

To: Secretariat, Pilbara Energy Transition
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Rio Tinto Submission Evolution of the Pilbara Network Rules Consultation Paper of 4 February 2025

1 Summary

Thank you for the opportunity to provide submissions in response to the 4 February 2025 “*Evolution of the Pilbara Networks Rules*” Consultation Paper (**Consultation Paper**).

This submission is lodged on behalf of Pilbara Iron Pty Ltd (**Rio Tinto**).

While Rio Tinto recognises the strategic importance of a well-functioning regulatory framework to support economic growth, energy security and decarbonisation objectives in the Pilbara region, it believes certain aspects of the proposals warrant further consideration to ensure the framework is practical, proportionate and aligned with the interests of the various users of the NWIS.

Overall, Rio Tinto has a number of concerns as to the proposals in the Consultation Paper. Rio Tinto does not consider the increasing complexity and regulation proposed is consistent with the needs of current and likely future users of the NWIS. Rio Tinto is concerned that a rigorous cost/benefit analysis has not been undertaken which demonstrates that these changes will provide an overall benefit, either for users of the NWIS or for the economy of Western Australia.

The NWIS is a relatively small network with a small number of connections. The primary business of many of the participants in the NWIS is something other than electricity – i.e. the electricity operations of the participants are subsidiary to their core business (usually, but not always, the mining of iron ore).

It is not analogous to the system subject to the West Australian Wholesale Electricity Market (**WEM**) or the systems the subject of the National Electricity Market (**NEM**). These are large scale systems, supplying millions of customers. The primary business of the persons who are registered participants in those systems is electricity generation, transmission or retailing.

Increasing regulation inevitably imposes substantial costs, both direct costs of compliance and indirect costs of adversely affecting the efficiency with which systems operate. As shown in the WEM and the NEM, increasing regulation has a cascading effect, with regulation inevitably creating further complexity which in turn leads to further regulation. The overall result of this in a small system such as the NWIS will be a loss of economic benefits and international competitiveness.

Rio Tinto notes that section 119 of the *Electricity Industry Act* directs attention to the specific circumstances of the Pilbara region. Specifically section 119(3) refers to:

- (a) *the contribution of the Pilbara resources industry to the State’s economy;*
- (b) *the nature and scale of investment in the Pilbara resources industry;*

- (c) *the importance to the Pilbara resources industry of a secure and reliable electricity supply*

These criteria are specifically referred in section 4 of the *Electricity Industry (Pilbara Networks) Regulations 2021* plus the additional criteria that a decision maker must have regard to:

“the nature of electricity supply in the Pilbara region, including whether or not regulatory approaches used outside the Pilbara region are appropriate for the region, Pilbara network users and Pilbara networks;”

Rio Tinto submits that the Consultation Paper may not have taken these matters sufficiently into account in that it is imposing a system more suited to a network servicing a major population centre on a network which, to a significant extent, is designed to service customers of very different nature.

From Rio Tinto’s perspective, it operates a self-contained system which can operate independently of the NWIS. The sole consequence of the reforms will be to impose additional costs upon Rio Tinto for no apparent benefit. Rio Tinto is a major contributor to the economy of this region and Western Australia. Reforms which adversely affect Rio Tinto’s costs will inevitably negatively impact the broader economy. Given this context, from a broader policy perspective, reforms should not proceed unless there are clearly demonstrated benefits which will actually materialise (and not merely academic benefits of economic models which may or may not reflect reality). Further in undertaking any such analysis it is important not to understate adverse impacts upon existing operating projects and overstate the benefit of hypothetical, and in some cases theoretical, projects which may or may not be developed.

There are frequent references in the Consultation Paper to all participants benefiting from ISO functions and oversight. Rio Tinto is interested to understand what benefits it is considered Rio Tinto receives from the ISO functions and oversight, what additional benefit it will receive from the expanded ISO role and how this benefit is in any way proportionate to the substantial costs the contemplated proposals will entail.

2 Proposal 1 - Long Term Planning

Rio Tinto does not consider these changes to the planning processes are required and considers that the existing approach to planning is sufficient.

The long term planning of the type contemplated by the Consultation Paper will involve significant costs, which it is proposed be passed through to the participants in the NWIS.

As noted in the summary, Rio Tinto does not consider a decision should be made to commit to the costs in the absence of a rigorous cost/benefit analysis which clearly demonstrates a net benefit of the change to participants in the NWIS. In conducting that analysis, regard must be had to the costs these proposals will impose on existing participants and the proper valuation of benefits created for and in anticipation of hypothetical projects which may, or may not, eventuate.

From Rio Tinto’s perspective, the changes provide no benefit. Rio Tinto’s network is self-contained and self-sufficient and Rio Tinto undertakes its own long term planning. The factors relevant to this planning are Rio Tinto’s projections of demand for Rio Tinto’s iron ore operations. Further, Rio Tinto already considers it provides sufficient information to the ISO for it to manage planning for those parts of the NWIS subject to ISO control. No analysis has been provided to demonstrate the existing processes are insufficient.

The fact AEMO may employ such processes in the WEM and the NEM is not relevant. Those are fundamentally different systems.

Were the planning proposals to proceed (which as noted above Rio Tinto does not support), then the only information which should be sought from self-sufficient networks such as Rio Tinto is information as to potential flows across the connection point between the stand-alone network and the covered part of the NWIS. The developments within a self-sufficient network are confidential to the operator of that network.

The proposal to publish information obtained from the planning process is also of particular concern. Many of the major users in the Pilbara are competitors and not primarily in the electricity supply business but in other industries (specifically iron ore). For an entity to be forced to have its development plans published such that they can be accessed by other competitors places the entity at a significant competitive disadvantage. This is particularly the case with long term planning information.

Given the above, there need to be very strict protocols around the handling of commercially sensitive information and the ISO should not, in any circumstances, have a discretion to override a network user's legitimate claims and publish such information.

While not supportive of the changes, Rio Tinto notes that if such a mechanism were implemented, two yearly plans are unlikely to be sufficient. Material changes to system use are likely to occur within a two year period, particularly in the current and foreseeable environment where so many renewable projects are delayed or need to be rescoped and hydrogen projects are being abandoned due to the uneconomic nature of that fuel. Plans can change significantly over a short timeframe.

Rio Tinto is concerned as to whether the ISO, in its current form, would have the experience to undertake the additional work. Rio Tinto is concerned if the ISO undertakes this function it will be heavily reliant on expensive consultants, which consultants have no incentive to provide services at an efficient cost. These costs would be passed on to participants.

If the planning proposals were adopted, because of the potential risk of significant cost blowouts in the future in this area, there should be mechanisms in the PNR to assess the need for continuation of extensive work in this space and/or to wind back work if, as is certainly conceivable given current economic headwinds affecting energy transition projects, the various anticipated projects in the Pilbara do not eventuate and it becomes apparent the planning provisions are adding no value. This comment also applies to many of the other proposals in the Consultation Paper.

3 Proposal 2 – Network Reliability Standard

Rio Tinto notes that the proposal to establish a N-1 standard for the NWIS will be challenging as currently most of the NWIS is radial. Rio Tinto does not consider this proposal should be progressed in the absence of a thorough cost/benefit analysis which demonstrates the benefits of a N-1 standard outweigh the substantial costs of planning for this standard.

In any event, Rio Tinto does not consider this standard should apply to its network. Rio Tinto's network is a private self-sufficient network designed for the benefit of Rio Tinto's mining operations. Its current interaction with the remainder of the NWIS is to provide ESS services, which is a service provided to benefit the other networks. If it is considered that Rio Tinto must upgrade to a N-1 standard because it provides this service, then this cost should be borne by those parties benefiting from Rio Tinto's provision of services and not by Rio Tinto itself.

4 Proposal 3 – Capacity Forecasting

Rio Tinto assumes this proposal will not apply to self-sufficient networks, given those networks are responsible for ensuring their own requirements are met. Rio Tinto would be grateful for clarification as to how this proposal is intended to apply to self-sufficient networks (such as Rio Tinto's network).

5 Proposal 4 – Individual Capacity Requirements

Rio Tinto reserves its position on this proposal pending further information as to how it will apply to self-sufficient networks (such as Rio Tinto's network).

6 Proposal 5 – Capacity Certification

Rio Tinto reserves its position on this proposal pending further information as to how it will apply to self-sufficient networks (such as Rio Tinto's network) and the precise processes for certification.

7 Proposal 6 – Backup Capacity Procurement

Rio Tinto reserves its position on this proposal pending further information as to how it will apply to self-sufficient networks (such as Rio Tinto's network).

Rio Tinto notes that it does not manage its load/generation balance on a yearly basis. The process is far more dynamic than this. To date, Rio Tinto has been able to manage its capacity requirements without assistance from the ISO and does not see any reason this would change in the future. Indeed, Rio Tinto would be concerned at the prospect of someone purchasing electricity on its behalf when Rio Tinto is well able to arrange the electricity supplies it needs to efficiently service its mining operations.

8 Proposal 7 – ESS framework

Rio Tinto reserves its position on this proposal pending further information as to how it will apply to self-sufficient networks (such as Rio Tinto's network).

Rio Tinto notes that for the ISO to discharge the functions contemplated by proposal 7 this will require a substantial increase in the ISO's resources and is a major change in its role. The ISO will also need advanced weather monitoring systems to correctly identify threats to the NWIS.

9 Proposal 8 – ESS cost recovery

Rio Tinto reserves its position on this proposal pending further information as to how it will apply to self-sufficient networks (such as Rio Tinto's network).

Rio Tinto will be able to operate its network on a self-sufficient basis and therefore is unlikely to require acquisition of ESS services.

10 Proposal 9 – System Strength

Rio Tinto reserves its position on this proposal pending greater detail on how it will operate. However Rio Tinto's primary concern is to ensure sufficient consultation with affected networks as part of setting system strength requirements. Rio Tinto notes this appears to be contemplated by the proposal.

11 Proposal 10 – Outage Planning

Rio Tinto has significant concerns with these proposals. Rio Tinto's network is a self-sufficient network designed to support major iron ore operations. Rio Tinto needs the flexibility to manage outages of individual units on this network without interference by the ISO. Outages of electricity facilities on the network need to be co-ordinated with outages of mining facilities. Only Rio Tinto has the data available to undertake these assessments.

The only issue of relevance to the ISO is flows across the connection point between Rio Tinto's network and the remainder of the NWIS. Noting Rio Tinto's net flows across the connection point on a daily basis are generally zero, there is no need for the ISO to exercise control over outages on Rio Tinto's self-sufficient network.

At most, the ISO could curtail, or disconnect, flows across the connection point if necessary to preserve system security. Its sole control over the activities on Rio Tinto's network should be that required to ensure connection point compliance.

The proposals refer to a network operator being required to "include a plan to mitigate the reliability impact". Rio Tinto notes that on any network it will not always be possible to have procedures which mitigate reliability impacts. It depends on the nature of the outage. Further the risk of not undertaking an outage may outweigh the risk of the outage. Any risk based approach to network management needs to recognise that risks cannot be fully eliminated. There must be a proportionate management of risk. Given this, Rio Tinto considers the requirement on a network operator should be to reduce risk to as low as reasonably practicable.

12 Proposal 11 – Outage Plan timing

As noted above, Rio Tinto needs the ability to manage outages on its network free from interference. The outages must co-ordinate with the needs of the iron-ore operations. It is not appropriate that outages on Rio Tinto's network be driven by requirements of the NWIS, as Rio-Tinto's network is a self-sufficient network whose purpose is to support privately owned mining operations. It is not a network established to support, or which is reliant on, the NWIS.

The proposal to submit outages one year in advance is not practicable. While some outages may be set one year in advance, many are not. It depends on the needs of the iron-ore operations. The situation is fundamentally distinct from the WEM or the NEM, where the sole drivers of a participant's behaviour is their generating plant, storage system or network. Here, the management of such facilities is subordinate to other operational considerations. Changes in iron ore operations, including their own planned and unplanned outages, will drive the timing of electricity outages.

Equally once outage of plant is scheduled, changing the timing of an outage is not a simple matter. This is because outages of electricity generating facilities must be co-ordinated with the outage of iron ore facilities. This would require, assuming it were even contractually possible, the rescheduling of maintenance personnel for both sets of facilities and production. It may not be possible to co-ordinate a joint outage of electricity generation facilities and iron ore facilities again for many months.

It appears that the ISO could cancel an outage at any time and that compensation is only payable if an outage is cancelled one week in advance. As noted above, this is completely impracticable from Rio Tinto's perspective. In any event, Rio Tinto queries whether the ISO's budget would extend to the scale of losses which would be caused to Rio Tinto by rescheduling of an outage, particularly on short notice. The assumption that outages can be rescheduled without cost if more than one week's notice has been provided is without foundation. Rescheduling of an outage may be a major exercise, relying on highly skilled staff who move from site to site. If an outage date is missed, it may be considerable time before the required staff are available again.

Rio Tinto accepts there may be some outages more easily rescheduled than others and Rio Tinto itself does reschedule outages from time to time. However it is Rio Tinto that has access to the information, including costs, safety issues and outage personnel availability, to make an informed decision as to when an outage can be safely and economically rescheduled. The ISO should not have access to this information because it does not, and should not, have visibility as to Rio Tinto's iron ore operations.

13 Proposal 12 – Balancing Mechanism

Rio Tinto reserves its position on this proposal pending further information as to how it will operate. Rio Tinto notes its flow across the connection point between itself and Horizon

Power are forecast as zero and, consequently, the proposals create considerable complexity to address a balancing issue which is unlikely to exist.

14 Proposal 13 – Metering

Rio Tinto assumes metering requirements will not apply to metering equipment on Rio Tinto's self-sufficient network (given that it is not a covered network) and that the metering requirements will only apply to the connection point between that self-sufficient network and the Horizon Power network.

15 Proposal 14 – Manual Load Shedding

Rio Tinto considers a manual load shedding plan impractical.

Rio Tinto considers each network service provider should be responsible for implementing load shedding on its own network. A network service provider is best placed to carry out this role in respect of its own network as it is the entity which has the most up to date information relating to current and projected loads and generation performance and availability. In addition, network service providers operating self-contained networks, and even networks whose primary role is to service specific production facilities, will be in the best position to assess the economic consequences of the order in which they shed load.

Rio Tinto considers that the existing load shedding procedures work effectively. While those procedures may need modification over time as more renewable generation connects to the networks, this does not justify the replacement of the existing procedures with manual load shedding procedures which are likely to be incapable of effective application.

A fundamental principle of any equitable load shedding procedure is that the entity whose conduct has necessitated the shedding of load should be curtailed in priority to all other users. Users of the system should not be penalised for the failings of other users.

16 Proposal 15 – ISO Functions

Rio Tinto does not consider the January 2027 timeline a realistic date for the ISO to take on control room functions for the NWIS. In order to implement a properly working control room, the ISO will need to implement new procedures, design, purchase and commission systems, establish effective cyber-security protection and recruit the required personnel.

Rio Tinto does not consider this step should be taken in the absence of a rigorous cost/benefit analysis demonstrating the ISO taking on these functions generates a net benefit for all users of the NWIS. Only once this analysis has been undertaken and shown to generate a net benefit should consideration be given to the appropriate timeframe. The consultation paper assumes a control room is of net benefit without any quantitative analysis to demonstrate this.

Further a realistic date for the establishment of any such control room should be set having regard to both (1) when the new projects which would justify such a system are actually likely to be commissioned and (2) reasonably foreseeable issues and delays which will impact setting up a control room.

Rio Tinto notes it already has, and will continue to have, its own control room to administer the assets on its network. The proposal creates no benefit to Rio Tinto and will instead impose the additional cost of duplicated effort. Rio Tinto suspects the other NSPs will also need to continue to maintain their own control rooms.

Given the limited number of other current (and likely future) users of the NWIS, Rio Tinto queries how the proposal could create a net benefit to users generally.

17 Proposal 16 – ISO Board

Rio Tinto agrees that Directors on the ISO Board should meet certain selection criteria, including requisite skill requirements, but does not support the position that “all” directors must be independent of participants. Rio Tinto further does not agree that all appointments should be by the Minister for Energy, especially when ISO was formed to be independent of the State Government.

It is Rio Tinto's view that the current Board composition is adequate and there is already scope in the existing Constitution for new NSPs to become members and appoint a director to the ISO Board.

18 Proposal 17 – ISO Budget

Rio Tinto notes its concerns set out above that the proposals in the Consultation Paper will involve significant costs and the benefit of incurring these costs has not been demonstrated. Participants in the NWIS will be the parties required to bear these costs and proposals should only proceed if there is a demonstrated benefit for participants (and actual participants not hypothetical ones).

In terms of budget setting, Rio Tinto considers it is critical that networks and users have input into the budget to ensure expenditure is to the benefit of participants. Unlike the NEM or WEM, there is no broader group of persons who are not participants who benefit from the ISO's expenditure. Based on its observations of other systems, Rio Tinto is concerned at the potential for expenditure to escalate despite the absence of businesses cases supporting that expenditure.

Any review and decision made by the ERA should only be undertaken after having provided participants with the opportunity to make submissions as to whether expenditure is efficient and prudent. Participants are in a far better position to assess if expenditure is of value to them, than is the ISO.

In addition, Rio Tinto submits that the ISO board should not be permitted to undertake expenditure outside of business as usual functions unless this has been approved by participants. In particular, participants should not be required to reimburse the costs of consultant spend on hypothetical proposals which participants may not see as creating any benefit for them.

To assist with management of expenditure, we recommend consideration be given to whether technical advisory committees could be established, constituted of representatives of the network service providers, to advise the ISO board on the need for ISO to undertake work outside business as usual functions.

19 Proposal 18 – ISO Fees

Rio Tinto agrees the current mechanism of allocating costs equally between the three networks is unfair and will become more unfair still if ISO and other regulatory costs are expanded in the manner envisaged by the Consultation Paper.

Proposal 18 appears to contemplate that all participants who inject or withdraw electricity from any network that forms part of the NWIS will pay fees levied based on the sum of gross injections and withdrawals. For a self-sufficient network such as Rio Tinto's network, this proposal is extremely unfair. Rio Tinto's net flow across the connection point between Rio Tinto's network and the rest of the NWIS is, on a daily basis, usually zero and in any event rarely varies from a zero net flow.

If this proposal were to proceed it would mean that Rio Tinto, despite operating on the principle of zero net flow at its interconnection points on the NWIS and despite deriving no (or at best limited) benefit from the NWIS (given Rio Tinto operates a self contained and self-sufficient network), will be paying a disproportionate share of fees and subsidising other

users (some of whom are Rio Tinto's competitors in the iron ore industry). The unfairness is magnified by the fact the gross injections and withdrawals will be measured not at the connection point but at individual points on the integrated mining network. Further complexity and costs will then follow from the proposal to create additional metering and balancing points.

The Consultation Paper provides a net energy volume based allocation would provide no allocation to participants with balance portfolios "*even though they do benefit from ISO activities*". Rio Tinto does not benefit from ISO activities – it operates a self-contained and self-sufficient network which does not need the ISO. The reverse is true – the NWIS benefits from Rio Tinto, as the provider of ESS Services, which services are not, at the current time, otherwise readily available. A proposal that Rio Tinto, who represents 60-70% of generation in the NWIS, must now pay for 60-70% of all costs for a system which offers no benefit to Rio Tinto has no justification, whether in equity or on an economic basis.

The Consultation Paper refers to a gross volume-based approach being used in many other systems. The NWIS is not like other systems. It includes major self-sufficient networks which have their own load and generation to balance each other out. This is not a characteristic of systems servicing major population centres.

Having regard to the above, Rio Tinto considers more appropriate mechanisms would be:

- to base charges on net flows at the connection points between self-sufficient networks and the covered networks; or
- for charges to be based on capacity at that connection points plus some allowance for actual energy flows.

20 Proposal 19 – Confidential Information

Rio Tinto recognises the need noted in the Consultation Paper to ensure an appropriate balance between transparency and preservation of the confidentiality of commercially sensitive information.

Rio Tinto considers that, in determining this balance, it is important to recognise that outage schedules, demand forecasts, generation schedules and capacity figures as they relate to integrated mining networks may constitute commercially sensitive information. Such information will also provide, by extension, information as to projected mining production schedules, which information is commercially sensitive and would not normally be made available to competitors.

Rio Tinto submits that in designing the confidentiality regime proper regard should be given to the fact that the utilisation and capacity of uncovered networks can be commercially sensitive and appropriate protection should be given to such information.

21 Proposal 20 – Compliance monitoring

Rio Tinto queries whether these expanded compliance functions will create a net benefit given the very small volumes of energy which will be traded/settled through the balancing regime. Compliance functions should only be expanded if net benefits are demonstrated. Currently the Consultation Paper appears to assume such benefits without analysis.

22 Proposal 20 – NSP to NSP Connection arrangements

To the extent the intent of this proposal is that the ISO and not networks will manage the process for new connections in substitution for the networks themselves, Rio Tinto does not agree with it. NSPs need to maintain a measure of control over the terms upon which their networks become interconnected. In particular, the commercial arrangements should be determined by negotiation between the NSPs and a NSP must (on a reasonable basis) be

satisfied as to the suitability of a connection at a technical level. Ultimately an NSP, not the ISO, is responsible to users of its network for the integrity of its network.

The ISO should have no role in relation to connections to uncovered networks. Rio Tinto's integrated network is uncovered because its primary purpose is to support its integrated mining operations. Rio Tinto would need to be satisfied that any new connections to its network will not adversely affect its operations. It would be best placed to assess such matters.

23 Proposal 24 – Self-Contained Networks

Rio Tinto is supportive of this proposal. In respect of the definition of Excluded Networks, Rio Tinto submits the calculations should be calculated based on net flows not gross flows, since net flows are a more actual representation of utilisation of a connection point. Rio Tinto notes its flows across its connection point with Horizon Power are usually a zero net transfer. In addition, the provision of ESS should not, of itself, exclude classification as a self-contained network as long as connection point compliance is demonstrated. This will assist encourage the provision of ESS by self-contained networks who may otherwise be discouraged from providing those services by the increased complexity and cost of the regulatory regime.

24 Proposal 25 – Storage Participation

Rio Tinto is generally supportive of this proposal. However it considers facilities on self-contained networks that are not being used to provide ESS should not be required to register.

25 Proposal 27 – HTR Standards

Rio Tinto does not have a concern with this proposal if it is limited to covered networks. Self-contained networks will need to be able to set their own technical standard to preserve the integrity of their integrated operations.

In respect of the HTR-specific issues and proposals set out on pages 50-55, Rio Tinto reserves its position on these proposals until more detail is provided.

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