

Barton Deakin Brief: Blueprint for the Future (Finkel Review)

Independent Review into the Future Security of the National Electricity Market (NEM)

14 June 2017

On Friday 9 June, Department of the Environment and Energy released *Blueprint for the future*, an independent review into the future security of the National Electricity Market (**NEM**). This review was generated by the Expert Panel chaired by Dr Alan Finkel AO of Chief Scientist and aims to deliver a plan to maintain security and reliability in the NEM.

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Introduction

The *Blueprint for the Future* is specific to the National Electricity Market (**NEM**) which is the Australian wholesale electricity market that covers five state-based networks and six cross-border interconnectors across NSW, QLD, SA, VIC, TAS and the ACT. The NEM is responsible for approximately 80 per cent of Australia's electricity consumption.

Four key outcomes:

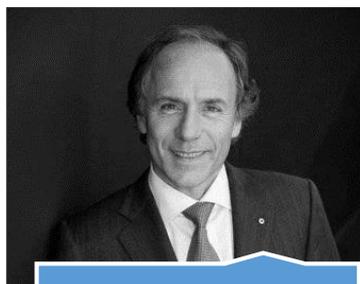
- Increased security;
- Future reliability;
- Rewarding consumers; and
- Lower emissions.

Enabled by three key pillars:

- Orderly transition;
- System planning; and
- Stronger governance.

The Expert Panel

An Expert Panel chaired by [Dr Alan Finkel AO](#), Chief Scientist, developed the independent review. The panel consists of:



Dr Alan Finkel AO
The Chief Scientist



Ms Karen Moses FAICD
Director, Charter Hall



Ms Chloe Munro
Former Chair, Clean Energy
Regulator



Mr Terry Effenev
CEO, Energex Ltd



Professor Mary O'Kane AC
NSW Chief Scientist &
Engineer

In preparing the review, the panel visited regulators and operators across Europe and the US and commissioned a review of best practices from the [International Energy Agency](#).

Domestically, the Expert Panel held public and private consultations in every region of the NEM, undertaking more than 120 individual meetings and receiving more than 390 written submissions.



Key outcomes

Security

The review recommends that security should be strengthened through *Security Obligations* for new generators, including regionally determined minimum system inertia levels and tighter frequency control. The review also recommends a stronger risk management framework work protect against natural disasters and cyber security attacks.

Reliability

The review recommends that future reliability of generators can be reinforced through a *Generator Reliability Obligation* implemented by the [Australian Energy Market Commission \(AEMC\)](#) and the [Australian Energy Market Operator \(AEMO\)](#) following improved regional reliability assessments. New generators would be incentivized to ensure the market and existing low-cost generators can avoid premature closure.

Rewarding consumers

The review recommends that more attention be paid to how Government and industry can best reward consumers for demand management and the power they generate through distributed energy resources like rooftop solar photovoltaic. System updates and new generation should aim to be achieved at the lowest cost in addition to better access to information to support consumer choice.

Lower emissions

The review recommends a continuous emissions trajectory to deliver certainty. Additionally, it recommends that emissions are to be reduced by 28 per cent below 2005 levels by 2030, heading towards zero emissions in the second half of the century.

Key pillars

Orderly transition

The review recommends that Governments agree to an emissions reduction trajectory to give the electricity sector clarity about the means to reaching international commitments. This review also recommends a Clean Energy Target as the mechanism for the electricity sector.

As part of the orderly transition, generators have been recommended to provide three years' notice of their intention to close. The AEMO have already been urged to publish a register of expected closures to assist long-term investor planning.

System planning

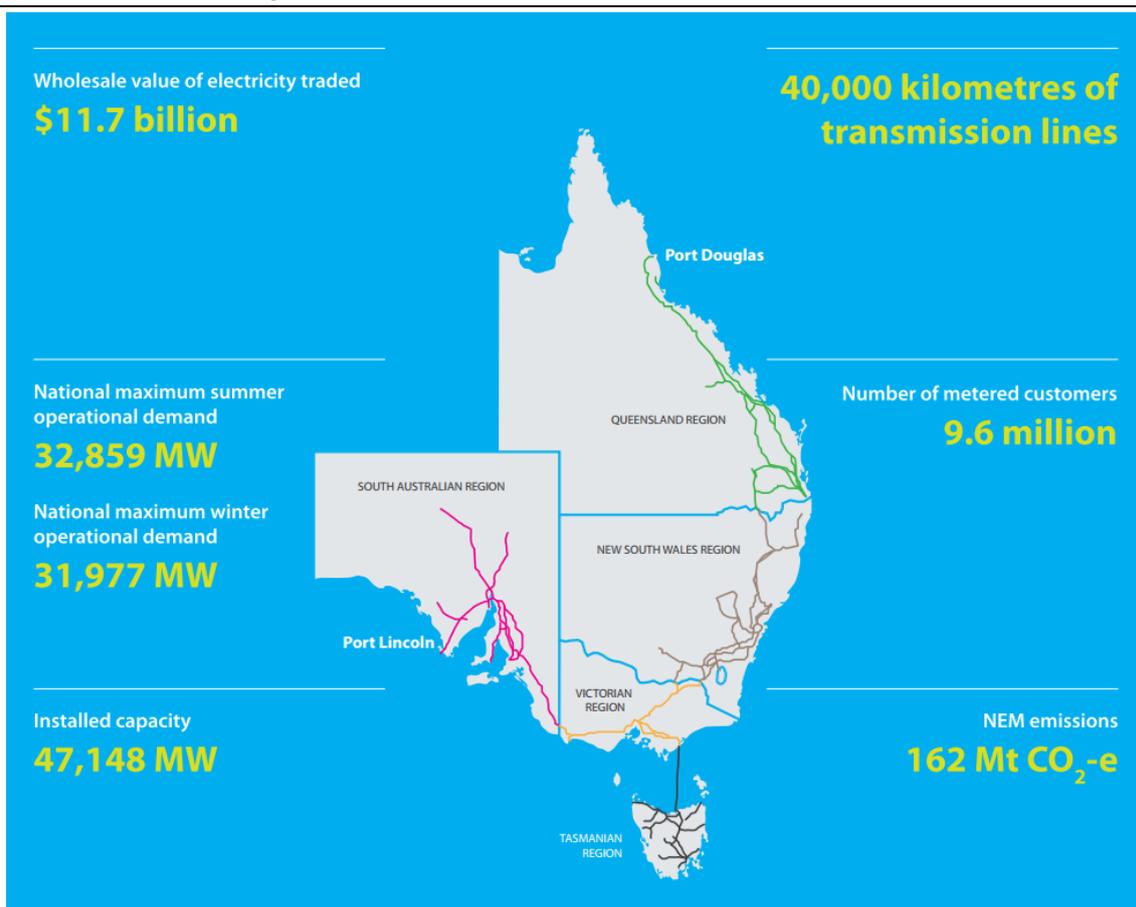
The review recommends that the AEMO play a stronger role in planning the future transmission network, including through the development of a NEM-wide integrated grid plan to inform future investment decisions. Additionally, it has been recommended for the AEMO to develop a list of potential priority projects to enable efficient development of renewable energy zones across the NEM.

Governance

The review recommends that the COAG Energy Council agree on a strategic energy plan for the NEM which reflects Government priorities. Additionally, a new Energy Security Board should be established to drive implementation of this review and coordinate whole-of-system monitoring of security, reliability and planning across the functions of our market bodies. It has been recommended for the new Energy Security Board to deliver an annual Health of the National Electricity Market report to COAG Energy Council that will track the performance of the system, the risks it faces, and the opportunities for improvement.



The National Electricity Market



Source: Blueprint for the Future: Independent Review into the Future Security of the National Electricity Market, p19
 NEM emissions data source from Jacobs (2017) | All other data source from the State of the Energy Market May

Estimated Operating Emissions for New Power Stations

Generation type	Estimated operating emissions as generated ⁴⁹⁰ (kg CO ₂ -e/ MWh)
Subcritical brown coal	1,140
Supercritical brown coal	960
Subcritical black coal	940
Supercritical black coal (HELE) ⁴⁹¹	860
Ultra-supercritical brown coal	845
Ultra-supercritical black coal (HELE) ⁴⁹²	700
Open cycle gas turbine (OCGT)	620
Combined cycle gas turbine (CCGT)	370
Wind	0
Hydro	0
Solar PV	0
Average NEM electricity grid emissions intensity	820⁴⁹³

Source: Blueprint for the Future: Independent Review into the Future Security of the National Electricity Market, p203



Further information

Final Report

Office of the Chief Scientist media release, [here](#).

Australian Government, Department of the Environment and Energy website, [here](#).

Blueprint for the future: Independent review into the future security of the National Electricity Market final report, [here](#).

Snapshot: an overview of the blueprint has been developed to explain its key elements, [here](#).

Executive summary of Finkel Report, [here](#).

Consolidated recommendations: a list of all the blueprint's recommendations, [here](#).

Preliminary Report

Preliminary Report website, [here](#).

Preliminary Report of the Independent Review into the Future Security of the National Electricity Market final report, [here](#).

Erratum on report, [here](#).

Submissions to the Independent Review into the Future Security of the National Electricity Market, [here](#).

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