AEMC Review: Differences between actual and forecast demand in network regulation

Stakeholder Workshop
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Scope of the request for advice

- Demand (peak and actual) drive both network costs and retail prices for consumers
- The use of demand forecasts in five yearly network determinations and annual tariff processes will create uncertainty and risks as actual demand will inevitability differ from forecasts
- Risks for both consumers and network businesses
- Nature and impact of those risks will differ if actual demand is more than or less than forecast
- SCER is requesting advice on how those **risks are managed** under the current regulatory frameworks including how **such risks are allocated between businesses and consumers**.
- This request for advice is not about the processes AER employs for determining demand forecasts for network determinations

Approach to the request for advice

1. What the risks associated with using forecast demand?
   - Expenditure risk
   - Volume risk
2. What are the impacts/costs of those risks?
   - NSP incentives/investment
   - Consumer impacts
3. How are such risks and costs managed under the current framework and differ between control mechanisms (price cap or revenue cap)?
   - Businesses investment planning processes
   - AER decision making under the rules
4. Identify potential improvements consistent with NEO
   - AER's ability to consider utilisation of previously approved capex
   - Annual network tariff setting

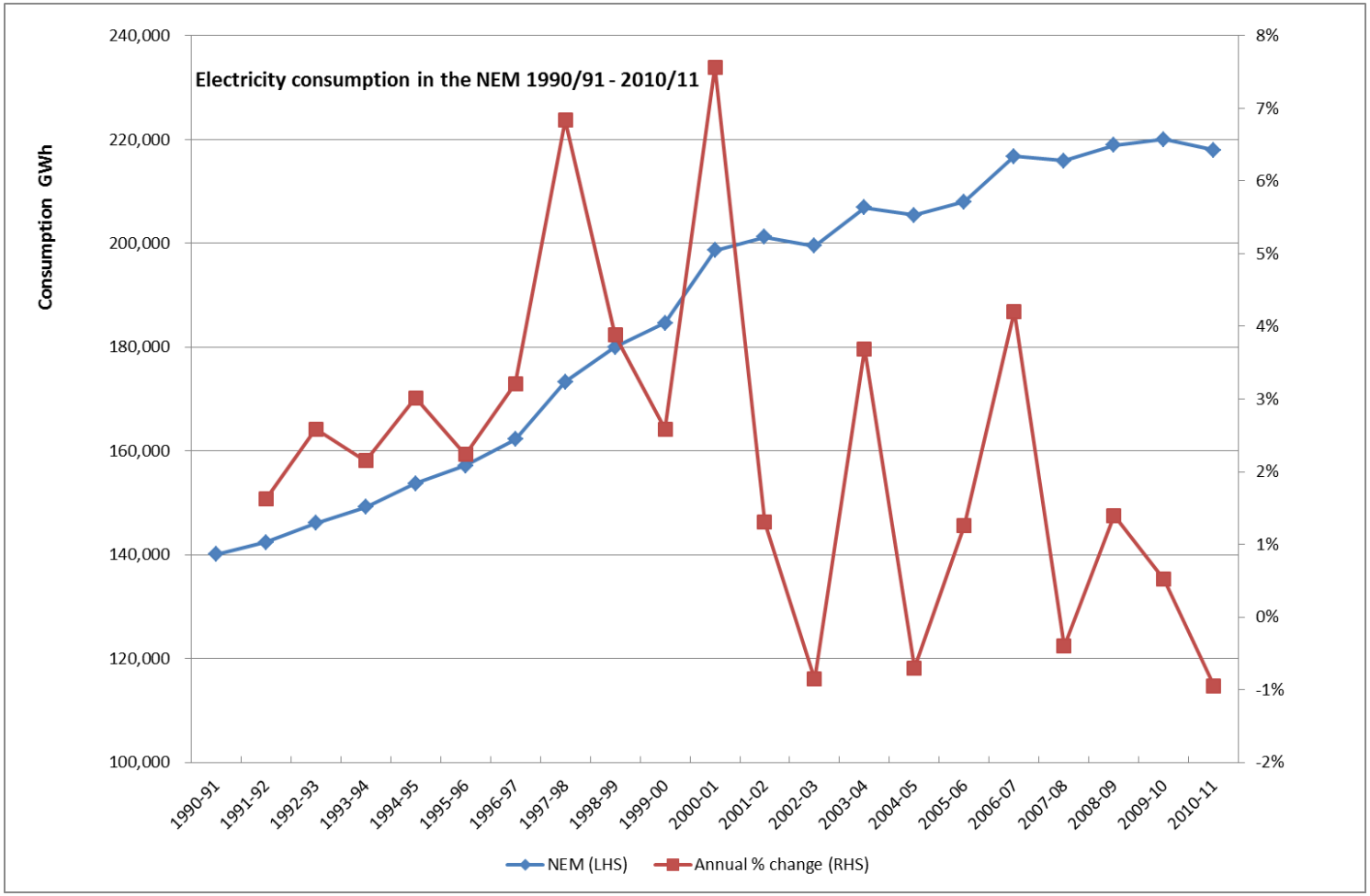
Expenditure Risk

Scenario	Business Impact	Consumer Impact	Key aspects of the regulatory frameworks
Actual demand is more than forecast demand	Potential insufficient revenue allowance to cover investment needs (if tariff is not efficient cost). Risk of penalties if reliability standards are breached	Risk of reliability if network does not build to meet extra demand	• Capex criteria • WACC • Capex incentives • AER guidelines • Contingency projects • Demand management scheme • Ex-post review of additional expenditure • Cost pass through • Regulatory investment tests
Actual demand is less than forecast demand	Uncertainty whether fall in demand is temporary or structural. Implications for next determination	Risk of inefficient expenditure and hence prices are too high. Have to pay off asset over the asset life (40 -60 yrs)	

Volume Risk

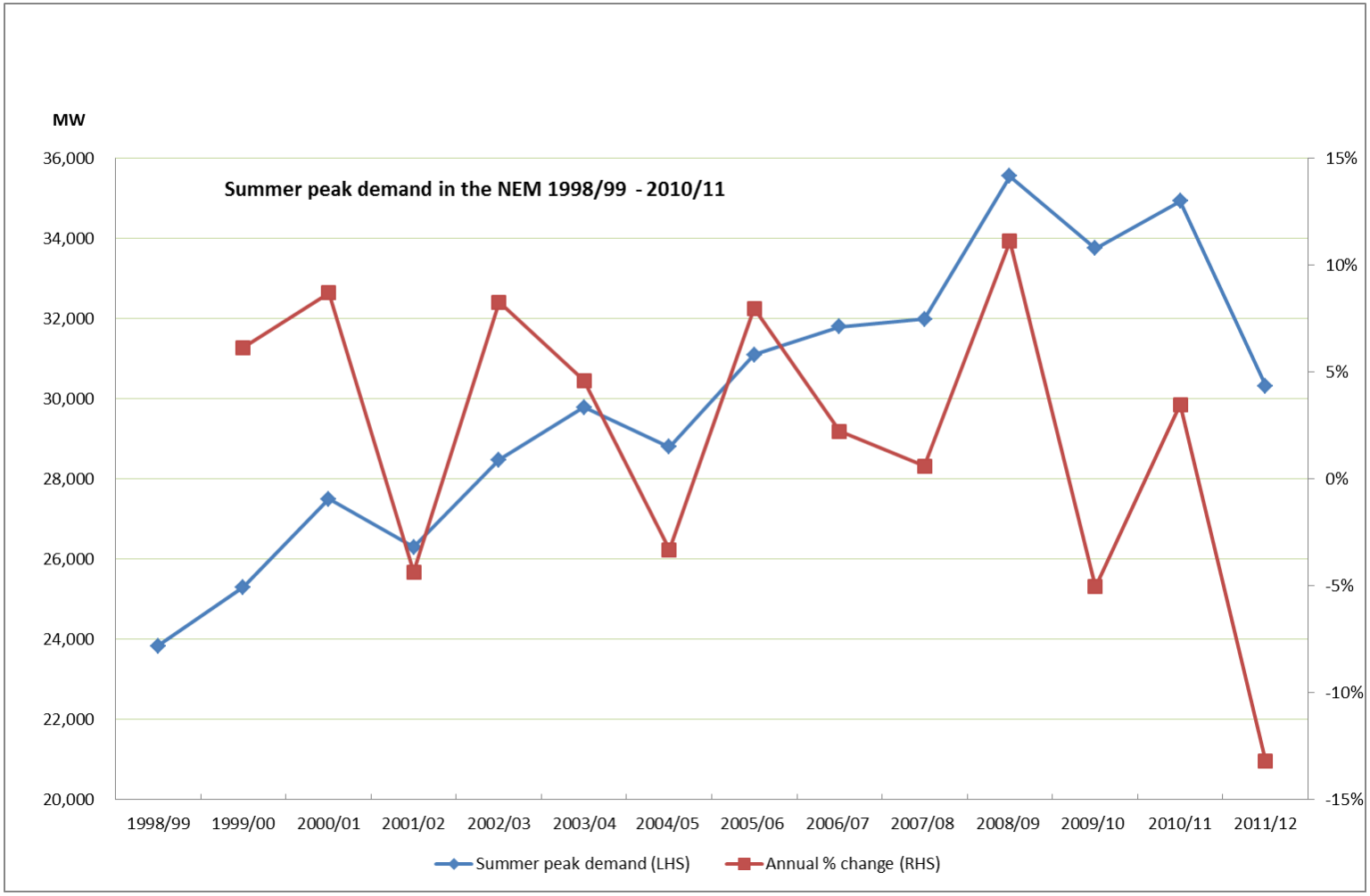
Scenario	Business Impact	Consumer Impact	Key aspects of the regulatory frameworks
Actual demand is more than forecast demand	Extra revenue for price cap NSPs (profit neutral if price equal to efficient cost)	Lower prices in next year for revenue cap NSPs	• Choice of control mechanisms • Tariff structure (fixed versus variable) • How volumes, consumer numbers are used to set annual prices
Actual demand is less than forecast demand	Loss of allowed revenue for price cap NSPs(profit neutral if price equal to efficient cost)	Higher prices in next year for revenue cap NSPs Price cap business may seek to migrate risk through tariff rebalancing	

Context – Overall demand trends



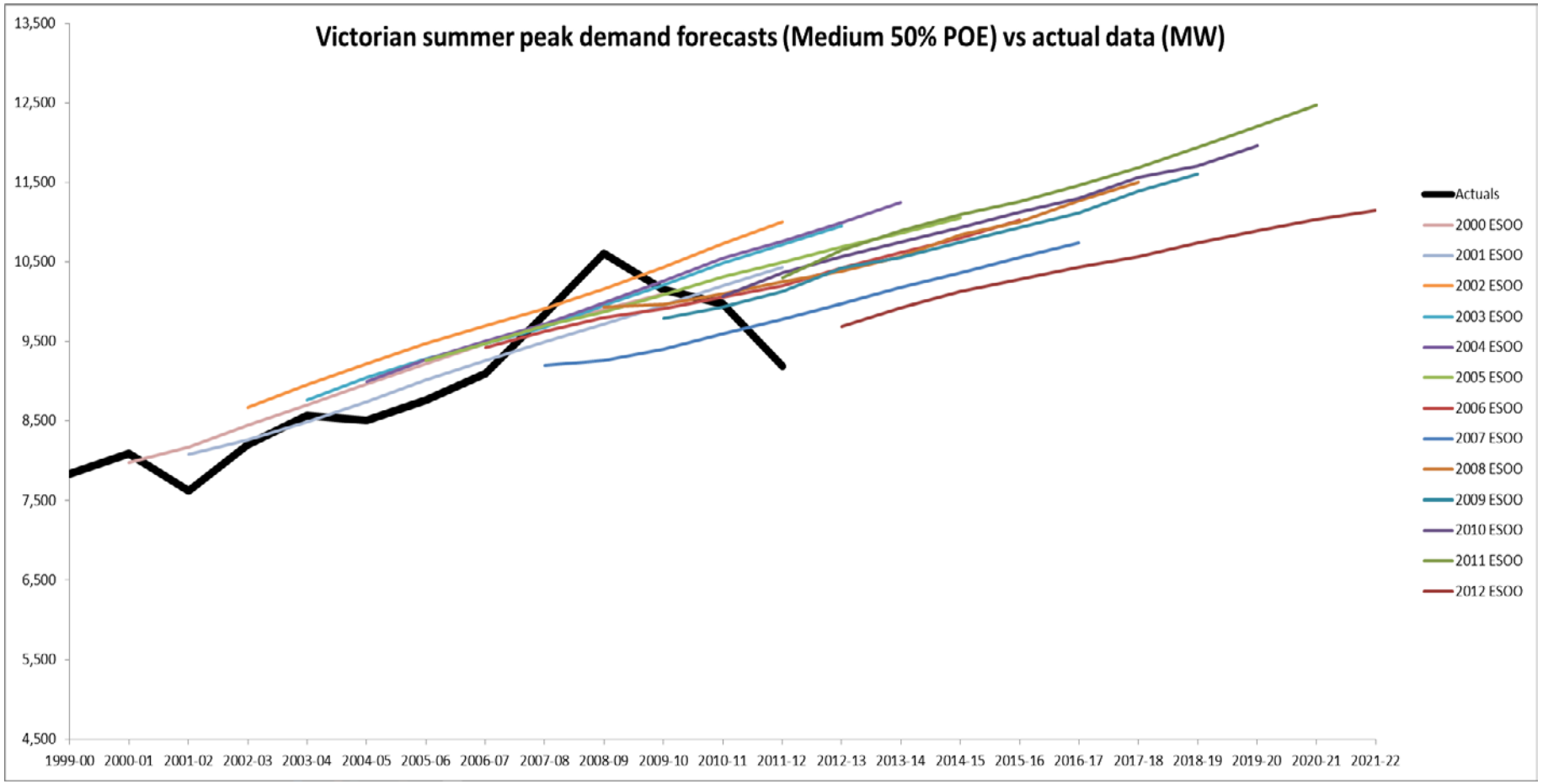
Source: Bureau of Resources and Energy Economics, 2012 Australian energy statistics data, Table I.

Context – Peak demand trends

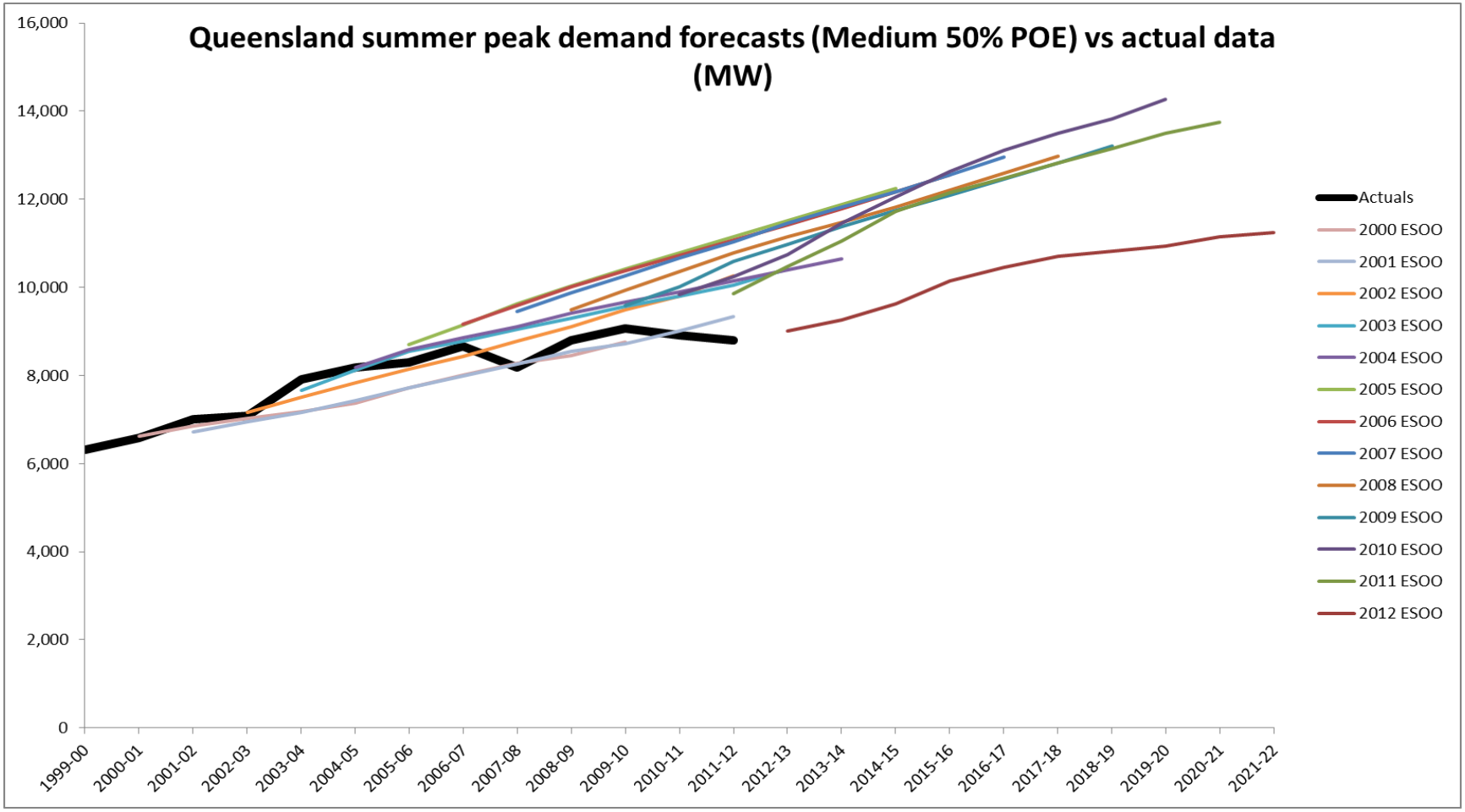


Source: Australian Energy Regulator website www.aer.gov.au

Context – Forecast vs actual demand (VIC)



Context – Forecast vs actual demand (QLD)



Points to consider:

- If network tariffs are set at efficient costs, most of the impacts on business go away because profit becomes neutral to demand variations **but not for consumers.**
  - However Power of Choice found that network tariffs are far from being efficient

- AER does currently consider differences in actual and forecast demand in previous regulatory periods in setting efficient expenditure going forward
  - Optimisation of past expenditure creates other impacts
  - AER approves an overall allowance of money and does not do a project by project assessment

Impact on consumers

- SCER has asked us to consider whether the amendments to the Rules are needed to ensure consumers receive the benefits of sustained reductions in demand
- Need to take a holistic view, as there are risks for both businesses and consumers for both demand scenarios
- Key is whether the risk allocation is efficient and appropriate
- Regarding expenditure risk, there are a number of mechanisms under existing rules to address uncertainty and incentivise efficient expenditure
- Regarding volume risk, we need to consider whether the impacts on consumers are being appropriately taken into consideration in two key areas
  - Choice between revenue cap and price cap
  - Tariff structure

Current WACC allowances for NSPs

Given that the risks are different under revenue cap versus price cap for businesses and consumers, should there be a corresponding difference in the weighted average cost of capital?

Revenue Cap NSPs	Price Cap NSPs
Transgrid = 10.05%	NSW DNSPs = 10.02%
ElectraNet = 10.65%	SA Power = 9.76%
Ergon/Energex = 9.72%	SP AusNet = 9.75%
Powerlink = 8.61%	VIC DNSPs = 9.49%
Transend = 10%	
Aurora Energy = 8.28%	

Tariff rebalancing

- Should price cap network businesses be allow to do tariff rebalancing as a means to address their volume risk?
- Two examples:
  - Victorian DNSPs during previous regulatory period
  - Ausgrid Network use of system charges 2012/2013
- NSPs seem to be able to maximise the upside risk of actual demand and minimise the downside risk through tariff rebalancing.

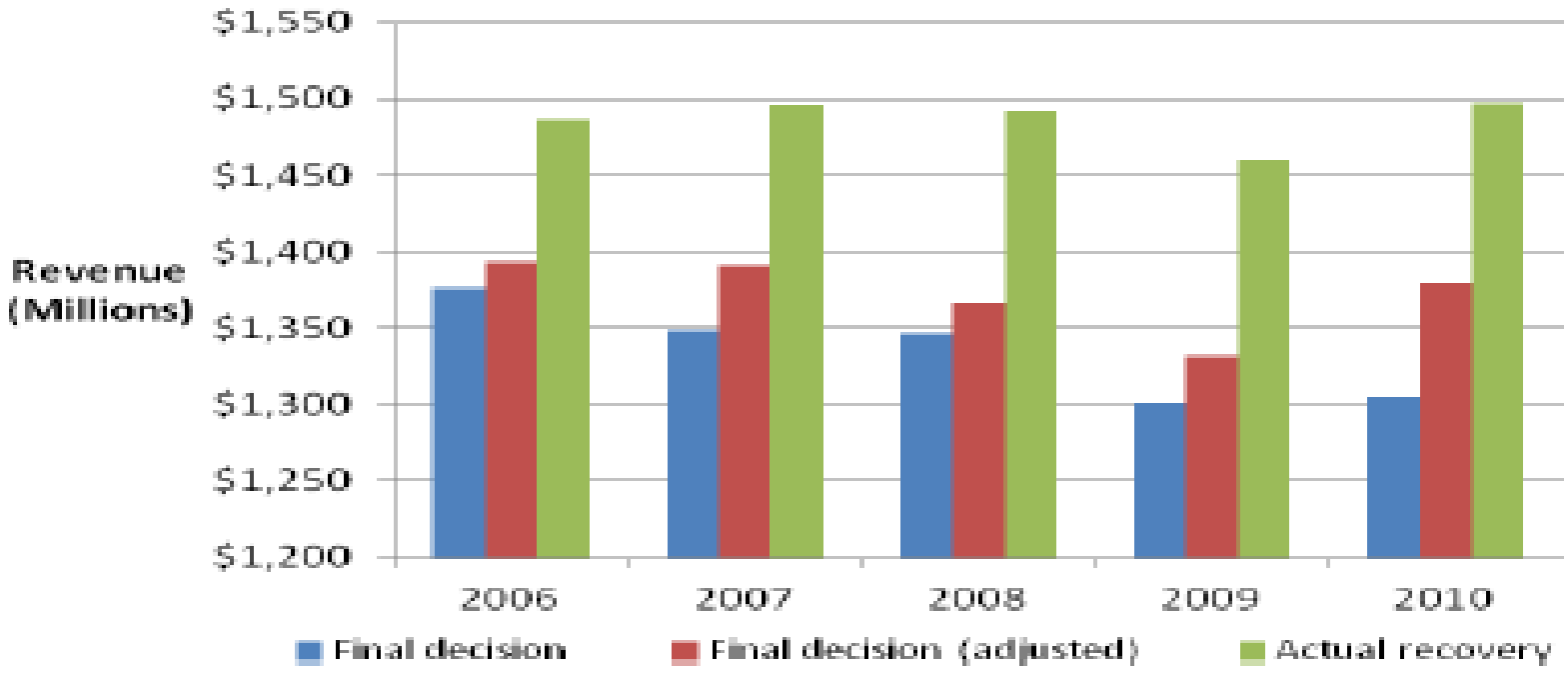
Tariff rebalancing under price cap: Ausgrid's new Network Use of system charges 2012/2013

- In NSW, transmission NSP is revenue cap and distribution NSP is price cap
- Ausgrid recovers transmission charge through its network use of system charge
- In 2012/13 Ausgrid moved from a two tier block tariff to a three tier block tariff
- Effect was to recover a larger proportion of distribution costs in the low volume consumption bands and a larger proportion of transmission costs in higher consumption bands
- Any shortfall in actual demand will impact more on transmission revenue than distribution revenue. However any shortfall in transmission revenue will be recovered from consumers in subsequent years.

Tariff rebalancing under Price Cap: Victorian DNSPs during previous regulatory period

Increasing the price of components of particular services experiencing sales growth above its forecast

Figure B.6 Total Victorian DNSP revenue recover 2006–10



Source: AER analysis.

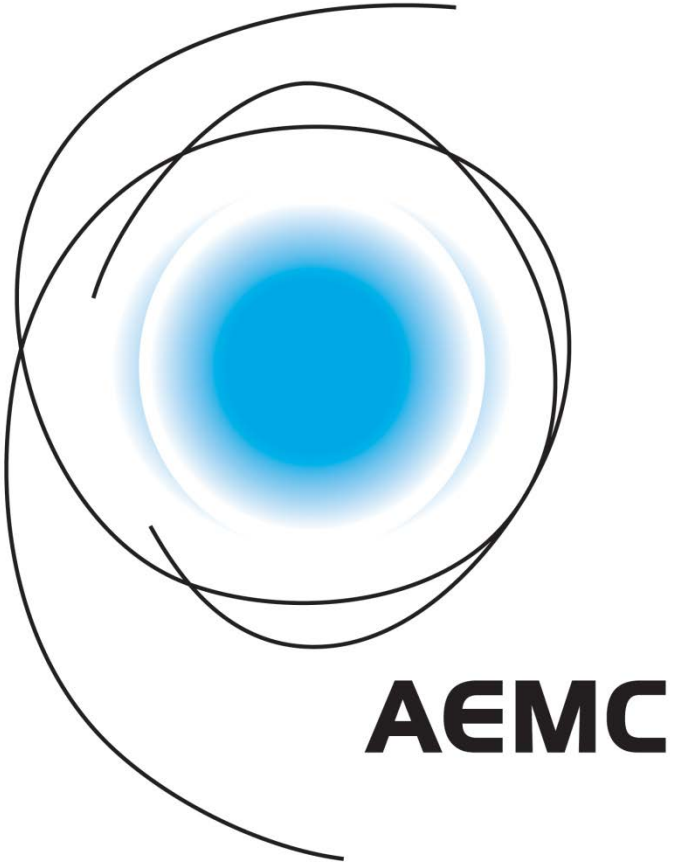
Today discussion topics:

- Following stakeholder presentations, we will go through the following three areas:

1. **Efficient Investment:** The role of demand forecasts to set allowed expenditure and how actual expenditure adjusts to differences between forecast and actual demand

2. **Revenue Recovery:** How is choice between revenue cap and price cap is determined and what are the implications for consumers/businesses of differences in demand.

3. **Tariff pricing:** How does the network tariff process affect the allocation of risks of differences in demand between networks and consumers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