



ElectraNet Regulatory Performance Report 2018-19

Key messages

- ▶ In 2018-19, ElectraNet Pty Ltd (**ElectraNet**) met the reliability standards for all five exit point categories on the transmission network.
- ▶ ElectraNet reported the same number of supply interruptions and a decrease in the average duration of supply interruptions, compared to the previous year.
- ▶ There were no transmission line or transformer failures for the 2018-19 year.

ElectraNet Pty Ltd (**ElectraNet**) is the monopoly service provider of electricity transmission services in South Australia.¹ The electricity transmission network in South Australia extends across approximately 200,000 square kilometres, and includes 88 high voltage substations and 5,600 route kilometres of transmission lines.

As a monopoly service provider, ElectraNet is subject to economic regulation in respect of the revenue it is permitted to earn from South Australian consumers. The Australian Energy Regulator is responsible for administering that regulatory regime under the National Electricity Rules.

How the Commission regulates ElectraNet

The Essential Services Commission (**Commission**) has issued ElectraNet with an electricity transmission licence which authorises it to operate the majority of the transmission network in South Australia. As a condition of its licence,

ElectraNet must comply with the requirements of the Electricity Transmission Code (**Code**).

The Code forms a part of the broader regulatory framework that applies to electricity transmission services in the National Electricity Market. The National Electricity Rules establish technical standards (dealing with matters such as network frequency, system stability, voltage quality and fault clearance) and the Commission's role is confined to the development and monitoring of jurisdictional service standards, which complement the technical standards required under the National Electricity Rules.

Under the Code, ElectraNet must comply with obligations relating to the quality, safety and reliability of electricity transmission services (including minimising supply interruptions and informing customers about planned outages).² ElectraNet must also use its best endeavours to plan, develop and operate the electricity transmission network to meet the standards imposed by the National Electricity Rules in relation to the quality of transmission services and the transmission network.

The Commission monitors and reports on ElectraNet's compliance with the requirements set out in the Code and takes enforcement action in instances of non-compliance, if necessary.

ElectraNet's service standards

The Commission sets service standards in the Code for exit point reliability. Exit points are the connections between ElectraNet's transmission network and its customers, such as SA Power Networks or, in a small number of cases, directly connected customers.

¹ Although there are other transmission network operators in South Australia, the transmission networks operated by these entities do not intersect with the main transmission network in South Australia, which is operated by ElectraNet.

² Refer: <https://www.escosa.sa.gov.au/industry/electricity/codes-guidelines/codes>.

There are a total of five reliability categories for exit points on ElectraNet's transmission network. Each exit point category has specific reliability and supply restoration standards³. This provides transmission customers (generally distributors and large commercial customers) with certainty about the level of reliability of supply that must be provided through transmission networks.

The obligations under the standards require ElectraNet to restore supply within specified timeframes in the event of an outage, and to provide redundant capacity so that supply is continuous even if one part of the network fails.

The standards require that exit points be grouped in categories. The categorisation of exit points is based on periodic assessments as to whether or not the costs of augmenting each exit point are outweighed by the value to customers of the increased reliability that would result.

In 2018-19, ElectraNet met the reliability standards for all five exit point categories on the transmission network.

ElectraNet's transmission services were reliable

The Commission also monitors other transmission network reliability metrics that impact South Australian customers, notably:

- ▶ number of power system incidents – where the transmission network supply is interrupted, usually as a result of a power line tripping, and
- ▶ system minutes off supply⁴ (SMOS) attributed to power system incidents - a measure of transmission network unavailability. It is an indicator of the service level of the transmission network in supplying energy to network customers.

ElectraNet reported the same number of supply interruptions and a decrease in average duration in 2018-19, compared with the previous year.

Specifically, ElectraNet reported six power system interruptions in 2018-19. On average, 10 interruptions occur each year, based on

³ Refer sections 2.4 – 2.9 of the Code at <https://www.escosa.sa.gov.au/industry/electricity/codes-guidelines/codes> for information on these standards.

⁴ System minutes unsupplied are calculated as megawatt hours of unsupplied energy divided by maximum regional demand.

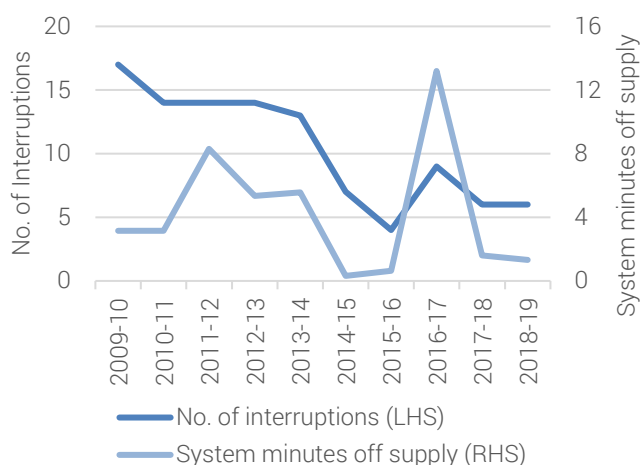
ElectraNet's 10-year historical reliability performance. Further, the reported 1.33 SMOS, which was lower than the 10-year historical average of 4.26 system minutes (Figure 1), has been attributed to the transmission system not being impacted by severe weather events in 2018-19.

In addition, ElectraNet reported that:

- ▶ there were no transmission line or transformer failures⁵ in 2018-19, and
- ▶ it restored line capacity (to achieve maximum agreed demand) within the exit point reliability standard timeframes specified in the Code.

Finally, ElectraNet reported that it has prepared, implemented and is compliant with an emergency transformer replacement plan and that it has sufficient spare transformers of appropriate types to ensure that the reliability standards of the Code can be met in the event of a transformer failure.

Figure 1. Number of transmission supply interruptions per year and associated system minutes off supply



Transmission line availability has declined slightly

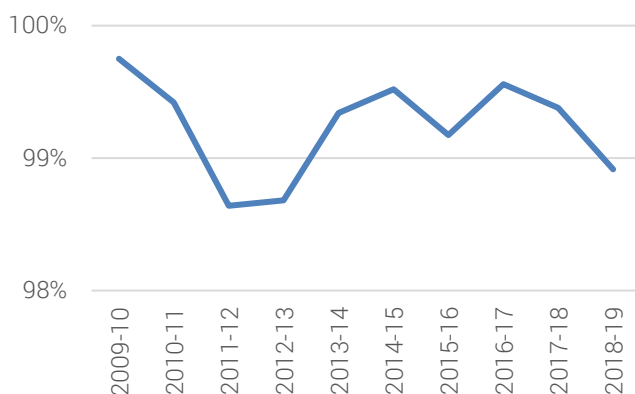
Transmission line availability is an indicator of the reliability of the network as it is an outcome of the effectiveness of strategies to minimise the number and duration of both planned maintenance and

⁵ Transmission line availability can be affected by factors such as transmission line failures, transformer failures and power system incidents.

unplanned outages (for example, coordination of routine capital works and defect repairs).

Figure 2 below shows transmission line availability over the last 10 years. Transmission line availability for the 2018-19 year was 98.92 percent, which is below the 10-year average of 99.24 percent but within the 10-year range. The Commission has noted the decline in transmission line availability and will consider a regulatory response if the decline persists.

Figure 2. Transmission line availability (percent of time)



Network support

ElectraNet reported that during the 2018-19 regulatory period, its network support service (back-up transmission) was tested eight times and ran supply to Port Lincoln once during the financial year. This resulted in tests and supply runs being 100 percent successful. Further, it was reported that there were no interruptions to Port Lincoln's supply where network support was required.

Further information

Further information on ElectraNet's customer service-related regulatory obligations and service standards can be found here:

<https://www.escosa.sa.gov.au/industry/electricity/codes-guidelines/codes>.

The complete time series performance data for ElectraNet can be found here:

<https://www.escosa.sa.gov.au/industry/electricity/regulatory-reporting/regulatory-performance-reports>

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