

FACTSHEET

THE EVOLVING SUPPLY MIX
WITHIN THE NATIONAL
ELECTRICITY MARKET 2015



GENERATION SUPPLY IN THE NATIONAL ELECTRICITY MARKET

The National Electricity Market (NEM) operates on one of the world's longest interconnected power systems, stretching from Port Douglas in Queensland to Port Lincoln in South Australia (SA) and across the Bass Strait to Tasmania – a distance of around 5,000 kilometres. The NEM infrastructure comprises of both state and private assets managed by many participants.

The NEM is supplied by a range of fuel sources, with renewable energy such as wind, rooftop PV and hydro making up an increasing component of overall generation, as illustrated in the region by region breakdown below. Facts about the NEM:



Supports approximately
9 million
customers.



Has about
40,000 km
of transmission lines
and cables.



Supplies about
200 TWh
of energy to businesses
and households each year.

	QUEENSLAND	NEW SOUTH WALES	VICTORIA	SOUTH AUSTRALIA	TASMANIA	NEM TOTAL
Demand	3,940–8,900 MW	5,160–14,740 MW	3,600–10,580 MW	790–3,400 MW	720–1,790 MW	15 GW – 30 GW
Wind	0 MW	649 MW	1,168 MW	1,475 MW	308 MW	3,600 MW
Rooftop PV	1,336 MW	1,035 MW	759 MW	596 MW	84 MW	3,810 MW
Hydro	652 MW	2,650 MW	2,237 MW	0 MW	2,261 MW	7,800 MW

AEMO's 2015 Electricity Statement of Opportunities (ESOO) reports that industry intends to withdraw approximately 4,550 megawatts (MW) of generation capacity across the NEM over the next ten years. Most of these withdrawals are planned for New South Wales and South Australia, which could lead to a greater reliance on interconnectors to supply electricity to these states.

CHANGING NATURE OF DEMAND

The consumption of electricity sourced from transmission networks in the NEM has been declining since 2009-10. Maximum demand growth has slowed and is forecast to slow over the next decade. This is attributed to:

- Higher electricity prices have placed pressure on consumers to reduce their consumption, regardless of income levels.
- Changes in Australia's global and national economy has seen energy intensive sectors replaced by less energy intensive sectors.
- Reduced residential and commercial consumption from the grid per capita in most NEM regions, due to strong growth in rooftop PV system installations.
- Ongoing energy efficiency savings have occurred due to appliance improvements and technological advances in response to government policies such as rooftop solar PV.

FURTHER INFORMATION

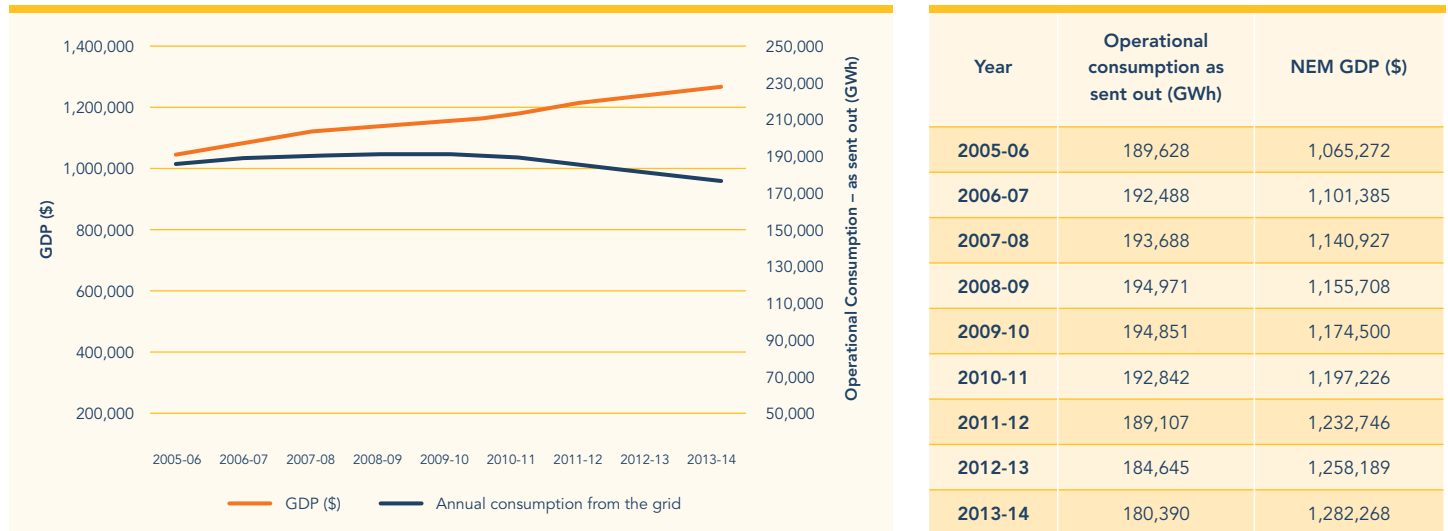
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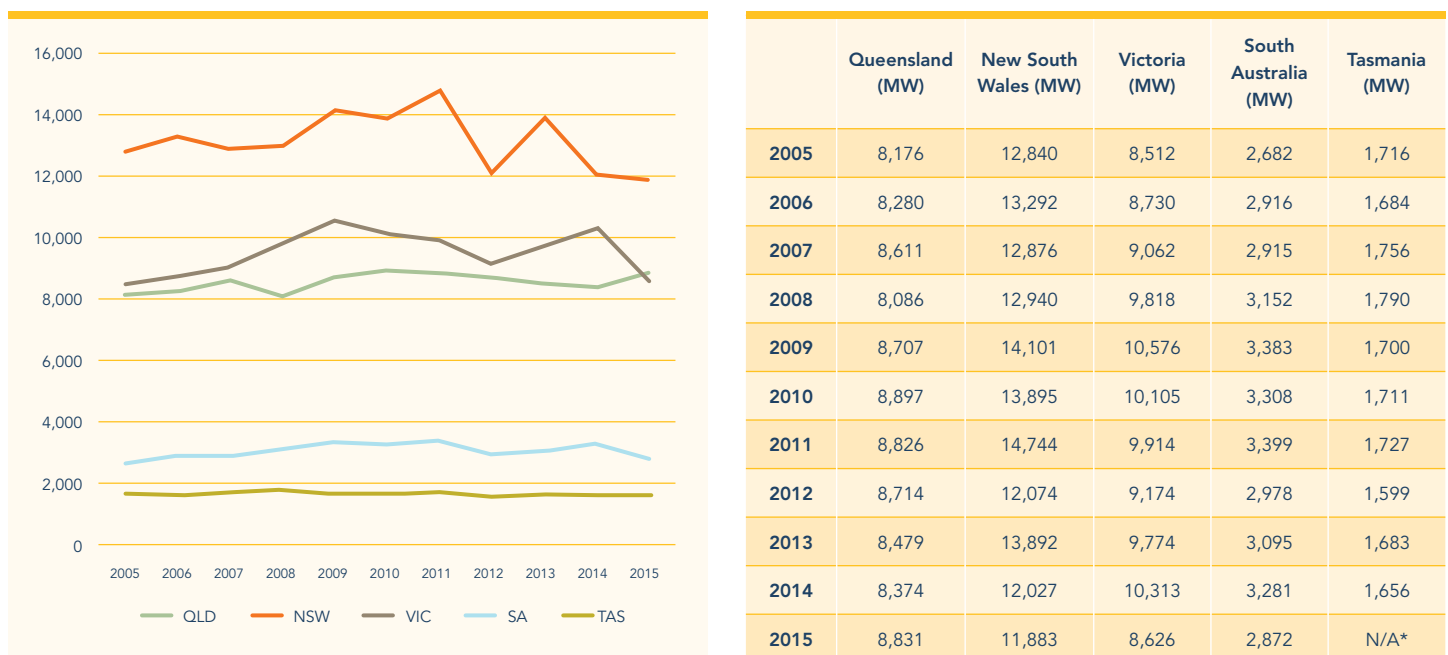
THE CORRELATION AND SEPARATION BETWEEN GRID CONSUMPTION AND GDP



THE IMPACT OF MAXIMUM DEMAND

Operational maximum demand is defined as the highest level of instantaneous operational demand during summer and winter each year, averaged over a 30-minute period. The maximum demand levels provide guidance on the network capacity required to sustain supply during these periods. Operational maximum demand occurs in summer in all regions except Tasmania, which experiences peak demand during winter.

The graph below displays maximum demand figures from all regions of the NEM since 2005, as at June 2015.



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