



AUSTRALIAN  
ENERGY  
REGULATOR

**Andrew Reeves, Chairman**

**Asia-Pacific Partnership on Clean Development and Climate:  
Energy Regulatory and Market Development Forum**

**4 November 2010**

# Overview

## 1. Market Governance

- Policy maker / regulator / operator separation

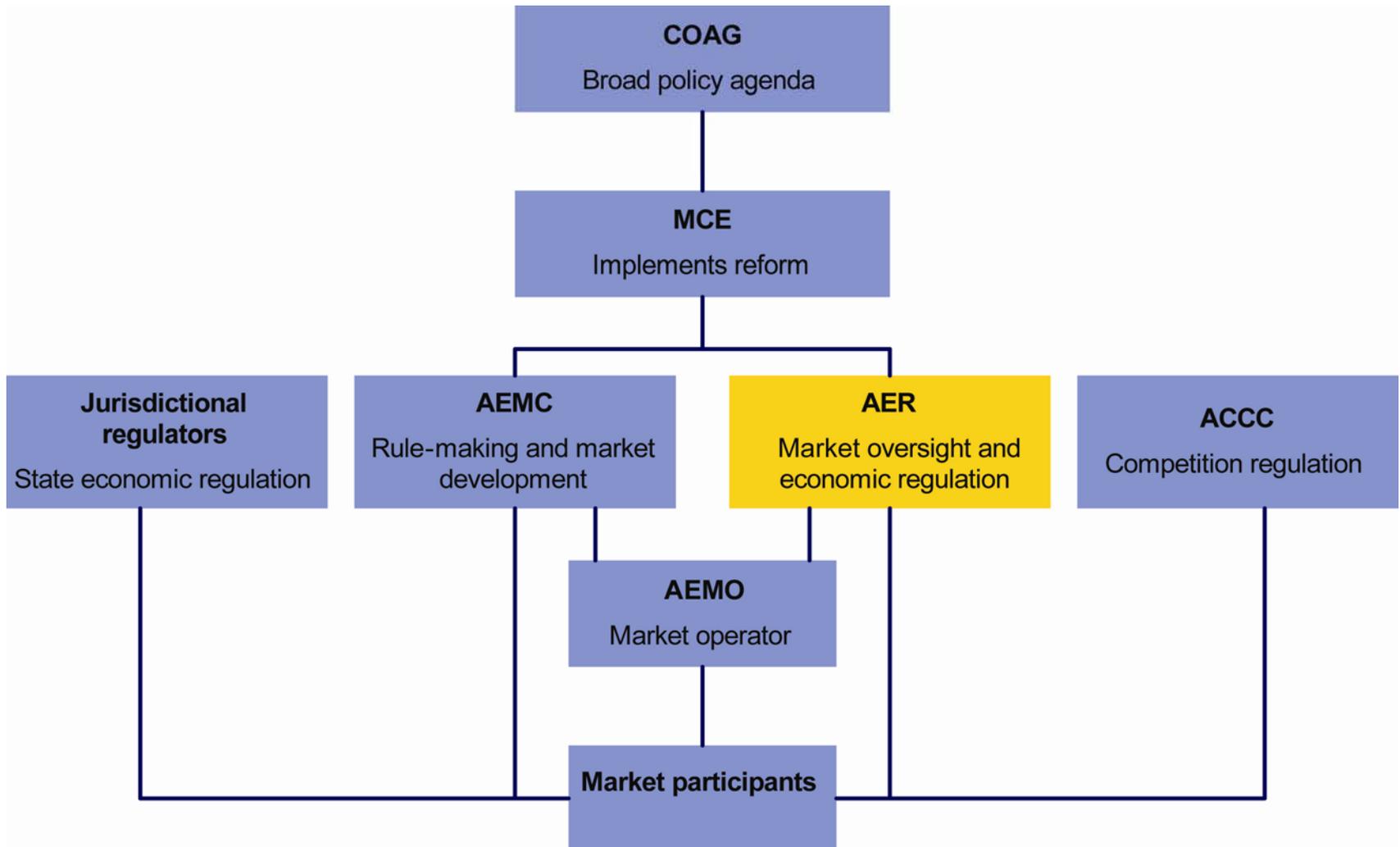
## 2. Gas and electricity market development

- NEM / SWIS
- Emerging gas market
- Coal seam gas

## 3. Energy price drivers

- Economic regulation in Australia
- Recent decisions
- Retail price impacts

# Market governance



# Electricity regulatory structure

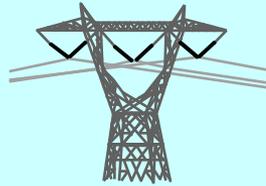
	QLD	NSW	ACT	Vic	Tas	SA	WA	NT
<b>Licensing</b>	Office of Energy	Minister for Energy / IPART	ICRC	ESCV	OTTER	ESCOSA	ERA	UC
<b>Retail Pricing</b>	Office of Energy	IPART	ICRC	DOI	OTTER / GPOC	ESCOSA		
<b>Non-price Retail</b>	Australian Energy Regulator (AER)							
<b>Distribution</b>								
<b>Transmission</b>								
<b>Wholesale</b>								
<b>Competition Regulation</b>	Australian Competition and Consumer Commission (ACCC)							

# Overview of AER's roles in energy

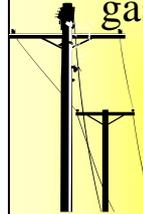
**Wholesale gas  
& electricity  
markets**



**Transmission  
networks &  
pipelines**



**Distribution  
Networks for  
gas/electricity**



**Retail  
& other  
distribution**



We monitor  
wholesale markets  
and enforce rules

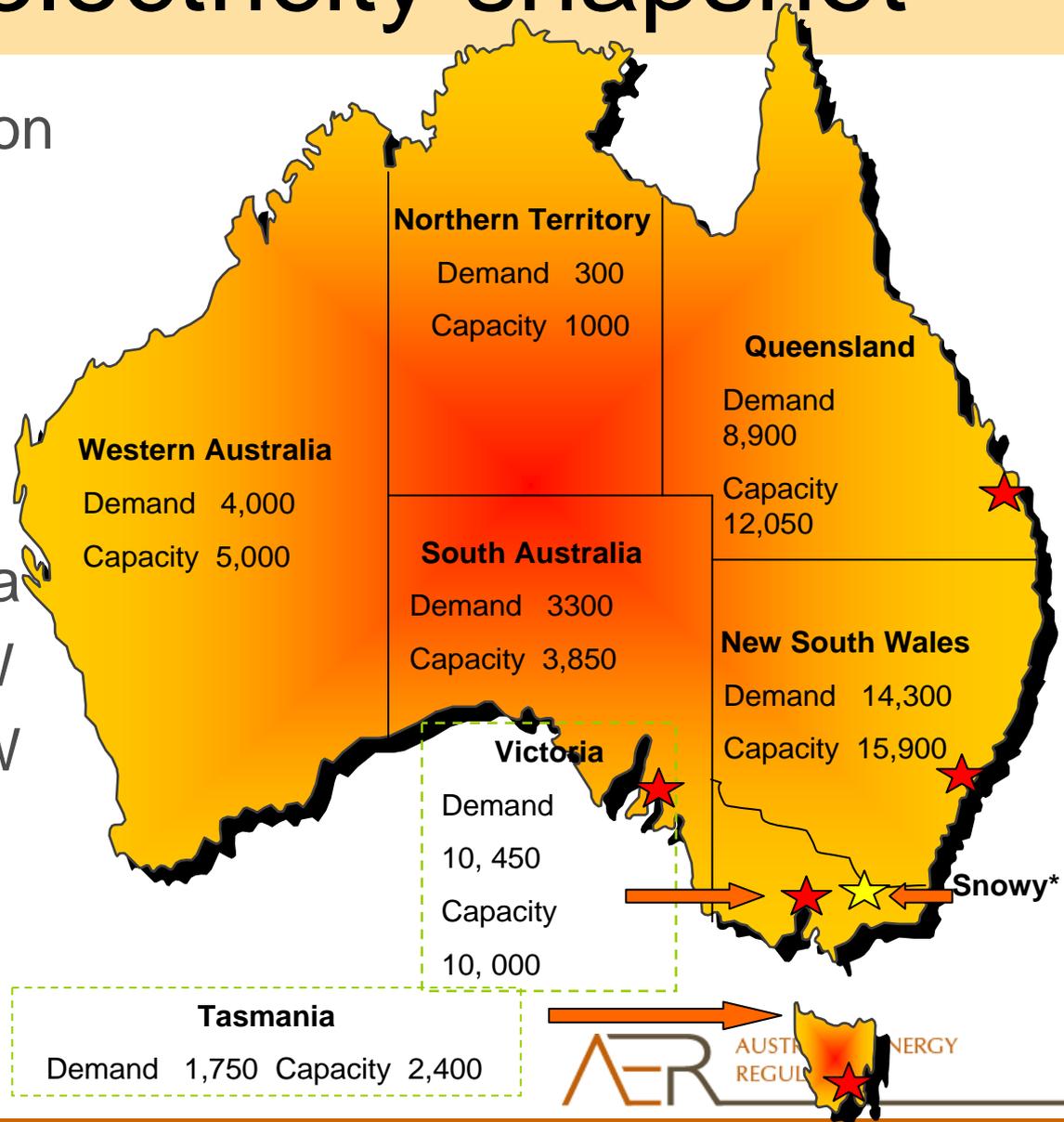
We regulate  
revenues of  
transmission  
businesses

We regulate  
revenues of  
distribution  
businesses

We will regulate  
non-price retail  
activities

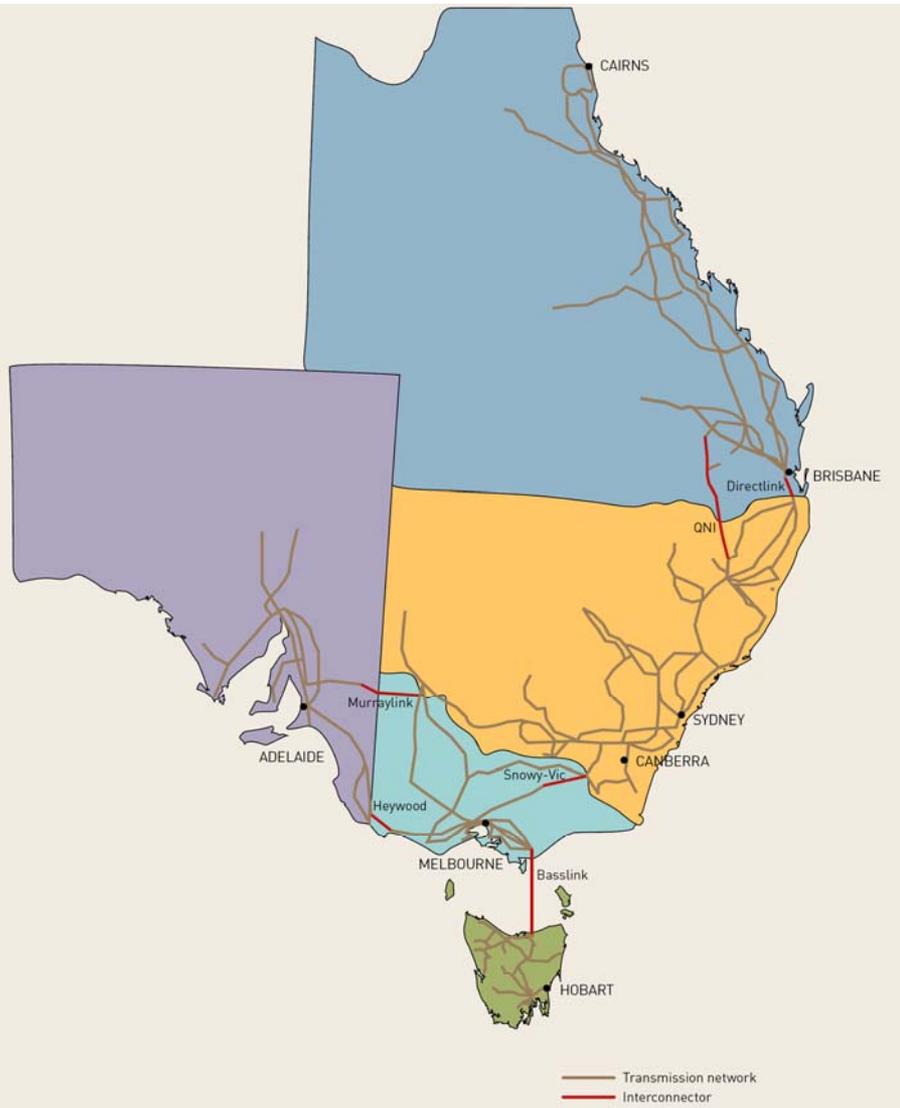
# Australian electricity snapshot

- Population ~ 22.2 million
  - 65% in capital cities
  - 90% on east coast
- Electricity
  - energy 213TWh pa
  - peak 38,000MW
  - installed 50,200MW



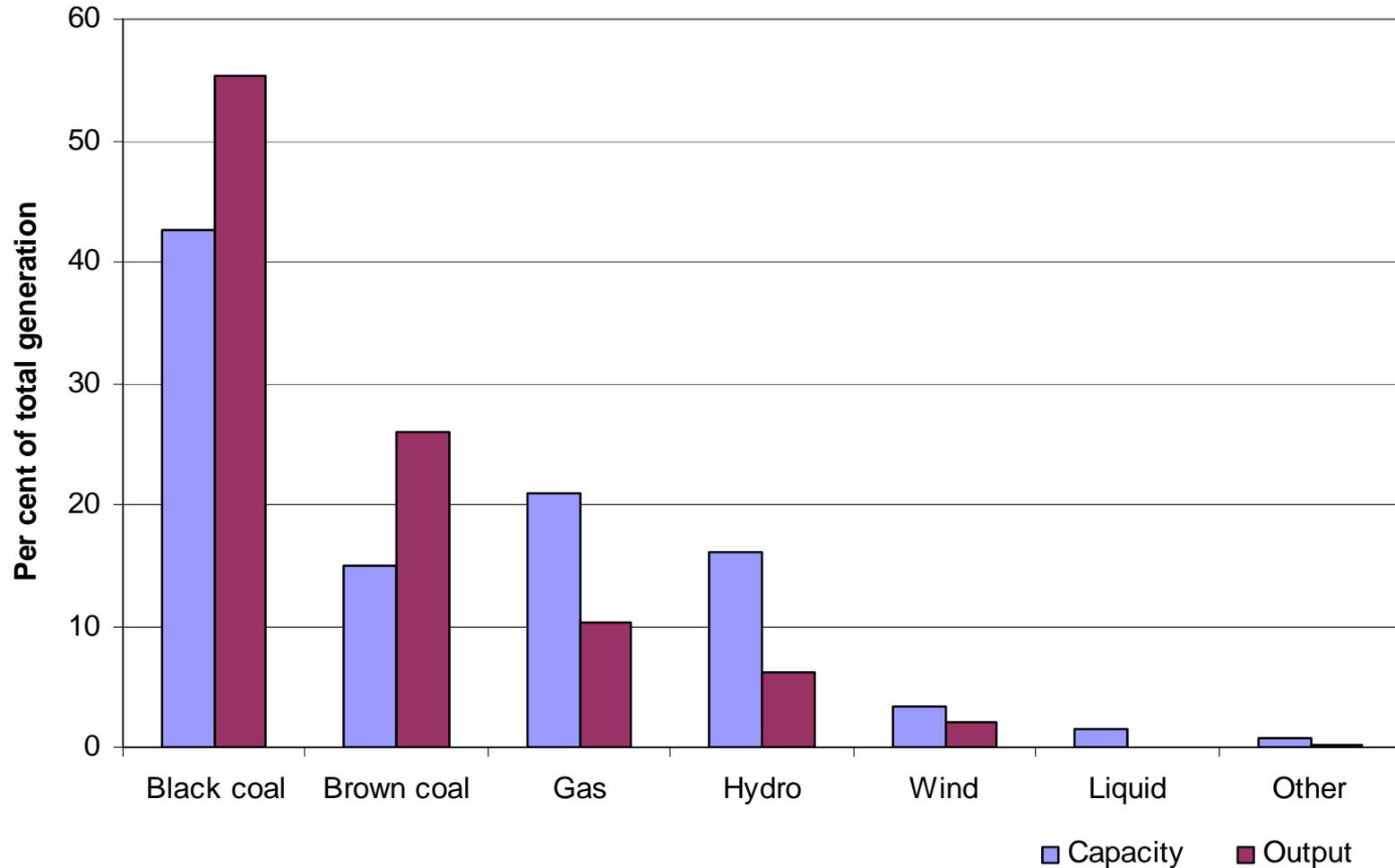
\* 3676MW at Snowy gen split between NSW & VIC

# National electricity market

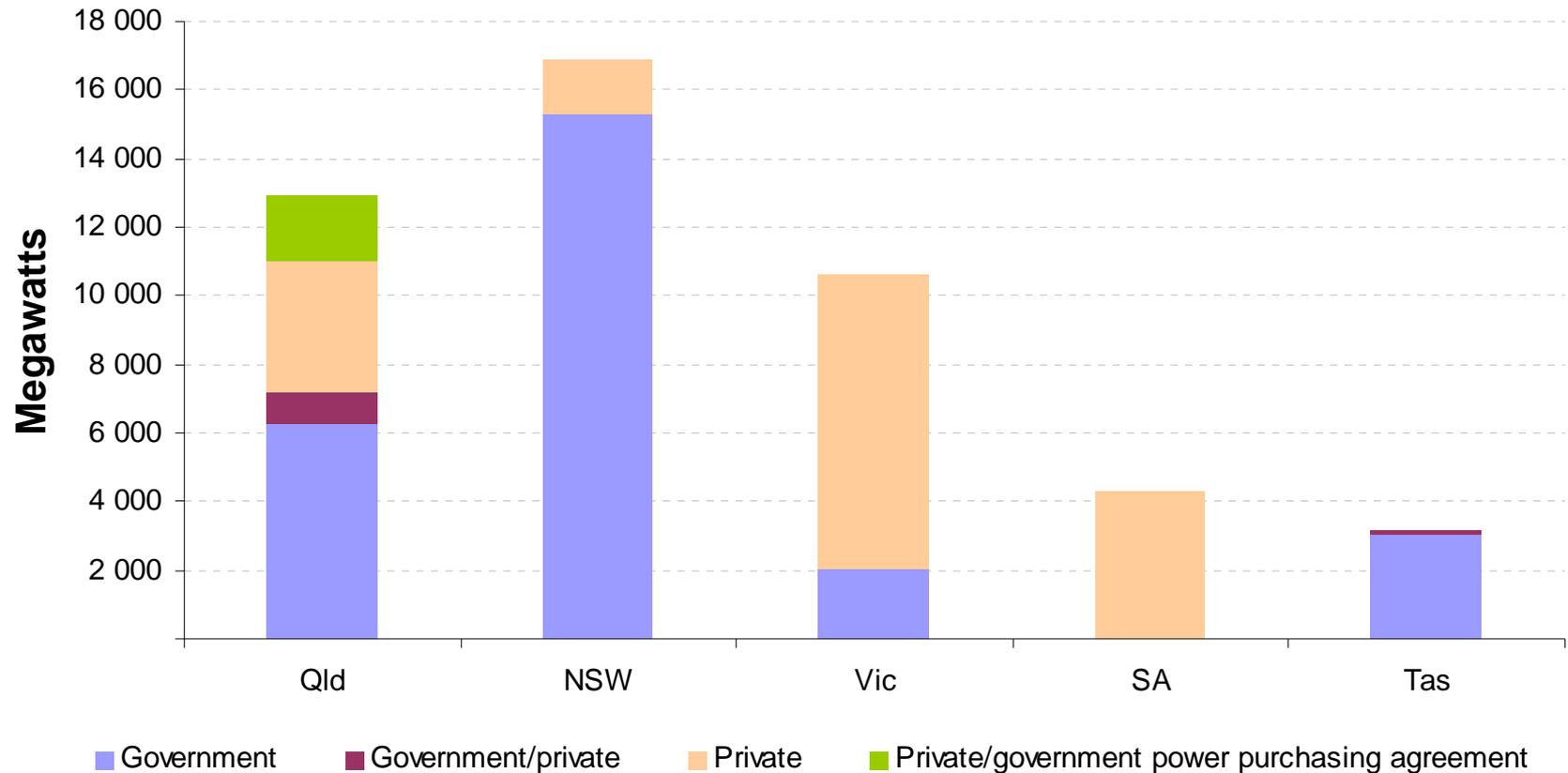


- fully interconnected AC power system
- covers 4500km
- includes 3 DC links
- regional pricing model
- 5 regions
- one market/system operator

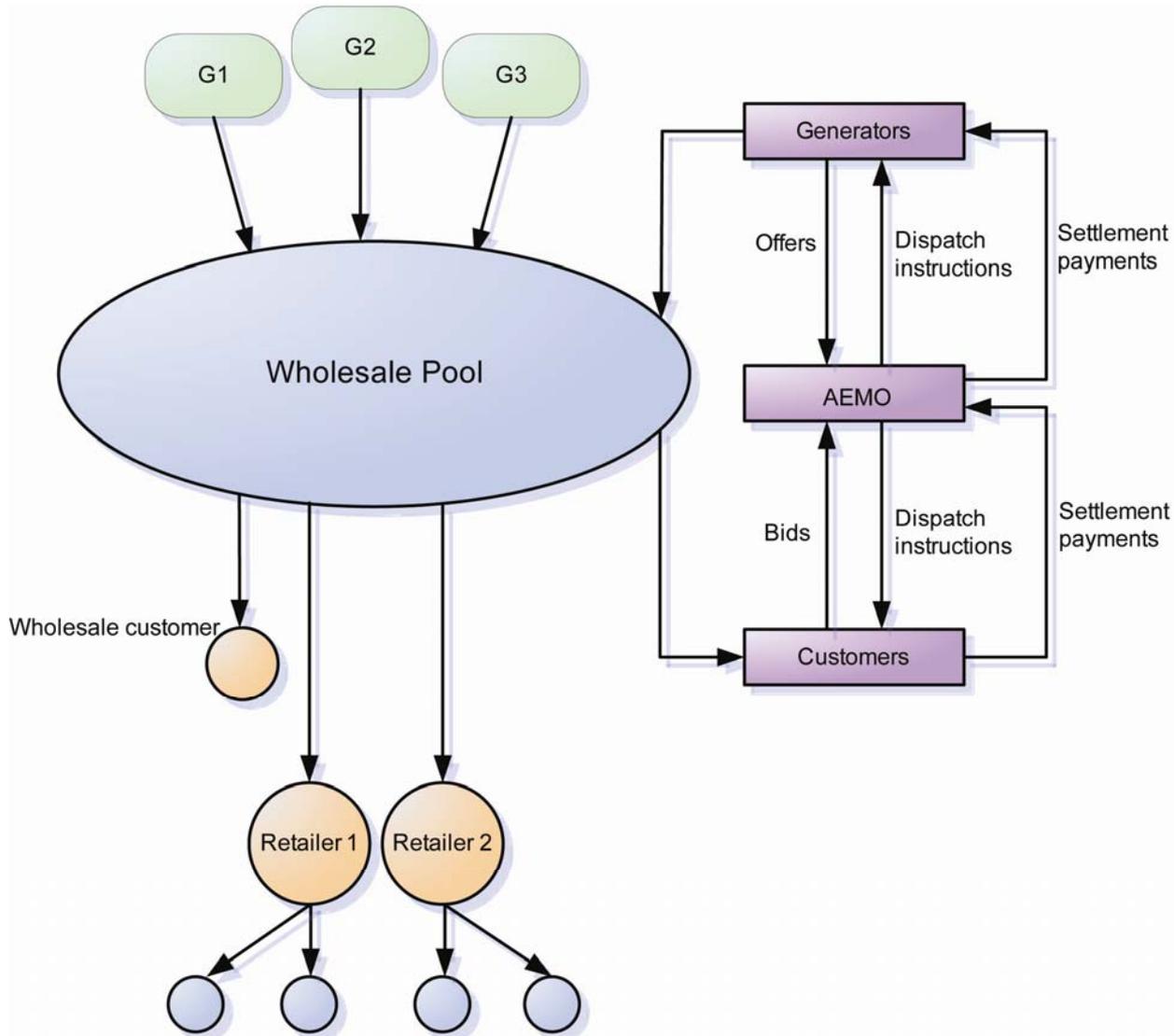
# Generation mix



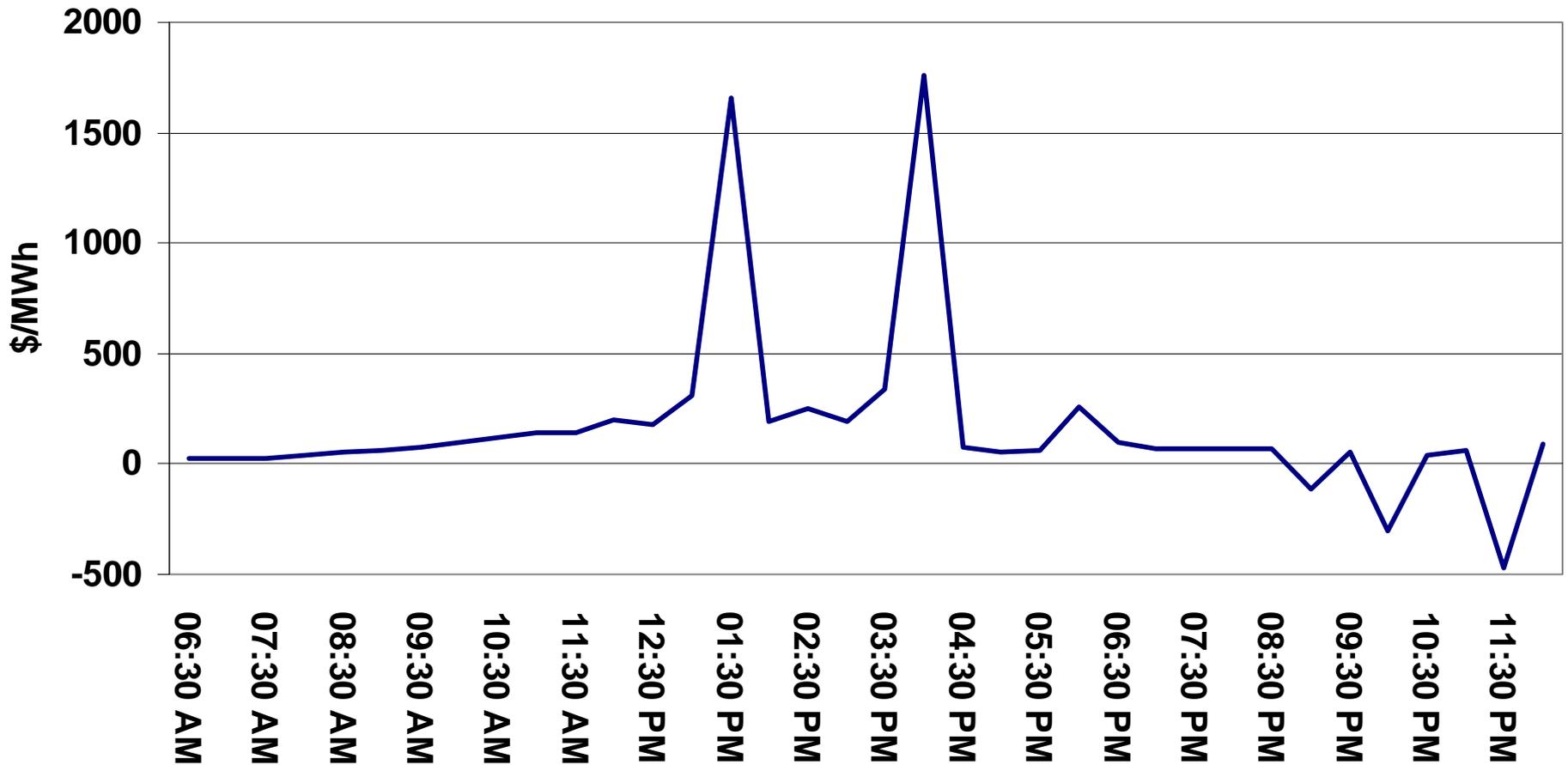
# Ownership of generation



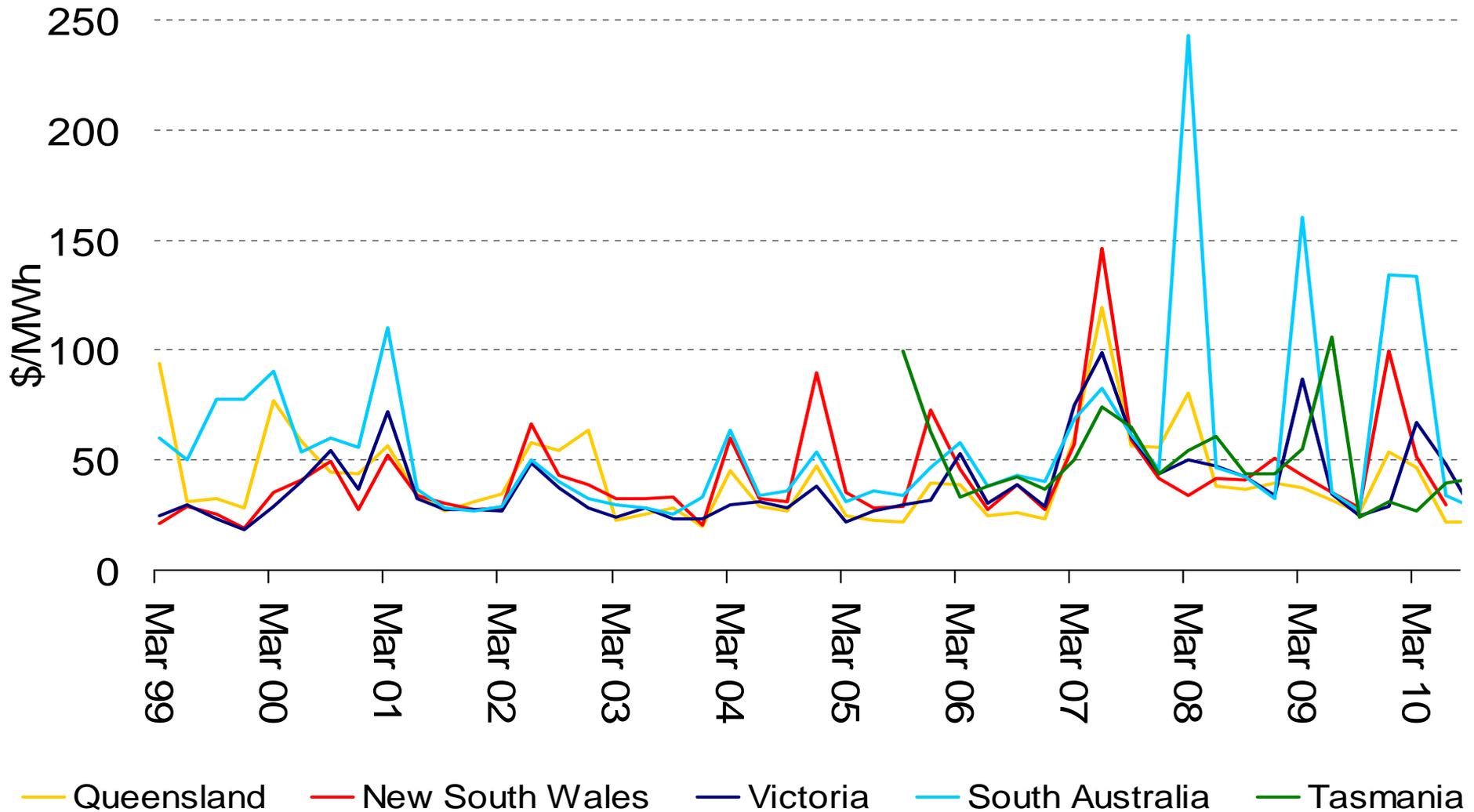
# NEM market design



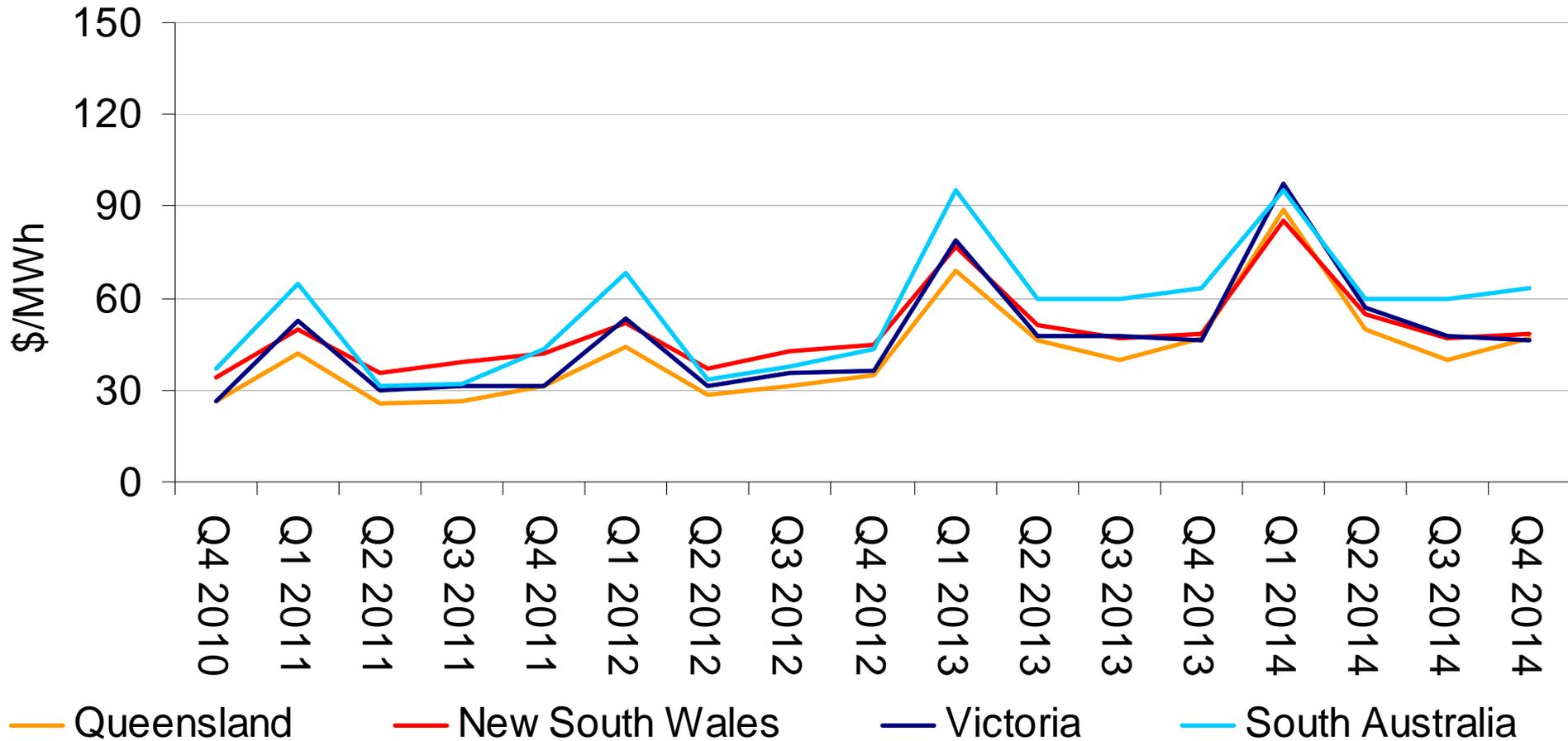
# South Australia - 7 February 2009



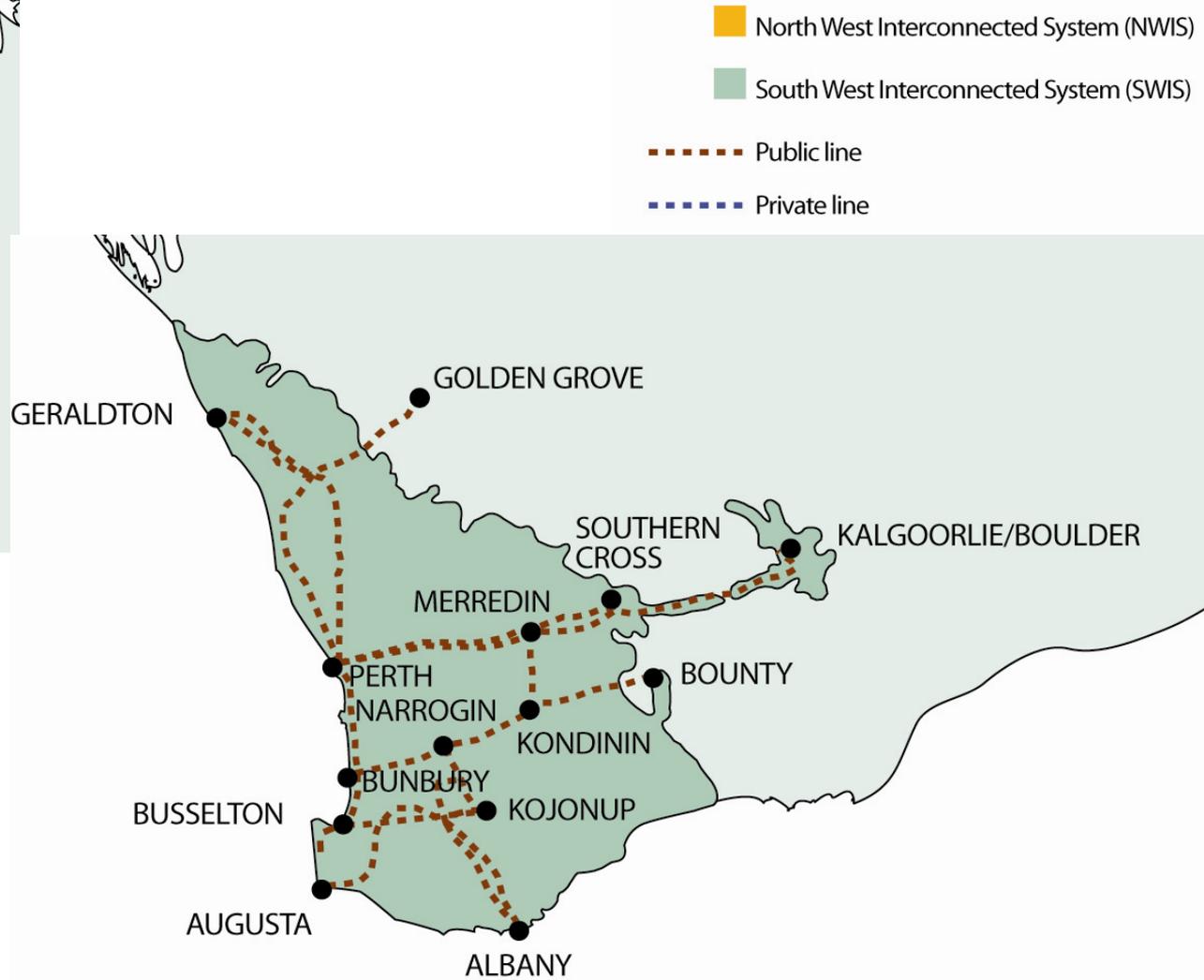
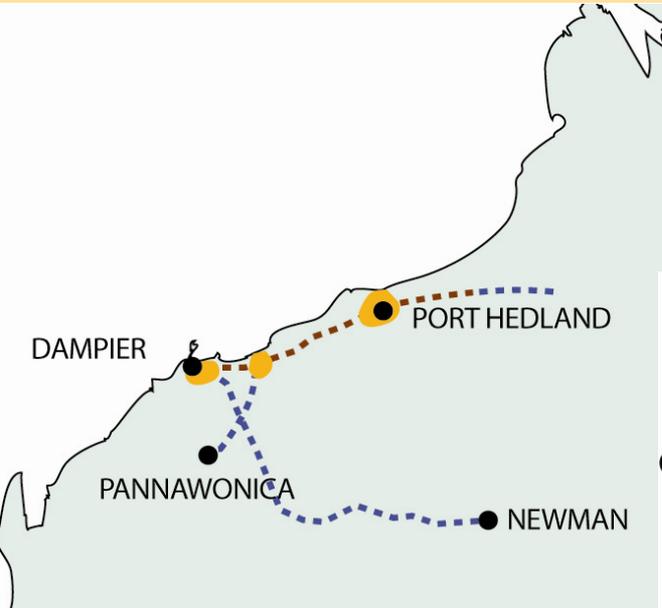
# Wholesale electricity quarterly prices



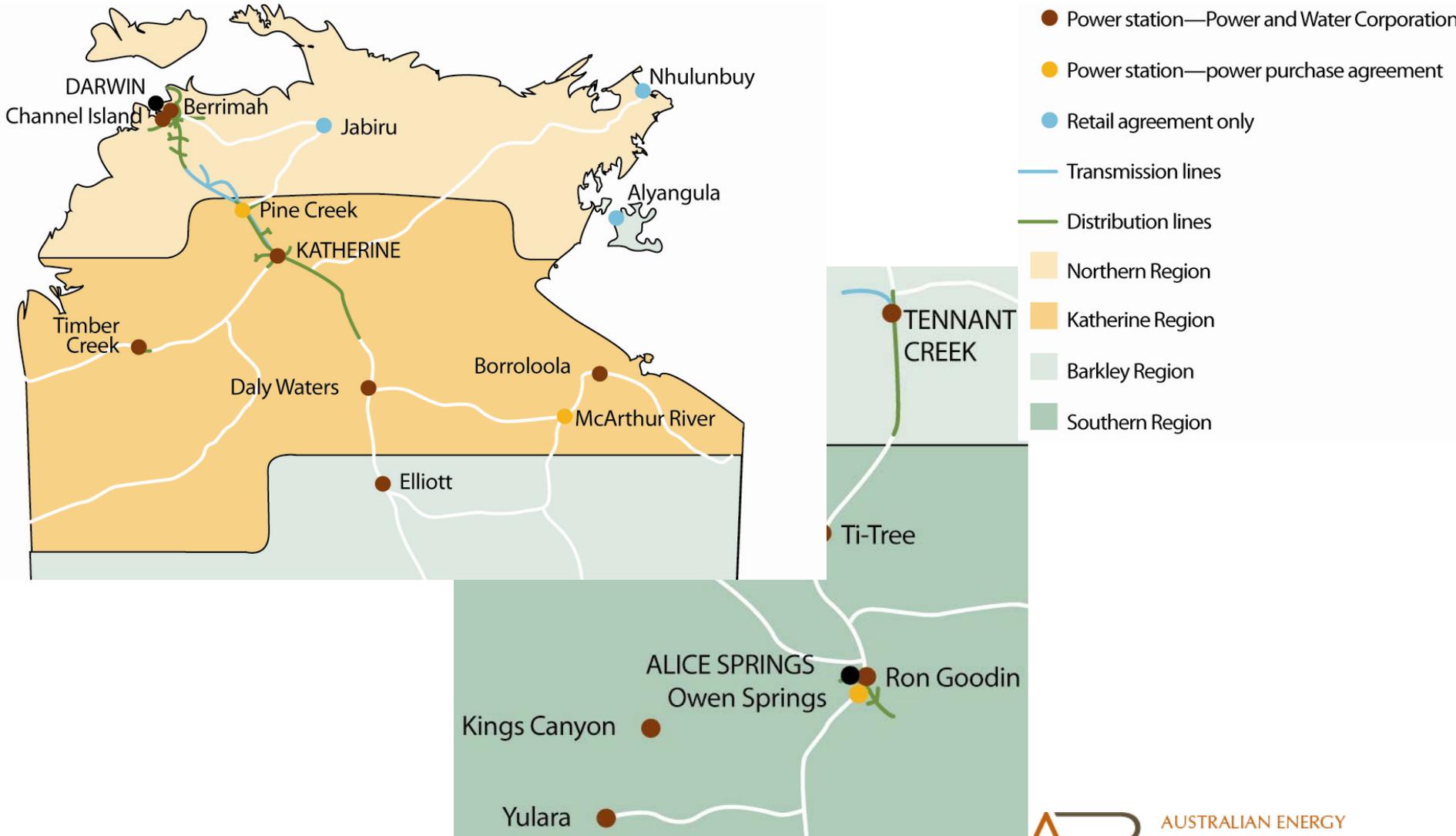
# Futures prices - electricity



# WA electricity market

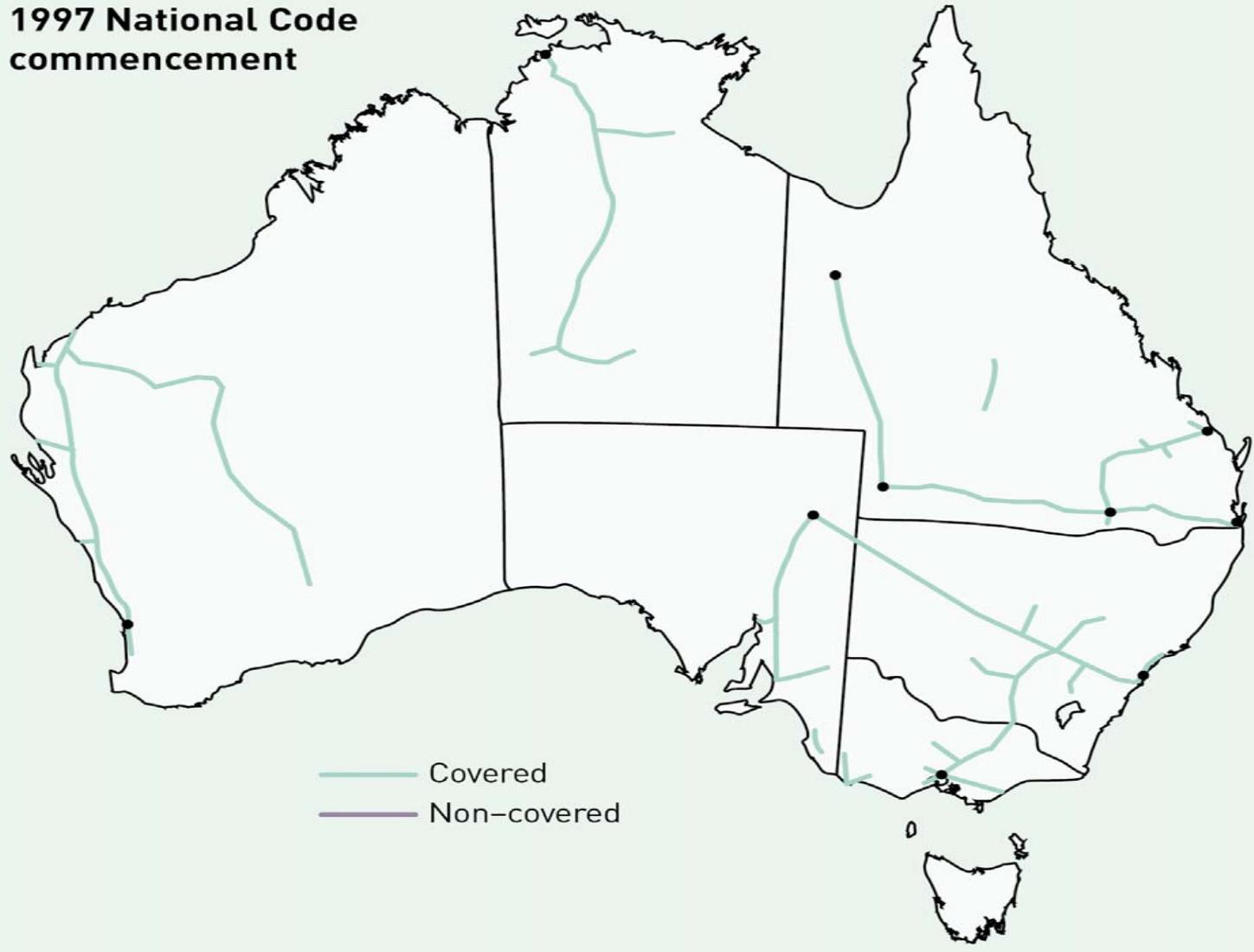


# NT electricity

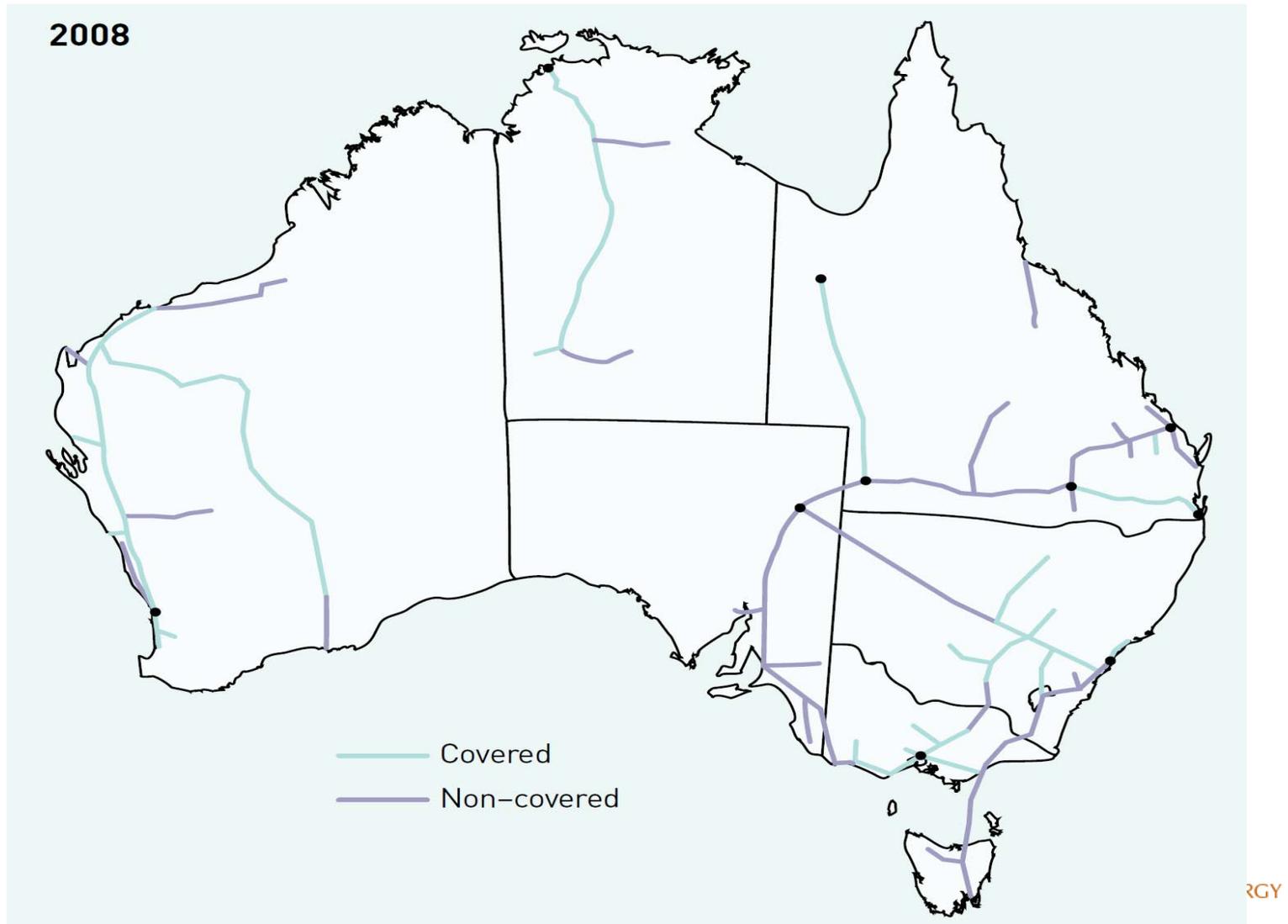


# Gas market development

1997 National Code commencement



# New gas transmission



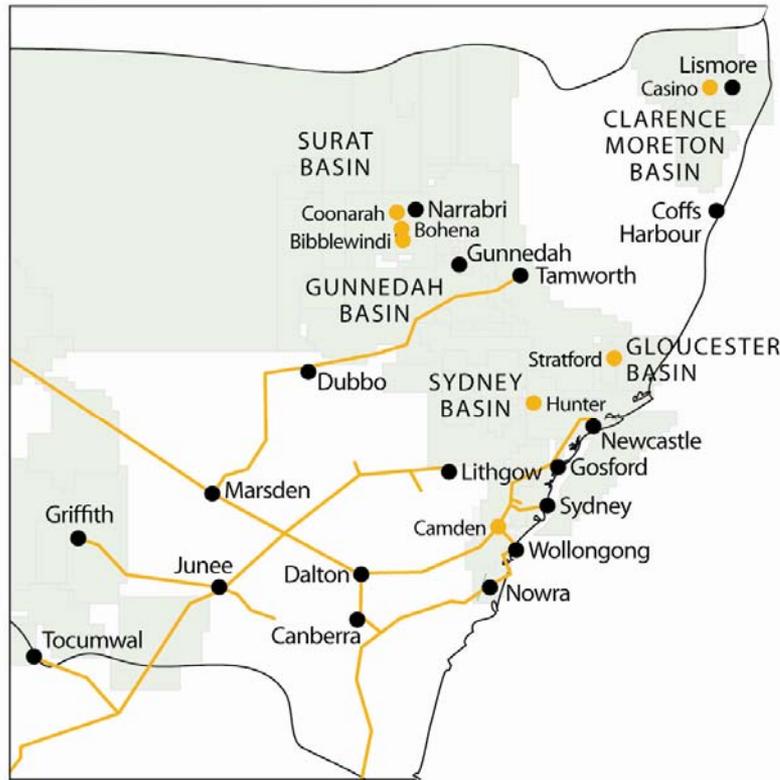
# Wholesale gas prices

<b>Market average price for Sep-Oct</b>	<b>Price \$/GJ</b>
Victorian Gas Market (weighted average daily price)	\$2.11
STTM – Sydney Hub (ex ante)	\$2.27
STTM – Sydney Hub (ex post)	\$2.82*
STTM – Adelaide Hub (ex ante)	\$3.11
STTM – Adelaide Hub (ex post)	\$3.20

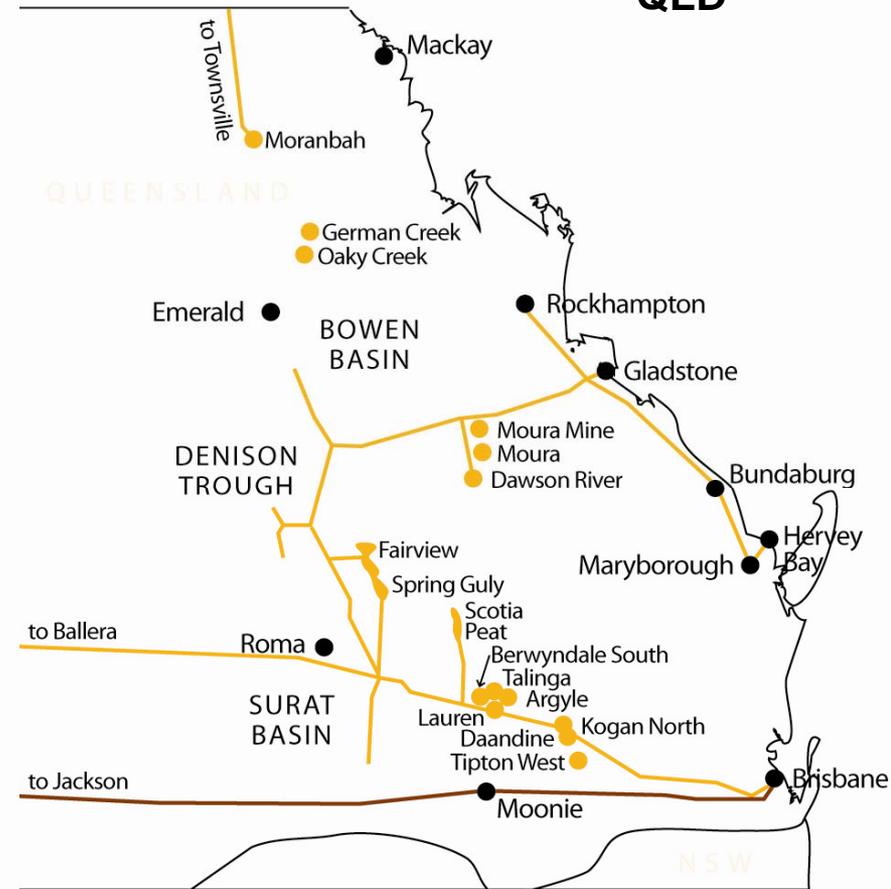
\*Excludes 8 October 2010 event

# Coal seam gas (CSG)

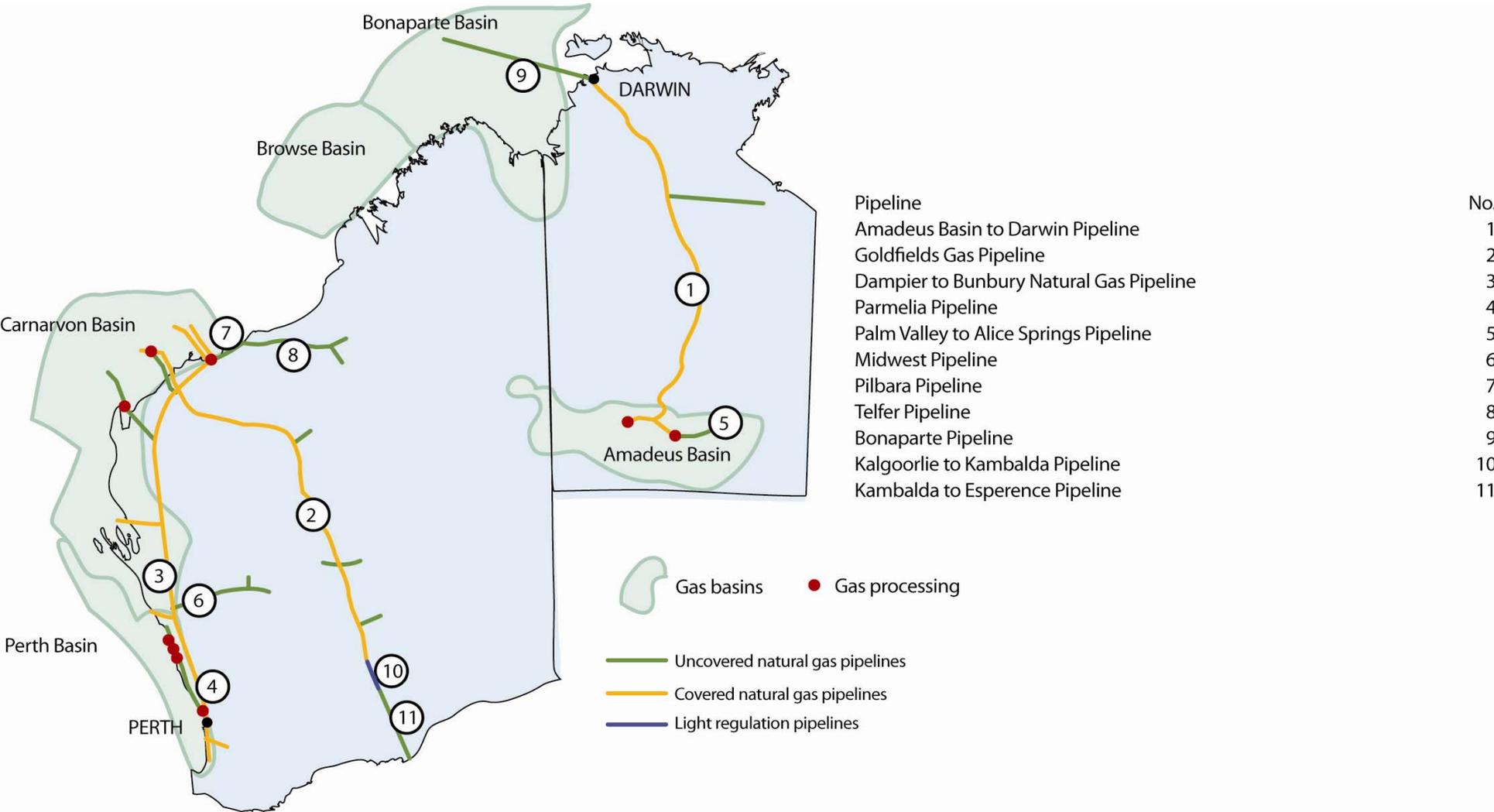
NSW



QLD



# WA and NT gas



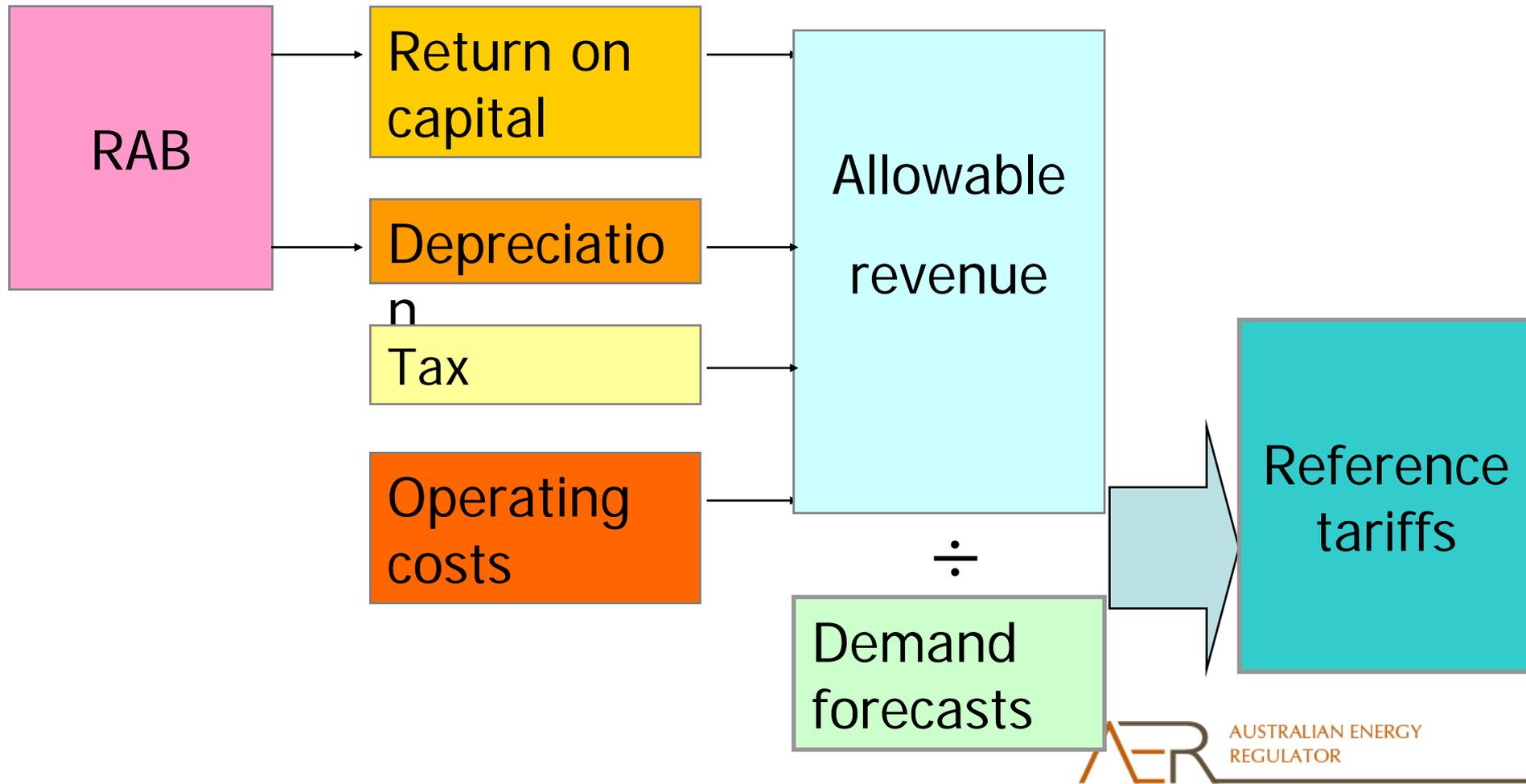
# Reporting on market outcomes

- Weekly report
  - Now produced for electricity and gas
  - market dynamics and forecasts
- Longer-term statistics - website
- Annual state of the market report
- [www.aer.gov.au](http://www.aer.gov.au) – market snapshot

# Energy price drivers

- Economic regulatory regime
- Factors impacting on network prices
- Recent network revenue determinations
- Retail price outcomes

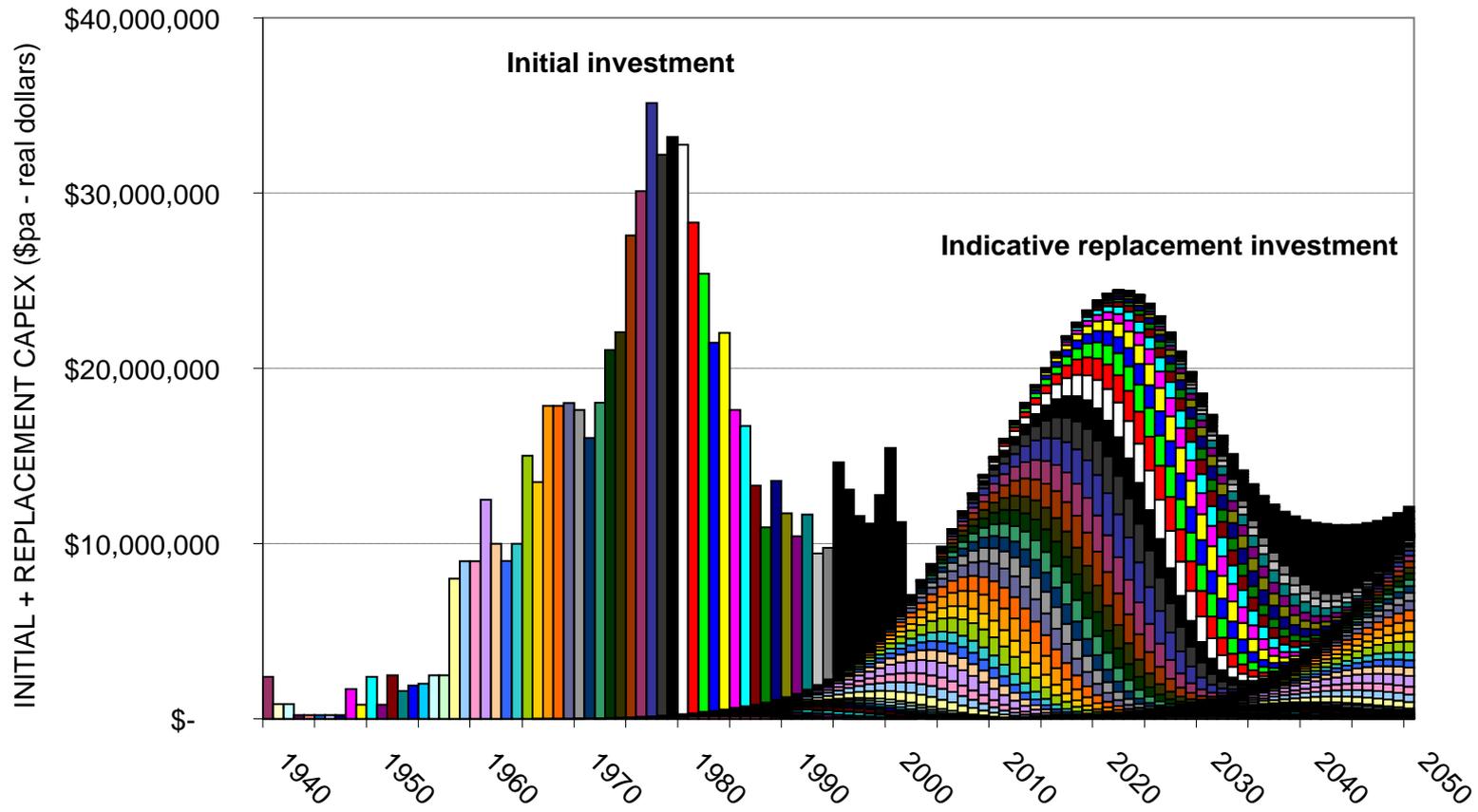
# Network regulation - Building blocks



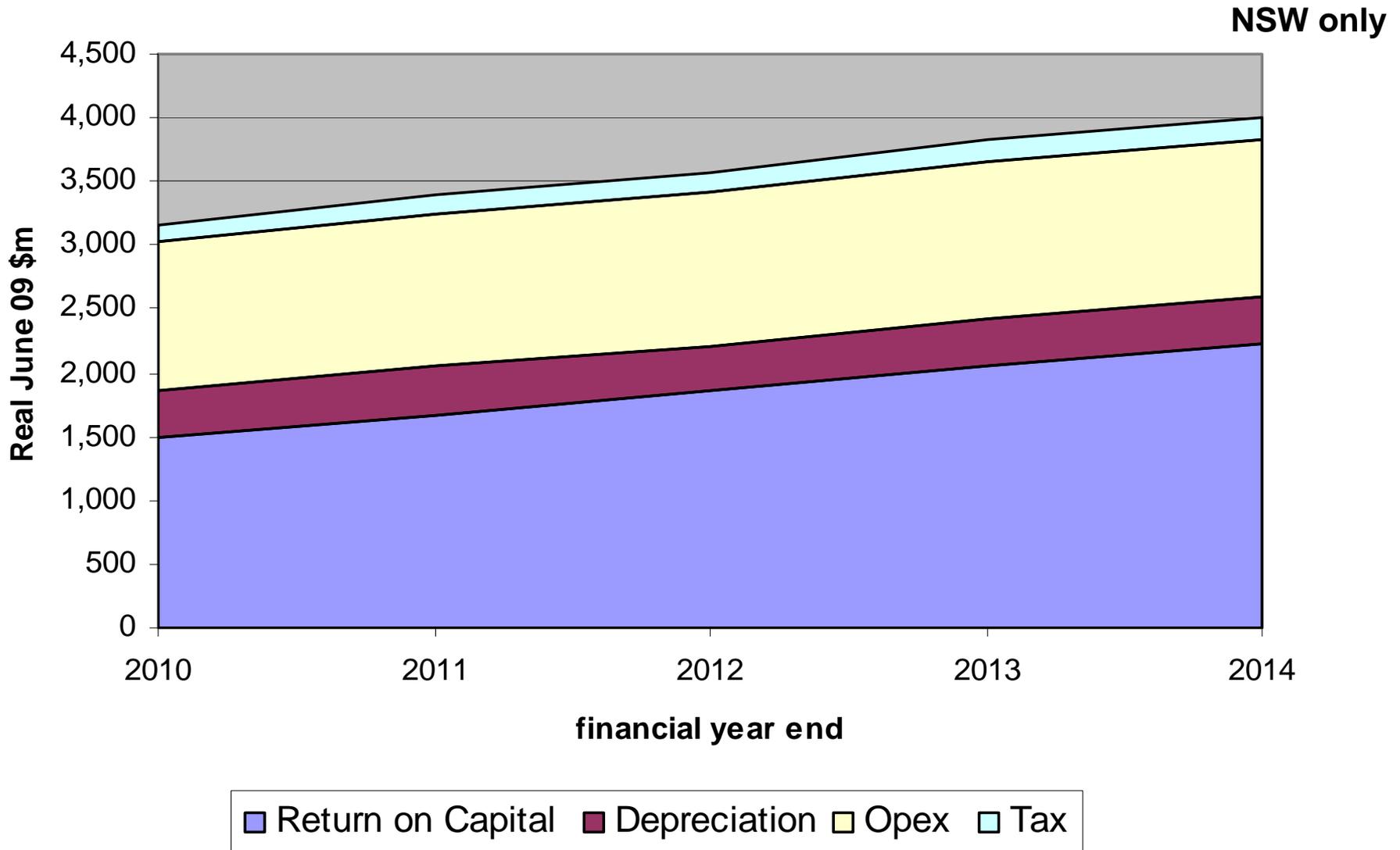
# Factors influencing network charges

- Capital expenditure
  - Ageing asset replacement
  - Demand Increase
  - New connections
  - Reliability and service standards
- Operating expenditure
  - increasing asset base
  - increasing input costs (labour and materials)
- Cost of Capital (WACC)
- Bushfire safety standards

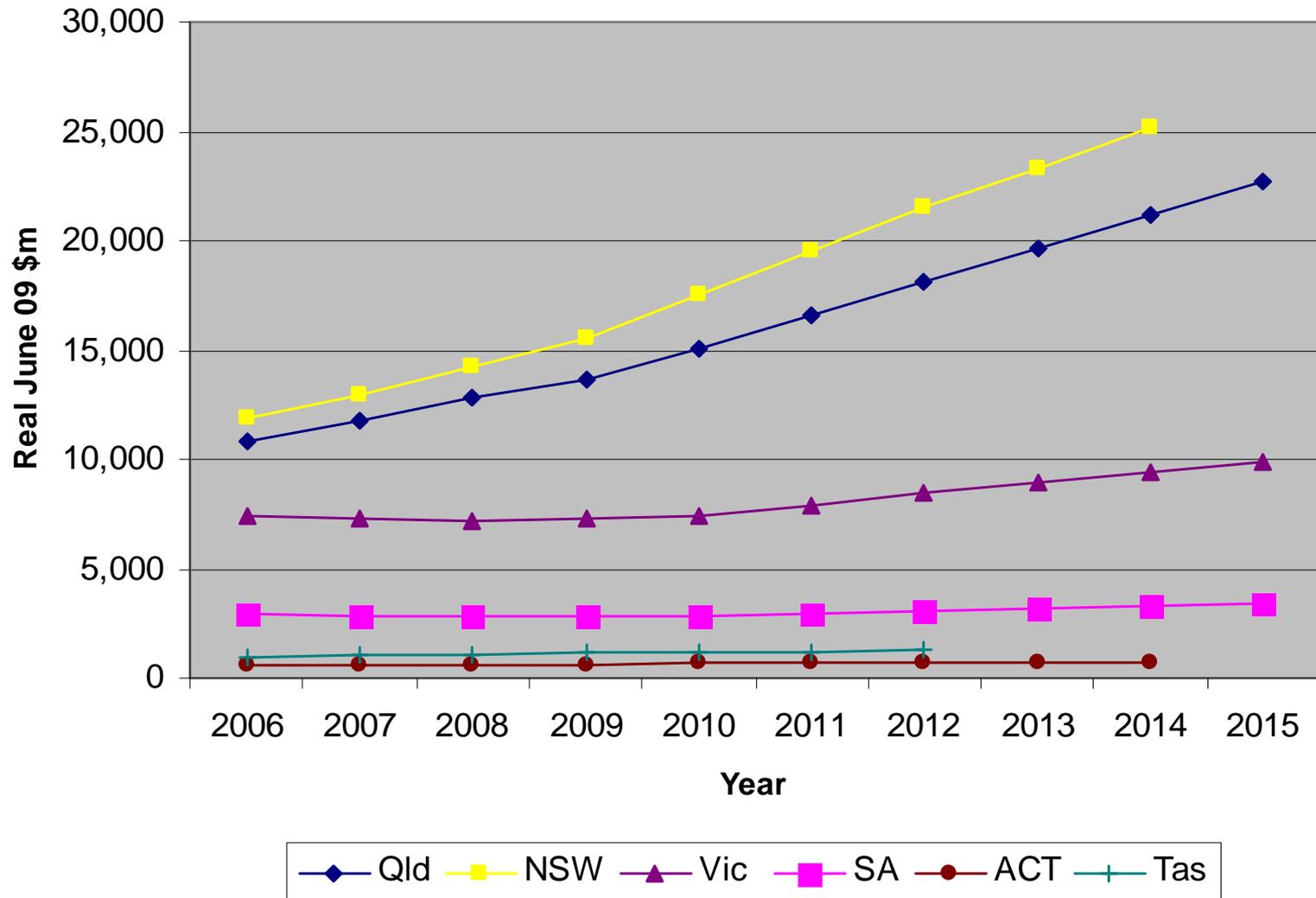
# Network investment and replacement



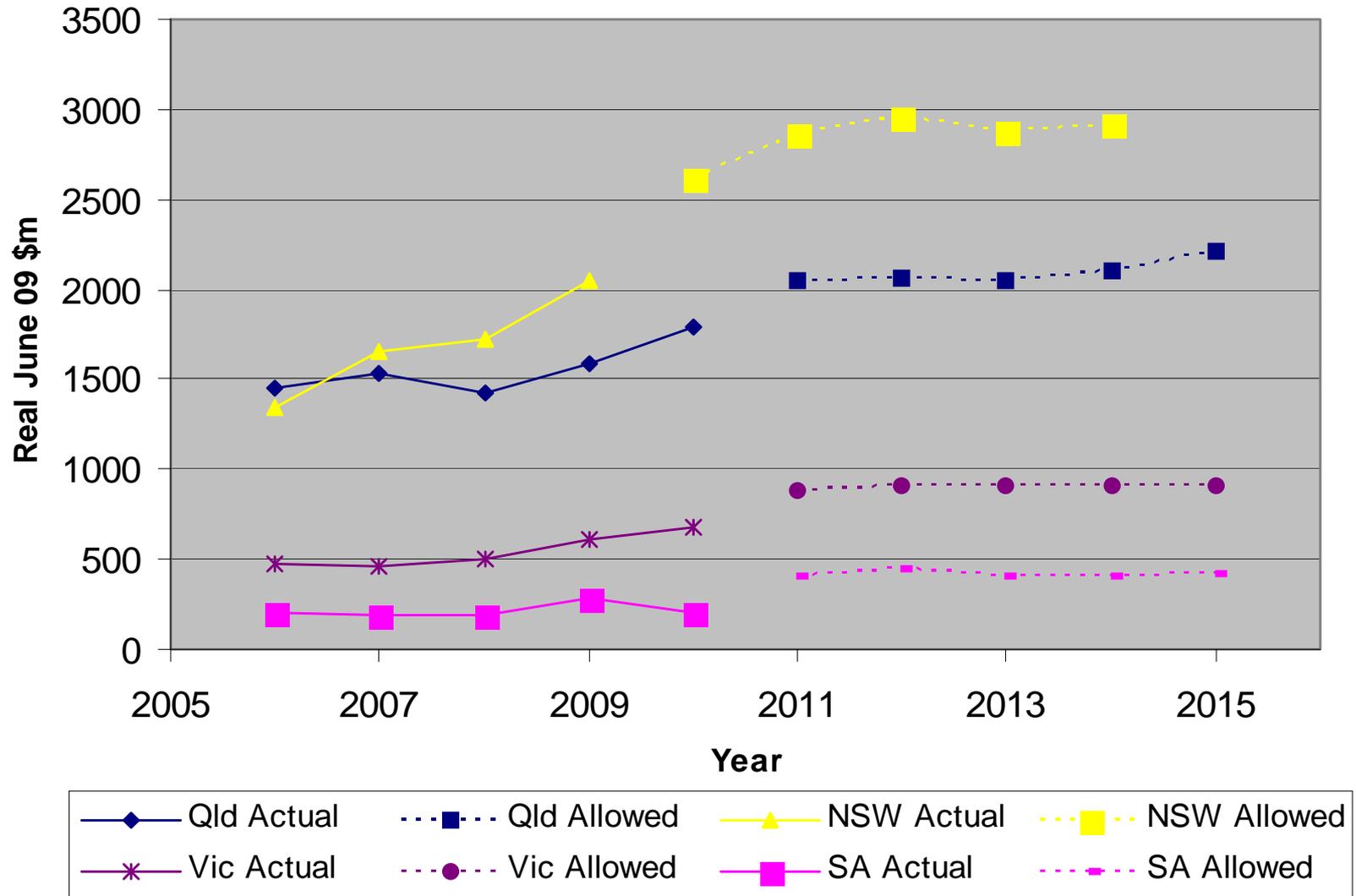
# Distributors revenue breakdown



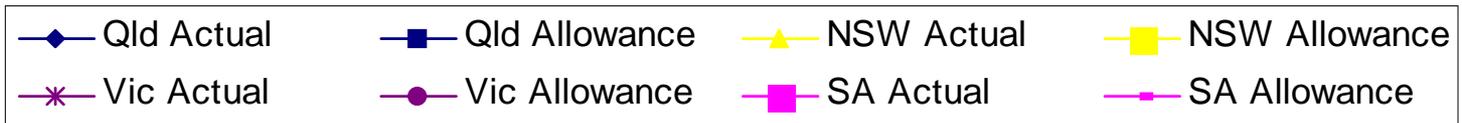
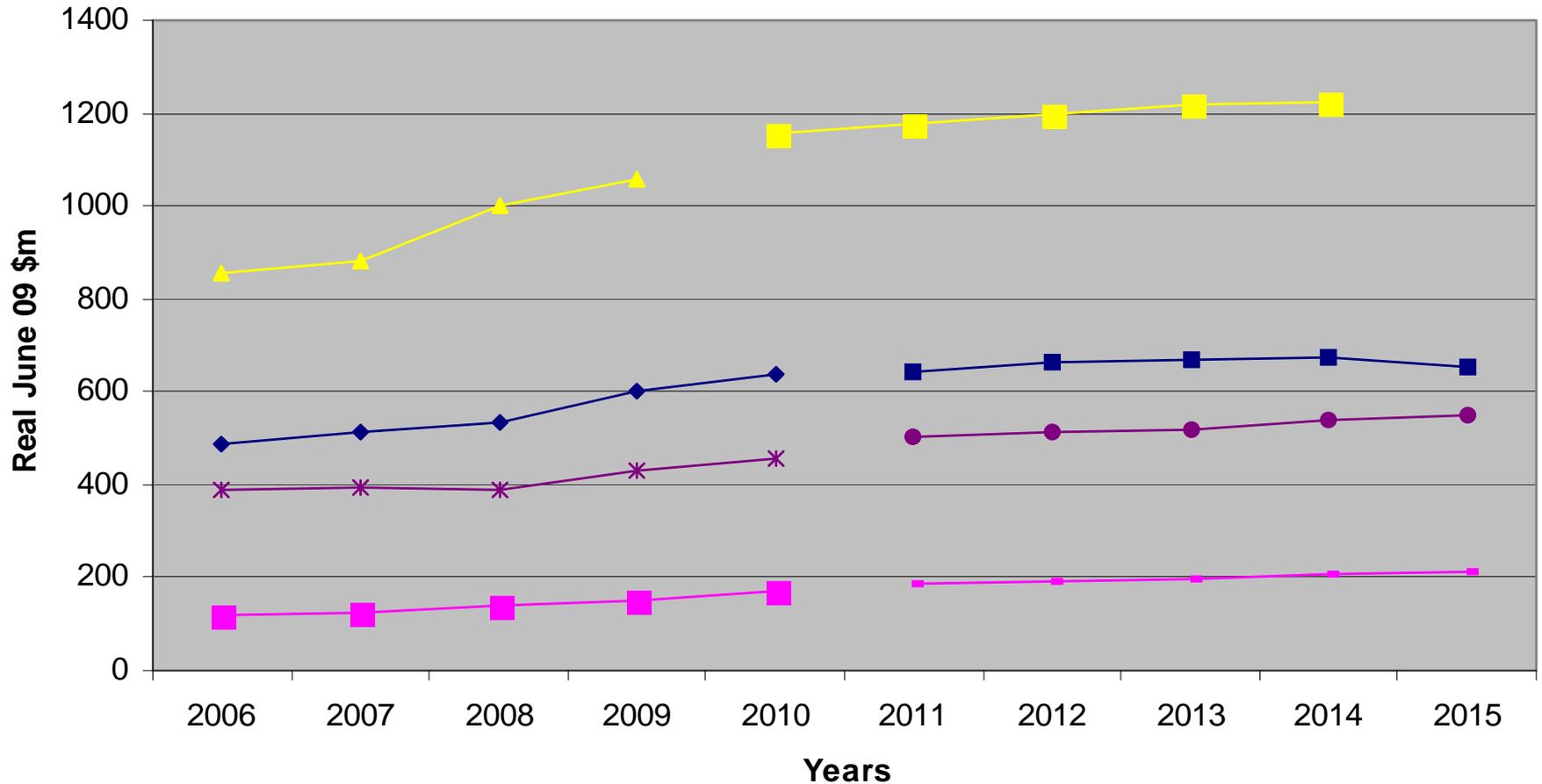
# Distribution regulatory asset bases



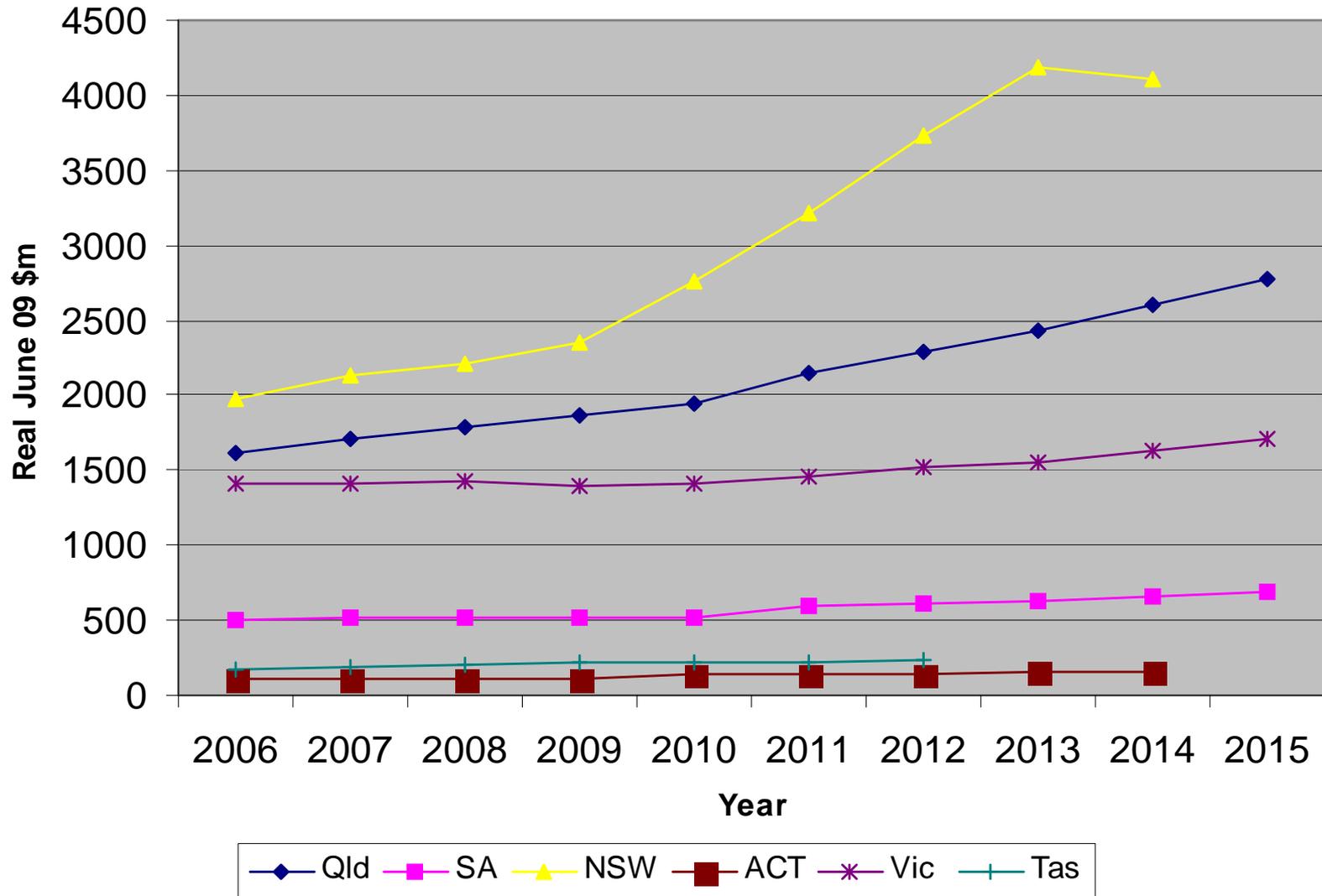
# Distributor capex



# Distributor opex



# Electricity distribution revenue

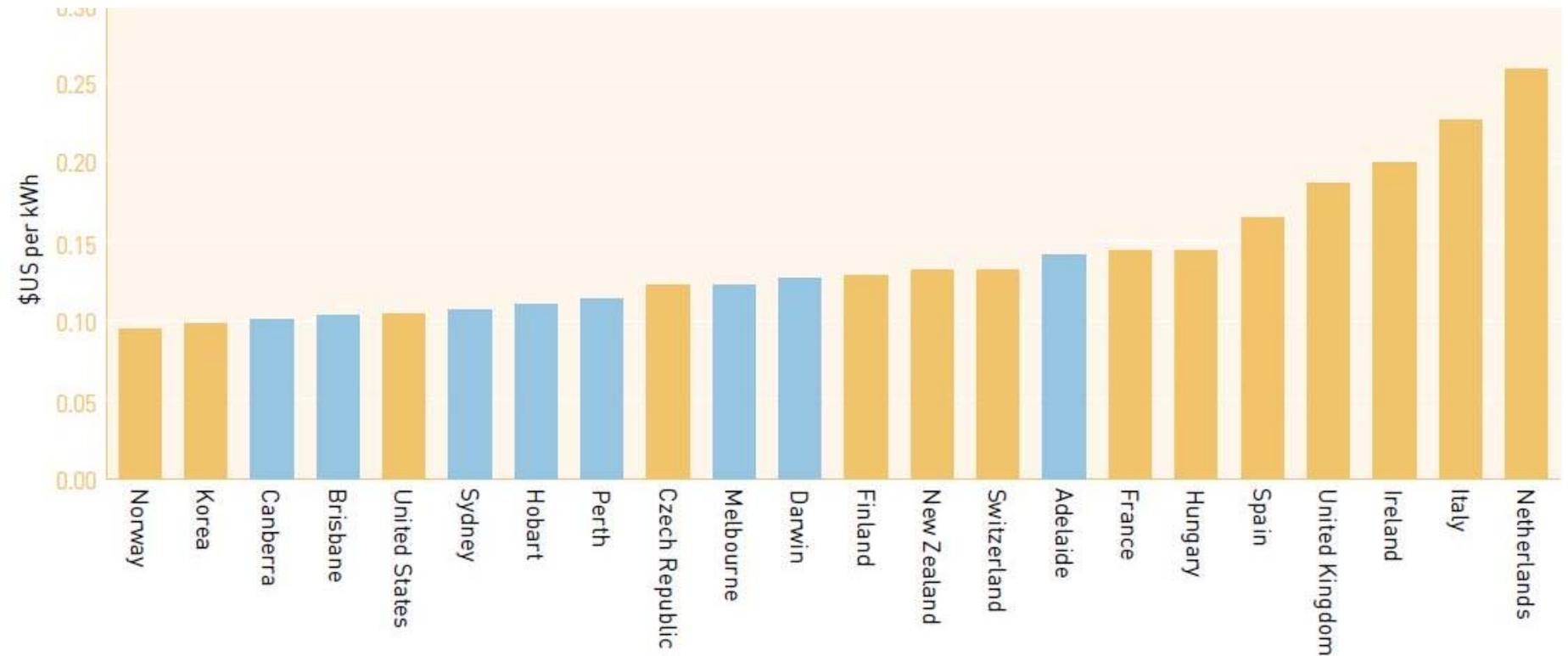


# What influences retail price

- Wholesale energy costs ~ 31 to 45% for electricity
- Network charges
  - Transmission ~ 10 %
  - Distribution ~ 40 to 50%
- Retailer costs ~ 4 to 15%
- Regulation of retail tariffs by state regulators (except Victoria)
  - Standing offers Vs market offers

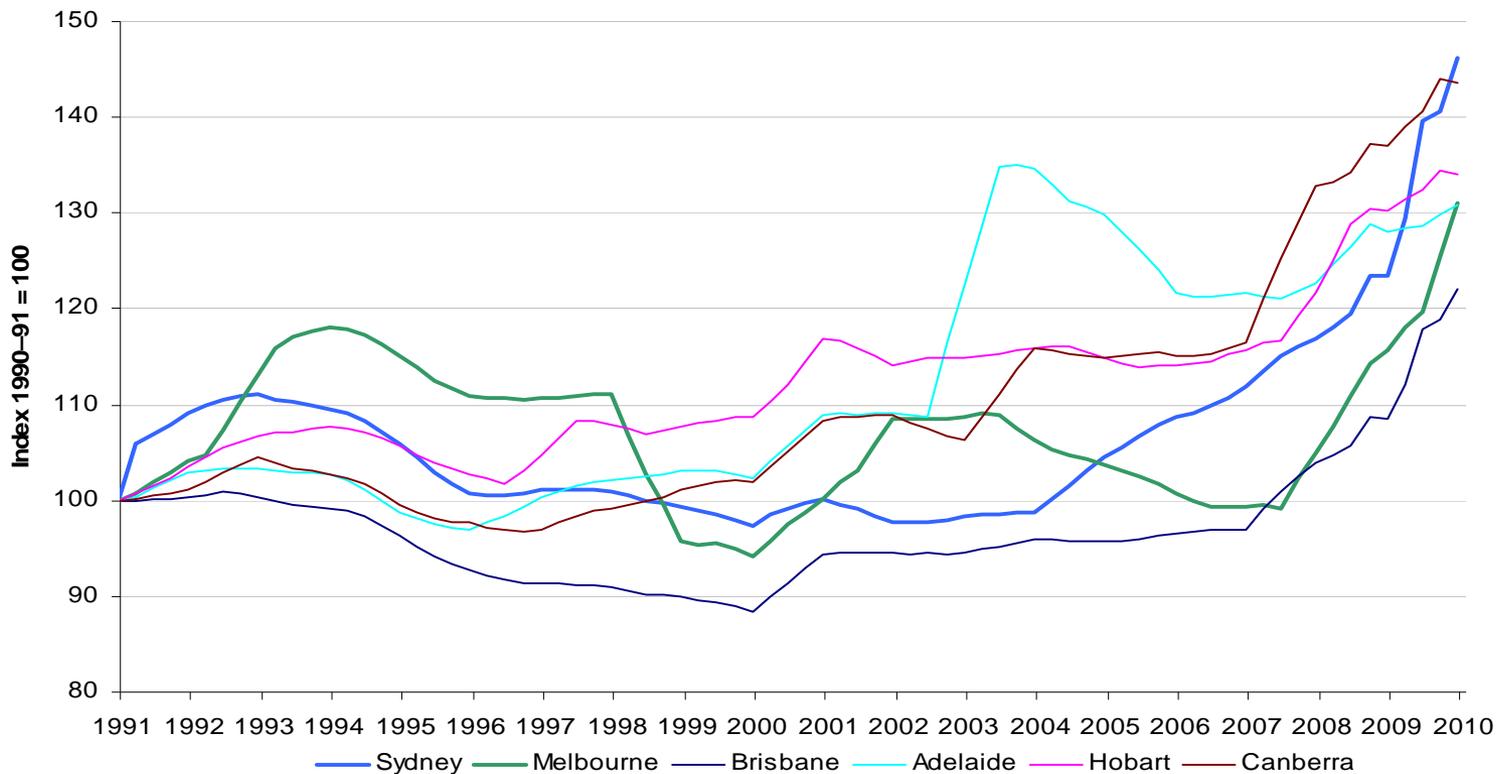
# Retail electricity prices

Historically, Australia has had low retail electricity prices



# Retail electricity prices

Prices are now rising and are expected to rise further



# Other development issues

- New low carbon generation
- Demand management
- Smart Grid trial
- Smart meter rollout

# Questions

