

National Energy Market and energy policy

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Department for Energy and Mining

Energy Efficiency Expo and
Seminar

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of South Australia
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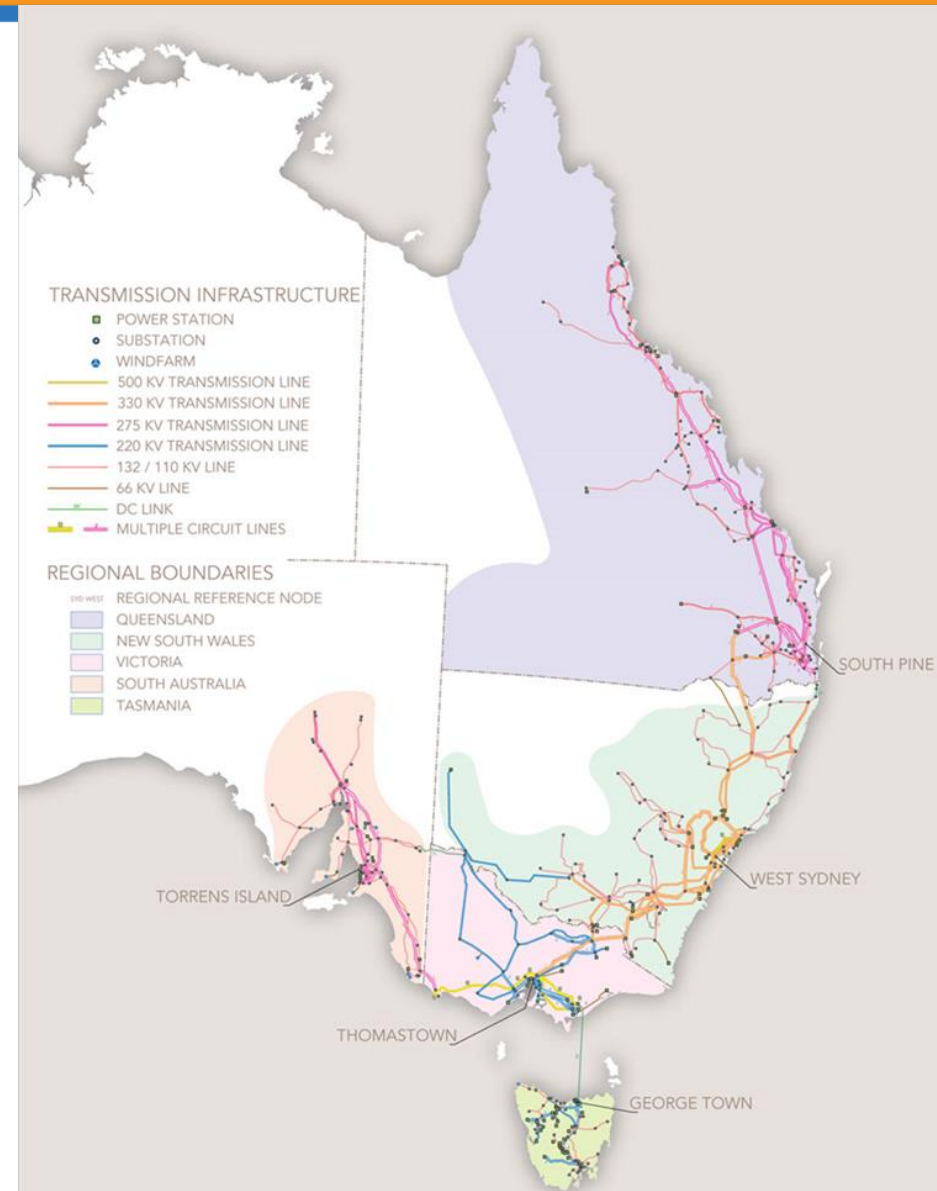
National Electricity Market



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- The NEM operates on one of the world's longest interconnected power systems – from Port Douglas in Queensland to Port Lincoln in South Australia (SA) – a distance of around 5,000 kilometres.
- The NEM generates around 200 terawatt hours of electricity annually, supplying around 80% of Australia's electricity consumption. Trades of \$11 billion of power occur every year to meet the needs of 19 million end-user consumers.





AEMO Wholesale Market

- Unlike other industries, electricity cannot be stored easily (though this is changing with the introduction of battery storage and other storage-capable technologies). Therefore, supply must meet demand at every point in time.
- The NEM is an energy-only gross pool where generators only receive revenue when dispatched.
- AEMO dispatches generators based on price, from the least expensive offers through to the most expensive. In this way, the expected demand for electricity is supplied by the lowest cost mix of generators.

Recent Wholesale Prices



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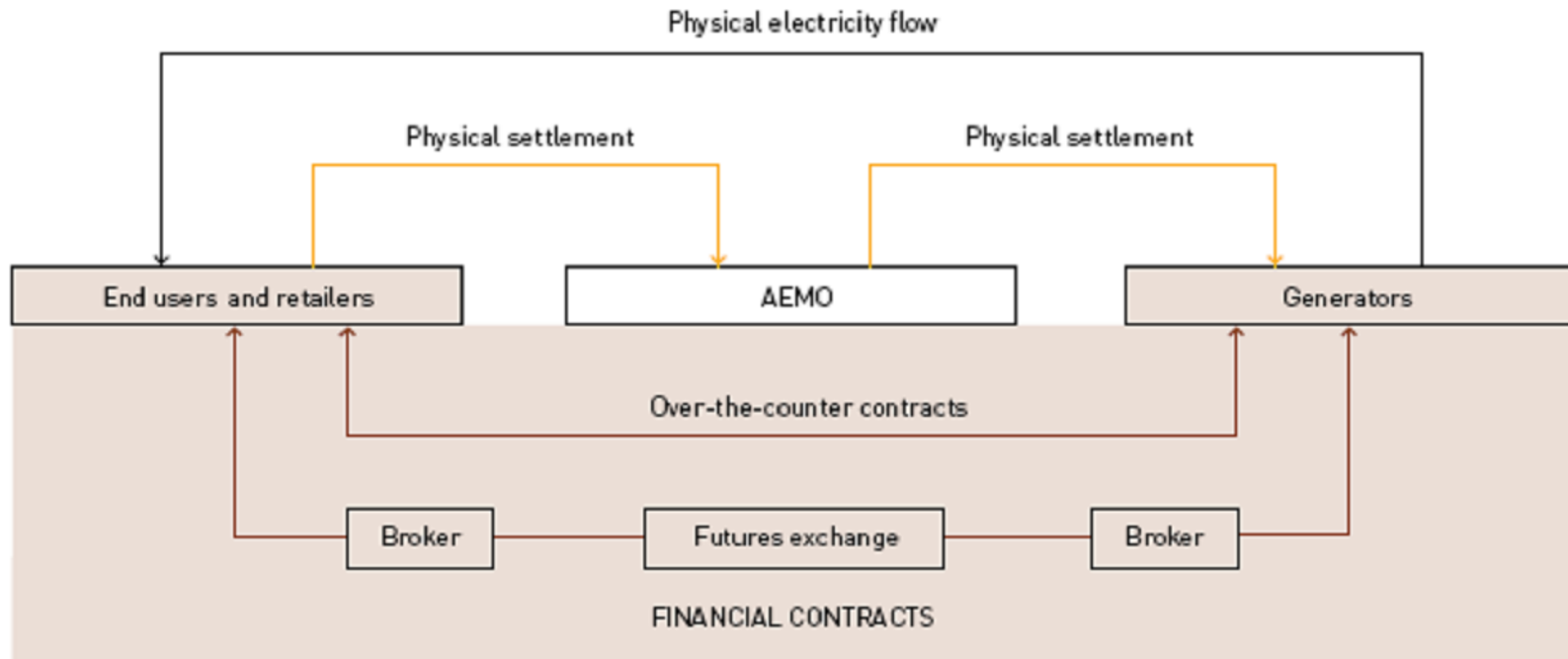
Financial Year	Queensland (\$ per MWh)	NSW (\$ per MWh)	Victoria (\$ per MWh)	SA (\$ per MWh)	Tasmania (\$ per MWh)
2014-15	53	35	30	39	37
2015-16	60	52	46	62	103
2016-17	93	81	67	108	76
2017-18	73	82	92	98	87
2018-19 (YTD)	72	78	68	90	37

- Wholesale prices have increased over the last four years due to the effect of closures of coal generation, Northern in SA and Hazelwood in Victoria, placing greater reliance on gas powered generation (in an environment of higher gas prices).

Physical and Financial markets



Figure 3.2
Relationship between the National Electricity Market and financial markets

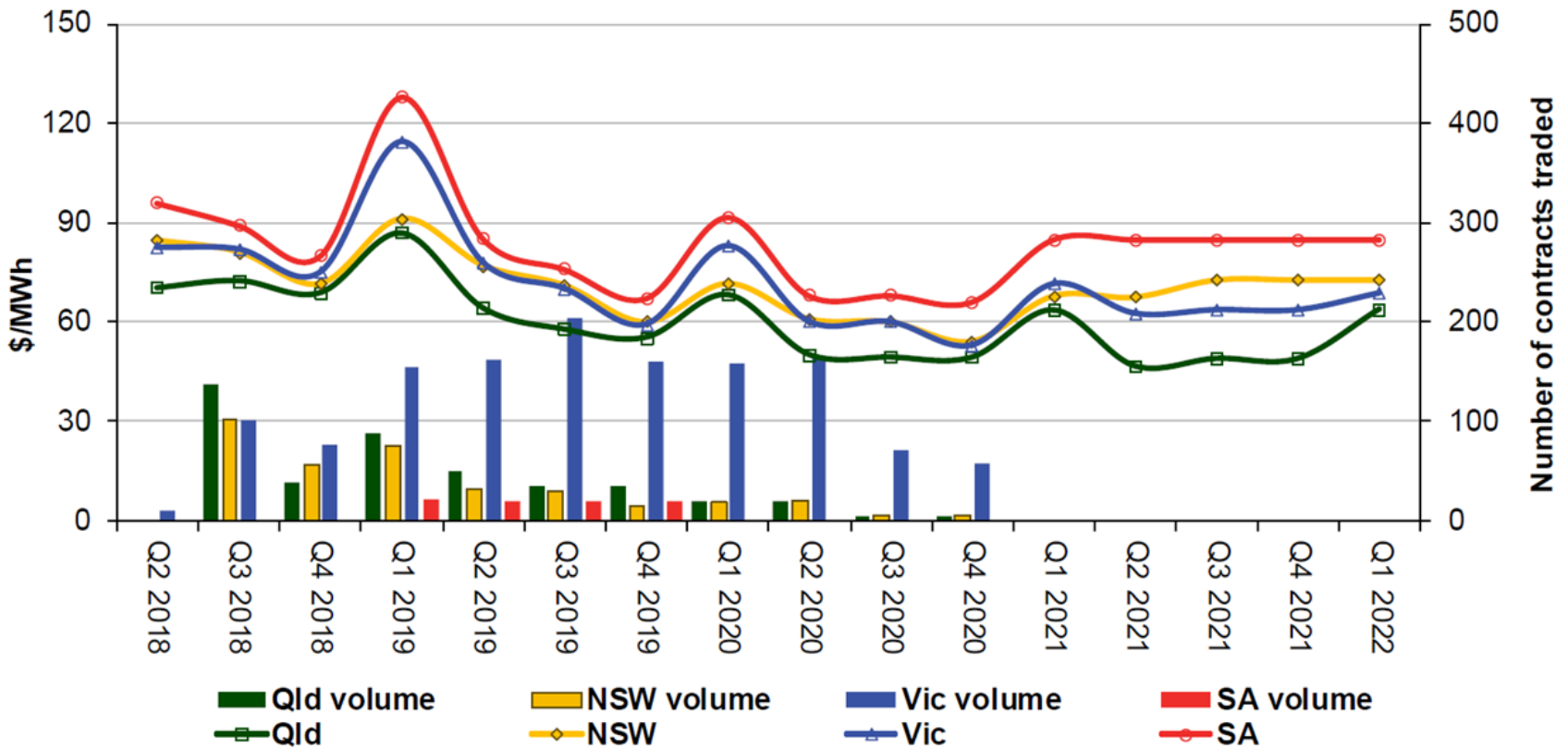


AEMO, Australian Energy Market Operator.

ASX future prices



Figure 9: Quarterly base future prices Q2 2018 – Q1 2022



Energy Initiatives



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The government committed funding to a number of new initiatives under its comprehensive energy policy:

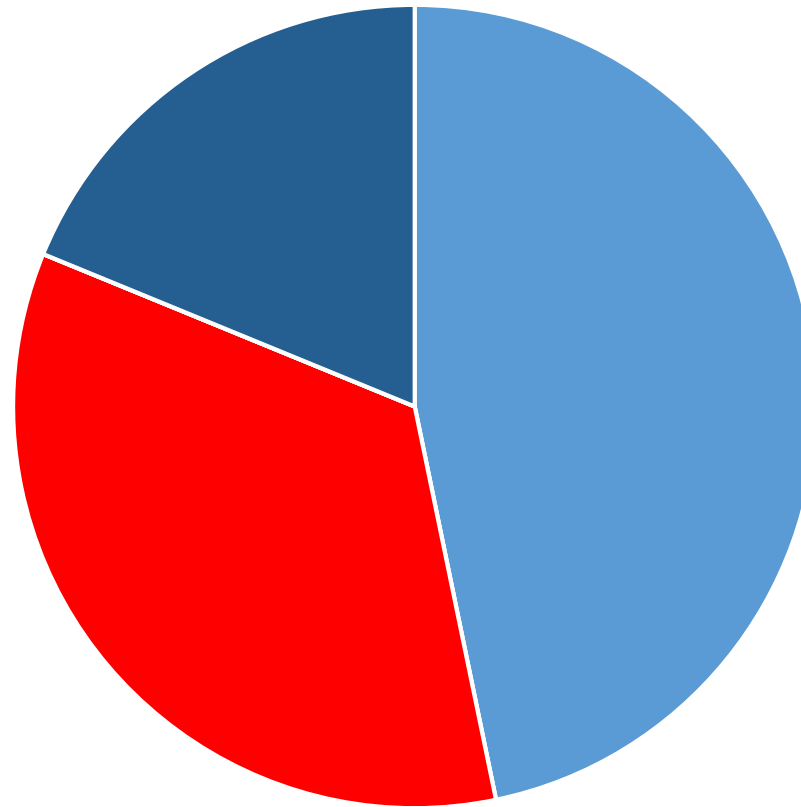
- a \$200 million interconnection fund, with ElectraNet's RIT-T draft decision and AEMO's Integrated System Plan supporting a new interconnector with NSW.
- a \$100 million Household Battery Scheme to empower households to take advantage of storage technologies.
- a \$50 million Grid Scale Storage Fund to facilitate the development of new storage technologies and further address energy intermittency issues.
- \$10 million Demand Response trials to help consumers better understand how their costs change depending on the time of their energy use.
- \$10 million in Demand Aggregation trials to develop network tools bringing together groups of consumers willing to enter into aggregation initiatives.
- \$10 million in supporting trials of technology designed to improve integrating distributed generation into the network.

Generation by fuel type (GWh) 2000/01



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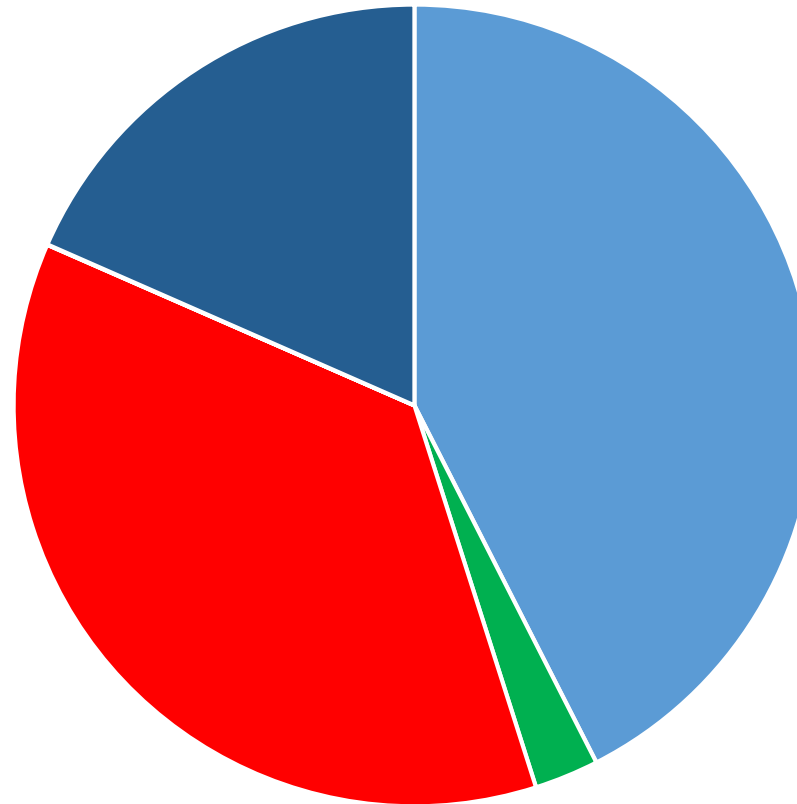
- Gas
- Wind
- Coal
- Diesel & small non-scheduled generation
- Rooftop PV
- Large scale solar
- Net interchange (importing)

Generation by fuel type (GWh) 2004/05



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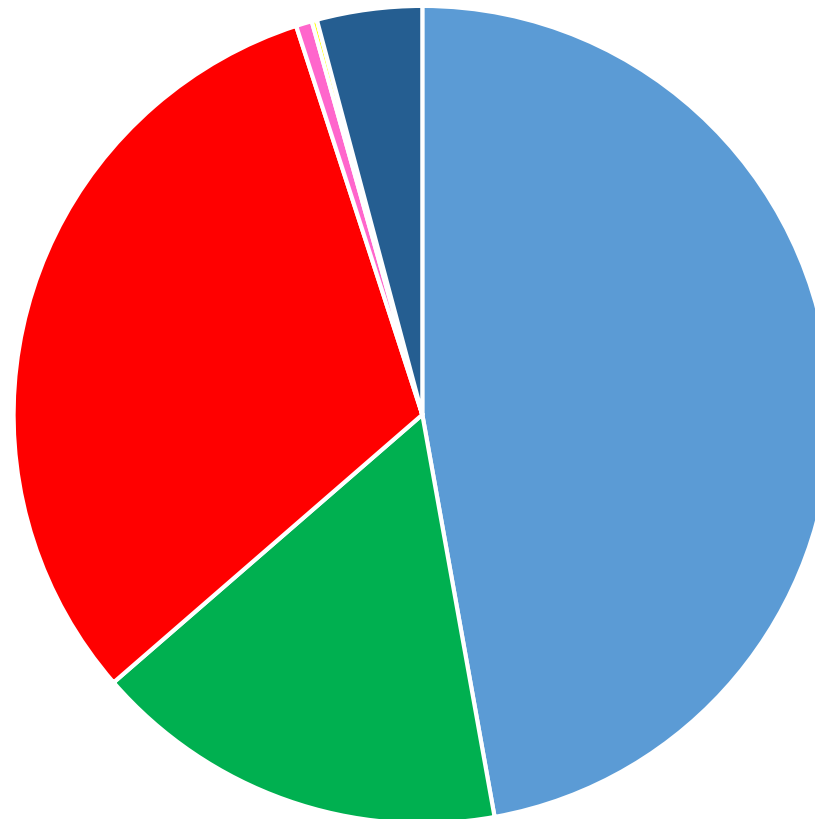
- Gas
- Wind
- Coal
- Diesel & small non-scheduled generation
- Rooftop PV
- Large scale solar
- Net interchange (importing)

Generation by fuel type (GWh) 2009/10



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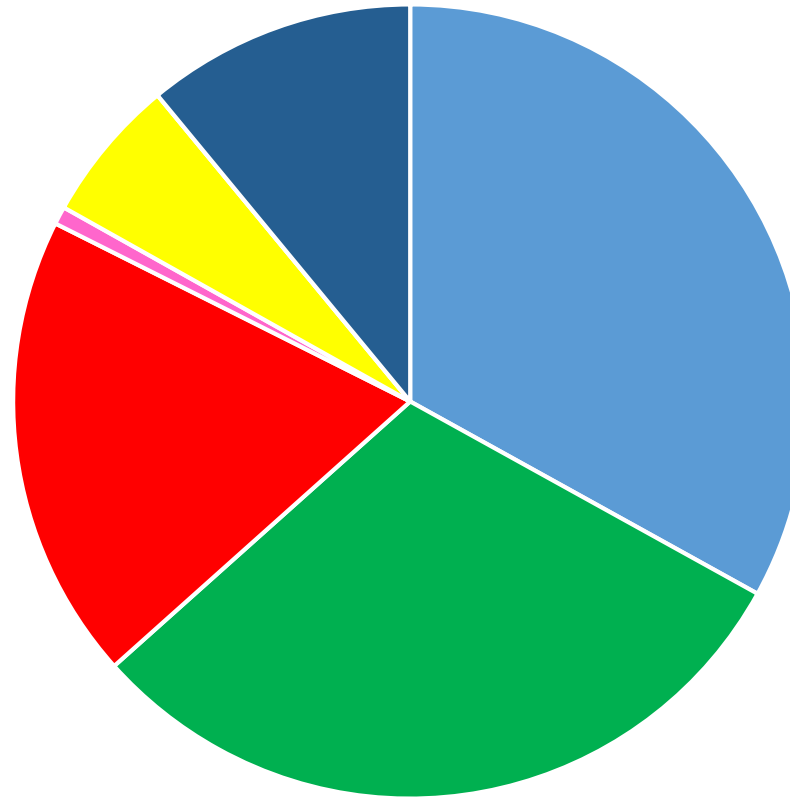
- Gas
- Wind
- Coal
- Diesel & small non-scheduled generation
- Rooftop PV
- Large scale solar
- Net interchange (importing)

Generation by fuel type (GWh) 2014/15



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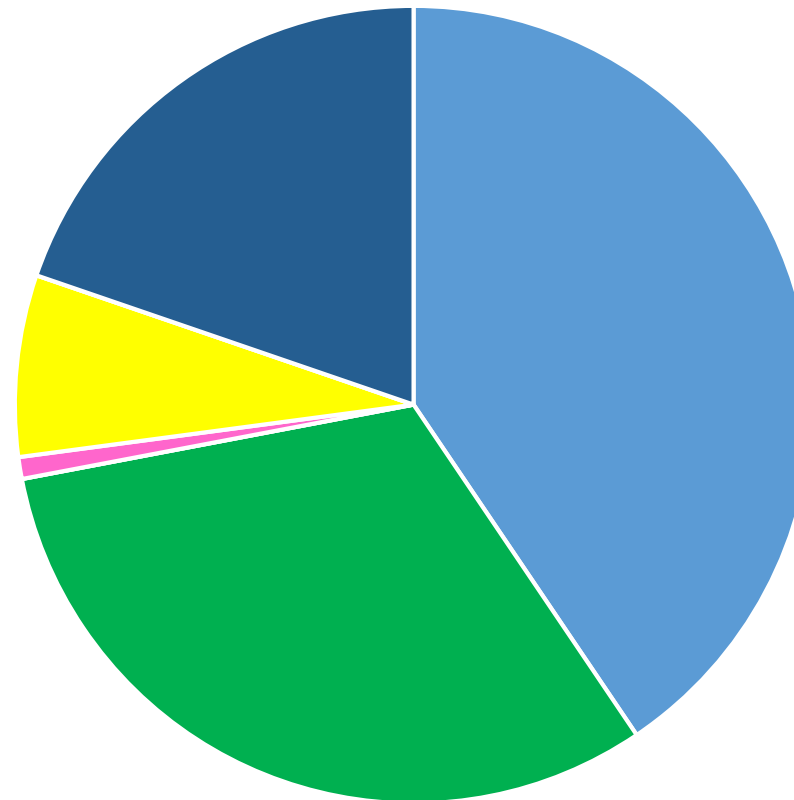
- Gas
- Wind
- Coal
- Diesel & small non-scheduled generation
- Rooftop PV
- Large scale solar
- Net interchange (importing)

Generation by fuel type (GWh) 2016/17 (latest)



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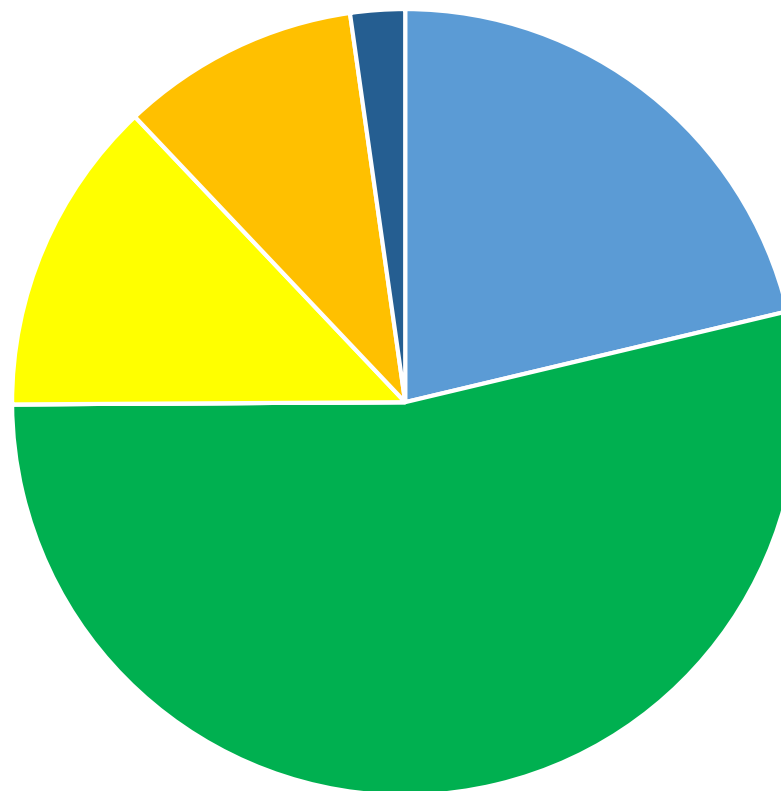
- Gas
- Wind
- Coal
- Diesel & small non-scheduled generation
- Rooftop PV
- Large scale solar
- Net interchange (importing)

Generation by fuel type (GWh) 2024/25 (AEMO forecast)



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- Gas
- Wind
- Coal
- Diesel & small non-scheduled generation
- Rooftop PV
- Large scale solar
- Net interchange (exporting)

Contact

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