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Submitted electronically

**Primary Frequency Response Rule Changes – ERC0274**

Alinta Energy welcomes the opportunity to provide a submission to the Australian Energy Market Commission's (**AEMC**) Primary Frequency Response Rule Changes (**the Rule Change**).

Alinta Energy is an active investor in energy markets across Australia with an owned and contracted generation portfolio of nearly 3,000MW, including 1,700MW of gas-fired generation facilities and 1,070MW of thermal generation facilities, and in excess of 1.2 million electricity and gas customers including more than 670,000 in east coast markets.

Several of Alinta Energy's generation assets currently provide frequency response in the NEM, in particular the Loy Yang B Generation unit located in the Latrobe Valley. As such, Alinta Energy is directly impacted by the rule change proposals.

## *Context*

Alinta Energy recognises that at present the NEM is undergoing significant transition, and this transition justifies the further investigation and wholistic study of methods of improving the NEM's frequency control methodology.

However, Alinta Energy considers that the strategic direction proposed by the rule change proponents as well as the general sense of urgency presented does not justify the introduction of the rule change as currently proposed. To this end, Alinta Energy makes the following points below:

1. Consistent with the 2017 Finkel Recommendations and the 2018 Frequency Control Frameworks Review, the AEMC should begin the development of a long-term markets-based incentive mechanism in conjunction with industry at the earliest possible convenience.
2. The proposed mandatory obligation to provide primary frequency control under exceptional tight dead bands is physically untested in the NEM's history and as such represents a significant departure from standard operating practise and may threaten the speed of transition to a lower carbon energy system.

3. The proposal to obligate the provision of primary frequency control is contrary to the market-based philosophy which underpins the NEM. As such if the rule change is introduced, a sunset clause should be included to unwind the mandatory obligation after a sufficient period to allow a market-based mechanism to be implemented.
4. In the absence of a market-based mechanism, contracted and / or regulated payment options for any service provided must be fully explored by the AEMC prior to implementation.
5. Any exemption criteria must be drafted precisely to ensure appropriate definitions exist which methodically outline a stringent criterion to whom exemptions can apply and under what specific grounds.
6. The proposed timeframes for >200MW generators to undertake and complete self-assessments are unreasonably short and require further consideration given the large, complex nature of thermal generating assets. Implementation timing also needs to be well coordinated across each region of the NEM to ensure that the first Units to comply are not unfairly impacted by a lengthy implementation phase.

These points and others are further explored in detail below.

### *Long Term Market Solution is required*

The NEM's existing market framework does not readily facilitate or value the kind of frequency control AEMO considers necessary to keep the NEM in a secure and reliable operating state. This is because at present the market has not yet valued or determined the appropriate level of primary frequency control which is required.

One solution would be to determine this value in a market, which would subsequently allow market participants to create revenue certainty and underwrite investments in the provision of this service. However, in the absence of such a proposal, the rule proponents proposed solution is to mandate the provision of primary frequency control through a rules-based requirement. This proposal is fundamentally at odds with the underlying markets-based philosophy of the NEM.

At present frequency control is a service which can be provided by different generator types, at significantly different levels of response rates, some multidirectional others unidirectional. Different generators also face vastly different costs associated with the provision of the service. This implies that some generators are intrinsically more suitable to provide primary frequency control than others, implying that the service is bespoke and requires the creation of a competitive market to determine an appropriate value.

As such, the proposal to mandate the provision of this service will in affect create a perverse situation whereby those generator types which are perhaps best placed to respond will be penalised and those generators who are worst placed to respond will be treated the same for the provision of a potentially inferior level of service.

Whilst in the next 2-year time horizon a mandated solution may arrest the NEM's frequency control issues in the very short term, in the very foreseeable future it will undermine the investment value proposition of the exact services the NEM fundamentally needs to invest in

to provide long-term frequency support to the NEM. The NEM is currently failing to reward the essential physical services it needs in order to minimise the long-term costs to consumers, this proposal in its current form prolongs this known and growing problem.

As such, Alinta Energy recommends the AEMC use this rule change to direct AEMO to begin the process of determining the efficient frequency control envelope for the NEM and subsequently begin the process of establishing the design and optimisation of a market-based response to procure to the defined frequency requirement. The establishment of markets-based solution will deliver the appropriate frequency response at lowest price, which is in the long-term interest of consumers in the NEM.

### *Proposed Deadband Settings are Physically Untested in NEM's History*

The proposal to obligate frequency control to a ±15mHz dead band setting is unreasonably tight and is physically untested in the NEM's history. In Alinta Energy's view implementing abruptly such a narrow dead band would introduce several risks that may have unintended implications to the secure and reliable operating state of the NEM and undermine current planned investments that support higher renewables penetration. For example, planned improvements in flexibility (low load operation and fast ramping) of large thermal generators would be undermined by such a rule change. The lack of thorough risk assessment, quantifiable technical analysis and other supporting information demonstrating due consideration of these potential consequences is of concern to industry participants.

An alternative approach to the proposed "hard cutover" proposal would be to progressively implement an ordered reduction in dead band settings over a period of 12-18 months (at a minimum) in order to progressively monitor the performance of frequency of the NEM.

This approach would allow the market to methodically determine the efficient dead band settings to alleviate frequency concerns, at the least cost to the NEM. It also provides the least "risky" solution to guard for the NEM's safe and reliable operating state. In the absence of a markets-based solution, this would be a preferable option than obligating the service.

### *Sunset Clause*

Alinta Energy considers that the strategic direction proposed by the rule change proponents as well as the general sense of urgency presented in the proposal does not justify the introduction of the ERC0274 in its current format at this time. Nonetheless, if an AEMC decision is made to implement the rule proposal, then Alinta Energy recommends that a sunset clause is developed which rescinds the mandatory obligation after a period of two years. This two-year period would provide ample time to develop a markets-based solution which will provide a sustainable and long-term solution to arresting frequency concerns within the NEM.

It is worth noting that the industry holds strong concerns that if ERC0274 is implemented into perpetuity then the urgency to provide a long-term solution to frequency control issues in

the NEM will ease in the short term, until the time that another thermal plant retires. At that point in the near future, it is highly likely that future issues regarding primary frequency control will be significantly worse, as there will be less plant to physically obligate to the provide the service.

In order to prevent such a situation occurring, Alinta Energy considers the AEMC should introduce a sunset clause, in conjunction with a direction to develop a long-term sustainable market solution.

### *Compensation for Services Provided*

If an AEMC decision is made to implement the rule proposal, then Alina Energy is firmly of the view that a compensation regime for the frequency control services provided is fundamentally required.

In this regard, Alinta Energy notes the proposal for Generators to submit claims to AEMO for the reimbursement of costs associated with changes to its plant to provide frequency control in line with the proposed obligatory requirement. Alinta Energy is broadly supportive of this element of the proposal.

Nonetheless, the absence of ongoing compensation for frequency services provided in the form of a markets-based mechanism must be addressed by the AEMC. The provision of frequency control involves costs on plant and general wear and tear. The provision of these services deteriorates the operating life of units and unavoidably requires an additional level of maintenance costs. These costs could vary greatly depending on the dead band frequency ultimately set.

Alinta Energy would encourage the AEMC to consider what forms of ongoing compensation for services provided could be utilised to provide renumeration to generators, some identifiable options include:

- Ancillary tender arrangements similar to SRAS and NSCAS services
- RERT type contractual arrangements
- A form of regulated payment which is determined by the AER. These regulated payments were the typical method of compensation for generators in various states before the construction of the NEM

### *Exemption Clause*

Alinta Energy notes the proposed rule recognises that some generators may not be inherently capable of providing PFR and so may need to seek exemption from the requirements stipulated. The Primary exemption criteria is currently set out as:

*"A plant may be eligible for exemption from the PFRR if it cannot be modified, or requires significant augmentation, to provide PFR."*

Alinta Energy agrees in principle with an exemption criterion in some format existing for certain plant type when it is uneconomic to provide primary frequency control.

Nonetheless, Alinta Energy has concerns that a broadly defined exemption criteria, or one that gives AEMO significant discretion in its application would significantly risk departing from a technology neutral approach.

A situation could potentially arise, whereby exemptions are granted for certain technology types on economic grounds, leaving a significantly smaller pool of generators which whom the obligation pertains to, and in turn significantly raising the costs of wear and tear on these obligated units. Again, the construction of a markets-based incentive mechanism would avoid the complexity in obligating a service provision from technology types which fundamentally provide frequency control services unequally.

As such, Alinta Energy would urge the AEMC to ensure any exemption criteria must be drafted precisely to ensure appropriate definitions exist which methodically outline a stringent criterion to whom exemptions can apply and under what specific grounds and include a 'Regional exemption MW threshold' at which the obligation on remaining participants in the region to comply with the mandatory rule would cease to apply.

### *General Timeframes*

As currently drafted, the rule proposal obligates generators with a nameplate capacity rating greater than 200MW to undertake a self-assessment process to be completed within 60 business days from commencement of the rule change followed by a process of dialogue and proposed implementation timeframes with AEMO.

In Alinta Energy's view these proposed time frames are impractically short and require further consideration. The provision of frequency control services is a highly specialised engineering service which is typically provided by a select number of experts NEM wide. Many generators require external consultants for the provision of these services. Given this rule proposal is a regulatory obligation, proposed under exceptionally tight timeframes, there is a high likely hood any external consulting services will be in high demand from all generators in the NEM at the exact same time, and as such will be subject scarcity pricing(which ultimately will be passed on in the form of higher prices).

In Alinta Energy's experience, generation plant operation and maintenance work follows a pre-defined long term operating plan which is set and approved at the board level, years in advance. The practical task of scheduling engineering feasibility studies, undertaking risk assessments, doing testing and physically making changes to generation plant takes significant time. For these reasons the proposed 60-day self-assessment process is unrealistic.

Again, Alinta Energy would encourage consideration of an alternative approach to the proposed "hard cutover" proposal. A progressively implemented and ordered reduction in dead band settings over a period of 12-18 months (at a minimum) in order to progressively monitor the performance of frequency of the NEM appears a more appropriate solution. In addition, timing of every dead-band change needs to be well coordinated to ensure Units that implement changes first are not unfairly disadvantaged by having to provide more onerous primary frequency control over a potentially lengthy transitional period.

### *Conclusion*

Alinta looks forward to participating in the ongoing Primary Frequency Response Rule Change consultations and would encourage consideration of the points raised above.

If you have any queries in relation to this submission, please contact me via email: anders.sangkuhl@alintaenergy.com.au or by phone 02 9375 0992.

Yours sincerely,

[signed]

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