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29 April 2025

Energy Policy WA
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Consultation Submission – Evolution of the Pilbara – Access Regime and Network Rules

BHP appreciates the opportunity to provide our input in respect of the Evolution of the Pilbara Electricity - Access Regime and Network Rules consultation papers. BHP's submissions on the proposals regarding the Access Regime and the Network Rules are set out in Annexures 1 and 2 respectively.

About BHP Western Australia Iron Ore

BHP's Western Australia Iron Ore (WAIO) operation, located in the Pilbara, is an integrated system comprising four processing hubs and five mining hubs. These hubs are connected by over 1,000 kilometres of rail infrastructure to port facilities in Port Hedland, where 287 million tonnes of iron ore were exported in FY 2024. WAIO's processing and mining hubs in the central and eastern Pilbara operate within an islanded electricity network owned and managed by WAIO. The port operations are linked to the North-West Interconnected System (NWIS), with electricity procured through Power Purchase Agreements (PPA).

BHP is progressing towards its goal of reducing global operational greenhouse gas emissions by at least 30% by FY 2030, against a FY 2020 baseline. Additionally, BHP aspires to achieve net zero operational greenhouse gas emissions by 2050. While we anticipate expanding our operations to meet growing demand, the journey to decarbonisation will be complex and non-linear. Electrifying our fleet of diesel trucks, locomotives, and other heavy machinery hinges on technological advancements, and we are actively collaborating with original equipment manufacturers and industry partners to expedite this transition. This shift will be enabled by the integration of renewable energy sources such as wind, solar, and battery storage, complemented by firm power from our highly efficient Yarnima gas-fired power station.

As a member of the Pilbara Industry Roundtable, BHP supports the Pilbara Energy Transition and its goals to develop new common user electricity infrastructure, fostering increased renewable energy adoption and decarbonisation in the Pilbara. We support the evolution of regulatory frameworks and network rules that facilitate this transition. Ensuring access to safe, secure, and cost-effective electricity is crucial for BHP, industry, and the Pilbara communities. Updating the network rules and access regime must strike a balance, delivering a fit-for-purpose framework that acknowledges diverse stakeholders, the uncertainties in decarbonisation timelines, and the economic significance of the Pilbara to Western Australia and the Commonwealth.

We welcome the opportunity to engage with EPWA to discuss our feedback and provide further insights into our plans, aiding the development of the Access Regime and Network Rules.

Yours sincerely

Gabrielle Sycamore

Head of Power Decarbonisation

Annexure 1

Access Paper

The below table sets out BHP's submissions on the proposals in the Access Paper.

NO.	PROPOSAL	BHP SUBMISSION
1	Proposal 1: Coverage	<p>BHP is broadly aligned with the proposal for major multi-user transmission infrastructure to be automatically covered, while the approach to the legacy, existing, non-covered networks is to remain unchanged (ie no automatic coverage for such networks), on the understanding that augmentations of existing uncovered networks will also not be automatically covered.</p> <p>BHP notes that the definition of a “<i>network</i>”, and the concepts of a small “<i>single-user connection asset</i>” and “<i>material change</i>” in the nature of an interconnection, will be vital to ensuring the policy intent of this coverage mechanism is met. BHP welcomes the opportunity to discuss specific scenarios with EPWA to ensure that the regulations and policy intent are ultimately aligned.</p>
2	Proposal 2: Managing Vertical Integration	<p>While BHP is aligned that non-covered networks should be exempt from ringfencing obligations, BHP is concerned about the potential of BHP's business becoming the subject of ‘bespoke’ ringfencing arrangements following a change to its interconnections with other networks. BHP does not see the need for, or benefit of, a non-covered network to be subject to ringfencing obligations in any scenario and seeks further clarification from EPWA in respect of this proposal, in addition to the scope of the intended bespoke ringfencing arrangements.</p>
3	Proposal 3: Managing multiplicity of contracts – splitting access in two	<p>BHP understands the potential complexity associated with multiple meshed private networks going forward, and is generally aligned with the need to simplify TUOS arrangements in the future given the increasing complexity. However, noting that initially the number of private networks and individual users connected to those networks is likely to be low, BHP's support of this proposal is dependent on EPWA providing further information on how it will give consideration to the timing for activation of this change and whether these arrangements should only be triggered based on future industry consultation.</p> <p>In relation to the proposed rights to transfer electricity across networks, BHP notes that the proposed PNR arrangements for this solution are identified in the Access Paper as “under development” and are not currently discussed in the Network Paper. As such it is uncertain how these changes will be implemented in practice, particularly in relation to the proposed rights for future 3rd parties to transfer electricity through BHP's currently uncovered networks. BHP welcomes the opportunity for further discussion with EPWA in order to understand potential implications for existing contracts and operations and support more detailed feedback.</p> <p>BHP also seeks confirmation that this proposal would only apply to transmission and not distribution.</p>
4	Proposal 4: Managing how interconnection agreements affect users' access contracts	<p>BHP is broadly aligned with the intent to cover common NSP-NSP obligations under the PNR/HTR. However, the contents of any future NSP-NSP interconnection agreement will depend on the specific items to be covered in the PNR/HTR, so BHP requests further information in respect of what is proposed to be covered by the PNR/HTR in order to provide more fulsome feedback on the consultation questions.</p>
5	Proposal 10: Dealing with foundation user requirements	<p>BHP recognises the importance of commercial settings to enable the development of common user infrastructure and therefore the concept of regulating foundation user rights will need to be a consideration. BHP also considers that a period of flexibility in respect of restrictions on foundation user rights is required in the near term, to encourage investment in the required transmission infrastructure. BHP is concerned that if not properly implemented, these restrictions could significantly limit the funding and support required for necessary transmission to be built.</p>

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6	Other	<p>BHP understands that EPWA is considering staging the implementation of the proposals in the Access Paper. BHP is supportive of such an approach, as this would reduce immediate concerns about the high level of additional complexity being imposed on existing operations. However, further clarity on how the administration of contracting, tariff setting and cost recovery is needed to understand how these processes will operate in a multi-user and multi-network system.</p> <p>Additionally, given the scale of the planned common-user infrastructure, there is a lack of detail as to the commercial viability and the level of government funding necessary to underwrite this undertaking. BHP also understands that the reforms are generally aimed at new networks (particularly the PET Plan corridors), not existing networks, with there to be appropriate explicit carveouts for existing networks. BHP is supportive of this approach.</p>

Annexure 2

Network Rules Paper

The below table sets out BHP's submissions on the Network Rules Paper proposals.

NO.	PROPOSAL	BHP SUBMISSION
1	Proposal 1: Long term planning	<p>BHP would like to understand more about how the proposal seeks to resolve security and reliability issues in relation to future network build and the timeframe over which the PSP is intended to operate. For example, it is not currently clear if the issues identified in a published PSP are intended to translate into specific obligations on the NSPs to act (eg to address identified issues), or whether the PSP is purely for information purposes only.</p> <p>BHP notes that demand assumptions will be key in developing the PSP and that many future demand assumptions will involve a high level of uncertainty and be dependent on future commercial decisions that users may (or may not) ultimately make. This will require the PSP to allow for multiple different possibilities, which is likely to reduce its accuracy.</p> <p>In addition, while generally aligned with the release of non-commercially sensitive information, BHP requests further information in respect of protection of commercially sensitive information. BHP considers that clear parameters around commercial sensitivity are required and does not consider that it is necessary for the ISO (or planning entity) to have information gathering powers in respect of networks behind a single connection point, such as BHP's inland power network.</p> <p>BHP is generally aligned with the ISO undertaking the long-term planning function given its independence. However, to properly and effectively fulfil this role BHP considers that the ISO will require significant additional resources.</p>
2	Proposal 2: Network reliability standard	<p>BHP has concerns regarding the potential unintended consequences of the proposal as it currently drafted. It is unclear to BHP whether it is proposed that the whole of the network will be required to be maintained to a n-1 standard. For example, will distribution elements of the NWIS (which would typically not be designed to an n-1 standard) also be required to meet an n-1 standard going forward?</p> <p>BHP seeks further clarity from EPWA on how "self-contained" networks are intended to be defined and exempted from this requirement. BHP considers that this particularly relevant as the Access Paper proposes new transfer rights for users through connected networks which may result in additional obligations being placed on "self-contained" network owners (eg to build to an n-1 standard). There should be a clear exemption for private use networks to avoid introducing unnecessary cost and complexity on those networks.</p>
3	Proposal 3: Capacity forecasting and consultation questions	<p>BHP notes that there is no timeframe included in the proposed capacity forecast mechanism and that the determination of future demand is very uncertain given:</p> <ul style="list-style-type: none"> the nature of large users on the NWIS in comprising the overall demand; and commercial uncertainty around future projects that will have a significant impact on future demand projections. <p>BHP also notes that the mechanism used for forecasting elsewhere and referenced here may be assuming that peak demand is fundamentally coincident and weather dependent among all users. However, in the Pilbara this is not necessarily true – each individual user's peak demand may occur at different times and under different conditions (not necessarily linked to weather).</p> <p>Capacity targets in other jurisdictions (such as the WEM) do not target zero unserved energy, but instead have an allowable unserved energy based on a reliability target which is periodically reviewed. It may be practical to allow for something similar in the Pilbara.</p>

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		<p>BHP also seeks confirmation of whether peak demand in this proposal refers to underlying peak demand or operational peak demand.</p> <p>Given the above, BHP would welcome additional discussion/clarity on this proposal with EPWA.</p>
4	Proposal 4: Individual capacity requirements	<p>BHP is generally aligned with the concept that users who service their demand from the NWIS but have not procured sufficient capacity to meet that demand should be required to fund any additional capacity required.</p> <p>However, BHP sees some potential gaps in the mechanism as proposed and seeks clarity from EPWA on the following:</p> <ul style="list-style-type: none"> ensuring the mechanism takes account of capacity procured outside of the user's network (e.g. pre-existing generation contracts supplying loads connected to the NWIS) and not just co-located generation; ensuring the mechanism allows for a user's storage devices (either owned or contracted) to offset the need for central capacity (i.e. the mechanism extends beyond generation assets alone); the proposal is silent as to the mechanism and/or obligations for managing in real time a load, or part of a load, which has been nominated as non-firm by a user. In addition, if that non-firm load is using capacity procured by others, BHP requests that EPWA confirms what, if any, mechanism is proposed for that load to share in part of the payment; and in relation to variable generation capacity, understanding whether the effective load carrying capability method is the most effective for the Pilbara and whether there are potentially alternative methods that can/should be considered.
5	Proposal 5: Capacity certification	<p>Further to BHP's comments on Proposal 4 (Individual Capacity Requirements), BHP seeks clarity on whether the mechanism allows for capacity procured from 3rd parties connected to BHP's internal network to be certified (e.g. pre-existing generation contracts supplying loads connected to BHP's uncovered network) and not just user-owned generation.</p> <p>Additionally, BHP would like to understand the intent behind a participant not being permitted to self-certify a generator unless it is unaffected by network constraints. As currently proposed the concept of "<i>network constraints</i>" is very broad and BHP is concerned that it could prevent <i>all</i> generators from self-certifying on the basis that it is likely that some network conditions will arise from time to time which will limit the output from a user's own generation.</p>
6	Proposal 6: Backup capacity procurement	<p>Given that a significant proportion of the demand of large users will be bilaterally contracted, BHP considers that a capacity procurement mechanism like this, which is likely to impose significant cost on participants (both in terms of administration and due to the lack of options for procuring backup capacity), may not be necessary immediately. BHP considers that this mechanism should only be implemented / triggered based on an obvious need for it.</p>
7	Proposal 7: ESS Framework	<p>BHP generally supports the proposal, but notes that the need for Contingency Reserve Lower service will depend on the frequency impact of the loss of load, and if there is sufficient high-output generation to offset the loss through droop response. As such, BHP would suggest that the trigger for the Contingency Reserve Lower service should also be supported by frequency impact studies rather than just the number of storage devices connected to the network.</p>
8	Proposal 8: ESS cost recovery	<p>BHP generally supports the causer-pays principle, but notes that the following items will require additional consideration to ensure equitable cost allocations:</p> <ul style="list-style-type: none"> as the proposed Regulation cost allocation is based on deviation from an "ideal" trajectory, if the start of interval position is based on day-

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		<p>ahead nominations there is a significant risk that real time measurements will be significantly different from what was nominated 24-36 hours previously, and this is unlikely to be reflective of <i>actual</i> Regulation usage;</p> <ul style="list-style-type: none"> the exemption (or other treatment) of facilities that are <i>providing</i> Regulation and Contingency services should be clarified; and while a runway method for Contingency services (Raise and Lower) is reasonable, the identification of a user's "Risk" will need to account for mitigating factors beyond just load-shedding, such as instances where BESS supports a user's generation or other forms of <i>internal</i> contingency reserve. <p>To ensure that the approach will not disadvantage larger users, BHP requests further information in respect of how the cost allocation will be managed in practice.</p> <p>BHP also has concerns as to how metering will be undertaken and whether it will accurately reflect each user's impact on ESS services as certain approaches may result in disproportionate ESS costs being applied to some users.</p>
9	Proposal 9: System strength	<p>BHP supports this proposal in principle; however, determining system strength requirements will require the use of complex computer models which may result in variations in modelling results between NSPs and the ISO. BHP suggests that the proposal could benefit from the addition of an independent review process under which NSPs seek a review of an ISO's decision/findings to manage such discrepancies should they arise.</p>
10	Proposal 10: Outage planning	<p>BHP supports the proposal in principle; however, BHP considers that the following items require further details and discussions with EPWA:</p> <ul style="list-style-type: none"> the concept of an outage impacting Power System Reliability needs to be further defined – for example, it may be acceptable for BHP to take a line out of service and accept a higher localised risk of unserved energy for a period of time, but it is not clear how that relates to the concept Power System Reliability; the Outage Planning List should only contain those items of equipment that have the potential to impact power system security and reliability, and the proposal should also provide a mechanism under which participants can challenge/seek a review of the inclusion of equipment where the participant can demonstrate no/minimal impact on power system security or reliability; the proposal appears focused only on network outages – BHP requests further clarity on generator/storage outages and whether there are any additional obligations / implications for outages of certified capacity; general compliance obligations and penalties should be clarified; further clarity is required in respect of protection of commercially sensitive information provided to the ISO in connection with outages. <p>BHP notes that the proposal discusses notifying ahead of time for <i>any</i> outages that are not on the Outage Planning List (even those not requiring approval), and notifying immediately following forced outages. BHP considers that this obligation is too broad, and considers that it would not be reasonable or necessary for Participants to notify the ISO of <i>any</i> outage. Instead, the notification of outages should be limited to outages that may impact Power System Security or Reliability.</p>
11	Proposal 11: Outage plan timing	<p>BHP requests further details from EPWA in respect of:</p> <ul style="list-style-type: none"> the ISO's proposed powers to withdraw approval of an outage;

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		<ul style="list-style-type: none"> the application of the outage process to uncovered networks; and the cost recovery arrangements for outage compensation, in order to understand cost implications for Participants <p>BHP would like to clarify the minimum timing for outage submissions – it is not clear whether “no later than a year in advance” is a minimum or maximum timeframe. If it is a requirement for at least 1 year’s notice, BHP does not consider this to be reasonable.</p> <p>In addition, BHP considers that the proposed framework should expressly permit a participant to make changes:</p> <ul style="list-style-type: none"> to a nominated outage window prior to that outage window being approved by the ISO, noting that outage windows can change many times prior to final approval and it would be unreasonable to have to submit a new outage request each time; and to unplanned outages, for example implementing outage extensions where repairs take longer than anticipated or where an outage that was previously approved is running late, to avoid a participant being required to request multiple outages and therefore minimise the administrative burden over outcomes which cannot be controlled.
12	Proposal 12: Balancing mechanism	<p>BHP is generally aligned with the move to a market-based mechanism for determining prices within the Pilbara network. However, given the scale of this change and risk to the operation of the Power System as a whole, BHP considers the activation of these mechanisms should be staged to minimise overall risk and cost (noting that it understands that EPWA shares this view).</p> <p>Whilst noting the proposed staged approach, BHP has found it difficult to understand the practical workings of this proposal in full (in particular in relation to the dispatch of self-contained networks that include generation/storage and connections to 3rd parties) and believes it would be of great benefit for EPWA to provide some worked examples to support a more detailed response. Some examples of specific queries include:</p> <ul style="list-style-type: none"> understanding specific obligations on participants once the day-ahead market has cleared, e.g. are there dispatch targets issued, or is it expected that participants try to meet adjusted “forecasts” issued by the ISO? understanding where the dispatch obligations apply (eg at the connection point), how multiple connection points for a facility are dealt with, the implications for 3rd party generators connected to an NSP’s network, any tolerance arrangements and the implications for non-dispatchable facilities (e.g. loads); understanding how the ISO would determine the actual supply/demand imbalance – if this is in real time, then this is the same as what the Regulation service is providing, whereas if it is over some future horizon then ISO would presumably need a mechanism for updating expected forecast demands from participants; understanding how the ISO would dispatch balancing facilities – e.g. every 30 minutes over a 30-minute interval or something else, and what happens if no balancing facilities are nominated (and any associated pricing arrangements, eg if the ISO issues directions); and understanding the interaction of the Outages proposal with the obligations around nominations and dispatch (eg where generators or networks connected to generators are on outage, how does this change the nomination obligations?)

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13	Proposal 14: Manual load shedding plan	BHP supports the proposal in principle, but requests additional details on the intent of the ISO <i>“taking account of network equipment serving both load and generation”</i> when determining the priority order.
14	Proposal 18: ISO fees	<p>BHP seeks clarification from EPWA in respect of the proposed <i>“gross approach”</i> for cost recovery in relation to the connection of uncovered networks to the NWIS. In particular, does the proposal intend to use meters at the connection point in this regard, or is it intended that injection and withdrawal will be measured via meters installed at individual generators and connection points on uncovered networks?</p> <p>Further clarification from EPWA is also sought on what staging or triggers will inform the evolution of ISO role as infrastructure is commissioned.</p>
15	Proposal 19: Confidential information	BHP considers that all participants should be carefully consulted regarding the information which is deemed to constitute <i>“public information”</i> . In particular, BHP is concerned that some of the examples of <i>“public information”</i> EPWA has provided could actually contain commercially sensitive data (e.g. demand forecasts).
16	Proposal 20: Compliance monitoring	BHP notes that in many circumstances there are circumstances outside of the reasonable control of participants that may affect their ability to maintain strict compliance with network rules. As such, BHP considers compliance monitoring arrangements should allow for reasonable tolerances where it is sensible to do so (e.g. dispatch compliance).
17	Proposal 21: Compliance enforcement	BHP notes that some traded quantities relate to un-controllable entities (e.g. non-dispatchable load) and seeks clarification from EPWA on how persistent failure to meet traded energy quantities would be treated in this case.
18	Proposal 22: NSP to NSP connection arrangements	<p>BHP agrees that connecting networks could place Power System Security or Power System Reliability at risk for other users.</p> <p>However, BHP notes that where existing networks which have been built to a standard other than that prescribed by the HTR, it may be impractical for that network (and for individual assets on the connecting network) to demonstrate compliance with the HTR, as they were not constructed to do so. Requiring these networks to comply with the HTR has the potential to create barriers to new connections, and so consideration should be given to the application of a more flexible standard (which would be as close to the HTR standard as possible) in instances where a connecting network (or network expansion) cannot meet the HTR standard but can demonstrate that it will not impact on Power System Security and Reliability.</p> <p>Additionally, BHP seeks clarity as to whether the proposal for self-contained networks to manage compliance the connection point is also intended to permit that network to self-manage any 3rd party generation/storage providers connected to the network. For example, if a network is constructed for sole use, but is supplied by a mixture of self-owned and contracted generation, is it intended that that network will still be defined as ‘self-contained’?</p>
19	Proposal 23: Preferential supply for transmission foundation	BHP agrees in principle with the concept of making allowance for foundation customers; however, it is unclear how this proposal would work in practice alongside the proposed day-ahead and balancing mechanisms. BHP considers that additional worked examples would be of benefit in understanding the intent and to aid in providing more detailed feedback.
20	Proposal 24: Self-contained networks	BHP agrees in principle with distinguishing private networks that are constructed for the purposes of supplying a private demand from other network infrastructure. However, BHP is unclear on how these proposed allowances and exemptions are intended to work in conjunction with the reforms proposed under the Access Paper. In particular, BHP is concerned that the definition of a ‘self-

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		<p>contained network' could be impacted by the proposals noted under the Access Paper – for example, Proposal 3, which proposes to grant a user the right to transfer electricity across another's network which could result in a network no longer being 'self contained'.</p> <p>BHP also requests EPWA confirm whether:</p> <ul style="list-style-type: none"> • having 3rd parties connected to the self-contained network (e.g. contracted generation/network) would impact the ability of a participant to manage compliance at the connection point; and • existing Excluded Networks would be exempt from the new 10MW load limit, or whether existing Excluded Networks that have more than 10MW of load will have their status revoked upon the introduction of this limit.
21	Proposal 25: Storage participation	<p>BHP agrees in principle with the adjustments to the PNR to better reflect storage devices; however, BHP seeks clarity on the registration requirements for a storage device (whether owned by BHP or others) if the storage device is part of a self-contained network that is participating and managing compliance at the connection point. In this circumstance, BHP considers that individual registration is unnecessary.</p>
22	Proposal 27: HTR Standards	<p>Similar to BHP's comments on Proposal 22 above, existing networks may not meet any new 'minimum' standard imposed by the HTR. Consideration should be given to the application of a more flexible standard (which would be as close to the HTR standard as possible) in instances where an existing network cannot meet the HTR standard but can demonstrate that it will not impact on Power System Security and Reliability.</p> <p>In addition, BHP notes that this proposal does not identify any requirements that participants must meet when making changes to an existing network once connected to the NWIS. BHP considers that it will be important to understand these potential requirements as part of the proposed HTR standards going forward.</p>
23	Other	<p>BHP understands that EPWA is considering staging the implementation of the proposals in the Network Rules Paper. BHP is supportive of such an approach, as this would reduce immediate concerns about the high level of additional complexity being imposed on existing operations.</p>