

Meeting Agenda

Meeting Title:	Evolution of Pilbara Network Rules Working Group
Workstream	Workstream 1 (PNR Workstream)
Date:	21 November 2024
Time:	9:30am – 11:30am
Location:	Online, via TEAMS

#	Item Name	Responsibility	Type	Duration
1	Welcome and Agenda <ul style="list-style-type: none"> Conflicts of interest Competition Law 	Chair	Noting	2 min
2	Meeting Apologies and Attendance	Chair	Noting	1 min
3	Minutes of Meeting 2024_October_24.	Chair	Discussion	2 min
4	Action Items	Chair	Noting	5 min
5	PNR Workstream <ul style="list-style-type: none"> (a) Long term planning (b) NSO to NSP connection arrangements (c) Outage planning (d) Exemptions and derogations from the HTR (e) Registration category and requirements for storage facilities (f) Compliance enforcement options (g) Confidentiality regime (h) ISO functions (i) Consistency between PNR and HTR 	RBP	Discussion	1h 40min
6	Other Business <ul style="list-style-type: none"> Intermittent loads Black start arrangements in Rule 192 (Horizon Power) Next steps 	Chair	Discussion	10 min

Competition and Consumer Law Obligations

Members of the PAC's Evolution of the Pilbara Network 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.



Minutes

Meeting Title:	Evolution of the Pilbara Network Rules (EPNR) Working Group
Date:	24 August 2024
Time:	9:30 AM – 11:30 AM
Location:	Online, via TEAMS

Attendees	Company	Comment
Dora Guzeleva	Chair, Energy Policy WA	
Rebecca White	BHP	
Lekshmi Jaya Mohan	BP	
Herman Prinsloo	Horizon Power (Pilbara Network)	
Jaden Williamson	Horizon Power (Pilbara Network)	
Jason Chanlongsirich	Horizon Power (Pilbara Network)	Proxy for Sandy Morgan
Rebecca Mason	APA	
Summa McMahon	ISOCco	
Nenad Ninkov	Woodside Energy	Proxy for Reece Tonkin
Kathryn Barrie	Energy Policy WA	Presenter – Item 5
Matt Bowen	Energy Policy WA	Presenter – Item 5
Tom Coates	Energy Policy WA	
Laura Koziol	Energy Policy WA	
Luke Commins	Energy Policy WA	
Ajith Viswanath Sreenivasan	RBP	
Eija Samson	RBP	
James Seidelin	RBP	
Tim Robinson	RBP	

Item	Subject
1	<p>Welcome and Agenda</p> <p>The Chair opened the meeting with an Acknowledgement of Country.</p> <p>The Chair noted the Competition Law Statement, reminded members of their obligations and encouraged them to bring any Competition Law issues to her attention as they may arise.</p>
2	<p>Meeting Attendance</p> <p>The Chair noted the attendance as listed above.</p>
3	<p>Minutes of Meeting 2024_08_28</p> <p>The Chair confirmed the previous Minutes were approved out-of-session and published on the EPWA website.</p>
4	<p>Action Items</p> <p>The Chair noted EPWA's ongoing discussions and coordination with the ISO on Subchapters 7.3 and 7.4 review. She acknowledged Items 6 and 7 were marked complete per the meeting papers.</p>
5	<p>Changes to the PNR arising from the Pilbara Energy Transition Project</p> <p>The Chair welcomed Ms Kathryn Barrie and Mr Matthew Bowen to provide an update on the broader Pilbara Energy Transition (PET) Plan.</p> <p>Ms Barrie summarised EPWA's review of the PNAC and certain provisions of the PNR under the PET Plan, referencing slides 5-6. She identified six areas of potential overlap between the PNAC and the PNR reviews, as shown on slide 7. Key issues discussed included:</p> <ul style="list-style-type: none"> • Proposed changes to the PNAC to manage vertical integration, review ringfencing arrangements and transfer information-sharing functions to the ISO. • Proposed amendments to Chapter 9 of the PNR to balance constrained access with prioritising reliability for foundation users. • Suggested updates to Chapter 10 of the PNR to incorporate a "CorridorCo" concept and establish initial contract-based regulation for early projects, with a transition to full regulation after the reforms are in place. • Ms Mason asked about the timeframes for these changes. <p>Ms Barrie indicated that the aim is to align these proposals and consultation timeframes with the EPNR Consultation Paper.</p> <p>The Chair reiterated the intention for the Draft Consultation Paper to be shared with the PAC at its meeting on 5 December 2024. She outlined the expectation for publication in mid-December, with the feedback period extending until end of February.</p> <p>Ms Barrie added that the PNAC reforms will involve a second consultation process later in 2025.</p>
6	<p>PNR Workstream Work Program</p> <p>The Chair outlined the timeframe for the remaining steps in the consultation process, noting the potential impacts of the upcoming State Elections on this schedule. She reiterated that the proposals presented were not final solutions but were shared to gather feedback, observations, and address questions from Working Group members. The Chair emphasised that the proposals would be implemented progressively, on the basis of an Implementation Plan, rather than all at once.</p> <p>Mr. Robinson reminded members that additional details were available in the appendix of the meeting paper, and that the presentation would focus on key proposals for discussion.</p>

a) Supply adequacy

Mr Robinson outlined proposals for a reliability standard and capacity forecasting, referencing slide 12: This included an n-1 standard for all parts of the NWIS, without limiting higher operating standards. The ISO would be responsible for forecasting over 10-year horizons, updated annually, and would publish data on energy demand, availability and expected unserved energy and capacity requirements, including a reserve margin.

- Ms White asked about the application of the n-1 standard, especially to private networks.

Mr Robinson emphasised that the standards are for the interconnected network.

- Ms White acknowledged the value of an n-1 standard but suggested that network owners should retain discretion over their own network standards.

Mr Robinson said that the distinction between private networks and networks that were relied upon by others would be made.

- Mr Williamson asked if the proposals would apply to existing infrastructure built to a lower standard (e.g. n-0) and whether non-network solutions could be used to achieve the n-1 standard.

The Chair highlighted that non-network solutions are frequently used in the WEM and are often the least-cost option.

- Mr Changlongsirichai observed that many applicants seeking to build renewable generation preferred an n-0 standard. He asked if the additional costs for applicants were considered under the proposed standard.

Mr Robinson explained that while the network could support higher standards, participants on an n-0 transmission line could agree to adjust their operations to reduce (or otherwise self-supply) their load if the line experiences an outage.

Mr Robinson outlined the proposals for participant supply adequacy targets, referencing slides 13-14. This included a proposal that participants may opt their generation and consumption out of capacity calculations if they met specific criteria. Self-certification of generation would be allowed if the energy is used within their portfolio and it was unaffected by network constraints. Otherwise, the ISO would assess capacity contributions. In cases of a shortfall, the ISO would procure capacity.

- Ms White asked whether the Effective Load Carrying Capacity (ELCC) for intermittent generation would mirror the SWIS approach.

Mr Robinson indicated that this was up for discussion.

The Chair added that she would like to hear why any alternative approach should differ from the SWIS.

- Ms White questioned how an ELCCC method would be effectively implemented in the NWIS given the absence of a reserve capacity mechanism.

Mr Robinson clarified that these measures focus on forecasting potential energy shortfalls and actions in response, with the ISO being responsible for procuring capacity in the event of forecasted shortfalls and recovering costs from participants with insufficient capacity coverage.

- Mr Williamson raised concerns about the long-term certainty for incoming generators, noting that some parties might lack an ongoing obligation to procure capacity.

The Chair clarified that, given the nature of the current system, participants are incentivised to ensure capacity adequacy, as the cost of any ISO-procured reserve capacity would be borne by those with capacity shortfalls.

- Ms White suggested that further equity consideration should be made in spreading costs for a procurement mechanism across the market.

Item	Subject
	<p>Mr Robinson explained that only participants with capacity shortfalls would bear these costs, unlike the WEM supplementary mechanism.</p> <p>The Chair reiterated that the measures are intended to address increased intermittent generation in the Pilbara, with the expectation that participants will continue to ensure their own coverage, and the ISO would only procure a minimal capacity for use in the balancing mechanism.</p> <p>The Chair asked the working group feedback on the direction of these proposals.</p> <p>No objections were raised.</p>
	<p>b) Centralised balancing services</p>
	<p>Mr Robinson outlined a proposed structure for a balancing mechanism, referencing slides 16-17. He emphasised that financial participation in the market is optional (participants may manage their own supply/demand) and that each participant can enter the mechanism with a net balancing position of zero.</p>
	<p>Mr Robinson explained that under this proposal, the ISO would use participant offers to manage supply and demand in real time, reducing the need to use costly Essential System Services (ESS). Participants interested in actively participating in the balancing mechanism would inform the ISO of their maximum balancing range in advance.</p>
	<ul style="list-style-type: none"> Ms White sought clarification on whether mine sites could manage their generation and load to avoid balancing exposure.
	<p>Mr Robinson confirmed that participants could manage their own supply/demand portfolio.</p>
	<ul style="list-style-type: none"> Mr Williamson asked what form the information provided by participants to the ISO would need to take e.g. as an hourly forecast or as a merit order with additional associated flexibility.
	<p>Mr Robinson suggested that the potential information requirements for participants may include hourly forecast covering generation, consumption, and bilateral contracts. He suggested that bilateral positions and prices could be set one hour before a trading interval, with the ISO making balancing adjustments up to ten minutes before real time, with any demand or supply changes after this time being managed through ESS.</p>
	<p>Mr Robinson outlined the proposed balancing pricing arrangements with reference to slide 18, including a penalty factor for departure from balanced positions.</p>
	<ul style="list-style-type: none"> Mr Williamson noted that the current number of balancing points was limited to contestable loads and asked whether the threshold for classification of a balancing point would facilitate locational or smaller size connection points.
	<p>The Chair suggested further consultation on this question but cautioned against unnecessary complexity around the notional wholesale meter.</p>
	<p>Mr Robinson described the operation of the balancing market in the event of an energy shortfall, referencing slide 19. Participants would be required to submit balanced nomination for balancing purposes, ensuring that their consumption aligns with their production.</p>
	<p>Mr Robinson highlighted that, if a participant has spare capacity that could support the system balancing mechanism but has not made it available, the ISO must have the power to direct the use of this capacity to mitigate emerging system risk.</p>
	<ul style="list-style-type: none"> Ms White asked if a load with behind-the-meter storage would be exempt from such a direction, as this stored power is intended for managing the specific site's capacity adequacy.
	<p>The Chair responded that, as a starting point for discussion, participants could operate similarly to the SWIS, where they have the option to register their facilities. Some may choose not to register, in which case they would have no balancing obligations but would be limited in their export capabilities.</p>

Item	Subject
	<ul style="list-style-type: none"> Mr Prinsloo noted the difficulty in planning and determining costs with only an hour before the trading interval. <p>Mr Robinson acknowledged the feedback and invited members to propose alternative timeframes.</p> <p>The Chair observed that setting the gate closure to a one-day advance would require sufficient ESS to address uncertainties, which would come at a higher cost.</p> <ul style="list-style-type: none"> Mr Prinsloo suggested that a day or so would be adequate but was unsure if the aim for the future was to eventually have a real time nomination system. <p>The Chair indicated that this question warrants further analysis, and that an incremental approach may be appropriate, suggesting that this could form part of the implementation plan activities.</p> <p>c-e) ISO Board composition; Fee allocation; and ISO budget and resourcing</p> <p>Mr Robinson presented a proposal to amend the ISO board composition, referencing slide 21. Under this proposal, the board would consist of five independent members, with a CEO (managing director) selected by the board, and specific selection criteria applying to director appointments.</p> <p>Mr Robinson also outlined a proposed fee allocation model for the ISO, adopting a volume-based approach to be determined annually, as shown on slide 23.</p> <p>Mr Robinson outlined a proposal to introduce a new requirement for the ISO budget to be approved by the ERA, referencing slide 25. He emphasised the importance of the ISO having adequate resources and assets to ensure a level playing field for all NWIS competitors, highlighting the intention for the ISO to develop in-house control desk capabilities to mitigate concerns over information sharing.</p> <ul style="list-style-type: none"> Mr Williamson asked for further clarity on whether “participants” referred to current NSPs or end users and asked if the settlement period would be monthly. <p>Mr Robinson clarified that “participants” referred to system users. The Chair added that fees would be set on an annual basis based on projected expenditure and demand expectation, with reconciliation based on previous year expenditure.</p> <ul style="list-style-type: none"> Ms White requested additional data to assess the impact of the fee proposal and asked if the fee allocation could consider ISO time spent on individual activities/participants. <p>Mr Robinson acknowledged that it would be a good exercise to develop ballpark figures for reference.</p> <p>The Chair addressed the second aspect of the question, noting that a similar exercise to allocate AEMO’s fees in the SWIS had been challenging and ultimately unsuccessful.</p> <ul style="list-style-type: none"> Mr Chanlongsirichai asked if the ISO’s expanding role might shift it from an administrative model to one resembling the Australian Electricity Market Operator (AEMO). He suggested that a cost comparison between the two models could be helpful. <p>The Chair stated that, while the responsibilities of the ISO were expanding, she was unable to see why the organisation would move towards an AEMO model, and that no discussions have been had to revisit an AEMO appointment to the ISO role.</p> <ul style="list-style-type: none"> Mr Bowen provided additional context on the considerations at the time of the original Pilbara reform and the preference for the ISOCO model, noting that the rationale extended beyond cost factors. <p>Mr Robinson noted that obtaining an accurate cost comparison between the AEMO and ISOCO models would require consultation with AEMO to determine the cost of running its services in the Pilbara region.</p> <ul style="list-style-type: none"> Mr Ninkov asked how board members for the new ISOCO board would be appointed.

Item	Subject
	<p>The Chair noted that board appointment details were still under internal discussion and invited members to provide input on this topic.</p> <ul style="list-style-type: none"> Ms Mason stressed the importance of regional knowledge for directors, highlighting that such expertise is essential for a remote and significant network. <p>The Chair agreed, reiterating that directors would need to meet specific criteria, including familiarity with the Pilbara region and the market.</p> <ul style="list-style-type: none"> Mr Chanlongsirichai reiterated his earlier question about comparing the AEMO and ISOCO models, noting that the addition of independent directors would increase costs. Ms Mason sought clarification on ISO fee allocation and the budget-setting process, expressing concern that existing NSPs might not input in approving a potentially higher budget. <p>The Chair explained that the budget would be approved by an independent body, with key questions focused on ensuring budget efficiency and fair allocation. She added that the proposal follows a model commonly used in other markets, including the WEM, but welcomed any alternatives for consideration.</p> <ul style="list-style-type: none"> Ms White indicated that further work on ISOCO governance and fee allocation is necessary before working group members could endorse including these proposals in the consultation paper. Mr Ninkov suggested differentiating between participant-specific costs (borne individually) and general costs, which would be shared. <p>The Chair agreed with the need for further deliberation, noting that the points raised could be explored in a second discussion of these topics at the next meeting.</p>
	<p>f) Essential System Services</p> <p>Mr Robinson presented an initial proposal for the range and naming of future ESS in the NWIS, referencing slide 27. The proposal includes adding a contingency reserve lower service and conducting further studies to assess the need for an inertia service or faster contingency response. He noted that the appendices provide additional context and rationale for these proposals.</p> <p>Mr Robinson discussed the procurement, contacting and scheduling of ESS, referencing slide 28. He indicated that ESS scheduling may eventually integrate with energy scheduling and the balancing mechanism. For now, however, EPWA proposes retaining a contract-based approach to ESS.</p> <ul style="list-style-type: none"> Mr Prinsloo mentioned that Horizon Power currently procures power from independent power producers via power purchase agreements and requested that such arrangements be considered in evaluating a shift to a market-based mechanism.
	<p>g) ESS cost allocation</p> <p>Mr Robinson outlined initial proposals for allocating costs for regulation and contingency services, referencing slide 30. He noted that all methods are proposed to apply a more granular reference period than current practices.</p> <ul style="list-style-type: none"> Mr Williamson asked about the new contingency reserve lower service and sought clarification that an assessment would be conducted to determine the required capacity and that the service wouldn't be mandatory if existing Harmonised Technical Rules settings could accommodate it. <p>The Chair clarified that this proposal assumes increased storage technology within the Pilbara Network, which may necessitate additional scheduling of contingency lower reserves.</p>

Item	Subject
	<ul style="list-style-type: none"> Mr Ninkov asked how the fee allocation would account and be applied to the renewables that do not operate continuously, such as those running less than 12 hours per day. <p>The Chair confirmed that if a renewable generator does not operate during specific hours, it would not be included in the ESS cost allocation for those periods.</p> <hr/> <p>ACTION: EPWA to develop comparative analysis on the impact of current ISO fee allocation proposal.</p> <hr/>
7	<p>Next Steps</p> <p>The Chair noted that the remaining topics in Agenda Items 5(h)-(j) - long term planning, enforcement options and the confidentiality regime - would be discussed at the next meeting.</p> <ul style="list-style-type: none"> Members requested that EPWA considers extending the consultation timeframes for the Consultation Paper and the possibility of incorporating a second stage of consultation into the project plan. <p>The Chair agreed to take this as an action.</p> <hr/> <p>ACTION: EPWA to consider the timing of the Consultation Paper release and consultation period, and to consider the possibility of adding a second stage of consultation into the project plan.</p> <hr/>

The meeting closed at 11:30 am.



Agenda Item 4: Action Items

Evolution of the Pilbara Networks Rules Working Group (EPNRWG) Workstream 1 – Meeting - 2024_11_21

Shaded	Shaded action items are actions that have been completed since the last EPNRWG (WS1) meeting. Updates from last working group 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.

Item	Action	Responsibility	Meeting Arising	Status
8/2024	EPWA to develop comparative analysis on the impact of current ISO fee allocation proposal.	EPWA	2024_10_24	Closed This is addressed in Agenda Item 5(h)
9/2024	EPWA to consider the timing of the Consultation Paper release and consultation period, and to consider the possibility of adding a second stage of consultation into the project plan.	EPWA	2024_10_24	Closed To be discussed in Agenda Item 5 and Other Business



Government of Western Australia
Energy Policy WA

Evolution of the Pilbara Network Rules Working Group Meeting 2024_11_21

21 November 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@demirs.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

Meeting Agenda

Item	Item	Responsibility	Type	Duration
1	Welcome and agenda	Chair	Noting	2 min
2	Meeting apologies/attendance	Chair	Noting	1 min
3	Competition law statement	Chair	Noting	2 min
4	Action Items	EPWA	Noting	5 min
5	PNR Workstream Work Program	EPWA	Discussion	1h 40 min
	(a) Long term planning			10 min
	(b) NSP to NSP connection arrangements			15 min
	(c) Outage planning			15 min
	(d) Exemptions and derogations from the HTR			15 min
	(e) Registration category and requirements for storage facilities			10 min
	(f) Compliance enforcement options			10 min
	(g) Confidentiality regime			5 min
	(h) ISO functions			15 min
	(i) Consistency between PNR and HTR			5 min
6	Other Business			10 min
	<ul style="list-style-type: none"> Intermittent loads Black start arrangements in Rule 192 (Horizon Power) Next steps 			

5. PNR Workstream Work Program

Today's issues – initial proposals for discussion

Power system security and reliability

- Reliability standard and supply adequacy
- 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 transmission pricing and constrained access
- Registration category and requirements for storage facilities
- Registration category and requirements for DSR
- Exemptions and derogations from the HTR

Terminology

- Registration constructs – definition of “NSP”
- 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

Context for Initial Proposals

Recap of planned process

- The working group meetings inform and develop content for the Consultation Paper.
 - A draft Consultation Paper will be presented to the PAC on 5 December 2024.
 - The Consultation Paper is expected to be published in mid-December 2024 and remain open for formal submissions until March 2025.
 - An Information Paper and Implementation Plan will be developed in Q2 2025.

Key messages on initial proposals presented today

- The initial proposals presented in the slide are draft only, and intended to provide ‘strawperson’ options to facilitate targeted WG feedback.
- The initial proposals presented are proposals for the ‘end state’ of the PNR. The timing and staging of an evolution plan will be considered during the development of the Implementation Plan in Q2 2025.

5(a) Long term planning

The future

The size and location of transmission, generation, and load are critical factors in maintaining system reliability as the system decarbonises. With the expected demand and geographical growth of the Pilbara networks, including the NWIS, there is a significant uncertainty over where and when large investments will be made. Evolving the long-term planning arrangements would assist stakeholders to efficiently coordinate their efforts.

Options for discussion (two-step inquiry)

Step 1. Who is responsible for Long-term planning?

- No centralised forecast activity
- Mandatory information publication by NSPs, whether or not connected to the NWIS
- Each NSP produces and publishes an integrated plan for its own network
- Integrated ISP/WOSP, with a central party collating data and forecasting needs in a variety of futures.

Step 2. Is the plan 'for information only' or are parties required to implement transmission capital investment?

Proposal

The ISO will have strong information-gathering powers for all networks in the Pilbara, whether connected to the NWIS or not.

The ISO will prepare an integrated ISP for the NWIS, with transparent process and data.

The ISO will prepare the ISP every two years. The ISP will replace the Transmission Development Plan. In years where no ISP is published, the ISO will continue to prepare and publish the GenSOO.

Where there is a shortfall in capacity, the ISO will procure supply to meet the gap.

The mechanism for delivery of the transmission investment will be considered as part of the broader the PET Plan.

5(b) NSP to NSP connection arrangements

Proposal – network connection process

When a new connection to the NWIS involves:

- Only generation, storage, or load, or a combination thereof, the connecting NSP will continue to manage the connection process.
- Transmission equipment owned and/or operated by an existing NSP, the NSP will manage the connection process
- Transmission equipment to be owned and operated by a new NSP (including where there is a combination of transmission equipment with generation, storage or load), the ISO will manage the connection process

When a network interconnects to the NWIS:

- It must show historical compliance with Chapter 2 of the HTR, or demonstrate work done to enable future compliance
- It may negotiate to meet a lower standard (still above the yet to be specified minimum standard)
- The ISO must conduct system studies to assess the impact on the NWIS, and engage with NSPs and other affected parties on the findings.
- Individual assets on the connecting network must demonstrate compliance with Chapter 3 of the HTR, with that process to be managed by the connecting network NSP, liaising with the ISO.

What is a reasonable timeframe for assessments to be completed and connection decisions made?

Discussion - Constrained access

New network connections will change the way electricity flows in the NWIS. Network constraints may result in some generation being curtailed while other generation is dispatched. Less probably, network constraints could result in energy not served in specific locations.

Where energy is made available for sale and purchase in the balancing market, economic curtailment will be automatically compensated: a participant with a balanced portfolio can buy cheaper energy in balancing and have an overall cheaper outcome than if it had run its own generation.

Where a generator would have run if not for a network constraint, or a load would have been served but for a network constraint, there are four options:

1. The PNR operates on the principle of constrained access, meaning that all generators and loads are treated equally in efficient dispatch.
2. Participants who fund new transmission build receive preferential supply, even if their portfolio generation is curtailed.
3. Participants who fund new transmission build receive preferential dispatch (out of merit order) for their facilities.
4. Participants who fund new transmission build receive compensation for curtailment of load or generation due to network constraints. In a market with locational pricing, this could be managed through financial transmission rights. In a single-price market, it would require constrained off payments.

Proposal – constrained access

If a participant has funded transmission infrastructure, it will be entitled to firm supply for its loads.

- It will be allocated energy from other sources if its generation is constrained in balancing.
- It will be settled without imbalance penalties if its dedicated generation is constrained after balancing positions are finalised.

In any case:

- Effects of transmission constraints on dispatch outcomes must be considered in transmission planning.
- Connection processes must include network congestion studies to identify the likely impact on dispatch.

5(c) Outage management

Outage management

To enable an integrated power system with high volumes of intermittent renewable energy, the outage process needs to evolve to incorporate:

1. Independent outage assessments, with centralised decision making authority.
2. Transparent outage information, with the same data available to all parties.
3. A clear process for outage scheduling, assessment, and approval.

Proposal - process

1. Connected parties (network and supply) submit outage plans to ISO. All registered facilities on an Outage Scheduling list (i.e. those that can impact on PSSR) must submit outage plans to ISO for approval.
2. Facilities not registered or not on the Outage Scheduling List can self-schedule.
3. Outage applicants must consult with affected parties before submitting outage plans to the ISO.
4. ISO collates and reviews all plans and approves scheduled outages unless doing so would reasonably threaten power system security or reliability.
5. If the ISO recalls or cancels an outage due to system conditions, the requesting party could be compensated for unavoidable expenditure.

If a network outage would clearly affect power system reliability, requestor must include plans to mitigate the impact.

Proposal – timeframes and prioritisation

Proposed timeframes:

- Windows for scheduling of Planned outages to be requested at least 12 months ahead
- “Opportunistic” outages to be requested as soon as practical
- Forced outages to be notified as soon as practical
- ISO to approve/reject within two weeks of receipt, and may notify changes at least three months before outage commencement for Planned outages
- Outages may be recalled with shorter notice in certain circumstances if this is required to maintain security of supply

If outages cannot be approved simultaneously, they are prioritised in accordance with the risk framework, including order of submission.

5(d) Exemptions and derogations from the HTR

Proposal

The HTR will set:

- a default standard for “automatic qualification”; and
- (longer term) a minimum standard below which connection and operation is not permitted

The PNR will:

- Require NSPs to negotiate with prospective connections for departures from the default standard
- Allow access seekers to nominate compliance at equipment level or at connection point level at their option, whether or not they would be compliant behind the meter as well. Existing CPC facilities will maintain that status.
- Require new connections to provide standing data and real-time data to the ISO for relevant behind the meter equipment
- Require NSPs to publish estimated and actual timeframes for connection assessment
- Provide for disputes to be escalated to the Energy Disputes Arbitrator
- Require NSPs and the ISO to publish all agreed deviations from the default standard

5(e) Registration category and requirements for storage facilities

Discussion

EPWA proposes to bring the treatment of storage into line with generation by:

- Requiring controllers of Storage Works to register under rule 91, and amending the exemption in rule 92 to apply only to those under 5 MW capacity.
- Defining a new construct of Energy Producing System, comprising Generating Units and Storage Works
- Replacing “Generating Unit” with “Energy Producing System” around 2/3rds of the times it appears, and adding explicit requirements for Storage Works in the others.
- Amending chapter 3 of the HTR to explicitly cover requirements for storage works, and making existing requirements for generating units explicitly cover storage works where applicable. Most of the requirements currently in chapter 3 already differentiate between synchronous and inverter based generation, so additional requirements largely need to deal with storage behaviour while consuming energy.
- Amending chapter 3 of the HTR to distinguish between grid-forming inverters and grid-following inverters.
- Ensuring storage works is included in planned HTR changes to implement Generator Performance Standards.

5(f) Compliance enforcement options

Potential additional compliance enforcement options

Building on penalty rates for energy imbalances, and publication of non-compliance or disconnection for all other non-compliance, the PNR could provide for remedies of increasing severity (initial proposals in **bold**):

- **Formal warnings**
- Increased compliance attention (e.g. additional monitoring, independent compliance audit)
- Automatic monetary penalties (e.g. the modified runway method discussed earlier)
- **Referral to ERA with escalating civil penalties for breaches of specific rules** (e.g. dispatch non-compliance, or breach of technical standards)
- **Temporary suspension from some aspects of market participation** (e.g. ability to purchase energy in balancing, exemption from ESS cost allocation)
- Temporary suspension from all market participation
- **Disconnection**

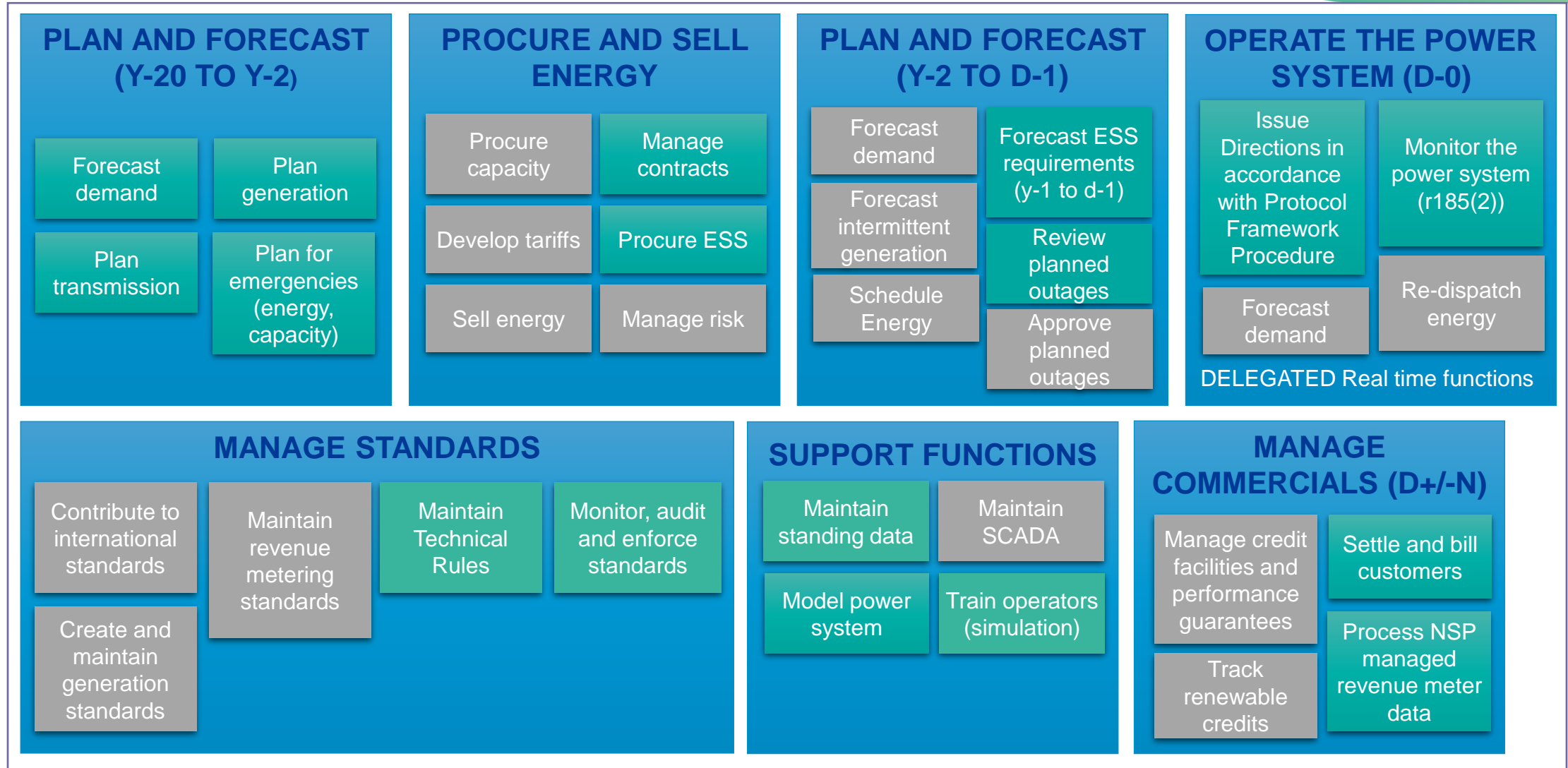
5(g) Confidentiality regime

Transparency in information provision

- EPWA is seeking to increase transparency of information:
 - Between NSPs/participants and the ISO
 - Between the ISO and the public
- Our starting point is that – apart from bilateral contracts between commercial parties – all market information should be public, unless there is a clear reason why it shouldn't be.
 - Confidential Information definition in Rule 295 should be refined to allow a Discloser to request confidentiality and provide a reason why information should be confidential, with the ISO deciding.
 - A dispute mechanism may be necessary if there is disagreement about confidentiality
- Transparency measures should apply to all parties equally, so that there is a level playing field.
 - For example: outage plans and schedules, demand forecasts, generation schedules, balancing offers (ex-post), network connection costs.
- What are the barriers and concerns to making more information and data available?

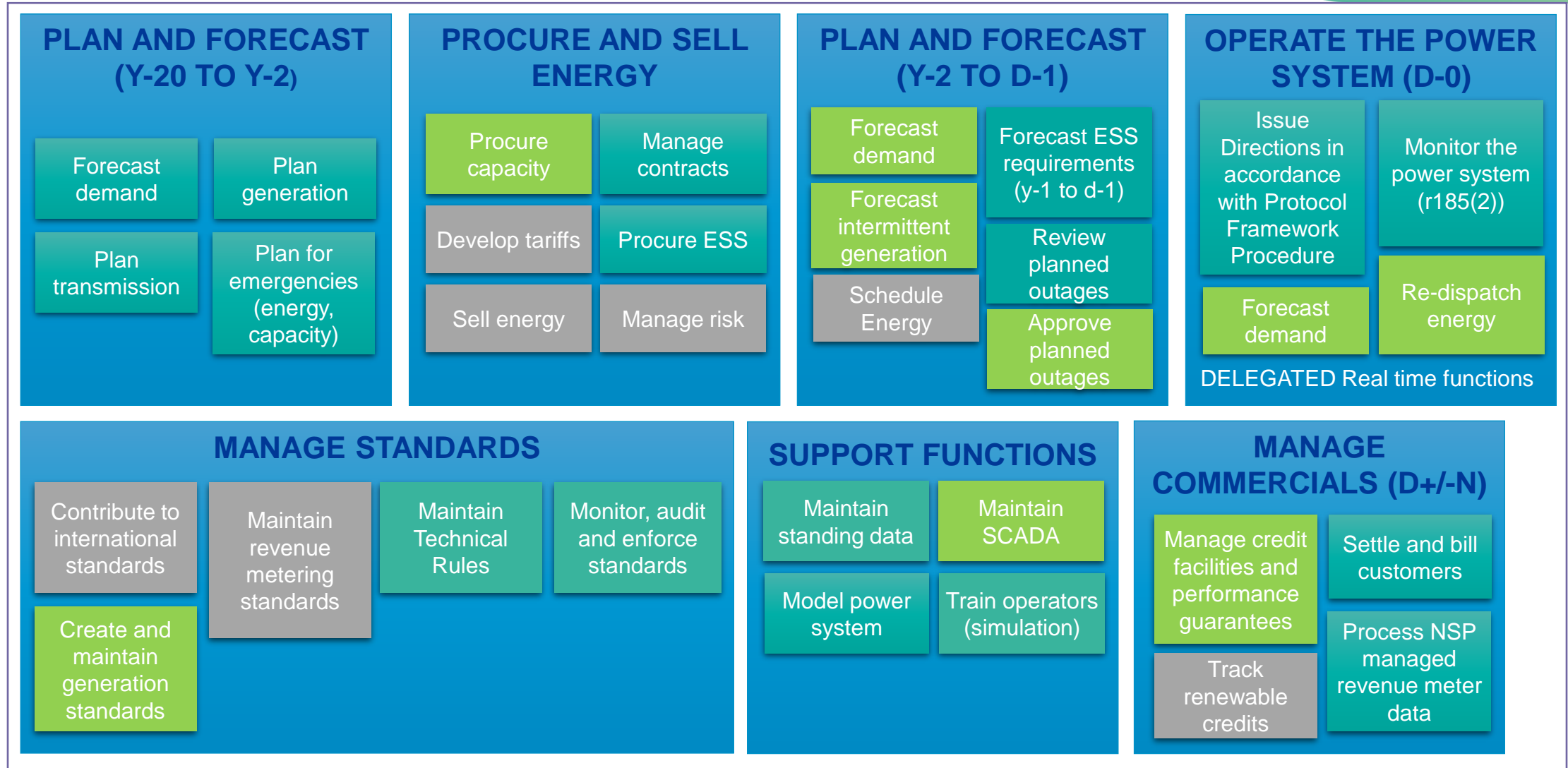
5(h) ISO functions

How does the ISO need to evolve? Current state



How does the ISO need to evolve? Future state

FUTURE FUNCTIONS



Who relies on which functions?

Most ISO functions are used by all connected parties.

- Long term generation and transmission planning: all connected parties, all prospective connected parties
- Outage planning: all connected parties.
- Capacity procurement: all connected parties
- ESS procurement: all connected parties
- Balancing market: parties buying and selling energy
- Energy scheduling and dispatch: connected parties not perfectly balancing their portfolio
- Real-time operations: all connected parties
- Standards, compliance and enforcement: all connected parties
- Settlement and billing: parties buying and selling energy, parties to ESS contracts

Estimated Pilbara ISO fees

- ISO costs are currently split evenly between APA, Horizon Power and Rio Tinto.
- The table below shows revenue requirements, total consumption, and market fees for the WEM and NEM, along with estimated fees for the NWIS if they were collected on the same basis.
- The NWIS revenue requirement uses current ISO costs, including the cost of the outsourced control desk.
- The “Entire Pilbara” row shows estimated market fees if all generation and load in the region were connected into the NWIS.
- Northern Territory system and market operations costs cover multiple separate power systems of various sizes.

Power System/Market	Revenue requirement (\$m/yr)	Consumption (GWh)	Market fees \$/MWh
NEM ¹	201.7	173,560	0.58 ²
WEM	96.0 ³	17,800 ⁴	2.57 ³
Northern Territory	16.8 ⁵	1,685 ⁶	4.99
Current NWIS	4.82 ⁷	2,957 ⁸	0.82
Entire Pilbara	4.82 ⁷	17,620 ⁹	0.14

Note. The fees for the entire (or expired) Pilbara are based on the costs of ISO’s existing functions. Each additional \$1m per year added to the ISO Budget would increase Market fees by around \$0.03 per MWh.

1. [AEMO’s budget and fees: 2024-25](#)

2. This is the NEM Benchmark Fee divided by two, to allow comparison on a similar basis as WEM fees.

3. [AEMO 2024 in-period adjustment Final Determination](#)

4. [AEMO 2024 WEM Electricity Statement of Opportunities](#)

5. [Northern Territory Electricity System and Market Operator Regulatory Proposal 2024/25-2026/27](#)

6. [Northern Territory Electricity Outlook Report 2023](#)

7. [Pilbara ISOCO Budget and Fees 2024-25](#)

8. [Clean Energy Regulator – 2-22-23 Greenhouse and energy information by designated generation facility](#)

9. [EPNR modelling assumptions](#)

5(i) Consistency between PNR and HTR

Proposal

EPWA proposes to:

- Amend the HTR to remove alternative defined terms with the defined terms used in the PNR.
- Move all terms defined in the HTR to the main PNR glossary
- Amend definitions (or use of defined terms as relevant) in the HTR to remove different definitions of the same terms.
- Amend the formatting of the HTR to more closely match the formatting of the PNR. Numbering will not be changed.
- Introduce a definition for “commissioning” in the PNR
- Introduce a definition for “commercial operations” in the PNR.

6. Other business

Intermittent loads

In considering treatment of storage and demand side participation, EPWA has noted that it may be useful to introduce a concept for “intermittent loads” to the PNR.

The WEM uses this concept, which applies to sites with collocated supply and consumption, and allows them to be exempt from registration, capacity assessment, and central dispatch as long as:

- Site consumption from the grid is zero almost all the time (so demand is served by behind the meter generation)
- Site injection to the grid is less than 10 MW almost all the time (the de minimis level for facility registration).

Included this concept in the PNR would support the ability of connected parties to manage their own operations as desired.

Next steps

- Upcoming meetings:
 - **5 December:** PAC meeting
 - **Mid December:** Consultation paper published
 - **March:** Submissions close
 - **Late March:** PNRWG meeting
 - **Early Q2:** Implementation plan

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

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APPENDIX

Additional material for discussion items above

A.5(a). Long term planning

Current state

Every two years, the ISO is mandated by the PNR to prepare and publish two Network Coordination and Planning (NCP) reports:

- Transmission Development Plan, which describes scenarios for NWIS Covered Transmission Elements, describing the locations and quantity of supply and demand in the Networks, and a summary of the most recently published proposed and contemplated Augmentations.
- The Pilbara Generation Statement of Opportunity (GenSOO), which sets out potential investment opportunities for renewables and storage in the NWIS, the ISO's projection of generation fuel availability, fuel sources, and intermittent energy developments, a report on ESS procured, assessment of the adequacy of the system capacity, and other information set out in the Planning and Reporting Procedure.

Both reports are focused on the Covered Networks in the NWIS, but may also include information on existing, or potential new, extended or expanded, Non-Covered Networks that are not part of the NWIS. However, the ISO has limited power in seeking information from parties that are not connected to the NWIS.

EPWA is exploring transmission planning through PETA and in support of Rewiring the Nation.

The future

The size and location of transmission, generation, and load are critical factors in maintaining system reliability as the system decarbonizes. With the expected demand and geographical growth of the Pilbara networks, including the NWIS, there is a significant uncertainty over where and when large investments will be made. Evolving the long-term planning arrangements would assist stakeholders to efficiently coordinate their efforts.

Options for discussion (two-step inquiry)

Step 1. Who is responsible for Long-term planning?

- No centralised forecast activity
- Mandatory information publication by NSPs, whether or not connected to the NWIS
- Each NSP produces and publishes an integrated plan for its own network
- Integrated ISP/WOSP, with a central party collating data and forecasting needs in a variety of futures.

Step 2. Is the plan 'for information only' or are parties required to implement transmission capital investment?

Proposal: ISO to prepare an integrated ISP for the NWIS, with transparent process and data (**Note.** The mechanism for delivery of the transmission investment is considered by the PET project)

A.5(b) NSP to NSP connection arrangements

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.

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.

Discussion

The HTR do include technical standards for network operation, as well as high level rules for an incumbent NSP connecting new network equipment.

- Chapter 2 of the HTR sets out performance and planning criteria for networks.
- Chapter 3 of the HTR sets out technical requirements for connected generation and storage facilities.
- Chapter 4 of the HTR sets out processes for connecting generation and storage facilities to a network, including provisions for testing compliance with Chapter 3.

Options:

- Amending the existing connection 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

EPWA considers that the connection process will be sufficiently different to warrant a parallel set of rules.

Who should manage the process?

International examples deal with connection of new transmission equipment, not whole networks. e.g. merchant transmission in the US, new state to state interconnectors in the NEM. Most of the process deals with regulatory and legal issues, rather than technical aspects.

The PNR and HTR need to set out the rules for proving compliance with technical standards, not land access, environmental approvals, or transmission charging.

The process could be managed by:

- The NSP for the network point where the connection will occur.
- The ISO

EPWA considers that the ISO's role in planning and operating the power system means its role in any new interconnection will be sizeable, and it should have responsibility for managing the connection process on behalf of NSPs.

Proposal – network connection process

When a new connection to the NWIS involves:

- Only generation, storage, or load, or a combination thereof, the connecting NSP will continue to manage the connection process.
- Transmission equipment owned and/or operated by an existing NSP, the NSP will manage the connection process
- Transmission equipment to be owned and operated by a new NSP, the ISO will manage the connection process
- A combination of transmission equipment with large generation, storage or load (>10 MW), the ISO will manage the connection process.

When a network interconnects to the NWIS:

- It must show historical compliance with Chapter 2, or demonstrate work done to enable future compliance
- It may negotiate to meet a lower standard (still above the yet to be specified minimum standard)
- The ISO must conduct system studies to assess the impact on the NWIS, and engage with NSPs and other affected parties on the findings.
- Individual assets on the connecting network must demonstrate compliance with Chapter 3, with that process to be managed by the connecting network NSP, liaising with the ISO.

Discussion - Constrained access

New network connections will change the way electricity flows in the NWIS. Network constraints may result in some generation being curtailed while other generation is dispatched. Less probably, network constraints could result in energy not served in specific locations.

Where energy is made available for sale and purchase in the balancing market, economic curtailment will be automatically compensated: a participant with a balanced portfolio can buy cheaper energy in balancing and have an overall cheaper outcome than if it had run its own generation.

Where a generator would have run if not for a network constraint, or a load would have been served but for a network constraint, there are four options:

1. The PNR operates on the principle of constrained access, meaning that all generators and loads are treated equally in efficient dispatch.
2. Participants who fund new transmission build receive preferential supply, even if their portfolio generation is curtailed.
3. Participants who fund new transmission build receive preferential dispatch (out of merit order) for their facilities.
4. Participants who fund new transmission build receive compensation for curtailment of load or generation due to network constraints. In a market with locational pricing, this could be managed through financial transmission rights. In a single-price market, it would require constrained off payments.

Proposal – constrained access

If a participant has funded transmission infrastructure, it will be entitled to firm supply for its loads.

- It will be allocated energy from other sources if its generation is constrained in balancing.
- It will be settled without imbalance penalties if its dedicated generation is constrained after balancing positions are finalised.

In any case:

- Effects of transmission constraints on dispatch outcomes must be considered in transmission planning.
- Connection processes must include network congestion studies to identify the likely impact on dispatch.

A.5(c) Outage planning

Current state

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.

Outage management

To enable an integrated power system with high volumes of intermittent renewable energy, the outage process needs to evolve to incorporate:

1. Independent outage assessments, with centralised decision making authority.
2. Transparent outage information, with the same data available to all parties.
3. A clear process for outage scheduling, assessment, and approval.

Considerations (1)

Centralised process where:

1. Connected parties (network and supply) submit outage plans to ISO. All registered facilities on an Outage Scheduling list (i.e. those that can impact on PSSR) must submit outage plans to ISO for approval.
2. Facilities not registered or not on the Outage Scheduling List can self-schedule.
3. Outage applicants must consult with affected parties before submitting outage plans to the ISO.
4. ISO collates and reviews all plans and approves scheduled outages unless doing so would reasonably threaten power system security or reliability.
5. If the ISO recalls or cancels an outage due to system conditions, the requesting party could be compensated for unavoidable expenditure.

If a network outage would affect power system reliability (eg by reducing to n-0), proponent must include plan to mitigate reliability impact – this could include standby generation or runback arrangements with generators, or expedited emergency recall in case of concurrent unplanned outage of another piece of equipment.

Considerations (2)

Proposed timeframes:

- Windows for scheduling of Planned outages to be requested at least 12 months ahead
- “Opportunistic” outages to be requested as soon as practical
- Forced outages to be notified as soon as practical
- ISO to approve/reject within two weeks of receipt, and may notify changes at least three months before outage commencement for Planned outages
- Outages may be recalled with shorter notice in certain circumstances if this is required to maintain security of supply

If outages cannot be approved simultaneously, they are prioritised in relation to:

- Order of submission, with earlier notified outages approved ahead of later ones.
- Impact of not allowing the outage, for example if an outage is required to diagnose or manage a potential problem that could become critical if left unaddressed.

Considerations (3)

Implementing an outage management process will require:

- Agreed risk assessment process for use by NSPs (for self scheduling) and ISO.
- New systems and processes for the ISO
- New processes for NSPs and connected parties to report outages
- New systems to publish approved outage schedule

A.5(d) Exemption and derogation from the HTR

Exemptions and derogations from the HTR

Historically, different networks in the Pilbara had different technical standards. Each network operator set the technical requirements for connecting to and operating on its network. The Pilbara Network Rules introduced a common framework for the interconnected networks making up the NWIS. Appendix 5 of the PNR is the Harmonised Technical Rules.

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. They are intended to supersede technical rules for different networks, and provide a single standard across all parts of the interconnected network.

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 a dispute resolution process.

Default standard and minimum standard

Networks and network equipment that connects to the NWIS in future is expected to meet the HTR and operate in accordance with them. Where there are gaps in the HTR, it is EPWA's intention that they are filled, so that the HTR provide a complete set of common technical standards for the NWIS.

The HTR will set a default standard for “automatic qualification”, whereby any prospective connection that meets the standard is automatically eligible for connection. Network operators will not have a right to place conditions or restrictions on operation that apply higher standards than the HTR.

In addition to the default (or “automatic”) standard, EPWA proposes that the HTR sets a minimum technical standard:

- Below which connection and operation is not permitted.
- Above which (if also below the default standard) the prospective connection can seek departure from the default standard from the network operator and the ISO.

Until a minimum standard has been developed, the negotiation framework will only refer to departures from the default standard.

Connection Point Compliance

In the current PNR, a connecting party that has non-compliant equipment can apply for Connection Point Compliance, where their compliance is assessed at the facility gate rather than for each piece of equipment behind the meter.

At present, CPC can only be applied for if there is behind the connection non-compliance. EPWA considers that monitoring compliance at the connection point is likely to be more and more necessary as the generation fleet changes, and proposes to make connection point compliance an option even if all equipment would be compliant individually.

The ISO would still need information and data about the characteristics and operation of equipment behind the meter to ensure power system security.

Proposed negotiation framework (1)

If a prospective connection meets the default standard, no negotiation is required, and no additional conditions can be required by the network operator.

A network operator can request that an applicant meet a higher standard than specified in the HTR, but if the applicant meets the default standard in all aspects, it can reject the request and still be allowed to connect.

The access seeker must show that it meets the standard (to either the NSP or the ISO, as discussed in the NSP-to-NSP connection section). The access seeker can choose whether it does this for each piece of equipment, or at the connection point.

If a connection applicant wishes to depart from the default standard, it can request so. The NSP and/or the ISO must negotiate with the access seeker to agree an acceptable solution that at least meets the minimum standard (once defined).

Proposed negotiation framework (2)

The duration required to assess connection applications depends on the complexity and size of the connection. Assessing the technical compliance of connected equipment comes towards the end of the process. EPWA considers that it is not reasonable to set firm one-size-fits-all timing requirements for connection applications, but that NSPs should be required to publish estimated time requirements for different types of connection, and publish information on actual time taken.

All parties should be acting in good faith. If parties are unable to reach agreement, including on whether a prospective connection meets the default standard, or has provided sufficient evidence, it may be necessary to seek resolution from another body. EPWA proposes that this is the Energy Disputes Arbitrator.

Any deviations from the default standard agreed in the final outcome of the negotiation process will be published by the NSP or the ISO.

A.5(e) Registration category and requirements for storage facilities

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.

Discussion

EPWA proposes to bring the treatment of storage into line with generation by:

- Requiring controllers of Storage Works to register under rule 91, and amending the exemption in rule 92 to apply only to those under 5 MW capacity
- Defining a new construct of Energy Producing System, comprising Generating Units and Storage Works
- Replacing “Generating Unit” with “Energy Producing System” around 2/3rds of the times it appears, and adding explicit requirements for Storage Works in the others.
- Amending chapter 3 of the HTR to explicitly cover requirements for storage works, and making existing requirements for generating units explicitly cover storage works where applicable. Most of the requirements currently in chapter 3 already differentiate between synchronous and inverter based generation, so additional requirements largely need to deal with storage behaviour while consuming energy.
- Amending chapter 3 of the HTR to distinguish between grid-forming inverters and grid-following inverters.
- Ensuring storage works is included in planned HTR changes to implement Generator Performance Standards.

A.5(f) Compliance enforcement options

Current state

The current PNR has three main mechanisms to deal with rule breaches:

- An Administered Penalty Price for Balancing Energy is calculated for Participants who fail to balance their energy beyond tolerance margins;
- Publication of rule non-compliance, and
- Disconnection.

Disconnection is not a practical remedy for most situations, many non-compliant participants will not face consequences for their actions, reducing the incentive to abide by the regulations.

Potential additional compliance enforcement options

Building on penalty rates for energy imbalances, and publication of non-compliance or disconnection for all other non-compliance, the PNR could provide for remedies of increasing severity:

- Formal warnings
- Increased compliance attention (e.g. additional monitoring, independent compliance audit)
- Automatic monetary penalties (e.g. the modified runway method discussed earlier)
- Referral to a judicial body with escalating civil penalties for breaches of specific rules (e.g. dispatch non-compliance, or breach of technical standards)
- Temporary suspension from some aspects of market participation (e.g. ability to purchase energy in balancing, exemption from ESS cost allocation)
- Temporary suspension from all market participation

A.5(g) Confidentiality regime

Current state

Chapter 8 of the Pilbara Network Access Code (PNAC) requires NSPs to adopt and implement ringfencing rules with the main objective of ensuring that the vertical integration of NSP with any other business does not decrease competition. Ringfencing policies must emphasize confidentiality, cost allocation, and prevention of discriminatory treatment favouring the network business and other associated businesses of the NSP. This is also relevant to Horizon Power's delegated control desk functions, which must be

The PNR has confidentiality and cyber-security clauses that set out limitations on how to use, store, analyse, and disseminate confidential information, including those obtained during meetings and discussions.

Discussion

Options:

- Increase transparency of information, by requiring information publication by either NSPs or the ISO. For example: outage plans and schedules, demand forecasts, generation schedules, balancing offers (ex-post), network connection costs.
- Increase ISO visibility, by requiring NSPs to share more information with the ISO, which can then conduct better oversight of market behaviour even if the information is not published
- Make confidentiality provisions ISO centred, whereby the ISO is the main channel for confidential information.
- In-housing control desk functions would remove one confidentiality challenge

A.5(i) Consistency between PNR and HTR

Current state (1)

The PNR and HTR are inconsistent in their terminology and format.

They use different terms for the same things:

- The PNR uses “generation facility” and the HTR (mostly) uses “power station”.
- The PNR uses “essential system service” and the HTR uses “ancillary service”.
- The PNR (mostly) uses “network access contract” and the HTR uses “access contract”.
- Most times where the HTR uses a different term, the HTR glossary definition refers to the PNR term.

They use the same term for different things:

- The PNR definition of “NSP” includes all NSPs, the HTR definition excludes NSPs of excluded networks.
- Both PNR and HTR use “small-use customer”, but it is only defined in the HTR.

The PNR uses capitalisation to denote defined terms, while the HTR uses italics.

The PNR has other sections where additional terms are defined outside the main glossary, using the terms “legacy contract” and “legacy user” with different meanings.

Current state (2)

The PNR and HTR use the terms “energise”, “energised”, and “energisation” to refer to the point in time at which a connection becomes part of the power system, or its state of being part of the power system. These terms are defined in the HTR, but not the PNR.

The PNR and HTR both refer to “commissioning” of new equipment, and set out a process for commissioning planning and testing. This term is not defined in either the PNR or HTR.

The HTR (4.1.3) requires generators to complete certain tests after energisation, but before “commencing commercial operation” or “prior to commercial operation”. This term is not defined. There is no concept of “commercial operations” in the PNR. If the generator does not provide sufficient evidence, the NSP can direct the facility to operate in a particular way, including at zero.

Proposal

EPWA proposes to:

- Amend the HTR to remove alternative defined terms with the defined terms used in the PNR.
- Move all terms defined in the HTR to the main PNR glossary
- Amend definitions (or use of defined terms as relevant) in the HTR to remove different definitions of the same terms.
- Amend the formatting of the HTR to more closely match the formatting of the PNR. Numbering will not be changed.
- move definitions for “energise” and related terms from the HTR to the PNR.
- Introduce a definition for “commissioning” in the PNR
- Introduce a definition for “commercial operations” in the PNR.