

**Consultation paper**

# National Electricity Amendment (Resetting Powerlink's system strength unit prices) Rule

Proponent

Powerlink

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**Reference: ERC0382**

## About the AEMC

The AEMC reports to the energy ministers. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the energy ministers.

## Acknowledgement of Country

The AEMC acknowledges and shows respect for the traditional custodians of the many different lands across Australia on which we all live and work. We pay respect to all Elders past and present and the continuing connection of Aboriginal and Torres Strait Islander peoples to Country. The AEMC office is located on the land traditionally owned by the Gadigal people of the Eora nation.

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## Summary

- 1 As the electricity sector decarbonises, significant investment in new generation is required. A substantial volume of this generation is forecast to be lower-cost, inverter based resources (IBR) such as batteries, wind, and solar. Connection of this generation will necessitate investments in system strength services to ensure the secure operation of the power system.
- 2 The system strength framework in the National Energy Rules (NER) was recently evolved to help the power system operate securely and efficiently during and after the transition to renewables and batteries. The framework is designed to promote the efficient investment in, and efficient operation and use of, system strength services by encouraging connection applicants to make a decision about whether to:
  - self-remediate their plant's general system strength impact, or
  - pay the system strength charge for centrally provided system strength services.
- 3 In order to make efficient decisions about whether to self-remediate or pay the system strength charge, connection proponents rely on the system strength charge reflecting the costs of providing the required amount of system strength at the proposed location.
- 4 As such, Powerlink is seeking a participant derogation for a one-off reset to its system strength unit prices (SSUPs), to help ensure that connection proponents in Queensland can make the most efficient choice between paying the charge and self-remediation.

### What issue has Powerlink identified?

- 5 On 7 December 2023 Powerlink submitted a rule change request to the Australian Energy Market Commission (AEMC or the Commission) proposing that it, as the system strength service provider (SSSP) for the Queensland region, be able to reset its SSUPs. This would reflect Powerlink's improved cost estimates for meeting system strength requirements. The SSUP is a component of the system strength charge which is designed to reflect the system strength costs that a connecting party would impose on the system. The system strength charge is based on three components:
  1. the SSUP
  2. the system strength locational factor (SSL) and
  3. the system strength quantity (SSQ).
- 6 The SSUP (\$/MVA) reflects the forward-looking cost of the SSSP supplying system strength at each system strength node. Each SSSP determines the SSUP applicable to each of the system strength nodes in its network.
- 7 How the SSSPs calculate their SSUPs is set out in each SSSP's transmission pricing methodologies, which must comply with the AER's Transmission Pricing Methodology Guidelines.
- 8 The SSUPs must be fixed (subject to consumer price indexation (CPI)) for the system strength charging period. Each charging period runs from the start of the second year of the SSSP's regulatory control period until the end of the first year of the next regulatory control period. That is, the SSUPs are set and fixed for five years.
- 9 Each SSSP must publish its prices by 15 March each year so that distributed network service providers (DNSPs) can use those prices for setting their prices in April or May each year and retailers can have final network prices sufficiently in advance of the new prices commencing on 1 July each year.

- 10 When Powerlink prepared the SSUPs for Queensland's nodes in early 2023, it had not yet gone to market to seek information and proposals to meet both the forecast minimum and efficient levels of system strength required for Queensland over the next 10-years. Powerlink established SSUPs based on the most reasonable information available to it at the time. This largely came from benchmarked costs for synchronous condensers as the then most likely technology to meet requirements, as well as energy costs to run these machines.
- 11 Powerlink has now had the opportunity to formally test the market for system strength services. They have stated that "early indications from potential service providers shows that the costs to procure system strength services could be materially lower than those used to calculate our published SSUPs. This is largely due to a change in the potential mix of technologies that could now be used to meet system strength requirements over the 10-year outlook period".<sup>1</sup>
- 12 Powerlink has stated that its SSUPs are, on average, higher than those published for other regions.<sup>2</sup> Powerlink considers that allowing it to reset its SSUPs to incorporate new market information will bring Queensland's SSUPs more closely in line with those in other regions.<sup>3</sup> Powerlink has advised that connection proponents have stated that the current SSUPs have signalled that they should (and will) self-remediate their system strength impact in every case.<sup>4</sup>Powerlink have indicated, this could mean IBR connections in Queensland will be delayed.<sup>5</sup>
- 13 Powerlink proposes to publish the revised SSUPs on 15 March 2024, to take effect from 1 July 2024 and to stay in place for the four remaining years of Powerlink's current system strength charging period.
- 14 Powerlink expects the proposed rule change to result in a number of beneficial outcomes. Powerlink have set out that these include:
- lower published SSUPs for Queensland
  - lower costs to IBR proponents seeking to connect to the Queensland electricity transmission network
  - a faster transition to a lower carbon emissions future; and
  - in doing so, lower overall costs to electricity consumers.<sup>6</sup>

## We are seeking your views on a rule change proposal that would allow Powerlink to reset its system strength unit prices

- 15 Powerlink has proposed a rule change to allow a one-off reset of SSUPs in Queensland within the current system strength charging period. Powerlink's rule change request asks the Commission to allow Powerlink to reset and publish SSUPs for Queensland on 15 March 2024 and to have these prices take effect from 1 July 2024.<sup>7</sup> This would ensure the publication and effective timeframes align with the broader annual prescribed transmission pricing process. The SSUPs would apply for the four remaining years of the current system strength charging period.
- 16 Powerlink requests that the Rules be amended to the minimum extent necessary to give effect to its proposal.<sup>8</sup> Powerlink has also stated that its intention is not to inadvertently capture other

1 Powerlink rule change request, p.3.

2 Powerlink rule change request, p.4.

3 Powerlink rule change request, p.4.

4 Powerlink rule change request, p.5.

5 Powerlink rule change request, p.5.

6 Powerlink rule change request, p.3.

7 Powerlink rule change request, p.3.

8 Powerlink rule change request, p.3.

SSSPs through this rule change.<sup>9</sup>

## The Commission has opted to use the expedited rule change process

- 17 Powerlink requested the AEMC to apply an expedited process to this matter on the basis that its proposal is non-controversial and unlikely to have a significant effect on the National Electricity Market (NEM). Their reasons for this are set out in **chapter 1**.
- 18 The AEMC is assessing this rule change under the expedited process because we consider the rule change request is non-controversial, that is, it is unlikely to have a significant effect on the NEM. This is because:
- The rule change request focuses on resetting a component of the system strength charge to reflect new information that was not available to Powerlink when its SSUPs were first set.
  - The system strength charging arrangements are part of a process that already exists in the NER.
  - It will remain open to project proponents connecting IBR to a part of the national grid in Queensland for which Powerlink is the SSSP to continue to self-remediate, should that be the more efficient outcome for them.
  - Greater take-up of the system strength charge in Queensland, where that is more efficient than self-remediation, will not give rise to adverse effect on participants or consumers.

## The Commission has prepared a draft rule which we are also seeking feedback on

- 19 To facilitate stakeholder consultation on the expedited process, the AEMC has prepared an indicative draft rule. This provides some indication as to how the proposed participant derogation could work, including that the reset SSUPs should be lower than Powerlink's current SSUPs and that Powerlink would have a one-month window within which to publish the reset SSUPs and must apply the reset SSUPs with effect from 1 July 2024. The proposed transitional arrangements also suggest potential obligations on Powerlink and the other Network Service Providers (NSPs) in Queensland (Energex and Ergon Energy). These relate to how existing connection enquiries, applications to connect, and connection agreements could be treated after the commencement of the new framework. See **chapter 3** for further details.
- 20 We are seeking your feedback on this indicative draft rule.

## We are also seeking your views on the three assessment criteria that the Commission will use in making a final determination

- 21 Considering the National Electricity Objective (NEO), Section 7 of the National Electricity Law (NEL), and the issues raised in the rule change request, the Commission proposes to assess the rule change request against three assessment criteria.
- 22 We are seeking feedback on our proposal to assess the request against the following three criteria.
- **Safety, security and reliability, outcomes and services:** We selected this criterion because ensuring the system strength framework works as intended will help to ensure there are no

<sup>9</sup> Powerlink rule change request, p.3.

unnecessary delays to the connection of IBR in Queensland, which are needed for maintaining reliability in the context of the retirement of synchronous plant.

- **Principles of market efficiency, concepts of efficiency:** We selected this criterion because of the rule change's objective to lower the SSUP in Queensland so that they provide more informed price signals for proponents. Ensuring the system strength charge is set at an efficient level will help to ensure that IBR proponents looking to invest in Queensland can choose the most efficient approach between self-remediation and paying the centralised system strength charge. Efficient choices in connections benefit consumers as the costs of providing system strength are eventually passed on to consumers.
- **Implementation considerations, timing and uncertainty:** We selected this criterion because the issue impacts the timing and uncertainty in how the system strength charge is applied. We will consider whether the benefits of addressing this issue now and having a more informed price signal for investors outweigh concerns about any uncertainties that may arise from updating the Queensland SSUPs.

## Submissions are due by 15 February 2024 with other engagement opportunities available

- 23 There are several options to provide your feedback throughout the rule change process.
- 24 Written submissions responding to this consultation paper must be lodged with the Commission by 5pm 15 February 2024 via the Commission's website, [www.aemc.gov.au](http://www.aemc.gov.au).
- 25 Written objections to the expedited process must be lodged with the Commission by 5pm, 1 February 2024 via the Commission's website, [www.aemc.gov.au](http://www.aemc.gov.au).
- 26 If you wish to engage with us further, we are happy to provide one-on-one discussions or industry briefing sessions. See the section of this paper about "How to engage with us" for further instructions and contact details for the project leader.

## Full list of consultation questions

**Question 1: Do you have any feedback on the issues Powerlink has raised in its rule change request?**

**Question 2: What are your views about the solution proposed by Powerlink?**

**Question 3: Do you have any feedback on the indicative draft rule?**

**Question 4: In relation to project proponents that have already concluded connection agreements and wish to change their election not to pay the system strength charge, do you consider the proposed approach is workable?**

**Question 5: Do you agree with the proposed assessment criteria? Are there additional criteria that the Commission should consider or criteria included here that are not relevant?**

## HOW TO MAKE A SUBMISSION AND OBJECT TO AN EXPEDITED PROCESS

### We encourage you to make a submission

Stakeholders can help shape the solutions by participating in the rule change process. Engaging with stakeholders helps us understand the potential impacts of our decisions and, in so doing, contributes to well-informed, high quality rule changes.

We have included questions in each chapter to guide feedback, and the full list of questions is above. However, you are welcome to provide feedback on any additional matters that may assist the Commission in making its decision.

### How to make a written submission

**Due date:** Written submissions responding to this consultation paper must be lodged with the Commission by 5pm, 15 February 2024.

**How to make a submission:** Go to the Commission's website, [www.aemc.gov.au](http://www.aemc.gov.au), find the "lodge a submission" function under the "Contact Us" tab, and select the project reference code ERC0382.<sup>10</sup>

Tips for making submissions are available on our website.<sup>11</sup>

**Publication:** The Commission publishes submissions on its website. However, we will not publish parts of a submission that we agree are confidential, or that we consider inappropriate (for example offensive or defamatory content, or content that is likely to infringe intellectual property rights).<sup>12</sup>

### How to object to an expedited process

The Commission proposes to use an expedited process (eight weeks, one round of consultation) for this rule change for the reasons set out in section **chapter 1**. You can object to this process. We will switch to the standard rule change process if we receive a valid objection.<sup>13</sup>

**Due date:** Written objections to the expedited process must be lodged with the Commission by 5pm, 1 February 2024.

**How to lodge an objection to the expedited process:** Go to the Commission's website, [www.aemc.gov.au](http://www.aemc.gov.au), find the "lodge a submission" function under the "Contact Us" tab, and select the project reference code ERC0382.<sup>14</sup>

**Contents:** Objections must set out the reasons why you consider for a non-controversial NER rule: the Rule is not unlikely to have a significant effect on the national electricity market.

**Publication:** The Commission publishes objections on its website. However, we will not publish materials that we agree are confidential, or that we consider inappropriate (for example offensive or defamatory content, or content that is likely to infringe intellectual property rights).<sup>15</sup>

<sup>10</sup> If you are not able to lodge a submission online, please contact us and we will provide instructions for alternative methods to lodge the submission.

<sup>11</sup> See: <https://www.aemc.gov.au/our-work/changing-energy-rules-unique-process/making-rule-change-request/submission-tips>

<sup>12</sup> Further information is available here: <https://www.aemc.gov.au/contact-us/lodge-submission>

<sup>13</sup> See section 96 of the NEL. The Commission will consider if the reasons set out in the objection are misconceived or lacking in substance.

<sup>14</sup> If you are not able to lodge an objection online, please contact us and we will provide instructions for alternative methods to lodge the objection.

<sup>15</sup> Further information is available here: <https://www.aemc.gov.au/contact-us/lodge-submission>

## For more information, you can contact us

Please contact the project leader with questions or feedback at any stage.

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# 1 The context for this rule change request

This consultation paper seeks stakeholder feedback on the rule change request submitted by Powerlink on 7 December 2023. The request seeks a participant derogation for Powerlink to allow a one-off reset of the system strength unit prices (SSUPs) for each system strength node in Queensland.

In the rule change request, Powerlink identifies as an issue that the current framework does not allow SSUPs to be updated, within the five-year system strength charging period, to take into account new information on the costs to procure system strength as new information and services become available. Powerlink has identified new information that it considers would justify revising its SSUPs which are set too high.

Powerlink do not want to inadvertently capture any other System Strength Service Providers (SSSPs) through this rule change request. Powerlink proposes to publish the revised SSUPs on 15 March 2024, to take effect from 1 July 2024 and to stay in place for the four remaining years of Powerlink's current system strength charging period. We have set out the issues and the proponent's solution in this consultation paper and have included questions in each chapter to guide feedback. You are also welcome to provide feedback on any relevant matters that may assist the Commission in making its decision.

## 1.1 Ensuring adequate system strength services is a key priority for the transition

As the electricity sector decarbonises, significant investment in new generation is required. A substantial volume of this generation is forecast to be lower-cost, IBR such as batteries, wind, and solar. Connections of this generation will necessitate investments in system strength services to ensure the secure operation of the power system.

System strength relates to the stability of the voltage waveform. Along with frequency, voltage is a core electrical quality that must be maintained for a stable power system. A smooth, consistent and predictable voltage waveform is critical to the power system's voltage remaining within the parameters required for a safe transfer of energy from generators to consumers. A strong system with a stable voltage is particularly important for supporting the decarbonisation of the power sector that is currently underway.

In October 2021 the AEMC introduced a new system strength framework in the National Electricity Rules (NER) to ensure the provision of system strength is more forward looking and coordinated. In March 2023 the SSUPs requirement, under this framework, was published for the first time.

## 1.2 This rule change has emerged from the implementation of the evolved system strength framework

In October 2021 the AEMC made a rule<sup>16</sup> changing the system strength requirements for proponents connecting to the NEM. The Rule introduced a new obligation for a subset of Transmission Network Service Providers (TNSPs) in each region to provide the right amount of system strength to support the connection of IBR as forecast by the Australian Energy Market Operator (AEMO).<sup>17</sup> The system strength standard is met by a subset of TNSPs -the System Strength Services Providers SSSPs.

<sup>16</sup> National Electricity Amendment (Efficient management of system strength on the power system) Rule 2021, 21 October 2021.

<sup>17</sup> AEMO published the levels in December 2022, in its first System Strength Report, with SSSPs required to publish the SSUPs by 15 March 2023.

In addition, the rule change made changes to access standards to seek to limit the amount of system strength new connections demanded from the system.

Of relevance to this rule change proposal, the 2021 rule introduced a new system strength mitigation requirement, evolving the framework away from the 'do not harm' obligations. This means when a proponent seeks to connect to the networks, it now has two options:

1. Pay the System Strength Service Provider (SSSP) the system strength charge for hosting capability, with the charge reflecting the system strength requirements of the connecting party.
2. Self-remediate its general system strength impact, by proposing an appropriate system strength remediation scheme or paying the Network Service Provider to undertake system strength connection works.

In order to make efficient decisions about whether to remediate or pay the charge, connection proponents rely on the signal provided by the system strength charge. This consultation paper outlines Powerlink's request to reset their SSUPs to support connection proponents in making this choice. Having now had the opportunity to formally test the market for system strength services, Powerlink advise that early indications from potential service providers show that the costs to procure system strength services could be materially lower, than those used to calculate their published SSUPs.<sup>18</sup>

Efficient decisions by connection applicants contribute to the overall aims of the system strength framework which are to:

- encourage better locational decisions by sending clear signals about the cost of system strength at specific points
- promote more effective management of system strength by clearly allocating the responsibilities of providing and paying for it
- capture potential efficiencies from central procurement of system strength
- ultimately reduce total demand for system strength and the total cost to consumers.

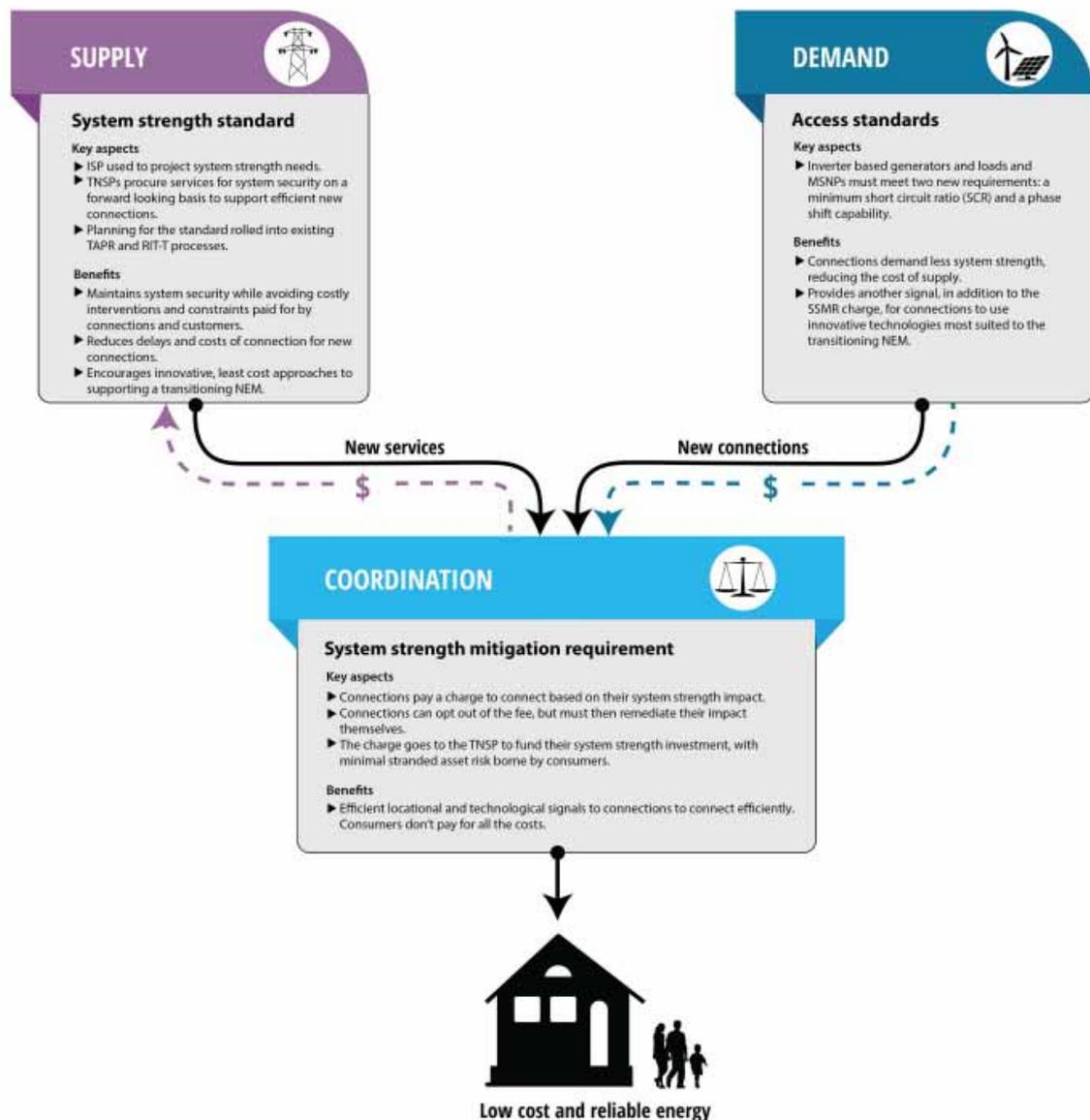
As illustrated below, the final rule<sup>19</sup> set out transitional arrangements to support its implementation:

- Supply side arrangements commencing 1 December 2022, at which time SSSPs must begin planning to provide the efficient level of system strength by 2 December 2025 at the latest
- Demand side and coordination arrangements that evolve the 'do no harm' obligation, commencing on 15 March 2023, from which time a new connecting party may opt to pay the system strength charge rather than having to self-remediate.

<sup>18</sup> Powerlink rule change request, p.3.

<sup>19</sup> Efficient management of system strength on the power system, final determination, p iv.

Figure 1.1: Overview of evolved system strength framework



Source: AEMC

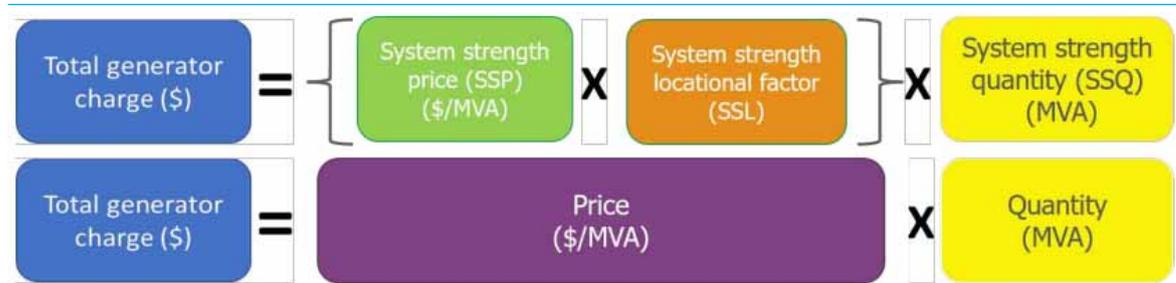
### 1.2.1 The purpose and design of the system strength charge

The system strength charge is designed to reflect the system strength costs that a connecting party would impose on the system. The AER determines permitted methodologies for determining SSUPs.

The system strength charge is based on 3 components with the idea being to contribute to lower consumer bills by allowing the most accurate price signal to be sent to connecting parties resulting in the lowest total system costs:

1. the system strength unit price (SSUP)
2. the system strength locational factor (SSL) and
3. the system strength quantity (SSQ).

Figure 1.2: Components of the system strength charge



Source: AEMC

Each component in the above figure reflects different cost drivers -being the provision of the service or the use of it due to either technology or distance -and as such would send price signals for the connecting party to incentivise efficient behaviour.

### 1.2.2 This rule change relates to the calculation of system strength unit prices

The SSUPs are set by the relevant SSSP for each system strength node and reflects the forward-looking cost of the SSSP supplying system strength at each system strength node. The SSUPs may be updated by the SSSP for every system strength charging period. However, during this period the SSUPs cannot change.

The SSUP must be fixed (subject to consumer price indexation (CPI)) for the system strength charging period. Each charging period runs from the start of the second year of the SSSP's regulatory control period until the end of the first year of the next regulatory control period.<sup>20</sup>

## 1.3 Powerlink has proposed a rule change to allow the system strength unit prices in Queensland to be reset within the system strength charging period

Powerlink's rule change request asks the Commission to allow it to reset and publish SSUPs for Queensland on 15 March 2024 and to have these lower prices take effect from 1 July 2024. Powerlink is seeking a participant derogation for a one-off reset to its SSUPs, with the prices applying for the remaining four out of five years of the current system strength charging period, until 30 June 2028.

Powerlink considers the Rule change is aligned to the intent of the Commission's system strength framework to enable the rapid integration of IBR into the power system and support the transition towards a low carbon future at lower cost to energy consumers.<sup>21</sup> Powerlink also considers the rule change will promote the long-term interests of consumers, consistent with the NEO.<sup>22</sup> Powerlink's rationale is set out in more detail in **chapter 2**.

## 1.4 Powerlink have proposed the rule is expedited

In order to meet the 15 March 2024 timeframe Powerlink have requested the Commission to apply an expedited process to this matter on the basis they consider the proposal is unlikely to have a significant effect on the NEM.

<sup>20</sup> Clause 6A.23.5(b)

<sup>21</sup> Powerlink rule change request, p.4.

<sup>22</sup> Powerlink rule change request, p.1.

Powerlink considers the rule can be expedited for the following reasons<sup>23</sup>:

- That the rule request is consistent with the intent of the Commission's evolved system strength framework, which is to enable the rapid integration of IBR into the power system and support the transition towards a low carbon future. The Commission's<sup>24</sup> central procurement of system strength services intends to leverage economies of scale and scope. This should facilitate greater coordination with new connections and ultimately result in more efficient outcomes and lower costs to consumers.
- That there could be a significant impact on the NEM if Powerlink is not permitted to reset its SSUPs. IBR proponents seeking to invest in Queensland indicated they will self-remediate their system strength impact, rather than participate in the central system strength procurement framework. This approach would be contrary to facilitating outcomes in a coordinated and efficient manner at a time when we need to enable an energy market in transition to a lower carbon future.
- That Powerlink's SSUPs are, on average, higher than those published for other States. While the precise reasons for these differences between states is not clear, Powerlink consider that providing it with the ability to reset these prices to incorporate new market information would bring Queensland SSUPs more closely in line with those in other jurisdictions.<sup>25</sup>
- Powerlink also sought in-principle support from other TNSPs on their initial rule change proposal. At that time, TNSPs were generally comfortable with the proposal and a number of them assumed that it may apply to other SSSPs on an opt-in rather than mandatory basis.

#### 1.4.1 The Commission is proposing to use an expedited process for this rule change

We propose to use the expedited rule making process under section 96 of the NEL because we consider the rule change request is a request for a non-controversial rule, and using the expedited process (eight weeks in total, with one round of consultation) is appropriate in these circumstances. The process for objecting to the expedited rule making process is set out in the section on How to make a submission.

We consider the rule change request is non-controversial – that is, the rule change is unlikely to have a significant effect on the NEM<sup>26</sup> because:

- The rule change request focuses on resetting a component of the system strength charge to reflect new information that was not available to Powerlink when its SSUPs were first set.
- The system strength charging arrangements are part of a process that already exists in the NER.
- It will remain open to project proponents connecting IBR to a part of the national grid in Queensland for which Powerlink is the SSP to continue to self-remediate, should that be the more efficient outcome for them.
- Greater take-up of the system strength charge in Queensland, where that is more efficient than self-remediation, will not give rise to adverse effect on participants or consumers.

We will use the expedited rule change process (8 weeks) for this request. This includes the following formal stages:

<sup>23</sup> Powerlink rule change request, p.4.

<sup>24</sup> AEMC, Efficient Management of System Strength on the Power System, Information Note, 21 October 2021.

<sup>25</sup> System Strength Unit Prices - 2023/24 (transgrid .com.au), Electranet: South-Australian-System-Strength-Unit-Prices-for-1-July-2023-ro-30-June-2024.pdf (electranet.com.au), Australian Energy Market Operator: Electricity Transmission Use of System Prices 1 July 2023 - 30 June 2024 (aemo.com.au), TasNetworks: tasmanian-system-strength-unit-prices-for-publicationv2.pdf (tasnetworks.com.au), and Powerlink schedule 3 - System Strength Unit Prices for Queensland -2023/24 (powerlink.com.au).

<sup>26</sup> Section 87 of the NEL.

- a proponent submits a rule change request
- the Commission commences the rule change process by publishing a consultation paper and seeking stakeholder feedback
- stakeholders lodge submissions on the consultation paper and engage through other channels to make their views known to the AEMC project team
- the Commission publishes a final determination and final rule (if relevant).

**Figure 1.3: Expedited rule change process**



Source: AEMC

Note: The expedited process is 8 weeks from the date the consultation paper is published

To assist stakeholders in engaging with this expedited process, the Commission has included an indicative draft rule in this consultation paper which is detailed in **chapter 3**.

The indicative draft rule can be found on the AEMC's project page.<sup>27</sup>

## 1.5 We are seeking your feedback

This consultation paper is the first stage of our formal consultation process. The Commission invites stakeholders to make submissions on this consultation paper by 15 February 2024. If stakeholders have an objection to the expedited process they can object by 1 February 2024.

To make a decision on this proposal, we seek stakeholder feedback on how we propose to assess the stated problem and the proposed solutions outlined in **chapter 2** and **chapter 3**. A list of the key questions is provided at the end of the Summary section.

**Table 1.1:**

| MILESTONE  | KEY DATE   |
|--|------------|
| The AEMC received the rule change request              | 07/12/2023 |
| Consultation paper and indicative draft rule published | 18/01/2024 |
| Final day to object to the expedited process           | 01/02/2024 |
| Close of submissions to the consultation paper         | 15/02/2024 |
| Publication of final determination and final rule      | 14/03/2024 |

<sup>27</sup> Resetting Powerlink's system strength unit prices, project page, <https://www.aemc.gov.au/rule-changes/resetting-powerlinks-system-strength-unit-prices>

| MILESTONE                           | KEY DATE |
|-------------------------------------|----------|
| (if no valid objection is received) |          |

Source: AEMC

Information on how to provide your submission and other opportunities for engagement is set out at the front of this document at the end of the **Summary section**.

You can find more information on the rule change process in *The Rule change process - a guide for stakeholders*.<sup>28</sup>

### 1.5.1 Other recent work on system strength

On 30 November 2023 the Commission published a draft determination and draft more preferable rule<sup>29</sup> that, if made by the Commission, would change the way the system strength quantity (SSQ) component of the system strength charge is calculated. The draft rule would make it equivalent to the magnitude of general system strength impact that a connection proponents would otherwise need to remediate.

This is in response to a rule change request submitted by AEMO. The Commission is progressing this rule change under a fast track process since AEMO has already consulted publicly on the nature and content of its proposal. The consultation occurred while AEMO was developing its system strength impact assessment guidelines (SSIAG) as part of implementing the revised system strength framework.

28 The rule change process: a guide for stakeholders, June 2017, available here: <https://www.aemc.gov.au/sites/default/files/2018-09/A-guide-to-the-rule-change-process-200617.PDF>

29 National Electricity Amendment (Calculation of system strength quantity) Rule 2024.

## 2 The problem raised in the rule change request

Powerlink's rule change request raised the following matters in relation to their SSUPs:

- they have identified new information that indicates system strength costs are lower than originally estimated and captured in their SSUPs which currently cannot be lowered
- they cannot reset their SSUPs because they must be the same in each regulatory year in a system strength charging period (which is five years).

This chapter discusses the above issues and sets out our questions for stakeholder feedback.

### 2.1 Powerlink has identified new information that indicates system strength costs are lower than originally estimated and captured in their system strength unit prices which currently cannot be lowered

At the time Powerlink prepared the SSUPs in early 2023, they had not yet gone to market to seek information and proposals to meet both the forecast minimum and efficient levels of system strength required for Queensland over the next 10-years.

Powerlink have advised that due to the timing around which the first set of SSUPs were required to be published (15 March 2023) and the initial stage they were at in terms of their Regulatory Investment Test for Transmission (RIT-T) process, they established SSUPs based on the most reasonable information available to them at the time. That information comprised largely benchmarked costs for synchronous condensers as the technology to meet requirements, as well as energy costs to run the machines.<sup>30</sup>

Later in March 2023 when Powerlink commenced the first stage of their RIT-T, early indications from potential system strength service providers have shown that the costs to procure system strength could be materially lower than those used to calculate the SSUPs. Powerlink has stated that technologies have developed faster than they anticipated. This acceleration has led to lower forecast costs for system strength services.<sup>31</sup>

Powerlink also notes that at present, the price signal created by its published SSUPs has resulted in feedback from IBR proponents that they intend to self-remediate their system strength impact.<sup>32</sup> Powerlink considers that, if implemented, the rule change proposal would provide IBR proponents with an option to lower costs via centrally procuring system strength in Queensland – and create a pathway for proponents to utilise these arrangements accordingly. Powerlink submits this is aligned with the Commission's objective.<sup>33</sup> to leverage economies of scale and scope in the supply of system strength through greater coordination and consideration of system strength solutions at an aggregated level.

As explained above, Powerlink considers that early indications from potential SSSPs have shown that costs to procure system strength could be materially lower than those used to calculate its SSUPs. Those levels were only published by AEMO in December 2022, in its first system strength report under the evolved framework.

Compared to other jurisdictions Queensland's SSUPs are much higher than others. While prices may be higher at nodes where the network restricts sharing or where sharing is not a real option,

30 Powerlink rule change request, p.2.

31 Powerlink rule change request, p.3.

32 Powerlink rule change request, p.3.

33 AEMC Rule Determination, Efficient Management of System Strength, 21 October 2021, pv.

or where resulting hosting capacity from system strength investment is lower, or other commercial factors. Powerlink is saying that despite any other factors the SSUPs could be lower if new information could be incorporated.

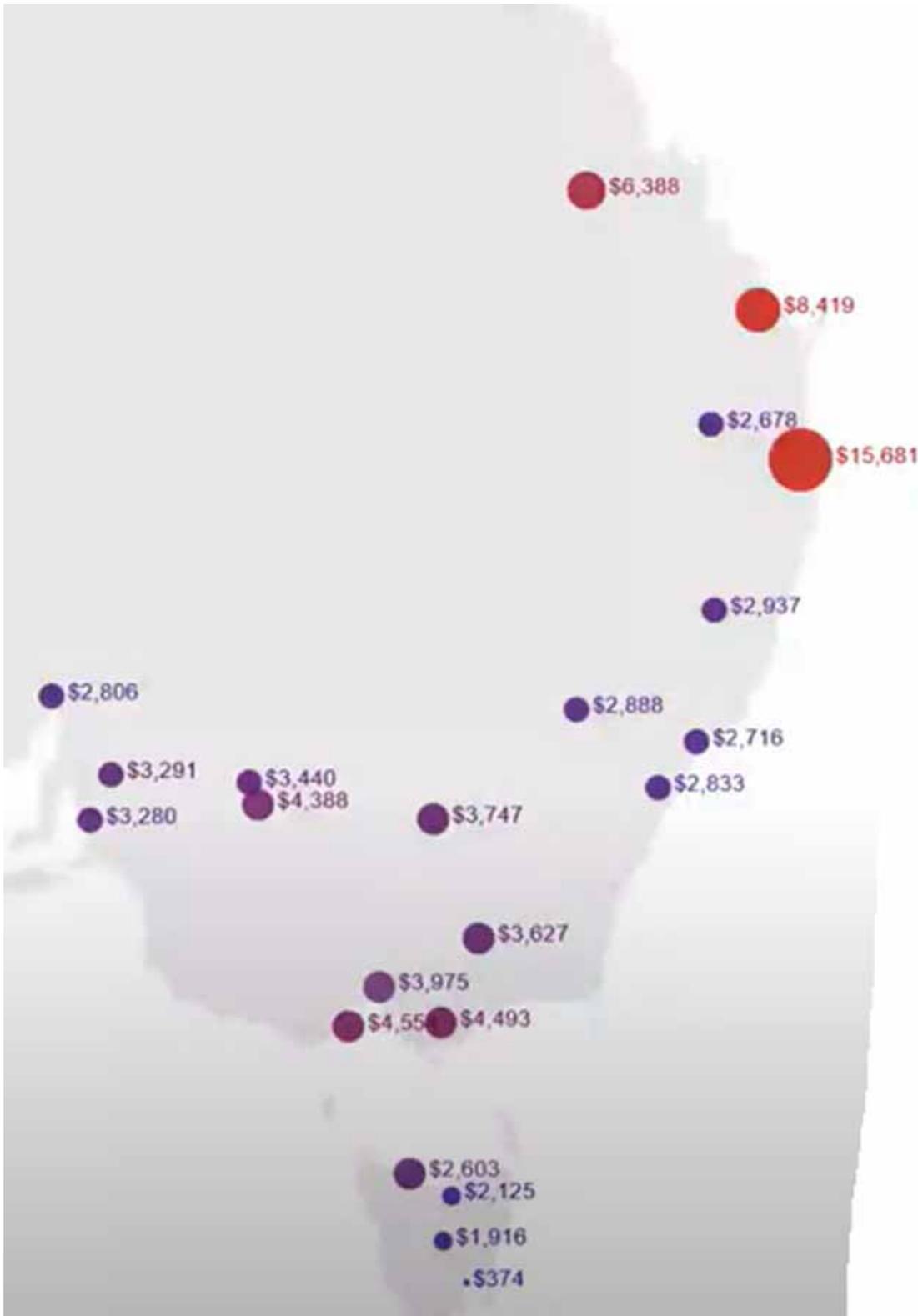
Powerlink considers that their current SSUPs are incentivising proponents to self-remediate. However this may not be the most efficient way to meet the system strength standard. If Powerlink's SSUPs included updated information, then it may be that proponents may opt to pay the system strength charge if it is the most efficient option.

As noted in its rule change request, Powerlink's SSUPs were set before new information revealed alternative and more efficient means of providing system strength. Therefore, Powerlink considers that they are currently too high and are understood to be incentivising connection proponents to self-remediate. According to Powerlink's rule change request, they are not aware of any connection proponent opting to pay the charge while it is based on the current SSUPs.<sup>34</sup> Maintaining the status quo may not be efficient as connection proponents are not likely to pay the charge while it is based on artificially high SSUPs. Under the status quo there may be instances where connection proponents could miss out on efficiencies that they would have otherwise passed onto consumers. In addition, self-remediation typically involves a lengthier connections process and so the higher SSUPs could be contributing to delays in connecting IBR to address reliability and help meet emissions targets.

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34 Powerlink rule change request, p.5.

Figure 2.1: System strength unit prices across nodes



Source: AEMO, system strength webinar <https://www.youtube.com/watch?v=tVnT0LfnEac>

## 2.2 System strength unit prices must be the same in each regulatory year in a system strength charging period

Powerlink's key concern with the current rules is that they do not allow updates to SSUPs for costs to procure system strength services during the course of a system strength charging period. As discussed above, at the time the SSUPs were prepared in early 2023, Powerlink had not yet gone to market to seek information and proposals to meet both the forecast minimum and efficient levels of system strength required for Queensland over the next 10 years.

The NER requires SSUPs to remain the same during the course of a system strength charging period to ensure an appropriate balance between the extent of variability of the charge changing, which could result in risks for investors, and the accuracy of the price signals. The SSUPs can change in subsequent system strength charging periods, reflecting changes in the estimate of the forward-looking cost of its provision.

Having had the opportunity to formally test the market for system strength services, early indications shows that the costs to procure system strength services could be materially lower than those used to calculate Powerlink's published SSUPs. Powerlink wishes to reset their SSUPs to incorporate new information to continue to drive value for customers.

**Question 1: Do you have any feedback on the issues Powerlink has raised in its rule change request?**

### Box 1: How system strength unit prices are calculated and set

#### What is it reflecting

The SSUP (\$/MVA) reflects the forward-looking cost of the SSSP supplying system strength at each system strength node. Each SSSP determines the SSUP applicable to each of the system strength nodes in its network.

The differences in prices at each node are largely driven by local network conditions coupled with the expected quantity of services required at those locations and the resulting hosting capacity at those locations from the investment made there.

#### How it is calculated and set

How an SSSP calculates its SSUPs is set out in its transmission pricing methodology, which must comply with the AER's pricing methodology guidelines. The SSUPs may be updated by the SSSP for every system strength charging period. During this period the SSUP cannot change.

#### Why it is fixed for five years and what this means

The SSUP must be fixed (subject to consumer price indexation (CPI)) for the system strength charging period. Each charging period runs from the start of the second year of the SSSP's regulatory control period until the end of the first year of the next regulatory control period.

This would mean the charging period would be five years with the SSUP fixed for those five years to provide some price certainty for connecting parties.

The five years is based on the current duration of transmission regulatory control periods, which allows for some alignment with the regulatory control period. The five-year period runs from the

second year of a regulatory control period until the first year of the subsequent regulatory control period.

SSSPs must publish their prices by 15 March each year so that DNSPs can use those prices for setting their prices in April or May each year and retailers can have final network prices sufficiently in advance of their commencement on 1 July each year.

SSUPs may change in subsequent system strength charging periods, reflecting changes in the estimate of the forward-looking cost of the provision of system strength services, which could see it either increase or decrease.

This strikes an appropriate balance between the extent of variability of the charge changing (resulting in risks for investors) and the accuracy of the price signals sent by the charge. The Commission considers that the five-year period provides an appropriate balance between investment certainty and economic efficiency.

## 3 The proposed solution and implementation

Powerlink's proposed solution seeks to allow it to reset the SSUPs for Queensland's system strength nodes. Powerlink is asking for the ability to reset its SSUPs to incorporate updated information after beginning the RIT-T process and make the forecast reduced costs to centrally procure system strength available to potential proponents.

This chapter seeks feedback on the solution proposed by Powerlink and the draft rule proposed by the Commission.

### 3.1 Powerlink proposes a solution to update the system strength unit prices for Queensland

Powerlink's key concern with the current rules is that they do not allow them to update the current SSUPs to reflect Powerlink's revised estimate of costs to procure system strength services.<sup>35</sup>

Powerlink's proposal is to amend the Rules to enable it to undertake a one-off reset of SSUPs for Queensland.

Powerlink requests that the Rules be amended to the minimum extent necessary to give effect to its proposal. Powerlink also stated that its intention is not to inadvertently capture other SSSPs through this Rule change.

#### 3.1.1 Powerlink proposes to reset and publish the system strength unit prices on 15 March 2024

Powerlink's proposal is to amend the Rules to enable them to undertake a one-off reset of SSUPs for Queensland. Powerlink wants to publish the revised prices on 15 March 2024 to have them take effect from 1 July 2024 for the four remaining years of the system strength charging period (until 30 June 2028). Powerlink considers these revised SSUPs should continue to be adjusted by CPI each year.<sup>36</sup>

Powerlink considers publishing the SSUPs on 15 March 2024 would ensure that the publication and effective timeframes align with the broader annual prescribed transmission pricing process.

#### 3.1.2 Powerlink have proposed the rule is considered a participant derogation

Powerlink have proposed a narrow rule change, allowing them to reset and publish SSUPs for Queensland nodes on a one-off basis. As such, it is seeking a participant derogation from the Rules.<sup>37</sup>

Powerlink intends for this to be a one-off reset which would apply for four out of five years of the current system strength charging period, plus annual CPI adjustments.

#### 3.1.3 Powerlink has noted potential beneficial outcomes of their proposed solution

Powerlink expects the proposed rule change to result in a number of beneficial outcomes. Powerlink considers that these include:<sup>38</sup>

- lower published SSUPs for Queensland

35 Powerlink rule change request, p.2.

36 Powerlink rule change request, p.3.

37 Powerlink rule change request, p.1.

38 Powerlink rule change request, p.3.

- lower costs to IBR proponents seeking to connect to the Queensland electricity transmission network
- a faster transition to a lower carbon emissions future; and
- in doing so, lower overall costs to electricity consumers.

**Question 2: What are your views about the solution proposed by Powerlink?**

## 3.2 The Commission is publishing an indicative draft rule for consultation

In order to facilitate an expedited process the AEMC is publishing an indicative draft rule for consultation to help stakeholders. The indicative draft rule details how the proposed participant derogation could work, including that the reset SSUPs would need to be lower than Powerlink's current SSUPs, the opportunity to reset SSUPs could expire within one month, and potential obligations on Powerlink and the other Network Service Providers (NSPs) in Queensland relating to existing project proponents. We are interested in stakeholder feedback on this.

The Commission is also interested in stakeholder feedback on the proposed assessment criteria, which can be found in **chapter 4**.

### 3.2.1 How the proposed participant derogation would work

The proposed participant derogation would only apply to Powerlink. The indicative draft rule would derogate from the requirements under clause 6A.23.5(f) of the NER which states that SSUPs for a system strength node must be the same for each regulatory year in a system strength charging period.

Under the indicative draft rule where Powerlink determines revised SSUPs, in line with their approved pricing methodology, the SSUPs:

- would apply for each regulatory year in Powerlink's current system strength charging period commencing on or after 1 July 2024
- would be required to remain the same for each of those years except to the extent the pricing methodology guidelines permit indexation
- would be used for the purpose of calculating system strength charges<sup>39</sup> in respect of the period commencing 1 July 2024 to the end of the current system strength charging period including where the election to pay the system strength charge<sup>40</sup> was made before the start of that period.

#### **The reset SSUPs would be required to be lower than Powerlink's current SSUPs**

Under the indicative draft rule, Powerlink would be able to reset the SSUPs for any of the system strength nodes on its transmission network only if they are lower than the SSUPs for the nodes that Powerlink published in March 2023.

This condition aims to safeguard consumers and connecting proponents from adverse cost impacts and align with the intent of Powerlink's rule change request. Powerlink have stated that early indications from potential service providers show that the costs to procure system strength services could be materially lower than those used to calculate their published SSUPs.

<sup>39</sup> under clause 6A.27.1(a) of the NER.

<sup>40</sup> under clause 5.3.4B(b1) of the NER.

### **The opportunity to reset SSUPs would expire within 1 month**

Under the indicative draft rule, Powerlink's ability to reset its SSUPs would expire at the end of the revision period<sup>41</sup> The revision period ends on 14 April 2024, which gives Powerlink one month from the intended publication of the final rule to revise its SSUPs. If Powerlink revises the SSUPs within the revision period, the SSUPs would apply for the remainder of the system strength charging period.<sup>42</sup>

Powerlink has stated it intends to publish the revised SSUPs on 15 March 2024 and therefore the 14 April 2024. time frame should provide a sufficient amount of time for Powerlink to publish its SSUPs. Further, giving Powerlink a limited timeframe to reset its SSUPs ensures the participant derogation operates as a one-off reset.

### **Obligations on Powerlink for existing connection enquiries**

Under the indicative draft rule, if any party has made a connection enquiry relating to a part of a network where Powerlink is the SSSP, the relevant NSP (Powerlink, Ergon Energy, or Energex) would, be required to, as soon as practicable, notify the connection proponent<sup>43</sup> that Powerlink may revise its SSUPs in accordance with their participant derogation.

### **Connection proponent who originally elected not to pay the system strength charge could change this decision**

Under the indicative draft rule, all applicants for connection to a network for which Powerlink is the SSSP and who were subject to the new system strength framework could have the opportunity to benefit from the revised SSUPs, even where the connection proponent has already elected not to pay the system strength charge or has already concluded its connection agreement setting out an agreed system strength remediation scheme.

The indicative draft rule provides that the relevant NSP (Powerlink, Ergon Energy, or Energex) within 10 business days would notify each project proponent that falls in this group of the opportunity to change its decision.<sup>44</sup>

A project proponent could change its decision by notice to the relevant NSP within 20 business days. The new decision cannot be revoked.<sup>45</sup>

Under the indicative draft rule, if a project proponent has concluded a connection agreement with the relevant NSP, and gives notice that it elects to pay the system strength charge, the project proponent and the relevant NSP must negotiate in good faith to amend the connection agreement to give effect to the new decision.<sup>46</sup> This could involve removing those parts of the agreement dealing with the system strength remediation scheme, since that would no longer be required where the project proponent will instead pay the system strength charge.

**Question 3: Do you have any feedback on the indicative draft rule?**

41 Draft rule Clause 8A.16.3(b).

42 Draft rule clause 8A.16.3(d).

43 Draft rule clause 11.164.2.

44 Draft clause 11.164.3(c).

45 Draft clause 11.164.3(b).

46 Draft clause 11.164.3(e).

**Question 4: In relation to project proponents that have already concluded connection agreements and wish to change their election not to pay the system strength charge, do you consider the proposed approach is workable?**

### 3.3 If the rule cannot be expedited

If the proposed rule cannot be expedited and SSUPs are published on or after 1 July 2024 transitional arrangements would need to be in place.

In this instance, one option would be that any system strength charges calculated from 1 July 2024 to the date of publication of the reset SSUPs would need to be calculated using the revised SSUPs. Any amount charged in excess of this amount would need to be promptly refunded by Powerlink.

## 4 Making our decision

When considering a rule change proposal, the Commission considers a range of factors.

This chapter outlines:

- issues the Commission must take into account
- the proposed assessment framework
- decisions the Commission can make

We would like your feedback on the proposed assessment framework.

### 4.1 The Commission must act in the long-term interests of consumers

The Commission is bound by the NEL to only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the NEO.<sup>47</sup>

The NEO is:<sup>48</sup>

to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system; and
- (c) the achievement of targets set by a participating jurisdiction—
  - (i) for reducing Australia's greenhouse gas emissions; or
  - (ii) that are likely to contribute to reducing Australia's greenhouse gas emissions.

The targets statement, available on the AEMC website, lists the emissions reduction targets to be considered, as a minimum, in having regard to the NEO.<sup>49</sup>

### 4.2 We propose to assess the rule change using these three criteria

#### 4.2.1 Our regulatory impact analysis methodology

Considering the NEO and the issues raised in the rule change request, the Commission proposes to assess this rule change request against the set of criteria outlined below. These assessment criteria reflect the key potential impacts – costs and benefits – of the rule change request. We consider these impacts within the framework of the NEO.

The Commission's regulatory impact analysis may use qualitative and/or quantitative methodologies. The depth of analysis will be commensurate with the potential impacts of the proposed rule change. We may refine the regulatory impact analysis methodology as this rule change progresses, including in response to stakeholder submissions.

Consistent with good regulatory practice, we also assess other viable policy options - including not making the proposed rule (a business-as-usual scenario) and making a more preferable rule - using the same set of assessment criteria and impact analysis methodology where feasible.

47 Section 88 of the NEL.

48 Section 7 of the NEL.

49 Section 32A(5) of the NEL.

#### 4.2.2 Assessment criteria and rationale

The proposed assessment criteria and rationale for each is as follows:

##### 1. Safety, security and reliability, outcomes and services

We selected this assessment criterion because this rule change seeks to incorporate updated information into SSUPs, with the current prices set pushing IBR to self-remediate, which may be increasing connecting times of IBR in Queensland, which are needed for maintaining reliability in the context of the retirement of synchronous plant.

##### 2. Principles of market efficiency, concepts of efficiency

We selected this criterion because of the rule change's potential to lower the SSUPs in Queensland so that they provide more informed signals for proponents. Having updated SSUPs will help to ensure that proponents looking to invest in Queensland can choose the most efficient approach between self-remediation and paying the centralised system strength charge. It was envisaged that there would be circumstances where the centralised charge is the most efficient option as it can harness economies of scale and scope for system strength supply through central procurement which provides for greater coordination and consideration of system strength solutions in aggregate. Efficient choices in connections benefit consumers as these costs are eventually passed onto to consumers.

##### 3. Implementation considerations, timing and uncertainty

We selected this assessment criterion because the issue impacts the timing and uncertainty in how the system strength charge is applied is affected. This rule change addresses issues with the implementation of the system strength framework in Queensland. We will consider whether the benefits of addressing this issue now and having a more informed price signal for investors outweigh concerns about any uncertainties that may arise from updating the Queensland SSUPs. Any concerns about timing and uncertainty are further addressed by using the expedited rule change process for this rule change.

**Question 5: Do you agree with the proposed assessment criteria? Are there additional criteria that the Commission should consider or criteria included here that are not relevant?**

### 4.3 We have three options when making our decision

After using the assessment framework to consider the rule change request, the Commission may decide:

- to make the rule as proposed by the proponent<sup>50</sup>
- to make a rule that is different to the proposed rule (a more preferable rule), as discussed below, or
- not to make a rule.

The Commission may make a more preferable rule (which may be materially different to the proposed rule) if it is satisfied that, having regard to the issue or issues raised in the rule change request, the more preferable rule is likely to better contribute to the achievement of the NEO.<sup>51</sup>

<sup>50</sup> The proponent describes its proposed rule on page 3 of Powerlink's rule change request.

<sup>51</sup> Section 91A of the NEL.

## 4.4 We may make a different rule to apply in the Northern Territory

Parts of the NER, as amended from time to time, apply in the Northern Territory, subject to modifications set out in regulations made under the Northern Territory legislation adopting the NEL.<sup>52</sup>

The proposed rule would have no effect in the Northern Territory, as it amends provisions that have no effect in the Northern Territory.<sup>53</sup> Nevertheless, the proposed rule, being a participant derogation, is not a differential rule within the meaning of clause 14(2) of Schedule 1 to the NT Act. Accordingly, the Commission intends not to assess the proposed rule against the additional elements contained in the Northern Territory legislation.<sup>54</sup>

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52 National Electricity (Northern Territory) (National Uniform Legislation) Act 2015 (**NT Act**). The regulations under the NT Act are the National Electricity (Northern Territory) (National Uniform Legislation) (Modification) Regulations 2016.

53 Under the NT Act and its regulations, only certain parts of the NER have been adopted in the Northern Territory. The version of the NER that applies in the Northern Territory is available on the AEMC website at: <https://energy-rules.aemc.gov.au/ntner>.

54 Clauses 14A and 14B of Schedule 1 to the NT Act, inserting section 88(2a) into the NEL as it applies in the Northern Territory.

## Abbreviations and defined terms

|            |  |
|------------|--|
| AEMC       | Australian Energy Market Commission          |
| AEMO       | Australian Energy Market Operator            |
| AER        | Australian Energy Regulator                  |
| Commission | See AEMC                                     |
| CPI        | Consumer Price Indexation                    |
| DNSP       | Distributed Network Service Provider         |
| IBR        | Inverter based resources                     |
| NEL        | National Electricity Law                     |
| NEM        | National Electricity Market                  |
| NEO        | National Electricity Objective               |
| NER        | National Electricity Rules                   |
| NSP        | Network Service Provider                     |
| RIT-T      | Regulatory Investment Test for Transmission  |
| SSIAG      | System Strength Impact Assessment Guidelines |
| SSL        | System Strength Locational Factor            |
| SSSP       | System Strength Service Provider             |
| SSUP       | System Strength Unit Price                   |
| SSQ        | System Strength Quantity                     |
| TNSP       | Transmission Network Service Provider        |