

30 May 2013

Submissions
Climate Change Authority
GPO Box 1944
Melbourne VIC 3001

By email: submissions@climatechangeauthority.gov.au

Climate Change Authority Caps and Targets Review

Thank you for the opportunity to make a submission to the Climate Change Authority (CCA) Caps and Targets Review.

The Australian Energy Market Operator (AEMO) operates the National Electricity Market (NEM), the Victorian Declared Wholesale Gas Market (DWGM) in Victoria and the Short Term Trading Markets (STTM) for gas at hubs in Adelaide, Sydney and Brisbane. AEMO is also responsible for the procurement and planning of the shared network and for connections to the electricity transmission network in Victoria and has a range of national planning functions for electricity and gas transmission.

As noted in the issues paper, stationary energy is responsible for around half of Australia's carbon emissions, and has grown strongly over the last two decades. Therefore the markets AEMO operates are inevitably a major focus of your review. AEMO does not participate nor invest in any market itself, but its role in supporting Australian energy markets in a technology-neutral manner provides it a wide perspective in some matters relevant to the Authority's review. The attached submission outlines AEMO's key operational and planning responsibilities. Given the degree of interaction between AEMO's work and the Caps and Targets review, AEMO would be pleased to assist the CCA in any practical way towards reaching its conclusions.

If you would like to further discuss any matters raised in this submission, please contact Mr Murray Chapman, Group Manager Market Policy Development on (03) 9609 8486 or by email: murray.chapman@aemo.com.au.

Yours sincerely

David Swift
Acting Chief Executive Officer

Attachments: AEMO submission to Climate Change Authority review of the Renewable Energy Target scheme

AEMO Submission to Climate Change Authority Caps and Targets Review

Role of AEMO

AEMO is an independent, member based organisation (60 per cent government, 40 per cent industry) working in the long-term interests of Australian consumers by ensuring that energy markets operate to balance issues of price, quality, safety, reliability and security of energy supply.

AEMO also delivers an array of gas and electricity market operational and planning functions. It operates in eastern and south-eastern Australia, but not in Western Australia or the Northern Territory.

AEMO does not invest or participate in the markets, but its responsibilities include:

- Day to day management of wholesale and retail energy market operations and emergency management protocols.
- Ongoing market development required to incorporate new rules, infrastructure and participants.
- Long term market planning through demand forecasting data and scenario analysis.

1.1. Markets

AEMO operates the retail and wholesale energy markets of eastern and south eastern Australia, including:

- National Electricity Market (NEM)
- Victorian Declared Wholesale Gas Market (DWGM)
- Short Term Trading Market (STTM) – wholesale gas in NSW, SA and Queensland.

Each of these markets operates under its own set of rules and involves different sets of participants. AEMO is also developing a new wholesale gas market in the supply hub of South West Queensland.

1.2. Operations

AEMO oversees the vital system operations and security of the NEM and the Victorian gas transmission network. Market operation includes a range of functions from systems operation, maintenance of system security, metering and settlements through to market performance reporting, incident analysis and emergency management. Those operations cover:

- Power system operator (Queensland, NSW, ACT, Victoria, SA and Tasmania)
- National gas bulletin board (Publishes current information on supply, demand and capacity across the interconnected gas transmission pipelines: Covers Queensland, NSW and the ACT, SA, Victoria and Tasmania)
- Victorian declared transmission system (gas) operator
- Emergency management (electricity and gas)

It is important to note that AEMO's role as the operator of the Victorian gas transmission arrangements is unique and does not apply in other jurisdictions.

1.3. Planning

In its role as the National Transmission Planner, AEMO delivers strategic gas and electricity planning advice and forecasting to guide long term investment in Australia's energy network infrastructure and resource management. This includes independent modelling of possible future scenarios and advice on how our markets might develop under those scenarios. AEMO provides advice on how generation and transmission might develop to meet forecast energy requirements.

In 2012, AEMO published the first independent demand forecast for all NEM regions over the next 10 years, providing a consistent basis for our planning activities. This demonstrated a significant turndown from previous growth estimates. The second release will occur on 1 July 2013.

Planning and forecasting information is delivered annually through a suite of interrelated documents:

National Electricity Forecasting Report (NEFR)	<ul style="list-style-type: none"> • Provides an independent demand forecast for all NEM regions for the 10-year outlook period. • Explores a range of scenarios across medium, high and low economic outlooks.
National Transmission Network Development Plan (NTNDP)	<ul style="list-style-type: none"> • A strategic plan and comprehensive information source for the NEM transmission network • Explores a range of scenarios to determine their potential future electricity transmission impacts
Electricity Statement of Opportunities (ESOO)	<ul style="list-style-type: none"> • Provides information about demand forecasts, generation capacities, and NEM supply adequacy for the following 10 years. • Supported by the annual Power System Adequacy report which considers security matters in the following 2 years and the Generator Information Page providing ongoing information on existing, committed and future projects.
Gas Statement of Opportunities (GSOO)	<ul style="list-style-type: none"> • Examines the interconnected Australian gas transmission network, consolidating demand and reserve forecasts and opportunities • Explores a range of scenarios to determine potential future impacts on gas reserves, processing and storage, transmission pipelines and customer demand
South Australian Advisory Functions	<ul style="list-style-type: none"> • A series of reports that present information on the current and future state of the SA electricity market, including demand forecasts, supply capability and fuel supply as well as analyses of historical trends and the behaviour of wind generation.
Victorian Annual Planning Report (VAPR)	<ul style="list-style-type: none"> • Provides forecasts for energy demand and supply in Victoria and identifies future development needs for both the electricity shared transmission network and the Victorian Declared Transmission System

These reports and the associated information perform an important market disclosure process for intending commercial investors. In turn, they rely upon quality input information, much of which is derived from those investors. There are challenges in obtaining high quality information, especially regarding new supply.

AEMO was also recently commissioned by the Commonwealth to perform a detailed study into scenarios postulating a NEM fuelled entirely by renewables.

1.4. AEMO's role in the Victorian Electricity Transmission Network

In NSW, Queensland and Tasmania, the local Transmission Network Service Provider (TNSP) plans (with reference to AEMO's NTNDP), constructs and operates (in conjunction with AEMO operations) the transmission systems and arranges connections to it. These TNSPs are government owned, for-profit monopolies, regulated by the Australian Energy Regulator (AER).

In South Australia the arrangement is similar, but the TNSP is privately owned and AEMO provides a level of independent oversight and review.

In Victoria, AEMO is the electricity transmission network planner and procurer and arranges network connections. Most existing network assets are physically owned by the regulated for-profit SPAusNet under a Use of System Agreement with AEMO. Where AEMO determines a Victorian augmentation to be justified and contestable, AEMO is able to put the project construction and on-going management out to competitive tender.

As part of this role, AEMO arranges transmission network connection projects in Victoria, which gives it detailed experience in the challenges of connecting new generation technologies to the grid.

2. AEMO perspectives on the Caps and Targets Review

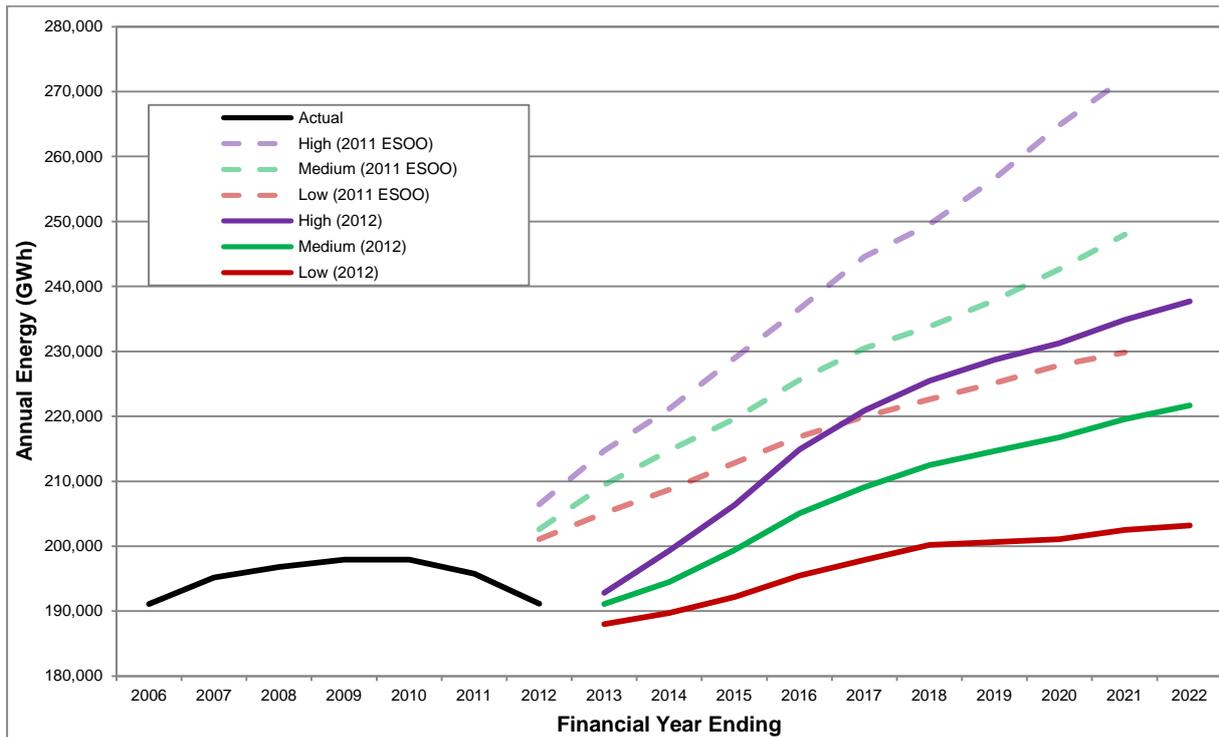
AEMO does not participate in any of the energy markets, nor does it invest directly in the markets or the industry. Consequently AEMO does not take a position on the appropriateness of any national carbon target.

However the functions that AEMO performs do interact with the work the CCA is performing for the review, and AEMO would be pleased to assist where it can.

2.1. Demand forecasts

A significant development in the NEM in 2012 was the publication of the first National Electricity Forecasting Report (NEFR). This report provides an independent energy and maximum demand forecast for all NEM regions for the following 10 years, and provides a consistent basis for AEMO and industry planning functions.

The NEFR shows that the expected growth in energy demand over the next ten years is much slower than previously assumed. The diagram below provides a comparison between the 2012 NEFR and the previous 2011 Electricity Statement of Opportunities:



The 2013 NEFR to be published in July 2013 is expected to reinforce this new paradigm of reduced growth in the demand for electricity.

This flattening of electrical energy demand is occurring simultaneously with the forced introduction of a large quantity of renewable energy driven by the Renewable Energy Target (RET). These circumstances alone would be expected to have some impact in reducing the NEM's carbon emissions.

2.2. Sectoral milestones

The issues paper refers to a desire to develop milestones for the electricity sector and possibly other sectors. AEMO's publications and market data is likely to provide a good source from which to determine developments in investments in physical infrastructure. AEMO considers transparency an important foundation upon which to develop efficiently competitive energy markets, as well as supporting informed policy. AEMO considers the NEM to be one of the most transparent electricity markets in the world, especially with respect to large scheduled and semi-scheduled generators.

When developing milestones, it may be worthwhile for the CCA to consider whether the level of transparency that exists in that sector is conducive to setting and measuring these milestones. If necessary the CCA could make recommendations to policy makers for the improvement of transparency where the data is not fully available. Areas the CCA might wish to draw attention to in this regard are:

- Non-NEM electricity supplies.
- Facility-based emissions intensities.
- Natural gas supplies that are not cleared through a gas market.