COAG
Energy Council
Senior Committee
of Officials

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Mr Pierce

Australian Energy Market Operator access to information for developing demand forecasts

I am writing to you regarding changes to the National Electricity Rules (the Rules) to broaden the Australian Energy Market Operator's (AEMO) access to information for the purpose of enhancing its National Transmission Planner functions through the development of demand forecasts. On the basis of the transmission network investment needs identified by AEMO through use of these demand forecasts, the Australian Energy Regulator (AER) will be able to access additional and robust information. The AER may use the information in accordance with its functions, including its assessment of network businesses' revenue proposals.

I am writing to formally request that the Australian Energy Market Commission (AEMC) initiate a Rule change process to introduce changes to the Rules to:

- expressly recognise AEMO's new function in connection point demand forecasting as a 'National Transmission Planner function';
- ensure the resultant forecasts are included in AEMO's National Transmission Network Development Plan database; and
- provide for AEMO to give connection point demand forecasts to the AER upon request.

The attached document provides additional information in support of this request.

Should you have any further enquiries please contact Ms Kristen Palmer, Manager, COAG Energy Council Secretariat on (02) 6243 7107.

Yours sincerely

John Ryan
Chair
COAG Energy Council Senior Committee of Officials
30 January 2015

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Australian Energy Market Operator access to information for developing demand forecasts

Rule change request and proposal

30 January 2015

Name and address of Rule change request proponent

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1. Rule change proposal

These proposed amendments relate to changes to the National Electricity Rules (the Rules) to broaden the Australian Energy Market Operator's (AEMO) access to information for the purpose of enhancing its National Transmission Planner (NTP) functions through the development of demand forecasts. This demand forecasting function is consistent with AEMO's statutory NTP functions and will be supported by AEMO's associated information collection powers under the National Electricity Law (the Law). The Australian Energy Regulator (AER) will, on request, have access to this additional independent information to inform its assessment of network businesses' revenue proposals.

It is therefore proposed the Rules be amended to refine AEMO's NTP function to:

- expressly recognise AEMO's new function in connection point demand forecasting as an 'NTP function';
- ensure the resultant forecasts are included in AEMO's National Transmission Network Development Plan (NTNDP) database; and
- provide for AEMO to give connection point forecasts to the AER upon request.

1.1. Background to the proposed Rule

In 2009, the Council of Australian Governments (COAG) recognised the importance of the National Transmission Planner function and agreed to establish an enhanced planning process for the national transmission network to ensure a more strategic and nationally coordinated approach to transmission network development. COAG noted the objective was, among other things, to inform transmission companies' investment decisions and the AER determination of revenue for transmission businesses.

Electricity demand in many regions of the National Electricity Market (NEM) has slowed or declined since 2009. This trend is expected to continue, with AEMO's 2014 *National Electricity Forecasting Report* forecasting average annual electricity consumption across the NEM over the 10 year outlook to only grow at 0.3 per cent. All states, except Queensland, are forecast to have either falling or flat electricity demand growth over the 10 year period. Queensland's average annual electricity consumption growth is higher, due to three large liquefied natural gas projects coming online from 2014-2015. The reduced or flat demand in the NEM will have significant implications for the costs of providing networks for consumers where, currently, network revenues are set, in part, on the basis of the provision of capacity to meet forecast peak demand levels.

On 7 December 2012, COAG endorsed a package of reforms agreed by the then Standing Council on Energy and Resources (SCER). This package of reforms was aimed at ensuring consumers do not pay more than necessary for electricity. As part of this package, SCER considered the implications of sustained demand reductions on the costs of providing network

services to consumers, where, currently, network revenues are set on the basis of the provision of capacity to meet forecast peak demand levels. SCER accordingly noted the need, within the existing incentive regime, for benefits from sustained changes in demand to flow through to consumers.

As part of the package of energy market reforms, on 31 May 2013, SCER agreed to request AEMO to provide independent demand forecast information to the AER in a manner which will facilitate the AER's ability to interrogate demand forecasts submitted by network businesses to regulatory processes.

As future demand levels are a key determinant of future network investment requirements, demand forecasts are an integral part of the planning process for the national grid. Therefore, the demand forecasts are a key input into the NTNDP which guides transmission business investment planning processes and, ultimately, their regulatory investment tests and revenue proposals.

Given the recent changes to the patterns of demand, it is therefore important for demand forecasts to be rigorous and fully reflect changing patterns of consumption and production, particularly at the connection point level, to assist in facilitating efficient investment decisions. Further, as the current electricity market regulatory frameworks were established at a time of increasing demand, the demand forecasts would be an important input into policy and market development processes going forward.

In a separate body of work, the Australian Energy Market Commission (AEMC) in its Final Report for its *Transmission Frameworks Review* released in April 2013, identified potentially significant changes in the types and location of electricity generation, technology development and patterns of demand which will lead to uncertainty for network investment. A key part of the AEMC's recommendation to reduce investment risk being borne by consumers was for AEMO to produce "bottom up" demand forecasts at a transmission connection point level for each region in the NEM. The AEMC noted this could incorporate a variety of information such as, embedded generation, new and decommissioned loads and metering configuration data. The AEMC considered that "bottom up" demand forecasts would provide contestability of views, as AEMO's connection point forecasts can be compared to transmission network businesses' connection point forecasts. SCER agreed with the AEMC's advice on this issue on 31 May 2013, noting the matter would be addressed through the SCER work outlined above.

It is envisaged that the data and information AEMO may request to collect from network businesses may include, but are not limited to:

- demand profiles at individual connection points including historic demand trends;
- information on embedded generation such as location, size and output;
- forecasts for residential, commercial and industrial new and decommissioned loads and expansions and contractions of each of these segments, for each region as well as data on load segments;
- network development plans for new connection points, load transfers, load splits and new generators linked with the corresponding connection point; and
- metering configuration data for connection points.

The proposed amendments to the Rules will recognise AEMO's new role in developing demand forecasts as an input into the NTNDP and for the forecasts to be provided to the AER

at the AER's request. This information will allow for the identification of necessary network investment or non-network alternatives as part of the strategic development of the transmission network in the NEM, help inform transmission businesses' investment decisions and, at the AER's discretion, assist the AER in its regulatory processes.

1.2. Proposed Rules

The following amendments to Rule 5.20 of the Rules are proposed:

- amendments to existing provision heading 5.20.1 to clarify that this clause relates to the NTNDP;
- new provisions (proposed clause 5.20.6) that outline:
    - AEMO's function in connection point demand forecasting;
    - connection point forecasts must be included in the NTNDP database; and
    - AEMO must provide connection point forecasts to the AER if the AER requests the information.

It is expected that AEMO will collect the information required to produce these forecasts in accordance with its powers and obligations under the Law (in relation to market information notices and orders). AEMO may issue these market information instruments in respect of its national transmission planner functions.

In addition, if necessary, it is requested the AEMC, in making the Rule, give regard to the following principles in regard to regulatory compliance costs for network businesses:

- that required information does not unnecessarily duplicate data and information already provided to AEMO;
- that it does not place additional, unnecessary or unreasonable compliance costs on stakeholders; and
- that there is net value in obtaining specific types of information for the development of demand forecasts.

Box 1 sets out the proposed draft Rules that reflect this proposal, with the amendments crossed out and new provisions underlined for easy reference.

Box 1: Proposed draft Rules

5.20.1 Preliminary consultation on NTNDP

(a) By no later than 30 January each year, *AEMO* must *publish*:

(1) a document that sets out the *NTNDP inputs* that it proposes to use for the preparation or revision of the *NTNDP* for the following calendar year; and

(2) a document (the **statement of material issues**):

(i) summarising the issues *AEMO* considers to be the material issues involved in the preparation or revision of the *NTNDP* for the following calendar year; and

(ii) giving an indication of *AEMO's* preliminary views on how those issues should be resolved.

5.20.5 Provision of assistance to AEMO ~~Jurisdictional planning bodies and jurisdictional planning representatives~~

(a) ~~A j~~*Jurisdictional planning bodies*~~y~~ and *Network Service Providers* must provide assistance *AEMO* reasonably requests in connection with the performance of its *NTP functions*.

(b) If there is no *jurisdictional planning body* or no *jurisdictional planning representative* for a *participating jurisdiction*, *AEMO* may assume the functions of such a body or representative under the *Rules*.

5.20.6 Electricity demand forecasts

(a) In its capacity as *National Transmission Planner*, *AEMO* may develop forecasts of electricity demand at a *regional* or *connection point* level.

(b) In developing forecasts under paragraph (a), *AEMO* may consult with the AER about the forecasts.

(c) Any forecasts developed under paragraph (a) must be:

(1) included in the *NTNDP database*; and

(2) provided by *AEMO* to the *AER* if requested by the *AER*.

Chapter 10

...

national transmission grid

Has the meaning given in the *National Electricity Law*.

National Transmission Planner

Has the meaning given in the *National Electricity Law*.

2. Statement of Issues

Understanding long term trends in demand is essential for planning and developing the electricity networks to ensure consumers are not faced with the costs of building and maintaining unnecessary network assets or assets built to a higher capacity or specification than is required.

Historically, demand has been forecast by transmission businesses to inform the development of their regulatory proposals. These forecasts were undertaken in isolation and using diverse methods, making them difficult to use from a whole of system planning perspective. Consequently, AEMO has begun to develop internal demand forecasts for the NEM. However, forecasting demand at the connection point level is a developing function for AEMO, in particular the development of connection point forecasts, where AEMO developed a consistent framework and began applying it in 2013.

While AEMO already collects data and information from network businesses for network planning and supply capacity forecasts, it requires detailed connection point data and information from network businesses to improve its forecasts.

2.1. Collection of information for connection point forecasts

The proposed amendments describe the types of data and information AEMO may require and therefore request from jurisdictional planning bodies and network businesses. The development of connection point forecasts is consistent with AEMO's existing network planning functions under the Law.

As a consequence, AEMO will be able use its existing market information instruments which include Market Information Orders and Market Information Notices. These instruments were enacted for AEMO network planning functions with the specific intention of making sure AEMO can effectively perform its statutory national transmission planning functions and will be able to be used as required in the development of connection point forecasts.

The market information instruments can request the provision of information on a yearly or periodic basis and may require information of any of the following kinds:

- historic, current and forecast information;
- information that may be derived from other information in the possession or control of the person required to provide the information.

2.2. Amendments to clause 5.20.5 and addition of new clause 5.20.6

Currently, the clause heading 5.20.5 "Jurisdictional planning bodies and jurisdictional planning representatives" is not clear. The purpose of this clause is to oblige jurisdictional planning bodies and network businesses to assist AEMO in the exercise of its National Transmission Planner functions, where AEMO reasonably requests. The proposed new heading, "Provision of assistance to AEMO", reflects this more appropriately.

2.3. AEMO development and provision of demand forecasts to the AER

The addition of the new clause 5.20.6, which is the main provision to give effect to this Rule change proposal, clarifies AEMO's demand forecasting as part of its National Transmission

Planner function, and sets out parameters. The new provisions establish a requirement for AEMO to provide the forecasts to the AER upon request.

3. Contribution to the National Electricity Objective

The National Electricity Objective is set out in section 7 of the Law. The National Electricity Objective states:

> *"The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:*
>
> *a) price, quality, safety, reliability and security of supply of electricity; and*
>
> *b) the reliability, safety and security of the national electricity system."*

The proposed changes to the Rules will contribute to the achievement of the National Electricity Objective by enhancing AEMO's National Transmission Planner function and potentially assisting the AER in network business revenue determinations by having access to non-transmission business forecasts. In addition, the demand forecasts will improve the transparency of information provided to the market in AEMO's planning documents, allowing for more efficient and timely investment decision-making.

Specifically, the proposed changes to the Rules will address any shortfall of data and information required by AEMO to improve its demand forecasts, including at the connection point level. These forecasts will be suitable for use by transmission businesses in informing their investment decisions and by the AER in the interrogation of network businesses' regulatory proposals.

4. Expected benefits and costs associated with the proposed Rules

4.1. Australian Energy Market Operator

The proposed changes to the Rules will benefit AEMO by improving the quality and quantity of data and information AEMO has access to for demand forecasting, particularly as this relates to connection points. The improvement in access to data and information will flow through into AEMO's existing network planning functions for transmission, in particular the NTNDP. It will also inform its other planning documents, such as the Electricity Statement of Opportunities, the Gas Statement of Opportunities and the National Electricity Forecasting Report. This data and information will also raise market participant confidence in the accuracy of AEMO's forecasts and planning reports and will enhance the ability of the market to identify and respond to investment issues in an economically efficient and timely fashion.

There may be some costs associated with the proposed changes to the Rules for AEMO relating to requesting information. However, these costs are only likely to be marginal as it builds on AEMO's existing demand forecasting functions and current work in improving its national connection point forecasts.

4.2. Energy market development

The proposed changes to the Rules will enable the early identification of challenges facing the electricity sector. Further, the outputs developed by AEMO as a result of these changes will be key inputs into further energy market reform and market development processes.

4.3. Consumers

The proposed changes to the Rules will benefit consumers by ensuring that the transmission grid servicing the NEM is developed on the basis of robust demand forecasts and help to ensure that the benefits of changes in demand patterns are able to be shared with consumers. It is possible that the outputs developed by AEMO as a result of these changes will be used as a means of assessing the efficiency of future network investment proposals, thereby ensuring that consumers pay no more than necessary to deliver a reliable and secure supply of electricity in light of changing electricity consumption patterns.

While it is expected these amendments will deliver net benefits for consumers, there is the potential for the changes to result in increased operating expenditure for network businesses, which will be passed through to consumers as part of the businesses' regulated revenues. However, any increased costs for consumers are expected to be minimal as most network businesses already collect the data required by AEMO and because AEMO's data/ information requests must be reasonable. There may be an increase in operating expenditure for consumers served by those network businesses that do not currently collect the specific information targeted by the proposed changes. These costs are likely to be small in comparison with the benefits of having robust, consistent forecasts.

4.4. Network businesses

The outputs developed by AEMO as a result of these changes, in particular, the NTNDP, will assist transmission network businesses in developing their Annual Planning Reports and to identify opportunities to respond efficiently to changing demand patterns. In addition, these outputs have the potential to enable both transmission and distribution network businesses to respond innovatively due to the increased transparency around the drivers of changing demand.

The costs associated with the collection and provision of data and information by network businesses to AEMO will vary between businesses. For the majority of network businesses, the costs will only be marginal as network businesses already collect this information, and AEMO intends to base its data and information request around the existing capabilities of network businesses. Given this, network business system upgrades to facilitate the collection of information will be largely unnecessary, therefore limiting the need for additional costs added to network capital expenditure.

However, it is noted that for some network businesses this will require the collection and maintenance of data in a form that has previously not been necessary. While these costs are not likely to be insignificant, there are benefits for the network businesses in maintaining this information in terms of the early identification of weaknesses within the electricity grid that may compromise electricity supplies in the future.

4.5. Australian Energy Regulator

Where the AER requests demand forecasts from AEMO this has the potential to reduce the AER's costs through supplementing, or replacing, the other independent forecasts the AER occasionally seeks in the regulatory determination processes.

5. Consistency of the Rule change with AEMO's current prescribed functions under the National Electricity Law.

These proposed changes to the Rules will not affect AEMO's declared network functions under the Law.

6. Timing

The resultant changes to the Rules should ideally be implemented by mid-2015. AEMO will begin collecting data and refining its methodologies for use in the next round of regulatory determinations.