



## Meeting Agenda

<b>Meeting Title:</b>	Pilbara Advisory Committee ( <b>PAC</b> )
<b>Date:</b>	Wednesday 9 November 2022
<b>Time:</b>	2:00 PM – 3:30 PM
<b>Location:</b>	Online, via TEAMS.

Item	Item	Responsibility	Type	Duration
1	Welcome and Agenda	Chair	Noting	2 min
2	Meeting Apologies/Attendance	Chair	Noting	2 min
3	Competition Law Statement	Chair	Noting	1 min
4	Minutes			
	(a) Minutes of Meeting 2022_08_03	Chair	Decision	2 min
	(b) Minutes of Meeting 2022_09_28	Chair	Decision	2 min
5	Action Items	Chair	Noting	1 Min
6	Rule Changes			
	(a) PRC_2022_01 – Overview of Rule Change Proposals		Noting	
	(b) PRC_2022_01 – Technical Working Group (Stage 2 Outcomes)	Chair	Discussion Decision	40 min
	(c) PRC_2022_01 – Coordinator of Energy Regulatory Workshop	Chair	Discussion	40 min
7	General Business	Chair	Discussion	5 min
	Next meeting: 9:30 AM, 23 February 2023			

Please note, this meeting will be recorded.



## COMPETITION LAW OBLIGATIONS

Members of the Pilbara Advisory Committee (**Members**) note their obligations under the *Competition and Consumer Act 2010 (CCA)*.

If a Member has a concern regarding the competition law implications of any issue being discussed at any meeting, please bring the matter to the immediate attention of the Chairperson.

Part IV of the CCA (titled “Restrictive Trade Practices” contains several prohibitions (rules) targeting anti-competitive conduct. These include:

- (a) **cartel conduct.** Cartel conduct is an arrangement or understanding between competitors to fix prices; restrict the supply or acquisition of goods or services by parties to the arrangement; allocate customers or territories; and or rig bids, see s45AD and Division 1 of Part IV of the CCA more generally.
- (b) **concerted practices:** a concerted practice can be conceived of as involving cooperation between competitors which has the purpose, effect or likely effect of substantially lessening competition, in particular, sharing Competitively Sensitive Information with competitors such as future pricing intentions and this end:
  - a concerted practice, according to the ACCC, involves a lower threshold between parties than a contract arrangement or understanding; and accordingly,
  - a forum like the meetings of the MAC is capable being a place where such cooperation could occur.

See s45(1)(c), s45 of the CCA more generally, and [these](#) guidelines published by the ACCC.

- (c) **anti-competitive contracts, arrangements understandings:** Any contract, arrangement or understanding which has the purpose, effect or likely effect of substantially lessening competition, see section 45 of the CCA and Division 2 of Part IV of the CCA more generally.
- (d) **anti-competitive conduct (market power):** any conduct by a company with market power which has the purpose, effect or likely effect of substantially lessening competition, see s46 of the CCA.
- (e) **collective boycotts:** where a group of competitors agree not to acquire goods or services from, or not to supply goods or services to, a business with whom the group is negotiating, unless the business accepts the terms and conditions offered by the group, see Division 2 of Part IV of the CCA.

A contravention of the CCA could result in a significant fine (up to \$500,000 for individuals and more than \$10million for companies). Cartel conduct may also result in criminal sanctions, including gaol terms for individuals.

**Sensitive Information** means and includes:

- (a) commercially sensitive information belonging to a Member’s organisation or business (in this document such bodies are referred to as an **Industry Stakeholder**); and
- (b) information which, if disclosed, would breach an Industry Stakeholder’s obligations of confidence to third parties, be against laws or regulations (including competition laws), would waive legal

professional privilege, or cause unreasonable prejudice to the Coordinator of Energy or the State of Western Australia).

### **Guiding Principle – what not to discuss**

In any circumstance in which Industry Stakeholders are or are likely to be in competition with one another a Member must not discuss or exchange with any of the other Members information that is not otherwise in the public domain about commercially sensitive matters,<sup>1</sup> including without limitation the following:

- (a) the rates or prices (including any discounts or rebates) for the goods produced or the services produced by the Industry Stakeholders that are paid by or offered to third parties;
- (b) the confidential details regarding a customer or supplier of an Industry Stakeholder;
- (c) any strategies employed by an Industry Stakeholder to further any business that is or is likely to be in competition with a business of another Industry Stakeholder, (including, without limitation, any strategy related to an Industry Stakeholder's approach to bilateral contracting or bidding in the energy or ancillary/essential system services markets);
- (d) the prices paid or offered to be paid (including any aspects of a transaction) by an Industry Stakeholder to acquire goods or services from third parties; and
- (e) the confidential particulars of a third party supplier of goods or services to an Industry Stakeholder, including any circumstances in which an Industry Stakeholder has refused to or would refuse to acquire goods or services from a third party supplier or class of third party supplier.

### **Compliance Procedures for Meetings**

- If any of the matters listed above is raised for discussion, or information is sought to be exchanged in relation to the matter, the relevant Member must object to the matter being discussed. If, despite the objection, discussion of the relevant matter continues, then the relevant Member should advise the Chairperson and cease participation in the meeting/discussion and the relevant events must be recorded in the minutes for the meeting, including the time at which the relevant Member ceased to participate.



## Minutes

<b>Meeting Title:</b>	Pilbara Advisory Committee ( <b>PAC</b> )
<b>Date:</b>	3 August 2022
<b>Time:</b>	10:00 am – 11:30 am
<b>Location:</b>	Videoconference (Microsoft Teams)

<b>Attendees</b>	<b>Class</b>	<b>Comment</b>
Sally McMahon	Chair	
James Campbell-Everden	Independent System Operator ( <b>ISO</b> )	
Momcilo Andric	Registered Network Service Provider ( <b>NSP</b> ) – Rio Tinto	
Jacinda Papps	Registered NSP – Alinta Energy	
David Stephens	Registered NSP – Horizon Power	
Neil Midolo	Excluded NSP – Fortescue Metal Group	
Christopher Alexander	Small-Use Customer	
Dora Guzeleva	Observer appointed by the Minister	Proxy for Noel Ryan
Adrian Theseira	Observer appointed by the Economic Regulation Authority ( <b>ERA</b> )	

<b>Also in Attendance</b>	<b>From</b>	<b>Comment</b>
Stephen Eliot	PAC Secretariat	Observer
Reece Tonkin	Woodside	Presenter – for agenda item 5(b)
Gemma Lynch	Woodside	Presenter – for agenda item 5(b)
Nenad Ninkov	Woodside	Presenter – for agenda item 5(b)
Jonathan Holborn	Allens	Observer – for agenda item 5(b)
Li-Lin Ang	Rio Tinto	Observer – for agenda item 5(b)

Apologies	From	Comment
Noel Ryan	Observer appointed by the Minister	
Anne Taylor	Excluded NSP – Roy Hill	
Chris Adams	Contestable Customer – City of Karratha	
Chris Bossong	Excluded NSP – BHP	

Item	Subject	Action
<b>1</b>	<b>Welcome and Agenda</b> The Chair opened the meeting at 10:00 am with an Acknowledgement of Country.	
<b>2</b>	<b>Meeting Apologies/Attendance</b> The Chair noted the attendance and apologies as listed above.	
<b>3</b>	<b>Minutes of Meeting 2022_05_04</b> The PAC accepted the minutes of the 4 May 2022 meeting as a true and accurate record of the meeting. <b>Action: The PAC Secretariat to publish the minutes of the 4 May 2022 PAC meeting on the Coordinator’s Website as final.</b>	<b>PAC Secretariat</b>
<b>4</b>	<b>Action Items</b> The Chair noted that there were no open action items.	
<b>5</b>	<b>Rule Changes</b> <b>(a) Overview of rule change proposals</b> The paper was taken as read. Ms Guzeleva noted that the date indicated for the close of submissions on rule change proposal PRC_2022_01 should be 7 September 2022, not 27 September 2022. <b>Action: The PAC Secretariat is to update the papers on the Coordinator’s website to correct the date for submission on PRC_2022_01.</b>	<b>PAC Secretariat</b>
	<b>(b) PRC_2022_01 – Integrated LNG Systems</b> The Chair noted that Woodside has formally submitted rule change proposal PRC_2022_01 and the items listed in the cover paper for discussion by the PAC. Ms Lynch provided background for the rule change proposal: <ul style="list-style-type: none"> <li>Woodside consulted with Energy Policy WA (<b>EPWA</b>) on the reforms that led to the Pilbara Network Rules (<b>PNR</b>) but was not involved in the drafting of the rules.</li> <li>Woodside has consulted with EPWA on the rule change proposal since late-2021 and with the PAC in May 2022.</li> </ul>	

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- Woodside has revised its proposal to address some of the issues raised by the PAC in May 2022.
- Woodside is serious about pursuing decarbonization opportunities and is looking to connect to the North West Interconnected System (**NWIS**) to help with this pursuit, but must have a regulatory certainty for its multi-billion dollar investments.

Mr Tonkin summarised that Woodside accepts that it will be a NSP and that PRC\_2022\_01 has been updated since May 2022 to include an 'Integrated LNG Network' category that was adapted from the existing Integrated Mining Network model.

Mr Tonkin indicated that Woodside is looking to connect to the NWIS in May 2023 to facilitate its solar project, and provide improved reliability outcomes for the Pluto facility and the NWIS.

Mr Alexander asked if Woodside could quantify the carbon emissions benefits of its project. Ms Lynch indicated that Woodside:

- has submitted an environment referral for its Maitland Solar Farm, which is available on the Environmental Protection Authority and Woodside websites; and
- is looking to import up to 50 MW, which is a substantial portion of the Pluto LNG facilities' electricity use.

Mr Alexander asked what engagement Woodside has undertaken about the impact of its proposal on small customers in the NWIS.

Ms Lynch indicated that Woodside has engaged with:

- EPWA, the ISO, Horizon Power, Rio Tinto, Alinta and the City of Karratha on the rule change proposal; and
- various government departments and agencies in Perth and Karratha as part of its development and environmental approvals.

The Chair asked if the PAC had any questions or views on how the rule change proposal will affect the Pilbara electricity objective.

Mrs Papps indicated that:

- she supports facilitating interconnection and decarbonization; and
- the rule change proposal is designed to maintain the security and reliability of the Pluto facility, and tries to address security risks for other NWIS users by providing for disconnection of the Pluto facility; but
- she is unsure that this solution will protect other NWIS users and therefore may not meet the Pilbara Electricity Objective because the technical details have not yet been made clear, and there might be impacts on other users depending on how quickly the ISO can disconnect the Pluto facility.

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Ms Lynch noted that Woodside would prefer to keep its facilities on an islanded non-interconnected network to maintain reliability for its facilities, but Government and other stakeholders strongly encouraged it to consider connecting to the NWIS in support of the Pilbara electricity objective.

Mr Campbell-Everden indicated that:

- the ISO has provided a confidential submission to Woodside outlining the work that needs to be done with regard to access and connection;
- the exemption from the Harmonized Technical Rules (**HTR**) may impact on the ISO's ability to perform the studies necessary for the ISO to undertake its functions under the PNR, including its role related to maintaining system security and reliability;
- it may be possible to separate the rule change proposal from the access and connection process;
- the ISO will make a formal submission on the rule change proposal by 7 September 2022; and
- the issues are technical and complex, so it may be worth establishing a PAC working group to consider the issues.

Mr Stephens indicated that Horizon Power:

- sees the rule change proposal and the network connection as separate processes; and
- has worked with Woodside on the connection process so that Woodside can meet its technical obligations and demonstrate HTR compliance at the connection point.

Mr Andric thanked Woodside for its engagement on the issues and:

- indicated that Rio Tinto supports Woodside becoming part of the NWIS and its efforts on decarbonization;
- noted that Woodside has acknowledged that it will not be possible to contain network flow to one direction and that Woodside will spill into the rest of the system in fault conditions;
- indicated that, when new generation was being connected to the NWIS in 1995/96, the modelling indicated that there would be impacts on existing generators, and the new generators were required to upgrade their facilities; and
- he cannot comment on the rule change proposal without the ISO modelling of the impact of Woodside connecting to the NWIS based on detailed data provided by Woodside, Alinta, Horizon Power and Rio Tinto.

The Chair asked Mr Andric what issues remain to be addressed if he could be satisfied that the ISO and Horizon Power have properly modelled and assessed the connection issues.

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- Mr Andric suggested that the modelling may indicate that a rule change is not required for Woodside to be able to comply with the HTR.
- The Chair noted that Woodside’s position is that its facilities do not fit under the existing exemptions, that it would need to undertake costly work on its facility to comply with the HTR, and that it does not want to be directed to do things that impact on its security of supply. She asked, if Woodside could comply with the HTR, what other issues need to be addressed.
- Mr Andric indicated that the HTR would only impose costs on Woodside if it was necessary for system security or reliability, and that he is not sure that any such costs would be significant.

Mr Alexander asked if the technical work can be accelerated to get clarity around these issues.

- Mr Ninkov noted that the rule change process provides two opportunities for submissions and that the modelling results will be available between the Draft and Final Rule Change Reports, and suggested forming a working group at that point to have an evidence-based discussion of the issues.
- Mr Andric supported forming a working group.

Mrs Papps noted the rule change proposal would prevent Woodside from being directed by the ISO and, if this rule change is made, then special circumstances would apply to every NSP other than Alinta, and only Alinta would have to comply with the PNR in its entirety. This would unfairly disadvantage Alinta and its customers, as only Alinta would be fully exposed to directions from the ISO.

- Ms Lynch pointed out that this is an issue with the Pilbara regime, not just Woodside.
- Mr Tonkin noted that there would be no change in supply of Essential System Services (**ESS**) beyond what currently exists on the NWIS and pointed out that:
  - Woodside is not seeking an exemption from the PNR in all scenarios, for example, in distress situations;
  - a 50 MW solar farm will be connected under Woodside’s proposal that will contribute to NWIS security and reliability; and
  - there would be no change to the ESS that is available.
- Mrs Papps indicated that there is a broader issue with fairness and equity of the Pilbara regime if Alinta is required to do all of the heavy lifting because no other parties can be directed by the ISO. A party that is connecting to the NWIS should not get an advantage that is detrimental to an existing participant.



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- Ms Lynch pointed out that the Maitland Solar Farm would be treated like any other generator, Woodside is just seeking to connect its LNG production facility with some certainty.

Mr Tonkin noted that the PAC is understandably concerned with the robustness and security of the NWIS, as is Woodside, but that Woodside is also concerned with the security of its facility. Pluto was designed to be an islanded facility, not grid connected, so it is key for Woodside to de-risk the connection.

*The attendees from Woodside left the meeting at 10:47 am.*

The Chair asked the PAC to focus on the issues with the proposal that still need to be discussed, assuming that the ISO and Horizon Power can provide assurance that the proposal meets all of the technical requirements, such as:

- why exemptions from the HTR would not be sufficient;
- what are the implications of not adopting the rule change proposal;
- if the rules are continuously amended to give exemptions, then what are the impacts on:
  - existing players that are not afforded the same exemptions;
  - the ISO's ability to do its job; and
- what are the impacts of the ISO not being able to direct Woodside.

Mrs Papps expressed concern with the long-term development of the NWIS if every new connection is given a different category. The PNR provide for exemptions from parts of the PNR and HTR, and it is not good regulatory practice to build in permanent exemptions.

Mr Campbell-Everden supported these comments.

Ms Papps supports the connection of the Pluto facility by Woodside, but existing network users should not be unfairly impacted.

Mr Stephens indicated that Horizon Power supports the rule change proposal and asked for the ISO's view around how Woodside has worded the assessment of its compliance with the HTR at the connection point i.e. does it put the same requirements on Woodside at the connection point as everyone else.

Mr Alexander asked: (i) what it means for Woodside to have the ability to self-disconnect and whether this could impact system security; (ii) what are the circumstances around self-disconnection; and (iii) what are the implications if Woodside were to self-disconnect when the system is under threat.

- Mr Stephens indicated that the studies will look at dynamic events on the system, including how the generator at the Pluto facility will respond to system events, which could manifest as a very short term import or export over the connection for the

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purpose of dynamic response. There will be obligations on Woodside to comply with the HTR at the connection point and this will be included in the modelling exercise.

- Mr Campbell-Everden agreed with Mr Stephens and indicated that it is important to understand whether the rule change proposal impacts on the ISO's ability to perform its functions in assessing access and connection, and that paragraph 19F of the proposal creates uncertainty on this matter, which will be part of the ISO's formal submission.

Mr Campbell-Everden indicated that the ISO has held two recent meetings with Woodside, and the ISO now has more information around how Woodside might respond in circumstances where there are issues on the network, but that this is still not clear in the proposal. It would be useful to form a working group to get greater understanding of these issues.

Mr Campbell-Everden indicated that:

- the ISO is working on its access and connection procedure and that a workshop on the procedure is underway; and
- the ISO's model has been finalised, static and dynamic modelling has been done, and results will be presented to the NSPs on 5 August 2022.

Mr Campbell-Everden suggested that the rule change proposal can be progressed before assessing the connection, subject to clarity on the key issues, but the ISO must continue to have the same levers that it currently has with regard to giving final approval on the connection.

Mr Andric:

- supported Woodside connecting to the NWIS because more generation will make the NWIS more robust;
- indicated that he does not understand what significant costs Woodside would incur to comply with the PNR and HTR;
- expressed concern with exempting Woodside from directions because the ISO will not be able to do its job; and
- agreed with Mrs Papps that approving this rule change proposal may lead to other parties seeking similar changes, which will not support system security.

The Chair noted that the PAC supports Woodside connecting to the NWIS but questions how the exemptions that it is proposing will impact on the rest of the system and the ISO's ability to do its job.

Mrs Papps asked whether Horizon Power will need to make system changes with material costs to continue in its delegated role of monitoring the system, given how Woodside has drafted the rule change proposal. Mr Stephens indicated that he would provide a response on this out of session.

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Mr Midolo indicated that he can see why Woodside is concerned about the connection when its facility's cost of loss of supply is about \$1 million/hour – such a business would keep its facility islanded unless it can connect its facility in a way that it will not be adversely impacted. There will need to be compromises from both sides to connect such a facility.

The Chair proposed developing a written statement from the PAC to advise the Coordinator of the PAC's views. The Chair indicated that she could develop a draft PAC advice and circulate it to the PAC for review and comment before sending it to the Coordinator.

- The PAC agreed to development of such advice.
- Mrs Papps asked that the advice indicate that the PAC has only considered the proposal at a conceptual level and that PAC members will make separate detailed submissions on the proposed rule amendments.
- The Chair summarised that the advice would indicate that:
  - Woodside's rule change proposal will be consistent with the Pilbara electricity objective if there are assurances that NWIS security and reliability is maintained;
  - Woodside's proposal seems to be consistent with the Pilbara Regulations because it promotes investment in the region, recognises the contribution of the resources sector, and contributes to lowering emissions;
  - connecting Woodside will benefit the NWIS, but the PAC has some specific concerns and implementation issues, including that it is unclear:
    - whether Woodside needs an exemption, and if so, whether a more focused exemption would be more appropriate;
    - whether the blanket exemption will impact on the ISO's ability to do its job;
    - whether the precedent that would be set by the proposal is acceptable;
    - how Woodside would respond to address security issues on the NWIS;
    - what are the costs to implement the proposal; and
  - the PAC needs additional data and modelling to come to a fully informed view on the proposal and supports establishing a working group to achieve this.
- Mr Alexander suggested that the advice should indicate that, while Woodside did engage with some PAC members, it did not engage with small consumer representatives.

Ms Guzeleva indicated that the PAC can form a working group but would need to first draft terms of reference for the group.

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	<p>Ms Guzeleva acknowledged that the PAC members have indicated that they need the modelling results to come to an informed view on the rule change proposal and noted that the Coordinator would also need this information to make a draft decision on the proposal.</p> <p>Mr Stephens expressed a view that:</p> <ul style="list-style-type: none"> <li>• the rule change proposal and the connection process are separate processes;</li> <li>• Woodside will need address the technical requirements of the connection process irrespective of what happens with the rule change process; and</li> <li>• the working group is only needed for the connection process. <del>and does not need to be formalised.</del></li> </ul> <p><b>ACTION: Mr Stephens is to advise whether Horizon Power will need to make system changes with material costs to continue in its role to monitor the NWIS, given how Woodside has drafted the rule change proposal.</b></p> <p><b>ACTION: The Chair is to develop a written advice from the PAC to advise the Coordinator of the PAC’s views on the proposal and is to circulate the statement to the PAC for review and comment before sending it to the Coordinator.</b></p>	<p><b>Mr Stephens 7/09/2022</b></p> <p><b>Chair (5/08/2022)</b></p>
6	<p><b>Pilbara ISO Cost Recovery</b></p> <p>The Chair indicated that the ISO has identified an issue in the PNR regarding cost recovery and is seeking advice from the PAC on whether it should develop and submit a rule change proposal.</p> <p>Mr Campbell-Everden noted that:</p> <ul style="list-style-type: none"> <li>• the ISO has access and connection functions under rule 268;</li> <li>• the ISO’s costs under the PNR are recovered equally from the NSPs – there are currently three NSPs;</li> <li>• the ISO is providing access and connection services to two access seekers;</li> <li>• the question is whether the costs for the access and connection services should be recovered from the existing NSPs, as would be the case under the existing PNR, or from the access seekers, which may require a rule change; and</li> <li>• both Horizon Power and Alinta indicate in their access guides that the connection fees will be passed onto the access seeker.</li> </ul> <p>Mr Campbell-Everden estimated that the relevant costs would typically be \$15,000 to \$40,000, but could be up to \$80,000.</p> <p>Mr Campbell-Everden indicated that the ISO has a mechanism to recover these costs but is seeking advice from the PAC on whether a rule change proposal should be drafted to clarify how these costs are recovered.</p>	

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	<p>Mr Alexander asked how these costs are recovered under other regimes. Mr Campbell-Everden indicated that these costs are generally passed on to the access seeker. Mrs Papps confirmed that this is the case for Western Power’s network, although there are some instances when some costs are shared.</p> <p>The Chair suggested that it would be consistent with general practice to allocate costs to an access seeker if:</p> <ul style="list-style-type: none"> <li>• the costs can be separately identified; and</li> <li>• the costs are sufficiently material to make it worth separately recovering them.</li> </ul> <p>Mr Campbell-Everden indicated that it should be simple to separately identify the costs based on the access and connection procedure that is currently under development, and that the estimated costs would be material relative to the ISO's total budget.</p> <p>Mr Campbell-Everden asked, from a policy point of view, whether the PAC has a view on whether these costs should be recovered through the NSP, and therefore spread across all users, or directly from the access seeker.</p> <p>Mr Alexander and Mr Andric supported the user pays principle, so that access seekers should pay the costs for their connection.</p> <p>The Chair summarised the PAC view as:</p> <ul style="list-style-type: none"> <li>• it is not appropriate for access costs to be smeared across the NSPs in all cases;</li> <li>• a price signal to the access seeker is appropriate; and</li> <li>• the ISO should take into account the separability and materiality of the costs, and whether the costs would be a barrier to connection.</li> </ul> <p>Based on this, the PAC supported the ISO developing a rule change proposal to address this issue.</p> <p>Ms Guzeleva suggested that Mr Campbell-Everden should send the rule change proposal to EPWA as soon as it is ready, but before it is formally submitted, and that the proposal can then be discussed either at the 9 November 2022 PAC meeting or an earlier meeting can be called if the proposal is finalised well in advance of that.</p>	

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**7 General Business**

No general business was raised.

The next meeting is scheduled for 9 November 2022. The Secretariat is to poll PAC members ahead of the next meeting to see if they would like to hold the meeting online or in person.

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**The meeting closed at 11:30 am.**



## Minutes

<b>Meeting Title:</b>	Pilbara Advisory Committee ( <b>PAC</b> )
<b>Date:</b>	28 September 2022
<b>Time:</b>	10:00am – 11:10am
<b>Location:</b>	Online (Microsoft Teams)

<b>Attendees</b>	<b>Class</b>	<b>Comment<sup>1</sup></b>
Sally McMahon	Chair	
Matthew Kok	Registered Network Service Provider	Proxy for Momcilo Andric
James Campbell-Everden	Independent System Operator	
Jacinda Papps	Registered Network Service Provider	
David Stephens	Registered Network Service Provider	
Geoff White	Small-Use Consumer Representative	
Chris Bossong	Excluded Network Service Provider Representative	
Noel Ryan	Observer appointed by the Minister	
Adrian Theseira	Observer appointed by the Economic Regulation Authority ( <b>ERA</b> )	
Neil Midolo	Excluded Network Service Provider	
<b>Also in Attendance</b>	<b>From</b>	<b>Comment</b>
Dora Guzeleva	PAC Secretariat	Observer
Sarah Graham	PAC Secretariat	Observer
Li-Lin Ang	Registered Network Service Provider	Observer
<b>Apologies</b>	<b>From</b>	<b>Comment</b>
Momcilo Andric	Registered Network Service Provider	
Anne Taylor	Excluded Network Service Provider Representative	
Chris Adams	Contestable Customer	

Item	Subject	Action
1	<b>Welcome and Agenda</b> The Chair opened the meeting at 10:00am with an Acknowledgement of Country and welcomed the PAC members.	
2	<b>Meeting Apologies/Attendance</b> The Chair noted the attendance and apologies as listed above.	

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### 3 PRC\_2022\_01 – Technical Working Group (Stage 1 Outcomes)

The Chair noted the recommendations outlined in the paper and invited Mr Campbell-Everden to open the discussion.

Mr Campbell-Everden gave an overview of Stage 1 of the Technical Working Group (**TWG**), and highlighted its two key findings:

- that assessing compliance at the point of interconnection would need to involve the development of compliance criteria; and
- that the ISO would need to undertake further analysis on potential network contingency risks, and whether these risks could be impacted by the proposed limitations to ISO directions.

Mr Campbell-Everden further noted the overall support from the TWG for Woodside's endeavor to connect the Pluto Facility.

The following discussion then took place:

- Mr Stephens spoke about the pre-connection phase and compliance criteria, noting that:
  - the main issue is the uncertainty regarding what is the compliance criteria and what HTR compliance at the interconnection point means;
  - It is important to develop the criteria, however, Horizon Power is comfortable if this is not developed prior to the rule change;
  - Horizon Power is currently going through the connection process, understands how this can work practically and is currently developing guidance regarding assessing compliance at an interconnection point.
- The Chair asked if it was possible that Woodside would not be able to connect once the compliance criteria was developed.
  - Mr Stephens noted that it was unlikely, as the criteria would reflect the process Horizon Power is currently undertaking, which includes full assessment, in this case only at the connection point.
- The Chair noted that this criteria may not resolve concerns as it would still be possible for risks to manifest themselves meaning that Woodside would not be able to connect. If this is a possible outcome we need to understand what work needs to be done before the rule change progresses and what could be done after.
  - Mr Stephens responded that there are two parts: the HTR assessment, and then the actual studies and technical assessments. There is always the possibility that something is found that prohibits the connection during these studies and technical assessments.
  - Mr Stephens noted the concerns around the outcomes of the TWG and the possibility of risks. Mr Stephens also noted that Horizon Power has visibility over the technical studies and, as



Item	Subject	Action
	<p>a result, is in a different position to others regarding forming a judgement on the technical risks.</p> <ul style="list-style-type: none"><li>○ Mr Stephens considered that the studies and models being put into place by Horizon Power are acceptable and fit for purpose, and Horizon Power is confident that the process will manage the risks identified by the TWG.</li><li>● Ms Papps asked whether the point of interconnect criteria and the compliance guideline would be an internal Horizon Power document or be governed by the rules and then subject to a consultation process.<ul style="list-style-type: none"><li>○ Mr Stephens replied that this criteria would be approved by the ISO.</li></ul></li><li>● Ms Papps clarified that this criteria should be included in the drafting of the rules and the draft rule change report.</li><li>● Ms Papps asked what the criteria would be for when the compliance at the point of interconnection needs to be reassessed and what are the trigger points, noting that this question was raised in Alinta's submission on the rule change proposal. Alinta does not support any approval of compliance in perpetuity.</li><li>● Ms Papps noted that Alinta is very supportive of defining what the 'point of interconnection' means and raised the potential for it to be drafted into the HTR, noting other facilities may also want to only comply at the point of interconnection.</li><li>● Mr Kok noted that:<ul style="list-style-type: none"><li>○ Rio Tinto is very supportive of Woodside's interconnection with the NWIS;</li><li>○ at this stage there is insufficient information for Rio Tinto to assess the proposal and therefore it has concerns over whether compliance at the point of connection is acceptable or viable;</li><li>○ Rio Tinto wants to ensure the system can work and that facilities close to the Woodside plant, including its own production at Dampier Port will not have any adverse interruptions.</li></ul></li><li>● The Chair sought to understand the difference between Rio Tinto being satisfied with the risks associated with the rule change versus Rio Tinto being satisfied with the risks of connection, which the Chair understands is the ISO and the NSP's responsibility.<ul style="list-style-type: none"><li>○ Mr Kok responded that Rio is concerned that, if all of these changes were accepted, the blanket exemption from the HTR may prevent the ISO from protecting the system overall.</li></ul></li><li>● Mr Campbell-Everden provided some comments on the access and connection process, noting that:</li></ul>	

Item	Subject	Action
	<ul style="list-style-type: none"><li>○ under normal processes, the registered NSP would work with the access seeker to look at each of the HTR derogations line by line and come up with an exemption process program in relation to each.</li><li>○ in this case, there is no requirement to look at them line by line, rather to look at the point of interconnection and the compliance criteria around the point of interconnection.</li><li>○ establishing the criteria, understanding how it was derived and developing a guideline would provide the required certainty.</li></ul>	
	<ul style="list-style-type: none"><li>● Mr Stephens noted that Horizon Power won't get a full set of study results in time for providing feedback on the rule change, however, it expects that it will go through a suitable assessment process in time for a decision on the rule change.<ul style="list-style-type: none"><li>○ Mr Campbell-Everden noted that it is not necessarily appropriate for Horizon Power to share the study results with the other NSPs, as the access and connection process is between the access seeker, the registered NSP and the ISO.</li></ul></li></ul>	
	<ul style="list-style-type: none"><li>● Mr Kok noted that his biggest concern is that, following the rule change, there is uncertainty in how the new connected facility helps to maintain system security, safety and reliability as it will not be bound by the HTR.</li></ul>	
	<ul style="list-style-type: none"><li>● The Chair noted there is some support for developing the compliance criteria and this compliance criteria should be developed before the draft rule change report publication.<ul style="list-style-type: none"><li>○ No opposing views were raised by members and this was taken to be general consensus from the PAC.</li></ul></li></ul>	
	<ul style="list-style-type: none"><li>● The Chair asked what other work needs to be done for Rio to be satisfied with the pre-connection work.<ul style="list-style-type: none"><li>○ Mr Kok responded that he would like to see the criteria to be sure overall system security can be maintained.</li></ul></li></ul>	
	<ul style="list-style-type: none"><li>● The Chair asked other PAC members for views on whether other work could be conducted, in parallel, to improve the overall ability to assess the rule change.</li></ul>	
	<ul style="list-style-type: none"><li>● Mr Stephens asked the ISO to elaborate on how the system directions protocol would work during an emergency, e.g. if Horizon Power wishes to request Woodside to contribute.</li></ul>	
	<ul style="list-style-type: none"><li>● Mr Campbell-Everden noted that:<ul style="list-style-type: none"><li>○ Woodside offered a helpful non-binding coordination protocol and ISO will have to respect the elements of the rule change proposal which limit the ISO directions, even in an emergency;</li><li>○ if the exemptions were extended past Woodside to other facilities, it may become problematic as the three existing NSPs would do all the work;</li></ul></li></ul>	

Item	Subject	Action
	<ul style="list-style-type: none"><li>○ the ISO needs to do the work to understand the circumstances in which the ISO control desk would issue the limited directions that it would be allowed to make and the impact on the system of doing that;</li><li>○ Rio and Alinta had stronger views on this.</li></ul>	
	<ul style="list-style-type: none"><li>● Mr Kok noted that this is an important consideration, and highlighted that, if there are too many facilities with a similar exemptions, ISO would lose the overall ability to coordinate the system overall.<ul style="list-style-type: none"><li>○ Mr Campbell-Everden noted that Woodside's argument is that there is no greater risk with it connecting than there is today, as currently it cannot provide support during an emergency.</li></ul></li><li>● The Chair sought to clarify with the ISO if the work needs to be done prior to the rule change being considered to address the following issues that were raised:<ul style="list-style-type: none"><li>○ what is the potential impact on other connections in the event the ISO cannot direct Woodside in an emergency;</li><li>○ whatever is developed needs to be suitable for application to any future facilities covered by these arrangements as well; and</li><li>○ are the risks greater than the potential outcome if Woodside was not connected in the first place.</li></ul></li><li>● Mr Campbell-Everden noted in response that:<ul style="list-style-type: none"><li>○ Woodside have offered a non-binding protocol and to have a storage component connected;</li><li>○ how and when Woodside would disconnect and how this is to be treated, in the context of an emergency, needs to be understood to understand the impact on the system;</li><li>○ he was not sure there is a particular study that can be done, as you either participate or you don't participate in an emergency, and Woodside is saying that it will not participate except in accordance with this non-binding protocol;</li><li>○ the ISO is responsible for maintaining security, so the question to ask is whether what Woodside is proposing with regard to restricted directions would make system security worse.</li></ul></li><li>● Mr Stephens noted in addition that:<ul style="list-style-type: none"><li>○ the non-binding protocol may provide some visibility on how the process will work and provide some confidence that Woodside will be contactable during emergency; and</li><li>○ we are not yet able to answer the question of what will happen when the plant disconnects in a contingency event as this is linked to studies that will unfold over the next number of months.</li></ul></li></ul>	

Item	Subject	Action
	<ul style="list-style-type: none"><li>• Mr Kok noted that protocols are helpful, however are not binding. We need to make sure that the protocol is based around rules as it is the rules that are binding. During an emergency, parties must follow the rules as there is little time and, if the rules are not clear, the whole system might collapse.</li><li>• The Chair requested that other PAC members raise any views at this time.</li><li>• Mr Midolo noted that compliance at the point of interconnection is likely to change as you will have to reassess whether the criteria is still valid every time there is a major change in the system. This criteria cannot exist in perpetuity. There has to be some opportunity to revisit it.</li><li>• Mr Bossong did not wish to provide a comment at this time.</li><li>• Mr White supported the intention to protect consumers and questioned whether the timeline of the rule change process needed amendment to address the technical issues identified by the TWG.</li><li>• The Chair asked what the timeframe is for the work that needs to be done, when can it be done by and how the advice given can support the Coordinator.<ul style="list-style-type: none"><li>○ The Chair noted that in particular the compliance criteria and the non-binding protocol needed more investigation and finalisation before the draft rule change is developed.</li></ul></li><li>• Ms Guzeleva responded that the Coordinator needs clarity as to whether it is credible at this point in time to publish the draft report, noting that:<ul style="list-style-type: none"><li>○ there have been lots of arguments raised by the PAC that work needs to be done before the report is published;</li><li>○ stakeholders need to have complete information in the draft report, to the extent practicable, to make sensible comments on it; and</li><li>○ drafting of the rules may need to change, for example by including triggers for reassessment of compliance at the point of interconnection.</li></ul></li><li>• Ms Guzeleva summarised the information that would be required to be published in an extension notice in the event the Coordinator decides to extend the publication of the draft rule change report.<ul style="list-style-type: none"><li>○ Ms Guzeleva requested that a timeframe is agreed for completion of the works that need to be undertaken.</li></ul></li><li>• The Chair asked the PAC if there were concerns regarding an extension and the length of extension.<ul style="list-style-type: none"><li>○ No concerns were raised by any of the members which was taken to mean general consensus from the PAC for publishing the extension notice.</li></ul></li></ul>	

Item	Subject	Action
	<ul style="list-style-type: none"> <li>○ Ms Papps supported taking the time needed to get the drafting right, and noted that it is vital to get it right the first time.</li> <li>● The Chair asked Mr Campbell-Everden as the chair of the TWG, how long of a delay is necessary in order to inform a potential extension by the Coordinator.               <ul style="list-style-type: none"> <li>○ Mr Campbell-Everden responded that the timeframe is dependent on Horizon Power submitting a draft compliance criteria and then allowing time for the ISO to review. He noted the need to take this to the TWG for consideration and, hopefully, consensus.</li> <li>○ Mr Stephens noted that Horizon Power has already started drafting the criteria and indicated that it could deliver a draft by 10 October 2022.</li> </ul> </li> </ul>	
	<p><b>Action: Horizon Power is to submit a draft compliance criteria to the technical working group by 10 October 2022.</b></p>	<p><b>Mr Stephens</b></p>
	<p>Ms Guzeleva asked for a high level work program from the ISO, which could then be reflected in an extension notice, as the PAC seems to support an extension.</p>	
	<ul style="list-style-type: none"> <li>● The Chair supported this work package and the need to inform Ms Guzeleva by tomorrow afternoon, and reinforced the need to also consider the non-binding protocol and the impact on other parties.</li> </ul>	
	<p><b>Action: Mr Campbell-Everden is to develop a timeframe and Stage 2 work to be completed by the technical working group before the next PAC meeting to inform the rule change process.</b></p>	<p><b>Mr Campbell-Everden</b></p>
	<ul style="list-style-type: none"> <li>● The Chair noted that unless anyone objects, the extension notice itself didn't need to come back to the PAC, but the length of the extension required may need to come back to the PAC.               <ul style="list-style-type: none"> <li>○ The Chair noted that in the interest in keeping the process as expedient as possible, perhaps a period of twenty business days for this additional work would be appropriate to not delay the final advice too much.</li> </ul> </li> <li>● Mr Campbell-Everden noted that he will do everything possible to facilitate this and requested clarification on whether the scope of works for stage 2 needed to be formally presented to the PAC.               <ul style="list-style-type: none"> <li>○ The Chair clarified that this was not necessary, that the ISO should just provide the key steps via email to Ms Guzeleva and the PAC, for the purposes of developing the extension notice.</li> <li>○ PAC members will be given until COB on 30 September to provide any comments.</li> </ul> </li> <li>● Mr Campbell noted that the work program could potentially be delivered by 26 October 2022.</li> </ul>	
	<p><b>Action: Members of the PAC are to inform Ms Guzeleva by COB 30 September 2022 of any issues with the extension of the draft rule change report.</b></p>	<p><b>PAC Members</b></p>

<b>Item</b>	<b>Subject</b>	<b>Action</b>
	<p><b>Action: The technical working group could deliver Stage 2 of the work program by 26 October 2022.</b></p> <ul style="list-style-type: none"><li>• Ms Guzeleva noted that we also need to consider what rules need to change for both the compliance criteria, and triggers for reassessment of compliance.<ul style="list-style-type: none"><li>○ Ms Papps noted that the TWG may not be suitable for these discussions and regulatory resources from the respective entities may be better suited (rather than technical people) for this.</li><li>○ Mr Campbell-Everden questioned whether Woodside would be involved in these regulatory discussions.</li><li>○ The Chair responded that this depends on whether Woodside's subject matter expertise is required for these discussions but that she thinks that this would generally be beneficial.</li></ul></li><li>• Mr Campbell-Everden asked Mr Stephens whether he would provide a copy of the draft compliance criteria to Woodside first.<ul style="list-style-type: none"><li>○ Mr Stephens responded that the draft is reflective of the process Horizon Power is undertaking with Woodside, however he could not confirm on the spot who (aside from the ISO) they would share the draft with and when.</li></ul></li></ul> <p>The Chair requested that the date or time of the next PAC meeting is changed to either the next day or to the afternoon of 9 November 2022. Ms Papps noted that she would be unable to attend if the date was moved, so members agreed to move the meeting to the afternoon of 9 November 2022.</p> <p>The Chair thanked everyone for attending and closed the meeting.</p> <p><b>Action: The next PAC meeting is to be moved to the afternoon of the 9 November 2022.</b></p>	<p><b>Mr Campbell- Everden</b></p> <p><b>PAC Secretariat</b></p>

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**The meeting closed at 11:10am.**



## Agenda Item 4: PAC Action Items

Pilbara Advisory Committee (PAC) Meeting 2022\_11\_09

Shaded	Shaded action items are actions that have been completed since the last MAC meeting. Updates from last MAC meeting provided for information in <b>RED</b> .
Unshaded	Unshaded action items are still being progressed.
Missing	Action items missing in sequence have been completed from previous meetings and subsequently removed from log.

Item	Action	Responsibility	Meeting Arising	Status
1	The PAC Secretariat to publish the minutes of the 4 May 2022 PAC meeting on the Coordinator's Website as final.	PAC Secretariat	Meeting 2022_08_03	<b>In progress</b>
2	The PAC Secretariat is to update the papers on the Coordinator's website to correct the date for submission on PRC_2022_01.	PAC Secretariat	Meeting 2022_08_03	<b>Complete</b>
3	Mr Stephens is to advise whether Horizon Power will need to make system changes with material costs to continue in its role to monitor the NWIS, given how Woodside has drafted the rule change proposal.	Mr Stephens	Meeting 2022_08_03	<b>Pilbara ISO indicated via email on 23 August 2022 that the ISO would assess the impact on ISO control desk costs and share where possible</b>

Item	Action	Responsibility	Meeting Arising	Status
4	The Chair is to develop a written advice from the PAC to advise the Coordinator of the PAC's views on the proposal and is to circulate the statement to the PAC for review and comment before sending it to the Coordinator.	The Chair	Meeting 2022_08_03	<b>Complete</b>
5	Mr Campbell-Everden to provide Ms Guzeleva with a proposed work program and timeframe for stage 2 of the Technical Working Group.	Mr Campbell-Everden	Meeting 2022_09_28	<b>Complete</b>





## Agenda Item 5(a): Overview of Rule Change Proposals (as of 2 Nov 2022)

Pilbara advisory committee (PAC) Meeting 2022\_11\_09

- Changes to the report since the previous PAC meeting are shown in **red font**.
- The next steps and the timing for the next steps are provided for rule change proposals that are currently being actively progressed by the Coordinator of Energy (**Coordinator**) or the Minister.

### Indicative Rule Change Activity Until the Next PAC Meeting

Reference	Title	Events	Indicative Timing
PRC_2022_01	Integrated LNG Systems	<ul style="list-style-type: none"><li>• Publish the draft rule change report</li><li>• Second period submissions due</li></ul>	07/12/2022 09/01/2023

### Rule Change Proposals Commenced

Reference	Submitted	Proponent	Title	Commenced
None				

### Rule Change Proposals Awaiting Commencement

Reference	Submitted	Proponent	Title	Commencement
None				

### Rule Change Proposals Rejected

Reference	Submitted	Proponent	Title	Rejected
None				

### Rule Change Proposals Awaiting Approval by the Minister

Reference	Submitted	Proponent	Title	Approval Due Date
None				

### Formally Submitted Rule Change Proposals

Reference	Submitted	Proponent	Title	Next Step	Date
PRC_2022_01	19/07/2022	Woodside	Integrated LNG Systems	Draft rule change report publication	07/12/2022

### Pre-Rule Change Proposals

Reference	Proponent	Description	Next Step	Date
None				

### Rule Changes Made by the Minister and Awaiting Commencement

Gazette	Date	Title	Commencement
None			



## Agenda Item 5(b): PRC\_2022\_01 – Technical Working Group (Stage 2 Outcomes)

Meeting 2022\_11\_09

### 1. Purpose

- To update the *Pilbara advisory committee (PAC)* on the outcomes of Stage 2 of the technical working group (TWG), established by the PAC to consider the technical implications/risks of Woodside Energy's *rule change proposal (PRC\_2022\_01)* and propose potential solutions.
- To inform the PAC on the TWG views (including where there was consensus) regarding the draft compliance criteria developed by Horizon Power and the ISO's qualitative assessment of NWIS credible contingencies, resulting from Woodside's proposed interconnection.
- To seek guidance from the PAC, on any of the TWG considerations that the Coordinator should take into account when developing the *draft rule change report*.

### 2. Recommendation:

That the PAC:

- (1) Reviews the attached letter from the Pilbara ISO which outlines the TWG's approach to its final workshop (**Attachment 1**);
- (2) Reviews the draft compliance criteria developed by Horizon Power and list of network contingency risks prepared by the ISO in consultation with the ISO's control desk delegate (**Schedule 2 and 3 of Attachment 1**);
- (3) Reviews and provides views on the TWG participant submissions on the outcomes of workshop, including Woodside's proposed changes to the compliance criteria and network risk table (**Schedule 4 of Attachment 1**); and
- (4) Discusses and agrees the advice that may be provided to the Coordinator, including:
  - (a) whether compliance at the connection point can be assessed with the use of the draft compliance criteria (as outlined on page 1 of Attachment 1), and if so, whether the draft compliance criteria should be provided for through appropriate amendments to the PNR;
  - (b) if yes, to what extent this draft compliance criteria should incorporate the changes proposed by the TWG participants following the TWG last meeting (Schedule 4 of Attachment 1);
  - (c) whether the ISO is able to undertake its functions effectively during network contingency events (as outlined in Schedule 2 of Attachment 1), with Woodside's proposed limits on ISO directions;
  - (d) whether the overall technical risks identified by the TWG can be appropriately mitigated through the materials produced by the TWG and other identified measures (**Schedule 3 of Attachment 1**); and

- (e) any other considerations that may be relevant to the development by the Coordinator of the *draft rule change report*.

### 3. Background

- The TWG was established to assist the PAC in forming a view on the technical and complex risks associated with the Woodside's proposed compliance with the Harmonised Technical Rules (HTR) at the point of interconnection, and the ability of the ISO to perform its role.
- The TWG was chaired by the ISO and has now concluded its work program, which was undertaken in the following two stages:
  - Stage 1: identified the technical risks of the proposal and advised the PAC whether the risks were acceptable, unacceptable, or required further assessment.
  - Stage 2: was dependent on the outcomes of Stage 1, and later defined to include further assessment of the two technical risks identified by TWG as requiring additional work.
- Following the out-of-session PAC meeting on 28 September 2022, the work program for "Stage 2" of the TWG was proposed by the ISO and agreed by PAC members. The proposed work program and estimated timeframes were then published in the [Coordinator's extension notice](#) (see table below).
- The Coordinator extended the deadline for publishing the *draft rule change report* to 7 December 2022, on the basis that Stage 2 of TWG would be complete and discussed at the PAC meeting on 9 November 2022.
- While some of the dates differed slightly from the original work program, as indicated in the table below, the following materials were provided to the TWG members in advance, for discussion at the final TWG workshop on 24 October 2022:
  - Horizon Power's proposed Compliance Criteria – Harmonised Technical Rules Compliance at the Connection Point; and
  - The ISO's NWIS Credible Contingencies – qualitative assessment of system operation functions and network risk during contingency events.
- There was general consensus by the TWG participants that the draft compliance criteria was suitable for assessing compliance at the connection point and can form the basis for further amendments to the PNR.
- There was general consensus by the TWG that any network contingency risks can be managed in the presence of the proposed rule change.
- The TWG participants were given the opportunity to formalise these views, and the ISO, Alinta Energy, Rio Tinto and Woodside provided written submissions, which are all captured in Schedule 4, Attachment 1.
- The TWG participants were expected to brief their respective PAC members in advance of the 9 November PAC meeting.
- The Coordinator now has 20 Business Days remaining to develop and publish the *draft rule change report*, taking into account the outcomes of Stage 2 of the TWG and any views expressed by the PAC on these outcomes.

ISSUE	TASK	RESPONSIBILITY	TIMING
<b>Technical Risk 1:</b> Compliance at the point of interconnection	Develop draft criteria/guidance note for consultation	Horizon Power	10 October 2022
	Working group review of guidance note	Working Group (technical reps)	10 – 19 October 2022
	Finalise criteria and guidance note	Horizon Power/Pilbara ISO	19 – 24 October 2022
	Provide advice to the PAC Secretariat (EPWA)	Pilbara ISO	By 26 October 2022
	Assessment of regulatory framework required to support connection and ongoing compliance/assessment	EPWA (to hold regulatory workshop/s with nominated representatives from PAC members)	10 – 24 October 2022 (advice to the PAC by 26 October)
<b>Technical Risk 2:</b> Network risk in contingency events (qualitative assessment)	Develop list of current contingencies	Pilbara ISO (inc ISO Control Desk)	10 October 2022
	Refine list of contingencies where Woodside connection may impact	Pilbara ISO (inc ISO Control Desk)	10 - 14 October 2022
	Assessment before and after connection	Pilbara ISO (inc ISO Control Desk)	10 – 14 October 2022
	Working group review	Working Group (technical reps)	14 – 19 October 2022
	Provide advice to the PAC Secretariat (EPWA)	Pilbara ISO	26 October 2022

## 4. Attachments

(1) Attachment 1 – Technical Working Group PAC Submission 27.10.2022

27 October 2022

Sally McMahon  
Independent Chair  
Pilbara Advisory Committee

Dear Sally

### **Integrated LNG Systems Rule Change – PAC Technical Working Group**

As you are aware, on 29 August 2022 the Pilbara Advisory Committee (**PAC**) established a technical working group (**TWG**) under the Pilbara Network Rules (**PNR**) for the purposes of:

- identifying common themes of the proposed electrical connection of Woodside Energy Limited (Woodside) proposed connection of its “Pluto facility” to the Pilbara system, using the Rule Change PRC\_2022\_01 (Integrated LNG Systems) (**Rule Change**), submitted by Woodside as a base; and
- thereby, informing advice that may be provided by the PAC to the Coordinator of Energy.

### **TWG meetings**

As you aware, the TWG met on 15 September 2022 and 19 September 2022 to undertake a high-level risk assessment associated with the proposed connection of the Pluto facility. This assessment was discussed by the PAC on 28 September 2022 and the PAC requested further information from the TWG on two key issues related to the proposed connection:

1. Compliance criteria at the point of interconnection; and
2. System operation functions and network risk during contingency events.

The TWG met on 24 October 2022 to discuss these issues. The meeting was chaired by me and facilitated by Deepak Sambhi of KPMG, the ISO’s technical adviser, and attended by representatives from Horizon Power, Alinta Energy, Rio Tinto, Woodside, Energy Policy WA and the ISO.

The meetings were conducted subject to a competition law protocol, a copy of which is set out at schedule one for your reference.

The non-binding character of the TWG meetings, the importance of remaining solely focused on technical implications of the Rule Change and observing the competition law protocol was emphasised at the start of each of the TWG meetings by Luke O’Callaghan of Lavan, the ISO’s legal adviser on this matter, who also attended the meeting.

Attendees who were network service providers employees were also reminded that, although they attended by virtue of them being selected by their respective employers, their views should be based on their technical expertise and not representative of the “corporate” view of their respective organisations (if any).

## **Methodology**

Technical deliberations undertaken by the TWG did not involve a detailed assessment of particular elements of the Rule Change amendments proposed by Woodside because this in turn would have required comprehensive discussion and agreement about the meaning of partly legal and commercial arrangements and this is beyond the scope of the TWG's deliberations.

The approach taken by the TWG was to prepare two papers in advance of the meeting, see

*Compliance Criteria – Harmonised Technical Rules Compliance at the Connection Point*, prepared by Horizon Power at Schedule 2; and

*NWIS Credible Contingencies – Qualitative Assessment* prepared by the ISO in consultation with the ISO's control desk delegate at Schedule 3

for discussion and feedback.

Participants were given the opportunity to formalise their views in written submissions following the TWG meeting, these are provided at Schedule 4. TWG participants are expected to brief their PAC members prior to the next PAC meeting.

I trust that the information provided under cover of this letter will be useful to the PAC.

Yours sincerely

**James Campbell-Everden**  
**Executive Officer Pilbara ISOCo**

## COMPETITION LAW OBLIGATIONS

If a meeting participant has a concern regarding the competition law implications of any issue being discussed at any meeting, please bring the matter to the immediate attention of the Chairperson.

The CCA prohibits anti-competitive conduct, including:

- (a) Cartel conduct: arrangements between competitors to fix prices; restrict the supply or acquisition of goods or services by parties to the arrangement; allocate customers or territories; or rig bids.
- (b) Concerted practices: other cooperation between competitors which has the purpose, effect or likely effect of substantially lessening competition, in particular, sharing Competitively Sensitive Information with competitors such as future pricing intentions.
- (c) Any contract, arrangement or understanding which has the purpose, effect or likely effect of substantially lessening competition.
- (d) Any conduct by a company with market power which has the purpose, effect or likely effect of substantially lessening competition.
- (e) Collective boycotts: where a group of competitors agree not to acquire goods or services from, or not to supply goods or services to, a business with whom the group is negotiating, unless the business accepts the terms and conditions offered by the group.

A contravention of the CCA could result in significant penalties for Pilbara ISOCo, its Members and their respective employees. Cartel conduct may also result in criminal sanctions, including gaol terms for individuals.

**Competitively Sensitive Information** means information that is not otherwise in the public domain (ie. information that is confidential or has not been published) relating to commercially sensitive matters, such as information about rates and prices, customer/supplier lists, unit costs, market share, pricing projections, commercial strategy, contract negotiations.

### Competitors / In Competition

A person/company is a competitor of or is in competition with another person/company if it supplies (or is likely to supply) the same or similar products as that other person/company. A person/company could also be a competitor or be in competition with another person/company if they purchase the same or similar goods or services as that other person/company.

### Guiding Principles – what must not be discussed

In any circumstances in which a meeting participant are or are likely to be in competition with one another or one or more of them are or are likely to be in competition the meeting participant must not discuss or exchange with any of the other participants any Competitively Sensitive Information<sup>1</sup> including without limitation the following:

- (a) the rates or prices (including any discounts or rebates) for the goods produced or the services produced by the Members that are paid by or offered to third parties;
- (a) the confidential details regarding a customer or supplier;
- (b) any strategies employed to further any business which is or is likely to be in competition with others;

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<sup>1</sup> Note: Meeting participants should note that although information in the public domain will not in itself be commercially sensitive, the context in which it is provided, any view expressed or analysis in relation to it may be separately commercially or competitively sensitive and should not be discussed with others.



- (c) the prices paid or offered to be paid (including any aspects of a transaction) to acquire goods or services from third parties; and
- (d) the confidential particulars of a third party supplier of goods or services, including any circumstances in which a meeting participant has refused to or would refuse to acquire goods or services from a third party supplier or class of third party supplier.

### **Compliance Procedures for Meetings**

- Discussions at meetings should be limited to those topics identified in the agenda.
- Depending on the nature of the topics that will be discussed at a meeting, a lawyer may attend as an observer.
- If any of the matters listed above is raised for discussion, or information is sought to be exchanged in relation to the matter, the relevant meeting participant must object to the matter being discussed. If, despite the objection, discussion of the relevant matter continues, then participation in the meeting/discussion should cease and a file note made of the relevant events, including the time at which they ceased to participate in the relevant meeting/discussion.

## **COMPLIANCE CRITERIA**

### **HARMONISED TECHNICAL RULES COMPLIANCE AT THE CONNECTION POINT**

#### **BACKGROUND**

Woodside has proposed a rule change to facilitate the connection of their Pluto facility to the North West Interconnected System (NWIS).

The rule change (specifically the proposed Pilbara Network Rule 5A) requires Pilbara Harmonised Technical Rules (HTR) compliance, but only at the connection point between the Pluto facility and the NWIS.

For the purposes of the proposed rule change, the following provides some guidance as to how HTR compliance at the connection point is to be achieved.

#### **COMPLIANCE CRITERIA**

The assessment of HTR compliance at the connection point begins with an assessment of the Woodside Pluto facility as a whole.

This includes a technical assessment (*Technical Assessment Report*) of the complete facility against the HTR (and in particular the technical requirements of Chapter 3 of the HTR) to identify any issues within the facility that may cause a compliance issue at the point of connection.

Also included are a comprehensive suite of system studies (*System Studies Report*) of the complete facility, integrated with the Pilbara Network, to ensure the NWIS can continue to meet the system performance requirements of Chapter 2 of the HTR and technical requirements of Chapter 3 of the HTR with the integration of the Pluto facility. The system studies should be in accordance with HTR requirements and the ISOs (or interconnecting NSPs) modelling procedure, ensuring the models used in system studies are appropriately validated models, and ensuring results are appropriately assessed and adequately reviewed.

Where non-conformances or potential issues are found, these do not need to be managed within the facility, but may be managed at the connection point. This may require augmentation at the connection point by the NSP of the Integrated LNG Network to satisfy HTR compliance requirements.

The intent of this rule is that the HTR is assessed for the whole facility, but is measured, monitored and compliance achieved at the connection point.

Where an issue is unable to be suitably managed at the connection point, and there is no detrimental effect on the NWIS (i.e. the intent of the HTR is fully met), a derogation to the technical rules may be considered by the relevant authority (i.e. ISO for an NSP), as is the case with other Rules Participants.

In some cases, there may be technical issues and parameters which require coordination within the Pluto facility (for example protection and control settings such as critical clearing times and droop settings) and in these cases the parties (eg ISO, NSP of the Integrated LNG Network, controller of the Pluto facility and, if required, the NSP of the interconnecting network) shall work in good faith to ensure settings are coordinated with the NWIS, and overall Pluto facility response is compliant at the connection point, to the satisfaction of the ISO.

## ATTACHMENT A – ASSESSMENT GUIDELINES – EXAMPLES

The following table provides some examples and guidance on how specific HTR requirements are to be interpreted, managed, and monitored on an ongoing basis to achieve HTR compliance at the connection point. The below table is not an exhaustive list of all compliance requirements, but rather provides a guide as to how a suitable assessment process may be conducted.

HTR Clause(s)	Requirement	Interpretation	Monitoring
2.2, 2.3.3, 2.3.4, 2.3.5, 2.3.9, 3.2.3	Power System Performance Standards and Power Quality	<p>Facility shall meet the power system performance standards and power quality requirements at the connection point.</p> <p>Power quality within the facility does not need to meet the power quality requirements.</p>	<p>Power quality monitored at the connection point.</p> <p>Power quality monitoring equipment required at connection point in accordance with 3.2.3.</p>
2.2.7, 2.2.8, 2.2.9, 2.2.10, 2.2.11, 2.3.7, 5.2.1	Power System Stability Requirements	<p>Facility as a whole must meet the power system stability requirements of the HTR.</p> <p>The whole Facility shall be assessed against the HTR, including system studies of the complete facility, integrated with the Pilbara Network, to ensure the North West Interconnected System (NWIS) can meet the power system stability requirements of the HTR with the integration of the Facility.</p> <p>Where non-conformances or potential issues are found, these do not need to be managed within the facility, but may be managed at the connection point. This may require augmentation at the connection point (eg BESS) to ensure a stable response from the overall facility.</p> <p>Control system settings within the Pluto facility may require coordination to achieve overall system stability, and in these cases the parties shall work in good faith to ensure settings are coordinated with the NWIS, and overall Pluto facility response is compliant at the connection point, to the satisfaction of the ISO.</p>	<p>Suitable monitoring at connection point required (in accordance with 3.3.4.1) to enable review of system disturbances.</p> <p>Additional facility summary level information may also be required (see 3.3.4.1 below)</p> <p>Participation in ISO investigations or reviews of power system disturbances required in accordance with 5.2.1.</p>
2.3.1, 2.3.2, 2.4.1	Underfrequency Load shedding	<p>Facility as a whole must provide an underfrequency load shedding response, for imports<sup>1</sup> only.</p> <p>The % of load to be shed shall be in accordance with the HTR, but proportional to the magnitude of import during the underfrequency event.</p> <p>Where traditional load shedding schemes are not available to achieve this a supplementary response (eg via BESS) may be implemented at the connection point to ensure the overall facility % load reduction is achieved.</p> <p>Settings as per the HTR or as agreed with the ISO.</p>	<p>Underfrequency load shedding performance monitored at the connection point.</p> <p>For system underfrequency events, the underfrequency load shed % is measured as a % reduction in import at the connection point at the time of the event.</p>
2.4.2	Underfrequency islanding	<p>The HTR does not presently contemplate under frequency islanding of the Pluto Facility. If the facility is to island during underfrequency conditions the islanding settings should not be any more sensitive</p>	<p>Islanding monitored at the connection point.</p>

<sup>1</sup> Note the application of load shedding to import only (as opposed to entire facility load) may need to be managed as a derogation to the HTR.

HTR Clause(s)	Requirement	Interpretation	Monitoring
		<p>than the Stage 1 underfrequency islanding settings outlined in the HTR.</p> <p>Settings to be agreed with the ISO.</p>	
2.6, 3.2.5, 4.2.6	Protection	<p>Protection systems at the connection point must achieve compliance with the HTR.</p> <p>Protection systems within the facility do not need to comply with the HTR but must be suitably coordinated with upstream protection systems at the connection point and within the NWIS.</p> <p>In these cases, the parties shall work in good faith to ensure protection settings are coordinated with the NWIS, and the overall protection system is coordinated and compliant at the connection point, to the satisfaction of the ISO<sup>2</sup>.</p> <p>The technical assessment shall include an assessment of protection within the facility against the requirements of the HTR. Where specific protection schemes are required by the HTR and it is deemed that protection scheme may have an impact on HTR compliance at the connection point (eg generator check synchronisation protection) these schemes may be required to be implemented at the connection point if these can not be implemented within the facility.</p>	Protection system performance shall be monitored at the connection point.
2.6.4, 2.6.5	Maximum and Critical fault clearing times	<p>Protection systems at the connection point must be compliant with the maximum total fault clearing times and critical fault clearing times in the HTR.</p> <p>Protection systems within the facility do not need to meet the maximum fault clearing times in the HTR but must have settings which meet any critical fault clearing times identified in system studies, or suitable protection schemes implemented at the connection point to ensure critical fault clearing times can be met.</p> <p>In these cases, the parties shall work in good faith to ensure protection settings are coordinated with the NWIS, and overall protection system is coordinated and compliant at the connection point, to the satisfaction of the ISO.</p>	Protection clearing times monitored at the connection point.
3.2.4, 3.3.9	Power System Studies	<p>Power system studies of the complete facility, integrated with the Pilbara Network, shall be completed to ensure the North West Interconnected System (NWIS) can continue to meet the system performance requirements of Chapter 2 of the HTR with the integration of the Pluto facility. Also included are studies of the Pluto facility against the technical requirements of Chapter 3 of the HTR.</p> <p>The system studies should be in accordance with HTR requirements and the ISOs (or connecting NSPs) modelling procedure, ensuring the models used in system studies are appropriately validated models, and ensuring results are appropriately assessed and adequately reviewed.</p>	

<sup>2</sup> Given the nature of the connection, ISO may also consider the need to treat the 33kV connection point as a "Transmission System", in the context of the duplication of protection requirements in HTR 2.6.2(a).

HTR Clause(s)	Requirement	Interpretation	Monitoring
		Where non-conformances or potential issues are found, these do not need to be managed within the facility, but may be managed at the connection point.	
3.3.3.1	Reactive Power	<p>Generators assessed for suitable reactive power capability in accordance with HTR. The facility as a whole must provide suitable reactive power capability in line with HTR depending on number of machines online at any point in time.</p> <p>If individual generator reactive power capability cannot be achieved a supplementary reactive power capability (eg via BESS) shall be implemented at the connection point to ensure the overall facility meets the reactive power requirements of the HTR.</p>	Monitoring of overall facility reactive power capability – must provide sufficient reactive power capability depending on amount of generation capacity online at any point in time.
3.3.3.3, 3.3.3.8	Response to disturbances	<p>Generators within the facility shall be assessed to ensure immunity to disturbances in accordance with the HTR. The Facility as a whole must meet the ride through requirements of the HTR, and not subject the NWIS to fluctuations caused by equipment disconnecting during disturbances.</p> <p>If individual generators can not meet the HTR requirements for disturbance immunity then a supplemental disturbance response (eg BESS) shall be implemented at the connection point to ensure the overall facility meets the disturbance ride through requirements of the HTR.</p>	Monitoring at connection point to ensure overall facility rides through disturbances and the NWIS is not subjected to fluctuations caused by facility equipment inappropriately disconnecting during disturbances.
3.3.3.5	Generator ramp rates	<p>Generators assessed for suitable ramp rate performance in accordance with HTR.</p> <p>Facility as a whole must meet ramp rate performance requirements of the HTR, depending on the nature and number of machines online at any point in time.</p> <p>If individual machine ramp rate performance can not be achieved, a supplementary ramping response (eg via BESS) shall be implemented at the connection point to ensure the overall facility ramp rate performance meets the HTR.</p>	Ramp rates monitored at the connection point to ensure the facility as a whole meets ramp rate performance requirements of the HTR, depending on the nature and number of machines online at any point in time.
3.3.4.1	Remote Monitoring	<p>Monitoring equipment at the connection point must achieve compliance with the HTR.</p> <p>Monitoring equipment within the facility does not need to comply with the HTR, however some additional summary level monitoring will be required to measure compliance at the connection point including:</p> <ul style="list-style-type: none"> <li>• Number and type of machines online;</li> <li>• Total generation capacity online; and</li> <li>• Total generation output (real and reactive power).</li> </ul>	Monitoring at the connection point in accordance with 3.3.4.1, plus facility summary level information as indicated.
3.3.4.4	Generator droop response	<p>Generators assessed for suitable droop response in accordance with HTR. Facility as a whole must demonstrate suitable droop response in line with HTR depending on number of machines online at any point in time.</p> <p>If individual machine droop response can not be achieved a supplementary droop response (eg via BESS) shall be implemented at the connection point</p>	Monitoring of overall facility droop response – must meet required droop depending on the defined dead band, droop setting, amount of generation capacity online and magnitude of initial

HTR Clause(s)	Requirement	Interpretation	Monitoring
		<p>to ensure the overall facility droop response meets the HTR.</p> <p>Settings as per the HTR or as agreed with the ISO.</p>	output at any point in time.
3.3.4.4, 3.3.4.5	Voltage and Frequency control systems	<p>Studies shall be completed, and individual generator voltage and frequency control systems assessed in accordance with HTR. The facility as a whole must meet the voltage and frequency requirements of the HTR, on in aggregate.</p> <p>Where individual machines are unable to meet the voltage and frequency requirements of the HTR, it must be demonstrated that on in aggregate the whole plan facility meets the voltage and frequency control requirements of the HTR. If required, a supplementary control response (eg via BESS) may be implemented at the connection point to ensure the overall facility control response meets the HTR.</p>	Monitoring of frequency and voltage performance at the connection point.
3.3.6	Synchronising	<p>Synchronising equipment at the connection point must achieve compliance with the HTR.</p> <p>Synchronising equipment within the facility does not need to comply with the HTR, however suitable synchronising equipment must be in operation at the connection point if this can not be achieved at individual generators.</p>	Monitoring of synchronising equipment at the connection point.
3.4, 3.4.10.2, 3.4.10.3	Requirements for Connection of Small Generators	<p>Small Generating units (1000kVA up to 10MW) connected within the Pluto facility shall be assessed in accordance with the HTR.</p> <p>Where individual generating units in this category do not meet the requirements of the HTR, issues identified do not need to be managed within the facility, but may be managed at the connection point. This may require augmentation at the connection point (eg BESS) to ensure compliance at the connection point.</p> <p>Where specific protection schemes are required by the HTR and it is deemed that protection scheme may have an impact on HTR compliance at the connection point (such as pole slip and islanding protection) these schemes may be required to be implemented at the connection point if these can not be implemented within the facility.</p>	
4.1, 4.2, 5.4.2	Inspection, Testing and Commissioning	<p>Equipment at the connection point must comply with the inspection, testing and commissioning requirements of the HTR.</p> <p>Equipment within the facility does not need to comply with the inspection, testing and commissioning requirements of the HTR unless that equipment is specifically identified or deemed as part of the technical assessment process to directly affect the HTR compliance at the connection point. In such cases the parties shall work in good faith to ensure suitable inspection, testing and commissioning arrangements are in place, to achieve overall compliance at the connection point, to the satisfaction of the ISO.</p>	

<b>HTR Clause(s)</b>	<b>Requirement</b>	<b>Interpretation</b>	<b>Monitoring</b>
5.2.1, 5.2.2, 5.2.3	Network Operation	Equipment at the connection point must comply with the network operational requirements of the HTR.  Equipment within the facility does not need to comply with the network operational requirements of the HTR.	
5.3.1, 5.3.2	Operational voltage control and reactive reserve	The Facility shall meet the operational voltage control and reactive reserve requirements of the HTR at the connection point.  Equipment within the facility does not need to comply with the operational voltage control and reactive reserve requirements of the HTR.	
5.4.1	Fault levels	The Facility shall meet the fault level requirements of the HTR at the connection point.  Equipment within the facility does not need to comply with the fault level requirements of the HTR.	

#	Type	Element	Contingency needing further consideration	Network Impact of the contingency	Network impact change with Woodside connection
1	Line Trip	HPS - BPS 66 kV Line	N	Potential loss of generation from Alinta Energy's power stations. The loss will be compensated by SHPS and/ or FCAS/ SRESS provider	No impact
2	Line Trip	BPS - FIH 66 kV Line	N	Potential loss of generation from Alinta Energy's power stations. The loss will be compensated by SHPS and/ or FCAS/ SRESS provider	No impact
3	Line Trip	HPS - MDR 66 kV Line	N	- Risk to 75MW of load - Combined load of Tiger and Mt Newman is a risk. - If HPS-MDR trips, HPS-WFD/Tiger line will become overloaded, lose Tiger but Mt Newman/BHP will drag from the system FCAS/SRESS providers - If HPS-MDR trips but HPS-WFD/Tiger line is not overloaded, then SRESS delivery may be affected from HPS and BPS due to constraint limits. SRESS re-dispatch may be required from other connected sources. - 14MW swing reserve from everyone, RTIO another extra 20MW (so Rio has 34MW total). Total system reserve is 62MW. - Loss of HPS-MDR line will lead to loss of load, so reserve should be able to satisfy load demand.	No impact
4	Line Trip	HPS - TIG 66 kV Line	N	- HPS-WFD feeder loss - Similar impact to the system as HPS-MDR feeder loss	No impact
5	Line Trip	SHT - HDT 220 kV Line	N	Loss of one line is not a concern, both lines are equally rated so there is redundancy.	No impact
6	Line Trip	HDT-WFD 66 kV Line	N	Loss of one line is not a concern, both lines are equally rated so there is redundancy.	No impact
7	Line Trip	WFD-MNM 66 kV Line	N	No impact as the network will remain connected via MNM/AST line and there is the under harbour cable between FIH-MNM too.	No impact
8	Line Trip	WFD-MDR 66 kV Line	N	No impact as the network will remain connected via MDR/AST line.	No impact
9	Line Trip	MDR - AST 66 kV Line	N	No impact as the network will remain connected via MDR-WFD line.	No impact
10	Line Trip	CLB - SHT 220 kV Line	Y	- No impact on the system but the consequences of further contingencies requires consideration - ESS provisions need to be re-considered for further contingency events with Woodside connected. Even if ESS may be available in some scenarios, need to ensure that the ESS contracts are not breached. This should be captured in the normal process of calculating ESS requirements.	Pluto generation and load connection needs to be considered in ESS changes for various islanding scenarios (this is normal process for any network participant, not specific to Woodside).
11	Line Trip	KRT - CLB 132 kV Line	Y	No immediate impact seen on the system but given this loss is close to the 33 kV connections with RTIO and may pose risk by overloading the 33 kV connections as a result the consequences this contingency, in particular overloading of the 33 kV connections requires further consideration	It is understood that the dispatch arrangements in place to ensure the 33 kV lines are not overloaded and Woodside connection is likely to add to system strength subject to Woodside's primary frequency response requirements which needs assessing
12	Line Trip	KRT-DMP 132 kV Line	Y	No immediate impact seen on the system but given this loss is close to the 33 kV connections with RTIO and may pose risk by overloading the 33 kV connections as a result the consequences this contingency, in particular overloading of the 33 kV connections requires further consideration	It is understood that the dispatch arrangements in place ensure the 33 kV lines are not overloaded and Woodside connection is likely to add to system strength subject to Woodside's primary frequency response requirements which needs assessing
13	Line Trip	DMP-BRU 132 kV Line - Representing Pluto full load trip	Y	- Loss of 50MW for loss of Maitland during low load scenarios will create excess generation issue, requires further modelling. - This will also result in loss of the solar farm. - Consider ESS management, possibly a runback schemes but this requires greater visibility of Woodside network.	- Excess 50MW generation is a new issue for the existing system. This is possibly the largest loss of load that needs to be considered. - Loss of 50MW generation needs to be considered by Woodside
14	Line Trip	KRT - Maitland Solar Farm + BESS	Y	- 50MW of load will drag from system, ESS provisions need to be considered	Additional scenario of 50MW to be considered but manageable via ESS provisions. This risk can be managed through
15	Line Trip	DMP - DBS 33 kV Line - RTIO Interconnector	N	- Loss one line may cause second line to overload. Consider the double line loss contingency event from ESS provisions perspective, the supply is still maintained in the system via the DMP-KRT line.	No impact
16	Line Trip	CLB - CBS 33 kV Line - RTIO Interconnector	N	It is assumed that the 33kV circuits are operated under normal loading scenarios most times i.e. zero transfer as far as possible and/ or lightly loaded. For this contingency, a single circuit 33 kV interconnection trip is not seen as a risk, provided the other circuit is loaded under the overcurrent limit.	No impact
17	Line Trip	Both 33 kV links between RTIO and HP lost due to overload	Y	In the event, where the 33 kV circuits are loaded close to capacity, loss of one 33 kV circuit will lead to loss of the other circuit on overcurrent. ESS provisions need to be considered and further assessed for this contingency event	Needs further assessment with the working group to assess the credibility of losing both these lines.
18	Line Trip	YPS - CBS 220 kV Line	N	- Supply maintained from RTIO 132kV network but there would be some impact on system	No impact
19	Line Trip	MSM - CBS 132 kV Line	N	- No impact, supply maintained via 220kV lines	No impact
20	Generator Trip	HPS Generators	N	Manage via ESS	
21	Generator Trip	BPS Generator	N	Manage via ESS	
22	Generator Trip	KRT Generators	N	Manage via ESS	
23	Generator Trip	SHPS Generator (1.5 Gens)	N	Manage via ESS	
24	Generator Trip	CLPS Generator Trip	N	Manage via ESS	
25	Generator Trip	YMPS Generator Trip	N	Manage via ESS	
26	Generator Trip	PBD Generator Trip	N	Manage via ESS	
27	Generator Trip	West Ang Generation Trip	N	Manage via ESS	
28	Generator Trip	RTIO Solar PV Trip - TBC	N	Manage via ESS	
29	Generator Trip	Maitland solar farm trip	N	Manage via ESS	
30	Generator Trip	Pluto LNG Generation trip	N	Manage via ESS	
31	Generator Trip	Maitland BESS trip, during BESS discharge with no Maitland PV	N	Manage via ESS	
32	Generator Trip	Pluto BESS trip, during BESS discharge with no Maitland PV	N	Manage via ESS	
33	Load Shedding/UFLS	Pluto facility	Y	ISO control desk will not have the ability to manage Woodside load shed at/ beyond connection point via current Rules, needs some changes with Woodside's consent	UFLS and islanding scheme needs to be assessed and identify the means to provide Pluto visibility to the control desk to observe UFLS so it can manage the rest of the network during frequency excursion
34	CFCT		N	ISO control desk will not have the ability to assess CFCT change as a result of the connection	ISO to undertake system studies as part of the access and connection studies



## TWG Participant Submissions

<b>Alinta Energy</b>	<p>Overall, Alinta is supportive of the proposed compliance criteria at the point of connection for the Woodside Pluto facility as outlined the Compliance Criteria document providing there is a clear obligation for Woodside to have a full validated dynamic power system modelling of the Woodside Pluto facility and including a full assessment of network credible contingency scenarios tabled during the workshop on the 24/10/22.</p> <p>Any non-conformance to network contingency scenario will need to be addressed at the POC as well.</p>
<b>Rio Tinto</b>	<ol style="list-style-type: none"> <li>1. There is alignment that the entirety of Woodside’s facility needs to be assessed against the HTRs for compliance and must comply with the HTRs, and that the HTRs are the uniform minimum baseline for technical compliance with NWIS.</li> <li>2. However, Rio Tinto understands that Woodside’s concern is that: <ol style="list-style-type: none"> <li>a. if Woodside cannot meet those HTRs on a component by component basis within its facility, Woodside should be able to submit proposals/solutions which ultimately achieve the same objective provided for under the HTRs (a concept it expresses as being “at being at the interconnection point); and</li> <li>b. currently there is a “gap” in the PNRs in how Woodside would propose those solutions, how the solution would be assessed and if assessed as being acceptable, then how they would then become a binding obligation on Woodside instead of the original HTR requirement. Woodside seeks greater certainty around these matters in the PNRs.</li> </ol> </li> <li>3. Rio Tinto understands that Woodside is primarily proposing that those solutions could be provided for “at the interconnection point”, but that should not limit the range of potential solutions that could be proposed by other access seekers who in future find themselves in a similar position.</li> <li>4. One of the critical issues that will need to be dealt with is the criteria against which the decision maker assesses the relevant solution. Such criteria must be legally certain, specific, measurable and enforceable. They should be objective to the maximum extent possible and should minimise the discretion of a decision maker in determining whether criteria have been met. While there may be some flexibility, it is important that the criteria are as certain as possible, given that Woodside would be released from HTRs that satisfy these criteria and form part of the PNRs. The “guidelines” tabled at the TWG set out some high level principles, guidelines and examples. However, they are not sufficient to set the relevant criteria as described above for the decision maker to apply with certainty. Rather than developing new bespoke criteria for the “point of connection”, the HTR should continue to be used as the applicable criteria, with a focus on the objective or outcome of each criteria and how this is achieved. If the same technical objective or outcome can be achieved in a different way to what may be prescribed in the HTR, whilst still complying with the objectives of the HTR and not impacting to the broader NWIS, then this should form a feasible solution for this situation.</li> <li>5. Rio Tinto is currently considering the above and will provide Rio Tinto’s feedback/proposal on how these concerns could be addressed through EPWA’s Regulatory Working Group.</li> </ol>
<b>Pilbara ISO</b>	<p>With regard to agenda Item 1 - Compliance at the point of connection:</p> <ul style="list-style-type: none"> <li>- The ISO is supportive of the Compliance guideline prepared by Horizon Power, and recommends it is included in the regulatory framework to ensure access and connection, modelling, ongoing compliance, and future significant modifications are managed appropriately.</li> </ul> <p>With regard to agenda Item 2 - NWIS credible contingencies (qualitative assessment)</p> <ul style="list-style-type: none"> <li>- Based on a high-level qualitative assessment of NWIS contingencies, the ISO believes system operations (including limited directions) can be managed in accordance with the proposed rule change.</li> </ul>
<b>Woodside</b>	See marked up documents over page

## COMPLIANCE CRITERIA

### HARMONISED TECHNICAL RULES COMPLIANCE AT THE CONNECTION POINT

#### BACKGROUND

Woodside has proposed a rule change to facilitate the connection of the ~~if~~ Pluto facility to the North West Interconnected System (NWIS).

The rule change (specifically the proposed Pilbara Network Rule 5A) requires Pilbara Harmonised Technical Rules (HTR) compliance, but only at the connection point between the Pluto facility and the NWIS.

For the purposes of the proposed rule change, the following provides some guidance as to how HTR compliance at the connection point is to be assessed and achieved.

#### COMPLIANCE CRITERIA

The assessment of HTR compliance at the connection point begins with a connection assessment by the relevant NSP of the Woodside Pluto facility as a whole and will include assessment of network and system impacts against the HTR.

This consists of a technical assessment (*Technical Assessment Report*) of the complete facility against the HTR (and in particular the technical requirements of Chapter 3 of the HTR) to identify any issues within the facility that may cause a compliance issue at the point of connection.

As part of the Technical Assessment Report a comprehensive suite of system studies (*System Studies Report*) of the complete facility, integrated with the Pilbara Network, will be undertaken to ensure the NWIS can continue to meet the system performance requirements of Chapter 2 of the HTR and technical requirements of Chapter 3 of the HTR with the integration of the Pluto facility. The system studies should be in accordance with the published HTR requirements and the ISOs (or interconnecting NSPs)??? modelling procedures, to ensure the models used in system studies are appropriately validated models, and ensuring results are appropriately assessed and adequately reviewed. The system studies shall be developed by the NSP responsible for the connection and certified by the ISO prior to energisation.

Where non-conformances or potential issues are identified, these can be resolved either within the facility, and/or at the connection point. If required, this may necessitate augmentation at the connection point by the NSP of the Integrated LNG Network and/or interconnecting NSP to satisfy HTR compliance requirements.

The intent of this rule is that the HTR is assessed for the whole facility, but is measured, monitored and compliance achieved at the connection point.

Where an issue is unable to be suitably managed at the connection point, and there is no detrimental effect on the NWIS (i.e. the intent of the HTR is fully met), a derogation to the technical rules may be considered by the relevant authority (i.e. ISO for an NSP), as is the case with other Rules Participants.

In some cases, there may be technical issues and parameters which require coordination within the Pluto facility (for example protection and control settings such as critical clearing times and droop settings) and in these cases the parties (eg ISO, NSP of the Integrated LNG Network, controller of the Pluto facility and, if required, the NSP of the interconnecting network) shall work in good faith to ensure settings are coordinated with the NWIS, and overall Pluto facility response is compliant at the connection point, to the satisfaction of the ISO.

**ATTACHMENT A – ASSESSMENT GUIDELINES – Draft EXAMPLES for compliance at the Connection Point.**

**[Insert Watermark “Draft Examples” on all pages]**

**Woodside would not see Appendix A in the rules rather they may be included in guidance documentation.**

The following table provides some examples and guidance on how specific HTR requirements are to may be interpreted, managed, and monitored on an ongoing basis to achieve HTR compliance at the connection point. The below table is not an exhaustive list of all compliance requirements, but rather provides a guide as to how a suitable assessment process may be conducted.

<b>HTR Clause(s)</b>	<b>Requirement</b>	<b>Interpretation</b>	<b>Monitoring</b>
2.2, 2.3.3, 2.3.4, 2.3.5, 2.3.9, 3.2.3	Power System Performance Standards and Power Quality	<p>Facility shall meet the power system performance standards and power quality requirements at the connection point.</p> <p>Power quality within the facility does not need to meet the power quality requirements.</p>	<p>Power quality monitored at the connection point.</p> <p>Power quality monitoring equipment required at connection point in accordance with 3.2.3.</p>
2.2.7, 2.2.8, 2.2.9, 2.2.10, 2.2.11, 2.3.7, 5.2.1	Power System Stability Requirements	<p>Facility as a whole must meet the power system stability requirements of the HTR.</p> <p>The whole Facility shall be assessed against the HTR, including system studies of the complete facility, integrated with the Pilbara Network, to ensure the North West Interconnected System (NWIS) can meet the power system stability requirements of the HTR with the integration of the Facility.</p> <p>Where non-conformances or potential issues are found, these do not need to be managed within the facility, but may be managed at the connection point. This may require augmentation at the connection point (eg BESS) to ensure a stable response from the overall facility.</p> <p>Control system settings within the Pluto facility may require coordination to achieve overall system stability, and in these cases the parties shall work in good faith to ensure settings are coordinated with the NWIS, and overall Pluto facility response is compliant at the connection point, to the satisfaction of the ISO.</p>	<p>Suitable monitoring at connection point required (in accordance with 3.3.4.1) to enable review of system disturbances.</p> <p>Additional facility summary level information may also be required (see 3.3.4.1 below)</p> <p>Participation in ISO investigations or reviews of power system disturbances required in accordance with 5.2.1.</p>
2.3.1, 2.3.2, 2.4.1	Underfrequency Load shedding	<p>Facility as a whole must provide an underfrequency load shedding response, for imports<sup>1</sup> only.</p> <p>The % of load to be shed shall be in accordance with the HTR, but proportional to the magnitude of import during the underfrequency event.</p> <p>Where traditional load shedding schemes are not available to achieve this a supplementary response (eg via BESS) may be implemented at the connection point to ensure the overall facility % load reduction is achieved.</p>	<p>Underfrequency load shedding performance monitored at the connection point.</p> <p>For system underfrequency events, the underfrequency load shed % is measured as a % reduction in import at the</p>

<sup>1</sup> Note the application of load shedding to import only (as opposed to entire facility load) may need to be managed as a derogation to the HTR.

HTR Clause(s)	Requirement	Interpretation	Monitoring
		Settings as per the HTR or as agreed with the ISO.	connection point at the time of the event.
2.4.2	Underfrequency islanding	<p>The HTR does not presently contemplate under frequency islanding of the Pluto Facility. If the facility is to island during underfrequency conditions the islanding settings should not be any more sensitive than the Stage 1 underfrequency islanding settings outlined in the HTR.</p> <p>Settings to be agreed with the ISO.</p>	Islanding monitored at the connection point.
2.6, 3.2.5, 4.2.6	Protection	<p>Protection systems at the connection point must achieve compliance with the HTR.</p> <p>Protection systems within the facility do not need to comply with the HTR but must be suitably coordinated with upstream protection systems at the connection point and within the NWIS.</p> <p>In these cases, the parties shall work in good faith to ensure protection settings are coordinated with the NWIS, and the overall protection system is coordinated and compliant at the connection point, to the satisfaction of the ISO<sup>2</sup>.</p> <p>The technical assessment shall include an assessment of protection within the facility against the requirements of the HTR. Where specific protection schemes are required by the HTR and it is deemed that protection scheme may have an impact on HTR compliance at the connection point (eg generator check synchronisation protection) these schemes may be required to be implemented at the connection point if these can not be implemented within the facility.</p>	Protection system performance shall be monitored at the connection point.
2.6.4, 2.6.5	Maximum and Critical fault clearing times	<p>Protection systems at the connection point must be compliant with the maximum total fault clearing times and critical fault clearing times in the HTR.</p> <p>Protection systems within the facility do not need to meet the maximum fault clearing times in the HTR but must have settings which meet any critical fault clearing times identified in system studies, or suitable protection schemes implemented at the connection point to ensure critical fault clearing times can be met.</p> <p>In these cases, the parties shall work in good faith to ensure protection settings are coordinated with the NWIS, and overall protection system is coordinated and compliant at the connection point, to the satisfaction of the ISO.</p>	Protection clearing times monitored at the connection point.
3.2.4, 3.3.9	Power System Studies	Power system studies of the complete facility, integrated with the Pilbara Network, shall be completed to ensure the North West Interconnected System (NWIS) can continue to meet the system performance requirements of Chapter 2 of the HTR with the integration of the Pluto facility. Also included are studies of the Pluto facility against the technical requirements of Chapter 3 of the HTR.	

<sup>2</sup> Given the nature of the connection, ISO may also consider the need to treat the 33kV connection point as a "Transmission System", in the context of the duplication of protection requirements in HTR 2.6.2(a).

HTR Clause(s)	Requirement	Interpretation	Monitoring
		<p>The system studies should be in accordance with HTR requirements and <del>the ISOs (or connecting NSPs)</del> published modelling procedure, ensuring the models used in system studies are appropriately validated models, and ensuring results are appropriately assessed and adequately reviewed.</p> <p>Where non-conformances or potential issues are found, these do not need to be managed within the facility, but may be managed at the connection point.</p>	
3.3.3.1	Reactive Power	<p>Generators assessed for suitable reactive power capability in accordance with HTR. The facility as a whole must provide suitable reactive power capability in line with HTR depending on number of machines online at any point in time.</p> <p>If individual generator reactive power capability cannot be achieved a supplementary reactive power capability <del>(eg via BESS)</del> shall be implemented at the connection point to ensure the overall facility meets the reactive power requirements of the HTR.</p>	Monitoring of overall facility reactive power capability – must provide sufficient reactive power capability depending on amount of generation capacity online at any point in time.
3.3.3.3, 3.3.3.8	Response to disturbances	<p>Generators within the facility shall be assessed to ensure immunity to disturbances in accordance with the HTR. The Facility as a whole must meet the ride through requirements of the HTR, and not subject the NWIS to fluctuations caused by equipment disconnecting during disturbances.</p> <p><del>If individual generators can not meet the HTR requirements for disturbance immunity then a supplemental disturbance response (eg BESS) shall be implemented at the connection point to ensure the overall facility meets the disturbance ride through requirements of the HTR.</del></p>	Monitoring at connection point to ensure overall facility rides through disturbances and the NWIS is not subjected to fluctuations caused by facility equipment inappropriately disconnecting during disturbances.
3.3.3.5	Generator ramp rates	<p>Generators assessed for suitable ramp rate performance in accordance with HTR.</p> <p>Facility as a whole must meet ramp rate performance requirements of the HTR, depending on the nature and number of machines online at any point in time.</p> <p><del>If individual machine ramp rate performance can not be achieved, a supplementary ramping response (eg via BESS) shall be implemented at the connection point to ensure the overall facility ramp rate performance meets the HTR.</del></p>	Ramp rates monitored at the connection point to ensure the facility as a whole meets ramp rate performance requirements of the HTR, depending on the nature and number of machines online at any point in time.
3.3.4.1	Remote Monitoring	<p>Monitoring equipment at the connection point must achieve compliance with the HTR.</p> <p>Monitoring equipment within the facility does not need to comply with the HTR, however some additional summary level monitoring will be required to measure compliance at the connection point <del>including:</del></p> <p><del>Number and type of machines online;</del></p> <p><del>Total generation capacity online; and</del></p> <p><del>Total generation output (real and reactive power).</del></p>	Monitoring at the connection point in accordance with 3.3.4.1, plus facility summary level information as indicated.
3.3.4.4	Generator droop response	Generators assessed for suitable droop response in accordance with HTR. Facility as a whole must demonstrate suitable droop response in line with	Monitoring of overall facility droop response – must meet required

HTR Clause(s)	Requirement	Interpretation	Monitoring
		<p>HTR depending on number of machines online at any point in time.</p> <p><del>If individual machine droop response can not be achieved a supplementary droop response (eg via BESS) shall be implemented at the connection point to ensure the overall facility droop response meets the HTR.</del></p> <p>Settings as per the HTR or as agreed with the ISO.</p>	<p>droop depending on the defined dead band, droop setting, amount of generation capacity online and magnitude of initial output at any point in time.</p>
3.3.4.4, 3.3.4.5	Voltage and Frequency control systems	<p>Studies shall be completed, and individual generator voltage and frequency control systems assessed in accordance with HTR. The facility as a whole must meet the voltage and frequency requirements of the HTR, on in aggregate.</p> <p><del>Where individual machines are unable to meet the voltage and frequency requirements of the HTR, it must be demonstrated that on in aggregate the whole plan facility meets the voltage and frequency control requirements of the HTR. If required, a supplementary control response (eg via BESS) may be implemented at the connection point to ensure the overall facility control response meets the HTR.</del></p>	<p>Monitoring of frequency and voltage performance at the connection point.</p>
3.3.6	Synchronising	<p>Synchronising equipment at the connection point must achieve compliance with the HTR.</p> <p>Synchronising equipment within the facility does not need to comply with the HTR, however suitable synchronising equipment must be in operation at the connection point if this can not be achieved at individual generators.</p>	<p>Monitoring of synchronising equipment at the connection point.</p>
3.4, 3.4.10.2, 3.4.10.3	Requirements for Connection of Small Generators	<p>Small Generating units (1000kVA up to 10MW) connected within the Pluto facility shall be assessed in accordance with the HTR.</p> <p><del>Where individual generating units in this category do not meet the requirements of the HTR, issues identified do not need to be managed within the facility, but may be managed at the connection point. This may require augmentation at the connection point (eg BESS) to ensure compliance at the connection point.</del></p> <p>Where specific protection schemes are required by the HTR and it is deemed that protection scheme may have an impact on HTR compliance at the connection point (such as pole slip and islanding protection) these schemes may be required to be implemented at the connection point if these can not be implemented within the facility.</p>	
4.1, 4.2, 5.4.2	Inspection, Testing and Commissioning	<p>Equipment at the connection point must comply with the inspection, testing and commissioning requirements of the HTR.</p> <p>Equipment within the facility does not need to comply with the inspection, testing and commissioning requirements of the HTR unless that equipment is specifically identified or deemed as part of the technical assessment process to directly affect the HTR compliance at the connection point. In such cases the parties shall work in good faith to ensure suitable inspection, testing and commissioning</p>	

HTR Clause(s)	Requirement	Interpretation	Monitoring
		arrangements are in place, to achieve overall compliance at the connection point, to the satisfaction of the ISO.	
5.2.1, 5.2.2, 5.2.3	Network Operation	Equipment at the connection point must comply with the network operational requirements of the HTR.  Equipment within the facility does not need to comply with the network operational requirements of the HTR.	
5.3.1, 5.3.2	Operational voltage control and reactive reserve	The Facility shall meet the operational voltage control and reactive reserve requirements of the HTR at the connection point.  Equipment within the facility does not need to comply with the operational voltage control and reactive reserve requirements of the HTR.	
5.4.1	Fault levels	The Facility shall meet the fault level requirements of the HTR at the connection point.  Equipment within the facility does not need to comply with the fault level requirements of the HTR.	

#	Type	Element	Contingency needing further consideration Contingency needing further Consideration post Rule Change	Network Impact of the contingency	Network impact change with Woodside connection
1	Line Trip	HPS - BPS 66 kV Line	N	Potential loss of generation from Alinta Energy's power stations. The loss will be compensated by SHPS and/ or FCAS/ SRESS provider	No impact
2	Line Trip	BPS - FIH 66 kV Line	N	Potential loss of generation from Alinta Energy's power stations. The loss will be compensated by SHPS and/ or FCAS/ SRESS provider	No impact
3	Line Trip	HPS - MDR 66 kV Line	N	- Risk to 75MW of load - Combined load of Tiger and Mt Newman is a risk. - If HPS-MDR trips, HPS-WFD/Tiger line will become overloaded, lose Tiger but Mt Newman/BHP will drag from the system FCAS/SRESS providers - If HPS-MDR trips but HPS-WFD/Tiger line isnt overloaded, then SRESS delivery may be affected from HPS and BPS due to constraint limits. SRESS re-dispatch may be required from other connected sources. - 14MW swing reserve from everyone, RTIO another extra 20MW (so Rio has 34MW total). Total system reserve is 62MW. - Loss of HPS-MDR line will lead to loss of load, so reserve should be able to satisfy load demand.	No impact
4	Line Trip	HPS - TIG 66 kV Line	N	- HPS-WFD feeder loss - Similar impact to the system as HPS-MDR feeder loss	No impact
5	Line Trip	SHT - HDT 220 kV Line	N	Loss of one line is not a concern, both lines are equally rated so there is redundancy.	No impact
6	Line Trip	HDT-WFD 66 kV Line	N	Loss of one line is not a concern, both lines are equally rated so there is redundancy.	No impact
7	Line Trip	WFD-MNM 66 kV Line	N	No impact as the network will remain connected via MNM/AST line and there is the under harbour cable between FIH-MNM too.	No impact
8	Line Trip	WFD-MDR 66 kV Line	N	No impact as the network will remain connected via MDR/AST line.	No impact
9	Line Trip	MDR - AST 66 kV Line	N	No impact as the network will remain connected via MDR-WFD line.	No impact
10	Line Trip	CLB - SHT 220 kV Line	Y	- No impact on the system but the consequences of further contingencies requires consideration - ESS provisions need to be re-considered for further contingency events with Woodside connected. Even if ESS may be available in some scenarios, need to ensure that the ESS contracts are not breached. This should be captured in the normal process of calculating ESS requirements.	Pluto generation and load connection needs to be considered in ESS changes for various islanding scenarios (this is normal process for any network participant, not specific to Woodside).
11	Line Trip	KRT - CLB 132 kV Line	Y	No immediate impact seen on the system but given this loss is close to the 33 kV connections with RTIO and may pose risk by overloading the 33 kV connections as a result the consequences this contingency, in particular overloading of the 33 kV connections requires further consideration	It is understood that the dispatch arrangements in place to ensure the 33 kV lines are not overloaded and Woodside connection is likely to add to system strength subject to Woodside's primary frequency response requirements which needs assessing
12	Line Trip	KRT-DMP 132 kV Line	Y	No immediate impact seen on the system but given this loss is close to the 33 kV connections with RTIO and may pose risk by overloading the 33 kV connections as a result the consequences this contingency, in particular overloading of the 33 kV connections requires further consideration	It is understood that the dispatch arrangements in place ensure the 33 kV lines are not overloaded and Woodside connection is likely to add to system strength subject to Woodside's primary frequency response requirements which needs assessing
13	Line Trip	DMP-BRU 132 kV Line - Representing Pluto full load trip	Y	- Loss of 50MW for loss of Maitland during low load scenarios will create excess generation issue, requires further modelling. - This will also result in loss of the solar farm. - Consider ESS management, possibly a runback schemes but this requires greater visibility of Woodside network.	- Excess 50MW generation is a new issue for the existing system. This is possibly the largest loss of load that needs to be considered. - Loss of 50MW generation needs to be considered by Woodside
14	Line Trip	KRT - Maitland Solar Farm + BESS	Y	- 50MW of load will drag from system, ESS provisions need to be considered	Additional scenario of 50MW to be considered but manageable via ESS provisions. This risk can be managed through
15	Line Trip	DMP - DBS 33 kV Line - RTIO Interconnector	N	- Loss one line may cause second line to overload. Consider the double line loss contingency event from ESS provisions perspective, the supply is still maintained in the system via the DMP-KRT line.	No impact
16	Line Trip	CLB - CBS 33 kV Line - RTIO Interconnector	N	It is assumed that the 33kV circuits are operated under normal loading scenarios most times i.e. zero transfer as far as possible and/ or lightly loaded. For this contingency, a single circuit 33 kV interconnection trip is not seen as a risk, provided the other circuit is loaded under the overcurrent limit.	No impact
17	Line Trip	Both 33 kV links between RTIO and HP lost due to overload	Y	In the event, where the 33 kV circuits are loaded close to capacity, loss of one 33 kV circuit will lead to loss of the other circuit on overcurrent. ESS provisions need to be considered and further assessed for this contingency event	Needs further assessment with the working group to assess the credibility of losing both these lines.
18	Line Trip	YPS - CBS 220 kV Line	N	- Supply maintained from RTIO 132kV network but there would be some impact on system	No impact
19	Line Trip	MSM - CBS 132 kV Line	N	- No impact, supply maintained via 220kV lines	No impact
20	Generator Trip	HPS Generators	N	Manage via ESS	If Woodside decide to disconnect during high load/low generation situation, it will cause further loss in generation. Woodside cannot be directed to remain connected, cater for ESS provisions for Woodside disconnection
21	Generator Trip	BPS Generator	N	Manage via ESS	
22	Generator Trip	KRT Generators	N	Manage via ESS	
23	Generator Trip	SHPS Generator (1.5 Gens)	N	Manage via ESS	
24	Generator Trip	CLPS Generator Trip	N	Manage via ESS	
25	Generator Trip	YMPG Generator Trip	N	Manage via ESS	
26	Generator Trip	PBD Generator Trip	N	Manage via ESS	
27	Generator Trip	West Ang Generation Trip	N	Manage via ESS	
28	Generator Trip	RTIO Solar PV Trip - TBC	N	Manage via ESS	
29	Generator Trip	Maitland solar farm trip	N	Manage via ESS	
30	Generator Trip	Pluto LNG Generation trip	N	Manage via ESS	
31	Generator Trip	Maitland BESS trip, during BESS discharge with no Maitland PV	N	Manage via ESS	
32	Generator Trip	Pluto BESS trip, during BESS discharge with no Maitland PV	N	Manage via ESS	
33	Load Shedding/UFLS	Pluto facility	Y	ISO control desk will not have the ability to manage Woodside load shed at beyond connection point via current Rules; needs some changes with Woodside's consent Insufficient or excessive loadshed during a contingency event exacerbating network instability.	UFLS and islanding scheme needs to be assessed and identify the means to provide Pluto visibility to the control desk to observe UFLS so it can manage the rest of the network during frequency excursion UFLS and islanding schemes need to be developed in conjunction with Woodside and assessed to determine if any material impact to network.
34	CFCT		N	ISO control desk will not have the ability to assess CFCT change as a result of the connection	ISO to undertake system studies as part of the access and connection studies





## Agenda Item 5(c): PRC\_2022\_01 – Coordinator of Energy Regulatory Workshop

Meeting 2022\_11\_09

### 1. Purpose

- To update the *Pilbara advisory committee* (PAC) on the Coordinator of Energy's (Coordinator) regulatory workshop, held on 25 October 2022 to address matters related to Woodside Energy's rule change proposal (PRC\_2022\_01).
- To seek the PAC's views on the proposed additional regulatory arrangements discussed at the workshop, which seek to address how assessment of "compliance at the connection point", as proposed by Woodside, can be accommodated under the Pilbara Networks Rules (PNR).

### 2. Recommendation:

That the PAC:

- (1) Reviews the attached paper which outlines the proposed additional regulatory arrangements as discussed at the Coordinator's workshop (**Attachment 1**):
- (2) Notes the views of workshop attendees, including where there was consensus, which have been summarised in boxes throughout the attached paper (**Attachment 1**); and
- (3) Provides its views on the proposed regulatory arrangements, which are intended to be used as the basis for drafting additional amendments to the PNR.

### 3. Background

- At the Out of Session PAC meeting on 28 September, in addition to discussing the scope of Stage 2 of the Technical Working Group (TWG), the PAC noted:
  - that there was a need to develop additional draft rules to give effect to a compliance criteria/protocol for assessing initial and ongoing compliance at the connection point; and
  - any regulatory arrangements considered would require input from regulatory, rather than technical, experts of the parties involved.
- The Coordinator therefore included a regulatory workshop as part of the work program outlined in the [extension notice](#) for PRC\_2022\_01, and noted that any outcomes from the workshop were to be presented back to the PAC for discussion at its 9 November 2022 meeting.
- PAC members were requested to nominate attendees with regulatory expertise by 7 October 2022 and workshop materials (which included draft proposed regulatory arrangements and a competition law statement) were circulated to the attendees on 21 October 2022.

- The Coordinator’s workshop was held on 25 October, in accordance with clause A2.7.3 of the PNR, and was facilitated by Energy Policy WA (EPWA). The workshop was chaired by EPWA and included:
  - EPWA representatives (including observers), two Woodside Energy representatives, two Horizon Power representatives, the Pilbara ISO, one BHP representative, one FMG representative, and three Rio Tinto representatives.
- The objective of the regulatory workshop was to seek the views of attendees on the draft proposed regulatory arrangements, which covered the following three areas:
  - Getting connected: how to provide for the development and application of a “compliance criteria” under the PNR, to facilitate connection on the basis of compliance at the connection point;
  - Staying connected: how mechanisms for ensuring ongoing compliance at the connection point could be developed under the PNR; and
  - Reassessment: the circumstances in which a reassessment of ‘compliance at the connection point’ may be triggered under the PNR.
- The attached paper (**Attachment 1**) outlines the draft proposed arrangements as provided to and discussed with attendees at the Coordinator workshop on 25 October 2022. The only addition that has been made to the paper is the insertion of a box at the end of each of the three sections, which summarises the views expressed by workshop attendees.
- General consensus, where such has been reached, and any divergent views at the workshop are noted in these additional summaries. General consensus included that:
  - compliance criteria, for assessing compliance with the HTR at the connection point, should be provided for under the PNR;
  - Woodside’s facility will remain subject to the compliance and enforcement regime under the PNR, including investigations by the ISO; and
  - the PNR should specify triggers for reassessment of compliance at the connection point, including for example where there has been a major modification behind the connection point.

## 4. Attachments

- (1) Coordinator Regulatory Workshop - Proposed regulatory arrangements for discussion.

## **DRAFT - FOR DISCUSSION PURPOSES ONLY**

### **Coordinator of Energy – Regulatory Workshop**

**Note:** *This is the draft discussion paper as provided to attendees in advance and discussed at the regulatory workshop on 25 October 2022. While no changes have been made to the content of the proposed arrangements, a summary of the workshop discussion has been included in boxes at the end of each relevant section. General consensus, where such has been reached, and any divergent views at the workshop are noted in in these summaries.*

#### **Background**

The Coordinator of Energy (Coordinator) is holding this regulatory workshop in accordance with clause A2.7.3 of the Pilbara Networks Rules (Rules) and in relation to Woodside Energy's (Woodside) rule change proposal (PRC\_2022\_01). The objective of the workshop is to seek the views of attendees on the proposed regulatory arrangements outlined below, as they relate to the amending rules proposed by Woodside.

Please note this document is for workshop discussion purposes only and does not represent the views of the Coordinator.

#### **Summary of arrangements**

The following outlines draft proposed regulatory arrangements to facilitate connection of Woodside's Pluto LNG Facility to the Horizon Power's network, on the basis of 'compliance at the connection point'.

For the purposes of this note, 'compliance at the connection point' means that the requirements of the Harmonised Technical Rules are met at the connection point, irrespective of whether or not any plant or equipment on Woodside's side of the connection complies with those technical rules.

In summary:

- The regulatory arrangements below will be implemented through amending Pilbara Networks Rules and the making of one or more protocols or other instruments by the Pilbara ISO.
- The regulatory arrangements respond to the following needs identified by the Pilbara Advisory Committee (PAC):
  - The application of "compliance criteria" for compliance at the connection point of the Pluto facility to the NWIS (Horizon Power's network);
  - The ability to ensure that any network risks and or contingencies that might arise can be adequately and properly managed.
- In responding to these needs, the regulatory proposed arrangements will address 3 main issues:
  1. Basis on which Pluto facility becomes connected and energised:

2. The process by which, and the requirements to be satisfied before, the Pluto facility is connected to the NWIS and energisation occurs (that is, that the connection can be energised without any risk to the NWIS and the Pluto facility is able to comply with the HTR at the connection point)Basis on which Pluto facility continues to remain connected and energised (ongoing compliance):
  - ‘compliance at the connection point’ requirement must continue to be satisfied on an ongoing basis;
  - There is an ability to adequately (by Pilbara ISO and or its delegates) to respond to a circumstance where the Pluto facility is no longer complying at the connection point;
3. The circumstances (triggers) in which a reassessment of the basis on which Pluto’s facility can continue to stay connected to the network. That is, a reassessment of ‘compliance at the connection point’ is required.

A high level outline of how rules might be developed to address each of these 3 issues follows.

### Summary of workshop discussion

Some time was spent at the beginning of the workshop to establish the context and assumptions underpinning the approach to both the workshop and the proposed regulatory arrangements. Rio Tinto in particular asked whether they were to assume for the purposes of the workshop that Woodside is a registered network service provider, and that any technical issues associated with compliance at the connection point (including the development of a compliance criteria) have been resolved.

Attendees were directed to assume these conditions had been satisfied for the purposes of the workshop, in order to provide appropriate feedback on the proposed regulatory arrangements, which would only be applicable should the rule change be approved.

There was further discussion around the rule change proposal itself that was not necessarily related to the issues outlined in this paper.

## 1. Getting connected

The *Electricity Industry Act* and the *Electricity Industry (Pilbara Network) Regulations* (Regulations) made under it enable the Rules to be made to “authorise the Pilbara ISO to make instruments establishing protocols and procedures and any other instruments related to the performance of its functions” and to provide for the effect of those instruments and how they might later be amended: sections 120N(1)(f) and regulation 8(c).

It is not clear from the Rule Change Proposal whether or how the Pilbara ISO will be involved in the process by which the Pluto facility becomes connected to the NWIS and the connection energised. That is, whether the *new connections* process rule 268 “ISO’s access and connection function” will apply.

In any event, the connection is sought on the basis of unique 'compliance at the connection point' and new Rules must be made to ensure appropriate criteria are developed that speak to the detail of the matters that must be satisfied before connection is completed and energisation occurs.

Those rules will include a requirement for the Pilbara ISO to develop a protocol, procedure or other instrument addressing the detail of these matters that must be satisfied before connection and energisation occur. This instrument may also end up addressing process to be followed by Woodside (and others like Horizon as applicable). The Pilbara ISO (including a relevant delegate) would be the decision maker as to whether a criterion was satisfied.

The Rules may also address or give guidance to some of the content of the instrument that is to be developed by the Pilbara ISO and the process through which that procedure or protocol is developed (for example whether the transitional provisions in Sub-appendix A4.8 would apply).

Rules will enable the Pilbara ISO to recover its costs associated with performing these functions and developing the protocol.

### Summary of workshop discussions

It was generally accepted that the PNR would need to provide for the development of a protocol or procedure, which contains a "compliance criteria" that would need to be satisfied before connection was allowed and energisation occurred.

Attendees were asked to provide a view on the extent to which the details of this criteria should be included in the PNR versus in the protocol/procedure.

Some of the key points raised were:

- There was no consensus on the extent to which substantive content should be devolved to the procedure/protocol or enshrined in the PNR;
- Trade-offs were noted between enshrining content in the PNR (higher level of certainty, less readily able to be changed) and including most of the detail in a procedure/protocol (flexible, more capable of change as the system continues to evolve);

There was general consensus that a hybrid approach should be adopted, which would involve key matters related to the compliance criteria and its establishment being included in the PNR, while allowing for the next level of detail to be included in the protocol/procedure.

Attendees who were present at the last meeting of the technical working group (TWG) on 24 October noted that the first page of the compliance criteria, that was provided to and discussed with the TWG, would be a useful place to start as the base for drafting the relevant PNR amending rules, while the Attachment to the compliance criteria would form the basis of the protocol/procedure.

## 2. Staying connected

Several things need to be in place to ensure ongoing compliance at the connection point:

- **Visibility:** An ability for someone (probably Horizon Power) to monitor what is happening at the connection point (and measure or assess whether the Pluto facility continues to comply at the connection point);
- **Reporting:** a requirement for any incidences of non-compliance, or expected non-compliance, identified by the NSP or Woodside to be reported to the Pilbara ISO;
- **Responding to network risks and contingencies:**
  - This area crosses over with the extent to which the Pilbara ISO's functions and powers, more generally in the Rules, enable it to respond to contingencies and how emergencies are to be curtailed (as proposed by Woodside in its RCP).
- **Addressing Non-compliance:** means by which appropriate measures can be taken to address instances of non-compliance:
  - identification of the relevant Woodside entity that is to be contacted (ie the entity having the relevant operational control) and which is accountable under the Rules to respond;
  - ability for Pilbara ISO to investigate instances of non-compliance at the connection point, including requirements for the provision of information to the Pilbara ISO by Woodside;
  - escalation of continued non-compliance and application of enforcement measures as appropriate including, disconnection or other enforcement actions prescribed under the Rules. Disconnection in this circumstance would result in the connection criteria and process described in 1 above needing to be again satisfied before the connection would again be energised;
  - currently the Regulations do not provide for the application of civil penalties in relation to a breach of provisions of the Rules, only for provisions of the Pilbara Networks Access Code. This item is included for brief discussion as there is the opportunity to revisit these arrangements as part of a package of amendments to the Regulations currently being progressed by EPWA.
- **Proactive compliance:** ongoing compliance would have a "proactive quality" such that if Woodside was anticipating changing: (i) its plant or equipment in a

material way (see below under 3) and/or the way in which it operates that plant or equipment, or (ii) the Woodside entity that is to be responsible under the

Rules for compliance, then Woodside must report this to the Pilbara ISO well in advance of a change occurring:

- This will allow an assessment to be made of whether a “re-opener” as described in 3 below is required.
- A failure to report would be a breach of the Rules – and the enforcement action described above would apply.

## Summary of workshop views

### Ongoing Compliance

There was general consensus from attendees (including Woodside) that the existing compliance and enforcement regime, including any compliance investigations commenced in accordance with the ISO’s compliance protocol, will be applicable to Woodside in the same way they are applicable to any other facility.

The key difference is that any ISO directions that may arise as a result of an investigation, would be limited to the three types of ISO directions provided for under clause 172(4) of Woodside’s proposed rule change.

The discussion referenced an example of a hypothetical problem – with unacceptable level of harmonics being detected at the connection point. In such a circumstance Woodside would need to comply with any investigation and take any steps identified to address the issue, etc.

It was noted that if the rule change proposal, as it is currently drafted, does not make it clear that Woodside would be subject to compliance and enforcement arrangements under the PNR in the manner described above, then further amendments to the rule change would be required.

The consensus on this item, if implemented adequately, would avoid the need for many of the compliance measures identified in the paper presented to the workshop (see above), as they would be covered by existing provisions of the PNR.

### Network contingency risk

Attendees that were present at the meeting of the TWG on 24 October 2022 noted that the ISO’s list of network contingencies, as presented and discussed at that meeting, could be addressed without further amendments to the proposed rule changes. It was therefore agreed that no additional regulatory arrangements were required to address this matter.

### Enforcement

Please note that the enforcement actions identified above (including the civil penalty regime) were not discussed at the workshop.

### 3. Reassessment

Rules would be developed to address circumstances in which the “compliance at the connection point” basis on which the Pluto facility is connected must be re-examined and or reassessed. Possible openers (triggers) include:

- A material modification (including additions/removals/retirements) to the plant at the Pluto facility. *[We can look at the generator performance standards treatment of material change for guidance on this issue]*
- A material change in the way in which plant at the Pluto facility is operated (that is, the plant is not modified but the way in which it is to be operated changes – ie in a way that may have implications for the broader NWIS or ongoing compliance at the connection point).
- There is a change in the identity of the controller of the Pluto facility (the Woodside entity that is responsible for ensuring ongoing compliance with the requirements of the Rules and that must have the operational capacity to respond to any issues that arise).

#### Summary of workshop views

There was general consensus that the current provisions under the PNR that apply to any other facility will be applicable to the Pluto facility – e.g. the requirements under the PNR for any proposed modifications to a network or the facilities connected to it.

It was also accepted that any major planned modifications to the facilities behind the connection point would need to undergo the same assessment as the assessment which was undertaken prior to the initial interconnection. However, as with the original connection, such an assessment will be to ensure ongoing compliance at the connection point. If this is not clear under the current drafting of the rule change, than necessary amendments would be required to the proposed amending rules.