



Coordination of generation and transmission investment – options paper: stakeholder feedback template

The template below has been developed to assist stakeholders in providing their feedback on the questions posed in this paper and any other issues that they would like to provide feedback on. The AEMC encourages stakeholders to use this template to assist it to consider the views expressed by stakeholders on each issue. Stakeholders should not feel obliged to answer each question, but rather address those issues of particular interest or concern. Further context for the questions can be found in the options paper.

Organisation:

Contact name:

Contact details (email / phone):

Questions		Feedback
Chapter 4 – Making the ISP an actionable strategic plan		
Question 1: Questions arising from the ISP - The paper considers a number of questions about the role and regulatory implications of the ISP, including the links between the ISP and transmission investment decisions.		
A)	Are there any questions about the role and regulatory implications of the ISP that are not set out in the options paper?	It would also be valuable to the ISP modelling to analyse HVDC systems as an alternative to upgrades, new transmissions and augmentations of existing systems. We understand that HVDC systems have been suggested as an option for the link to Tasmania, however DC systems may be an efficient alternative in other areas of the NEM and its cost and benefits should at least be considered in multiple use cases across the NEM. Additionally, VPP, demand management and micro/mini-grids will become significant elements of the NEM in one form or another regulatory constraints and future opportunities. It's role and effects, on the system regulatory constraints and future opportunities have not been considered. A future analysis of the ISP should take this into account.
B)	Is our approach to making the ISP actionable (i.e. strengthening the link between the ISP and investment decisions) appropriate?	Palisade supports the concept of an ISP to support investment decisions in the NEM. To achieve an efficient outcome, the ISP should focus more on transparency and provision of information to support and guide investment decision (information that should be made available is described under question 15). This would add to transparency and provide incentives to invest in the most

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		<p>efficient areas.</p> <p>Additional focus of future ISPs should include:</p> <ul style="list-style-type: none"> - Developing an equal playing field for network and non-network options: network options are easier justified as its finance is guarantee through tariffs by consumers. Non-network options have a harder time to justify investment to banks. - For completeness and better public information, the RIT-T CBA may distinguish between public policy objectives and the real need of consumers. - Scope and quantification of benefits as part of the RIT-T CBA - It might be worth looking at a range of different concepts, i.e. less integrated grid - Greater focus on market design principles
Question 2: Interaction between the ISP and government policies		
A)	The ISP will necessarily have to take into account government environmental and industry policies in modelling ISP scenarios. Do stakeholders consider it would be helpful for the COAG Energy Council to provide formal advice to AEMO as to what government policies or scenarios should be modelled in the ISP?	<p>The effects of environmental and industry policies on ISP modelling outcomes should be considered through industry consultations, rather than determined by COAG Energy Council. The view of industry effected stakeholders should be considered when determining modelling assumptions (they have skin in the game). Assumptions should be tested and re-tested with relevant stakeholders on a regular basis to stay informed of changes in the industry and policy environment as well as to stay on top of new knowledge and innovations as it develops.</p>
B)	Are there other ways in which government policies that impact on the NEM could be incorporated as modelled scenarios in the ISP?	<p>Yes. Another option would be to consider a different NEM approach to stakeholders for consultation. This view would challenge the status quo by suggesting new approaches including for example:</p> <ul style="list-style-type: none"> - Consideration of impacts of government policies that are currently proposed, as well as focusing on policies that are already in place. For example, the election promise by the Victorian government to introduce a large solar and battery scheme could have significant impacts on the whole system - Considering different transmission technologies, i.e HVDC lines, - Consider demand management, VPP and micro/mini-grid possibilities that will eventuate in the NEM - Introduction of large-scale batteries into the system as a replacement option to transmission upgrades

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		- Analysing a case for energy efficiency rather than cost efficiency as the main driver, considering new concepts such as exergy, transactive energy and the implications of VPP on the wholesale market and the structure of the NEM
Question 3: “Strategic, national” investments and regional investments		
A)	It is proposed that the ISP only focusses on “strategic, national” investments. Do stakeholders consider this is appropriate?	
B)	If so, how could this threshold be defined, or what criteria could be used to define it?	
Question 4: Risk allocation		
A)	The paper canvasses a number of options for making the ISP actionable. How may the existing risk allocation for consumers, TNSPs and generators change under the proposed options?	Palisade agrees with the AEMC’s approach of considering risk allocation and would add that risk mitigation should also be considered in terms of the cost and effort required to mitigate these risks. For example, risks to generators that exist now, based on the current TNSP framework could be reduced by moving towards the right side of the Table 4.2, which includes a closer link between the TNSP and AEMO. This will allow a broader system wide perspective when investment decisions for new transmission is considered. Risks related to the location of generators and subsequent potential of high congestion in the network can be mitigated with the provision of transparent data to estimate the impact of a proposed generation project on congestion and subsequent system strength. A more coordinated approach to determine the location of generation will in turn reduce or augment the need for new transmission. There is a risk of tension between merchant assets and regulated assets.
B)	What other regulatory changes may be required in order to mitigate against changes in the risk allocation?	
Question 5: Level of consultation required under each of the options for how the ISP could be made actionable		
A)	What do stakeholders think about the level of consultation that would be required under each of the options considered for how to make the ISP an actionable strategic plan?	Palisade agrees that as AEMO’s responsibility for the stages of the investment process increases, the degree of consultation should increase. Stakeholder confidence will be improved by providing transparency in the planning process early on. An additional aspect relates to the implementation of stakeholder’s view. It is not enough to consult purely on the basis to minimise the cost of engineering solutions. Views should also include the underlying assumptions when

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		deciding on costs and benefits that will ultimately determine a RIT-T investment decision. These benefits may not be purely cost-driven from an engineering perspective but can be societal or network wide benefits.
B)	Should there be more consultation for options that fall to the right-hand side of the table?	
Question 6: Role of the ISP, option 1 – Requirement for TNSPs to consider ISP- identified needs in their TAPRs		
A)	What are stakeholder views on this option for how to make the ISP an actionable strategic plan?	
B)	Would the effective delivery of this option have an impact on the speed with which “strategic, national” investments are made?	
C)	Are there any regulatory or other implications that are not raised in the discussion of this option?	
Question 7: Role of the ISP, option 2 – Requirement for TNSPs to conduct RIT-T on ISP- identified needs and options		
A)	What are stakeholder views on this option for how to make the ISP an actionable strategic plan?	
B)	Would the effective delivery of this option have an impact on the speed with which “strategic, national” investments are made?	
C)	Are there any regulatory or other implications that are not raised in the discussion of this option?	
Question 8: Role of the ISP, option 3 – AEMO determines “best” option		
A)	What are stakeholder views on this option for how to make the ISP an actionable strategic plan?	

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B)	Would the effective delivery of this option have an impact on the speed with which “strategic, national” investments are made?	
C)	Are there any regulatory or other implications that are not raised in the discussion of this option?	
Question 9: Role of the ISP, option 4 – AEMO directs TNSP to proceed with the “best” option		
A)	What are stakeholder views on this option for how to make the ISP an actionable strategic plan?	
B)	Would the effective delivery of this option have an impact on the speed with which “strategic, national” investments are made?	
C)	Are there any regulatory or other implications that are not raised in the discussion of this option?	
Question 10: Role of the ISP, option 5 – AEMO directs TNSP to implement the investment		
A)	What are stakeholder views on this option for how to make the ISP an actionable strategic plan?	
B)	Would the effective delivery of this option have an impact on the speed with which “strategic, national” investments are made?	
C)	Are there any regulatory or other implications that are not raised in the discussion of this option?	
Question 11: Other options and considerations		
A)	Are there other options to strengthen the link between the ISP and individual TNSP	

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	investments that are not raised here?	
B)	Are there any other matters that should be taken into account when considering options to strengthen the link between the ISP and TNSPs' individual investments?	
Chapter 5 – the regulatory investment test for transmission		
Question 12: RIT-T benefits		
A)	Are there any additional benefit categories that should be considered in the RIT-T?	
B)	Why have no network businesses sought approval from the AER for additional benefits to be considered in RIT-T assessments as allowed for under the current NER?	
Question 13: Potential concerns with the RIT-T process		
A)	What are stakeholder views on current limitations with the RIT-T process?	
B)	Setting aside the ISP and how to make it more “actionable,” what other issues warrant attention when considering the objective of the RIT-T?	
C)	What changes may make the existing RIT-T process “faster”?	
D)	What is the role of a dispute process in the RIT-T? How could spurious disputes be minimised?	

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Chapter 6 – Renewable Energy Zones		
Question 14: REZ options – enhanced information provision		
A)	Do stakeholders agree with our conclusions for how this model can occur under current regulatory arrangements?	<p>Palisade agrees that enhanced information provision is essential to promote investment in the renewable and clean energy industry.</p> <p>We understand that it is necessary to find the balance between the benefits to the industry by providing information compared to the cost of such information provision. It is anticipated that AEMO will publish this information as part of the ISP.</p> <p>It is acknowledged that such a cost/benefit comparison raises further considerations about the type of information necessary to promote efficient investment. Different parties require different type of information. For example, for investors and generators the following list of information would enable more informed investment decisions:</p> <ul style="list-style-type: none"> - Planned projects in a REZ: type of technology, size (MW) of projects planned in the REZ - Impact of these projects on the network, i.e. network strength, congestion, inertia and subsequent effects on MLFs - Planned transmission to accommodate generation <p>Furthermore, with respect to effective timing to repeat the ISP, the options could include:</p> <ul style="list-style-type: none"> - Annually – static and might not be in time to eliminate potential risks (eg. Development of transmission projects that subsequently get cancelled). - After significant changes in the system that require ‘updates’ to previous ISP analysis – needs to define ‘significant changes to the system’ - Some information could be made available on request or published more often than other
B)	Do stakeholders agree with our assessment of whether this REZ model is consistent with the options discussed for making the ISP actionable? What other considerations should	<p>The provision of information will facilitate better informed investment decisions. Palisade considers information provision an enabling or supporting option rather than an option in its own right. It facilitates the development of other REZ options and should go alongside any other REZ model in question.</p>

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	be taken into account?	
Question 15: REZ options – generator coordination		
A)	Do stakeholders agree with our conclusions for how this model can occur under current regulatory arrangements?	<p>Palisade disagrees with the AEMC’s assessment and suggests that generator coordination is possible, given the right incentive.</p> <p>The past attempt to provide an incentive for generator coordination through the SENE Rule and relevant payments is not strong enough. The payment is relatively small compared to the level of coordination that is involved to make it work. Moreover, the SENE Rule incentivised coordinated connection of expected new generation in a particular area, providing only savings on connection costs.</p> <p>However, provision of information and facilitation (eg. either from AEMO or the TNSP) to promote generator coordination could deliver greater benefits to each generator and the network. Benefits</p> <p>Such information provision could include planned generation in a particular REZ (in MW), type of technologies that are planned to be connected in a REZ, transparency of the impact of this generation in a REZ on network congestion, forecasts of effects that new or planned generation in a REZ will have on MLFs in the region, system strength and inertia. This information will incentivise generators to either invest in a REZ with favourable indicators or collaborate with other generators to invest in technology that will contribute to improving these indicators.</p> <p>The provision of information on market indicators that influence the profitability of an investment in the REZ will automatically service as an incentive or disincentive to invest in a particular REZ. More congested REZ will look less favourable to additional investments, directing investment to the most efficient REZs.</p> <p>Facilitating generator coordination provides benefits to the market, by enabling larger investments through access to economies of scale, which in turn unlocks network wide benefits such as relieving network congestion, provision of system strength and frequency services in addition to generating a large enough revenue stream for each of the generators in the collaboration.</p> <p>Generator coordination may not be viable in each REZ, but it should be considered as a viable</p>

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		alternative to other options.
B)	Do stakeholders agree with our assessment of whether this REZ model is consistent with the options discussed for making the ISP actionable? What other considerations should be taken into account?	<p>As discussed above, Palisade considers this option to be a viable possibility to promote the efficient development of REZs.</p> <p>It is important to note that this option is not applicable for each REZ and might only be adopted in a few REZs. However, it is already a viable option under the current rules and does not require significant additional efforts from market participants and market bodies.</p>
Question 16: REZ options – TNSP speculative investment		
A)	Do stakeholders agree with our conclusions for how this model can occur under current regulatory arrangements?	<p>The speculative investment model bears the risk that TNSPs conduct speculative infrastructure investments to receive the higher rate of return. It is unclear what is deemed ‘efficient’ and who determines these efficiencies.</p> <p>Additionally, there is a question around how investment will be recovered if it is ultimately considered unnecessary.</p> <p>Engie suggests that the TNSP issues transmission bonds of enough value to underwrite a transmission infrastructure project in a REZ. In general, Palisade are supportive of this proposal but flag some areas that still need to be worked through.</p> <p>While the proposal promotes efficient investment by setting incentives that allows generator project proponents to choose which transmission project they would like to invest in it also creates conflicting incentives:</p> <ul style="list-style-type: none"> - For example, if the transmission project has a fixed size to support the connection of two more generators for example, but ultimately four generators are interested in underwriting the project - If four generators underwrite the project the cost contributions for each generator decreases. But, ultimately congestion in the REZ will increase, causing negative impacts for generators such as a decline in MLFs. <p>Therefore, we proposed that the transmission project in question should be adaptable to the number of proponents that are willing to underwrite the project to eliminate negative impacts on the network, that result from overcrowding a REZ. Simultaneously, if there are not enough</p>

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		proponents willing to underwrite the project, it should not go ahead.
B)	Do stakeholders agree with our assessment of whether this REZ model is consistent with the options discussed for making the ISP actionable? What other considerations should be taken into account?	
Question 17: REZ options – TNSP prescribed services		
A)	Do stakeholders agree with our conclusions for how this model can occur under current regulatory arrangements?	
B)	Do stakeholders agree with our assessment of whether this REZ model is consistent with the options discussed for making the ISP actionable? What other considerations should be taken into account?	
Question 18: REZ options – clustering		
A)	Do stakeholders agree with our conclusions for how this model can occur under current regulatory arrangements?	<p>Palisade considers that in principle the clustering approach is sensible as it incentivises collaboration and communication between the TNSP and AEMO and generators that propose to connect in the same REZ.</p> <p>There are clear risks that would need to be worked through:</p> <ul style="list-style-type: none"> - If clustering is encouraged to develop REZs it is important to understand the implications on the system. An increased number of generators in one REZ will decrease system strength overall, which in turn creates perverse outcomes, such as potential reductions in MLFs. - To avoid such an outcome, information about planned generation projects for the REZ and its impact on congestion in the system in light of any transmission augmentation projects

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		<p>should be made available to support efficient investment decisions.</p> <ul style="list-style-type: none"> - Definition of efficiency, this is clearly different for each group of stakeholders - System wide impacts dependent on the type of technology that is proposed to be connected to the grid. For example, non-synchronous generation has different effects on the system compared to large scale storage. Positive, system strengthening impacts should pay a different, if any connection charge - The cluster itself should be restricted to the size of a REZs.
B)	Do stakeholders agree with our assessment of whether this REZ model is consistent with the options discussed for making the ISP actionable? What other considerations should be taken into account?	
Question 19: REZs and access		
	Do stakeholders agree with our conclusion about the types of REZ models that are feasible under the current transmission access framework?	
Chapter 7 – Congestion and access		
Question 20: Conclusion on need to consider access issues		
	Do stakeholders agree with the Commission's conclusion in this Chapter that access and congestion management issues are likely to need to be addressed in the near term, once the role of the ISP has been addressed?	<p>Palisade strongly agree that congestion is a significant issue in the NEM. Building new generation without a clear path to drive efficiencies will result in</p> <ul style="list-style-type: none"> - Unnecessary network augmentation that could otherwise be avoided - Curtailment for generators to reduce temporary congestion - Increased cost / losses to generators to reflect congestion issues, such as frequency control

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		<p>payments and MLF decreases</p> <p>Achieving efficient investment and reduced congestion in the network requires to set incentives for generators, NSPs and AEMO to work collaboratively when proposing new generation in an area.</p> <p>For example, a REZ could display a set of characteristics, extending those already outlined in the Report Card in the ISP. The information in this card should include markers such as:</p> <ul style="list-style-type: none"> - MW of planned generation in a REZ - Type of technologies that are planned to be connected in a REZ (storage should be treated differently to non-synchronous generation) - Required or recommended levels of reactive support - Type and level of proposed VPP in the NEM that may impact the markers of the REZ - Impact of planned generation on network congestion - Impact of planned generation on MLFs in the region, system strength, inertia <p>Palisade disagrees with deep connection charging, as it may ultimately deter new generation investments that are vital for the sustainable management of the grid.</p> <p>Rather, Palisade proposes the whole of system impact of the generation (or other technology) that is planned to connect to the grid should be considered when negotiating a connection price. Connection costs should reflect use-of-system charges commensurate with the level of support to fulfil the objectives of the ISP in order to "...facilitate the efficient development and connection of renewable energy zones across the NEM." <i>Finkel Review</i>.</p>
Chapter 8 – Treatment of storage		
Question 21: Storage and TUOS		
	<p>Do stakeholders agree with the way the Commission has framed the issue of whether or not storage should pay transmission use of</p>	<p>Palisade disagrees with the concept of registering storage as a customer which then exposes it to TUOS charges.</p> <p>Ultimately, consumers (DNSPs, large industry customers and non-registered customers) are</p>

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	system charges?	<p>charged TUOS for the transmission services they use. These costs are pass through charges hence recovered from end-user customers through the distribution charges and in part reflect the cost of the provision of transmission services (TUOS charges).</p> <p>With regard to the proposal to charge storage facilities: given that the electricity dispatched from the storage facility uses the transmission network, the customers are already paying for the associated TUOS. Charging a storage facility TUOS charges results in double dipping – the industry and the customer are both paying for the same electron that passes through the transmission grid. This could be avoided through the application of cost reflective pricing which would reflect the true cost of the transmission service use by the customers as distinct from the storage facility.</p> <p>In addition, storage facilities provide network services, which are called up by AEMO. Charging TUOS for a service that provides network wide benefits presents perverse incentives.</p> <p>With this background Palisade proposes that TUOS charges may be applicable to storage facilities that do not export electricity into the grid. In this instance, there is no double charging. If the storage facility does not dispatch electricity into the grid, it acts ultimately as a customer.</p>
Question 22: Storage and TUOS - current arrangements		
	Do stakeholders have any comments on the Commission's initial views on storage and transmission charges? Are there any other arguments that are not discussed?	
Question 23: Storage and TUOS - considering changing existing arrangements		
	Are there any matters the Commission hasn't discussed that should be addressed if a change to the existing arrangements for transmission charging for storage is considered?	<p>Palisade strongly supports the introduction of a framework where participants can define each service individually for registration, regardless if they are buying or selling into the market. This would include that the participant can register to both sell and buy without restriction. Such a framework would allow for flexibility and reduce restrictions to fully access the revenue opportunities that storage facilities offer.</p> <p>If the participant is only able to register either as a customer or a generator the participant would</p>

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		<p>be constrained to only sell or buy electricity. This restriction will act as a barrier for the introduction of new technology and innovation because it limits market entrance opportunities.</p> <p>Palisade supports the proposal to allow participants to register for a range of different categories under the proposed framework.</p>
Question 24: Storage and TUOS - additional considerations		
	<p>When considering the approach to the recovery of transmission charges, are there any additional factors worthy of consideration that the Commission has not listed?</p>	