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Australian Energy Market Commission
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Via email: submissions@aemc.gov.au

National Transmission Planning Arrangements - Draft report

Origin is pleased to provide a response to the Australian Energy Market Commission's (the Commission) Draft report on the new "National Transmission Planning Arrangements".

The Coalition of Australian Governments (COAG) required that the Commission establish arrangements for a new National Transmission Planner (NTP) to be located within the Australian Energy Market Operator (AEMO) and with the principal task of developing a strategic National Transmission Development Plan (NTNDP). The Commission was also tasked with creating a new Regulatory Investment Test for Transmission (RIT-T) to strengthen incentives for transmission network service providers (transmission companies) to incorporate market benefits into their transmission investment decision making.

However COAG stipulated that the new planning arrangements should not be binding on transmission companies. In other words the new NTNDP is effectively an information document only, ultimately unable to directly compel particular transmission investment outcomes.

Overall, Origin considers the Draft report represents a balanced response to the COAG terms of reference.

However there are number of key aspects of the new RIT-T which Origin believes warrant further attention by Commission in respect of its Final Report on these matters. In particular we are concerned that the current form of the RIT-T has three potential weaknesses relating specifically to its capacity to support climate change policy. First, the RIT-T is ambiguous in respect of how climate change policies can be incorporated into the costs and benefits of the test; Second, the test continues to be reactive rather than pre-emptive, and therefore potentially undermines timely investment in large transmission assets; and third, the current cost allocation arrangements for transmission investment may discourage private investment in large transmission assets.

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We provide a number of possible options for dealing with these issues, but consider their complexity and importance warrants further attention by the Commission

These issues are discussed in more detail below.

Commission's draft proposals

Within the broader constraints set by COAG Origin considers the draft recommendations proposed by the Commission will significantly improve the transmission regulatory framework in the NEM:

- The role of the NTP in the RIT-T and AER consultation processes. This will bring effective discipline to the shorter-term planning and investment of transmission companies.

- The development of an NTNDP containing extensive scenario analysis and transmission development strategies will provide strong support for both transmission companies and market participants in their investment decision making.

- This is reinforced by the creation of a national database of assumptions and analyses underpinning the NTNDP.

- The establishment of an Advisory Committee will bring visibility and focus to the national planning function, as well as ensuring direct involvement in national planning by stakeholders and relevant experts.

- The requirement for broad and open consultation on the NTNDP will ensure rigour and transparency in the creation of the NTNDP.

- The proposed RIT-T should increase the efficiency of transmission investment by obligating transmission companies to consider more comprehensively the market benefits of their investment proposals.

While these proposals are strongly supported, there is one aspect of the transmission regulatory arrangements which to date has received relatively little attention, and that is the extent to which it can meet the needs of broader policy objectives, such as climate change.

This is an important question given the recent confirmation by the Federal government to significantly increase the Minimum Renewable Energy Target (MRET) and extend it

beyond 2020, and introduce a National Emissions Trading Regime (NETS). These policy measures are likely to drive significant new investment in low emissions generation in the NEM, and it is therefore important that the transmission regulatory framework can accommodate such investment if the required long term reductions in emissions are to be achieved.

Problems with the RIT-T in the context of climate change policy

Origin considers there are three areas of concern in respect of the RIT-T's ability to support climate change policies.

1. Environmental Costs and benefits

Origin considers there is a level of uncertainty surrounding the extent to which environmental costs and benefits can be included in the RIT-T.

The current regulatory test requires consideration of the total costs of an option to all those who produce, or consume electricity. Importantly this includes the capital costs, operating and maintenance costs, of complying with all relevant laws, regulations and applicable administrative requirements in relation to that option. An environmental subsidy, discussed in the application guidelines of the regulatory test, is treated as making a negative contribution to the costs of an option.

In principle, therefore, MRET could be included in the RIT-T as an environmental subsidy to renewable generation, the additional source of revenue per MWh in effect making the variable cost of renewable generation look cheaper in the spot market (by the REC price). A key benefit often identified in regulatory test assessments is that a particular transmission option allows lower cost generation to be dispatched. This provides a route by which the MRET subsidy can be incorporated into the RIT-T assessments. Indeed, this same approach would apply with the introduction of an ETS, except that it would impose an obligation on some generation rather than a subsidy.

However, it is somewhat confusing to include an environmental subsidy on the cost side of the RIT-T. It would be clearer if a tax, such as the permit price, be included in the costs of an option under the RIT-T. And an environmental subsidy, or any other subsidy

that is required in the context of meeting a government policy and which can be priced in the market, is included under the possible benefits of an option.

A further important point of clarity is that the current regulatory test does not allow wealth transfers between classes of participants to be included in the test. However, subsidies such as MRET are a transfer of wealth from consumers to producers. It is therefore not clear whether compliance with an administrative obligation, or the wealth transfer obligation in the test, takes precedence. This issue needs to be clarified so as the benefits of REC creation are explicitly included in the RIT-T.

It may also be useful for the application guidelines for the RIT-T to include an example of how environmental obligation can be incorporated into the test.

It is expected that to achieve the stringent targets underpinning environmental policy obligations of an ETS and the new MRET will require significant transmission investment to connect low emission generation to the network. Such generation will compete with other forms of generation investment as well as other network and non-network alternatives. To avoid disputes and subsequent delay in transmission investments, it will therefore be critical that the RIT-T, and the supporting application guidelines, is clear on how the benefits and costs of meeting environmental obligations can be included in the test.

2. Lack of strategic benefit in the RIT-T

To achieve the significant reductions in future emissions required under an expanded MRET and ETS, will require deployment of large amounts of zero or low emissions generation. A significant proportion of this generation will need to locate in remote areas where fuel resources are located. This in turn will require a significant expansion in transmission capacity in order to connect remote generation to the transmission network.

A key concern with the RIT-T is that it will not lead to timely development of substantial transmission capacity for opening up remote renewable resources. The RIT-T like its predecessor continues to be largely reactive, rather than strategic in how it assesses transmission investment.

The nature of the costs and benefits to be included in the RIT-T has not changed. An option passes the test if it has the greatest net market benefit across a range of reasonable scenarios. This creates a bias towards smaller incremental transmission projects as these will tend to provide the greatest benefits across divergent scenarios.

An approach to scenario analysis which assigns probability to each scenario would better capture potential value of larger projects with higher risk but also higher benefits in particular scenarios.

The NPV focus of the current RIT-T also tends to weight quantitative factors or factors that can be measured far more highly then factors that due to their level of uncertainty are less measurable, and therefore more heavily discounted. Again, this reduces the strategic potential of the RIT-T, and encourages late rather than early investment in significant transmission assets.

The need for Real Options analysis in the RIT-T

An alternative approach used in New Zealand is "real options" analysis, which may better address the cost and benefits of delaying investment. This approach attempts to value the ability of future decisions to be changed in light of new information. That is, it values the flexibility to expand or defer future investment.

Such an approach may be important in the context of large transmission assets which take a long time to build and are needed to access remote fuel resources. The cost of building such transmission assets pre-emptively and being under utilised in the near future may well be outweighed by the costs of building such assets too late, and then being unable to meet environmental policy targets (for example, because a prediction in an alternative scenario for a greater level of distributed generation has not come to pass).

Real options analysis would allow such tradeoffs to be made, and would provide greater consistency between strategic transmission development strategies identified in the NTNDP and the regulatory test.

3. Cost allocation for large privately funded transmission assets

If the RIT-T provides insufficient incentives for early investment in transmission by transmission companies, then private investment needs to be relied upon to bring such investment forward.

However, particularly in the case of large transmission assets, the cost allocation arrangements in regulatory framework provide little incentive for private participants to come forward and fund transmission.

These arrangements require the first connecting party that triggers the need for transmission to be built to fund its full costs. This is problematic for transmission in particular which, due to economies of scale, is most efficiently built in large increments to allow for new entry.

Costs may be recovered from other participants as they connect subsequently. However the requirement for significant up front funding and uncertainty around timing and quantum of subsequent cost recovery may prove too big a hurdle for the first connecting party. This creates the temptation for that party to either size the transmission sub-optimally so as only to meet their individual requirements, or wait for others to make the first upfront investment.

While this could be addressed by a group of participants negotiating to share the costs up front, it is likely that the transaction costs associated with complex ex ante cost allocations up front would be considerable and that free rider effects would dominate.

The situation arises therefore that where it may be optimal from society's point of view for a group of participants to combine to share the costs of a transmission asset up front, but each individual participant will have no incentive to do so.

The key implication of these problems is that needed transmission investment for low emissions technology occurs either too late or not at all.

The California solution

This issue has recently been addressed in California, where the regulator, FERC, has formally approved the introduction of a new arrangement by the ISO for allocating the costs of transmission required for remotely located renewable generation.

The ISO has been given the power to develop connections to remote locations which appear to be attractive to renewables development, and for which a sufficient level of interest is shown by renewable generators. For example, they would be required to show some evidence of planning approvals, intensions to construct, or a financial bond. Once a resource has been identified and sufficient interest established the transmission line is built and paid for by consumers through regulated charges.

However, as renewables generators subsequently connect over time they would be charged a proportionate share of the total costs of the capacity, and charges to consumers would be reduced. Thus each new connecting generator would only be

responsible for the costs of the line in proportion to the capacity required for its connection.

Origin considers there to some important benefits to a similar such arrangement being introduced in Australia:

- Provides a mechanism for transmission companies to obtain full cost recovery for the transmission facilities without unduly burdening the development of renewable generation

- Benefits renewable generators by increasing timeliness of transmission investment, in particular the likelihood that transmission will be available when they initiate a transmission request and ensuring they do not have to bear the full cost of those facilities up front

- Benefits electricity customers by encouraging the development of renewable generation resources through which climate change policies can be advanced and maximises the benefits of economies of scale of transmission.

- Links well with current arrangements, including the national planning arrangements, which can identify such investments early. TNSPs or some other third party could then initiate process for assessing interest from renewable generation.

- Such an arrangement would not constitute a subsidy.

Conclusion

Origin commends the Commission on the direction and progress it is making on National Transmission Planning Arrangements and looks forward to continued engagement with the Commission on this important matter.

If you have any question or would like to discuss this submission please call me on (02) 8345 5250 or Con Van Kemenade on (02) 8345 5278.

Yours sincerely

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