25 June 2021

Ms Sinclair
Principal – ISP Energy Systems Lead
Australian Energy Market Operator

Email: ISP@aemo.com.au

AEMO Draft Transmission Cost Report

Dear Ms Sinclair,

Energy Networks Australia (ENA) welcomes the opportunity to provide a response to the Australian Energy Market Operator (AEMO) on the Draft Transmission Cost report and associated documents.

ENA is the national industry body representing Australia's electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia.

ENA supports improving the accuracy and transparency of forecast project costs in the Integrated Systems Plan (ISP) for all ISP projects, including state-based policy projects. This will facilitate improved learnings for future projects and improve the assessment of identified investment needs and whether they are on the optimal development path. It is important that this analysis is undertaken with reasonable cost estimates to ensure the right transmission investment needs proceed through the further regulatory and investment processes and are ultimately in the long-term interests of consumers.

The ISP identifies an investment need with potential market benefits, but not the preferred solution. A range of options are subsequently identified. The costs and benefits are further refined as the project develops and a preferred option is selected, and where possible uncertainties in costs and benefits are also addressed.

Scope changes as the project progresses

The ISP is a nationally integrated plan, developing an optimal development path based on reasonable project cost estimates available at the time. There are a range of factors that can significantly influence outturn project costs from those estimated and used in the ISP, Regulatory Investment Test- Transmission (RIT-T) and Contingent Project Application (CPA).

The ISP is testing a range of projects based on early estimates. The RIT-T assesses network and non-network options, including alternative transmission line routes, to ensure that an individual project has a net benefit to consumers. At completion of the RIT-T the project has a preferred option and clear specificity, and the CPA provides even further clarification to support the assessment of costs. The cost of an actionable ISP project is tested in the RIT-T, the ISP feedback loop and by the Australian Energy Regulator (AER) when approving the CPA.

The AER in its recent Large Transmission Projects Guidance Note have reflected the importance of continued engagement with a range of stakeholders, including local communities, prior to the CPA being submitted to the AER. This enables stakeholders to understand cost variations and consider alternative

routes which may reduce community impacts. These changes can impact the scope and cost of the project.

Importantly, investment and procurement decisions are not based on the ISP information alone. Considerable further assessment through the RIT-T and up to the CPA ensure that the proposed investment is in the long-term interest of consumers.

Realistic American Association of Cost Engineering (AACE) levels

Some participants noted at the AEMO webinar that an individual renewable project can receive far higher project cost accuracy before investment decisions. In contrast, as the ISP assesses a range of identified investments, early project cost estimates are based on desk top studies and will not reach investment grade cost accuracy. Projects have a range of options that need to be considered in the ISP and in the Project Assessment Draft Report (PADR). With the number of options, the time allowed for preparatory activities and the level of detail that would be required it is unlikely to be feasible to achieve near AACE class 3 (with an estimated accuracy of ± xx%) for all options.

By way of example, Project Energy Connect (PEC) is the most significant major transmission project in decades and involves building 900 km of interconnector lines. Despite the CPA being approved for PEC and the decision to invest being made there are still a range of planning and environmental approvals in progress. Whilst some government costs may be formulaic in nature, the price within the formula is subject to change and is potentially volatile. These costs will only become known well into the development phase and are just one of the known risks at the time the CPA is finalised. ENA consider that the concept of almost no known risks and no unknown risks for a project of this size at Project Assessment Conclusions Report (PACR) or CPA stage is unrealistic.

There appears to be a material difference in how risks are viewed and allocated in the electricity sector compared to other sectors where there is greater recognition of the need for appropriate levels of contingency to cover residual risks in large infrastructure projects.

Virtual transmission costs

ENA note that some of the options with virtual transmission are noted as seeking costs from interested parties (one example is South Queensland to Central and North Queensland, option 3). ENA is keen to understand whether this is the cost of some infrastructure, e.g. a battery, or demand response, and how the full cost of implementation and risk build up information is determined and reviewed with the relevant transmission network service provider (TNSPs).

Review and update when needed

The accompanying GHD report notes that AEMO will need to update and maintain the database as completed project information becomes available. This should include updating the unit rates and risk rates based on the final budget and the actual project costs for all projects.

It is important that unit rates for future actionable ISP projects are updated to align with the most recent data sets available, and are able to take into account the tightness of the market for labour and materials (such as steel and aluminium) across a range of infrastructure projects, recognising that state government infrastructure projects are competing for similar resources. Appropriate real cost escalators, not just consumer price index, may be needed.

Despite updating unit rates with the latest information, large transmission projects are bespoke and a simple application of unit rates and risk rates may not be sufficient to reflect the complexity of building new greenfield transmission (or indeed expanding brownfield sites to integrate the new network).

AEMO should review the unit rates and risk rates on a regular basis and consider the need to update the base unit rates, accessing independent expert opinion, as necessary. For future actionable ISP projects, TNSPs should be involved in reviewing the building block network elements and risk attributes selected to ensure they are appropriate for the project option.

Market forming

The transmission cost database is a significant initiative to address information asymmetry and ENA suggests exercising caution in being overly transparent. There is significant information provided which has the potential to be market forming which can ultimately lead to higher costs to all electricity consumers. AEMO might like to consider these commercial sensitivities.

Should you have any queries on this response please feel free to contact Verity Watson, vwatson@energynetworks.com.au.

Yours sincerely,

Jill Cainey

General Manager Networks