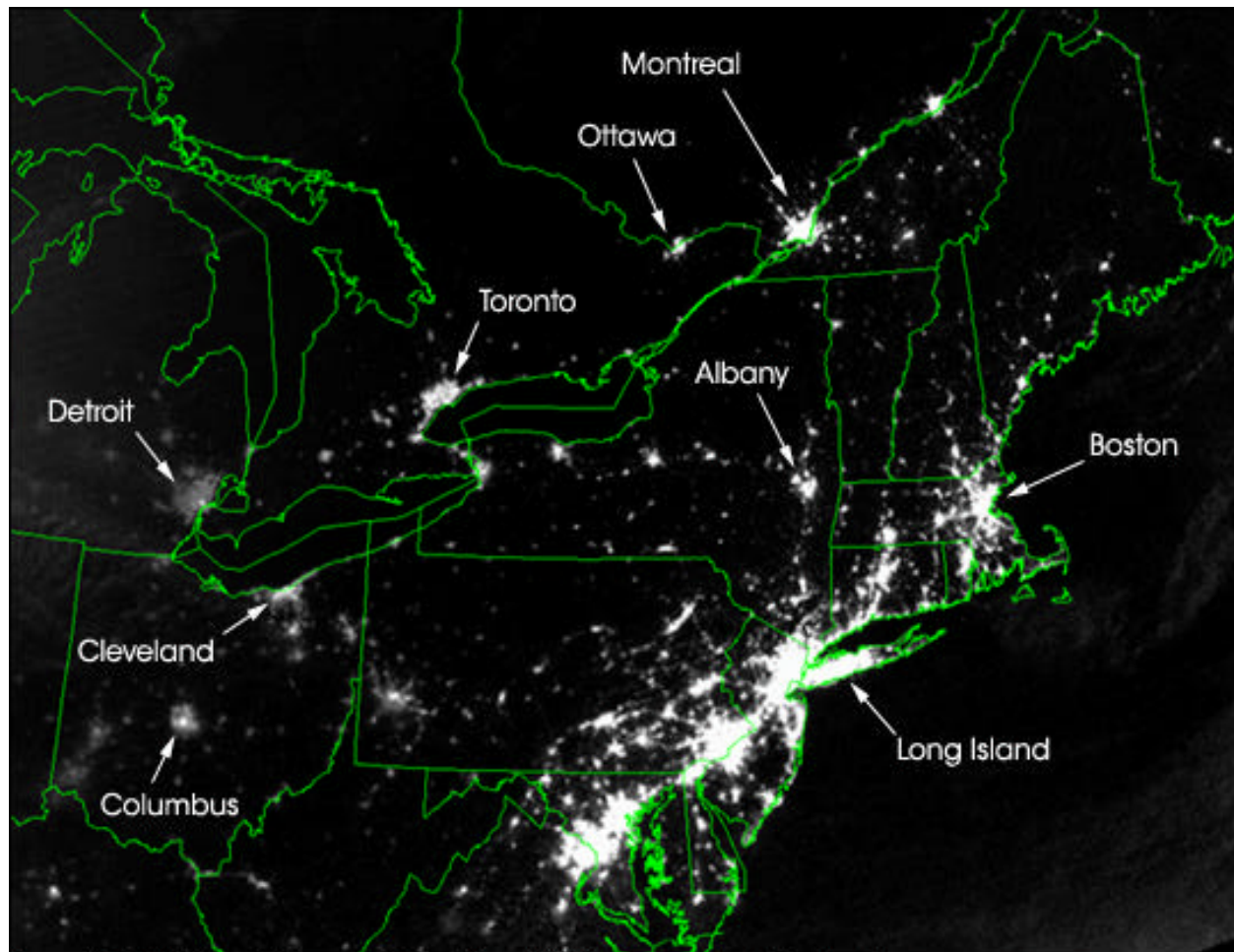


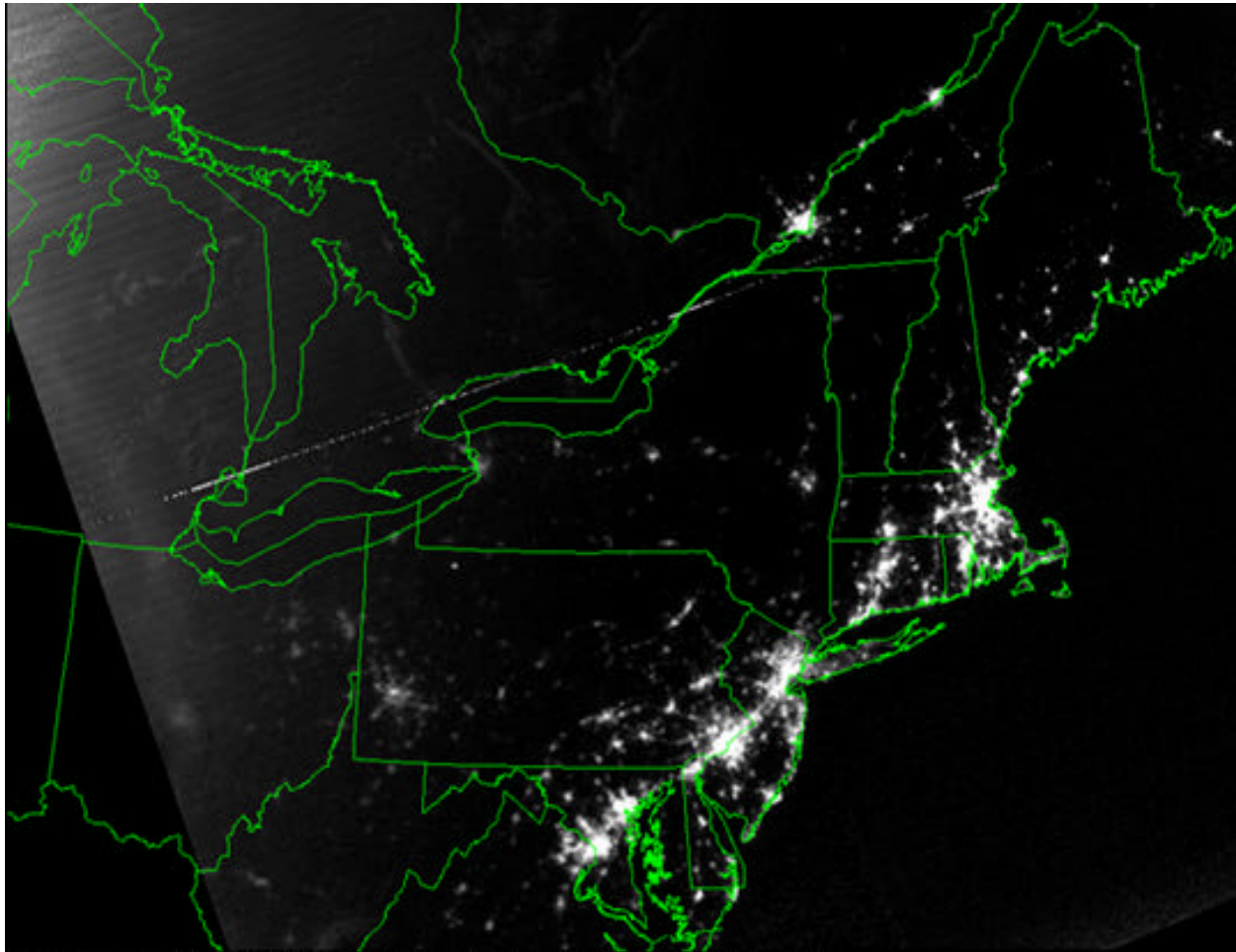


## NORTH AMERICA - AUGUST 2003



August 14, 2003 • 9:29 p.m. EDT • About 20 hours before blackout

## NORTH AMERICA - AUGUST 2003



August 15, 2003 • 9:14 p.m. EDT • About 7 hours after blackout

**NORTH AMERICA - AUGUST 2003**



**Empire State Building looms over darkened city skyline**



# 14 STEPS TO THE INCIDENT



AAP/Wall Street Journal

A series of interconnected events cascading to “System Black” ...

## LESSONS FOR AUSTRALIA

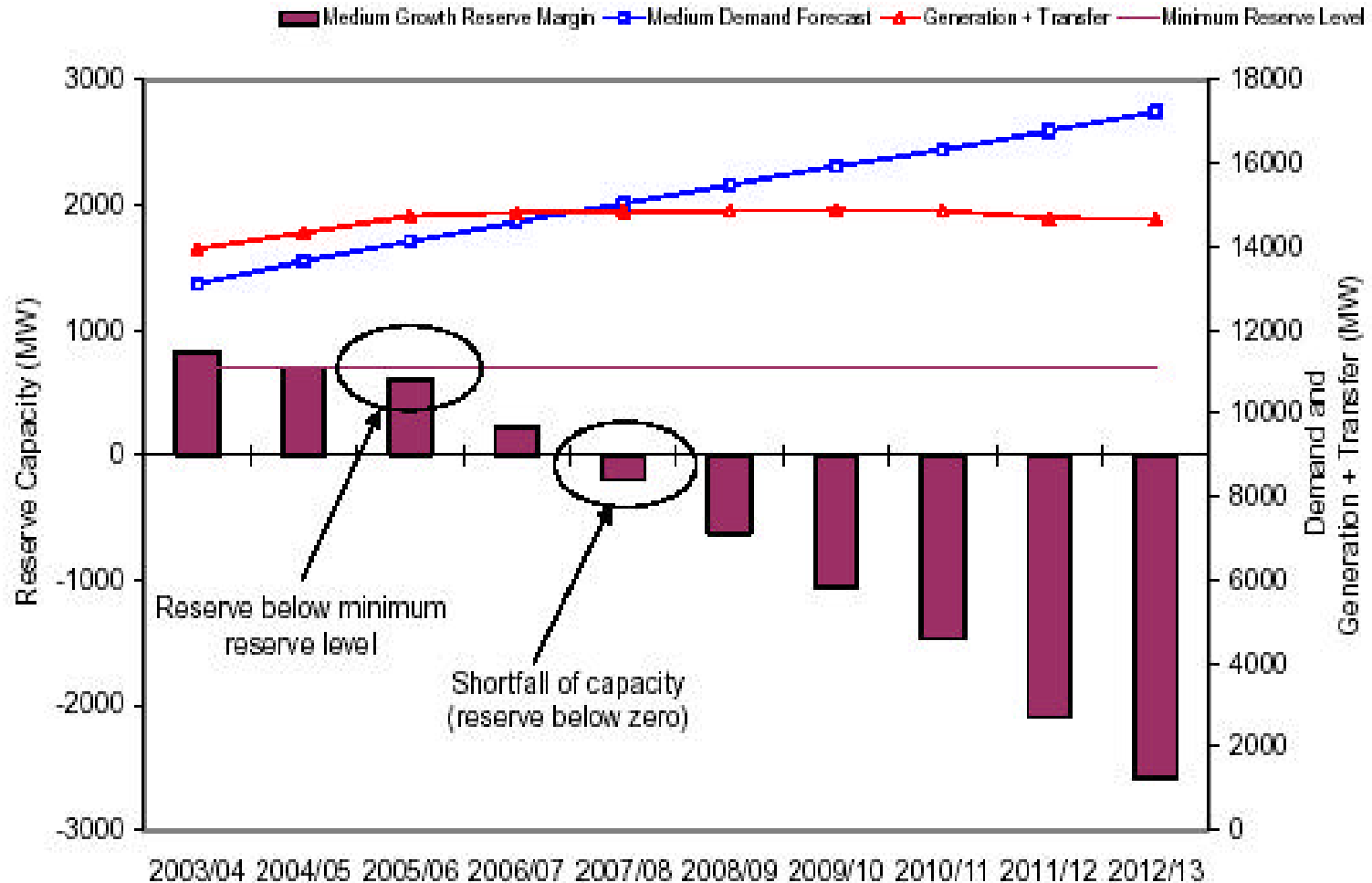


- Supply/Demand Balance
- Peak Electricity Demand
- Transmission System Constraints
- Complex Regulatory System



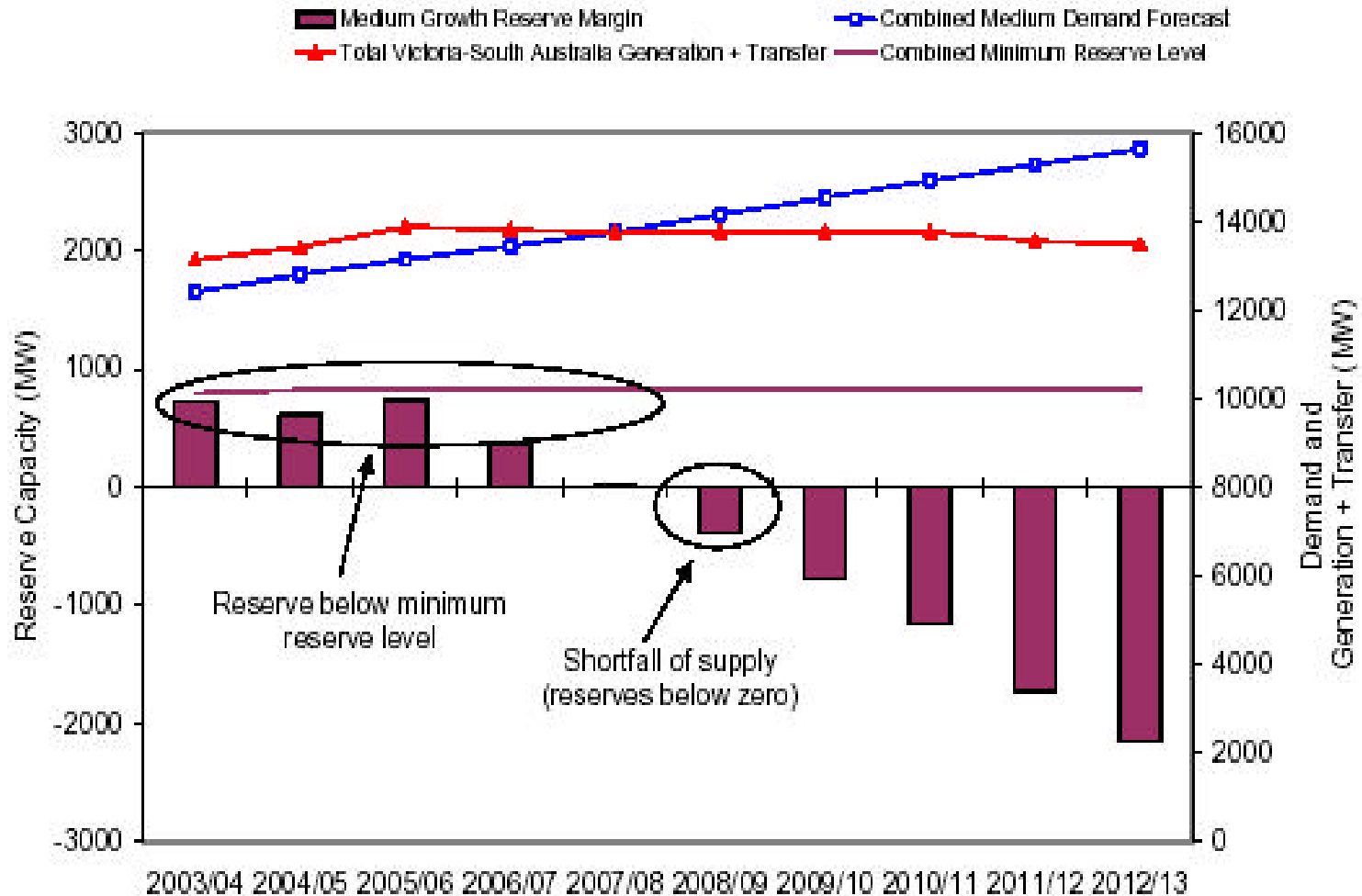
# SUPPLY/DEMAND BALANCE

## NEMMCO SOO - NSW Supply / Demand Balance

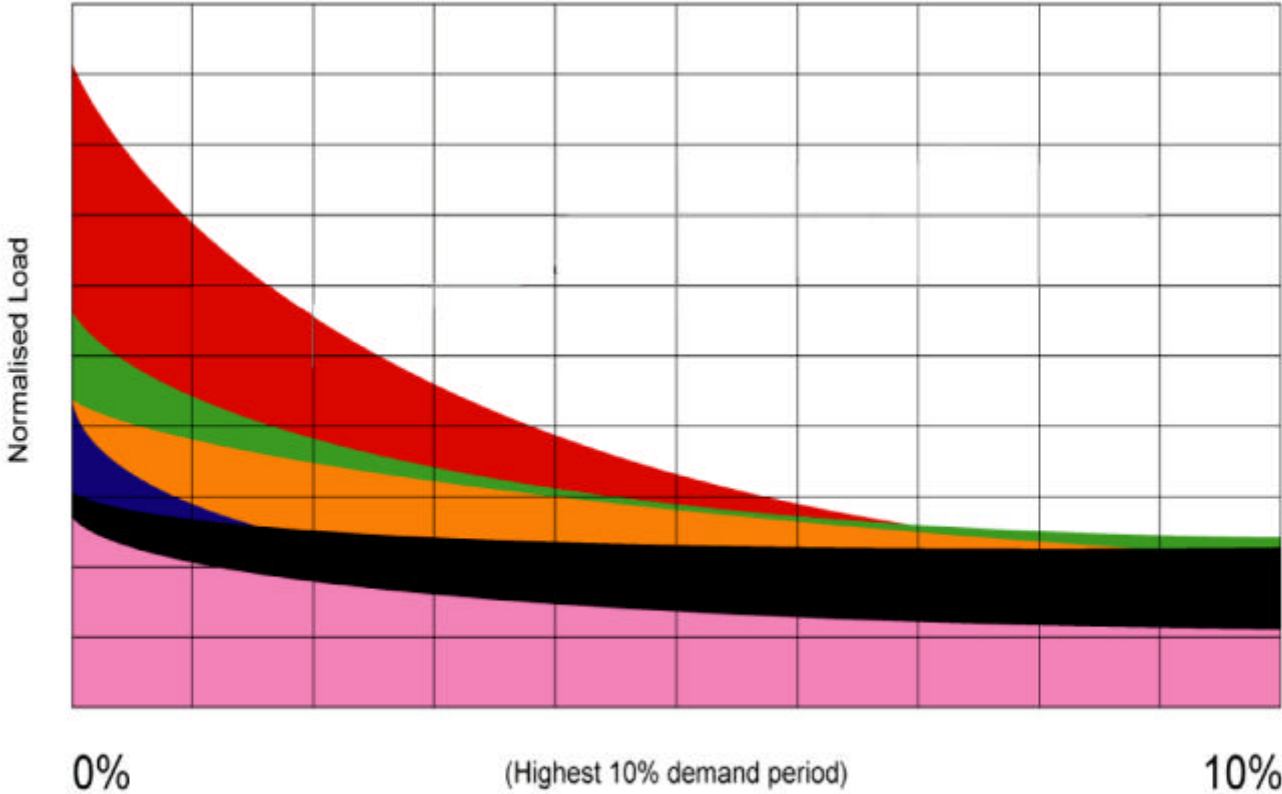


# SUPPLY/DEMAND BALANCE

## NEMMCO SOO - VIC & SA Supply / Demand Balance



# PEAK ELECTRICITY DEMAND Load Shape Comparison



Alberta, CAN   Singapore   Victoria   New Zealand   California   South Australia

# TRANSMISSION SYSTEM CONSTRAINTS



## NEM Electrical Interconnection Capacities

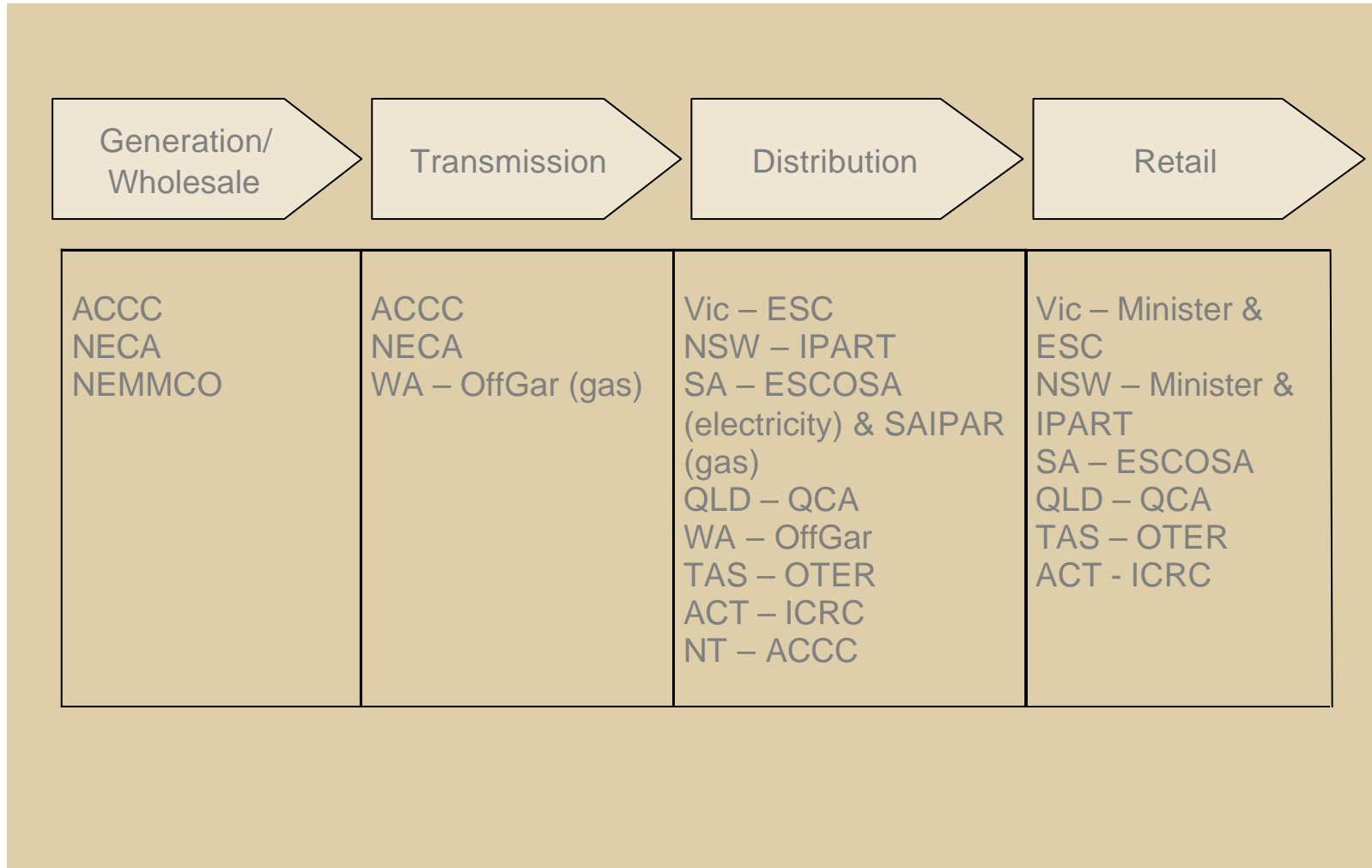
Unit = MW



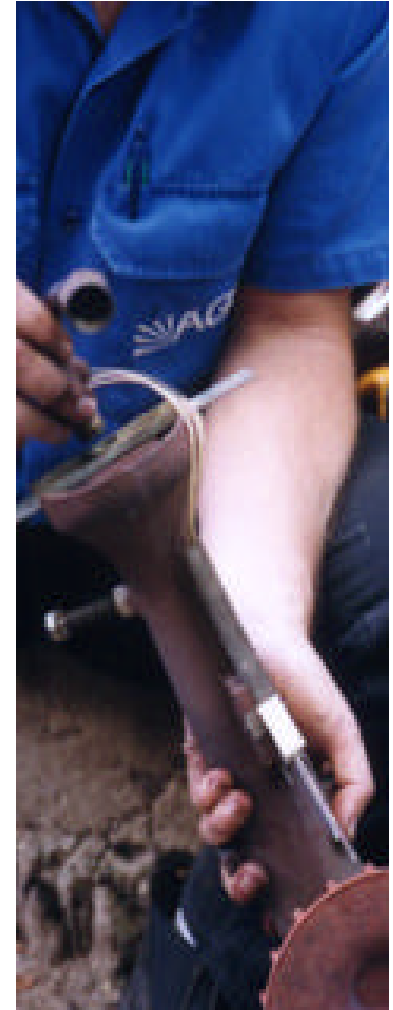
Snowy to Victoria	1950s	1,900MW
Snowy to NSW	1950s	3,100MW
Heywood (Vic - SA)	1980	500MW/300MW
Directlink (Qld-NSW)	2000	180MW
QNI (Qld - NSW)	2001	1000MW/750MW
Murraylink (Vic - SA)	2002	220MW
Basslink (Tas - Vic)	2005	600MW/300MW

# COMPLEX REGULATORY SYSTEM

## Australian Energy Regulatory Structure

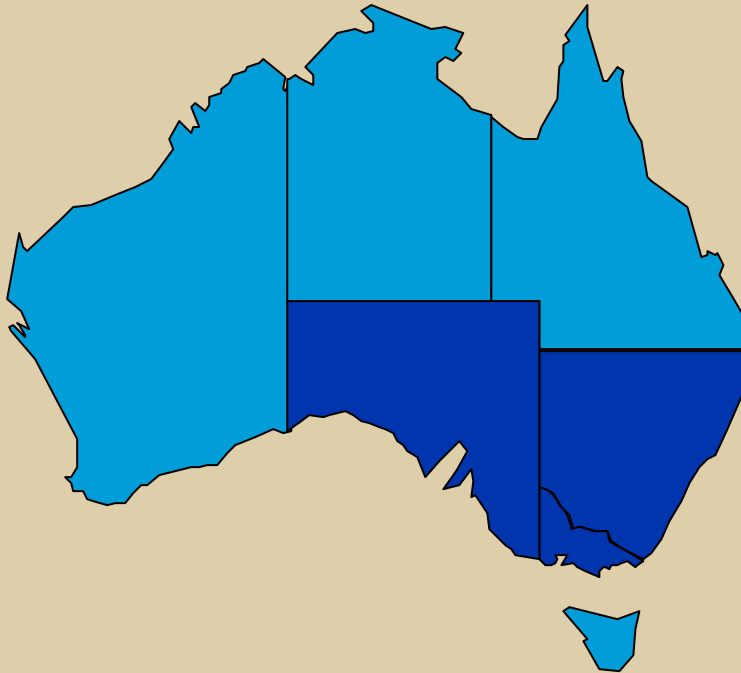


- Portfolio of Businesses Across the Energy Value Chain
- Positions of Market Leadership in Retail Energy:
  - Wholesale electricity portfolio
- Power Generation:
  - Greenfields
  - Brownfields
  - Investments in existing plants



# ENERGY SALES & MARKETING

## Market leading energy retailer



	Gas	Electricity
Customer numbers*	1.4million	1.7million
Energy Sales	155.2PJ	21 208 GWh

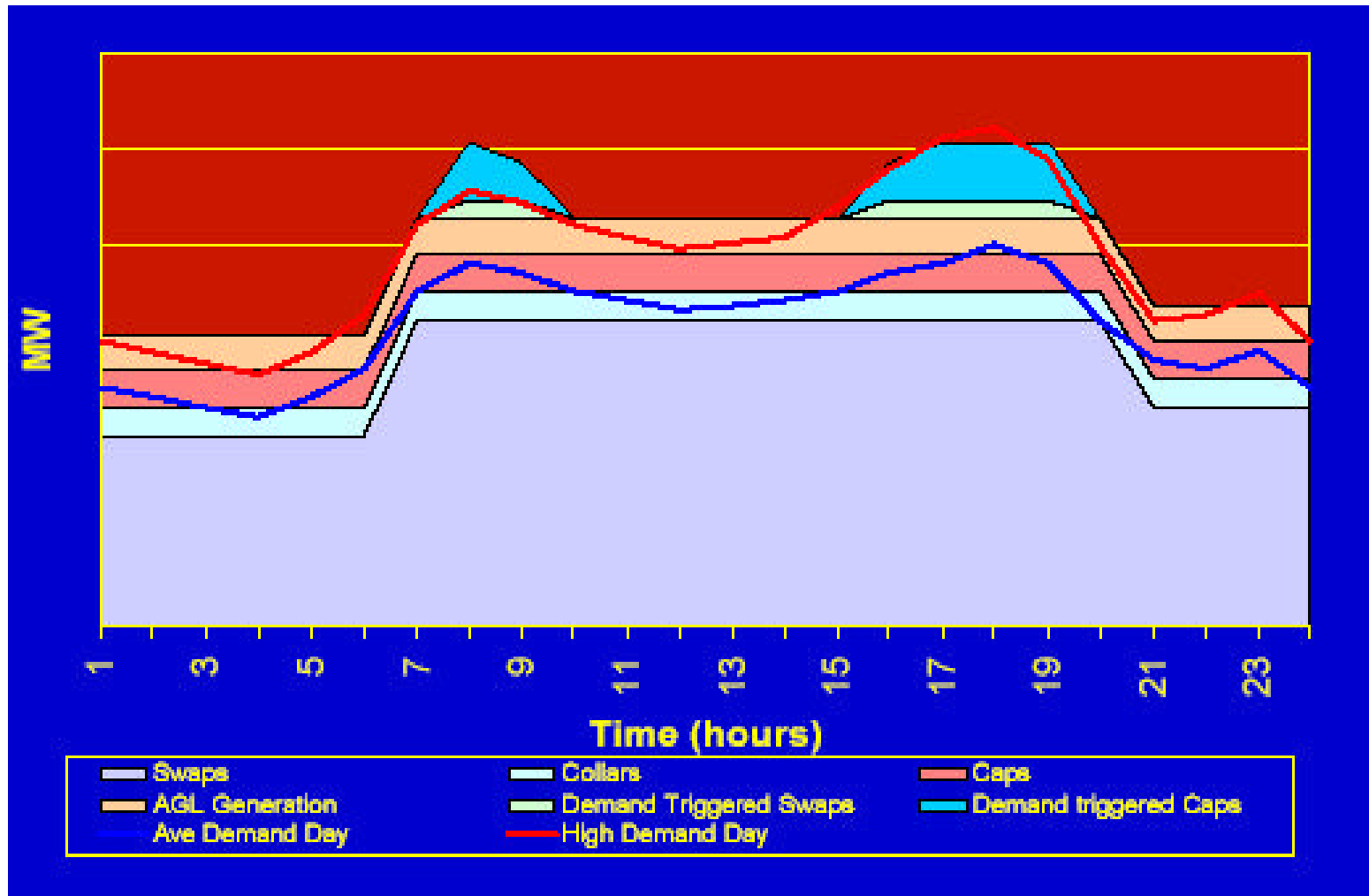
\* Includes ActewAGL customers

**3 million  
customer  
base**

**Wholesale  
energy  
position**

**Brand &  
energy  
know-how**

# WHOLESALE ELECTRICITY Typical Portfolio Structure



### **Two distinct elements:**

- Vertical integration positions with control of trading/dispatch  
- where appropriate
- Stand-alone power generation investments

### **Benefits:**

- Earnings diversification
- Portfolio diversification
- Additional growth opportunities

Another plank in AGL's business platform ...

# PEAKING POWER GENERATION



## Somerton (Vic)

- Peaking operation
- 150 MW
- Gas fired

## Hallett (SA)

- Peaking operation
- 180 MW
- Gas/distillate fired

## Benefits:

- Enhancing the retail electricity business
- Wholesale electricity risk mitigation




Further investment as demand grows ...

# LOY YANG POWER



- Conditional Share Sale Agreement signed - extension to Dec 2003
- AGL investment of \$200m for 35% stake
- Lowest cash operating cost base load generator in the NEM
- 40 plus years fuel supply

## Loy Yang investment is aligned with AGL strategy:

- 
- Increased investment in important part of energy chain
  - Earning appropriate return on investment in lowest cost base load generator



An attractive investment opportunity...

