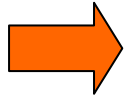


# Comprehensive Reliability Review

International Power & Loy Yang  
Marketing



# Overview

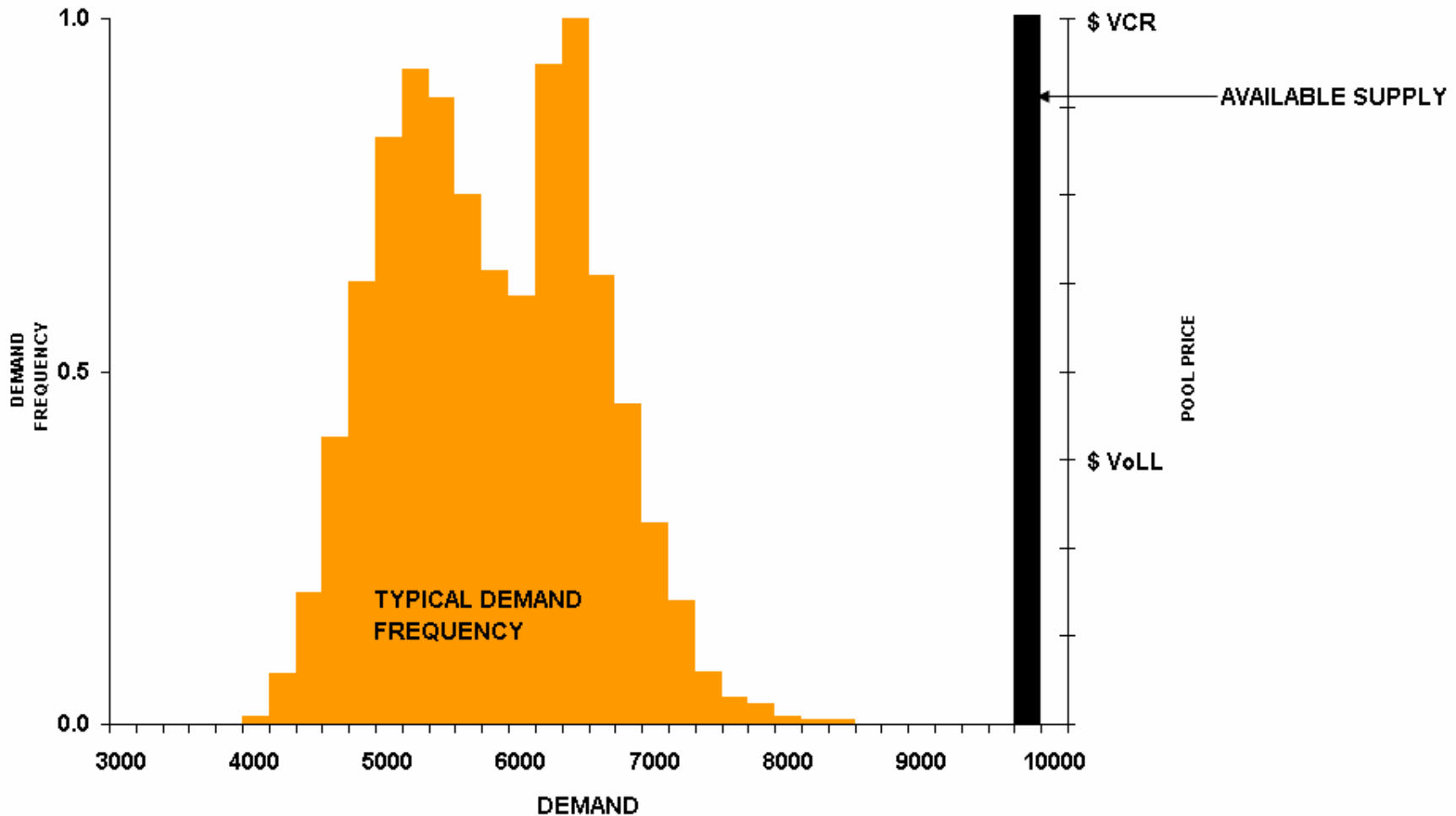


- NEM design issues
- Investment in generation and wholesale prices by region
- Key issues and actions required

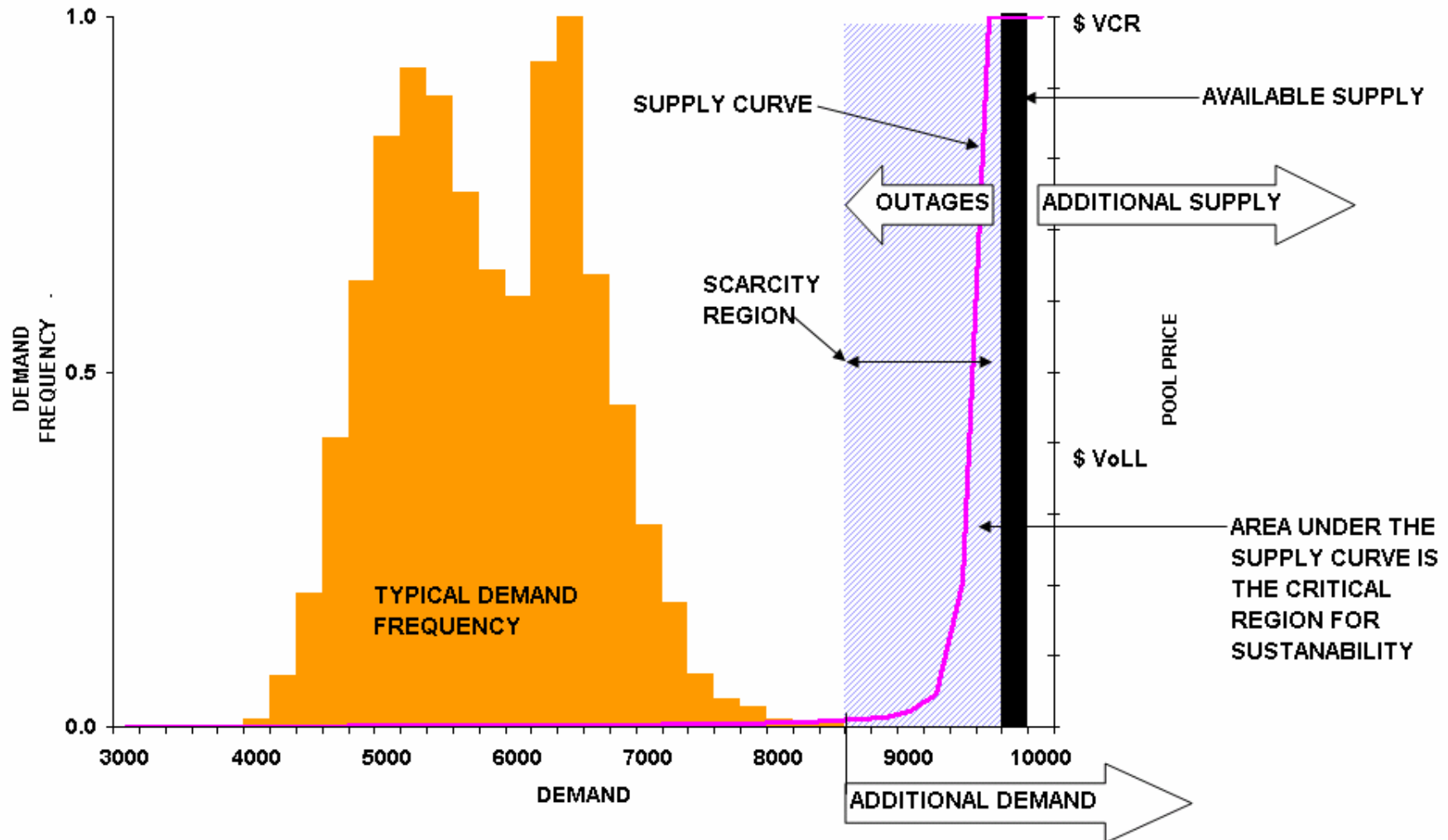
# NEM Design Issues

- Design is two sided market but minimal demand response in practice
- Reliability settings inadequately represent consumer response (price vs reliability)
- Supply relies on high prices and involuntary load shedding for adequate returns
- Involuntary load shedding invites political intervention
- Reserve trader is becoming regular - (essentially market failure)
- No sustainable equilibrium

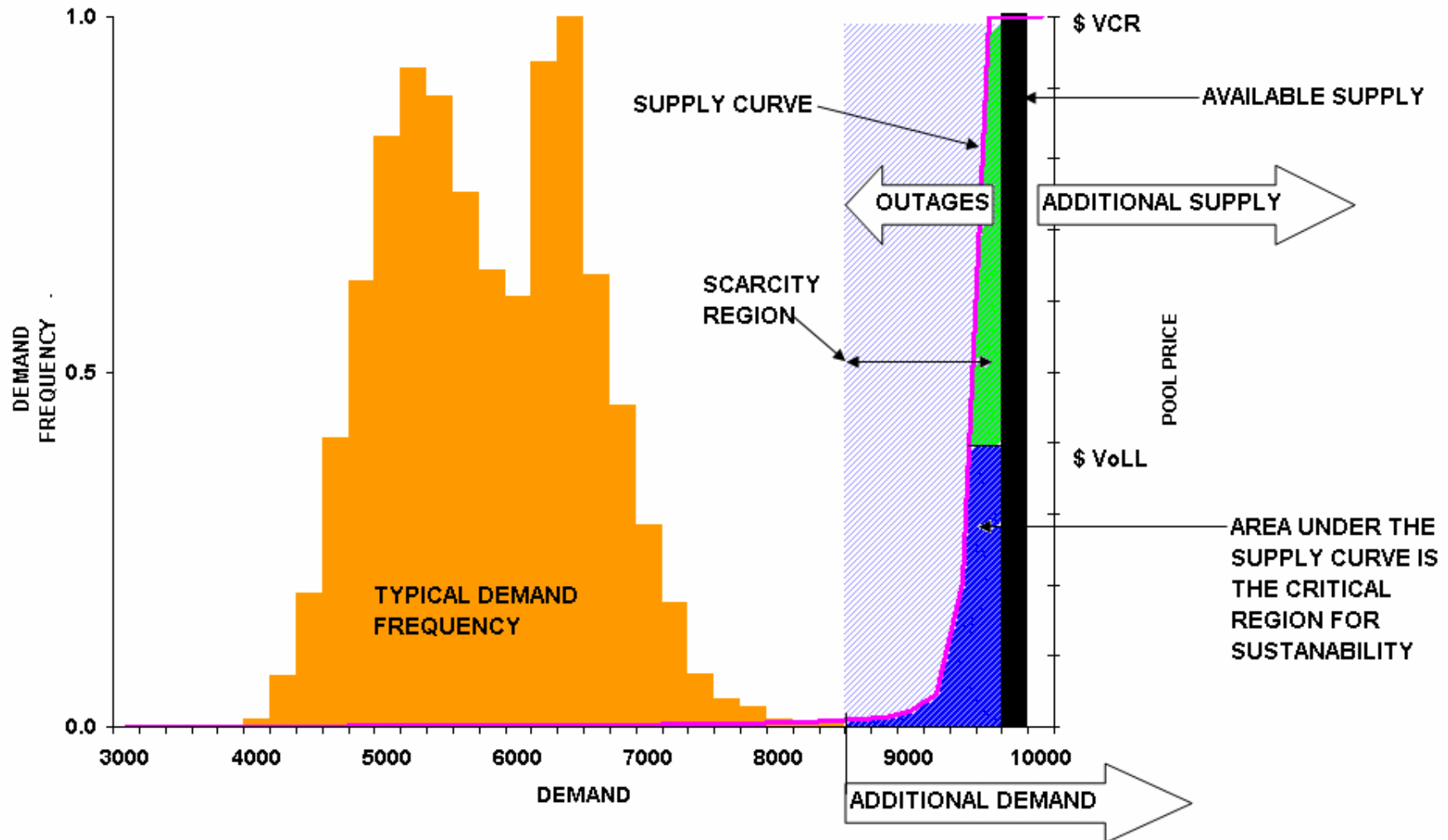
# Energy Only Market Design ( and the missing money issue)



# Energy Only Market Design ( and the missing money issue)



# Energy Only Market Design ( and the missing money issue)



# Sustainable investment = reliability

- Positive reliability history due to oversupply

## Threats to sustainable investment

- Government policies and actions
- Government ownership
- Market design for reliability and sustainability is yet to be proven.

# Externalities

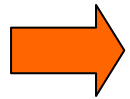
- State investment creates competitive neutrality issues
- State development agendas encourage oversupply
- GHG abatement schemes subsidise some generators and encourage over supply
- Other government policy agendas interfere with market operation





# Overview

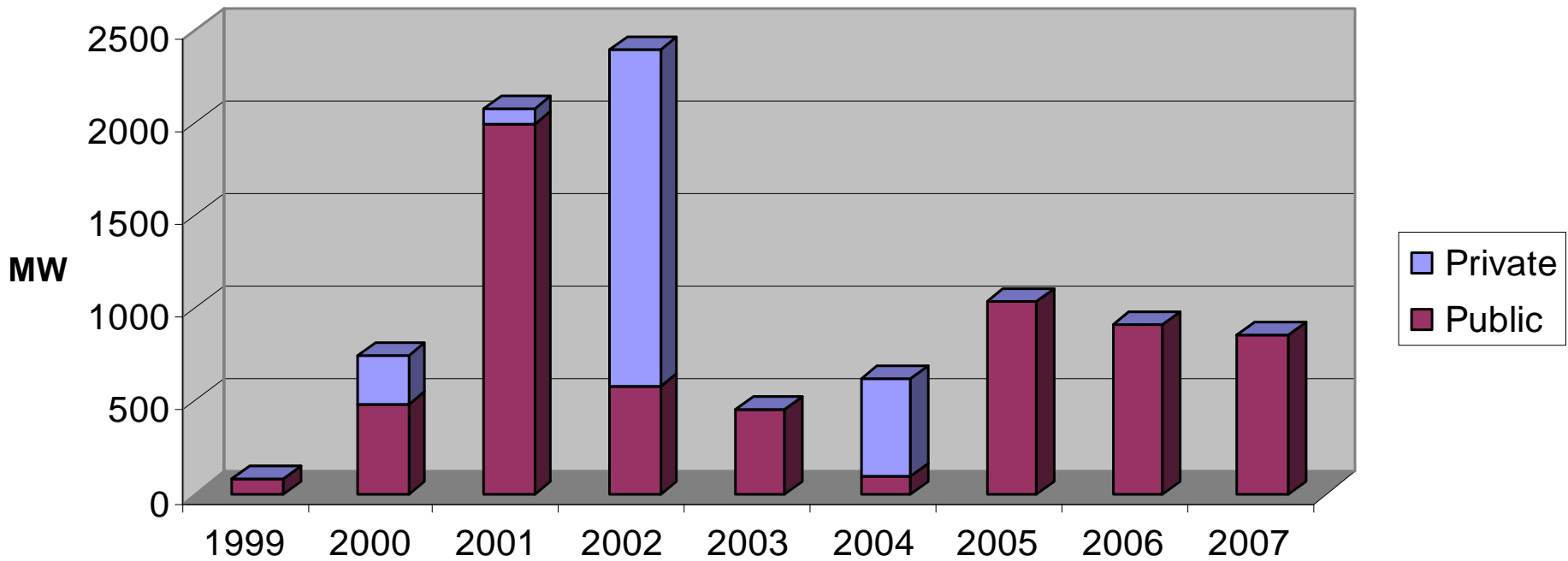
- NEM design issues



- Investment in generation and wholesale prices by region
- Key issues and actions required

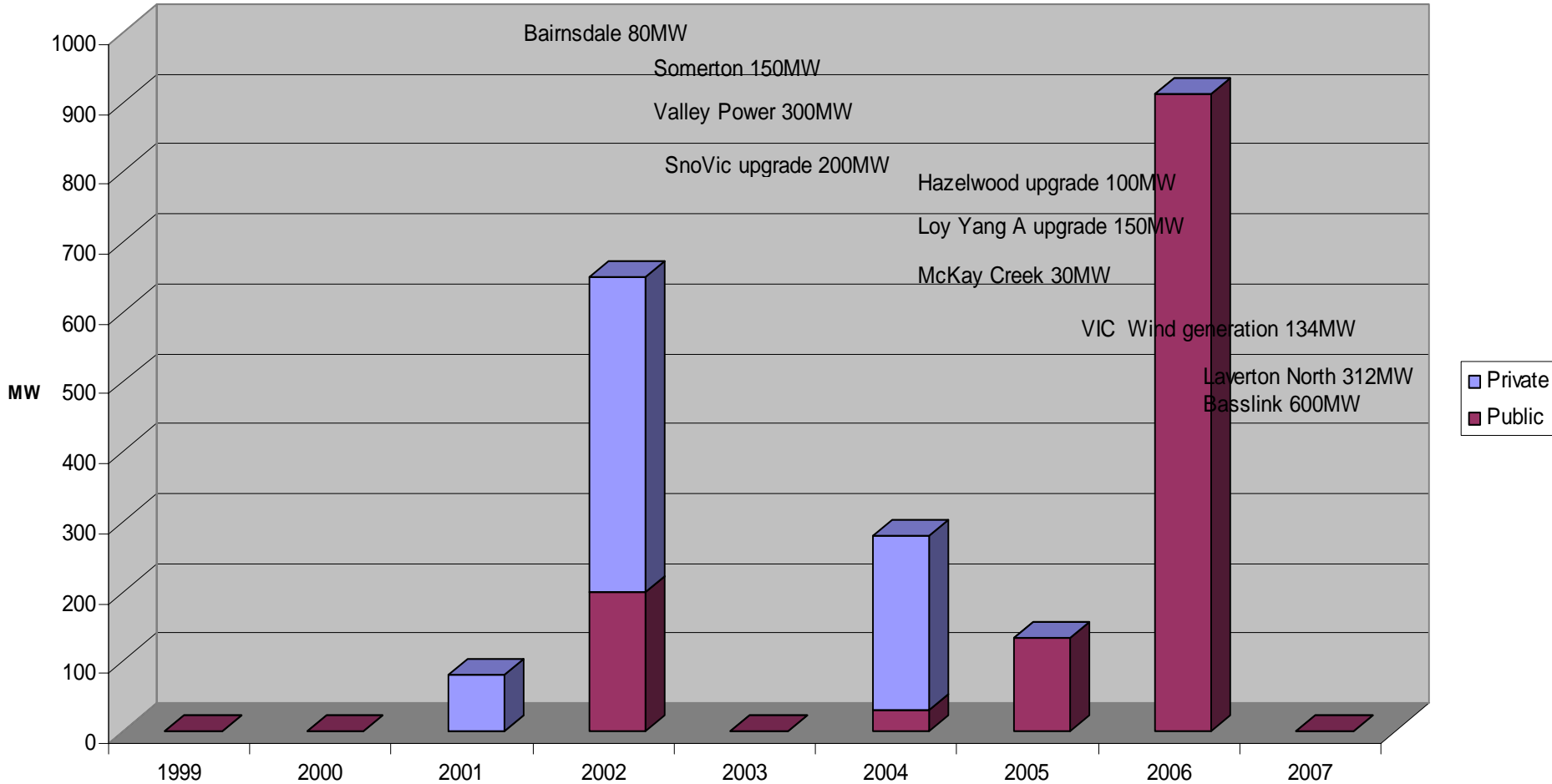
# State Investment & Competitive Neutrality

**NEM - Govt. Facilitated/Owned & Private Investment**



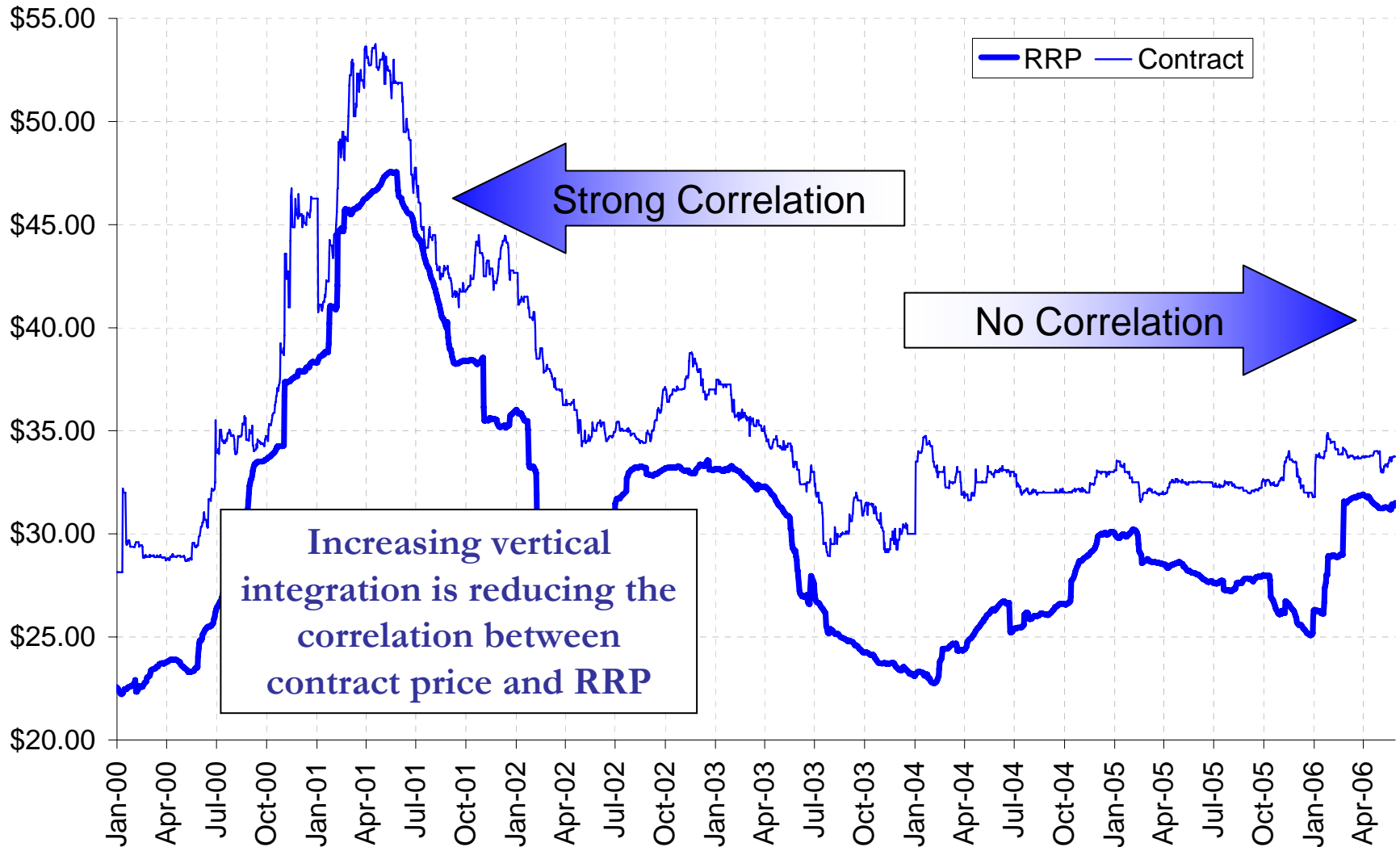
# Victoria New Entry

Vic Region - Govt. Facilitated/Owned & Private Investment



# Impact of Externalities

## Victorian Year Ahead Contract Price V Rolling Avg. RRP





# Observations - Victoria

- Significant government investment despite low (below new entry) contract prices
- Vertical integration may mean the pool price is less relevant.
  - A problem for private merchant generators unless the pool works?
- NEMMCO reserve trader activity but fwd prices do not signal a shortfall
  - No new entry required in the short term

# Overview

- NEM design issues
- Investment in generation and wholesale prices by region
- ➔ • Key issues and actions required

# Key issues

- Energy only market design does not have a stable equilibrium
  - Lack of demand side response
  - Disconnect exists between prices and reliability
  - Requires market power for sustainable revenues
- Government policies interferes by encouraging early entry
- Little evidence of a market maturing and becoming sustainable



# RELIABILITY



## Investor confidence

- Current investors likely to be new investors
- Current investors need returns today
- Other new investors will have same needs

**NEM needs to work** as intended



## Requires removal of impediments

- Reserve calculation / trader
- Government intervention / ownership
- Greater regulatory certainty

Failure to address these will mean

- Gov will have to invest (take risk and incur opportunity cost)
- or Gov will subsidise with consumers money (e.g. VRET).

# Actions required

- The problem is complex, high degree of uncertainty as to how & whether the NEM will work.
- Solutions need to be holistic & market based
- Externalities
  - Government intervention (environmental & State development agendas)
  - Competitive neutrality
- Reform governance regimes
  - Changes to reliability criteria and preferences
  - Move from focusing on short term price outcomes to ensuring long term sustainability