

Meeting Agenda

Meeting Title:	Evolution of Pilbara Network Rules Working Group
Workstream	Workstream 1 (PNR Workstream)
Date:	31 July 2025
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	2 min
3	Minutes of Meeting 2024_November_21.	Chair	Noting	1 min
4	PNR Workstream Implementation Plan	RBP	Discussion	80 min
5	Initiatives with Trigger Conditions	RBP	Discussion	20 min
6	New Issues	RBP	Discussion	10 min
7	Other Business <ul style="list-style-type: none"> Next steps 	Chair	Discussion	5 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:	21 November 2024
Time:	9:30 AM – 11:30 AM
Location:	Online, via TEAMS

Attendees	Company	Comment
Dora Guzeleva	Chair, EPWA	9:30am-11am
Tim Robinson	RBP	
Rebecca Mason	APA	
Rebecca White	BHP	
Lekshmi Jaya Mohan	BP	
Anthony Marcos Guevarra	Citic Pacific Mining	
Melinda Anderson	ERA	
Herman Prinsloo	Horizon Power (Pilbara Network)	
Jaden Williamson	Horizon Power (Pilbara Network)	
Sandy Morgan	Horizon Power (Pilbara Network)	9:55am
Summa McMahon	ISO	
Laura Koziol	Energy Policy WA	
Luke Commins	Energy Policy WA	
Tom Coates	Energy Policy WA	A/Chair, 11:00-11:30am
Ajith Viswanath Sreenivasan	RBP	
Eija Samson	RBP	
James Seidelin	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, and 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 and acknowledged an apology from Mr Tonkin.</p>
3	<p>Minutes of Meeting 2024_10_24</p> <p>The working group approved the Minutes, as circulated in the meeting papers.</p>
4	<p>Action Items</p> <p>The Chair addressed the two actions on EPWA in the Action Register.</p> <ul style="list-style-type: none"> • She noted that the comparative analysis requested to inform the ISO fee allocation proposal would be presented in Agenda Item 5(h). • She provided an update on the consultation period, advising that the consultation paper was expected to be published in mid-December and that the consultation period would be extended until the end of March 2025. She added that the proposals would be presented at the next PAC meeting on 5 December 2025.
5	<p>PNR Workstream Work Program</p> <p>The Chair introduced the agenda item and outlined the topics for discussion today. She reiterated that the proposals presented were not final solutions but were shared to gather feedback and observations, and address questions from Working Group members. The Chair emphasised that the proposals would be implemented progressively through the implementation plan, not all at once.</p> <p>a.) Long Term Planning</p> <p>Mr Robinson outlined options and a proposal for long term planning, referencing slides 8 and 9, explaining that the function is proposed to stay with the ISO, with a broader scope and more effective information gathering powers. He emphasised that the 'Integrated System Plan' would be limited to providing information and planning signals, and not committing to specific transmission investment.</p> <ul style="list-style-type: none"> • Ms White asked what considerations were being had for other networks, such as the BHP network that was not connected to the NWIS, especially since BHP was likely better placed to plan for that network than the ISO. <p>Mr Robinson clarified that the ISO would not conduct planning for other networks, rather it would provide a coordinated whole of system plan, including information on expected load growth in the NWIS, and required new supply sources to meet this load growth.</p> <ul style="list-style-type: none"> • Ms White asked what type of information would be needed by ISO and whether that information would differ between networks that were connected to the NWIS and those that were not. <p>Mr Robinson noted that the details of the information requirements have not been developed yet, but they would be different for connected and non-connected networks. He emphasised that the focus of information requests would be on potential NWIS impacts (i.e. new sources of connecting load, generation and storage). He added that the commercial sensitivity of such information would be protected.</p> <ul style="list-style-type: none"> • Ms White asked that further consideration be made to address commercially sensitive information and whether it would be appropriate to share such information. She highlighted the difference between gathering information and publishing information

Item	Subject
	<p>and noted that the sensitivity around the ISO gathering information would be reduced by the proposed changes to ISO's governance structure.</p> <p>The Chair noted the concerns of Ms White but noted that consideration needed to also be made to ensure that the confidentiality and transparency provisions in the PNR were for everybody's benefit, and that, while they need to protect commercially sensitive information, they also must maximise transparency.</p> <p>The Chair reiterated that it was not the intention that the ISO's information gathering powers would be used to plan participants facilities or network if they remained disconnected from the grid. All information gathered was strictly for the purpose of long-term forward planning of the NWIS' interconnected systems.</p> <ul style="list-style-type: none"> Mr Williamson asked for clarity on changes between the proposed ISP created by ISO and the current transmission development plan and whether this change was to create a stronger link to the PET Plan. <p>Mr Robinson answered that the aim was to create an integrated plan that encompassed energy supply resources and transmission. To do so, the ISO requires an ongoing mechanism that would provide effective information gathering provisions and an appropriate scope to consider future scenarios developed under the PET Plan.</p> <p>b.) NSP to NSP Connection Arrangements</p> <p>Mr Robinson discussed NSP to NSP connection arrangements, including proposals for the network connection process and constrained access, referencing slides 11-13. Mr Robinson explained that, while the HTR lays out the technical standards for a new facility, the Rules are focused on connecting facilities to the host NSPs, which is not suitable for interconnection of larger networks and managing potential conflicts of interest.</p> <p>Mr Robinson outlined the proposal detailed on Slide 11, stating that host NSPs would manage the connection of new generation, load or storage, but if equipment is operated by an NSP, the ISO will manage the connection process, liaising with all affected parties.</p> <p>Mr Robinson outlined an additional aspect of the proposal, omitted from the slides, that a network user can apply for connection point compliance even if its equipment was compliant with the HTR.</p> <ul style="list-style-type: none"> Mr Williamson supported the proposal but noted that the current NSP definition might affect some of the proposed solutions because a combination of generation, storage and transmission above a certain threshold automatically becomes a network with an NSP. If generation is above 10 megawatts, it cannot apply for excluded network status. Any proposal for interconnection would need to consider if the connecting party wanted to be a registered NSP, or simply interconnect to an existing NSP who performs the functions of Part 2 of the HTR. <p>The Chair suggested that it could be made clearer in the HTR that compliance was at the connection point.</p> <ul style="list-style-type: none"> Mr Williamson noted that would only apply if the party was classified as a user. If it was classified as a network, then Part 2 is applied across the whole network. <p>Mr Robinson acknowledged this point and suggested revisiting the definition of NSP may be required so that users, as outlined by Mr Williamson, did not fall under it.</p> <ul style="list-style-type: none"> Mr Williamson noted that, as part of the existing process, facilities are not automatically connected once agreement is reached with the NSP, as the NSP is required to do studies and get approvals from the ISO. He asked if this ISO role would continue under the revised scheme. <p>Mr Robinson replied that the intention was for the ISO to oversee and have responsibility for the whole compliance checklist.</p> <ul style="list-style-type: none"> Ms White noted the overlap between the different workstreams and the need to ensure that reforms were consistent. She asked whether it was appropriate that an existing

Item	Subject
	<p>NSP manages the connection process between two competitors and whether the ISO would manage new connections.</p> <p>Mr Robinson clarified that, in accordance with the proposal in Slide 10, an NSP that connects its transmission equipment to its network could manage that process itself and that a new NSP includes an existing network connecting to the NWIS.</p> <ul style="list-style-type: none"> • Ms White queried whether the ISO should have more of an oversight role when an NSP connects something material to its network that changes the shape and nature of the NWIS, affecting other market participants. • Ms McMahon explained that the ISO gets involved in all connection processes over 10 megawatts and supervises the connection standards. Anything that might impact anybody else, including transmission infrastructure, involves the ISO. <p>The Chair agreed that there needed to be clarity regarding a participant connecting load, generation or storage facilities that does not want to become an NSP.</p> <ul style="list-style-type: none"> • Mr Williamson noted that the timeframes for assessments would be impacted if the connection was for a covered network, affecting the customers on that network, which may require a re-assessment by the ISO of the ESS requirements. <p>Mr Robinson stated that discussions had been had about the difficulty of applying a one size fits all approach to different types of connections with hard deadlines. Instead, it would be useful if the ISO and the NSP were publishing timeframes for connections so that everyone understands the steps and time required for different types of connections.</p> <ul style="list-style-type: none"> • Ms McMahon added that such timeframes could be in a procedure with target dates which would be easy to change. Also, the ISO is currently reviewing the connection process with each new connection, thereby refining the process and building up the information required by future applicants going through the connection process. <p>Mr Robinson outlined the proposal, detailed in Slide 13, relating to constrained access. This included providing preferential supply to foundation customer users, if they have funded relevant network elements, even if their portfolio generation is curtailed. If that customer is out of balance because their designated generation is constrained, then penalty rates are not applied.</p> <p>Mr Robinson asked that two things be considered. Firstly, what are the effects of network constraints on the dispatch outcomes and secondly, what are the potential impacts on dispatch if a new line is connected in a way that alters the operational profile of customers or generators.</p> <ul style="list-style-type: none"> • Mr Williamson outlined that the current constrained regime prioritises those who fund network augmentation and that, in a constrained access event, they can choose to be constrained if there are multiple available options. <p>The Chair explained that the concern would arise if a new transmission line were used to bring renewable energy into another part of the network that pre-exists the new transmission line. The intent was that the load was always supplied, even if the generation was constrained.</p> <ul style="list-style-type: none"> • Mr Williamson asked whether, to resolve such constraint issues, generators would be curtailed in accordance with a merit order unless a party had directly funded a network augmentation in a section of the network and only when that specific section became constrained. That is, if a legacy party was curtailed, it is not penalised because the energy is still supplied to the customer. <p>Mr Robinson explained that the aim was to apply preferential supply of the load, with the merit order resulting in the cheaper electricity.</p> <p>The Chair added that if a generator is constrained due to a constraint between the generator and the load to which it's committed, and that generator is on part of the network that it has augmented or funded, they are not subject to the same balancing charges as everyone else.</p>

c.) Outage management

Item	Subject
	<p>Mr Robinson outlined a proposal for outage management, referencing slides 15-18. Mr Robinson stated that the proposals were following on from the ISO's own review of subchapters 7.3 and 7.4.</p> <ul style="list-style-type: none"> Ms Morgan asked that EPWA considers the consultations provided by Horizon Power in the ISO review to avoid repeating the work already done by Horizon Power staff. <p>The Chair said that any submissions meritocratic would be accounted for together with other submissions on the consultation paper.</p> <p>Mr Robinson added that the information in the submissions in the ISO review would be read and assessed.</p> <ul style="list-style-type: none"> Ms McMahon noted that the ISO was about to publish a notice that the final decision for its review would be delayed until June 2025, after the ACCC's final determination had been received and to align with the direction of the EPNR Project. Further information would be available on the ISO's website. Mr Williamson highlighted Horizon Power's preferred timeframe for notifying outages was 6 months, rather than the 12 months proposed. <p>The Chair explained that there was nothing to prevent plans from being updated closer to the proposed time of the outage.</p> <p>d.) Exemptions and derogations from the HTR</p> <p>Mr Robinson outlined a proposal for exemptions and derogations from the HTR, referencing slide 19. This included the HTR setting an automatic standard. Those who meet the automatic standard qualify for connection. The aim is to eventually develop a minimum standard in the HTR, leaving room for negotiations between the connecting party and the NSP to agree on a point between the automatic and minimum standards.</p> <p>Mr Robinson added that, while not in the meeting papers, the ISO would need to give ultimate approval for deviations from the automatic standard, even when the NSP was managing the process.</p> <ul style="list-style-type: none"> Mr Williamson flagged that not all the standards in Part 3 apply to a user and asked whether a customer wanting to be assessed at the connection point could propose deviations from the standards for negotiation or whether a suite of technical standards could be provided for connection point compliance. <p>Mr Robinson replied that the latter was the aim and that eventually the HTR would specify what connection point compliance looks like to avoid needing to reestablish that standard in every negotiation.</p> <p>e.) Registration category and requirements for storage facilities</p> <p>Mr Robinson outlined a proposal for a new registration category and requirements for storage facilities, referencing slide 21. He explained that a new registration category, 'Energy Producing System' was needed to cover both generation and storage works.</p> <p>Mr Robinson said that, in the HTR, the generator standards are applied to storage facilities when they are injecting into the network, and load standards are applied when they are withdrawing from the network. Reforms were needed to the PNR (as outlined in Slide 21), with the long-term goal being a dedicated section on storage in the HTR, leveraging the work being done in the SWIS regarding generated performance standards.</p> <ul style="list-style-type: none"> Mr Williamson noted that, similarly to earlier discussions, we would need to ensure that storage works are not inadvertently captured within the NSP definition. <p>Mr Robinson explained that the storage threshold is 5 megawatts because it can switch between injecting and withdrawing from the network, with 5 megawatts each way resulting in 10-megawatt impact.</p> <p>f.) Compliance and enforcement</p>

Item	Subject
	<p>Mr Robinson outlined options and a proposal for a new compliance enforcement framework, referencing slide 23. While each option, from formal warnings to potential suspension might not be appropriate for every type of breach, they would provide useful options to ensure compliance.</p> <p>The Chair added that further work was needed on how suspension of participation in the balancing mechanism might work in practice, and to check that it would be useful as a compliance enforcement tool.</p> <p>g.) Confidentiality regime</p> <p>Mr Robinson discussed the confidentiality regime, referencing slide 25. He noted that ring fencing is being addressed in the PNAC (outside of this project). The goal for the confidentiality provisions in the PNR was to promote transparency, with as much information being publicly available as reasonable, unless there was a clear reason for information to be treated as confidential e.g. if it is demonstrably commercially sensitive.</p> <p>Mr Robinson proposed that if a participant wanted to keep information confidential, a reason must be provided to do so. The ISO would have the power to rule against a confidentiality request and the parties, through a dispute mechanism, could reach a conclusion.</p> <ul style="list-style-type: none"> • Ms White said that, rather than having every piece of information being made confidential by request, the Rules could outline what type of information was confidential and the circumstances under which information would be made public. • Ms McMahon seconded the proposal from Ms White, especially as an administrative assistance to the ISO performing its functions, as this topic will likely involve ongoing conversations between the ISO and NSPs. <p>The Chair explained that the principle was that all market information was public unless it met a specific criterion in the Rules. The proposal aimed to avoid going through every single Rule to determine what is and isn't public. The Chair asked whether the general principle was agreed to by the Working Group members.</p> <ul style="list-style-type: none"> • Ms McMahon agreed clarifying that what was being sought was guidance, with clear examples to explain why some types of information were public and others were confidential. <p>Mr Robinson, referring to Slide 25, suggested four basic criteria to determine if information would not be immediately disclosed. Those criteria included whether the information was in a contract, poses a risk to system security and reliability if disclosed, contains personal information or could cause commercial detriment to another party if disclosed without their knowledge. The goal was to include these principles, or something to their effect, in the Rules, so that they can act as the basic for any assessment by the ISO.</p> <ul style="list-style-type: none"> • Ms McMahon asked whether it was up to the participant to prove that information fell under those criteria. <p>Mr Robinson confirmed that it would be up to the participant to request the information's status and for the ISO to determine the outcome.</p> <p>h.) ISO Functions</p> <p>Mr Robinson provide diagrams demonstrating the proposed evolution of the ISO and its role in the Pilbara regime, referencing slides 37 and 38.</p> <p>Mr Robinson explained that the Pilbara ISO would need to expand its planning and forecasting role in a future with more intermittent renewable generation, procuring capacity as a backstop if there is a shortfall, and approving and managing planned and unplanned outages in a centralised role. The ISO would also have a billing and settlement role, particularly regarding capacity procurement.</p> <p>Mr Robinson acknowledged that this would be a larger role for the ISO and affect how fees are distributed. Data for other system operator fees compared to the ISO's fee was provided as a response to previous discussions around re-visiting an AEMO style model.</p>

Item	Subject
	<ul style="list-style-type: none"> Ms White noted that the clean energy regulator data included behind the meter data, and therefore may overstate the chargeable fee volume and understate fees per MW. <p>Mr Robinson agreed that some form of accounting for behind the meter injection and withdrawal was necessary but was not available at this time.</p> <ul style="list-style-type: none"> Ms White asked if behind the meter data could be found, to help inform discussions about the equitable allocation of the ISO's fees. <p>Mr Coates agreed that further information and analysis was needed to identify the impact of the fee allocation proposal and could be provided as part of the detailed design activities in the implementation plan.</p> <ul style="list-style-type: none"> Ms Morgan suggested that the analysis was misleading, and that historical data from pre-reform should be used and the cost of the new ISO functions added to get a more accurate representation. <p>i.) Consistency between PNR and HTR</p> <p>Mr Robinson, referencing slide 32, flagging several discrepancies between the PNR and HTR proposing to fix them and ensure all Rules were consistent in their definitions, terms, and formatting. If members noticed discrepancies, they should inform EPWA, noting that these changes would not likely be included in the consultation paper.</p>
6	<p>Other Business</p> <p><i>Intermittent Loads</i></p> <p>Mr Robinson noted that there were different ways for connected parties to operate, especially those operating storage and demand. The WEM uses the concept of an intermittent load, in which facilities are neither drawing nor injecting substantial amounts of energy from/to the network. Under this term, participants can manage their operations without needing to comply with the full set of rules.</p> <p>Mr Robinson asked members whether such a concept would be useful to include in the PNR and stated that it would need to be considered alongside any changes to the NSP definition.</p> <ul style="list-style-type: none"> Mr Williamson agreed, saying that Horizon Power had similar thoughts when connecting Woodside's Pluto facility to the NWIS and that such a concept in the Rules would be helpful going forward. <p><i>Black Start Arrangements in Rule 192</i></p> <p>Mr Coates stated that this issue would be flagged for further consideration in the Implementation Plan.</p> <p>Mr Coates outlined the issue provided by Mr Williamson outside of meetings, namely that registered NSPs need to be able to black start their own networks and that this would not be practicable if they have no inherent generation, which is an inefficient outcome. He added that there is scope for the ISO to procure black start capabilities for certain effected networks.</p> <ul style="list-style-type: none"> Mr Williamson added that this might apply to a new NSP that does not have any generation, requiring it to contract with an interconnected generator or seek exemption from the ISO. Because the ISO cannot procure ESS services that are not defined in Chapter 3 of the PNR, this may be an area of needed reform. Ms White asked in what way this issue would be addressed through the Implementation Plan, since people need to provide feedback. <p>Mr Coates said that EPWA was capturing issues as they arose. While the Implementation Plan was aimed at designing solutions to already identified issues, that did not mean that new issues could not be flagged for later considerations.</p> <ul style="list-style-type: none"> Mr Williamson added that this issue had been touched upon by the HTR Working Group, in which there were discussions about the definitions of ancillary services, as they applied to black start requirements, verses essential system services, and that it

Item	Subject
	<p>was recommended that this should be passed to the PNR Working Group for further discussion.</p> <ul style="list-style-type: none"> Ms Mason flagged that there would need to be a point at which changes were locked in, rather than having constant changes which creates uncertainty for the businesses and participants, using the example of the East Coast where changes were implemented once several reforms had been coalesced. <p>Mr Robinson clarified that, while these reforms were quite large and substantial, there was no intention to be in a constant state of change and a line in the sand had to be drawn.</p> <p>Next Steps</p> <p>Mr Coates outlined the next steps included providing an outline of the proposals at the next PAC meeting, and publication of the consultation paper. He noted that submissions would be open until late March.</p> <ul style="list-style-type: none"> Ms Mason asked to what extent the HTR's work would be included in the consultation paper. <p>Mr Robinson explained that the 43 issues would be listed with a high-level summary of the recommended solutions and that a reference to the HTR materials would be provided. This was discussed with the HTR Working Group and that the table would be provided to them for feedback before the consultation paper was published.</p> <p>Mr Coates thanked everyone for their time. He thanked members for their contribution, which would be reflected in the consultation paper.</p>

The meeting closed at 11:30 am.



Government of Western Australia
Energy Policy WA

Evolution of the Pilbara Networks Rules Working Group Meeting 2025_07_31

31 July 2025

Working together for a
brighter energy future.

Meeting Agenda

Item	Item	Responsibility	Type	Duration
1	Welcome and agenda	Chair	Noting	2 min
2	Meeting apologies and attendance	Chair	Noting	2 min
3	Minutes of Meeting 2024_November_21	Chair	Noting	1 min
4	PNR workstream implementation plan	EPWA	Discussion	80 min
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7	Other Business <ul style="list-style-type: none">Next steps			5 min
Appendix: Implementation activities by initiative				

4. PNR workstream implementation plan

Phasing the implementation plan

Some policy outcomes are ready to be implemented now – all that is needed is a rule change.

Some initiatives need further design work before they can be implemented.

Some initiatives are dependent on others, which must be delivered first.

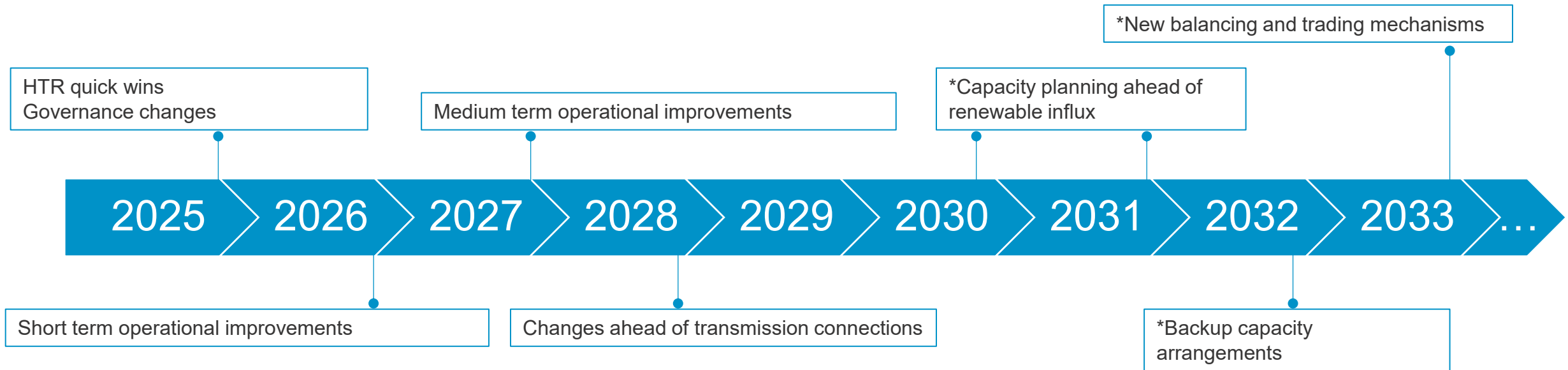
Some outcomes are not needed until power system characteristics change.

Prudence and bandwidth considerations mean that not everything can be implemented at once.

In developing the timing and order of implementation, EPWA has considered the three limbs of the state electricity objective – whether and when the initiative is needed:

- to maintain power system security and reliability
- to enable emissions reduction
- to enable efficient costs.

EPNR implementation timeline



Implementation plan

Initiatives where the next step is to develop rule changes for consultation

Within 12 months:

- Changes to the HTR for 27 of 31 issues (details in HTR workstream)
- Contingency Reserve Raise cost recovery changes (Proposal 8)
- Head of power for Integrated Pilbara Network Plan (Proposal 1)
- Introduce Energy Producing System (25)
- Remove condition that facilities are only eligible for CPC if they otherwise cannot comply with HTR (24)

Within 24 months:

- Move metering requirements into PNR (13)

Implementation plan

Short term (0-12 months): Initiatives commencing design activity

~CY 2025

- Finalise and implement updated governance policy requirements for the ISO, including board composition, nomination and appointment processes (16)
- Detailed design for Regulation cost recovery (8)
- Develop interpretation guidance for network reliability standard (2)
- Develop outage planning processes (10, 11)
- Develop and implement plan to transfer control desk functions into ISO (15)
- Detailed design for ISO fee model (18)

~CY 2026

- Detailed design for monitoring and compliance enforcement tools (21)
- Detailed design for NSP to NSP connection arrangements (22)
- Develop targeted technical requirements for storage facilities (25)
- Detailed design for CPC for self-contained networks (24)

Implementation plan

Short term (0-12 months): Commencement milestones

~ CY 2025

- Introduce majority independent Pilbara ISO board requirements (16)
- Implement HTR working group actions to complete HTR default standard (27)

~ CY 2026

- New ISO budget arrangements, with ERA oversight (17)
- Commence new outage planning process (10,11)
- Commence new monitoring and compliance enforcement tools (21)

Implementation plan

Medium term (12-36 months): Design activity

From CY 2027

- Develop fault level requirements (9)
- Detailed design for HTR negotiation framework (28)
- Develop load shedding list (14)
- Conduct RoCoF studies to understand ride-through capabilities and requirements (7)
- Detailed design for new information framework (19)
- Develop HTR minimum standard (27)
- Detailed design for capacity forecasting (3)

Implementation plan

Medium term (12-36 months): Commencement milestones

~ CY 2026

- Commence new ISO fee model (18)
- Commence new network reliability standard (2)
- Commence specific HTR requirements for storage facilities (25)
- Commence new Regulation cost recovery arrangements (8)
- Commence CPC for self-contained networks (24)

~ CY 2027

- Commence new system strength approach (9)
- ISO commences control desk functions (15)
- Commence NSP to NSP connection arrangements (22)
- Commence new information framework (19)
- Commence HTR negotiation framework (28)

~ CY 2028

- Commence manual load shedding plan (14)
- Commence HTR minimum standard (27)

Implementation plan

Long term (36+ months): Design activity

From ~CY 2029

- Detailed design for individual capacity requirements (4)
- Detailed design for capacity certification (5)
- High level design for demand side participation (26)
- Detailed design for backup capacity procurement (6)
- Detailed design for balancing mechanism (12)
- Detailed design for preferential supply for transmission foundation customers (23)
- Detailed design for trading mechanism (12)

5. Changes with trigger criteria

Trigger points for introducing change

2024 modelling showed that greater shared use of the Pilbara supply fleet will allow significant cost savings as the volatility of the fleet increases. However, current capacity, trading, and balancing arrangements will suffice until the characteristics of the fleet change. For example, as long as the fleet is almost all dispatchable thermal generation, self-certification of capacity will continue to provide sufficient confidence of available supply.

The best estimate is that there will be a large influx of renewable generation when new transmission is connected in around 2031, but significant load growth before then could see higher levels of renewable penetration reached ahead of transmission commissioning.

Modelling shows that there are clear benefits of capacity sharing when renewable generation makes up around 20% of generation. This may occur by 2030, and almost certainly by 2035. By this point, mechanisms to allow sharing of energy must be in place. Some measures need to be in place ahead of this time, and should be staged to allow phased implementation rather than all changes occurring at once.

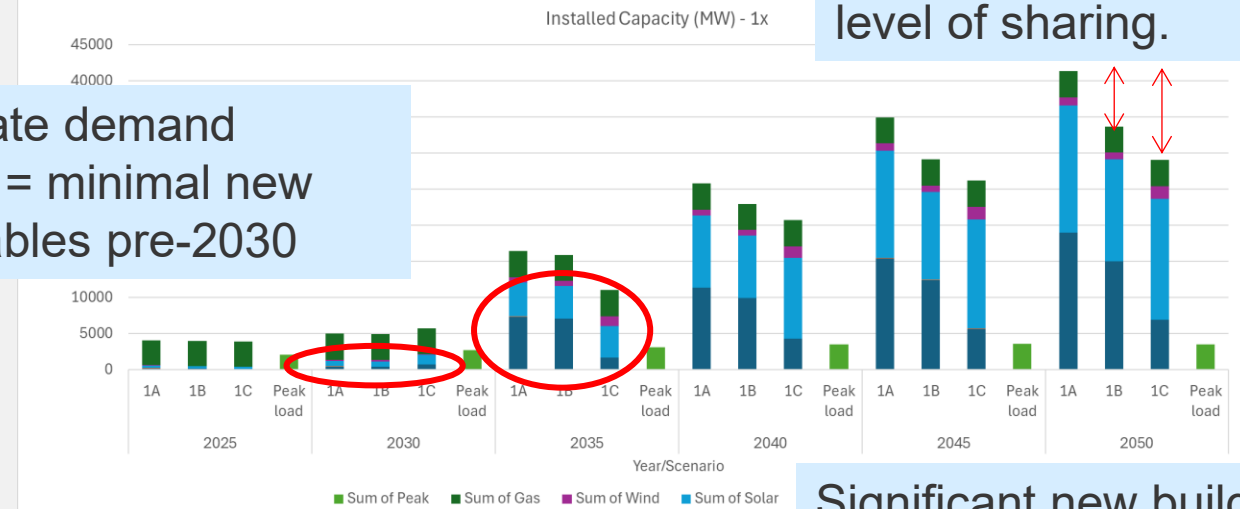
See next two slides from 2024 modelling.

Generation Build

- In a high renewable future, significant overcapacity is needed due to the intermittent nature of renewables, and to meet the carbon emissions targets
- The 2x scenarios have a greater proportion of new capacity coming from wind, enabled by the higher transmission build.
- Even though the overall demand is higher in the 2x scenarios, because there is more wind, the total installed capacity in the 2x scenarios is lower
- The fully integrated scenario (nC) requires less capacity when compared to nA and nB as resources are shared among the participants in the network
- Storage is integral in all scenarios to distribute intermittent capacity to other parts of the day and to provide firming capability to the system as gas facilities are restricted by emission targets

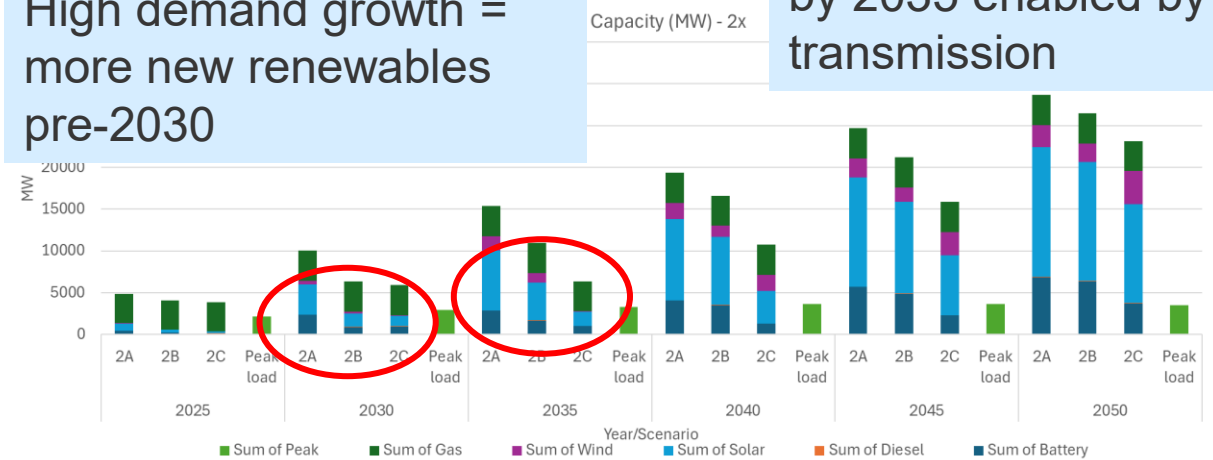
Differences in build needs driven by level of sharing.

Moderate demand growth = minimal new renewables pre-2030



High demand growth = more new renewables pre-2030

Significant new build by 2035 enabled by transmission

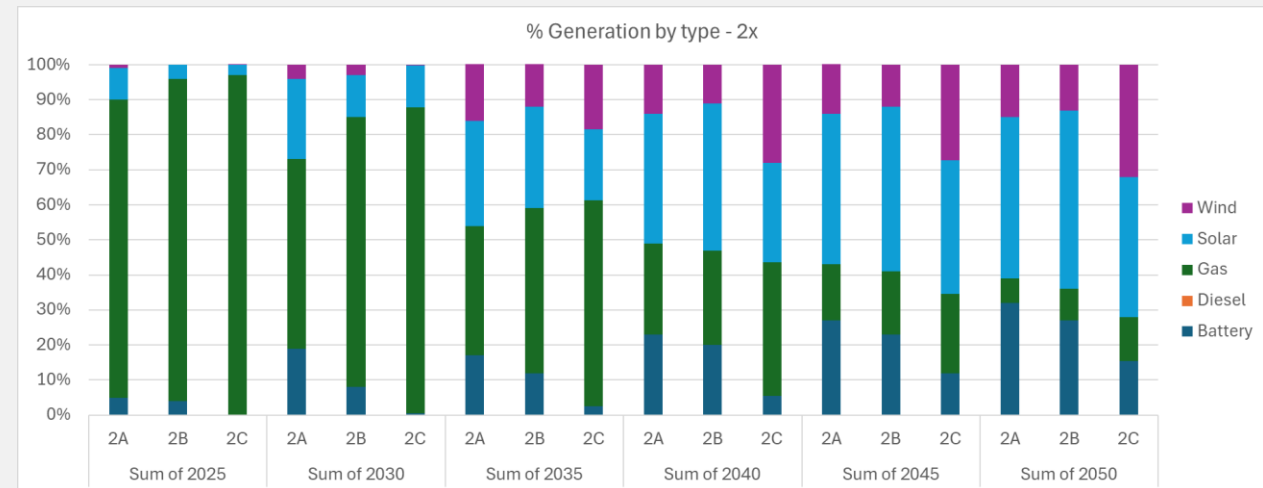
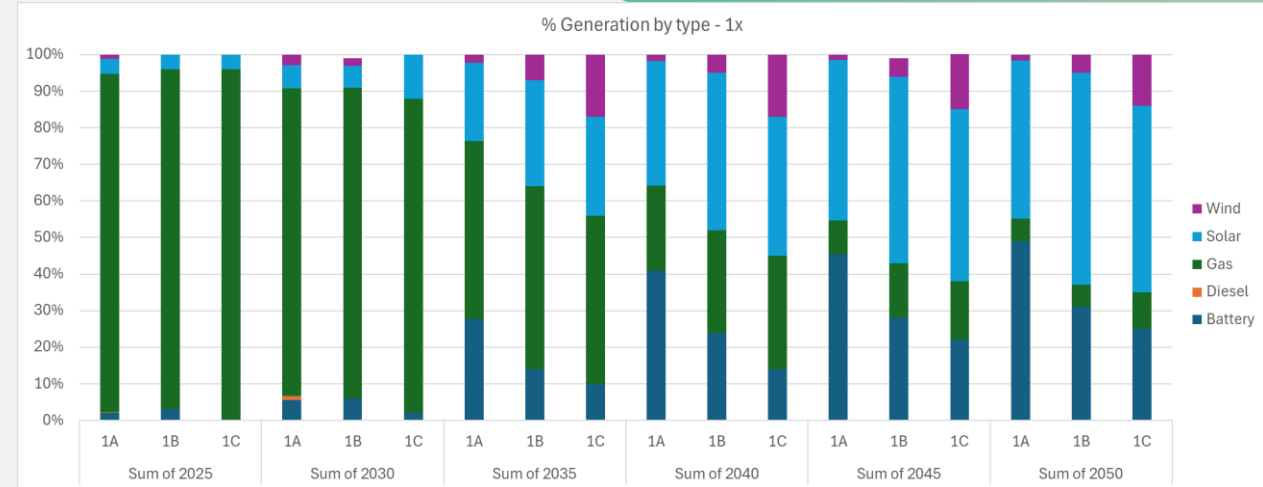


Note: The % of new capacity addition is based on PETA modelling data

Generation dispatch

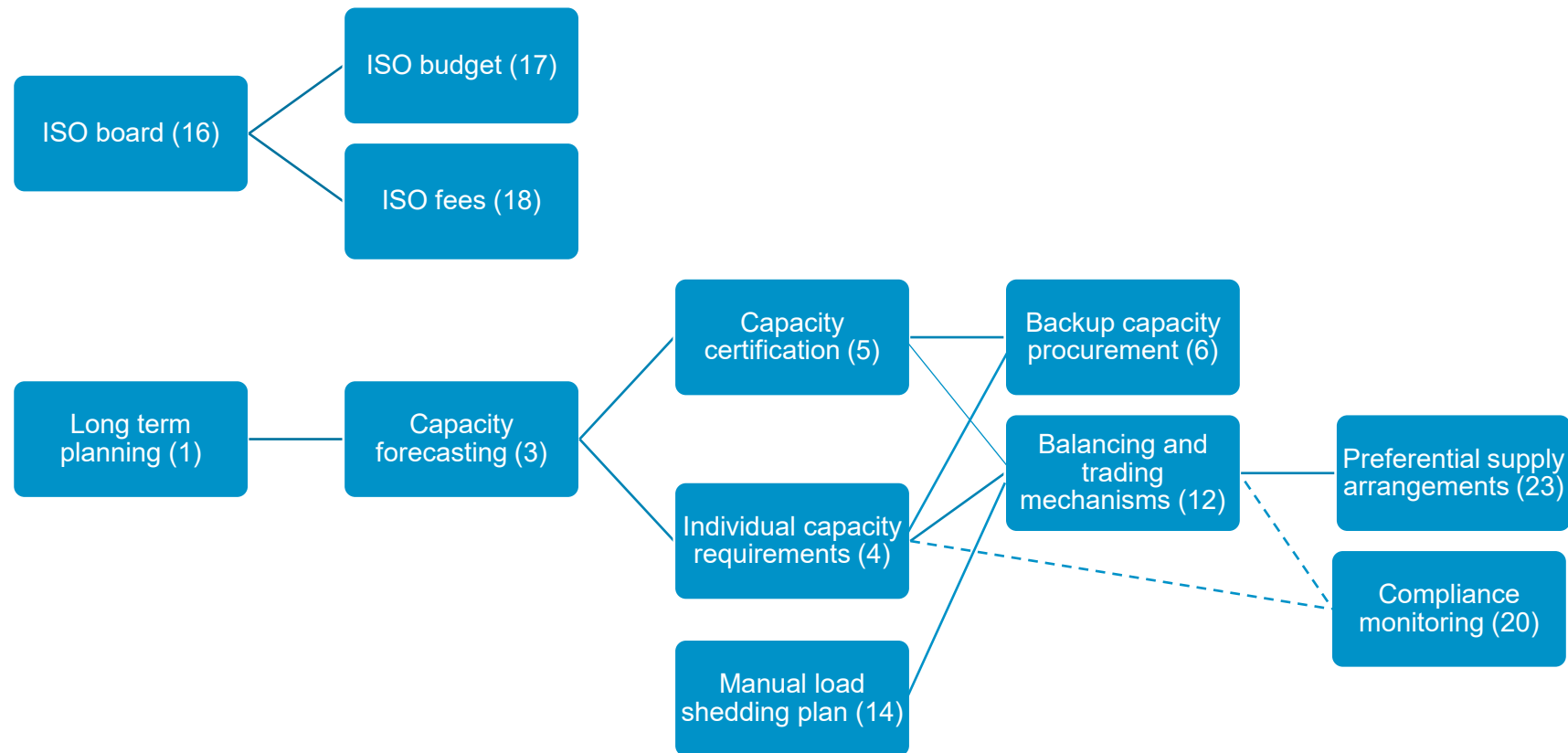
- Thermal generation drops steadily to meet the assumed emission targets
- Batteries remain integral to meeting load when the intermittent generation is low
- Higher installed wind capacity in 2x when compared to 1x leads to two outcomes:
 - Contribution of wind is higher in 2x because wind is available through out the day and can contribute during peak periods (evening)
 - Battery contribution is lower in 2x since wind can provide when solar cannot (evening and overnight)

Proportion of renewable dispatch depends on fleet. More renewable dispatch in sharing scenarios, even though less build.



Dependencies

Some initiatives must be completed before others are possible. These initiatives must be scheduled so they are in place when the dependent initiative is needed.

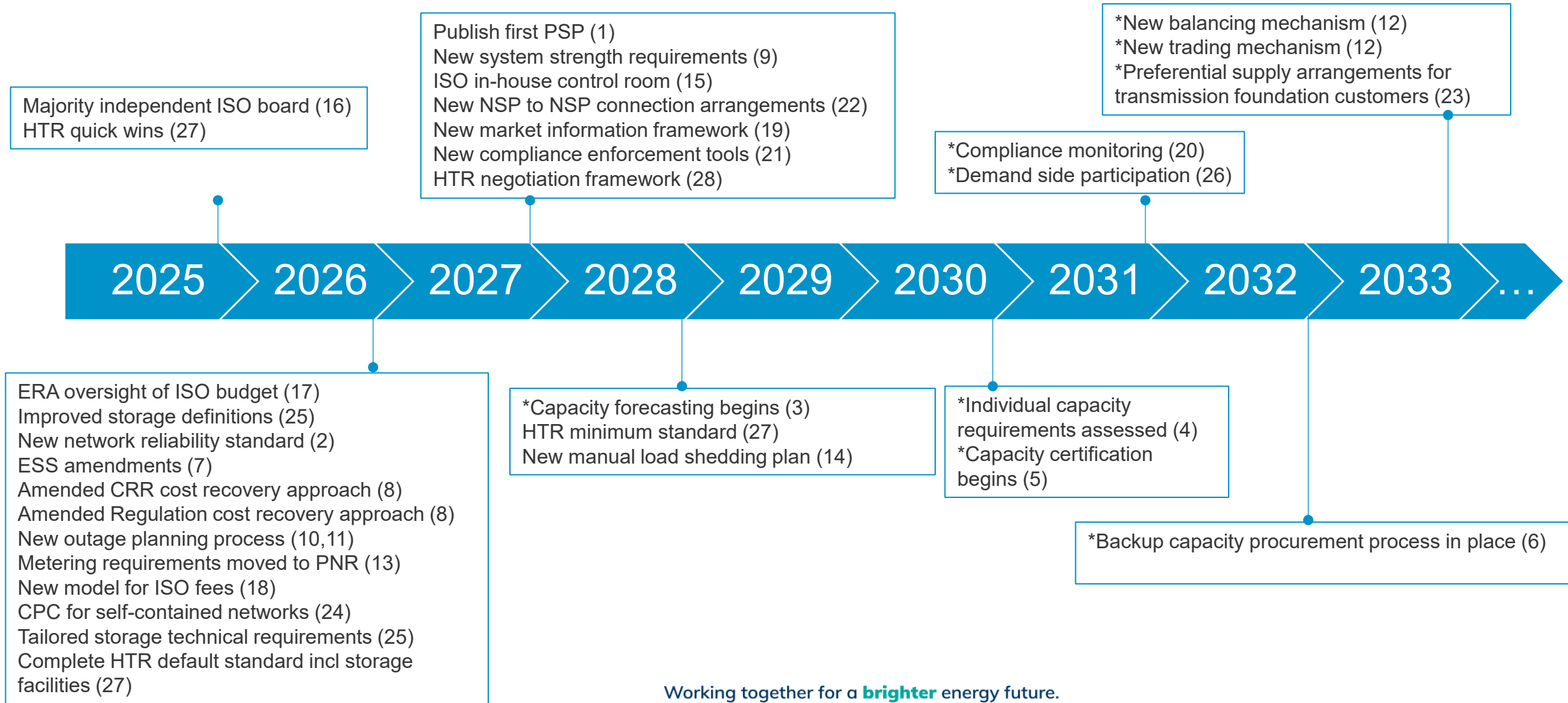


Implementation plan

Long term (36+ months): Commencement triggers

- When credible load loss risk exceeds available droop response, commence Contingency Reserve Lower service (7)
- When NWIS reaches 10% renewable energy, commence capacity forecasting (expected ~2028) (3)
- Two years (~2030) after first capacity forecasts:
 - commence individual capacity requirements (4)
 - commence capacity certification (5)
 - commence additional compliance monitoring (20)
- When NWIS reaches 100MW of flexible load, amend balancing and ESS to allow participation (expected ~2031) (26)
- When NWIS reaches 20% renewable energy and 10% of load served by non-vertically integrated parties, commence backup capacity procurement (expected ~2032) (6)
- When NWIS reaches 20% renewable energy, commence new balancing mechanism (12)
- When NWIS reaches 20% renewable energy, commence new trading mechanism (12)

EPNR implementation timeline



6. New issues

New issues

- Balancing payment rules do not charge ESS providers for energy consumed outside their balancing threshold, even if other parties are being paid for providing this energy. This means that there is a systematic undercollection of balancing costs. EPWA proposes to review balancing payment rules to ensure ESS costs are clearly separate from balancing
- Others?

7. Next steps

Next steps

- **28 August:** PAC meeting
- **September:** Publish consultation paper on the implementation plan.

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

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

The background features a solid dark blue field. In the lower-left corner, there are several overlapping, semi-transparent geometric shapes in shades of teal and light green. These shapes have rounded corners and are arranged in a way that creates a sense of depth and movement, resembling stylized hills or a modern architectural design.

*We're working for
Western Australia.*

Appendix A: Activities by initiative

1. Long term planning

Outcome:

- 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 System 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.

1. Long term planning

Implementation activities

Trigger: N/A

Timing: First PSP to be published 2027

Actions: Rule change.

Precedents: None

Dependents: 3/4/5/6 (capacity), 12 (balancing)

2. Network reliability standard

The future success of the Pilbara would be impaired if a network operator is only required to take steps to provide reliable supply after a connecting party requests it. An n-1 reliability planning standard for all new network infrastructure is therefore necessary, but this can be achieved with physical equipment or non-network solutions, including agreements with loads or generators.

Some existing infrastructure was not designed and built to n-1 standard. This infrastructure will not be required to upgrade, either by new network build or new non-network solutions, but will be required to formalise its arrangements for the level of service with existing connected parties if this is not already the case.

Outcome:

- The default reliability planning standard for the NWIS transmission network will be n-1.
- This does not require redundant network equipment, but can be achieved by non-network solutions. For example, load runback schemes / non-firm agreements and generator redundancy/curtailment.
- The standard will not apply to self-contained networks, as long as outages do not affect the rest of the power system.

2. Network reliability standard

Implementation activities

Trigger: N/A

Timing: Within 12-18 months

Actions:

- Develop interpretation guidance;

- Rule change.

Precedents: None

Dependents: None

3. Capacity forecasting

Outcome:

- Capacity forecasting is not required yet, but needs to be in place ahead of a pre-defined percentage of variable renewables.
- The ISO will forecast capacity requirements for the NWIS, based on the capacity needed to avoid unserved energy:
 - in the worst case of coincidence of high demand and low renewable output expected to occur once in ten years (this may not be the same as peak demand); and
 - while maintaining a reserve margin equal to the expected generator forced outage rate.

3. Capacity forecasting

Implementation activities

Trigger: NWIS reaches 10% renewable energy.

Capacity forecasting will need to be in place ahead of other capacity activities.

Timing: ~2028

Actions:

Detailed design;

Rule change.

Precedents: 1 (Long term planning)

Dependents: None

4. Individual capacity requirements

Outcome:

- Individual capacity requirements are not required yet, but need to be in place ahead of a pre-defined percentage of variable renewables.
- 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.

5. Capacity Certification

Outcome:

- Capacity certification is not required yet, but needs to be in place ahead of a pre-defined percentage of variable renewables.
- 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, and detailed design will consider the need to show proof of energy supply.
- All capacity methods will be transparent, with as much data as possible provided to participants and publicly so affected parties can check the ISO's assessment.

4 & 5. Individual capacity requirements and certification

Implementation activities

Trigger: N/A

Timing: ~2030 (two years after first capacity forecasts)

Actions:

- Detailed design;

- Rule change.

Precedents: 3 (capacity forecasting)

Dependents: 6 (backup capacity procurement)

6. Backup capacity procurement

Outcome:

- Backup capacity procurement is not required yet, but needs to be in place when there is a a pre-defined proportion of load served by non-vertically integrated parties.
- If there is a shortfall of capacity (i.e. participants do not present evidence of sufficient capacity to meet their individual requirements for a particular year, including a reserve margin), and do not identify their load as non-firm, the ISO will seek to procure additional capacity to meet the shortfall in that year.
- ISO procurement will be capped at a cost reflecting the expected value of customer reliability (VCR) from avoiding the shortfall, to be determined in consultation with stakeholders. This means backup capacity is likely to come from spare capacity from other connected parties or temporary demand response rather than new build.
- The costs of capacity procured by the ISO will be allocated to the participants with individual shortfalls. Self-sufficient participants will not bear any costs of backup capacity procurement.

6. Backup capacity procurement

Implementation activities

Trigger: NWIS reaches 20% renewable energy and 10% of load served to non-vertically integrated parties.

Timing: ~2032

Actions:

- Detailed design;

- Rule change.

Precedents: 4/5 (capacity requirements and certification)

Dependents: None

7. ESS framework

- 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 there is credible risk of load loss that cannot be absorbed by available droop response, 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

Implementation activities

Triggers:

Contingency reserve lower: credible risk of load loss event greater than available droop response

Other actions: N/A

Timing:

CRL: as per trigger

Other actions: within 12-18 months

Actions:

RoCoF studies;

Rule change.

Precedents: None

Dependents: None

8. ESS cost recovery

Outcome:

- 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.

8. ESS cost recovery

Implementation activities

Trigger: N/A

Timing:

CRR: 12-18 months

Regulation: 12-24 months

Actions:

CRR: Rule change.

Regulation: Detailed design; Rule change

Precedents: None

Dependents: None

9. System Strength

Outcome:

- 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.

9. System strength

Implementation activities

Trigger: N/A

Timing: 12-24 months

Actions:

- Develop fault level requirements;
HTR change.

Precedents: None

Dependents: None

10. Outage planning

Outcome:

- The ISO will manage a centralised outage scheduling process.
- The ISO cannot approve or reject outages of equipment, only the timing of the outage.
- All registered facilities on an outage planning list will be required to participate.
- The outage planning list will contain the facilities for which outages have the potential to materially impact PSSR.
- Outages of facilities not on the outage planning list may be required to be notified to the ISO for information purposes only.
- Outage requestors must consult with affected parties before submitting outage requests to the ISO.
- If a network outage would affect PSSR the network operator must include a plan to mitigate the PSSR impact.
- The ISO must assess outages according to an assessment framework developed with connected parties, and must approve an outage window unless doing so would have a material impact on PSSR.
- ISO decisions (including decisions to include equipment on the outage planning list) can be disputed.

11. Outage plan - timing

Outcome

- Outage plans must be submitted as soon as practicable, and for regular maintenance, no later than a year in advance.
- The ISO must assess outage plans and approve or reject timing within two weeks of receipt.
- If the ISO rejects proposed outage timing, it must assist the proposer to identify an acceptable alternative time.
- 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

10 & 11. Outage planning

Implementation activities

Trigger: N/A

Timing: next 12 months

Actions:

- Develop processes including risk framework, criteria for the outage equipment list;

- Develop procedure to help participants identify outage impacts;

- Rule change.

Precedents: None

Dependents: None

12. Balancing mechanism

Outcome:

- More sophisticated balancing arrangements are not required yet, but need to be in place ahead of a pre-defined percentage of variable renewables.
- A separate trading mechanism will only be needed if operational generation scheduling continues to need significant lead time for most participants.
- In the meantime, the ISO will continue to balance the system using ESS.
- Settlement arrangements for ESS will be reviewed to ensure that the full cost of ESS is reflected in ESS payments, rather than through exemption from energy payments.

12. Balancing mechanism

Implementation activities

Trigger: NWIS reaches 20% renewable energy

Timing: ~2032/33

Actions:

- Detailed design;

- Rule change.

Precedents: Individual capacity requirements (4), Capacity certification (5)

Dependents: Preferential supply arrangements for transmission foundation customers (23)

13. Metering

Outcome:

- 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.

13. Metering

Implementation activities

Trigger: N/A

Timing: 12 – 18 months

Actions: Rule change.

Precedents: None

Dependents: 26 (demand side participation)

14. Manual load shedding plan

Outcome:

- A manual load shedding plan is not required at the moment, but needs to be in place ahead of a pre-defined percentage of variable renewables.
- 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

Outcome (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.

14. Manual load shedding plan

Trigger: N/A

Timing: Within 36 months

Actions:

- Rule change;

- Develop load shedding list

Precedents: None

Dependents: 12 (Balancing mechanism)

15. ISO functions

Outcome:

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

15. ISO functions (control room transfer)

Implementation activities

Trigger: None

Timing: 2027

Actions:

- Develop project plan

- Rule change (to remove delegation option).

Precedents: None

Dependents: None

16. ISO board (2)

Outcome:

- An ISO majority independent board comprising:
 - three independent directors, including the Chair, appointed by the Minister; and
 - two directors nominated by industry and each appointed by the Minister for two-year terms.
- To facilitate this change:
 - one additional independent director will be appointed;
 - two of the existing NSP directors will be retained for a two- and a three-year term respectively; and
 - upon expiry of each NSP director's term, a new director will be nominated by members for a two-year term.
- A reformed PAC will have an additional role of providing advice to the ISO Board, creating a new avenue for industry input to the ISO Board.
- To be appointed, any new Director must meet selection criteria, including any requisite skill requirements.

16. ISO board

Implementation activities

Trigger: None

Timing: Within 6-12 months

Actions:

Announce policy requirements for entity appointed to Pilbara ISO Role, with transitional timeframe provided for conformity/compliance.

Precedents: None

Dependents: 17/18 (ISO budget and fees)

17. ISO budget

Outcome:

- 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.

17. ISO budget

Implementation activities

Trigger: None

Timing: Within 6-12 months

Actions:

Rule change.

Precedents: 16 (ISO board)

Dependents: None

18. ISO Fees

Outcome:

- Where an ISO cost is clearly attributable to an individual participant (initially connection activities and registration processing), costs will be recovered via processing fees.
- All other ISO costs will be recovered from participants based on gross injection and withdrawal figures into and from the NWIS.
- ISO fees for any given fee payer will be capped at 33.3% of total ISO fees.

18. ISO fees

Implementation activities

Trigger: None

Timing: Within 12-18 months

Actions:

- Detailed design (including data sources)

- Rule change.

Precedents: 16 (ISO board)

Dependents: None

19. Information

Outcome

- Market information will be public unless there is a compelling reason for it to remain confidential.
- 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

Implementation activities

Trigger: None

Timing: Within 12-24 months

Actions:

- Detailed design;

- Rule change.

Precedents: None

Dependents: None

20. Compliance monitoring

Outcome:

- 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.

20. Compliance monitoring

Implementation activities

Trigger: Commencement of new capacity or balancing obligations

Timing: ~2031

Actions:

Rule change.

Precedents: At least one of 4/5 (capacity requirements and certification), 12 (balancing mechanism)

Dependents: None

21. Compliance enforcement

Outcome:

- 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.

21. Compliance enforcement

Implementation activities

Trigger: None

Timing: Within 12-36 months

Actions:

- Detailed design;

- Rule change.

Precedents: None

Dependents: None

22. NSP to NSP connection arrangements

Outcome:

- 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 choose to demonstrate compliance at the interconnection point to the NWIS, instead of showing compliance of all equipment on the network.

22. NSP to NSP connection arrangements

Implementation activities

Trigger: Potential for new interconnections (already met)

Timing: Within 12-24 months

Actions:

- Rule change;

- Develop procedure.

Precedents: None

Dependents: None

23. Preferential supply for transmission foundation customers

Outcome:

- Scheduling and dispatch processes will endeavour to provide foundation customers of transmission infrastructure with firm supply for their loads when using the network components they have funded.
- Foundation customers of transmission infrastructure will be settled without imbalance penalties if their dedicated generation is constrained after trading positions are finalised.

23. Preferential supply for transmission foundation customers

Implementation activities

Trigger: N/A

Timing: 36+ months

Actions:

- Detailed design;

- Rule change;

Precedents: Balancing mechanism (12)

Dependents: None

24. Self-contained networks

Outcome:

- The PNR will distinguish between a network operator which provides services to third parties, and the operator of network infrastructure that is used only 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).
- A network owner which wants to be treated as a user, but is not an Excluded Network, will no longer be required to show non-compliance with the HTR in-order-to be able to opt for Connection Point Compliance.
- Currently an Excluded Network can have generation units with a maximum size of 10 MW. This definition will be maintained.
- Detailed design will consider appropriate definitions, including the definition of NSP.
- Proponents of new connections must provide the ISO with standing data and real-time data for individual pieces of equipment for equipment which could affect PSSR, even if their facilities are subject to connection point compliance.

24. Self contained networks

Implementation activities

Trigger: N/A

Timing: Within 24 months

Actions:

- Initial rule change to remove requirement for CPC facilities to be non-compliant with HTR;

- Detailed design;

- Rule change.

Precedents: None

Dependents: None

25. Storage participation

Outcome:

- 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.

25. Storage participation

Implementation activities

Trigger: N/A

Timing: Within 6-24 months

Actions:

- Rule change (introduce Energy Producing System);

- Rule change (technical requirements in HTR chapter 3).

Precedents: None

Dependents: None

26. Demand side participation

Outcome:

- Special arrangements for flexible load are not yet required.
- When flexible load enters, balancing and ESS provisions will be revisited to ensure that flexible load can take advantage of available variable renewable energy.
- Owners of flexible loads will be allowed to contract with the ISO to provide Contingency Reserve Raise as interruptible load.
- Flexible load will be able to be designated as non-firm in the capacity adequacy process, so that it is not required to be matched by supply capacity.
- When the trading mechanism is introduced, owners of flexible loads can bid to purchase additional energy, and then manage their load to match their position.

26. Demand side participation

Implementation activities

Trigger: ~100 MW flexible load connects to NWIS

Timing: ~2031

Actions:

- High level design (amend balancing and ESS framework design to allow participation);

- Rule change.

Precedents: None

Dependents: None

27. HTR standards

Outcome:

- The HTR will set a default standard for “automatic qualification”. If a prospective connection meets this standard it meets the technical criteria to connect to the NWIS.
- NSPs will not have technical standards for connections in addition to the HTR.
- In the medium term a minimum standard for connection will be added to the HTR
- Connection will not be allowed for equipment that falls short of the minimum standard, but there will be a process for equipment that falls between the default and minimum standards.

27. HTR standards

Implementation activities

Trigger: None

Timing:

- Default standard: within 12 months

- Minimum standard: within 36-60 months

Actions:

- Implement HTR working group actions to complete default standard

- Develop minimum standard

Precedents: None

Dependents: None

28. HTR negotiation framework

Outcome:

- 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

Implementation activities

Trigger: None

Timing: within 12-24 months

Actions:

- Detailed design

- Rule change.

Precedents: 27 (HTR default standard)

Dependents: None