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Australian Energy Market Operator
Level 17, 197 St Georges Tce
PERTH WA 6000

Submitted via: wa.marketdevelopment@aemo.com.au

Procedure Change Proposal No: AEPC_2024_14 – Reliability Standard Implementation

Alinta Energy appreciates the opportunity to provide feedback on the proposed new WEM Procedure: Reliability Standard Implementation.

| Reference/Issue | Feedback |
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| Use and implications of PASA | We recommend that the WEM Procedure briefly summarise the respective actions that may (or must) be taken if the planning criterion is not satisfied in each planning horizon. Under the current drafting it is not clear what implication this has in each horizon (besides that AEMO will not accept outages that lead to an expected energy shortfall ¹), making it difficult to assess the appropriateness of the scenarios and standards applied. For example, does a change in the EUE forecast also mean that AEMO will recall outages or classify them as 'at risk'? And what interventions may occur. |
| Integral and Related WEM Procedures | <p>We understand that this procedure is intended to inform AEMO's reasonable expectation on whether the SWIS is in a Reliable Operating State, and facilitate AEMO's assessment of risks to Power System Adequacy and actions to mitigate those risks.</p> <p>Per clause 3.3.1, the SWIS is operating in a Reliable Operating State when AEMO has not initiated any manual load shedding directions and does not reasonably expect to initiate any such directions in accordance with this proposed new WEM Procedure.</p> <p>Per 3.3.2(a), the purpose of this WEM Procedure is to set out how AEMO assesses reliability in relation to the following:</p> <ul style="list-style-type: none"> (i) The Long Term PASA; (ii) The Medium Term PASA; (iii) The Short Term PASA; (iv) Pre-Dispatch Intervals and Dispatch Intervals; and (v) Outage assessment and approval, and <p>describe the events that are included or not included in measuring Unserved Energy in relation to maintaining Power System Reliability and Power System Adequacy.</p> <p>Importantly, clause 3.3.3 sets out the Power System Reliability Principles:</p> <ul style="list-style-type: none"> (a) the SWIS should be operated such that it is in a Reliable Operating State to the extent practicable; (b) subject to maintaining Power System Security, where the SWIS is not in a Reliable Operating State, or is not forecast to be in a Reliable Operating State, AEMO must take all reasonable actions to restore or maintain a Reliable Operating State as soon as practicable; and |

¹ We note that the statement that "AEMO will not accept outages that lead to an expected energy shortfall" implies that AEMO will apply a zero tolerance EUE target rather than a 0.0002% target. This appears to be a contradiction within the draft WEM Procedure and inconsistent with the evaluation process applied 3.18E on the WEM Rules and the WEM Procedure: Outages.

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| | <p>(c) AEMO must assess risks to Power System Adequacy and act to minimise any risks to Power System Adequacy in accordance with the WEM Procedure referred to in clause 3.3.2.</p> <p>The following procedures are yet to be developed but provide important context for and contribute to the foundation of the assessment of Power System Reliability and Adequacy:</p> <ul style="list-style-type: none"> • WEM Procedure for Low Reserve Conditions as required by Clause 3.17.11; • WEM Procedure for Short-Term or Medium Term PASA as required by Clause 3.16.10. <p>As these WEM Procedures are yet to be developed, it is difficult to provide meaningful comment and feedback in relation to the proposed processes set out in the Draft WEM Procedure Reliability Standard Implementation.</p> <p>Given Energy Shortfalls have been predicted for the 2024/25 summer period, we consider that it would be prudent to prioritise the development of the PASA and Low Reserve Conditions WEM Procedures.</p> <p>We further suggest that consideration be given to providing a further opportunity for consultation on the WEM Procedure: Reliability Standard Implementation with any Procedure Change Proposal for the WEM Procedures Medium Term PASA and Short Term PASA.</p> |
| Energy Shortfall Planning Criterion | <p>We have a general concern that the planning criterion proposed in paragraphs 2.1.2, 2.1.6, 2.1.10, and 2.1.11 may be too conservative when considered in conjunction with the broad range of scenarios where this planning criterion must be met. We note that an overly conservative approach may cause perverse outcomes that undermine the WEM Objectives including:</p> <ul style="list-style-type: none"> - inefficient market outcomes due to excessive interventions to resolve forecast energy shortfalls risks. - disincentivised competition among generators due to interference with competitive market forces. - poor reliability of the production and supply of energy due to the degradation of generation assets. <p>While we acknowledge that the 0.0002% EUE target is required in the Long Term PASA, we question whether it is appropriate to maintain in the MT PASA study, given that:</p> <ul style="list-style-type: none"> - we understand the MT PASA incorporates a 'high case' demand forecast and potentially a broader range of contingencies compared with the LT PASA. - The use of the tighter 0.0002% target in the LT PASA was intended to influence the Reserve Capacity Target and not decisions stemming from the MT PASA, like the assessment of Outage Plans. <p>We are concerned that the Medium Term PASA Planning Criterion to limit the expected Energy Shortfall to 0.0002% of annual energy consumption in any calendar year of the Medium Term PASA will likely lead to overly conservative planning and decision making, especially in relation to Outage Scheduling. Due to the extended time horizon and higher levels of uncertainty on the outer years, we also question whether the planning criterion should be static over this period.</p> <p>We suggest that AEMO consider whether the planning criterion for this time horizon be set at a higher level or otherwise based on scenarios excluding the most conservative currently in 2.1.2. Alternatively, considering that the planning criterion needs to adequately balance the items set out in paragraph 2.1.2 with the scenarios set out in paragraph 2.1.3, we question whether the Planning Criterion should be qualitative in nature.</p> <p>We are also concerned that the zero-risk tolerance approach to the expected Energy Shortfall planning criterion for the Short Term PASA and Pre-Dispatch Schedule Horizon may also be too conservative given the range of potential</p> |

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| | <p>contingencies incorporated. We question whether this will lead to an overly conservative approach and unnecessary or premature interventions, including outage recalls or cancellations and directions to Market Participants to offer capacity as In Service under 7.7.4 of the WEM Rules.</p> <p>This may interfere with market forces and negatively impact market efficiency and reliability over the longer term.</p> |
| Available vs In-Service Capacity | <p>Further clarification should be provided to Market Participants in relation to the role of new WEM Rule 7.4.2D with respect to resolving Energy Shortfalls. For example, whether AEMO will continue to exercise its power under 7.7.4 to direct Market Participants given that his new clause, effective 20 November 2024, obligates Market Participants to offer the quantity of any Available Capacity as In-Service Capacity in circumstances where the Reference Scenario for the Dispatch Interval in the last Pre-Dispatch Schedule or Dispatch Schedule provided before the Start Decision Cutoff predicts a real-time shortfall in energy, Contingency Reserve Raise or Regulation Raise.</p> <p>It is unclear how these new obligations compliment the tools and mechanisms at AEMO's disposal to ensure Power System Reliability in circumstances where an Energy Shortfall is predicted.</p> |
| WEM Procedure Outages | <p>Paragraph 2.2 appears to be disconnected from and potentially inconsistent with the WEM Procedure: Outages and 3.18.7(e), providing that AEMO must not accept an outage if it leads to an Expected Energy Shortfall and other considerations not referenced elsewhere. We also note that the statement that "AEMO will not accept outages that lead to an expected energy shortfall" implies that AEMO will apply a zero tolerance EUE target rather than a 0.0002% target as stated earlier in the WEM Procedure.3.18E of the WEM Rules and the WEM Procedure: Outages provides a more comprehensive outline of the processes for Outage assessment and approval including reference to Power System Reliability in the context of the WEM Procedure: Reliability Standard Implementation. We suggest that any procedures relating to Outage assessment and approval should clearly reference, be consistent with and complementary to the WEM Procedure: Outages and 3.18E of the WEM Rules.</p> <p>It should also note that per, 3.18.7(e) may approve an Outage Plan, despite the Outage Evaluation Criteria not being met, if AEMO reasonably considers that rejecting the Outage Plan would pose a greater threat to Power System Security or Power System Reliability over the long term;</p> |
| Increasing difficult to conduct appropriate maintenance | <p>We are concerned that restrictive planning criterion will compound the Power System Reliability and Adequacy issues associated the increasing difficulty to schedule outages and conduct appropriate maintenance (as highlighted by ERA's chart below). The need for maintenance becomes more pronounced as Facilities in the SWIS age while increasing levels of intermittent generation may further narrow opportunities. To ensure generation facilities are maintained in manner that supports Power System Reliability and Adequacy, the Reliability Standard Implementation must provide for an appropriate assessment of risk including planning criterion and risk tolerance that enables reliable short to medium term facility outage planning. Mechanisms that enable AEMO to work transparently and collaboratively with Market Participants to balance facility maintenance needs and meet energy demand is critical to the success of the SWIS going forward. This may require greater flexibility than that permitted by the draft WEM Procedure.</p> |

| | <div><h3>Outages</h3><table border="1"><caption>Planned outages (GWh)</caption><thead><tr><th>Quarter</th><th>Planned outages (GWh)</th></tr></thead><tbody><tr><td>2013 Q4</td><td>2600</td></tr><tr><td>2014 Q1</td><td>2200</td></tr><tr><td>2014 Q2</td><td>2200</td></tr><tr><td>2014 Q3</td><td>3000</td></tr><tr><td>2014 Q4</td><td>1300</td></tr><tr><td>2015 Q1</td><td>1400</td></tr><tr><td>2015 Q2</td><td>3300</td></tr><tr><td>2015 Q3</td><td>2300</td></tr><tr><td>2015 Q4</td><td>2900</td></tr><tr><td>2016 Q1</td><td>3300</td></tr><tr><td>2016 Q2</td><td>2300</td></tr><tr><td>2016 Q3</td><td>1500</td></tr><tr><td>2016 Q4</td><td>3400</td></tr><tr><td>2017 Q1</td><td>1800</td></tr><tr><td>2017 Q2</td><td>1200</td></tr><tr><td>2017 Q3</td><td>1900</td></tr><tr><td>2017 Q4</td><td>1700</td></tr><tr><td>2018 Q1</td><td>1000</td></tr><tr><td>2018 Q2</td><td>2700</td></tr><tr><td>2018 Q3</td><td>1800</td></tr><tr><td>2018 Q4</td><td>2000</td></tr><tr><td>2019 Q1</td><td>1800</td></tr><tr><td>2019 Q2</td><td>2500</td></tr><tr><td>2019 Q3</td><td>1700</td></tr><tr><td>2019 Q4</td><td>2500</td></tr><tr><td>2020 Q1</td><td>1000</td></tr><tr><td>2020 Q2</td><td>2000</td></tr><tr><td>2020 Q3</td><td>1400</td></tr><tr><td>2020 Q4</td><td>2400</td></tr><tr><td>2021 Q1</td><td>1000</td></tr><tr><td>2021 Q2</td><td>2000</td></tr><tr><td>2021 Q3</td><td>1400</td></tr><tr><td>2021 Q4</td><td>2400</td></tr><tr><td>2022 Q1</td><td>1000</td></tr><tr><td>2022 Q2</td><td>1300</td></tr><tr><td>2022 Q3</td><td>1500</td></tr><tr><td>2022 Q4</td><td>1600</td></tr><tr><td>2023 Q1</td><td>1000</td></tr><tr><td>2023 Q2</td><td>1500</td></tr><tr><td>2023 Q3</td><td>1000</td></tr><tr><td>2023 Q4</td><td>1500</td></tr><tr><td>2024 Q1</td><td>1000</td></tr><tr><td>2024 Q2</td><td>1500</td></tr></tbody></table><table border="1"><caption>Forced outages (GWh)</caption><thead><tr><th>Quarter</th><th>Forced outages (GWh)</th></tr></thead><tbody><tr><td>2013 Q4</td><td>600</td></tr><tr><td>2014 Q1</td><td>200</td></tr><tr><td>2014 Q2</td><td>200</td></tr><tr><td>2014 Q3</td><td>200</td></tr><tr><td>2014 Q4</td><td>900</td></tr><tr><td>2015 Q1</td><td>200</td></tr><tr><td>2015 Q2</td><td>200</td></tr><tr><td>2015 Q3</td><td>200</td></tr><tr><td>2015 Q4</td><td>200</td></tr><tr><td>2016 Q1</td><td>200</td></tr><tr><td>2016 Q2</td><td>200</td></tr><tr><td>2016 Q3</td><td>200</td></tr><tr><td>2016 Q4</td><td>200</td></tr><tr><td>2017 Q1</td><td>200</td></tr><tr><td>2017 Q2</td><td>200</td></tr><tr><td>2017 Q3</td><td>200</td></tr><tr><td>2017 Q4</td><td>200</td></tr><tr><td>2018 Q1</td><td>200</td></tr><tr><td>2018 Q2</td><td>200</td></tr><tr><td>2018 Q3</td><td>200</td></tr><tr><td>2018 Q4</td><td>200</td></tr><tr><td>2019 Q1</td><td>200</td></tr><tr><td>2019 Q2</td><td>200</td></tr><tr><td>2019 Q3</td><td>200</td></tr><tr><td>2019 Q4</td><td>200</td></tr><tr><td>2020 Q1</td><td>200</td></tr><tr><td>2020 Q2</td><td>200</td></tr><tr><td>2020 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2700 | 2018 Q3 | 1800 | 2018 Q4 | 2000 | 2019 Q1 | 1800 | 2019 Q2 | 2500 | 2019 Q3 | 1700 | 2019 Q4 | 2500 | 2020 Q1 | 1000 | 2020 Q2 | 2000 | 2020 Q3 | 1400 | 2020 Q4 | 2400 | 2021 Q1 | 1000 | 2021 Q2 | 2000 | 2021 Q3 | 1400 | 2021 Q4 | 2400 | 2022 Q1 | 1000 | 2022 Q2 | 1300 | 2022 Q3 | 1500 | 2022 Q4 | 1600 | 2023 Q1 | 1000 | 2023 Q2 | 1500 | 2023 Q3 | 1000 | 2023 Q4 | 1500 | 2024 Q1 | 1000 | 2024 Q2 | 1500 | Quarter | Forced outages (GWh) | 2013 Q4 | 600 | 2014 Q1 | 200 | 2014 Q2 | 200 | 2014 Q3 | 200 | 2014 Q4 | 900 | 2015 Q1 | 200 | 2015 Q2 | 200 | 2015 Q3 | 200 | 2015 Q4 | 200 | 2016 Q1 | 200 | 2016 Q2 | 200 | 2016 Q3 | 200 | 2016 Q4 | 200 | 2017 Q1 | 200 | 2017 Q2 | 200 | 2017 Q3 | 200 | 2017 Q4 | 200 | 2018 Q1 | 200 | 2018 Q2 | 200 | 2018 Q3 | 200 | 2018 Q4 | 200 | 2019 Q1 | 200 | 2019 Q2 | 200 | 2019 Q3 | 200 | 2019 Q4 | 200 | 2020 Q1 | 200 | 2020 Q2 | 200 | 2020 Q3 | 200 | 2020 Q4 | 200 | 2021 Q1 | 200 | 2021 Q2 | 200 | 2021 Q3 | 200 | 2021 Q4 | 200 | 2022 Q1 | 200 | 2022 Q2 | 200 | 2022 Q3 | 200 | 2022 Q4 | 3500 | 2023 Q1 | 1000 | 2023 Q2 | 1500 | 2023 Q3 | 1000 | 2023 Q4 | 1000 | 2024 Q1 | 1000 | 2024 Q2 | 1000 |
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| Quarter | Planned outages (GWh) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013 Q4 | 2600 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 Q1 | 2200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 Q2 | 2200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 Q3 | 3000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 Q4 | 1300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 Q1 | 1400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 Q2 | 3300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 Q3 | 2300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 Q4 | 2900 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 Q1 | 3300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 Q2 | 2300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 Q3 | 1500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 Q4 | 3400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 Q1 | 1800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 Q2 | 1200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 Q3 | 1900 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 Q4 | 1700 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 Q1 | 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 Q2 | 2700 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 Q3 | 1800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 Q4 | 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019 Q1 | 1800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019 Q2 | 2500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019 Q3 | 1700 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019 Q4 | 2500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020 Q1 | 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020 Q2 | 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020 Q3 | 1400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020 Q4 | 2400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2021 Q1 | 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2021 Q2 | 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2021 Q3 | 1400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2021 Q4 | 2400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022 Q1 | 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022 Q2 | 1300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022 Q3 | 1500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2022 Q4 | 1600 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2023 Q1 | 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2023 Q2 | 1500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2023 Q3 | 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2023 Q4 | 1500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2024 Q1 | 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2024 Q2 | 1500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quarter | Forced outages (GWh) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013 Q4 | 600 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 Q1 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 Q2 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 Q3 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 Q4 | 900 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 Q1 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 Q2 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 Q3 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 Q4 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 Q1 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 Q2 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 Q3 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 Q4 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 Q1 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 Q2 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 2017 Q4 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 Q1 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 Q2 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Long Term PASA | As acknowledged by the , 3.3.2(a)(i) requires that the WEM Procedure outline how AEMO assesses reliability in relation to the Long Term PASA. However, the draft WEM Procedure does not cover this. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Thank you for your consideration of Alinta Energy’s submission. Should you wish to discuss this further please contact me at Oscar.Carlberg@alintaenergy.com.au or on 0409501570.

Yours sincerely

Oscar Carlberg
Wholesale Regulation Manager