



Coordination of generation and transmission investment review - publication of options paper

Context for this review

The COAG Energy Council requested the Commission undertake a biennial reporting regime on a set of drivers that could impact on future transmission and generation investment. This reporting focuses on evaluating the transmission frameworks, in light of current and future conditions. It also considers when net benefits could be derived in adopting a transmission framework that would provide for better coordination of investment between the transmission and generation sectors. The pattern of network flows is changing in the transmission system and forecasts of future needs are increasingly uncertain. The transmission framework needs to be fit for purpose and deliver in a timely way to accommodate this change.

Since this review commenced, the Australian Energy Market Operator (AEMO) published its inaugural Integrated System Plan (ISP) in July 2018, which identifies a pathway for developing the transmission network based on modelling the entire market over a range of possible future scenarios. The Australian Energy Regulator (AER) has also published draft revisions to the regulatory investment test for transmission (RIT-T) and regulatory investment test for distribution (RIT-D) application guidelines in July 2018, and sought stakeholder views on these.

In August 2018, the COAG Energy Council tasked the Chair of the Energy Security Board (ESB) with taking the lead on the delivery of a work program to “convert the ISP into an actionable strategic plan” and report back to the Council’s December 2018 meeting. The options paper seeks to explore options for how to do this, and feedback on it will be an input into the ESB’s report to the COAG Energy Council in December 2018.

It also incorporates AEMO’s work on the ISP and the AER’s review of the RIT application guidelines where relevant. The Commission continues to work with the ESB, AEMO and the AER as part of this process.

Making the ISP an actionable strategic plan

Five potential options for making the ISP actionable were developed. These options are intended to create stronger links between the ISP and actual investments in transmission to improve overall confidence in the regulatory investment process, while at the same time providing appropriate accountabilities and regulatory oversight to protect customers who pay for transmission services, and in whose interests transmission investments are undertaken. The options are intended to be indicative of a potential range of investment decision paths, rather than an exhaustive list.

The five options for how the ISP could be implemented are described in terms of who is responsible for undertaking the various stages in a transmission investment process. The spectrum of options moves from an enhanced status quo, where transmission network service providers (TNSPs) retain responsibility for the majority of steps in the transmission planning and investment decision making process, to an option where AEMO would take on the responsibility for all the steps as part of the ISP. The options can be described as follows:

Option 1 - TNSP decides on transmission investments but is required to consider ISP identified investment needs in their transmission annual planning reports and regulatory proposals

Option 2 - TNSP decides on transmission investment but is required to conduct RIT-Ts on ISP-identified investment needs and options

Option 3 - In addition to the ISP identifying investment needs and options, AEMO determines the “best” option for transmission investment but the TNSP is still able to determine how to most efficiently meet that option, e.g. to take into account local conditions

Option 4 - AEMO determines the “best” option for transmission investment and directs a TNSP to proceed with the “best” option, although the TNSP can still choose the functional specification of that option

Option 5 - AEMO determines what transmission investment is necessary, including the functional specification, and directs a TNSP to implement the investment

These options have been developed based on the assumption that the existing open access arrangements in the NEM are retained. Changing the access arrangements would both add additional options, as well as increase the timeframes for implementing any of the above options. The options are not intended to be exhaustive and we welcome stakeholder views on alternatives.

Implications for the Regulatory Investment Test in Transmission

For investments in new or replacement transmission assets, TNSPs are required to undertake a cost-benefit analysis of potential options where the cost of the investment will be recovered from consumers - known as the Regulatory Investment Test for Transmission, or RIT-T.

The spectrum of options for how the ISP could be made “actionable” addresses key features of the current RIT-T that are designed to protect consumers. We are also interested in the objectives of the RIT-T, the steps that are involved and how it fits within the broader economic regulatory framework, with a view to considering how the RIT-T process could be made faster, and how the process and test itself could be adapted given the current environment.

Renewable energy zones

Renewable energy zones have been raised as a way to coordinate transmission planning and renewable generation investment.

As part of an earlier discussion paper in this review, the Commission explored options for different models that could be applied to implement REZs. The publication of the ISP allows for the consideration of REZs in a more tangible light. This options paper discusses how REZs could be implemented under current regulatory arrangements, and whether the potential models align with the options for implementing the ISP outlined above. The Commission is seeking stakeholder feedback on its analysis of these issues.

Congestion and access

Stakeholders, as well as AEMO’s ISP, have expressed that there is likely to be significant congestion in the future due to the rapid growth in proposed new generation. As congestion increases, augmentations to the transmission network may be required to keep congestion at an efficient level. Given the proposed transmission pathways being put forward in the ISP, and the impacts of investments on those pathways for levels of congestion, this paper is focussed on the role of the ISP and how a link could be created between it and the transmission planning and investment decision making framework. However, given these trends, 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.

Storage

The recent and potential connection of utility-scale storage facilities to the grid has raised questions about the appropriate market participant category for energy storage facilities to be registered in. The Commission considers that a more holistic look at the registration framework in the National Electricity Rules (NER) may be needed. The purpose of such a review would be to make sure that the participant categories sufficiently accommodate and support the participation of existing and emerging technologies and business models into

the future, and to reduce operational complexity and administrative burden for AEMO and participants.

The Commission has also considered whether energy storage systems are customers in the way that residential or business consumers are, whether they drive transmission investment, and issues that would require further consideration when examining whether the current allocation of transmission use of system charges should be changed. The Commission is seeking stakeholder feedback on its analysis of how storage might be treated for the purposes of registration and transmission charging.

Next steps

The Commission welcomes stakeholder feedback on the analysis presented in this options paper. Submissions are due on 19 October 2018.

The ESB will also hold two public forums on the issues raised in the options paper, and related matters. These will be held: in Sydney on 9 October 2018; in Melbourne on 11 October 2018.

More information on how to register for these forums can be found on the AEMC website: www.aemc.gov.au

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