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

Meeting Agenda

Meeting Title:	Pilbara Advisory Committee (PAC)
Date:	Thursday 29 May 2025
Time:	1:30 PM – 3:30 PM
Location:	Online, via TEAMS

Item	Item	Responsibility	Type	Duration
1	Welcome and Agenda • Conflicts of interest • Competition law statement	Chair	Noting	2 min
2	Meeting Apologies/Attendance	Chair	Noting	1 min
3	Minutes			
	(a) Minutes of Meeting 2024_12_05 Published 21 January 2025	Chair	Noting	1 min
	(b) Minutes of Meeting 2025_03_13 Published 10 April 2025	Chair	Noting	1 min
4	Action Items	Chair	Noting	2 min
5	Debrief on meetings	Chair	Noting	15 min
6	Update on EPWA's Pilbara Energy Transformation Plan work program	Paul Meyerkort	Discussion	15 min
7	EPNR Project Update	WG Chair	Discussion	75 min
8	Overview of Rule Change Proposals	Chair/Secretariat	Noting	2 min
9	General Business	Chair	Discussion	6 min
	Next meeting: 1:30 PM, 26 June 2025			

Please note, this meeting will be recorded.

Competition and Consumer Law Obligations

Members of the PAC (**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 PAC 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 4: PAC Action Items

Pilbara Advisory Committee (PAC) Meeting 2025_05_29

Shaded	Shaded action items are actions that have been completed since the last PAC meeting. Updates from last PAC meeting provided for information in RED.
Unshaded	Unshaded action items are still being progressed.

Item	Action	Responsibility	Meeting Arising	Status
1/2025	The Chair will circulate a draft email outlining the PAC's advice on Pilbara Rule Change PRC_2025_01 for members' consideration.	EPWA	2025_03_13	**Closed** EPWA circulated the proposed PAC advice to the Coordinator on 18 March 2025. The Chair emailed the PAC advice to the Coordinator on 19 March 2025.

Note. Closed action items will be removed from this list once noted at a PAC meeting. Accordingly, the numbering of action items may not be sequential.

Department of Energy, Mines, Industry Regulation and Safety
Energy Policy WA

GOVERNMENT OF WESTERN AUSTRALIA

Update on the Pilbara Energy Transition Plan

Pilbara Advisory Committee

May 2025

Key moments

2022
Establishment of Pilbara Industry Roundtable

The State Government invited industry stakeholders to discuss the unique challenges of a clean energy transition in the Pilbara, while minimising impact on Country and creating economic opportunities.

July 2023
Industry support for new common use infrastructure

The Industry Roundtable progressed four priority workstreams over 12 months. Consensus was reached on the important role of new common use transmission infrastructure in supporting increased levels of renewable energy and the need to empower Aboriginal people to realise meaningful opportunities from the transition.

August 2023
Rewiring the Nation deal

Informed by the Roundtable work program, the State Government negotiated concessional finance pool of up to $3b from the national *Rewiring the Nation* fund.

2024
Pilbara Roundtable

The Pilbara Roundtable series was expanded to include Traditional Owners to ensure appropriate engagement and participation in the transition. An Industry Liaison Committee and Aboriginal Working Group established under the Roundtable. Priority actions for 2024 include partnering with Traditional Owners, prioritising the required transmission infrastructure and regulatory evolution, and beginning to expand the Pilbara common use network.

2025
Accelerated transmission

Priority Projects are on an accelerated pathway to development, with transmission proponents and customers able to proceed with confidence.

2030
First Wave of projects completed

The first wave of common use transmission projects are online and delivering renewable power, a key milestone in the decarbonisation journey for the Pilbara and the Western Australia.

The Pilbara Energy Transition Plan (PETP)

Five interrelated workstreams

Investment and Rewiring the Nation

Electricity system modelling

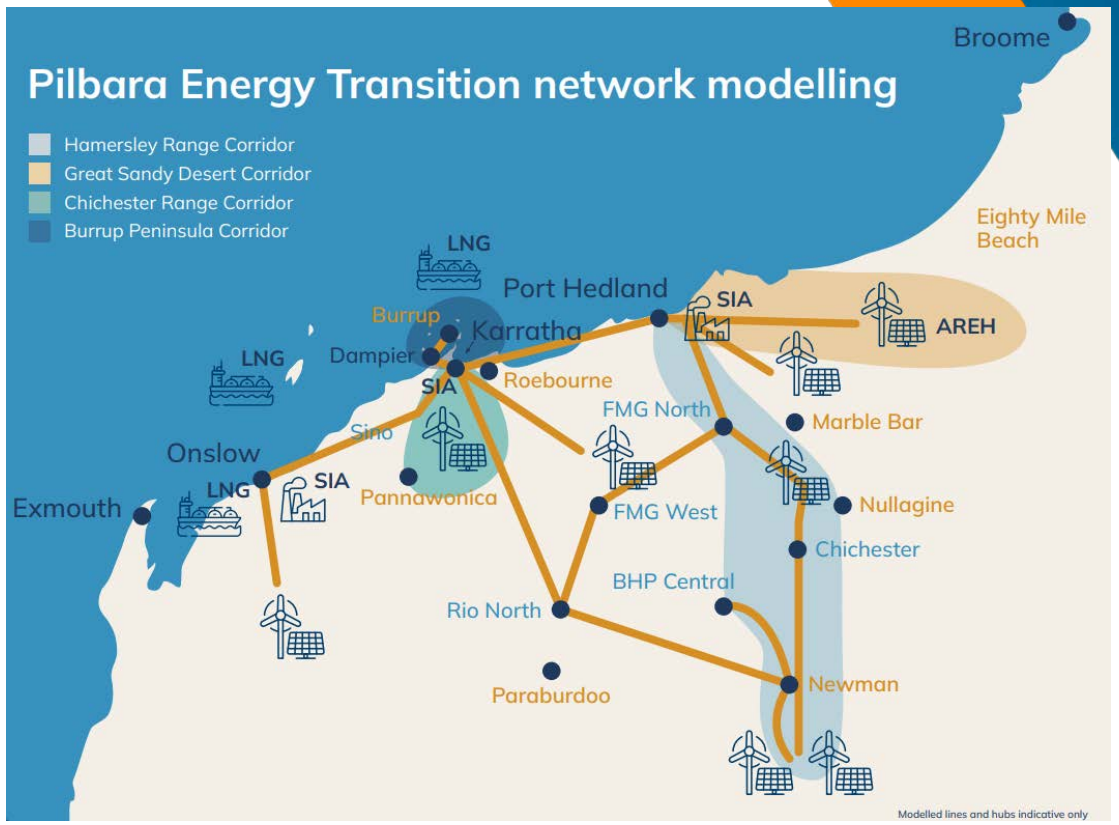
Aboriginal participation

CorridorCo and land tenure

Regulatory evolution

Electricity system modelling

- EPWA is continuing to refine the modelling undertaken in 2024.
- Priority Corridors outlined in the EOI process offer significant value as a first phase in an expanded common use network.
- The modelling considers two main demand scenarios:
  - **Current Industries**: Where electricity consumption trajectories continue based on current industry commitments and inland players increase electrification to support decarbonisation efforts.
  - **Green industries:** Where electricity demand increases significantly around the coast at Strategic Industrial Areas.



Investment and RTN: Expression of Interest

13 September 2024
Launch of Request for EOI for Priority Projects

25 October 2024
EOI applications closed

November 2024
Assessment of EOI responses by Assessment Panel

WA Government decision on Priority Projects

3 December 2024
Minister for Energy announced successful EOI proponents at Pilbara Roundtable

- Great Sandy Desert corridor – Australian Renewable Energy Hub
- Hamersley Range corridor – APA Group
- Chichester Range corridor – Yindjibarndi Energy Corp
- Burrup (Murujuga) corridor – APA Group

Aboriginal Participation Work Program

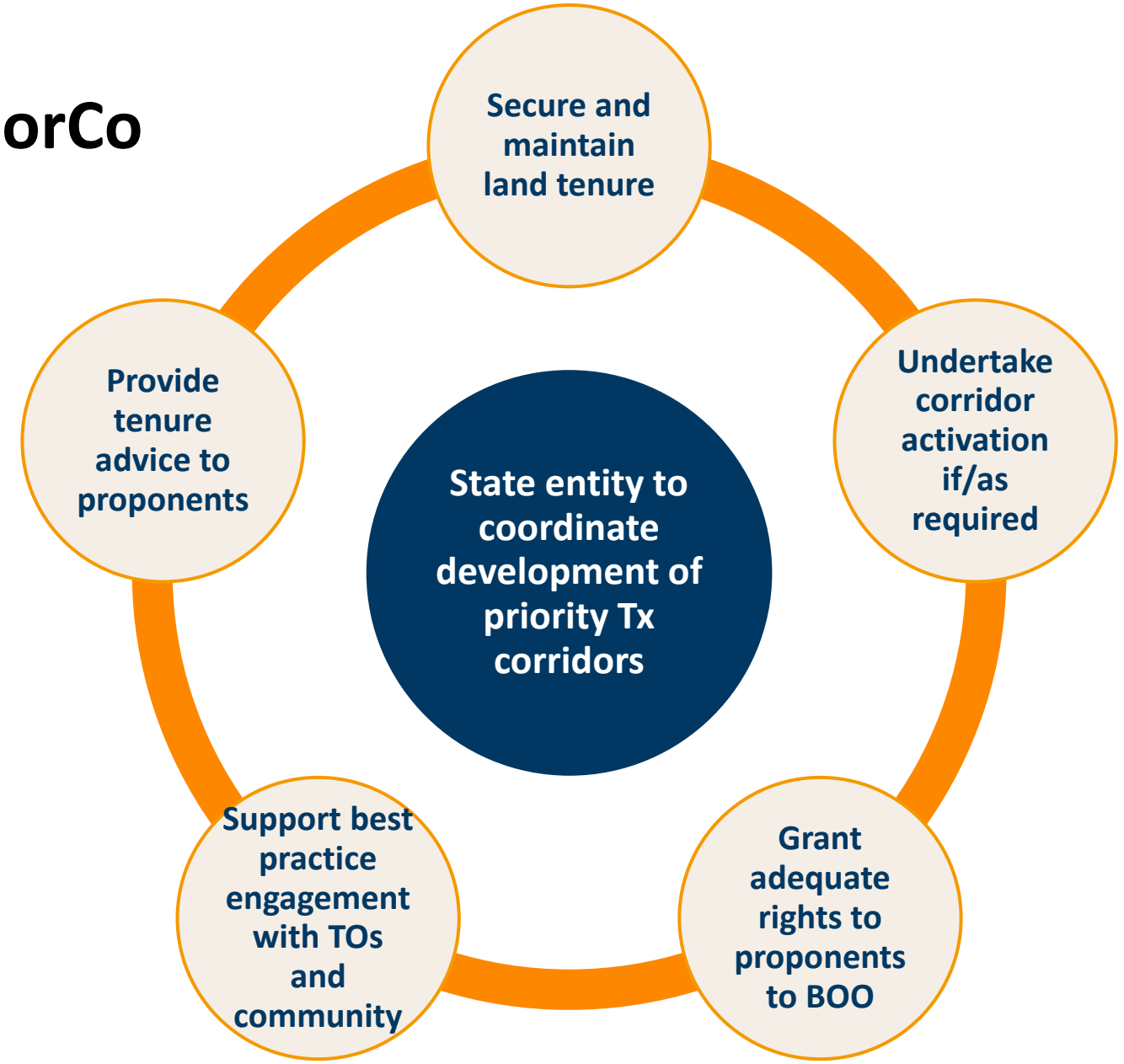
Objective

To support Aboriginal people in and around the Pilbara region to participate in, and benefit from, the Pilbara Energy Transition.

How

1. **Information Sharing and Consultation:** Aboriginal Working Group established as an avenue for information sharing and feedback on the Pilbara Energy Transition Plan
2. **Capacity Building:** Support Traditional Owner groups to participate in renewable energy projects through grants and other programs
3. **Best Practice Engagement:** Ensure that Traditional Owner agreement-making for priority transmission projects is done in a best practice way, including through State involvement in ILUA negotiations for these projects

CorridorCo



Development and implementation of CorridorCo model being progressed by high level inter-agency Steering Committee

Steering Committee directing and overseeing early stage CorridorCo functions to facilitate delivery of first four priority projects

Regulatory evolution: access

12 proposals grouped across 5 themes

Creating the new common use Pilbara grid

- Deciding which networks to regulate (coverage)
- Managing vertical integration

Managing access across multiple networks

- Avoiding multiplicity of contracts
- Managing interconnection points and agreements
- Managing user impacts on neighbouring networks

Better regulation for network tariffs

- Greater up front certainty
- Provision for revenue control
- Managing tariffs for future ready capacity

Better regulation of terms and conditions

- Model reference terms and conditions
- Managing foundation user terms

Other improvements to regulation

- More flexible accountability measures
- A transitional 'fixed principles' mechanism

Access evolution: Next steps

May/June 2025
Review of submissions

June 2025
Present to Industry Liaison Committee

June/July 2025
Further stakeholders meeting if/as required

June/July 2025
Develop implementation plan

By December 2025
First stage of reforms implemented

Will include further public consultation as required by *Electricity Industry Act 2004*

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Agenda Item 7: Evolution of the Pilbara Networks Rules (EPNR) Project Update

Pilbara Advisory Committee (PAC) Meeting 2025_05_29

1. Purpose

The purpose of this agenda item is to:

- update the PAC on submissions received for the EPNR Project Consultation Paper ("Consultation Paper") and seek PAC's views on a number of key items; and
- outline EPWA's proposed plan and timeframe for the next stages of the EPNR Project.

2. Recommendation

That the PAC:

(1) notes the information provided in the PAC Presentation Slides (Attachment 1); and

(2) provides feedback on:

a. selected areas in the light of responses to Consultation Paper submissions; and

b. the plan and timeframe for the next stages of the EPNR Project.

3. Background

- On 4 February 2025, EPWA published the Consultation Paper. The due date for submissions on the Consultation Paper was extended to 29 April 2025.
- EPWA received a total of 12 public submissions, together with 6 confidential submissions. Public submissions were received from:
  - APA
  - ATCO
  - BHP
  - Chamber of Minerals and Energy
  - Geoff Glazier
  - Horizon Power
  - NECA
  - Pilbara ISOCo
  - Rio Tinto
  - TransAlta
  - Woodside
  - Yindjibarndi Energy Corporation
- EPWA has prepared a high-level summary of public submissions, and has identified some key areas for discussion. EPWA has also updated the EPNR project timeframes. This information is provided in Attachment 1.

4. Next Steps

- The next PAC meeting is scheduled for 26 June 2025 and EPWA plans to provide recommendations on how submissions in response to the Consultation Paper can be addressed in the final EPNR project proposals.
- The next EPNR Working Group (Workstream 2 – HTR) meeting is proposed for early July 2025.
    - This meeting will discuss the prioritisation of HTR-related initiatives.
- The next EPNR Working Group (Workstream 1 - PNR) meeting is proposed for mid-July 2025.
    - This meeting will discuss the staging of the implementation for the EPNR project initiatives.

5. Attachments

(1) 29 May 2025 PAC Presentation Slides

Government of **Western Australia**
Energy Policy WA

Pilbara Advisory Committee

EPNR Project update

29 May 2025

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

Agenda

Item	Item	Duration	Slides
1	Overall summary of submissions	5 min	3 – 6
2	Discussion: Summary of key issues in submissions on selected proposals	65 min	7 - 25
3	Project timeline and next steps	5 min	26 - 27
Appendices			
	Summary of submissions on remaining proposals		29 - 80

Note. Appendices are provided for further information and are not planned for discussion at the meeting.

1. Overall summary of Submissions

Context

The Pilbara electricity sector is changing.

Fossil fuelled generation is expected to be supplemented and eventually replaced by intermittent renewable generation. More diverse users will be connected to the NWIS, and the proportion of load served by vertically integrated entities will decrease.

System and market arrangements need to support these changes. This means evolution of governance, operational practice, and market design over time.

EPWA has consulted on a set of policy proposals for the evolution of the Pilbara Networks Rules.

Overall summary

Submissions received: 19

Submitters: APA, ATCO, BHP, CME, Geoff Glazier, HP Generation and Other Business, HP Pilbara Networks, NECA, Pilbara ISOCO, Rio Tinto, Woodside, Yindjibarndi Energy, and seven confidential submissions.

Key messages:

- Submitters generally support change but consider that some of the proposed changes are not needed until the long term. They are wary of increasing the costs and complexity of the Pilbara arrangements.
- Eight proposals received unanimous support, albeit qualified in many cases: Proposal 9 – system strength; Proposal 13 – metering; Proposal 17 – ISO budget; Proposal 19 – confidential information; Proposal 21 – compliance and enforcement; Proposal 24 – self contained networks; Proposal 25 – storage participation; and Proposal 28 – HTR negotiation framework.
- Six proposals were opposed by more than 25% of submitters expressing a position: Proposal 2 – network reliability standard; Proposal 3 – capacity forecasting; Proposal 6 – backup capacity procurement; Proposal 12 – balancing mechanism; Proposal 16 – ISO board; and Proposal 18 – ISO fees.

Overall response to submissions

Many concerns raised relate to timing of change and design detail. EPWA confirms that:

- Not all change is needed straight away. Reform will be timed to be ready when it becomes necessary.
- Detailed design of individual changes will be conducted with stakeholder input.

The first part of this set of slides focuses on proposals for which the views in submissions were divided.

The rest of the main body of this presentation focuses on proposals for which the same issue was raised by several submitters. The number of submissions raising each issue is included in parentheses.

EPWA seeks PAC's guidance on how key issues of contention can be resolved.

2. Discussion: Summary of key issues in submissions for selected proposals

16. ISO board

Proposal:

- The ISO board will continue to have five members, including a Chairperson and the Pilbara ISO Chief Executive Officer (CEO, Managing Director).
- ISO directors must be independent of participants.
- Directors (except for the CEO, who is appointed by the board) will be appointed by the Minister of Energy.
- To be appointed, any new Director must meet selection criteria, including any requisite skill requirements.
- Directors will be appointed for staggered three-year terms, with eligibility for reappointment twice.
- ISO cost recovery should be amended at the same time as board composition changes.

An independent ISO is critical to support third party access and investment.

Current arrangements require exemption from the ACCC to comply with competition law.

Current ISO fee allocation is consistent with NSP board representation and control, but the proposed fee allocations (see proposal 18) are not.

Proposal 16 – ISO board

Support	Qualified support	No position	Do not support
3	6	7	3

- Overview of critical feedback
  - Most submitters agreed that change is needed, but there were different views on the board's level of independence.
  - Board composition should include member-appointed directors (4 submissions). Participant board members bring irreplaceable knowledge and should be retained (1 submission). Almost all people with required knowledge to maintain secure power supply in the Pilbara already work for participants (1). A board without industry representation may lack incentives to operate efficiently (1).
  - The ISO board should be expanded to include large customer representatives (2). The ISO board should be a mix of member-appointed and independent directors (1). At least one Ministerial appointment should be nominated by industry participants (2).
  - Timing of board changes should align with changes to the makeup of connected parties. (2)
  - Director appointment processes must ensure that independent directors have skills and expertise relevant to the Pilbara specifically. (3)
- Issues of contention to be resolved:
  - Level of board independence, board composition and appointments to the board
  - How can industry participants influence board decisions

How does the PAC consider these issues should be resolved?

18. ISO Fees

Proposal:

- ISO costs will be recovered from participants based on gross injection and withdrawal figures into and from the NWIS.
- The fee (in $/MWh) will be determined annually.
- Fees will be recovered in each settlement period.
- The approach to ISO cost recovery will be changed at the same time as the board composition is changed.

ISO costs should be borne by all parties who use the power system. As new parties connect, current cost allocation methods will become increasingly unfair. This proposal brings the recovery of fees in the NWIS in line with other markets.

Proposal 18 – ISO fees

Support	Qualified support	No position	Do not support
2	3	10	4

- Overview of critical feedback
  - ISO functions benefit the Pilbara more broadly, so fees should not be restricted to NWIS connected parties (1). Fee structures should account for some participants not relying on system services during normal operations (1).
  - Fees should be allocated on a $/MW capacity basis, not $/MWh. (3)
  - Fees could be more equitably allocated using a more complex approach, with different cost components allocated based on different metrics (e.g. number of connection points, number of end consumers, connected capacity, energy throughput). (2)
  - Fee changes need not align with board composition changes (1), but should be made before any significant changes in the level of ISO fees (2).
  - Injection and withdrawal should be measured at the connection point to a covered network, not at connections within non-covered networks. (2)
- Issues of contention to be resolved:
  - What should be the basis for an equitable fee allocation
  - For example, with the current proposal, one party could pay 2/3rds of fees. Should fee calculations include a cap (e.g. 1/3rd of fees)
  - How can the inputs to the fee calculation be transparently measured

How does the PAC consider these issues should be resolved?

15. ISO functions

Proposal:

- Over time, the remit of the ISO will expand to cover additional functions.
- The ISO will take control room functions in house by January 2027.

Independent performance of a wider range of market and system operations functions is critical to support third party access and investment.

Current arrangements restrict the ability of the control desk to access information about power system operations. Moving the control desk inside the ISO would reduce some of the competition concerns and allow the ISO to perform its core function.

Proposal 15 – ISO functions

Support	Qualified support	No position	Do not support
5	4	8	2

- Overview of critical feedback
  - The ISO should have in-house control desk functions, and should oversee the NSP-NSP connection process, but should not gain other proposed expanded functions. (1)
  - ISO should continue outsourcing control desk functions. (2)
  - The ISO has already moved away from an administrative model. (1)
  - Timing for increased ISO functions should align with timing of new transmission and generation connections. (2)
  - The January 2027 timeline for in-housing control desk functions is challenging (5), and should be clearly tracked and communicated.
- Issues of contention to be resolved:
  - If and when the ISO should aim to take control desk functions in-house
  - When the ISO should take on additional functions necessary for a more integrated NWIS

How does the PAC consider these issues should be resolved?

2. Network reliability standard

Proposal:

- The default planning and operation standard for the NWIS will be n-1.
- Parts of the network can be planned and operated to a higher or a lower standard, with the agreement of affected parties.
- Network operators can use alternative, non-network solutions to achieve an n-1 standard.

In a power system dominated by renewables, connected parties become more dependent on each other's operations. Having a consistent planning and operation standard means that all parties know what to expect.

Traditional network investments will not be the most efficient way to achieve the standard in all circumstances.

Proposal 2 – Network reliability standard

Support	Qualified support	No position	Do not support
2	5	6	6

- Overview of critical feedback
  - Some network users do not require n-1 reliability, and the standard should not force this level where it is not required (9 submissions).
  - Participants are best placed to choose the level of reliability they need, and how to achieve it (3 submissions). This is best facilitated by providing access to network constraint equation data for existing and planned network infrastructure (1 submission).
  - Private use networks should not be required to meet the n-1 standard (2), even if they are required to provide access to third parties (1). The distribution network should have an n-0 standard (1).
- Issues of contention to be resolved:
  - What “minimum” network reliability standard should apply to interconnecting NSPs to make sure one party does not negatively impact the rest
  - Can any/all interconnecting NSPs be free to set their own network reliability standard
  - Can an interconnected NSP be allowed to plan and operate with n-0 reliability

How does the PAC consider these issues should be resolved?

12. Balancing mechanism (1)

- The ISO will operate a day-ahead trading mechanism in which participants can trade energy around their bilateral positions in half hour increments.
- Participants must nominate:
  - Planned consumption by their portfolio loads.
  - Planned supply by portfolio generation and storage, including contracted supply from other parties.
  - Expected dispatch order for facilities in their portfolio.
- Nominations must balance.
- Participants may choose to offer to deviate from their initial position, by making $/MWh bids (to sell energy) and offers (to buy energy).
- The ISO will clear the day-ahead trading mechanism.
- Trading positions and prices will be determined a day-ahead of real-time.
- Traded energy will be settled at the marginal clearing price at the point supply offers and demand bids intersect.
- Participants can nominate specific facilities to provide balancing energy.
- Participants from whom the ISO has procured backup capacity must provide balancing offers for the contracted facilities.

12. Balancing mechanism (2)

Proposal (continued):

- During the trading day, the ISO will designate and dispatch balancing facilities according to their bids and offers.
- The ISO will determine a balancing price for compensating the balancing facilities based on the marginal price of the last facility dispatched.
- Balancing energy will be settled at:
    - For additional energy dispatched from balancing facilities, the balancing price;
    - For uninstructed imbalances (from trading market outcomes), the balancing price multiplied by a penalty factor. Penalty factors will be different for negative imbalances and positive imbalances.

Centrally coordinated trading and balancing arrangements provide tools for participants and the ISO to manage increasing generation volatility, reducing the need for each participant to build flexible capacity to smooth the volatility of its renewable generation portfolio. It will simplify complex multi-party nominations, and allow more responsive and cost-efficient market dispatch closer to real-time.

Separate trading and balancing arrangements are proposed because feedback from stakeholders indicates that current operational practices require significant lead time for most parties, meaning a day ahead trading mechanism is preferred initially. A separate but related balancing mechanism is included because there can still be significant changes to load and variable generation, and using only ESS to keep the system within limits would require significantly higher volumes and costs.

Operating on a portfolio basis allows participants to continue to manage their own generation, and requiring a portfolio merit order allows the ISO to account for network congestion in its dispatch process.

Including penalty factors provides another incentive for participants to stick to their balanced positions.

Proposal 12 – Balancing mechanism

Support	Qualified support	No position	Do not support
2	2	12	3

- Overview of critical feedback
  - A day-ahead trading mechanism and balancing market is not required at this time. (4)
  - Complex commercial arrangements could create a barrier to entry and drive away investment. (1)
  - More detail is needed to understand implications for each party. (6)
  - An interim approach could include central purchase of balancing energy from standing sell offers. (1)
- Issues of contention to be resolved:
  - At what point existing balancing arrangements will no longer be suitable
  - How will balancing work in a world with high penetration of variable renewable generation and storage, and declining share of firm generation

How does the PAC consider these issues should be resolved?

27. HTR standards

Proposal:

- The HTR will set a default standard for “automatic qualification”.
- NSPs will not have technical standards for connections in addition to the HTR.
- In the medium term, the HTR will set a minimum standard for connection.
- Connection will not be allowed for equipment that falls short of the minimum standard.

The HTR are intended to function as a single, end-to-end technical power system standard for all networks and equipment connected to the NWIS. Allowing automatic rights of connection to parties meeting the standard is a key principle of open transmission access, to enable the evolution of the Pilbara.

Proposal 27 – HTR standards

Support	Qualified support	No position	Do not support
9	5	4	1

- Overview of critical feedback
  - Existing facilities (including those not yet connected to the NWIS) that do not meet the minimum requirement should be exempted, as long as they can demonstrate no impact on PSSR (4). Any required upgrade of non-compliant equipment should be staged over time (1).
  - How will minimum requirements apply to network changes? (1)
  - Technical requirements should not be amended during the connection process. (1)
  - The HTR can only provide a single standard once certain gaps are filled. (1)
  - Self-contained networks be subject to the HTR at the connection point only. (2)
  - More information on the minimum standard is needed. (3)
- Issues of contention to be resolved:
  - Should a minimum standard be set, and should some existing facilities be exempted from the minimum standard
  - Should existing networks be required to bring their equipment up to a minimum standard over time
  - Are there specific technical parameters that exemptions could be restricted to

How does the PAC consider these issues should be resolved?

10. Outage planning – proposal

- The ISO will manage a centralised outage process.
- All registered facilities on an outage planning list will be required to participate.
- The outage planning list will be published from time to time by the ISO and will contain the facilities of which outages have the potential to materially impact PSSR.
- Network and supply facilities will submit outage plans to the ISO.
- Outages of unregistered facilities or those not on the outage planning list must be notified to the ISO, but do not require approval.
- Outage requestors must consult with affected parties before submitting outage requests to the ISO.
- If a network outage would affect power system reliability the network operator must include a plan to mitigate the reliability impact.
- The ISO must develop an outage assessment procedure containing a risk-based outage assessment framework, in consultation with connected parties.
- The ISO must assess outages according to the assessment framework, and must approve outages unless doing so would have a material impact on PSSR.

10. Outage planning – rationale

A common outage planning and publication process is key to transparency, and to manage an increasingly interdependent power system in which parties rely on each other to maintain security and reliability.

Maintaining self-scheduling for outages that do not affect other parties maximises flexibility for vertically integrated portfolios.

ISO consulted on this topic during its review of subchapters 7.3 and 7.4 of the PNR from July to October 2024[1].

[1] https://pilbaraisoco.com.au/current-consultations/review-of-subchapter-7-3-and-subchapter-7-4-of-the-pilbara-networks-rules/

Proposal 10 – Outage planning

Support	Qualified support	No position	Do not support
5	5	7	2

- Overview of critical feedback
  - Changes to the outage process are not needed until the Pilbara power system becomes more complex. (1)
  - ISO should not have approval power for outages which do not affect PSSR for other participants (4). ISO powers should be limited to flows across connection points, and not to individual units behind the connection point (1).
  - ISO outage decisions (including equipment list inclusion) should be reviewable. (2)
  - As system complexity increases, identifying and consulting with affected parties prior to ISO review may be infeasible. Notification should be sufficient. (2)
  - Impacted parties should have opportunity to comment on outage management plans and have rights to refuse outage proposals. (1)
  - NSPs should not be required to buy energy or ESS as part of outage mitigation, as this impacts ring-fencing requirements. (1)
  - Impacted parties should be compensated for their participation in outage mitigation measures. (2)
  - Outage planning processes need to consider frequent rescheduling due to cyclone activity. (1)
- Issues of contention to be resolved:
  - What limits or check and balances should apply to ISO's decisions regarding outage scheduling
  - How can outages which affect other connected parties be identified and managed, while allowing participants flexibility
  - What compensation mechanism can apply that is fair and reasonable to all

How does the PAC consider these issues should be resolved?

25. Storage participation

Proposal:

- Controllers of storage works above 5 MW must register their facilities.
- A new defined term “Energy Producing System” will be added to encompass generation and storage facilities.
- Where appropriate, rules that refer to generation only will be broadened to refer to Energy Producing Systems.
- Technical requirements for storage works will be added to Chapter 3 of the HTR.

Storage is an important enabler for the connection of increased renewable energy. Allowing storage to participate fully under the PNR will increase the revenue streams available to it, and the overall efficiency of the system operations.

Proposal 25 – Storage participation

Support	Qualified support	No position	Do not support
6	5	8	0

- Overview of critical feedback
  - Individual registration should not be required for storage connected within a self-contained network or for sole-use storage. (5)
  - Storage rules in the NWIS should consider recent studies in the WEM. (1)
- Issues of contention to be resolved:
  - What is the right balance between the regulatory burden on facility owners and managing potential risks for other connected parties
  - How can we ensure that ISO can maintain power system security while minimising the requirements on connected parties

How does the PAC consider these issues should be resolved?

3. Project timeline and next steps

Project timeline

- 26 June: PAC meeting – Recommendations on how submissions can be taken into account
- Early July: HTR working group – prioritise initiatives
- Mid-July: PNR working group – staging of initiatives, and triggers for introducing market features
- 28 August: PAC meeting – Draft Information Paper (positions) and draft Implementation Plan
- Early September: Publish combined Information Paper (positions) and Consultation Paper on Implementation Plan
- 30 October: PAC meeting – Responses to submissions on Implementation Plan
- 4 December: PAC meeting – Draft Implementation Plan
- December: Publish Information Paper on Implementation Plan

Appendix: Submission responses on remaining proposals

I. Power system security and reliability

1. Long term planning

Proposal:

- The ISO will have effective information-gathering powers for all networks in the Pilbara, whether connected to the NWIS or not. Requested information will relate to plans to connect to the NWIS during the planning horizon.
- Every two years, the ISO will prepare an integrated system plan for the NWIS, (the Integrated Pilbara Plan, PSP), including potential interconnections and new supply and demand sources.
- The ISO will consult on the assumptions and methodologies to be used in preparing the PSP.
- Input and output data for the PSP will be published for transparency with commercial sensitivity respected.
- In years where an updated PSP is not published, the ISO will prepare a generation statement of opportunities including updated demand and capacity forecasts, and taking into account network constraints.

The size and location of transmission, generation, and loads are critical factors in maintaining system reliability as the system decarbonises.

Evolving long-term planning arrangements will assist stakeholders, including potential investors, to efficiently scope their developments.

Enabling the ISO to gather information outside the NWIS means the planning process can better account for potential new connections of both existing infrastructure and new developments.

Proposal 1 – Long term planning

Support	Qualified support	No position	Do not support
7	4	7	1

- Overview of critical feedback:
  - ISO will require expert resources to carry out this function. (3)
  - EPWA may be better placed to carry out forecasting at first, with the ISO picking up this function later. (2)
  - How will issues raised in a PSP translate to actual investment? (2)
  - ISO should not have powers to collect information behind a connection point. (2)
  - ISO information powers for unconnected parties should be limited to proposed connections, not power system studies. (1)
  - Two years between plans is too short (1). Two years between plans is too long (1).
  - PSP should identify where currently planned investment is not needed (1).

3. Capacity forecasting

Proposal:

- The ISO will forecast capacity requirements for the NWIS, based on avoiding unserved energy in the event of expected one-in-ten year peak demand and low renewable output, including a reserve margin to account for expected supply outages.

Having the ISO carry out system-wide forecasting ensures that there is clear responsibility for monitoring system conditions and potential capacity shortfalls. Providing transparency of forecasts and forecast methodologies increases confidence to current and prospective connected parties.

Proposal 3 – Capacity forecasting

Support	Qualified support	No position	Do not support
5	1	10	3

- Overview of critical feedback
  - Capacity forecasting is not required in the short or medium term. (1)
  - Focusing on the most extreme conditions would overstate capacity needs (2). The target should provide enough firm capacity to meet the system peak when renewable generation is low, not the absolute 1-in-10 year peak demand (1).
  - Future NWIS demand is very uncertain. Peak demand is not necessarily weather driven. Some unserved energy is reasonable. (1)
  - Self sufficient networks should not be included in the requirement, as they are responsible for meeting their own needs. (1)
  - The approach should be regularly reviewed to ensure it is cost-effective. (1)

4. Individual capacity requirements

Proposal:

- The ISO will set the method for participants to calculate their required contribution to the capacity requirement.
- Participants can nominate part of their demand as non-firm, to be excluded from the firm capacity requirement.
- Participants do not have to account for consumption served by co-located generation.
- Participants will be required to have sufficient capacity to meet their capacity requirement.
- The final NWIS capacity target will be the sum of individual participant requirements.

Having a formal, structured approach to capacity assessment ensures that all parties are clear on their needs, and those needs are determined in a consistent way.

The rise of flexible demand (where consumption follows available generation, rather than the other way around) has the potential to significantly offset the volatility of wind and solar output. If it were not accounted for, capacity targets would be overestimated.

Proposal 4 – Individual capacity requirements

Support	Qualified support	No position	Do not support
6	3	9	1

- Overview of critical feedback
  - More information on timeframes and methods is needed for full comfort. (5)
  - Individual capacity requirements are not required in the short or medium term. (1)
  - Calculations should account for capacity from non-collocated generation and storage. (1)
  - Non-firm consumption should pay capacity procurers when using capacity they have procured but are not using. (1)
  - Capacity methodologies should be fully transparent to all participants. (1)
  - EPWA should explore alternative methods to ELCC. (1)
  - Individual requirements should be based on Access Contract Contracted Maximum Demand. (1)
  - The ISO could facilitate a bulletin board for capacity sharing, which would reduce the need for backup capacity procurement. (1)

5. Capacity Certification – proposal

Proposal:

A participant can self-certify the capacity contribution of its own facilities if:

- energy from the facility will be used to serve its own consumption, and
- this supply will not be affected by network constraints.

If a participant does not include consumption served by co-located generation in its capacity target, the co-located facilities cannot have a certified capacity contribution.

The ISO will certify all other capacity:

- Firm generation will be certified according to maximum output under peak demand conditions, supported by test results.
- Variable generation will be certified by a probabilistic method that accounts for the variability and the correlation with other variable generation.
- Storage will be certified by linear deration.

5. Capacity Certification - rationale

Central certification provides a reliable and transparent approach for parties who rely on others to supply capacity and energy.

There will be large volumes of self-supplied load in the Pilbara. Generation and consumption that does not use the network does not need to be accounted for in capacity planning.

Capacity certification methods for firm generation and storage are standard around the world. Using a probabilistic method for variable generation will allow the correlation of renewable facilities to be accounted for, as well as the weather dependent correlation between renewable output and load.

Proposal 5 – Capacity certification

Support	Qualified support	No position	Do not support
4	3	11	1

- Overview of critical feedback
  - Capacity certification is not required in the short or medium term. (1)
  - Users should be able to certify third-party generation contracted to serve their loads. (1)
  - More detail needed on how network constraints affect self-certification rights (3), as most generation will be affected by network conditions from time to time (1). Can participants self-certify generation if the energy is to be used at a different location and transmitted by a shared transmission line? (1).
  - Storage should only be certified for capacity to the extent it has adequate energy for charging. (1)
  - Will all renewable facilities be required to obtain assessment from the ISO? (1)
  - Details of certification methods must be transparent and clearly defined. (1)

6. Backup capacity procurement

Proposal:

- If participants do not present evidence of sufficient capacity to meet their individual requirements for a particular year (including a reserve margin), the ISO will seek to procure additional capacity to meet the shortfall in that year.
- Submissions will specify a $/MW capacity price and a maximum $/MWh balancing energy price.
- The ISO will select submissions based on the lowest overall cost considering capacity payments and expected energy payments, and will pay all selected providers at the highest capacity price (pay as cleared) that fills the shortfall.
- The costs of capacity procured by the ISO will be allocated to the participants with individual shortfalls.
- Selected providers must offer energy in the balancing mechanism, with the energy price limited to the maximum price in the capacity submission.

Having a backstop mechanism to procure capacity provides confidence to current and prospective participants that the NWIS will continue to provide reliable supply in all reasonably expected circumstances.

A simple approach to capacity procurement, with costs allocated only to those who have a capacity shortfall, provides clear incentives for all parties.

Proposal 6 – Backup capacity procurement

Support	Qualified support	No position	Do not support
4	4	8	3

- Overview of critical feedback
  - Backup capacity procurement is not required in the short or medium term, and should only be implemented when there is a clear need. (3)
  - Centralised capacity procurement should be a last resort only and short participants should be given maximum opportunity to address their shortfall before the ISO procures. (2)
  - A backup capacity procurement mechanism could be avoided if participants are required to demonstrate adequate capacity arrangements before connecting new load. (1)
  - Some shortfalls will be temporary (e.g. delay in capacity commissioning). Backup procurement should not commit to expensive long term solutions to solve a short term issue, as this is not commercially viable. (1)
  - Backup procurement should not discourage bilateral contracting, and backup procurement should not impose costs on parties who have secure adequate capacity. (1)

7. ESS framework – proposal

- The two existing essential system services (ESS) will be retained.
- The existing “FCESS” service will be renamed “Regulation.”
- The existing “SRESS” service will be renamed “Contingency Reserve Raise”.
- When energy storage penetration increases, a new Contingency Reserve Lower service will be introduced to manage unplanned loss of load.
- Power system security will be managed by defined ESS requirements rather than by a minimum synchronous generation requirement.
- Power system studies will be conducted to assess Rate of Change of Frequency (RoCoF) ride-through capability of generators and other connected equipment, to determine the need for additional services such as inertia.
- The ISO will move to dynamic ESS requirements, with the ability to set different requirements at different times of day, different times of year and for different system conditions.
- The ISO may set locational ESS requirements for pre- and post-contingency management of the power system, with payment mechanisms aligned with system-wide arrangements.
- The ISO will establish an ESS accreditation framework, and monitor compliance with standards for ESS provision.
- ESS will continue to be procured and provided under contracts, i.e., not through a dynamic market mechanism.

7. ESS framework - rationale

These changes to ESS are consistent with the approaches used around the world to support the energy transition. A new load rejection reserve service (‘Contingency Reserve Lower’) will support the connection of large storage facilities. The need for an inertia service depends on the ride-through capability of existing generation and load equipment, which is not clear at this time.

Moving to more dynamic ESS requirements in the future would allow the ISO to target services to when and where they are needed, which will be more cost effective than a static requirement for all times and locations.

Effective delivery of ESS requires a party to assess facility capabilities, monitor compliance, and take action when performance does not match the requirement.

The limited number of facilities capable of providing ESS in the current Pilbara fleet is not sufficient to support procurement through a dynamic mechanism or closer to real time so, at this stage, it is efficient to continue to procure ESS via competitively procured, direct contracts until the depth of this capability increases.

Proposal 7 – ESS framework

Support	Qualified support	No position	Do not support
8	2	8	1

- Overview of critical feedback
  - Current generation characteristics (renewable penetration and ESS capability) is not yet sufficient to require dynamic or locational ESS requirements (1), to investigate RoCoF levels (1), or move away from contract-based ESS provision (3).
  - The need for a contingency lower service depends on the frequency impact of load loss, not just storage penetration (1), and can likely be covered by existing droop requirements (1).
  - Connected networks should be responsible for their own contingency response. (2) Detailed design of ESS arrangements should be expedited to avoid delay in investment decisions (1).

8. ESS cost recovery

Proposal:

- ESS costs will be recovered from causers where practical, on a trading interval basis.
- Regulation costs will be allocated to participants who vary their generation or load from their balancing positions.
- Contingency reserve raise costs will be allocated to supply facilities based on their output in each interval, according to the runway method.
- Contingency reserve raise costs will be allocated to supply facilities based on their output in each interval, according to the runway method.
- Contingency reserve lower costs will be allocated to a load based on their demand in each interval, according to the runway method.
- Facilities will be exempt from Contingency Reserve Raise costs if they provide evidence that a facility trip would be automatically offset by load curtailment by the same participant.

The proposed methods allocate ESS costs to those who cause the need for the service. Causer pays cost allocation provides incentive to reduce the quantity of ESS required, providing downward pressure on total system costs.

Allowing participants to avoid contributing to ESS costs if they do not cause a service requirement ensures that connected parties have the option to manage their own operations if they consider this to be more efficient.

Proposal 8 – ESS cost recovery

Support	Qualified support	No position	Do not support
5	5	8	1

- Overview of critical feedback
  - Multiple submissions (8) suggest alternative designs for elements of the ESS cost recovery framework including:
    - Contingency raise risk calculations should account for internal arrangements beyond load shedding, for example BTM storage. (2)
    - NSPs which do not buy or sell energy should not be deemed causers of ESS requirements. (2)
    - Runway method should be based on actual output of generating units, not on their capacity. (3)

9. System Strength

Proposal:

- The HTR will provide guidance on the setting of the minimum and maximum fault levels on the NWIS.
- The ISO will approve system strength requirements for different parts of the network.
- NSPs will support the ISO to determine the system strength requirements for locations on their networks.

System strength requirements differ across locations, so it is reasonable for the ISO to work with NSPs to determine the appropriate levels for different parts of each NSP network.

Where there are conflicts between settings in different places, the ISO is the obvious party to resolve the issue.

Proposal 9 – System strength

Support	Qualified support	No position	Do not support
6	2	11	0

- Overview of critical feedback
  - New connections should be required to “do no harm” to existing system strength. (1)
  - System strength requirements for new connections should be clear and predictable, to avoid late-breaking cost increases. (1)
  - The rules must manage disputes with ISO findings (2) e.g. by allowing an independent review process (1).

11. Outage plan - timing

Proposal:

- Outage plans must be submitted as soon as practicable, and no later than a year in advance.
- The ISO must assess and approve or reject an outage plan within two weeks of its receipt.
- Outage plans may be updated after submission, as long as the outage window is maintained. To extend the outage window a new submission must be made.
- The ISO can only withdraw approval for a previously approved outage plan if there is a risk to power system security or reliability, and must inform the requestor as soon as practicable.
- If the ISO withdraws approval within a week of the scheduled start time or recalls an outage, the requestor can request compensation for costs incurred in relation to the cancellation or recall.

Clear timeframes for outage information provision and approval are necessary for effective operation of the outage management process.

Sometimes, short notice changes will be unavoidable. If these occur to maintain system security for everyone, it is reasonable to compensate affected parties for the costs of the change.

ISO consulted on this topic during its review of subchapters 7.3 and 7.4 of the PNR from July to October 2024.

Cancellation compensation is included in the proposal in response to submissions on that consultation.

Proposal 11 – Outage plan timing

Support	Qualified support	No position	Do not support
5	4	9	1

- Overview of critical feedback
  - Will changed outage compensation payments be causer pays or recovered from all parties? (4) Changed outage compensation payments should be recovered from causers (e.g. another outage going long) (2).
  - Providing a year's notice for all outages is impractical. (2)
  - ISO should give a month's notice of outage cancellation or recall for reasons other than system security (2). Outage compensation window should be more than 1 week from the outage (3). It should be a month (1).
  - Parties should have more flexibility to change outage plans: before an outage is approved (1), for unplanned outages (1), and for short notice (opportunistic) outages (1).
  - Outage changes should be phased in, e.g. initially with a 3 month advance notice requirement. (1)

II. Scheduling and dispatch

13. Metering

Proposal:

- Content and timing requirements for meter data submissions will be moved from the Energy Balancing and Settlement Procedure to the PNR.
- Meter data format specifications will remain in the Energy Balancing and Settlement Procedure.

Meter data submission is part of the settlement process. It is appropriate for definitions, timeframes and high-level process steps to be included in the rules, rather than in a delegated instrument. This provides for clarity and certainty for participants and data providers.

Proposal 13 – Metering

Support	Qualified support	No position	Do not support
4	0	15	0

- Overview of critical feedback
  - Any new meters should be capable of measuring in 5 minute intervals. (1)
  - Metering requirements should not apply to equipment connected to a self-sufficient network, only to connections to covered networks. (1)

14. Manual load shedding plan (1)

Proposal:

- Participants must use best endeavours to manage their portfolios to balance their consumption and supply according to the trading and balancing mechanism provisions.
- The ISO must seek to maintain the power system in a secure operating state at all times, including using powers of direction to avoid involuntary load shedding.
- If the ISO forecasts a real-time supply shortfall, it must notify participants of the forecast time of the shortfall, and the quantity of expected unserved load.
- The ISO must develop a manual load shedding priority list, identifying the order in which network elements and load will be disconnected in the case of a forecast energy shortfall.
- If load shedding is required, the ISO must endeavour to follow the load shedding priority list.

14. Manual load shedding plan (2)

Proposal (continued):

- In preparing the priority list, the ISO must:
  - If possible, ensure that consumption relating to contracted energy volumes and contracted capacity volumes is disconnected later than consumption not associated with contracted capacity.
  - Ensure that consumption by foundation users of transmission network elements is prioritised ahead of others when network congestion is the cause of the shortfall.
  - Take account of network equipment serving both load and generation.
  - Attempt to achieve an equitable distribution and rotation of load disconnection across participants in proportion to their consumption.
  - Consult with NSPs and other connected parties to ensure the priority list is practical.

A pre-existing plan means participants have a shared understanding of what will happen in the event of a supply shortfall.

Proposal 14 – Manual load shedding plan

Support	Qualified support	No position	Do not support
7	0	11	1

- Overview of critical feedback
  - More information is needed on how the ISO would prioritise customers and loads. (3)
  - The approach should be widely consulted on before implementation. (3)
  - Manual, pre-contingent load shedding should be used instead of backup capacity procurement. (1)
  - NSPs should be responsible for load shedding on their own network. (1)
  - ISO load shedding powers should only apply in exceptional circumstances. (1)
  - Participants should be able to structure their own voluntary load management arrangements to minimise exposure to involuntary load shedding. (1)

III. ISO governance

17. ISO budget

Proposal:

- The ISO board must consult on a draft budget.
- The ISO board will set the ISO budget annually.
- The ISO budget will be subject to review and approval by the Economic Regulation Authority.

To safeguard efficiency of, and fair allocation to, ISO operations, the ISO budget needs to be subject to review and approval by a third party.

Proposal 17 – ISO budget

Support	Qualified support	No position	Do not support
8	0	11	0

- Overview of critical feedback
  - Rapid increase in ISO costs could be a barrier to investment. (1)
  - ERA should use WEM as a benchmark for market fees. (1)
  - The PNR should clearly set out the content and level of detail required in budget submissions. (1)
  - ISO cost recovery should include a true-up mechanism to manage under- or over-recovery. (1)
  - Budget processes must have mechanism for industry input. (4)
  - ISO should need explicit industry support for spending outside BAU functions. (1)
  - ISO should not incur costs if they do not represent value for money. (1)
  - ISO board could be supported by technical advisory groups to assess potential non-BAU activity. (1)
  - ISO budget should be set for a 5 year period. (1)

19. Information – proposal

- Market information will be public unless there is a compelling reason for it to remain confidential.
- Public information will include outage schedules, demand forecasts, generation schedules, capacity figures (both supply and demand) and balancing quantities.
- The PNR will designate certain information as confidential (for example: terms, conditions and prices in bilateral contracts).
- Disclosers can request that information provided to the ISO be treated as confidential, and provide supporting reasoning. The ISO must determine whether the information meets PNR specified criteria for being confidential, in accordance with an ISO procedure.
- Disputes about classification of information will be resolved by the Coordinator of Energy.

19. Information – rationale

Transparent access to information is key to efficient system and market operations. If participants have access to data on the power system they can better plan their operational strategies. Transparency measures should apply to all parties equally to provide a level playing field.

Requiring NSPs to share operational data with the ISO enables the ISO to effectively operate the power system and maintain PSSR.

Transparency improves the perception of independence of the ISO.

Confidential information should be protected in appropriate circumstances.

Proposal 19 – Confidential information

Support	Qualified support	No position	Do not support
4	6	9	0

- Overview of critical feedback
  - Further consultation is needed to clearly define confidential information and protect commercially sensitive information. (6)
  - Some information may be public in aggregate, but should not be broken down if it enables identification of customer activity. (3) (e.g. demand forecast data and planned outage schedules may reveal commercial operational details that a participant may wish to keep secret, and access applications may include sensitive information)
  - Coordinator information classifications should be reviewable decisions. (1)
  - Public information should be restricted to that required for operational planning and managing the network. (1)
  - Mandatory real-time data sharing could be costly for smaller operators. (1)

20. Compliance monitoring

Proposal:

- The ISO will monitor participant compliance with the PNR, including the HTR.
- Initial focus areas for ISO monitoring will be portfolio balancing, dispatch compliance, and ESS performance.
- The ISO will publish quarterly compliance reports on the activities it monitors.
- The ERA will continue to monitor market behaviour, with additional focus required from the start of the balancing market.

As the Pilbara networks move towards more integrated arrangements, connected parties need to be able to rely on each other's compliance with the PNR, including the HTR. The PNR must include a framework for monitoring and reporting on compliance of connected parties.

Proposal 20 – Compliance monitoring

Support	Qualified support	No position	Do not support
5	5	8	1

- Overview of critical feedback
  - Current compliance monitoring arrangements should continue until ISO functions expand. (2)
  - EPWA should consider strengthening monitoring of ISO compliance. (2)
  - Compliance monitoring should allow reasonable tolerances where sensible (e.g. dispatch compliance should also consider contractual commitments). (1)
  - Non-compliance reports should be issued as needed, to avoid unnecessary overhead. (1)

21. Compliance enforcement

Proposal:

- The ISO will be able to issue formal warnings and requests for non-compliant parties to return to compliant operation.
- The ISO will be able to refer non-compliance to the ERA for investigation.
- The ERA will be able to levy monetary penalties (civil penalties) for non-compliance with civil penalty provisions, to be prescribed by the relevant Regulations.
- The ERA will have power to restrict participation in the trading market for participants who persistently fail to meet their traded energy quantities. Participant energy will still be settled in balancing.
- Disconnection will remain as a sanction of last resort.

The proposed suite of remedies for non-compliance will allow more effective enforcement of compliance with the PNRs, in line with other markets, which will assist the maintenance of security and reliability for all parties connected to the system.

Proposal 21 – Compliance enforcement

Support	Qualified support	No position	Do not support
8	1	10	0

- Overview of critical feedback
  - A technical panel of experts would provide a useful forum to resolve technical disputes with the ISO. (1)
  - How will persistent failure to meet traded quantities from non-dispatchable load be treated? (1)
  - The ISO can monitor, but enforcement is the role of the ERA. (2)
  - Additional enforcement measures are only relevant when ISO functions expand. (1)
  - New monitoring and enforcement activities should be introduced gently, with a learning period allowed, and not immediate implementation of harsh penalties. (1)
  - Civil penalties should be reserved for clearly defined breaches rather than broad principle-based obligations. (1)

IV. New connections

22. NSP to NSP connection arrangements

Proposal:

- The PNR will include a process for the interconnection of additional networks to the NWIS.
- The ISO will manage the connection process for new networks, and for new interconnections between existing networks.
- Connecting networks must show compliance with Chapter 2 of the HTR, unless they are self-contained (established for the purpose of the participant serving only its own facilities).
- Generation, storage, and load facilities on the connecting network must demonstrate compliance with Chapter 3 of the HTR.
- Self-contained infrastructure may opt to demonstrate compliance at the interconnection point to the NWIS.

The unusual nature of the Pilbara electricity sector means that new connections can be more complex than in most other electricity systems. Providing transparent rules for how to handle the interconnection of existing infrastructure will smooth the process for sharing infrastructure.

Having the ISO manage the interconnection process for new networks provides a level playing field for parties that may compete with existing NSPs.

Proposal 22 – NSP to NSP connection arrangements

Support	Qualified support	No position	Do not support
4	5	8	2

- Overview of critical feedback
  - ISO role should be limited to overseeing and approving technical requirements. Monitoring competition concerns is the role of the ERA. (1)
  - Self-contained networks must (not “may opt to”) demonstrate compliance. (2)
  - If a self contained network demonstrates compliance at the connection point, will that network self-manage any third party generation/storage providers connected to that network? (1)
  - Processes are only required for interconnection of covered networks (1). The ISO should have no role in relation to connections to uncovered networks (1). Compliance obligations should focus on the interconnection point, and direct impacts on system security (1).
  - Interconnection costs should be funded by the initiating network. (1)
  - To provide clarity to potential connectors, the ISO could produce a Network Development Protocol based on PNAC section 42. (1)

23. Preferential supply for transmission foundation customers

Proposal:

- Foundation customers of transmission infrastructure will be entitled to firm supply for their loads when using the network components they have funded.
- Foundation customers of transmission infrastructure will be allocated energy from other sources if their generation is constrained in balancing.
- Foundation customers of transmission infrastructure will be settled without imbalance penalties if their dedicated generation is constrained after trading positions are finalised.

Transmission investment and generation investment go hand in hand. Giving foundation customers of transmission infrastructure priority for the use of that infrastructure will reduce their uncertainty about the ability to continue to benefit from this investment.

If the Pilbara had locational pricing, this could be done by allocating a financial transmission right for the funded asset, but with a single zonal price, that is not possible, and physical preferential access will be more cost effective than providing constrained payments.

Similarly, preferential dispatch for foundation generation could be more easily implemented in a security constrained economic dispatch environment, which is not proposed for the Pilbara at this stage.

Proposal 23 – Preferential supply for transmission foundation customers

Support	Qualified support	No position	Do not support
4	4	10	1

- Overview of critical feedback
  - Foundation customer rights should be determined on a case by case basis depending on individual needs. (1)
  - If some customers have preferential treatment, the ISO must have transparent processes setting out how this treatment will be implemented. (2)
  - The ISO should be consulted on foundation user rights to confirm feasibility before they are included in contracts. (2)
  - More detail is needed on how foundation rights would work in practice in the proposed mechanisms (3), and worked examples would help (1).
  - Foundation rights would be most simply implemented by including them in constraint equations for network and system limitations. (1)
  - Foundation rights should apply to retrospective foundation customers as well as future foundation customers. (1)
  - Foundation customer status should be removed in some circumstances (1). If vertically integrated NSPs have preferential access, there are competition concerns (1).
  - It is not clear how new shared transmission infrastructure will be funded. Preferential access to a natural monopoly is not aligned to a constrained access model. (1)

24. Self-contained networks – proposal

- The PNR will distinguish between a network operator which provides services to third parties, and the operator of network infrastructure that is used to serve load and generation of the same participant.
- Network operators who use their network equipment solely to service their own generation and load, can choose to be treated as a network user (demonstrating compliance at the interconnection point with the NWIS), or a network (compliance of all facilities within the network).
- New connections must provide standing data and real-time data for individual pieces of critical equipment to the ISO, including if their facilities are subject to connection point compliance.
- An Excluded Network can have a maximum of 10 MW of injection or consumption. If injection or consumption exceeds 10 MW for more than a set percentage of time over a rolling horizon, the Excluded Network status will be revoked.
- A network owner which wants to be treated as a user but is not an Excluded Network is not required to show non-compliance with the HTR in order to be able to opt for Connection Point Compliance.

24. Self contained networks – rationale

Allowing connected parties to manage their own processes is an important part of the approach to Pilbara operations, as long as it can be done without affecting other connected parties.

It is not necessary to require self-contained networks to comply with technical rules that support third party access.

Providing visibility of connected equipment to the ISO supports of power system security.

Proposal 24 – Self-contained networks

Support	Qualified support	No position	Do not support
4	5	10	0

- Overview of critical feedback
  - The PNR and HTR should only apply to isolated networks serving third parties if they also apply to networks operated by vertically integrated entities serving their own load and generation. (1)
  - An existing self-contained network may be required to provide access to a third party, and hence become no longer self-contained. Would such a network still be able to demonstrate compliance at the connection point? (1)
  - Will existing excluded networks remain so even if they have greater than 10MW injection or consumption? (1)
  - The definitions of “NSP” and “network user” need to be considered, as appropriate definitions will simplify implementation. (2)
  - Excluded network calculations should be based on net flows not gross flows. (1)
  - Self-contained networks should be able to provide ESS while demonstrating compliance at the connection point. (1)

26. Demand side participation

Proposal:

- Load participation in the PNR will be focused on ESS provision and providing mechanisms for flexible load to take advantage of available variable renewable energy.
- Flexible load can be designated as non-firm in the capacity adequacy process, so that it is not required to be matched by supply capacity.
- Owners of flexible loads can bid in the proposed trading mechanism to purchase additional energy, and then manage their load to match their position.
- Owners of flexible loads will be allowed to contract with the ISO to provide Contingency Reserve Raise as interruptible load.

Historically, the electricity sector has seen generation as a flexible resource to meet inelastic demand. In a power system with large volumes of variable renewable resources, flexible demand will have greater opportunity to access inexpensive energy much of the time and will see greater incentive to respond at short notice.

The proposed arrangements for capacity adequacy and balancing include the ability for participants to leverage load flexibility at portfolio level. This proposal lays groundwork for real-time demand response when it arrives.

Proposal 26 – Demand side participation

Support	Qualified support	No position	Do not support
7	1	10	1

- Overview of critical feedback
  - Any load participation needs to be considered in manual load shedding plans. (1)
  - Priorities for use of demand side resources should be clearly set in policy. (1)
  - Flexible load should be able to contract for capacity purposes. (1)
  - There is minimal flexible demand in the Pilbara at present. (1)

V. Development of the Harmonized Technical Rules

28. HTR negotiation framework - proposal

- NSPs must negotiate with access seekers and consult with the ISO on requested departures from the default standard, and the ISO will have final power of approval (as it does for all connections).
- The ISO may provide guidance for acceptable bounds of negotiation, evidence, and mitigation measures.
- NSPs must publish estimated and actual timeframes for connection assessment activities in their control.
- NSPs and access seekers can escalate disputes to the ISO, and where the ISO is a party to the dispute, to an appropriate dispute resolution mechanism.
- NSPs and the ISO must publish agreed deviations from the default standard (whether above or below the standard).

28. HTR negotiation framework - rationale

If a connecting party does not meet the default standard specified in the HTR, it can affect other connected parties. The ISO has responsibility for the security and reliability of the whole power system, so the ISO must be the final approver of deviations from standards.

At the same time, providing visibility to the ISO behind the connection point will enhance the ISO's ability to operate the power system securely.

Requiring publication of agreed deviations from the standard aligns with the transparency objectives.

Proposal 28 – HTR negotiation framework

Support	Qualified support	No position	Do not support
7	3	9	0

- Overview of critical feedback
  - ISO should not have final approval, but rather provide dispute resolution between NSPs and access seekers. (1)
  - If an access seeker does not comply with Part 3, but can demonstrate that the network would still comply with Part 2, it should be exempted from that aspect of Part 3 compliance. (1)
  - Consequences of non-compliance should be provided. (1)
  - The PNAC already requires publication of estimated connection timeframes. Actual timeframe publication should be limited to those parts of the process within the NSPs control. (1)
  - Dispute resolution with the ISO needs to be included in the framework (3). Dispute resolution would be assisted by independent technical review panels (1).

We're working for Western Australia.

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

Agenda Item 8: Overview of Rule Change Proposals (as of 22 May 2025)

Pilbara Advisory Committee (**PAC**) Meeting 2025_05_29

- 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.

Rule Change Proposals Commenced since the last PAC Meeting

None

Approved Rule Change Proposals Awaiting Commencement

None

Rule Change Proposals Rejected since the last PAC Meeting

None

Rule Change Proposals Commenced since the last PAC Meeting

None

Rule Change Proposals Awaiting Approval by the Minister

None

Formally Submitted Rule Change Proposals

Reference	Submitted	Proponent	Title and description	Urgency	Next Step	Date
Standard Rule Change Proposals with Second Submission Period Closed						
PRC_2025_01	1/2/2025	ISOCo	**Pilbara ISOCo Subchapter 10.1 Functions** Amendments to Rules 279 and 286		Publish Final Rule Change Report	17/6/2025

Pre-Rule Change Proposals

None