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## **ACCIONA Energy's Submission to AER's Semi-Scheduled Generator Rule Change**

### **Who is ACCIONA?**

ACCIONA is one of the world's largest renewable energy independent power producers with operations covering the development, construction, ownership and operation of renewable energy assets across 16 countries. ACCIONA has over 10,000 megawatts of renewable energy assets covering a range of technologies including hydroelectricity, wind, solar PV, solar thermal and biomass.

ACCIONA has been operating in Australia since 2002, where it has successfully developed its renewable energy, water and infrastructure businesses.

ACCIONA's Energy unit develops, builds and operates wind farms that produce clean energy for more than 285,000 Australian homes per year. Its installed capacity of 435 MW is distributed between Mt. Gellibrand (132MW, Victoria), Waubra (192MW, Victoria), Cathedral Rocks (64MW, South Australia) and Gunning (47MW, New South Wales). The company is currently building a wind farm in Mortlake South (158MW, Victoria) and in March 2020 announced plans to build the MacIntyre Wind Farm Precinct, (1,026MW, Queensland), with construction to commence mid-2021.

ACCIONA also has a strong development pipeline of wind and solar projects to support Australia's transition to a low carbon energy supply over the coming years.

ACCIONA's Infrastructure unit has built major projects such as the Legacy Way tunnel in Brisbane, a 41km bypass for the Toowoomba motorway, a desalination plant in Adelaide, the Mundaring water treatment plant East of Perth, and the Sydney Light Rail. In Western Australia, ACCIONA is currently building the country's first waste to energy (W2E) plant in Kwinana and has been awarded a second W2E project in East Rockingham. The company is developing a number of rail projects in Victoria.

## Introduction

ACCIONA welcomes the opportunity to participate in the Australian Energy Regulator's (AER) consultation on potential rule changes for Semi-Scheduled generators as outlined in its publication *Issues Paper - Semi Scheduled Generator Rule Change June 2020*. Acciona also participated in the AER's information session on the 2<sup>nd</sup> July 2020.

As a participant in the National Electricity Market since 2002 and long-term owner, operator of semi-scheduled generators in the NEM, ACCIONA is committed to supporting sound market and regulatory review processes to the benefit of all participants in the NEM.

There are two key aspects outlined in the AER's Issues Paper: *Semi-Scheduled Generator Rule Change(s) June 2020* under consultation:

1. That semi-scheduled generators be obligated to follow their dispatch targets in a similar manner to scheduled generators; and
2. Semi-scheduled generators be required to continually inform AEMO of any restrictions on their available capacity due to physical factors, ambient weather conditions and their market intentions.

ACCIONA understands that the second point is not being consulted until the direction of the first point is clarified. ACCIONA will participate in the related consultation at that time.

## Rule change Proposal: Semi scheduled generators to follow dispatch targets

### Issues and Context

The Energy Council has requested a rule change be submitted to the AEMC by the AER in relation to the operation of semi-scheduled generation.

As noted in the Issues paper, the main drivers for the proposed rule change stem from "behaviours" of some semi scheduled generators deviating materially from their expected output without rebidding. This impacts frequency and contributes to contingency disturbances.

The historical growth in intermittent generation and the forecast growth going forward is also highlighted as an important factor for requiring obligations on semi-scheduled generators to more stringently follow dispatch targets.

In the Issues Paper, the AER has evaluated various options to oblige (or arguably incentivise) semi-scheduled generators to follow dispatch targets in a similar manner to scheduled generators as follows:

- **Option 1:** Amend (increase) causer pays factors for ancillary services.
- **Option 2:** Remove the semi scheduled classification

- **Option 3:** Amend existing arrangements for semi-scheduled generation
- **Option 4:** Amend registration requirements and approvals for semi-scheduled generators to prevent the use of certain automated systems

As outlined by the AER, one of the key differences between scheduled - generally thermal - generators, and semi scheduled generators is the intermittent nature of the fuel source on which they rely and the practical and technical limitations of these generators in following firm dispatch targets. These are in part the reasons behind the original semi-schedule classification for such generators in the NEM. That said, these options need to be evaluated cognisant of the nature of, and physical limitations of, semi-scheduled generators.

### Review of the AER Rule Change Options

To avoid unnecessary regulatory burden or competing regulatory priorities, any proposed change must be evaluated considering the broader regulatory landscape (prevailing and planned), as well as the efficiency of the changes. That is, is a regulatory change justified or can a similar outcome be achieved using a more efficient market based incentive regime?

Considering the drivers outlined in the Issues Paper for the Rule Change, ACCIONA is of the view that a rule change as proposed in the Paper is not warranted in responding to highlighted behaviours by some semi-scheduled generators deviating from expected dispatch levels and rebidding protocols.

ACCIONA agrees that generator compliance with dispatch expectations is required to support grid stability. That said, ACCIONA does not believe that the options identified by the AER are sufficiently workable for semi-scheduled generators without significant cost, commercial burden or technical implications. This is discussed further below. Moreover, ACCIONA believes that a more robust incentive and enforcement regime warrants deeper analysis before a regulatory response is pursued.

In terms of the options outlined in the Issues Paper, ACCIONA supports the AER's conclusion that options 1, 2 and 4 are not practical, would result in material difficulties in implementation or operation, or may not address the main issues at play. In particular:

- **Option 1: Amend (increase) causer pays factors for ancillary services.**

ACCIONA agrees that this option would not be practical due to complications in the calculation of FCAS and the “blunt” nature of such an approach, particularly considering the 28 day delay period.

Moreover, there are several issues – including generator technical limitations and anomalies in the way forecasts by the AWEFS are developed - that could impose unequitable allocation of FCAS Causer Pays cost if the proposed Option 1 was to be adopted.

Consideration of this option does however highlight the need for a robust review of the existing AWEFS and ASEFS forecasting systems to assess how “fit for purpose” they are.

ACCIONA does not support this proposed option 1.

- **Option 2: Remove the semi scheduled classification.**

ACCIONA agrees that this approach should not be further considered.

While the AER discounts this option due to the complexity of required rule changes, for investors like ACCIONA in assets that currently fall within this semi-scheduled classification, the regulatory risk associated with such proposed rule change is significant. ACCIONA has made capital intensive, long life, investment decisions in these semi-scheduled assets on the basis of conditions and rules applicable at the time of investment decisions. To subsequently change the nature of how such generators participate in the market, and the technical and economic implications of such rule changes, is untenable. Moreover, ACCIONA proposes that there are more appropriate alternatives, as opposed to simply removing the semi-scheduled generation classification, to manage issues associated with uncoordinated withdrawal of intermittent generators.

- **Option 4: Imposing conditions on semi-schedule registration conditions**

ACCIONA does not believe that the response targeted by this option clearly aligns with the drivers and objectives as outlined in the Issues Paper. ACCIONA agrees with the AER’s conclusions that using registration conditions to respond to potential operational behaviours by some generators is not preferable nor efficient and agrees that this option should not be pursued.

The AER has also developed three alternative approaches under Option 3: Amend existing arrangements for semi-scheduled generation. On review, ACCIONA does not agree that the proposed sub-options are appropriate, particularly given the technical aspects and limitations of the generators in following a firm dispatch target.

For example, ACCIONA notes that the intentions of Option 3.3, whereby a generator is classified as inflexible, does not appear to offer a practical solution or result in an appropriate outcome.

Further, the AER notes a preference for Option 3.1 whereby the semi scheduled interval and cap concepts are removed and that the generation moves linearly to a dispatch target (MW) as a scheduled generator is required. However ACCIONA does not believe that this proposal adequately considers the practical aspects of a semi schedule generator and properly accounts for the limited ability of some generators to follow firm dispatch targets in an economic or technically feasible manner at all times.

Moreover, the AER preference for option 3.1 over option 3.2 (ie. MW target v's MWh target) is not compelling.

That said, considering all of the options put forward, setting an energy based dispatch target for semi-scheduled generators in the future, as outlined in Option 3.2, may provide for a workable solution. Reasonable tolerance thresholds to account for some output variation related to physical plant limitations and conditions would also need to be incorporated.

However, to support such a material change in operational obligations, the existing wind and solar energy forecasting systems used by AEMO will require a robust review to ensure the inputs and methodologies are fit for purpose and the forecasting accuracy is enhanced. This is particularly important if compliance and enforcement actions consider targets established by the forecasting systems. The AEMO energy forecasting systems would need to be substantially enhanced to more accurately take account of the complexities of wind farm sites and the physical limitations of the generation technology. This includes site conditions (wind speed, direction, topography, etc across the site, wind turbine technology performance and the site layout (particularly for large and/or complex sites).

Additionally, consideration needs to be given to the practical and real time status of generators (eg. if they are in pause and consideration of time to respond to changed targets).

### Other Considerations

The NEM is currently facing an unprecedented change in its regulatory landscape with a variety of workstreams, regulations and rules changes underway that will materially change the environment in which semi-scheduled generation in particular operates. Two such major changes are the Primary Frequency Response and the 5-Minute settlement process.

Primary Frequency Response is a mandatory requirement that will offer significant benefit to the network stability in keeping the frequency around 50Hz, and something all semi scheduled generators are obligated. The Issues paper does emphasise grid stability and frequency control but is silent on the impact to Primary Frequency Response and its role in the grid and subject at hand.

The 5-Minute Settlement transition in the NEM and the impact of this on generator behaviours and implications for operations of semi-scheduled generators should also be carefully considered in the evaluation of this proposed semi-scheduled rule change.

Considering the material changes these two examples represent to future operations, and of semi-scheduled generators, it is crucial that this rule change evaluation is undertaken cognisant of these two major NEM developments.

On another point, the impacts of increasing penetration of renewable energy generators is not limited to the NEM. Whilst the Issues Paper understandably focuses on operations in the NEM, there may also be benefit in looking to the approaches adopted in other jurisdictions and how similar issues have been addressed. For example, New Zealand has experience with high penetration of intermittent renewables and some behaviours seeing wind farms withdraw generation when the spot price was below operating costs, with resulting impacts on system under-frequency events <sup>1</sup>. At a high level, the New Zealand model requires participants to provide "bona fide physical reason" if generation is withdrawn in an uncoordinated manner, this provides the accountability on the generator and allows the New Zealand Electricity Authority an avenue to actively discourage this type of behaviour.

## Conclusion

In the changing environment of the National Electricity Market, ACCIONA supports the need to review the appropriateness of market process and regulatory settings. This is particularly true given the significant work programs and regulatory changes currently being considered and underway for the NEM over the short and longer terms. It is crucial that fundamental changes to the operations of the NEM, including classifications and obligations of particular market participants (ie. semi-scheduled generators), is considered in the broader landscape of proposed changes and objectives.

ACCIONA does not support the removal of the semi-schedule classification. Nor does it agree the outlined change options to semi-scheduled generator classifications or operational obligations are warranted or appropriate given the nature and technical

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<sup>1</sup> <https://www.ea.govt.nz/development/work-programme/pricing-cost-allocation/wind-generation-offers/development/decision-papers-on-wind-offer-arrangement/>



realities of semi-schedule generators and the intermittent nature of the fuel on which they rely. ACCIONA does not believe the options outlined in the Issues Paper are warranted nor will be practical for semi scheduled generators.

Furthermore, ACCIONA believes that this proposed regulatory change process has not sufficiently considered the currently changing market and regulatory landscape in the NEM, including the impact of the upcoming 5 Minute Settlements and the Primary Frequency Reponses requirements on generators and their operation and behaviours.

Instead ACCIONA's recommendations to address the issues outlined in the Issues Paper are three fold:

1. Greater incentives for compliance with dispatch targets should be evaluated and a penalty regime for consistent non-compliance by relevant parties should be enforced.
2. The existing AWEFS and ASEFS forecasting systems needs to be critically reviewed as they are not currently fit for purpose, particularly considering a scenario where firm dispatch targets would be based on their output.
3. If a rule change is ultimately introduced obliging semi-scheduled generators to comply with dispatch targets akin to the requirements of scheduled generators, the new arrangements should only apply to new semi-scheduled generators in the future. Grandfathering provisions should apply to exempt existing generators, or those currently under construction or already announced, from such changes.

ACCIONA thanks the AER for the opportunity to participate and looks forward to further consultation on these important issues.

If you have any questions in relation to our response, please contact Eric Caesar (eric.caesar@acciona.com) to discuss further.

Yours sincerely

A handwritten signature in black ink, appearing to read "Brett Wickham".

Brett Wickham  
Managing Director  
Energy