

# Resource adequacy and ageing thermal generation retirement

This pathway seeks to provide the right incentives to support the orderly retirement of thermal generators and timely investment in an efficient mix of resources (firm flexible generation, variable renewable energy and storage) to maintain reliability.

## What is a jurisdictional strategic reserve?

- A jurisdictional strategic reserve (JSR) would allow states and territories in the National Electricity Market (NEM) to pay for additional capacity (such as generators that do not participate in the market or large energy users who can temporarily reduce their usage) to be available during periods of very high demand.
- This JSR capacity would not be allowed to participate in the normal day-to-day operation of the electricity system but would be kept ready for when it is needed during periods of high demand such as during heatwaves, or when natural disasters interrupt transmission infrastructure.
- This will ensure that state and territory governments are able to maintain enough capacity in their region to ensure reliable and secure electricity for their consumers as the percentage of weather dependent generators increases.

## What are the improvements to transparency of generator availability?

- In the NEM, the day-to-day operation of the energy system is managed by the Australian Energy Market Operator (AEMO).
- AEMO ensures that the system is reliable, secure and that electricity supply meets demand every second of the day.
- AEMO collects a range of information from participants to ensure the system will have sufficient reserve supply, in case of any shortfalls.
- This reform will assist in earlier identification of risks of insufficient generation capacity, such as when a generator may be planning to mothball, and how long it would take for the mothballed generator to return to operation if needed.
- This reform will also require AEMO to notify states and territories in the NEM when a change in generator availability creates a shortage for that jurisdiction.

## What are the principles for jurisdictional investment schemes?

- The Energy Security Board (ESB) recommended a set of principles be adopted by jurisdictions to guide the development of future government investment schemes.
- Having these principles will help remove uncertainty for energy market investors and ensure government supported investments best match the physical needs of the energy system.
- Energy Ministers agreed to a set of principles, based on input from the ESB and jurisdictions, [here](#).

## What are the reforms to the Retailer Reliability Obligation?

- The Retailer Reliability Obligation (RRO) requires retailers to enter into sufficient contracts to cover their expected share of forecast peak demand in the event that a significant shortfall in electricity generation is forecast.

- The RRO is triggered by the Australian Energy Regulator (AER) when AEMO forecasts a shortfall three years out.
  - Triggering begins the obligation on retailers to ensure they have sufficiently contracted for the supply of electricity they anticipate to sell to their customers.
- This reform would allow Energy Ministers in the NEM to trigger the RRO in their jurisdiction, if they see it as necessary.
  - Should a shortfall emerge and persist one year out, retailers' contracts books would then be assessed by the AER.
  - Currently, only the South Australian Energy Minister has this power with respect to South Australia.
- This Ministerial trigger provides additional flexibility for Ministers to activate the RRO if they deem it necessary based on information beyond AEMO forecasts. This will provide jurisdictions additional confidence that reliability will be met until a capacity mechanism can be implemented.

### **What is a capacity mechanism?**

- Since 2010, 20 per cent of NEM coal-fired generation has retired and a further 69 per cent is expected to close by 2040.
- AEMO forecasts that up to 19 GW of fast, dispatchable generation, equivalent to more than six times the largest generator in the NEM, will be needed to firm up the influx of variable renewable energy – for the times when the sun is not shining and the wind is not blowing.
- Currently, generators are only paid for the energy they produce.
- A capacity mechanism, commonly found in most international markets facing similar challenges to Australia, creates a second marketplace for availability. This puts a value on generators being available during periods where demand could exceed supply.
- A capacity mechanism is intended to create a clear, technology neutral, long-term signal for investment in both existing and new dispatchable capacity (such as coal, gas, batteries and hydro) to ensure reliable supply is maintained as the share of renewables grows rapidly.
- Detailed design work is needed to settle the details of how a capacity mechanism could operate.
- Energy Ministers have asked the ESB to provide advice on a final design by the end of 2022.

### **What are orderly exit management contracts?**

- Orderly Exit Management Contracts are bilateral arrangements (usually between a government and a closing generator) that help to ensure that generator does not exit the system until sufficient capacity can be brought online to replace it.
- The terms of these contracts are bespoke.
- While the ESB did not make a recommendation for these contracts, it proposed that certain jurisdictional investment scheme principles should apply to them where they were used.
- National Cabinet has endorsed Energy Ministers' decision for further consideration of these contracts. This work will be carried out by the ESB, and will need to complement the design work on a capacity mechanism.