



3 November 2022

**Ms Anna Collyer
Chair
Australian Energy Market Commission**

Submitted via the AEMC website

Dear Ms Collyer,

Transmission Planning and Investment Review – Stage 3 draft report

A proudly Australian company with balance sheet strength, Fortescue Metals Group (Fortescue) is a global leader in large-scale, ultra-efficient and highly complex developments with a proven track record in developing and operating assets in remote and isolated locations. Fortescue has a strong focus on decarbonisation, evidenced by its industry leading target to achieve real-zero across our mining operations by 2030.

Through its subsidiary, Fortescue Future Industries (FFI), we are establishing a global portfolio of renewable energy, green hydrogen production and manufacturing projects and operations that will position us at the forefront of the global green hydrogen industry. The National Energy Market (NEM) is key to our plans to develop our portfolio, with a number of project opportunities already under development.

FFI welcomes the opportunity to provide comment on the Transmission and Planning Investment Review's stage 3 draft report. FFI supports the AEMC in its intents to ensure that the regulatory frameworks that govern the necessary rollout of significant new transmission developments occur at pace and with rigor.

Ensuring the AEMC objective of timely transmission developments through this review process is critical to industry, governments and regulators intent to facilitate a smooth and timely replacement of the exiting fossil fuel fleet in the NEM. For a sustainable, export-scale green hydrogen industry to be built in Australia, realising the Governments plans to become a renewable energy superpower, transmission developments must move at pace. This will unlock access to vast quantities of green, cheap energy for consumers and subsequently the green hydrogen industry.

Please find attached responses to the questions raised in the consultation paper. Thank you for the opportunity to comment on this consultation. If you would like to discuss any of the issues raised in this submission or to arrange a briefing, please contact tom.parkinson@fmgl.com.au or myself on the below details.



Yours sincerely

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FORTESCUE FUTURE INDUSTRIES



Question 1: The need for timely delivery of major transmission projects to facilitate the transition to net zero

<p>Do you agree with the Commission’s view that improvements to the economic assessment process should focus on facilitating the timely delivery of major transmission projects, given their role in providing benefits to consumers and facilitating the energy transition?</p>	<p>Timeliness is critical as we progress through the energy transition and try to accelerate. However, the focus on improving timeliness should not mean that energy cost, capital efficiency and social license risks are forgotten. In fact, lack of early-stage transparency on energy cost and capital efficiency will erode trust and undermine future social license and industry endorsement. Deferring engagement and limiting input throughout the process will likely result in more drawn-out challenges and delays.</p>
<p>What do you think would be a material reduction in time for undertaking the economic assessment process?</p>	<p>Due to the rate of change, acceleration of 12 months or more is critical: the faster the better. However, the improvement in timeliness needs to account for proper engagement to reduce the risk of legal challenges and lack of social license.</p>

Question 2: Counterfactual economic assessment process

<p>Do you agree that this is an accurate characterisation of how the counterfactual economic assessment process can be expected to operate in future? If not, what changes would make the counterfactual more accurate?</p>	<p>The description as it stands seems valid - however, there is a need to be careful of some things which may also influence future options:</p> <ul style="list-style-type: none"> • It is noted that "AEMO considers potential options drawn from RITs in progress, the joint planning process, and may identify others through its ISP modelling. Given the scope of the Integrated System Plan (ISP), the number / granularity of options AEMO can practically consider is limited". Over time, independent RITs will reduce as the TNSPs will naturally rely more heavily on the ISP. At its core the ISP is an optimisation model which (within the assumed limits) minimises cost, this will make progressing non-ISP RITs challenging. Identifying new options through the ISP modelling is challenging due to the approach taken in sourcing new options and degree of consultation required through the current ISP framework possibly constraining the opportunity for rapid innovation. This limits the options to those identified by joint planning. The reliance on joint planning risks being perceived as "behind closed doors", reducing trust in the process and increasing public perception that the stakeholder engagement is tokenistic since the decisions have already been made, at least in terms of the viable options. • The joint planning frequently focuses on fixing current issues or replacing current assets. Strategic developments that consider alternative futures can be challenging to identify and may require inputs from non-incumbent participants who would not be included in joint planning exercises. • In essence, the current model is not sustainable since the identification of options is expected to diminish at a time when there is a need for increased innovation. • It is also worth noting that the optimisation model used in the ISP is a cost-minimisation tool. This does not necessarily reflect the market behaviours accurately since for many of the market participants there is little drive to minimise market cost. This also means that the modelled outcomes are frequently different to the likely market
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	<p>behaviours (i.e. scarcity, black swan events, etc. all have a major impact on the market which are not currently captured). This also makes it hard to identify value outside the current ISP planning. The rest of the market is optimised around the asset - so changing the asset tends to reduce value. This results in few opportunities for alternative options to be identified as practical alternatives. Least cost optimisation is a weak indicator of market drivers and so this degree of reliance on least cost optimisation is not necessarily useful. Additional tests and analysis to test the ISP outcomes would be beneficial to increase the robustness of the analysis.</p>
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Question 3: Strawperson 1

<p>Do you agree with our assessment of the time savings of this strawperson option 1 regarding the delivery of ISP projects, relative to the counterfactual?</p>	<p>Not necessarily. Allowing more time to engage for social license is likely to help - but the idea that "all credible options" are identified before the engagement shows that the engagement may not be genuine. This may result in a lack of trust, loss of social license and more challenges – which have not been planned for in the proposed timeline. i.e. The time savings are achieved by removal of a feedback loop, which may occur anyway, resulting in an extension of time rather than a time saving.</p>
<p>Do you have any suggestions on how this option 1 could be specified differently, to facilitate the timely delivery of major transmission projects while maintaining an appropriate level of rigour?</p>	<p>It comes back to the framing of a problem and earlier engagement in the process. If the problem is clearly understood and there is early and transparent engagement on options to deliver against the problem definition, it is likely that there will be more trust in the solutions. These solutions would then be tested in the ISP before the project is actionable - however, the costs estimates need to be committed or at least tightly controlled before the analysis can proceed, otherwise there is a risk that non-optimal solutions may be selected or that projects progressively make decisions (e.g. highly conservative contingency or risk allocation) that add cost to the project. The increased clarity on early engagement from the revised Strawperson 3 discussed below better addresses these requirements.</p>
<p>Do you think that this option 1 should be taken forward?</p>	<p>Not as it stands. There is still a break in accountability for options selection and project design and delivery. This lacks early transparency, risks later challenges and limits chance for realised time savings. It also has no mechanism to deliver additional value as part of the option selection process.</p>



Question 4: Strawperson 2

<p>Do you agree with our assessment of the time savings of this strawperson option 2 regarding the delivery of ISP projects, relative to the counterfactual?</p>	<p>The statement that "<i>The Commission understands that in principle, the granular options considered by TNSPs can each create different benefits</i>" goes to the heart of the concerns with this model. As with Strawperson 1, the options are not transparently identified early, likely leading to more challenges and delays. By the time that the more detailed option selection is undertaken, the benefits will be defined by the solution selected in the ISP optimal development path. To capture the benefits, the selected solutions will need to be fundamentally similar - and therefore there is little real space for genuine optioneering. This is similar to the current issues, except that in Strawperson 2 the benefits are assessed centrally, and so alternative solutions cannot show a different/broader benefit - nor can they practically show a cheaper outcome that fails to meet all the benefits/requirements from the ISP.</p> <p>As for the timeliness, the acceleration seems to come from the later stages with no real reason for that acceleration, which does not provide confidence that the time savings will be realised.</p>
<p>Do you have any suggestions on how this option 2 could be specified differently, to facilitate the timely delivery of major transmission projects while maintaining an appropriate level of rigour?</p>	<p>It comes back to the framing of a problem and earlier engagement in the process. If the problem is clearly understood and there is early and transparent engagement on options to deliver against the problem definition, it is likely that there will be more trust in the solutions. These solutions would then be tested in the ISP before the project is actionable - however, the costs estimates need to be committed or at least tightly controlled before the analysis can proceed, otherwise there is a risk that non-optimal solutions may be selected or that projects progressively make decisions (e.g. highly conservative contingency or risk allocation) that add cost to the project.</p> <p>Having the ability to avoid re-prosecuting the benefits case only works if the ISP solution selected shows a positive cost benefit analysis and is then the <i>same</i> solution selected through the TNSP RIT analysis. Either way, the solution will not have been adequately consulted upon before this is locked in and so there is inherent risk of additional delays.</p>
<p>Do you think that this option 2 should be taken forward?</p>	<p>Not as it stands. There is still a break in accountability for options selection and project design and delivery. This lacks early transparency and limits chance for time savings. It also has no mechanism to deliver additional value as part of the option selection process and is in fact quite constrained - more than the counterfactual.</p>



Question 5: Strawperson 3

<p>Do you agree with our assessment of the time savings of this Strawperson option 3 regarding the delivery of ISP projects, relative to the counterfactual??</p>	<p>This model relies on a higher frequency ISP cycle. If the ISP is still intended to undergo extensive consultation for all inputs this may be impractical. Conversely, if there is an acceptance that the ISPs may need to be updated in response to feedback over time then this may be an attractive solution. In fact, a model which tries to avoid single large information drops, but instead accommodates and adopts new assumptions as new information arises may result in an ISP that follows a continuous delivery model where new major releases occur as a major assumption changes that would notably affect the outcomes (or some maximum time between major releases has elapsed). Without major structural change on the ISP process, the assumption of doubling the speed of the ISP is highly uncertain and risky.</p> <p>Note: The proposal for Strawperson 3 still has a number of iterations, but also seems to assume earlier identification of options (and achieves a 2-year time saving by earlier engagement on possible options). This is good but relies on early identification of opportunities – which may require more adaptation.</p>
<p>Do you have any suggestions on how this option 3 could be specified differently, to facilitate the timely delivery of major transmission projects while maintaining an appropriate level of rigour?</p>	<p>Strawperson 3 is a major change and while it presents a great opportunity for improvement, stakeholders may have concerns on the viability of the approach. The provided description left a number of uncertainties and the following attempts to provide a framework for how it might practically be achieved. An indicative process flow is also provided in Figure 1 below.</p> <ol style="list-style-type: none"> 1. Establish the market need - frame this as a service or series of services that could be bid upon by prospective developers. The services should be independent such that a solution could claim to meet one, some or all services being requested. This means that beyond a certain horizon the ISP will not necessarily identify a full plan or solution - but would recognise that the addition of capacity or energy at a certain point in the system would provide benefit and for the right price may provide a net value. 2. Go to market and ask for high-level solutions. This will be a pure service definition: no cost or benefit will be associated with the request. Some of these options may bring additional (unasked for) value. It would be expected that the proponents would share some information publicly to commence engagement, but the high-level options would be collated and published to help determine the social risk of the project. 3. Model these solutions to establish benefit. This would be done against the past ISP assumptions and may be as part of the development of the next ISP update. Solutions may be aggregated to create solution suites (i.e. combinations that meet the full range of services). 4. Test the cost against benefits for the solution (suites) – to test the investment case. If one or more of the options have a positive cost-benefit analysis they would be carried forward into the next process. 5. Get binding quotes (including permission to share the cost) - this may need to be at least partially funded since it will involve a fair degree of work and engineering that may be at risk for the project proponent. Select a preferred solution considering cost, risk and any other elements that are considered relevant in the eyes of the AEMC.

	<ol style="list-style-type: none"> 6. Test the social acceptance more extensively - including sharing other solutions that were considered. 7. ISP inclusion - publishing options, quotes, final cost(s) and benefits. For this to be effective deep and detailed engagement and consultation will be needed on the benefits to ensure that the benefits are properly captured. This should involve proponents of the particular solutions, governments, generators, retailers, large and small customers. Note that the numerical benefit analysis should not be shared until after the binding quotes are provided.
<p>Do you think that this option 3 should be taken forward?</p>	<p>With the modified outcomes to both the ISP process and the framing of the problem and consequential solution identification, then yes.</p> <p>Note: AEMO may or may not be the best placed organisation to run this process. It may be that the operational elements of AEMO (even including the nearer term ESOO and GSOO) need to be separated from the longer-term planning to allow for efficient and unbiased analysis of potential future outcomes.</p>

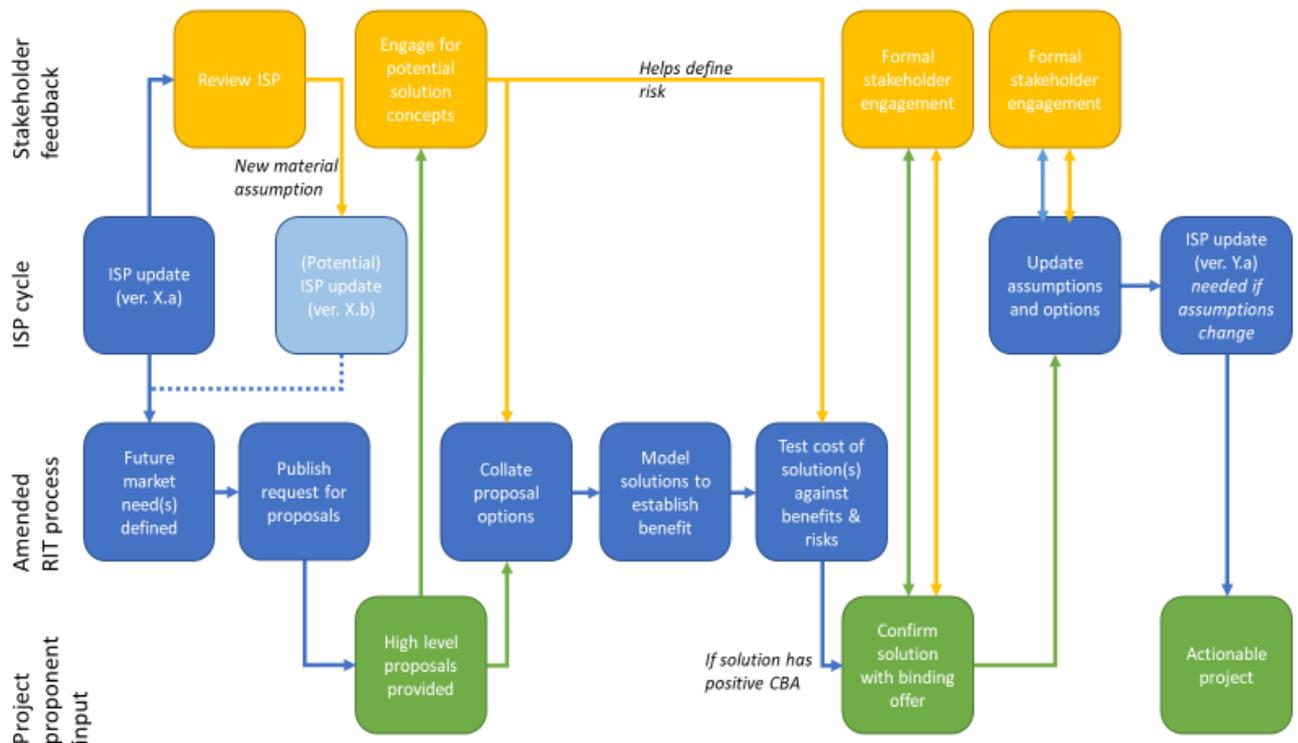


Figure 1. Demonstration of possible process to deliver on the adapted Strawperson 3.



Question 6: Assessment of Strawperson models

<p>Do you agree with our initial assessment of the options based on the assessment criteria?</p>	<p>Strawperson 1 is probably overestimated in terms of both benefits to timeliness and rigour. The analysis of Strawperson 2 and Strawperson 3 are well balanced. The issues raised in needing clarity for Strawperson 3 are attempted to be addressed above.</p>
<p>Do you think there are alternative Strawperson options that should be considered in this Review? This may include alternative specifications and/or combinations of the options presented in this report. If so, how would your proposed alternative better contribute to timeliness and rigour in the delivery of major transmission projects?</p>	<p>See question 5b. This is really a refinement of Strawperson 3 - but tries to resolve some of the uncertainty and ambiguity by putting a proposed process in place. It is understood that more effort is needed to flesh this out, but it provides a possible approach that could offer substantial value, timeliness and transparency.</p>
<p>Do you think there is potential for staging of the Strawperson options, e.g. implement one option in the short term and another option in the long term?</p>	<p>Yes, but it is not recommended. There is a risk that there will be a race (or even worse a slowdown) to try to fit into the most beneficial regime for a potential project. It is recommended that a path forward is selected and the industry can work towards achieving that outcome.</p>
<p>Do you think the counterfactual is the option that best achieves an appropriate balance between timeliness and rigour? If so, why?</p>	<p>No. It is too slow and the rigour is only there on face value. There is strong testing of market benefits, but even these are largely anchored by the standing ISP assumptions which are frequently critiqued. There is little ability to test the cost of solution in the current process and so most of the effort to manage cost goes into trying to minimise the benefit.</p> <p>Currently there is also the opportunity to define the problem such that there are few viable solutions to the regulated investment test. This means that alternative options may be locked out at times. This limiting of the solution space can therefore allow the cost of the few solution options to be matched to the benefit - limiting the cost-benefit to consumers. The issue here isn't whether the TNSPs intent is questionable, but the system rewards certain outcomes and drives behaviours that are not necessarily in the customers best interest. This is one of the reasons that RITs are so closely scrutinised.</p>



Question 7: Notifying the AER

<p>Who should notify the AER about the existence of a concessional finance arrangement?</p>	<p>The concessional finance should be part of the cost benefit analysis under the revised Strawperson 3 model. The quotes should be provided as direct costs. The concessional financing can be established and/or applied after the quotes are received. This would apply equally to all respondents to a particular service and would be the most balanced way to apply the arrangements without biasing the analysis. Therefore, it is suitable that any concessional financing is both agreed prior to the publication of the ISP and clearly outlined.</p>
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Question 8: Information requirements

<p>What types of information about the concessional finance arrangement should be provided to the AER and by whom?</p>	<p>This really comes back to the assumptions that were used (and previously agreed) within the ISP. The concessional finance provider must provide the ISP producer (i.e. AEMO) with the relevant assumptions to use, which should in turn be communicated to the AER (and possibly even developed in collaboration between the AER, AEMO and the relevant government).</p>
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Question 9: Financier's intent

<p>How should the AER determine the financier's intent?</p>	<p>While the high-level intent should be part of the working assumptions used to develop the ISP, if more details are needed, the concessional financier (i.e. government) is the only body who can truly answer those questions. If they go deeper than the ISP producer can answer, it is not appropriate to ask the potential beneficiary of the intent, it must come from the provider of the finance.</p>
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Question 10: Regulatory treatment of concessional finance

<p>How should the AER determine the amount of the concessional finance to be treated as a benefit to consumers and/or TNSPs? How should this amount be treated in the revenue determination process?</p>	<p>It is assumed that the concessional financier will have an intent in mind when proposing to offer concessional financing. For example, a development to deliver increased capacity may be supported to provide consumers and the economy with protection from unlikely events, but not impact their energy bills. Accordingly, the concessional finance should be treated consistently with the intent of the financier.</p>
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The following were not asked as formal questions but were drawn from the text.

Question 11: Risk of delayed projects

<p>Is the Timely Delivery Incentive (TDI) an appropriate response to the risk of delay?</p>	<p>Contestability is a preferred option. It is noted that the Commission does not consider that contestability is a proportional response to the risk of delayed construction, but notes that it is being considered in a separate stream. Given the alternative proposal for Strawperson 3 above, which requires contestability to work, and the flow on benefits in terms of both cost and timing, we believe that this is a strategic solution that must be considered as part of the broader reform. Moreover, it is expected that the binding offers would include timelines and consequential penalties, reducing the risk of delays.</p> <p>If operational contestability was not introduced, there would need to be a mechanism where the TNSP provides a quote for operation. If there was a concern about monopoly power being used to influence operational costs some "reasonable cost" mechanism could be devised to ensure efficiency of operational costs or the TNSP could be barred from submitting bids at all, meaning that:</p> <ul style="list-style-type: none"> • at worst they are impartial to the outcome • at best they are incentivised to offer low operational costs to support a new addition to their asset base <p>These details can all be addressed through the formal development of the process and procedures.</p>
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Question 12: Risk allowances

<p>Are current risk management processes suitable?</p>	<p>Given the proposed approach of trying to determine competitive tension earlier in the process to help select the optimal solution, it becomes challenging to continue the status quo of ex-ante and ex-post reviews. If the ex-post adjustments mean that the project would not have been considered preferable (or even viable) then the efficient investment may have been subverted - which is not in the interest of the Australian economy.</p> <p>It is recognised that such risks from undetermined routes or supply-chain issues are relevant and need to be accounted for. It is proposed that the AER is given the power to assess if a situation has changed materially. If a poor assumption was made - this should be at the cost of the proponent. However, cost relief should be provided if the external situation has changed beyond what may be reasonably expected. Equally, the AER should be engaged in assessing the submissions and inadequate cost allowances should also be flagged as risks that need consideration in the ISP - and sent back to proponents for amendment if considered appropriate.</p>
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Question 13: Applicability to wider benefits

<p>Should this reform consider wider benefits?</p>	<p>While it would be preferable for wider benefits to be assessed, the changes proposed are independent of the benefits identified. The required services for the system and the benefits (whatever they are determined to be) can be assessed regardless of what those benefits might be.</p> <p>While the inclusion of additional benefits is important, it can be separated from this particular reform and should not hold up this process.</p>
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