios must be reasonable and consistent with the Queensland Government’s policy objectives. Information that has been relied on by the QESAB has been assured by an independent expert and therefore, for the purposes of the assessment, Powerlink does not need to demonstrate the use of such information as ‘necessary’.</p> <p>However, where Powerlink proposes to use new, omitted or varied input, assumption or scenario that has not already been relied on by the QESAB, then it will need to demonstrate to the Responsible Ministers why it is necessary. These may include inputs, assumptions and scenarios relied on by AEMO in the development of the Optimal Development Path, provided they are not inconsistent with the inputs, assumptions and scenarios relied on by the QESAB in the development of the OIP, taking into account QESAB updates since the latest Blueprint was published.</p>
<p>Section 3.7.1 (Deriving states of the world in each reasonable scenario)</p>	<p>Replace the four bullet points following paragraph 3 of section 3.7.1 with the following:</p> <ul style="list-style-type: none"> Optimal Infrastructure Pathway projects: these must form part of all states of the world, unless directed by the Responsible Ministers not to include them. Committed projects: these must form part of all states of the world, 	<p>The states of the world must include OIP projects, unless directed by the Responsible Ministers not to include them, and committed projects. Actionable ISP projects, anticipated projects and modelled projects will form part of relevant states of the world unless doing so would be inconsistent with the OIP.</p>

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	<p>consistent with the treatment of existing assets and facilities.</p> <ul style="list-style-type: none"> • Actionable ISP projects: these projects will form part of all states of the world, unless doing so would be inconsistent with the Optimal Infrastructure Pathway. • Anticipated projects: these projects will form part of all relevant states of the world, unless doing so would be inconsistent with the Optimal Infrastructure Pathway. • Modelled projects: these projects will form part of all relevant states of the world, unless doing so would be inconsistent with the Optimal Infrastructure Pathway. 	
<p>Section 3.8 (Reasonable scenarios and sensitivities)</p>	<p>Add the following principle: A reasonable scenario may include changes in the assumed timing and magnitude of additional electricity demand due to electrification of industrial processes or establishment of new industries (for example, hydrogen).</p>	<p>A reasonable forecast of electricity demand may also reflect assumptions regarding technologies to meet economy wide emissions reductions targets or goals. Note: this modification does not mean this type of demand forecast must be used across all analysis.</p>
<p>Part 4 (Stakeholder engagement process in applying the RIT-T), sections 4.1 – 4.4.</p>	<p>All references to the stakeholder engagement process, reports and timeframes set out in the NER are removed and replaced by the stakeholder engagement process proposed by Powerlink and directed by the Responsible Ministers.</p> <p>Section 4.1 (Consumer and non-network engagement) is retained to the extent a best practice approach to consumer and non-network engagement can be accommodated within the timeframes directed by the Responsible Ministers and in</p>	<p>Consultation remains an important feature of the PTI framework as legislated in Part 5 (Priority Transmission Investments) of the Act. Consultation timeframes may be reduced to ensure the PTI framework provides an accelerated pathway for Queensland to deliver transmission investments on its OIP.</p> <p>The PTI framework will continue to seek relevant stakeholders’ views on draft credible options, methodology, and on the draft assessment results.</p>

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	consideration of confidentiality obligations.	