AEMC

INFORMATION

Review of the economic regulatory framework for electricity networks

The AEMC has released the first edition of the annual Electricity networks economic regulatory framework review report. The report reviews the operation of the economic regulatory framework and how it has evolved against the backdrop of change in the past decade. It also identifies areas for further investigation in future reports.

Background

The energy sector is undergoing significant change. The national electricity market (NEM) is moving from predominantly large-scale synchronous generation to non-synchronous, intermittent generation and from centralised generation to greater amounts of smaller, distributed generation. At the same time, households and businesses are changing the way they use electricity and how they engage with participants in the sector.

In December 2015, the COAG Energy Council received advice from officials assessing the likely adequacy of the electricity networks economic regulatory framework under different scenarios of possible future market conditions. In August 2016, the Council tasked the AEMC to monitor and report annually on the status of market developments which may impact on the ability of the framework to continue to deliver the national electricity objective (NEO).

The AEMC has gathered information and consulted stakeholders in order to provide a foundation for assessing the performance of the framework and for further analysis in future editions of the report.

Overview of the regulatory framework

The National Electricity Law (NEL) and the National Electricity Rules (NER) set out the regulatory framework governing electricity networks, as well as the role of regulatory bodies and the process for the review of regulatory decisions.

Electricity networks are capital intensive and incur declining average costs as output increases. Network services in a particular geographic area are therefore most efficiently provided by one supplier. As there is no competition, providers of network services are regulated to encourage efficient investment and maintenance of the electricity network, and to prevent consumers from being overcharged for its use.

The regulatory framework has evolved and adapted to changes in the energy sector. The NEL contains a provision that allows the AEMC to make a rule at the request of any person so long as it is within the AEMC's rule making power and the issue falls within the subject matter for the NER. This provides a mechanism so that the framework can respond to issues and changes (both technical and economic) raised by the stakeholders.

Key issues

In reviewing the economic regulatory framework, the Commission considered key issues that impact on the provision of network services and how the framework has responded to them.

System security

The shift in the generation fleet in the NEM driven by climate change and renewable energy policies and technological advances is changing the energy landscape. The NEM is transitioning from one powered by coal, gas and hydro to being powered increasingly by renewable sources such as wind and solar. This change in generation technology has altered the operational dynamics of the power system and the need for system services to be able to keep it secure.

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In response to this shift, the Commission initiated the System security market frameworks review in July 2016. The final report for the System security market frameworks review was published in June 2017 and implementation of its recommendations will lead to:

- a stronger system
- a system better equipped to resist frequency changes
- better frequency control
- action to further facilitate the transformation.

Coordination of transmission and generation investment

The change in generation mix has raised an important issue on how, and whether, generation and transmission investment is efficiently co-ordinated. Historically, the consequences of whether or not transmission and generation investment was coordinated were less material, but this is likely to change going forward as the shape of the transmission network may need to change to reliably supply consumers from a different generation mix.

The Commission is currently analysing this issue through its Reporting on drivers of change that impact transmission frameworks review. The reporting regime is a two stage process. The Commission's final stage one report was published on 18 July 2017, with this containing the Commission's decision to proceed to Stage 2. The Commission is scheduled to publish an approach paper for Stage 2 in August 2017.

New technologies, business models and trends

Technology surrounding the grid is changing. In recent years, more and more consumers have been adopting decentralised energy resources. New forms of generation, including solar PV and battery storage, are becoming cheaper and better - and as a consequence, more widespread and viable at a small scale. At the same time technological innovation is allowing for resources to be deployed and co-ordinated in unprecedented ways, giving rise to new forms of monetisation, trade and ownership.

The current framework provides a number of incentives and obligations for non-network options to be assessed and adopted where it is efficient to do so. For example:

- regulatory investment tests for distribution and transmission
- demand management incentive scheme
- demand management innovation allowance.

In addition to existing incentive mechanisms, substantial reforms to network regulation have and continue to be made arising out of the Commission's Power of Choice review, for example, the Expanding competition in metering and related services rule change.

Currently, the Commission is considering two rule changes on the contestability of energy services from the COAG Energy Council and Australian Energy Council, related to new technologies and which services should be economically regulated.

Rising network costs and concerns about under-utilisation of assets

The cost of producing network services had been increasing in all jurisdictions over the past ten years. Apart from increase in cost, the growth in regulatory asset bases, coupled with flatlining or declining demand have led to declining utilisation rates and concerns about stranded assets.

In response to concerns about utilisation rates, the Commission has made a number of rule changes recently to incentivise network service providers to operate more efficiently. Some of these rule changes include:

- 2012 economic regulation of network service providers rule change
- Introduction of the capital expenditure efficiency sharing scheme
- 2014 distribution network pricing arrangements rule change
- 2015 demand management incentive scheme rule change
- 2017 replacement expenditure planning arrangements rule change extending distribution and transmission regulatory investment tests to network replacement expenditure decisions (published today).

The AEMC will monitor and report annually on market developments which may affect the ability of the electricity network economic framework to deliver the NEO.

Areas of focus for future reports

Through the AEMC's analysis of the above issues as well as consultation conducted as part of the review, the AEMC has identified a number of areas that warrant further investigation. These areas are:

- NSPs' financial incentives in delivering economically regulated services
- continual implementation of network pricing reform
- the changing role of distribution networks, as outlined in the Commission's work on the distribution market model project.

The AEMC will continue to monitor these issues in future editions of this review.

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