Department of Energy, Mines, Industry Regulation and Safety
Energy Policy WA
GOVERNMENT OF WESTERN AUSTRALIA

Meeting Agenda

Meeting Title:	Evolution of Pilbara Network Rules Working Group
Workstream	Workstream 1 (PNR Workstream)
Date:	29 July 2024
Time:	9:30am – 11:30am
Location:	Online, via TEAMS

Item	Item	Responsibility	Type	Duration
1	Welcome and Agenda • Conflicts of interest • Competition Law	Chair	Noting	7 min
2	Meeting Apologies and Attendance	Chair	Noting	2 min
3	Action items	Chair	Noting	1 min
4	Project Scope	Chair	Noting	5 min
5	List of EPNR Initiatives	RBP	Discussion	10 min
6	Power system security and reliability	RBP	Discussion	20 min
7	Scheduling, dispatch and settlement	RBP	Discussion	15 min
8	New connections	RBP	Discussion	15 min
9	Governance of the ISO	Chair	Discussion	15 min
10	Compliance and enforcement	Chair	Discussion	10 min
11	Prioritisation	RBP	Discussion	15 min
12	Next steps	RBP	Noting	5 min
	Next meeting: 22 August 2024 (PNR workstream)			

Competition and Consumer Law Obligations

Members of the PAC's Evolution of the Pilbara Networks Rules Working Group (**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.

(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; and
- a forum like the EPNRWG is capable being a place where such cooperation could occur.

(c) **anti-competitive contracts, arrangements understandings**: any contract, arrangement or understanding which has the purpose, effect or likely effect of substantially lessening competition.

(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.

(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 a significant fine (up to $500,000 for individuals and more than $10 million 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, 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.

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Agenda Item 3: Action Items

Evolution of the Pilbara Networks Rules Working Group (EPNRWG) Workstream 1 – Meeting - 2024_07_29

Shaded	Shaded action items are actions that have been completed since the last EPNRWG (WS1) meeting. Updates from last EPNRWG (WS1) meeting provided for information in RED.
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.

[There are no action items currently open and all completed action items have been considered at previous meetings.]

Government of **Western Australia**
Energy Policy WA

Evolution of the Pilbara Network Rules Working Group

Meeting 2024_07_29

29 July 2024

Working together for a **brighter** energy future.

Meeting Protocols

- Please place your microphone on mute, unless you are asking a question or making a comment
- Please keep questions relevant to the agenda item being discussed
- If there is not a break in discussion and you would like to say something, you can ‘raise your hand’ by typing ‘question’ or ‘comment’ in the meeting chat
- Questions and comments can also be emailed to EPWA - Energy Markets energymarkets@dmirs.wa.gov.au after the meeting
- The meeting will be recorded and minutes will be taken
- Please state your name and organisation when you ask a question
- If you are having connection/bandwidth issues, you may want to disable the incoming and/or outgoing video

4. Project scope

EPNR Project Scope

Most of the Pilbara electricity system is vertically integrated, with weakly interconnected, self-sufficient power systems, and predominantly gas generation. The current PNRs were designed around this situation.

Decarbonisation means a transition to intermittent renewable generation plus firming. That is likely to require changes to the existing arrangements.

Stage	Status/Timing
Stage 1: Establish the Working Group	Working group established
Stage 2: Scenario development and modelling	March – July 2024
Stage 3: Assessment of PNR	July – November 2024
Public Consultation	November – December 2024
Stage 4: Implementation Plan	Jan – Feb 2025

Project workplan – Stages 3 and 4

Development initiatives:

- Detailed PNR review (Jul/Aug)
- Develop initiative list in conjunction with working group, drawing on modelling findings and roundtable work (Jul)
- Discuss final initiative list with working group, and prioritise (22 Aug)
- Develop design proposals for selected initiatives (Aug-Nov: 22 Aug, 26 Sep*, 21 Oct*), and discuss with working group.
    - TBC: EPWA is looking to defer 26 Sep and 21 Oct by around one month.
- Develop and publish consultation paper (Nov)
- Develop and publish information paper and Implementation Plan (Feb 2025), including discussion with working group (23 Jan)

5. List of EPNR initiatives

Initial initiative list – key issues to explore

Power system security and reliability

- Reliability standard
- Long term planning
- Outage planning
- ESS definitions and procurement
- ESS cost allocation
- Responsibility for setting system strength requirements

Scheduling, dispatch and settlement

- Balancing service with (optional) reduced load following requirements
- Metering obligations
- Load shedding arrangements
- Fee allocation

New connections

- NSP to NSP connection arrangements, including constrained access
- Process for new transmission build, including cost allocation and constrained access
- Registration category and requirements for storage facilities
- Registration category and requirements for DSP
- Exemptions and derogations from the HTR

Terminology

- Definition and use of “energisation” and “commercial operations”
- Consistency between PNR and HTR

Governance of the ISO

- Board composition
- Resourcing and budget
- Ringfencing and confidentiality regime

Compliance and enforcement

- Responsibilities and process for compliance monitoring
- Enforcement options

6. Power system security and reliability

Reliability Standard

Chapter 6 of the PNR provides for:

- The ISO to publish peak demand or a method for determining peak demand
- Exit Users to forecast their own peak demand and nominate a Demand Cap
- Generators to self-certify the capacity they provide
- Exit Users to provide generation adequacy certificates
- Exit Users to be restricted to withdrawing their Demand Cap

The chapter is currently suspended, and no methods have been published.

The regime needs to evolve to include a reliability standard:

- include a method for determining the overall capacity requirement
- include intermittent renewables, storage, and demand side response
- account for correlation (or lack thereof) in the output of intermittent renewable generation (which is likely to require centralised capacity certification)
- allow different standards in different parts of the network
- while maintaining opt out for behind the meter activity where loss of generation is tied to load reduction

Long term planning

The ISO must prepare and publish two long term planning reports every two years:

- A Transmission Development Plan
- The Pilbara GenSOO

The Transmission Development Plan is focused on the Covered Networks in the NWIS, but can include “possible opportunities for new, extended or expanded Pilbara networks which may Interconnect with the NWIS”.

The Pilbara GenSOO is also focused on the NWIS, but can “include information … in respect of existing, or potential new, extended or expanded, Non-Covered Networks which do not form part of the NWIS”. The ISO has limited powers to seek information from parties not connected to the NWIS.

The Pilbara networks (including the NWIS) are expected to see significant growth (both in demand and in geographical size) over the next decade, with significant uncertainty over where and when large investments will be made. Long term planning arrangements need to be strengthened to allow stakeholders (particularly those making large investments) to efficiently coordinate their efforts.

Outage planning

The PNR require Registered NSPs to notify:

- Planned outages to other NSPs orally in the system coordination meeting
- Planned outages to the ISO by providing a copy of internal outage planning reports
- Forced outages only if they may affect system security or ESS provision.

There is no minimum advance notification requirement, and no central outage register.

If outages clash, and consensus cannot be reached on revised plans, the ISO can direct an NSP not to take the outage.

A more integrated system requires a more structured approach to generation and network outages.

The ISO's review of sections 7.3 and 7.4 may deal with some of these issues, and the EPNR work needs to extend from that starting point.

Essential System Services definition and procurement

The current PNR includes two frequency management services:

- “FCESS”, a regulation service to manage frequency fluctuations occurring in the normal course of operations. Separate raise and lower components are defined, but procured as a single product. A single primary provider is designated for the power system as a whole, but the ISO also designates providers for each potential island.
- “SRESS”, a spinning reserve service to cover larger contingency events. There is no load rejection reserve service to manage a significant drop in load.

Intermittent volatility will come to be the largest contingency on the power system, both upwards and downwards. At the same time, the expected intermittent generation overbuild means significant intermittent curtailment will occurring much of the time, and could support both regulation and contingency response.

The ESS definitions need to evolve to suit a future with high renewable penetration, including making use of storage and curtailed renewables, and allowing more dynamic procurement to reduce costs. We also have the opportunity to standardise terminology with other Australian jurisdictions.

ESS cost allocation

Regulation costs are currently recovered from participants based on the size of the difference between their maximum load and their minimum load for the entire three year reference period.

Spinning Reserve costs are currently recovered from participants based on the size of their largest generation unit, regardless of how many other units they have, or whether that unit actually ran.

These arrangements are not unreasonable if participants have similarly sized generation portfolios, and large generation units run at high capacity factors. In future, neither of these will be the case.

The cost allocation approach needs to ensure that participants have opportunity to reduce their exposure to the costs in a way that reduces the need for the service.

The ISO's current review may deal with some of these issues, and the EPNR work needs to extend from that starting point.

Responsibility for setting system strength requirements

The Pilbara Networks comprise several interconnected networks with different owners. Optimum (or “automatic”) technical standards are best specified system-wide, in which case they will be specified in the HTR. Any negotiation around the technical standards is better specified on a network by network basis, in which case the PNR should ensure that powers and responsibilities are clearly specified.

The HTR do not currently specify system strength requirements, and the PNR do not allocate responsibility for which party is empowered to set the requirements. Its addition to the HTR is being considered by Workstream 2.

7. Scheduling, dispatch and settlement

Balancing service with (optional) reduced load following requirements

Currently, Balancing Nominees must maintain an Imbalance as close to zero as possible within each Trading Interval, and in real time. Consumers can source energy from outside their portfolio, but this must be nominated before the start of the relevant settlement period unless the ISO approves.

Any mismatch between real-time supply and demand is met by ESS providers, or by ISO direction if ESS is insufficient to meet the gap. Sometimes there can be payment shortfalls or surpluses.

A key finding of the modelling was that there is benefit from having more flexible balancing arrangements.

The EPNR project needs to explore design for a balancing service procured by the ISO, allowing:

- participants to avoid increasingly complex multi-party nominations
- centrally procured balancing energy to be determined closer to real time
- the ISO to manage expected intermittent volatility

A broader centralised balancing service will require review of the dispatch arrangements, nomination rules, and imbalance tolerances.

Metering obligations

Covered NSPs are responsible for metering at connection and interconnection points on their networks. This includes a metering database which records how metered quantities are to be allocated at points with more than one Network User.

The ISO Energy Balancing and Settlement Procedure sets out the timing and content required for meter data submissions.

The basic metering rules should continue to work with a centralised balancing service, but it may be prudent to move timing and content descriptions into the rules rather than a procedure.

Load shedding arrangements

In situations where there is insufficient energy available to meet load, some load will not be served.

The HTR include provisions for automated underfrequency load shedding. If energy shortfall is forecast, it is not good practice to wait for the frequency to fall enough to trigger AUFLS.

Whichever participant is unable to balance (due to an allocation shortfall) should turn down, but there is a general obligation for the ISO to use load shedding as a last resort only.

Neither the HTR nor the PNR include provisions for manual load shedding, other than by direction from the ISO or its delegate. The Loss of Generation Protocol covers the response to a contingency event, but otherwise there is no guidance on what load to shed first, allocation of load shedding to participants or networks, or timeframes for forecasts or notifications.

These matters need to be added to the PNR.

Fee allocation

The ISO, ERA, and Coordinator of Energy incur costs to administer and operate the PNR. These costs are currently divided equally between Registered NSPs, regardless of their size, energy use, level of participation in settlement, or other participation metrics. No costs are allocated directly to generators or large consumers.

As connections to the NWIS increase, and the mix of connected parties changes, this basis for allocating fees will no longer be appropriate.

The EPNR project needs to consider alternative methods of allocating administration and operation costs in the form of market fees.

8. New connections

NSP to NSP connection arrangements, including constrained access

The PNR and HTR include connection requirements for new facilities. They include minimum performance standards, operating requirements, and requirements for commissioning tests.

These connection requirements are largely to do with connection of new generating units, and not to new connections of networks to the NWIS.

The connection arrangements in the PNR and HTR need to be expanded to cover new network connections. This could be by:

- Amending the existing framework to clarify roles, responsibilities, and connection process when an access seeker is an NSP rather than a generator or load; or
- Creating of a new interconnection framework for NSP to NSP connections

The connection rules also need to address:

- whether and how constrained access rules would apply to new connected networks, and
- required timeframes for each step of the connection process.

Process for new transmission build, including cost allocation

Significant transmission investment is needed to enable the transition to renewables in the Pilbara. It is not yet clear who will make that investment, and how they will charge for access.

The PNR deal with network access rights for the two covered networks, but do not deal with investment decisions, and do not set transmission pricing arrangements.

The two covered networks are subject to some oversight by the Economic Regulation Authority, which approves ringfencing rules and the initial WACC.

The EPNR project needs to consider how new transmission build is likely to be managed and funded, interaction between the PNR and the PNAC, application of constrained access to new build, and whether the PNR should include rules for transmission planning, approval, and pricing.

Registration category and requirements for storage facilities

The PNR includes the concept of Storage Works. Storage Works must be registered, and Standing Data maintained for that facility.

However, the PNR place many requirements on Generation Facilities which are not placed on Storage Works. For example:

- Storage Works cannot provide ESS
- Storage Works cannot contribute to generation adequacy
- The HTR treats storage as a combination of a generation unit and consumer equipment
- The definition of the Technical Envelope considers Generation Facilities but not Storage Works
- The ISO can require information about Generation Facilities outside the NWIS for the purposes of long term planning, but not Storage Works.

The PNR need to expand to include relevant concepts for storage as it does for generation.

Registration category and requirements for DSP

One potentially significant component of demand growth in the Pilbara is consumer sites which can flexibly ramp their load up and down to match the availability of intermittent generation. Examples cited include hydrogen, ammonia, and green steel production.

Modelling indicates that there will be significant quantities of renewable generation that will be curtailed unless flexible demand is able to use it.

To be used efficiently, this load will need to be scheduled or dispatched close to real time. The PNR do not currently have a mechanism to do this efficiently.

The PNR need to include a mechanism to register and manage demand side participation loads.

Any central balancing needs to include either a signal of available volumes or actual dispatch of flexible load as part of balancing out potential overgeneration.

Exemptions and derogations from the HTR

Historically, different networks in the Pilbara have had different technical standards. The HTR is intended to function as a single, end-to-end technical power system standard for all networks and equipment connected to the NWIS.

While compliance with the HTR is sufficient for connection, sometimes a prospective connection or a network may wish to depart from the standard. For example, a new connection may wish to not comply with some portion of the HTR, or a network may prefer compliance with a higher standard than required in the HTR. In either case, the relevant parties would need to agree to negotiate such a departure.

The EPNR needs to include a mechanism for negotiation, formalisation, and ongoing monitoring of departures from the HTR, including supporting dispute resolution process.

9. Governance of the ISO

Summary Overview of Pilbara ISO Governance

Pilbara ISO Limited (Pilbara ISOCo) has been appointed to the ISO role. As well as the Pilbara regulatory regime (including the PNR), a number of instruments are relevant including the Pilbara ISOCo's Constitution, internal policies and controls.

Features of the current governance arrangement include:

- Participant-led company including board composition
- Key system operations functions (delegated to participants)
- Collaborative and informal approach to PNR functions (i.e. fortnightly system coordination meetings, including outage scheduling)
- Administered ISO funding/resourcing
- Reliance on non-PNR instruments (i.e. Internal company controls)
- Lack of effective enforcement mechanism

Board composition

Pilbara ISOCo Limited has been appointed to the ISO role.

In line with Pilbara ISOCo's constitution, the current board consists of an Independent Chair, a government appointed Director, APA member director, Horizon Power member director and Rio Tinto member director.

Strict protocols are in place in order to manage director conflicts of interest. An expanded NWIS and ISO role in the future warrant close consideration of:

- whether the current composition of the board is able to provide suitable oversight and insight into the operations of the ISO, and execution of its functions in achievement of the Pilbara electricity objectives
- whether the participation of registered NSPs on the board raises perception concerns relating to the independence of the ISO.

ISO resourcing and budgets

The ISO currently delegates performance of real-time system operations functions to Horizon Power.

Pilbara ISOCo's authorisation application to the ACCC also highlights the design of ISO functions under the foundational Pilbara regime prioritise efficiency, leveraging NSP input and expertise in decision-making processes (in order to avoid duplicating technical resources within the ISO).

As more parties join the NWIS, real time system operations will need to deal with more generators, more loads, and more complex decisions about operation of storage, intermittent curtailment, and other matters.

Reforms need to consider how the ISO delivers its real-time functions, and ensure suitable arrangements are reflected in the PNR to ensure that the ISO budget is prudent and efficient, and determined through an independent process.

Ringfencing and confidentiality regime

The PNAC contains rules regarding ringfencing, with a focus on vertically integrated NSPs. The ringfencing rules are applied only to some NSPs.

The PNR does include a confidentiality regime which limits the use of Confidential Information (as defined in the PNR) and disclosure to third parties.

The PNR may also specify further restrictions on confidential information in the delivery or participation in certain functions (for example, see Rule 176 for system coordination meetings).

Ringfencing arrangements and the treatment of confidential information is critical for reducing the perception and potential for anti-competitive behaviour to occur.

The Pilbara regime needs to ensure that ringfencing arrangement are fit-for-purpose and captures all relevant parties, and that further restrictions specified in the PNR are properly scoped to capture, and provide confidence, that all intended conduct is captured.

10. Compliance and enforcement

Responsibilities and process for compliance monitoring

The ISO is responsible for monitoring compliance with the PNR, including its own compliance. It must do so with “as little formality and as much expedition as reasonably practicable”. The ISO is subject to audit, and breaches by the ISO are referred to the ERA.

The ISO is also required to monitor the operation and effectiveness of the PNR in “maintaining and improving Security and Reliability and the Pilbara Electricity Objective”.

There is no explicit list of matters that the ISO must focus its compliance on, and there is no explicit requirement for the ERA or anyone to monitor market behaviour.

In the future, if participants are to rely on each other’s compliance to ensure power system reliability, the compliance regime must give confidence that all parties are compliant with their important obligations.

The role for monitoring of compliance may also need to be transferred to the ERA to ensure transparency and independence of the monitoring function, including with respect to the ISO compliance (especially if its functions are expanded).

Enforcement options

Participants who fail to balance their energy face penalty rates for the imbalance (beyond tolerance margins). For all other non-compliance, the current PNR have only two remedies: publication of the non-compliance, or disconnection. There is currently no provision for civil penalties in the regulations.

Disconnection is not a practical response in most situations. This means that in many cases, non-complying participants will face no sanctions, and no incentive to remedy their actions.

To be effective, the PNR needs to include a range of options to respond to non-compliance. These could include warnings, monetary penalties, temporary suspension from some or all aspects of participation, or increased compliance attention.

11. Prioritisation

Which issues should we deal with first?

Power system security and reliability

- Reliability standard
- Long term planning
- Outage planning
- ESS definitions and procurement
- ESS cost allocation
- Responsibility for setting system strength requirements

Scheduling, dispatch and settlement

- Balancing service with (optional) reduced load following requirements
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New connections

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Terminology

- Definition and use of “energisation” and “commercial operations”
- Consistency between PNR and HTR

Governance of the ISO

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Compliance and enforcement

- Responsibilities and process for compliance monitoring
- Enforcement options

12. Next steps

Next steps

- Working group members to provide input on missing initiatives and additional considerations for identified initiatives.
- EPWA to prepare options for selected initiatives
- Upcoming meetings (*timing to be confirmed*):
    - **22 August –** PNR workstream meeting: final prioritisation, options for selected issues
    - **29 August –** PAC meeting
    - **26 September* –** PNR workstream meeting: options for selected issues
    - **21 October* –** PNR workstream meeting: options for selected issues

*EPWA is looking to reschedule these meetings (around one later).

Questions or feedback can be emailed to energymarkets@dmirs.wa.gov.au

We're working for Western Australia.