

The Hon Malcolm Turnbull MP  
Prime Minister of Australia and Chair of the Council of Australian Governments  
Parliament House  
Canberra

Dear Prime Minister

On 9 June 2017 the Council of Australian Governments requested the COAG Energy Council consider the Independent Review into the Future Security of the National Electricity Market (the Finkel Review) and provide urgent advice out of session, and no later than August 2017, on which of the findings can be implemented and a timeline for doing so.

Please find enclosed the Council's advice. It provides information relating to the full implementation of the recommendations made by the Finkel Review, including tasking, milestones and where work is already underway.

The Council is acting on a clear and urgent need to ensure the security, reliability, affordability and sustainability of the National Electricity Market. It will implement the 49 agreed recommendations within the timeframes specified by the Finkel Review. As the Council did not support tasking the Australian Energy Market Commission (AEMC) to develop design options for implementation of a Clean Energy Target, the Council noted that Queensland, Victoria, South Australia and the Australian Capital Territory have separately commissioned the AEMC to do further work in this area.

Dr Kerry Schott AO has been announced as the independent Chair of the newly-established Energy Security Board, supported by Clare Savage as Deputy Chair. They are driving immediate implementation of the recommended energy reforms.

To ensure implementation remains on track, I have tasked the Chair of the Council's Senior Committee of Officials to write the necessary letters to implementing bodies.

This advice also constitutes the first annual report to the Council of Australian Governments on emerging issues and the strategic priorities for the Council.

Yours Sincerely,



**The Hon Josh Frydenberg MP**

Chair

COAG Energy Council

31 August 17



COAG Energy Council

25 August 2017

## **Report to the Council of Australian Governments**

### ***Implementation Plan for the Independent Review into the Future Security of the National Electricity Market***

This Report responds to the Council of Australian Governments (COAG)'s request on 9 June 2017 that the COAG Energy Council (the Council) consider the Independent Review into the Future Security of the National Electricity Market (the Finkel Review) and provide urgent advice out of session, and no later than August 2017, on which of the findings can be implemented and a timeline for doing so.

The Council will ensure the implementation of the 49 agreed recommendations within the timeframes put forward by the Finkel Review. The Council is acting on a clear and urgent need to ensure the security, reliability, affordability and sustainability of the National Electricity Market (NEM).

The Council noted that the Commonwealth is carefully considering a Clean Energy Target as recommended by the Finkel Review. As the Council did not support tasking the Australian Energy Market Commission (AEMC) to develop design options for implementation of a Clean Energy Target, the Council noted that Queensland, Victoria, South Australia and the Australian Capital Territory have separately commissioned the AEMC to do further work in this area.

This Report is structured to clearly demonstrate the Council's commitment to the three implementation timeframes outlined in the Finkel Review – namely within six months, 12 months, and three years – and references the Council's ongoing work as it relates to the measures recommended by the Finkel Review.

The Report will be the first in a series of annual reports to COAG from the Council, and implements Recommendation 7.4 of the Finkel Review concerning reporting on priorities and progress. In light of the pace of change in Australia's energy markets, the Council will report annually to update leaders on emerging issues and strategic priorities.

Enquiries regarding this Report or the Council's work program can be directed to the Council Secretariat at [EnergyCouncil@environment.gov.au](mailto:EnergyCouncil@environment.gov.au).

## **Delivering the Finkel Recommendations**

### *13 recommendations by the end of 2017*

Immediate measures to enhance the effective operation of the NEM will be implemented. This includes actions by the market operator to prepare for the coming summer and the newly-established Energy Security Board performing an initial assessment of the Health of the NEM. Governments will focus on how they can support consumers, in particular low-income consumers, as the energy system transitions.

### *21 recommendations by mid-2018*

Measures which fundamentally change Australia's energy systems will be worked through and put in place. Strategy and governance arrangements will be reviewed and improved, as will the way whole-of-system planning is done. Security and reliability will be enhanced through increased obligations on generators, improved technical standards and better data. The transition of the NEM will be facilitated through the more effective integration of distributed energy resources, demand response capability and micro-grids, while maintaining protections and adequate information for consumers as they engage with the changing market.

### *15 recommendations within three years*

Long-term measures which build on the first year's work will be implemented. The NEM will embrace new technologies through an updated proof-of-concept framework. New strategies and assessments relating to the resilience of the NEM will be created, including for cyber security preparedness. Future workforce requirements will be assessed, and consumers will be supported through improved energy data access and rights. A comprehensive review of the National Electricity Rules will be undertaken in light of a more dynamic market environment.

# Measures to be implemented within 6 months

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## **Establishing the Energy Security Board**

The Council has established an Energy Security Board (ESB) to support the transition of Australian energy markets and advance the long-term interests of consumers. The ESB will be responsible for implementing the recommendations of the Finkel Review, and provide whole-of-system oversight to the Council on energy security and reliability in the NEM. It will facilitate better planning, co-ordination and action between governments, the Council, and market bodies; and advise the Council on opportunities and risks in the performance of the NEM and how they should be dealt with.

Dr Kerry Schott AO has been appointed Chair of the ESB, with Clare Savage appointed Deputy Chair. The ESB has already met to discuss its first steps.

To deliver on Council agreement to strengthen the role of the ESB, a new Ministerial Rule-making power will be introduced into the national energy legislation, so that where the Council is unanimous in its support for ESB recommendations they can be implemented in the national energy Rules as a matter of priority.

The ESB will meet frequently until the end of 2017. The Council will assess performance annually against the ESB's Terms of Reference and Statement of Expectations, which will be issued by the end of 2017.

## **Reforming the Limited Merits Review regime**

The Commonwealth has introduced a bill to abolish the Limited Merits Review regime by amending the *Competition and Consumer Act 2010* to divest the Australian Competition Tribunal of its Limited Merits Review functions, to prevent network businesses from successfully substituting the revenue allowances set by the Australian Energy Regulator (AER) with ones imposing higher costs on consumers.

Further actions to promote certainty and support improved consumer engagement in the revenue-setting process were agreed by the Council on 14 July. These include: a binding rate-of-return guideline with advice from an independent panel, which will streamline the AER's decision-making process and provide greater certainty; and consultation on options to improve the resourcing and capacity of consumer groups in order to support more effective participation in the AER's regulatory processes.

## **More notice of power station closures**

The Council will task the AEMC to provide advice on the legislative changes necessary for a requirement that all large generators provide at least three years' notice prior to closure. The Australian Energy Market Operator (AEMO) will also publish and maintain a register of long-term expected closure dates for large generators.

Although the Finkel Review did not specify a timeframe for this recommendation, the Council will task the AEMC to provide this advice before the end of 2017 so that requirements can be put in place by the end of 2018.

## **Expediting the rule-making process**

The Council will implement the recommendations of the Vertigan Review to expedite the rule-making process by the end of 2017. This is being implemented as an amendment to the national energy legislation.

Neither consultation processes nor due diligence processes – which ensure Rules are fit-for-purpose – will be shortened or reduced as part of the changes.

The amendments are being drafted by South Australia, and officials will work together with South Australia to expedite the drafting and passage of the necessary legislative amendments.

## **Supporting low-income consumers through the transition**

By the end of 2017, Council members will identify and consider options to further expand on and address any gaps in existing activities supporting low income consumers investing in energy efficiency and demand management technologies.

The Council's National Energy Productivity Plan already has related work underway, including improving vulnerable consumers' access to energy services and considering the merits of new residential building performance requirements. The Council will further engage with jurisdictions to identify opportunities and options to financially support low-income households when purchasing more efficient appliances and technologies such as rooftop solar photovoltaic systems.

Individual jurisdictions also have a range of policies to support investment in energy efficiency, demand-side and other energy services in low-income homes and public housing. Several of these policies have been expanded recently.

## **Getting ready for summer**

AEMO has established a program of works for summer readiness, including tightening requirements on generators to provide information on their fuel resource adequacy, and additional measures being implemented as part of the gas supply guarantee. AEMO is also consulting with key network service providers on the 2018-19 summer forecast.

An independent review of AEMO's short-term demand forecast methodology will be completed and published by the end of September 2017. A separate independent review of AEMO's readiness for the upcoming summer including consultation with Transmission Network Service Providers on their forecasts will also be conducted by the end of September 2017.

The Council notes that all jurisdictions are already working with AEMO to develop detailed State and Territory summer readiness plans.

## **Updating AEMO's Constitution**

AEMO is developing proposals to reduce the three-year cooling off period for independent directors to six months, and will include in its Constitution a new skills matrix for directors that will ensure appropriate representation of professional power systems engineering or equivalent expertise is available to guide AEMO's activities. In November 2017, AEMO

Government and Industry Members will consider and vote on proposed amendments to the AEMO Constitution.

### **Assessing the health of the NEM**

By the end of 2017, the ESB will provide an inaugural Health of the NEM report to the Council. Successive reports will be delivered by the end of October each year, describing:

- the performance of the system
- performance against whole-of-system key performance indicators
- opportunities for market development including actual and emerging risks
- progress against a Statement of Expectations.

The ESB's annual Health of the NEM report to the Council also will cover affordability issues and proactively identify emerging issues, including the impact of changes in the market on the price and availability of long-term retail contracts, to provide greater transparency and clarity for small and large consumers.

These reports will inform the Council's report on priorities for the next 12 months, to be presented to COAG in December each year.

### **Creating a data strategy for the NEM**

The ESB, in collaboration with the AER, will deliver a data strategy for the NEM. AEMO will also be consulted through the process. Consultation on design will be undertaken by the end of 2017, and the data strategy completed by the end of 2018.

The Commonwealth will develop guidance on the data strategy for the ESB. This will consider costs for design and implementation for initial set up, plus indicative costs for ongoing maintenance of the key deliverables, and open government data principles.

This will be informed by work already underway through the Council and the Australian Government's response to the Productivity Commission inquiry into Data Availability and Use.

### **Gas pipeline reforms**

Elements of a comprehensive domestic gas market reform package are being put in place to lift competition. The Council has agreed for AEMO to operate the Capacity Trading Platform and the Day-Ahead Auction, and the Gas Market Reform Group has fast-tracked its work program to enable the information disclosure and commercial arbitration rules to be operational from 1 August 2017. Officials will report by the end of 2017 on further regulatory options to strengthen pipeline regulation.

## **Measures to be implemented within 12 months**

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### **Transparency for electricity retail pricing**

As part of its inquiry into the electricity retail market, the Australian Competition and Consumer Commission will consider the transparency and clarity of electricity retail prices as recommended by the Finkel Review.

The Australian Competition and Consumer Commission will hand a preliminary report to the Commonwealth Treasurer by 27 September 2017 and a final report by 30 June 2018.

The Commonwealth has secured agreement from energy retailers on immediate measures and ongoing changes to put families and small business first. The commitments include:

- contacting all the customers now who are on expired discounts and telling them how much they can save on a better deal
- requiring that retailers report to the Government and the Australian Competition and Consumer Commission what they are doing to get families on to a better deal and how many families remain on expired deals
- developing simple, plain English, fact sheets with understandable comparison rates
- support a change to the electricity rules requiring retailers to inform customers when their discount benefits end, setting out the dollar impact of doing nothing
- ensuring families and individuals on hardship programs will not lose any benefit or discount for late payment.

### **Setting a clear strategy**

A strategic energy plan will be developed by the Council in consultation with the ESB to improve clarity and direction for market bodies and participants in the transitioning energy system.

The Council will review the strategic energy plan every 12 months.

In developing the first strategic energy plan, the Council will consider the AEMC's advice on strategic priorities for the energy sector, due in October 2017.

The Council agreed that by 2020, the Australian Government should develop a whole-of-economy emissions reduction strategy for 2050, bearing in mind that the Commonwealth is carefully considering its position on a Clean Energy Target as recommended by the Finkel Review.

### **Improving how governments work together**

By mid-2018, the Council will propose a new Australian Energy Market Agreement (AEMA) to COAG, to reaffirm Australian governments' commitment to the NEM and a national, integrated approach to energy and emissions reduction policy.

The AEMA is an inter-governmental agreement established with the objectives of promoting the long-term interests of consumers with regard to the price, quality and reliability of electricity and gas services; and the establishment of a framework for further reform.

The process of reaching and signing a new intergovernmental agreement reinforces the importance of taking a uniform approach to energy markets and emissions reduction.

The Council will consider a draft AEMA by the end of 2017.

## **Setting the right expectations for energy market institutions**

By the end of 2017 the Council, in consultation with the ESB, will consider draft Statements of Expectations to the AER and the AEMC, and a Statement of Role to AEMO containing a comprehensive set of outcomes-based performance indicators.

The Council will also work proactively with the Commonwealth Treasurer to streamline the AER's dual Statements of Expectation where possible.

The ESB will monitor the Statements of Expectations and Statement of Role, measuring against the set outcomes and provide performance reports in the annual Health of the NEM report.

By mid-2018, the Council will also issue a Statement of Policy Principles to the AEMC to provide further clarification and policy guidance on applying the National Electricity Objective in the rule-making process. The principles will be developed in the context of the strategic energy plan.

The ESB will work with the energy market bodies to prioritise the development of principles, forming the basis of a formal Statement of Policy Principles which the Council can consider and subsequently issue to the AEMC.

## **Ensuring sufficient resourcing to implement the blueprint**

The Council will ensure the ESB is adequately funded to undertake its responsibilities, including implementing the blueprint set out in the Finkel Review.

On 25 August 2017 the Council agreed the funding model for the ESB's strategic work program, developed in consultation with the ESB, the Council's Senior Committee of Officials and AEMO.

The Secretariat functions of the ESB will be funded by AEMO.

The Commonwealth has recently increased funding for the AER by \$67.4 million over the four years from 1 July 2017. This funding is for existing tasks required for the AER to operate as an effective regulator.

## **Getting the right data**

The Council will engage with AEMO to develop a data collection framework to provide static and real-time data for all forms of distributed energy resources at a suitable level of aggregation to allow AEMO to forecast power system load more effectively. The framework will be completed by mid-2018.

The Council has agreed to set up a Distributed Energy Resources Register which will provide static information on battery storage and can extend to other forms of distributed energy resources. A rule change proposal placing relevant obligations on AEMO and market participants will be submitted by the end of September and finalised in early 2018. Jurisdictions are already working on how to collect battery installation data prior to the Register being in place.

## **Protecting consumers as technology changes**

By the end of 2017, the Council will complete its current project on applying consumer protections in relation to new energy services.

As part of the project, the Council has requested industry bodies develop a voluntary code for all 'behind the meter' electricity supply services and products to address key issues not covered by the National Electricity Customer Framework or Australian consumer law.

The Council has also agreed to amend the National Electricity Retail Law to allow jurisdictions to expand energy ombudsman schemes to include alternative energy sellers, which would improve access to dispute resolution processes for customers purchasing electricity through alternative supply arrangements.

## **Ensuring efficient investment**

The Council will accelerate existing work concerning the incentives for investments by distribution network businesses, to test if there is a preference for capital investments in network assets over operational expenditure on demand-side measures. The work will also examine options to address any bias, so that the lowest-cost options are utilised to achieve efficient outcomes.

The Council's work plan includes a consultancy examining alternative regulatory frameworks to provide the correct network incentives and their applicability to the Australian context.

This report will inform other work underway, including the AEMC's 2018 Economic Regulatory Framework Review.

## **Energy Security Obligations**

The AEMC is progressing rule changes to deliver minimum levels of inertia across the NEM, provide an initial framework for Fast Frequency Response services, oblige new generators to disclose software or physical parameters potentially affecting system security or reliability, and create system strength obligations for Transmission Network Service Providers.

AEMO will determine minimum levels of inertia for system security across the NEM. It has submitted a rule change request to the AEMC proposing new generator performance standards and will undertake regular reviews of connection standards to ensure they are fit-for-purpose.

Minimum inertia levels will be set by April 2018, and a determination on generator performance standards finalised by mid-2018.

## **An integrated grid plan**

By mid-2018, AEMO, supported by transmission network service providers and relevant stakeholders, will develop an integrated grid plan to facilitate the efficient development and connection of renewable energy zones across the NEM.

AEMO will extend its planning work in this year's National Transmission Network Development Plan to be published in December 2017. The first integrated grid plan will be developed in July 2018.

Renewable energy zones will also be considered as part of stage two of the AEMC's reporting on drivers of change that impact transmission frameworks.

### **Assuring black system restart**

By mid-2018, AEMO will ensure the black system restart plan for each NEM region clearly identifies the roles of the parties involved at each stage of the restoration process, and includes regular testing of black start equipment and processes.

AEMO has upgraded compliance testing and reviewed black start system plans under current standards. System Restart Ancillary Service Guidelines are being updated and new arrangements will apply after 1 July 2018.

### **Maintaining reliable supply at peak demand**

AEMO will provide advice to the Commonwealth Energy Minister on the need for dispatchable generation. If action is required in the near term, AEMO will propose a mechanism to obtain those resources. By mid-2018, AEMO will also ensure a proposal is provided to ensure adequate dispatchable generation is available over the long term to maintain reliability of supply at critical periods.

The Commonwealth's Australian Domestic Gas Security Mechanism commenced on 1 July 2017 and allows for intervention, if necessary, to restrict liquefied natural gas exports to prevent export-driven shortfalls in Australia's domestic gas market. The Commonwealth Minister for Resources and Northern Australia will rely on assessments from AEMO, the Australian Competition and Consumer Commission, industry and other stakeholders to determine whether exports will be restricted from 1 January 2018.

### **Generator Reliability Obligation**

The AEMC and AEMO will develop a Generator Reliability Obligation mechanism for implementation by mid-2018 to ensure adequate levels of dispatch capability are available in the system. The AEMC and AEMO will also continue to work closely together on their existing reliability work programs including, but not limited to, the Generator Reliability Obligation.

### **Strategic reserve and technical connection standards**

By mid-2018, AEMO and the AEMC will assess the need for a Strategic Reserve to act as a safety net in exceptional circumstances, the effectiveness of the new licensing arrangements and the suitability of a 'day-ahead' market to assist in maintaining system reliability.

A strategic reserve and the Reliability Emergency Reserve Trader mechanism will also be considered as part of the AEMC's Reliability Frameworks Review. The AEMC and AEMO will continue to work closely together on their reliability work programs.

Consistent with recommendation 2.1, AEMO has provided final advice to the Essential Services Commission of South Australia on technical standards for plant connection in South Australia, and lodged a rule change request with the AEMC to amend the technical standards in the National Electricity Rules.

### **Better system frequency control**

By mid-2018, AEMO and AEMC will investigate and decide on a requirement for all synchronous generators to change their governor settings and consider the costs and benefits of tightening the Frequency Operating Standard.

AEMO is already considering frequency control in terms of governor settings, deadband and the Frequency Operating Standard. AEMO has commissioned external advice on frequency control performance in the NEM. On consideration of that advice, AEMO's next steps may include lodging rule change request/s relating to governor and/or deadband settings.

AEMC's Frequency Control Frameworks Review will also look at governor and deadband settings in the context of the broader frequency control framework. It will consider and progress any related rule change requests as part of that review.

### **Enabling distributed energy resources**

By mid-2018 the AEMC will complete reviews of the regulatory framework for power system security in respect of distributed energy resources participation such as small-scale solar photovoltaics systems, energy storage and demand response technologies. The AEMC will then report to the Council by mid-2019 on proposed draft rule changes to better incentivise and orchestrate distributed energy resource participation to provide services such as frequency and voltage control.

The AEMC's Frequency Control Framework Review will make specific recommendations on ways to better incentivise and orchestrate participation of distributed energy resources in frequency management including recommendations on any necessary rule changes.

The AEMC's Reliability Frameworks Review will also make recommendations on ways of facilitating greater co-ordination of distributed energy resources in the wholesale market.

Distributed energy resource participation in the market more generally will be considered through AEMC's Distribution Market Model analysis and through annual reviews of the Electricity Network Economic Regulatory Frameworks.

AEMO may identify opportunities for greater participation of distributed energy resources through its proof-of-concept work with the Australian Renewable Energy Agency (ARENA). These findings can inform AEMC reviews or be submitted as rule change requests.

### **Enabling demand response**

By mid-2018, through the Reliability Frameworks Review, AEMC will consider a mechanism that facilitates demand response in the wholesale energy market. This will be informed by results from the AEMO/ARENA demand response trials currently being conducted.

## **Enabling micro-grids**

By mid-2018, the Council will direct the AEMC to undertake a review of the regulation of individual power systems and micro-grids so that these systems can be used where it is efficient to do so while retaining appropriate consumer protections.

The review will build on existing work, including a rule change process on alternatives to grid supply being considered by the AEMC, and existing Council work on stand-alone power systems.

## **Optimising how market rules change**

The ESB has been tasked to prioritise work with energy market bodies, the Council, and other relevant stakeholders to optimise the end-to-end rule change process, further to the reforms recommended by the Vertigan Review.

The ESB will report its progress on this initiative by the end of 2017.

# **Measures to be implemented within three years**

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## **Ensuring the benefits of transmission and distribution for consumers**

The Council completed a review of the Regulatory Investment Test for Transmission (RIT-T) in February 2017, which considered the appropriateness, effectiveness and efficiency of the RIT-T as the market evolves. The review found that the RIT-T was fit-for-purpose but recommended it take better account of renewable energy policy and low-probability, high-impact events.

The Council will consider the appropriate timing of a subsequent review to assess the effectiveness of the reforms to the RIT-T from the recent review. This consideration will include a review of the Regulatory Investment Test for Distribution.

## **Accelerating energy efficiency measures**

The Council will consider opportunities to accelerate energy efficiency measures which will be collated and reported on as part of the 2017 National Energy Productivity Plan Annual Report, and implement any new measures using a nationally-consistent approach.

## **Using data to make better choices**

The Council is already facilitating measures to remove complexities and improve consumers' access to, and rights to share, their energy data. An expert consultancy to assess data work will be completed by the end of 2017 and the outcomes provided to officials and AEMO for consideration and next steps.

### **Assessing every gas project on the evidence**

Governments will continue to adopt evidence-based regulatory regimes to manage the risk of individual gas projects on a case-by-case basis, noting Victoria's policies with respect to onshore gas exploration and development.

Responsibility for onshore gas resources development sits with each State and Territory.

### **Ensuring access to information about the gas industry**

By mid-2019, the Council will bring together relevant regulatory and scientific data on gas in an informative and easily accessible format. On 25 August 2017, the Council agreed a new Gas Supply Strategy Collaborative Action to communicate information for landholders and communities about the onshore gas industry, including information to assist landholders in negotiating access to land for gas developments.

Work is already underway through the Gas Industry Social and Environmental Research Alliance (GISERA) and a number of Collaborative Actions in the Gas Supply Strategy Implementation Plan.

### **Supporting the transition with a skilled workforce**

By mid-2019, the Council will facilitate the development of a national assessment of the future workforce requirements for the electricity sector to ensure a properly skilled workforce is available.

The Chair of the Council will write to the Skills Chair of the COAG Industry and Skills Council seeking agreement for the Councils to work collaboratively to develop the national assessment.

### **Facilitating new technologies**

The Council will direct the AEMC to review and update, by the end of 2018, the regulatory framework to facilitate proof-of-concept testing of innovative approaches and technologies.

Existing case-by-case arrangements do not support proof-of-concept projects as a natural part of the ongoing evolution of the NEM. The Memorandum of Understanding established by AEMO and ARENA to work on several proof-of-concept projects will inform AEMC's future work to update the regulatory framework.

### **Ensuring resourcing for trialling new technologies**

The ARENA Board and AEMO will work together to establish a program for proof-of-concept trials, with funds drawn from ARENA's existing allocation.

Design of the fund and program will build on learnings from the current joint ARENA/AEMO work on demand response and outcomes will be shared with industry.

The Council has asked ARENA and AEMO to develop the funding program across the remainder of 2017 in order to be available in early 2018.

## **Identifying priority projects**

In line with the integrated grid plan, the Council will task AEMO to, by mid-2019, develop a list of potential priority projects in each NEM region that governments could support if the market is unable to deliver the investment required to enable the development of renewable energy zones.

AEMO will also develop a rigorous framework to evaluate the priority projects, including guidance for governments on the combination of circumstances that would warrant a government intervention to facilitate specific transmission investments.

## **Markets for Fast Frequency Response services**

A future move towards a market-based mechanism for procuring Fast Frequency Response will only occur if there is a demonstrated benefit.

Consideration of a Fast Frequency Response market mechanism will be progressed through the AEMC's self-initiated Frequency Control Frameworks Review which commenced in July 2017. The Council will promptly consider any recommended rule changes.

## **Conducting a comprehensive review of the National Electricity Rules**

By the end of 2020, the ESB will conduct a comprehensive review of the National Electricity Rules with a view to streamlining them in light of changing technologies and conditions.

## **Reviewing how we plan for the future**

The Council will task the ESB to review the merits of giving AEMO a greater role in the transmission planning and decision-making process.

## **Assessing and improving the resilience of the NEM**

In recognition of the increased severity of extreme weather, by the end of 2018 the Council will develop a strategy to improve the integrity of energy infrastructure and the accuracy of supply and demand forecasting. The ESB will develop the strategy in close consultation with AEMO.

The Bureau of Meteorology is already developing plausible scenarios to stress test critical infrastructure for tolerance to extreme weather. Options to bring in additional expertise on climate change risks such as extreme weather will be investigated.

By mid-2019 the Australian Government will also lead a process to regularly assess the NEM's resilience to human and environmental threats. An assessment of the resilience of the NEM to human and environmental threats can be undertaken as a component of a national energy security assessment. This will be done in close consultation with relevant departments, national security agencies, and AEMO.

## **Improving cyber security preparedness**

The ESB has been tasked with developing, in consultation with the Australian Cyber Security Centre and the Secretary of the Commonwealth Department of the Environment and Energy,

an annual report into the cyber security preparedness of the NEM, with the first report to be delivered by end 2018.

Implementation strategies will be considered in consultation with the Attorney-General's Department, CERT Australia, other Commonwealth agencies and relevant implementing agencies as determined by the ESB.