

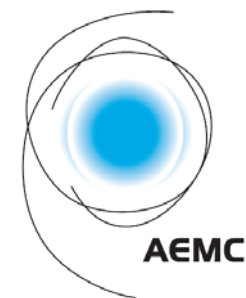
The State of the Australian Energy Market



JOHN TAMBLYN
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AUSTRALIAN ENERGY MARKET COMMISSION

OVERVIEW

- Current market design and national institutional structure arrangements
- Successful energy reform process to date
- Challenge is for the energy market to:
 - Provide sufficient generation capacity to meet growing demand
 - Respond and adapt to climate change policies



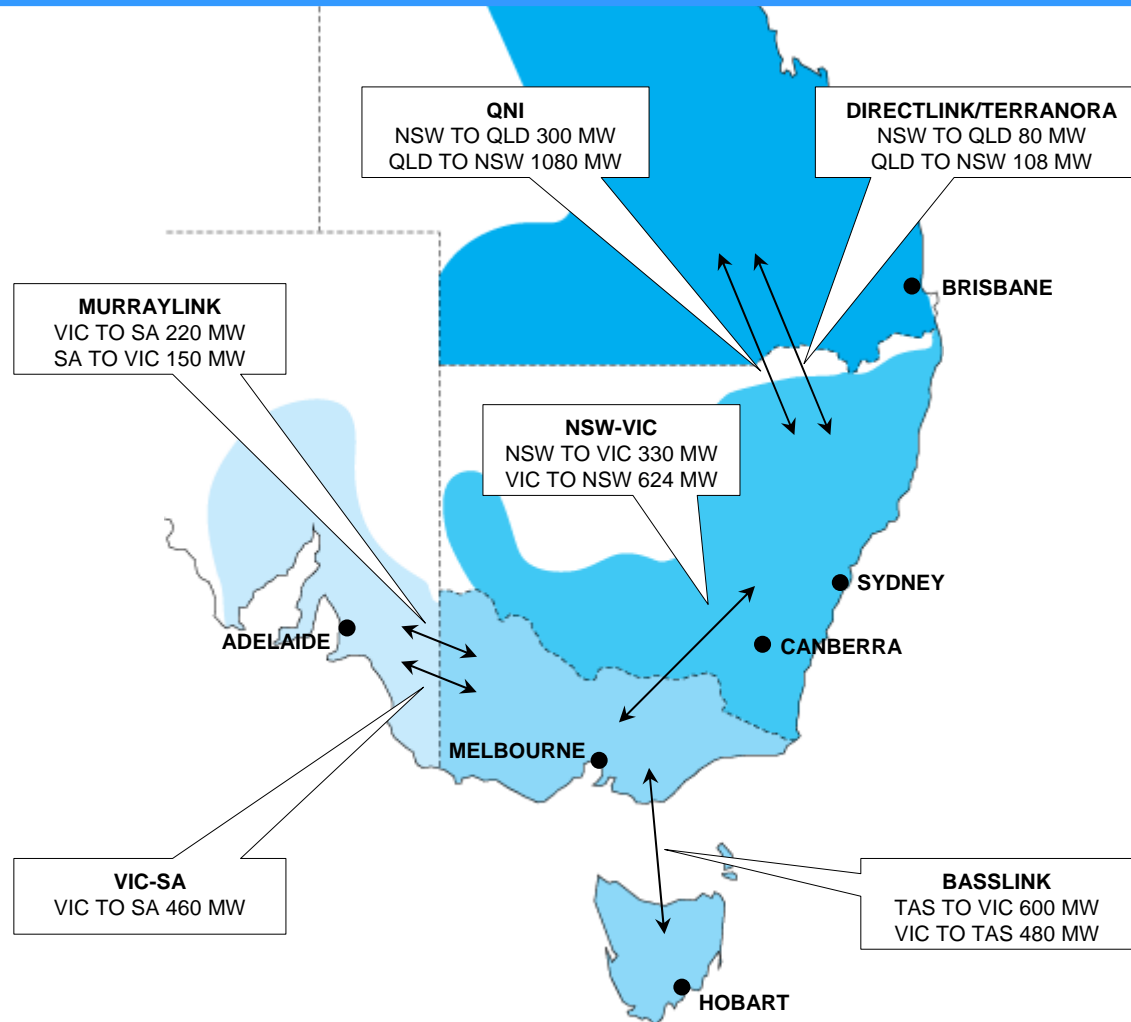
Current Market Arrangements



CRITICAL FEATURES OF THE ENERGY MARKET

- Electricity network made up of 5 interconnected regions
- Wholesale energy-only spot market, settled on a regional basis
- Transmission and distribution operate as a common carriage network
- Retail competition has been promoted, and residual price regulation is being removed once competition is found to be effective.

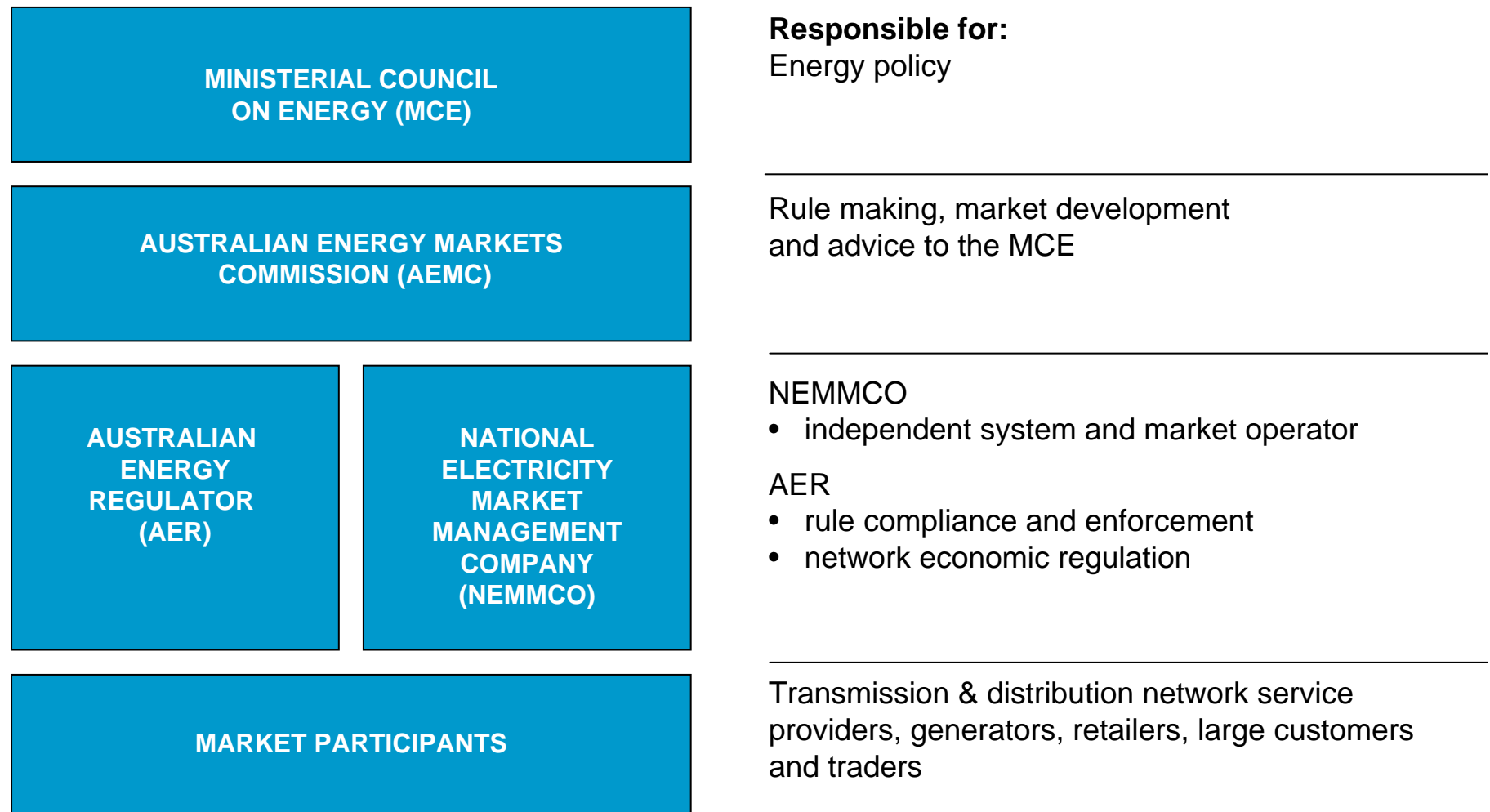
THE INTERCONNECTED NEM

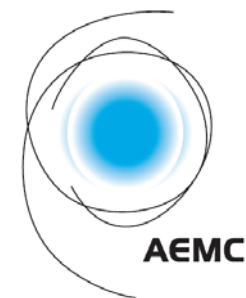


RELATIVE GEOGRAPHIC SIZE OF THE NATIONAL ELECTRICITY MARKET



INSTITUTIONAL STRUCTURE OF THE NEM

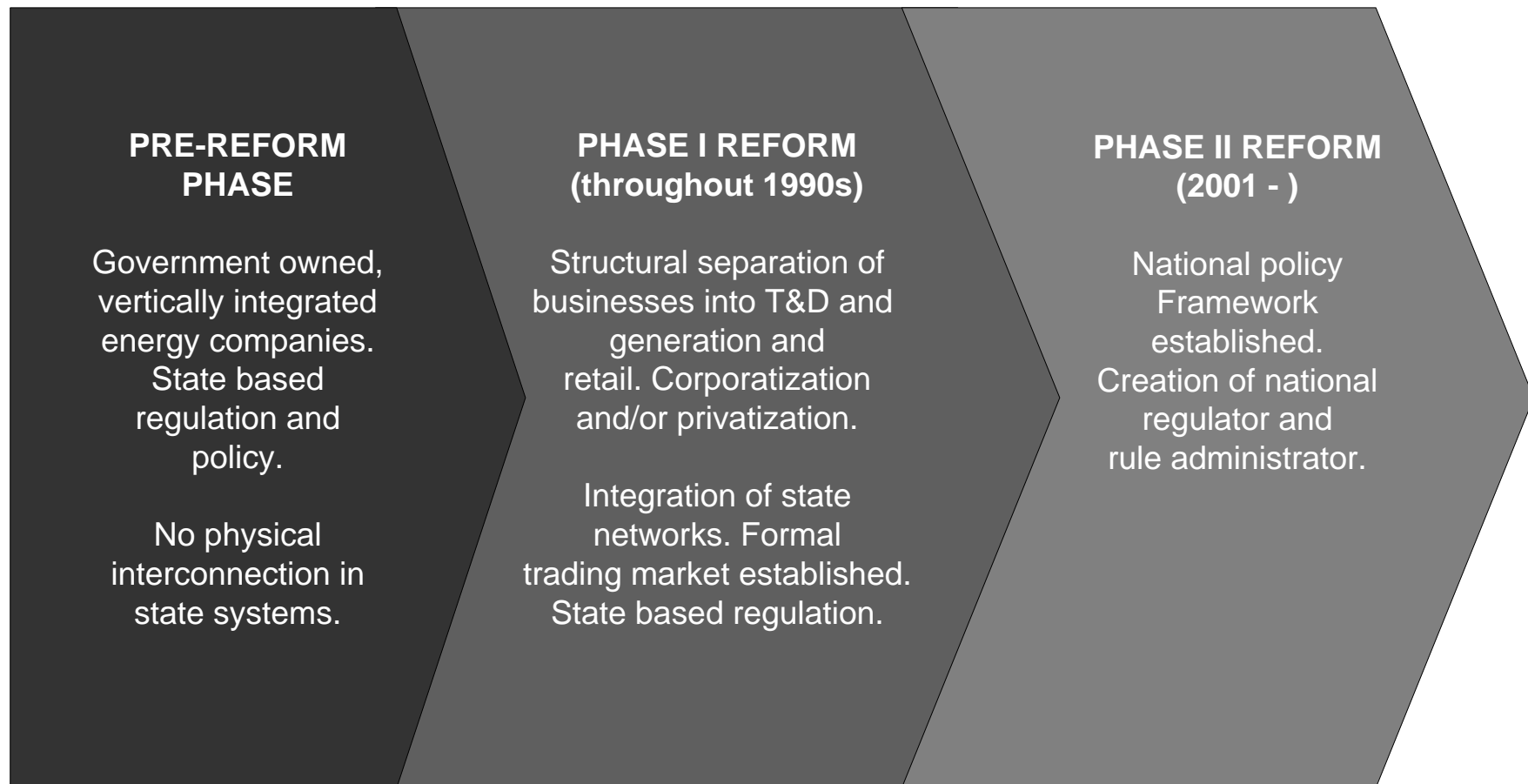


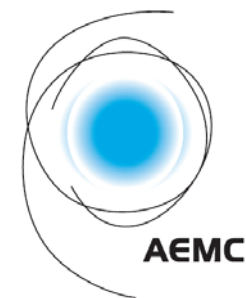


Path to reform



THE PATH TO REFORM

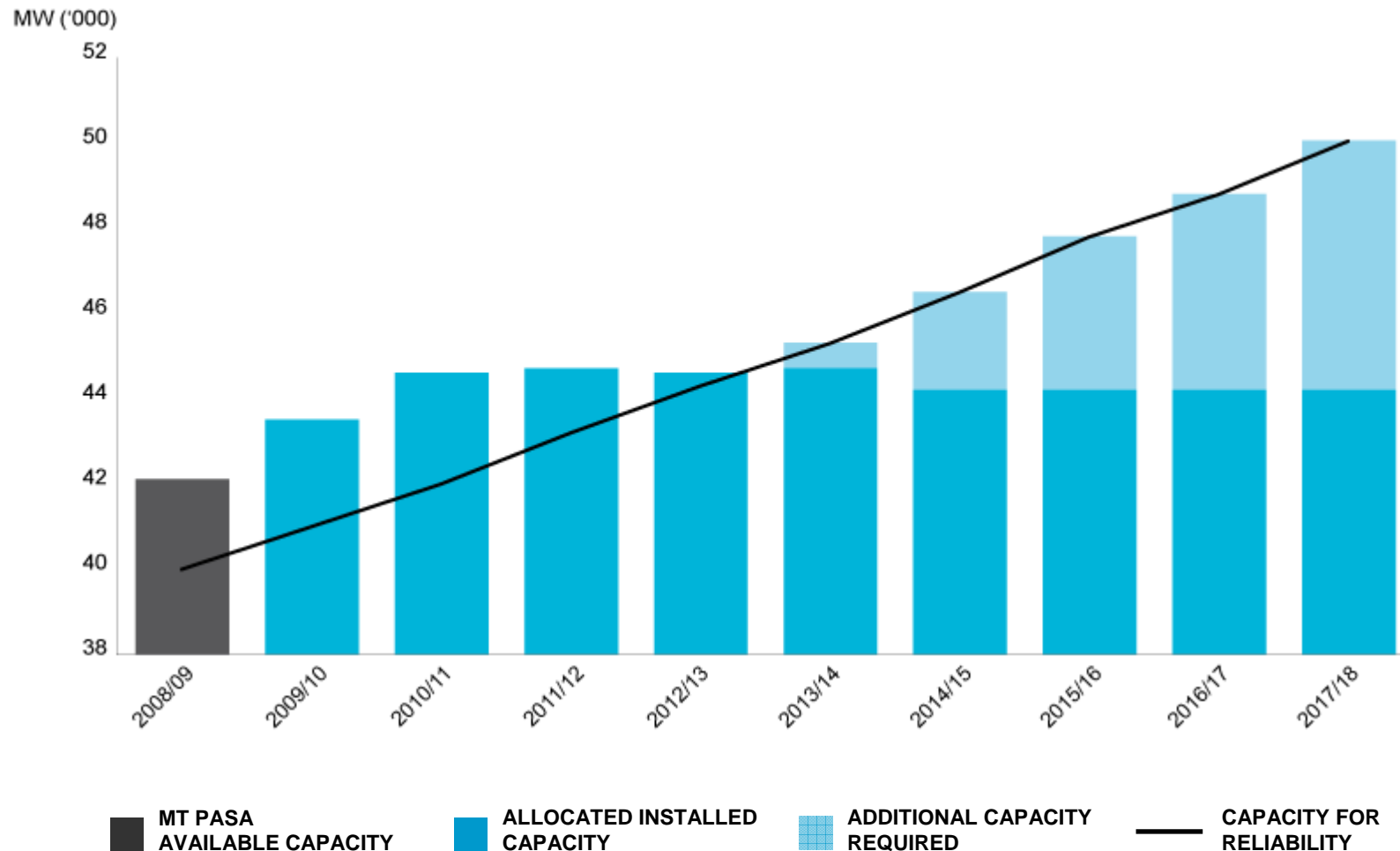




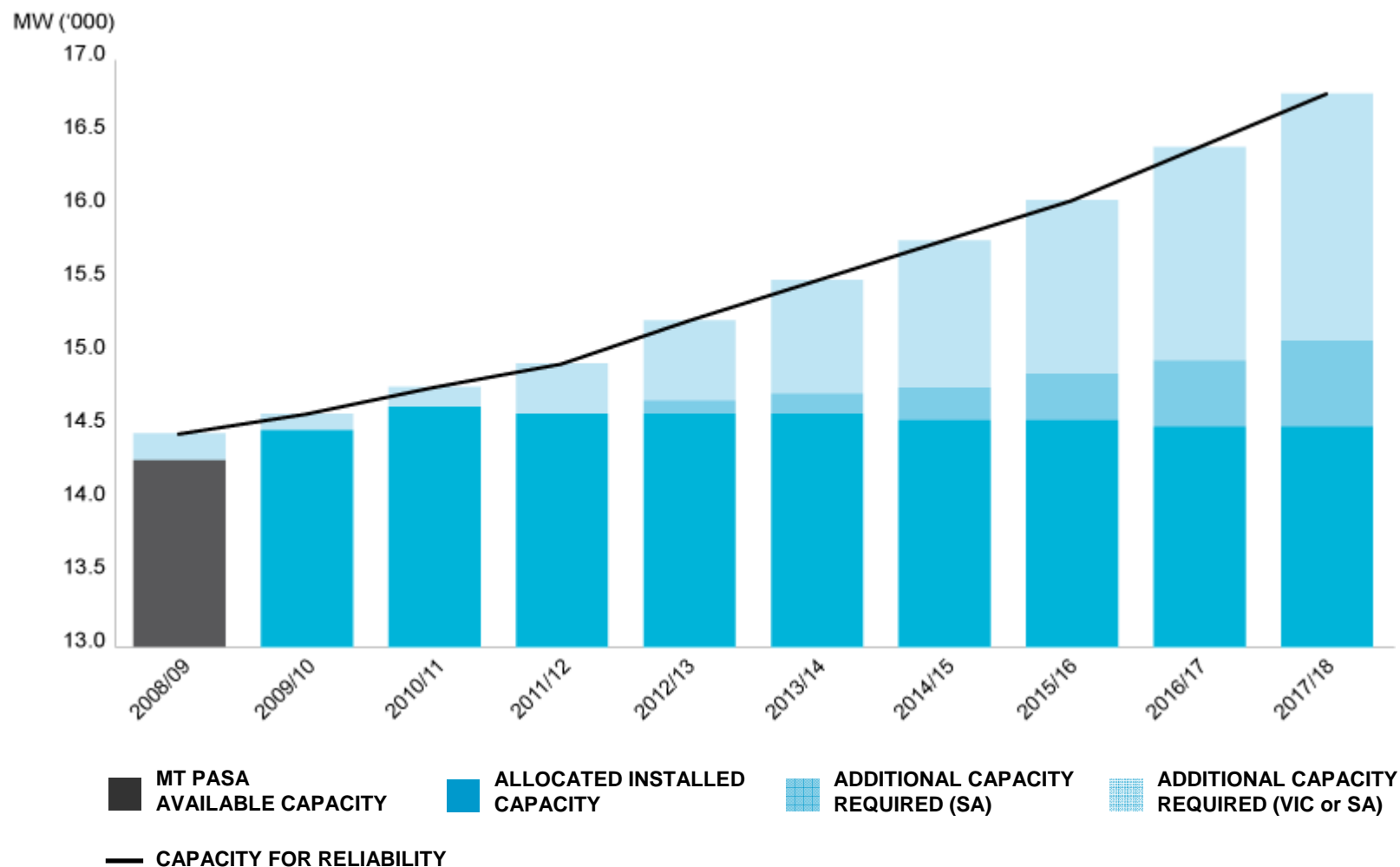
The need for new generation investment



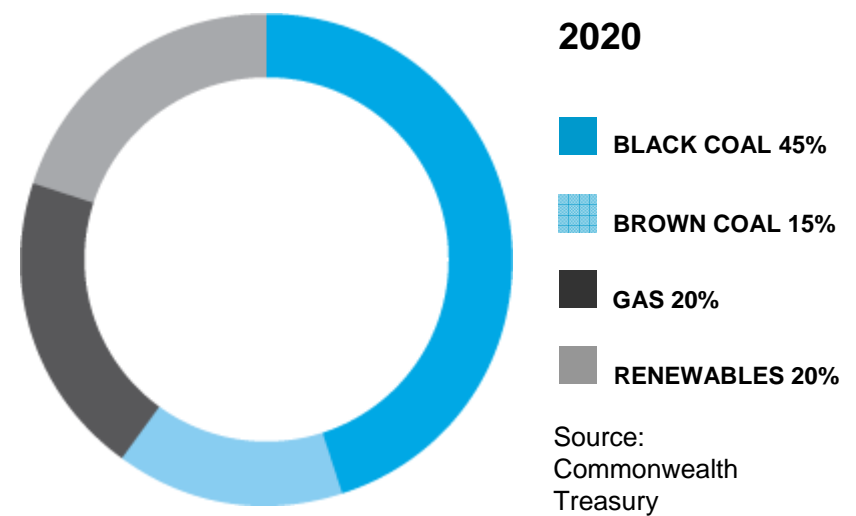
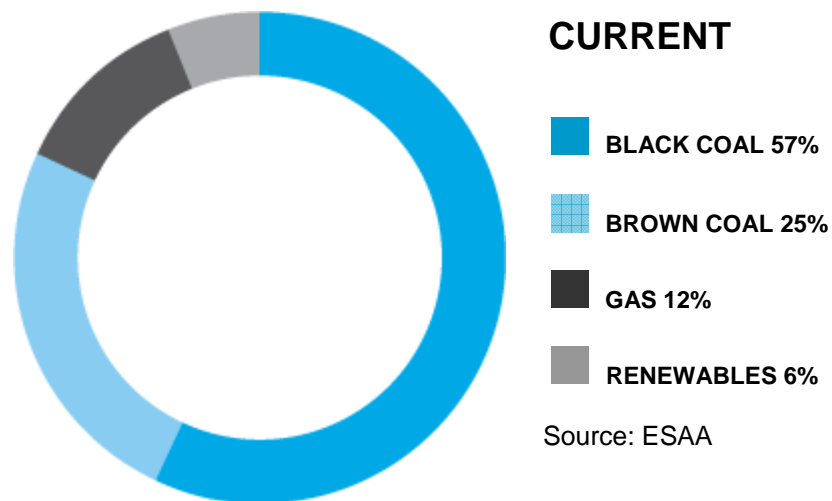
TIGHTENING DEMAND AND SUPPLY CONDITIONS – NEM



TIGHTENING DEMAND AND SUPPLY CONDITIONS – VICTORIA AND SOUTH AUSTRALIA

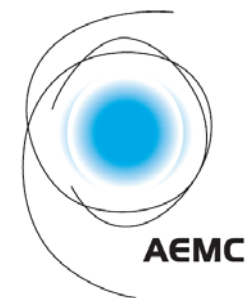


CURRENT GENERATION FUEL MIX IN THE NEM



CAN THE ENERGY-ONLY MARKET DELIVER NEEDED GENERATION INVESTMENT?

- Investment signals provided through:
 - Wholesale returns in excess of marginal production costs, which are limited by the market price cap
- Emergency reserve trader provisions where inadequate generation is forecast
- Need to consider whether market price cap is high enough and if not:
 - Should the market price cap be increased? OR
 - Is there a need for a capacity payment system?
- Security and reliability risks with more wind generation



Providing sufficient network capacity



CHALLENGES FOR NETWORK INVESTMENT

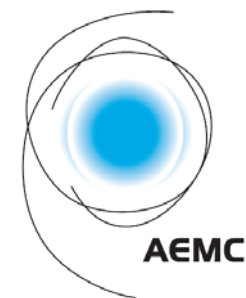
- Providing major extensions to the shared network
- Augmenting the existing shared network and inter-connector capacity in circumstances where it is warranted

IMPEDIMENTS TO EFFICIENT NETWORK INVESTMENT

- Funding of transmission investment is regionally based, while benefits can extend to the market as a whole
- Connection charging regime may not facilitate major extensions to new connecting generation
- Differences in funding and risk allocation as between electricity and gas network investments

OPTIONS FOR FUNDING NEW MAJOR EXTENSIONS

- May need to change current arrangements to better facilitate major extensions and augmentations to the shared network that extend beyond a region
- Spectrum of alternatives options to consider from:
 - Market based solutions (eg, 'Open seasons' or auctions for future capacity) to
 - More sophisticated planning (eg, involving the NTP or government directing the relevant transmission provider to undertake the investment in certain circumstances)
- Reforms to pricing and financing of network investments that benefit users in other regions



Retail competition is becoming effective



RETAIL COMPETITION IS BECOMING EFFECTIVE

- Retail competition for all customers has been implemented
- Currently reviewing the effectiveness of competition in each state
 - Victoria and South Australia have effective competition
- Where competition is effective, residual regulated default tariffs will be removed
- Risks to retailer viability and generation investment incentives from continuing retail price regulation

CONCLUSIONS

1. Providing significant new generation investment is the critical challenge for the energy-only market
2. Climate change policies will change the generation mix and promote more intermittent generation:
 - Security and reliability implications
3. Changes to the network planning and investment framework will be necessary to ensure major extensions and augmentations occur efficiently

