



Regulating electricity networks

Why networks are regulated

Electricity transmission and distribution network service providers build, own and operate the towers, poles, wires and substations required to transport electricity from where it is generated to where it is needed to be consumed.

Across the National Electricity Market (NEM), cross-border interconnectors enable state-based transmission networks to supply electricity to over nine million residential and business customers across Queensland, NSW, ACT, Victoria, Tasmania and South Australia¹

The massive costs involved in providing extensive networks mean that each network business operates as a natural monopoly in the region serviced. The revenues each business can earn are regulated to manage the risks of monopoly pricing (eg overcharging or poor service in remote areas).

The National Electricity Rules (NER)² are made and amended by the AEMC to govern the operation of the NEM to ensure consistent regulatory decision making in line with the National Electricity Objective³. Chapters 6 and 6A of the NER set the rules to be applied by the regulator for the economic regulation of monopoly transmission and distribution network services. The form of regulation is an incentive-based approach meaning that rewards and penalties are used to encourage good performance by network service providers.

How economic regulation of networks is managed

The National Electricity Rules set revenues that network businesses can earn; as well as prices they can charge during a regulatory period (usually five years). Electricity transmission and distribution businesses in the National Electricity Market apply to the Australian Energy Regulator (AER) to assess their revenue requirement. They also provide the AER with supporting information on the costs they expect to face based on demand forecasts, and operational and regulatory requirements. Proposals are assessed according to the rules before the regulator sets the maximum revenues or prices for the next regulatory period. The regulator makes a number of decisions, principally in the following areas:

- rate of return on capital to apply to the network service provider's asset base for the next regulatory period; and
- capital and operating expenditure allowances and incentives to apply for the next regulatory period.

The basis upon which the asset base is set for the next regulatory period is adjusted for a number of factors including asset depreciation costs.

¹ The transmission and distribution networks in Western Australia and the Northern Territory do not interconnect with the national electricity grid or each other.

² The National Gas Market is regulated in a similar way through the National Gas Rules.

³ The National Electricity Objective, as stated in the National Electricity Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity with respect to (1) price, quality, safety, reliability, and security of supply of electricity; and (2) the reliability, safety and security of the national electricity system.

Energy networks are capital intensive and incur declining average costs as output increases. This means network services in a particular geographic area can be most efficiently served by a single supplier, leading to a natural monopoly industry structure.

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	STATE	NETWORK	OWNER	LINE LENGTH (KM)
Transmission	Queensland	Powerlink	Qld Government	13,569
Transmission	New South Wales and ACT	Transgrid	NSW Government	12,656
Transmission	Victoria	SP Ausnet	Publicly listed company (Singapore Power International 51%)	6,553
Transmission	South Australia	ElectraNet	Powerlink (Qland Government); YTL Power Investment; Hastings Utilities Trust	5,591
Transmission	Tasmania	Transend	Tas Government	3,469
Interconnector	Queensland-New South Wales	Directlink	Energy Infrastructure Investments	63
Interconnector	Victoria-South Australia	Murraylink	Energy Infrastructure Investments	180
Distribution	Queensland	Energex	Qld Government	53,256
Distribution	Queensland	Ergon Energy	QldGovernment	146,000
Distribution	New South Wales and ACT	Ausgrid	NSW Government	49,442
Distribution	New South Wales and ACT	Endeavour Energy	NSW Government	33,817
Distribution	New South Wales and ACT	Essential Energy	NSW Government	190,844
Distribution	New South Wales and ACT	ActewAGL	ACTEW Corporation (ACT Government 50%; Jemena 50%)	4,858
Distribution	Victoria	Powercor	Cheung Kong Infrastructure/Power Assets Holdings 51%; Spark Infrastructure 49%	84,027
Distribution	Victoria	SP AusNet	SP AusNet (listed company; Singapore Power International 51%)	48,259
Distribution	Victoria	United Energy	Jemena (Singapore Power International) 34%; DUET Group 66%	12,628
Distribution	Victoria	Citipower	Cheung Kong Infrastructure/Power Assets Holdings 51%; Spark Infrastructure 49%	6,506
Distribution	Victoria	Jemena	Jemena (Singapore Power International)	5,971
Distribution	South Australia	ETSA Utilities	Cheung Kong Infrastructure/Power Assets Holdings 51%; Spark Infrastructure 49%	87,220
Distribution	Tasmania	Aurora Energy	Tas Government	24,385

* AER State of the Energy Market 2011 -- The Basslink interconnector is not regulated

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