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Level 6, 140 Creek Street
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7th November 2017

Australian Energy Market Commission
Level 6, 201 Elizabeth Street
Sydney NSW 2000

By Email: submissions@aemc.gov.au

GENERATOR TECHNICAL PERFORMANCE STANDARDS, CONSULTATION PAPER, 19 SEPT 2017

We are pleased to enclose our formal submission on the proposed rule change for consideration as part of the wider consultation process.

Introduction

Edify Energy is an Australian Renewable Energy Development and Investment Company. We specialise in large scale renewable energy, particularly solar projects, across development, financing, construction and asset management.

In response to the rapidly changing energy environment in Australia, AEMO has submitted a rule change request seeking amendment to the access standards and negotiating framework for generating systems in the National Electricity Rules.

Edify Energy supports a robust and stable electricity network, with a clear framework for new and existing generation assets. The environment must achieve competitive energy for consumers, and establish a consistent and fair environment for generators.

We were pleased to participate in the consultation workshop held in Sydney, and have considered the proposed rule change. Our response to the proposed changes is based upon our existing generating assets and looking to the future and the ability for the network to support growth in this sector.

Overarching Comments

As a developer of renewable generation assets, we compete with all types of generation to provide the cheapest electricity. To drive competitiveness, it is essential this is undertaken on a fair and equal platform which provides stability and a 'no surprise' approach. Without certainty, it is not possible to attract the necessary investment into the sector.

The framework under which the electricity network is governed needs to be technically achievable, drive performance based outcomes, and support the investment and operation over the long term.

We have seen in the last six to twelve months significant changes in interpretation and application of the National Electricity Rules which have had material cost and time impact. The development period of new generation assets starts before the agreement of performance standards and significant investment decisions are made based upon the application of the electricity rules. Uncertainty in regulation because of late amendments, negatively impacts the ability of the energy sector to grow and build the generation platform of the future. Uncertainty of interpretation by AEMO leads to the risk of inconsistent application of the rules.

We welcome the formal approach taken by AEMO in submitting a rule change, and the process AEMC are leading to consult and consider the impact of the proposed changes.

Our concerns in this submission are based upon the

Commercial: the allocation of risk and cost, driving commercially unacceptable scenarios and creating barriers to entry.

Technical: imposing unobtained levels of performance without improvement in performance or security, prejudicing technologies. It is not clear on the level of engagement AEMO has achieved with equipment suppliers and the practicality of some of the changes requested. We understand that whilst some major suppliers can meet the inverter performance standards, some cannot, and this significantly reduces competition and hence pricing and hence affordability to end users.

Process: Inconsistent application of the current rules and the proposed rule changes. The request to retrospectively apply the changes will impact the bankability of projects and future investment in the sector. Introducing more stakeholders will increase the complexity, cost, and time.

We do not believe the proposal fits with the National Electricity Objective (NEO) to promote efficient investment in electricity services and encourage competition. Many of the proposed changes are focused on network operation rather than the ability of the proposed generation assets to meet the performance standards. We believe a broader range of commercial and market led solutions could be used to solve some of these network rather than generator driven issues. This would contribute directly to the NEO and drive competitive fit for purpose solutions.

Specific Responses to Questions raised in the Assessment Framework

Qu.1. Assessment Framework. Agree. The assessment framework is balanced and provides the opportunity to express opinions and drive towards the National Electricity Objective.

Qu.2. Role of Access Standards. Edify Energy have successfully negotiated five generator performance standards in the past 12 months. During this period, we have found the access standards robust and appropriate. The process demands demonstrable compliance with the standards and allocates the risks to those who can best control them. The ability to seek the most appropriate access standard removes the risk of prejudice against specific technologies and provide a solution which is appropriate for the connection point and network requirements. We believe AEMO have adequate capability to achieve the desired outcomes under the existing framework.

The rule changes submitted by AEMO seek to start the negotiation from a higher point which may impact the ability of the applicant to contemplate commencing the negotiations due to the material cost implications. This seems at odds with the essence of a negotiated framework. In a negotiated framework, the start point would be immaterial and setting a mandatory level at the highest point may prove a barrier to entry, and does not remove AEMO's ability to seek the most appropriate levels on a case by case basis. We believe most participants strive for the highest performance standard practically achievable. The provision of objective and measurable considerations is important to ensure consistency and repeatability.

Mandating of certain capabilities in the generator access standards may enable and support the establishment of ancillary services. It is not evident that this is the most efficient manner to achieve this and consideration of other commercial frameworks to ensure these critical services are available may ensure the right services are provided by the most appropriate sources. We would favour an approach which focuses on the quality of outcome rather than quantum.

Qu 3. Proposed changes to generator access standards. Many of the proposed rule changes require a degree of *redundant* generation to be provided and the plant '*oversized*' in order to meet a higher level of support, or reserve capacity to ensure continuous uninterrupted operation. This imposes significant cost disadvantage to some technologies and may not be the most competitive solution in achieving the intent behind the rule change.

We believe a broader range of commercial and market led solutions could be used to solve some of these networks rather than generator driven issues. This would contribute directly to the NEO and drive competitive fit for purpose solutions.

Voltage Control

- We would like to understand how the rule change may impact '*small*' generation in a '*strong*' network
- The most appropriate access standard may depend upon the specific connection point and local network infrastructure to ensure the solution is '*best for network*' approach
- The cost to generators to achieve some of the proposed rules is excessive and will create barriers to entry through over investment. In many instances there may be network solutions which are economically my viable and provide a wider benefit to the sector as a whole. Creating a mechanism for commercial or market based solutions to address essentially network issues should be considered

Disturbance Ride Through – Reactive Current Injection

- We note the proposed requirement for the generation to maintain continuous operation for up to 15 voltage disturbances in any 5minute period. We are concerned that existing and developing technologies may fail to meet these onerous requirements without further definition and clarification.
- We would like some further clarification on what is required to demonstrate of this requirement.
- Some of the proposed capacity limitations may create a tiered system, giving smaller generators greater ability to negotiate, which is no longer available to larger generations. This removes the competitive environment.

System Strength

- We would like some further clarification on what is required to demonstrate of this requirement.
- We would like some clarification on the consultation process undertaken by AEMO to ensure this does not narrow the technology providers who are capable of meeting onerous technical requirements

Remote Monitoring and Control

- We fully support the capture of data to enable monitoring and analysis to tune and improve the efficiency of the plant and its contribution to the network and ultimately the consumer. We believe the control of the plant is a more complex issue and needs careful consideration to balance the need to ensure the plant responds to network issues, but enables the operator the flexibility to operate the plant as the commercial requirements allow. The issues surrounding this clause relate to commercial liabilities.

Qu 4. System Strength access standard. The proposed rule changes may be seen as future proofing the grid at the expense of the new generation. The role of the NER is not to solve existing network issues and potentially burdening new generation. We believe the imposition of costs for a possible future scenario is against the intent of the NER and is not appropriate.

Qu 5. Mandating active power control. New generators make a commercial decision on what services to offer the market and the rule change may impose an unnecessary commercial liability on the developer if some services are mandated. This introduces additional costs which reduces the competitive nature of the sector.

Qu 6. Reduction in system size thresholds. In principal the proposed change appears reasonable, but we would urge consideration of maintaining a negotiated position to ensure all stakeholders can ensure the standards are fit for purpose.

Qu 7. Definition of continuous uninterrupted operation. The current definition of Continuous Uninterrupted Operation is a subject of much debate and inconsistencies. The change in interpretation and application has caused significant material impact in both cost and time for projects. The proposed change would appear to go some way to clarify the interpretation currently being applied by AEMO, but it should be noted this comes at a cost for projects. Further work is required in this clause to provide a robust definition.

Qu 8. Negotiated access standard requirements under specific clauses. With continually improving and changing technologies, the danger of mandating the highest access level may lead to a suboptimum outcome. The negotiation framework is exactly that – a negotiation, in which all parties including AEMO are able to discuss and listen to options and select the optimum solution. This presents a potential barrier to entry and a barrier to opportunity. It is not our experience that the current framework does not enable AEMO to negotiate a satisfactory outcome.

Qu 9. Technical standards relevant to the alteration of generating plant / system. No specific comments.

Qu 10. Jurisdictional issues and harmonisation. For a competitive environment, a consistent and fair approach is required. Introducing regional variations would not serve this purpose and objective. This approach would also introduce more stakeholders into a negotiation process increasing risk, cost, and duration.

Qu 11. Issues with the current negotiating framework. As previously mentioned, mandating a higher standard to commence negotiations becomes a barrier to entry and imposes more administrative barriers than the current system. The current process provides a good degree of information to set a realistic and demonstrable access level. The current framework can be long and expensive, and the proposed changes would do little to change this.

Qu 12. Rationale for a negotiating framework. As reinforced in the AEMO paper the NER has not been reviewed for some years and needs to be a fit for all current and future generation options. To remove the negotiation access standard would make them inflexible and may be a barrier to entry for current and new technologies.

Qu 13. AEMO's proposed changes to the negotiating framework. 'Close as practicable' is a difficult standard to measure and quantify and is open to interpretation. Different negotiating parties will have different views on this, and that this term cannot be devoid of commercial considerations if we are truly to provide value to consumers. This would impose an unnecessary obligation to participants and be subjective in its application.

Qu 14. Nature of the issues raised. The transitional proposal raises significant commercial and liability questions for projects currently under consideration which have committed to financial models which could be changed by rules which are as yet unproven, considered, or demonstrable. As noted in section 6.2.1 there are limits to the rule making powers of AEMC and legal issues to enforcing proposed but not approved legislation. The proposal contradicts the rule changing process and is unacceptable.

Qu 15. AEMO’s proposed transitional arrangements. We strongly oppose the proposed transitional arrangements and do not believe they are legally enforceable.

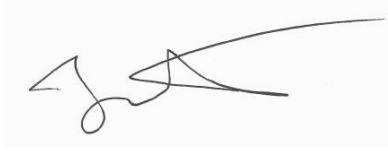
Review of Detailed Rule Changes to Generator Performance Standards

In discussion with our stakeholders and service providers, we believe there is potential to significantly increase the material requirements for new generation assets. Specific clauses can be summarised as:

Clause	Reference	Concern
Definition of CUO	S5.2.5.5 / 8 / 9 / 11 / 13 / 14	Material Impact
Reactive Power Control	S5.2.5.1	Requires further clarification to be adequately assessed
Voltage and reactive power control	S5.2.5.13	Requires further clarification to be adequately assessed
Disturbance ride through, reactive current injection	S5.2.5.5	Material Impact
Disturbance ride through, low voltage ride through	S5.2.5.4	Material Impact
Disturbance ride through, multiple voltage ride through	S5.2.5.5	Material Impact
Disturbance ride through, high voltage ride through	S5.2.5.4	Requires further clarification to be adequately assessed
Disturbance ride through, over voltage	S5.2.5.5	Material Impact
Disturbance ride through, active power recovery	S5.2.5.5	Requires further clarification to be adequately assessed
Active Power Control, proportional response to frequency change	S5.2.5.11	Material Impact
Remote Monitoring and Control, remote control capabilities	S5.2.6.1	Requires further clarification to be adequately assessed

We appreciate the opportunity to submit our concerns and would welcome the opportunity to discuss these further. We believe a technical and commercial perspective is essential to achieve the requirements of the NEO and at this stage it is not apparent that this has been satisfactorily completed.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Ian Christmas', with a long horizontal stroke extending to the right.

Ian Christmas

Head of Engineering



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