

# MEMORANDUM – CONSULTATION RESPONSE



**Attention:** Pilbara ISOco

**Subject:** Consultation Response to “*Interim-Power-System-Modelling-Procedure-v1.0*”

**From:** Craig Blizzard (*Pacific Energy Group Holdings Ltd*)

**Date:** 3<sup>rd</sup> November 2023

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Dear Pilbara ISOco,

By way of introduction, Pacific Energy (PE) are a significant independent power producer (IPP), operating throughout WA. PE’s current installed base includes numerous assets within the northwestern interconnected system (NWIS) where we are a substantial provider of power system solutions into the region. PE operates as a vertically integrated business offering early project development, detailed connection studies, and project delivery for our clients, several of which operate exclusively within the bounds of the Pilbara ISOco network zone. Accordingly, Pacific Energy (PE) welcome the opportunity to respond to the *Interim-Power-System-Modelling-Procedure-v1.0*.

Regarding the *Interim-Power-System-Modelling-Procedure-v1.0*, PE have identified a set of minor items, which we believe could benefit from amendment. These amendments are recommended to improve clarity and flexibility during the network access process for proponents and power system operators. We have summarised each of these below:

- **4.2.1 Stage 1** – Regarding the Interim Access and Connection Process, PE seeks further clarification as to the purpose and process of Stage 1. Having stepped through the connection process recently, it is our expectation that only Stage 2, and Stage 3 have a specific alignment with Horizon Power’s (HP) Power System Modelling Guideline phases (through the R0 and R1/2 phases). It is our understanding therefore, that only from Stage 2 and beyond could we formally engage with HP. We would like to request clarification from Pilbara ISOco regarding the method of interaction with both Pilbara ISOco and HP connection teams and further clarification regarding the purpose of Stage 1.
- **4.2.1 Stage 3** – We believe the term normal dispatch is ambiguous in nature especially as partial commercial operations can be achieved at different power levels (albeit below the registered nameplate) throughout incremental hold point testing. As a result, we would like to request clarification in the wording about how the term “normal dispatch” relates to the plant capacity defined during the connection study. Moreover, we would request the use of terms such as “full nameplate operations” or “full operation control within the agreed project nameplate” etc as we believe this will reduce ambiguity.
- **4.3.2 EMT Requirements** – The current wording regarding thresholds for EMT model triggering is vague and leads to risk and uncertainty for proponents considering renewable plant applications. We request that greater clarification around the specific numerical thresholds for SCR or grid

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impact are provided so that proponents will understand up front when an EMT study is and isn't required. Furthermore, using the NEM case as a reference preliminary impact assessments (PIA) are typically provided conducted at connection enquiry stage to address this uncertainty. The PIAs typically stipulate the requirements for EMT studies as well as provide transparency upfront to new proponents on the system strength. It is recommended from a connection process that the use of PIA's should also be considered within the Pilbara ISOco network zone.

- **4.4.4 (g) Active/reactive Current Injection Requirements** – Regarding the performance of Voltage/Frequency fault ride through, there is a need for a definition of the point at which current injection begins and additional details regarding the expectation of current injection methodology. Additionally, further guidelines are necessary for positive/negative sequence current injection requirements during both balanced and unbalanced conditions. Finally, it is necessary to provide a clearer definition of the term "absorption" in the case of HVRT for the removal of doubt.
- **4.4.4 (k) DSL Model Compilation to C Code** – Given the nature of DSL code, automatic or direct compilation to C code is not always feasible for several reasons. In certain circumstances, HP have indicated that an exemption or alternative source code options can be made possible. We recommend using a similar approach here and would request such wording to be added to the modelling procedure document. This would result in greater consistency of the process and also provides greater flexibility when dealing with OEM source code providers.
- **5.1.2 (c) Model Accuracy** – From our point of view, the currently used wording regarding model accuracy presents some ambiguity. Firstly, the current wording does not specify what constitutes an acceptable deviation to model accuracy. Furthermore, we recommend the document also includes details on to measure the total change in quantity. Finally, it needs to clarify the extent to which deviations are compliant with both normal steady-state and transient response.
- **5.3.1 NSP Witness Requirements** – We request that this wording is changed to the following: "registered NSP should be invited to witness performance testing", To allow for greater flexibility when witnessing is not feasible or practical due to possible timing and logistical constraints within a specific project.

We believe that with the refinement around the above items greater certainty can be provided which will be of real benefit to all proponents evaluating and developing projects within the region. Again, we very much appreciate the opportunity to make this submission and look forward to hearing your feedback on our raised items. When required, PE welcome a discussion at any time should further consultation or clarification be of value.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Craig Blizzard".

**Craig Blizzard**

Chief Technology Officer (CTO) Pacific Energy