

**Performance against minimum service standards  
(MSS) by Energex and Ergon Energy for the 2018-19  
financial year**

This publication has been compiled by <insert name/s> of <insert business group>, <insert department>.

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# Distributor performance

## Background

There are currently two Queensland distribution entities: Energex Limited (Energex) in South East Queensland and Ergon Energy Corporation Limited (Ergon Energy) in regional Queensland. Both entities operate distribution networks under Distribution Authorities issued to them by the Regulator under the *Electricity Act 1994* and administered by the Department of Natural Resources, Mines and Energy.

From 1 July 2014, as part of ongoing reforms to the Queensland electricity sector, the minimum service standards (MSS) of electricity distributors, and the requirement for them to report their performances against the MSS, were incorporated into their respective Distribution Authorities.

Prior to this date, the MSS and reporting requirements were contained within the Electricity Industry Code, and the reports were published online by the Queensland Competition Authority (QCA).

## Minimum Service Standards

The conditions of the Distribution Authorities held by Energex and Ergon Energy require that they use their best endeavours to meet MSS in relation to the frequency and duration of electricity distribution outages. The MSS are put in place to ensure that Queensland electricity customers receive a minimum prescribed level of supply reliability. If a distributor does not meet its MSS limits, it must provide reasons for any failure and a proposal to improve its performance.

The MSS limits for Energex and Ergon Energy differ, with those set for Energex being more stringent. This reflects the differences in their distribution networks, and the environments in which they operate.

Under the conditions of their Distribution Authorities, each entity is required to report on its performance against MSS limits within two months of the end of each quarter. Once the June quarterly report of each entity is received, DEWS can ascertain whether the distributor has performed within its MSS limits for the financial year.

This report details the performance of Energex and Ergon Energy against the MSS limits set for the 2018-19 financial year.

## Distribution Networks

The MSS reports are not intended to enable performance comparisons between Energex and Ergon Energy. Due to their very different operating environments and distribution network characteristics, any such comparison would be inappropriate. The MSS reports can, however, be used to gauge the year-on-year performance of each distributor.

The Energex distribution network supplies largely urbanised areas of South East Queensland. Ergon Energy's network is spread across the remainder of the state with a significant number of long, isolated feeders and lower customer densities. The individual prescribed MSS limits for each distribution entity reflect these network differences.

## MSS requirements

The MSS requirements are set in relation to the frequency and duration of interruptions to the distribution services provided by Energex and Ergon Energy. An interruption includes any temporary unavailability of electricity supply to a customer associated with an outage of the electricity distribution network.

The MSS are average measures of performance across each distribution network (categorised by feeder type) excluding the impact of certain excluded events such as severe weather events. To ensure a low probability of exceeding their MSS limits in a particular year, distributors must aim to achieve a higher level of performance than the MSS limits. The MSS limits for each financial year are detailed in the Distribution Authority of each distribution entity.

There are six MSS limits for each distributor. Three MSS limits relate to the average duration of service interruptions and three to the average frequency of service interruptions. Reliability performance is expressed using the following measures:

- a) **System average interruption duration index (SAIDI)** is the sum of all customer interruption durations (measured in minutes) divided by the total number of customers (averaged over the financial year) for each distributor; and
- b) **System average interruption frequency index (SAIFI)** is the total number of customer interruptions, divided by the total number of customers (averaged over the financial year) for each distributor.

SAIDI and SAIFI performance is measured and reported based on the broad feeder categories of central business district (CBD), urban, short rural and long rural feeders. The MSS limits differ between feeder types, reflecting the performance that should reasonably be achieved on each type.

Some interruptions may be excluded by the distributors when reporting performance against MSS limits. Possible exclusions include interruptions commencing on a major event day, interruptions of one minute or less (momentary interruptions), interruptions resulting from a failure of the shared transmission grid, and interruptions caused by the failure of a customer's electrical installation. Interruptions resulting from a direction by a police officer or other authorised person who is exercising powers in relation to public safety are also excluded. A complete list of excluded interruptions is set out in the Distribution Authority of each distribution entity.

## Major event days

A major event day is one where the daily SAIDI value exceeds a certain threshold, which is based on the distributor's historical reliability performance. Major event days are often associated with severe weather events that cause significant, widespread and prolonged customer supply interruptions. Major event days are excluded when assessing the performance of distributors against MSS limits.

## Failure to perform within MSS limits

If a distributor exceeds the same MSS limit (i.e. SAIDI limit or SAIFI limit) for three financial years in a row, this is considered a 'systemic failure' and represents a contravention of the conditions of the entity's distribution authority. Under the *Electricity Act 1994*, any such contravention may incur disciplinary action such as the cancellation or suspension of a distribution authority and/or the imposition of a pecuniary civil penalty.

## Summary of Energex performance

### Performance against the MSS limits

Energex's reliability performance for 2018-19 was favourable to the MSS for all six performance measures.

Energex's SAIDI and SAIFI performance before and after exclusions, and its MSS limits for 2018-19 (as prescribed in its distribution authority) are presented in Tables 1 and 2.

Table 3 details the interruptions that Energex has excluded in determining performance against its SAIDI and SAIFI limits during 2018-19.

Energex reported six major event days during 2018-19, these are detailed in Table 4.

### Performance against the SAIDI limits

**Table 1 Energex SAIDI performance (minutes)**

	2014-15	2015-16	2016-17	2017-18	2018-19	SAIDI MSS limits 2018-19
<b>Total before exclusions</b>						
CBD feeders	3.699	28.278	7.953	4.803	2.671	
Urban feeders	190.512	85.916	131.562	130.872	92.765	
Short rural feeders	263.357	258.085	520.825	381.706	322.151	
<b>Total net of exclusions</b>						
CBD feeders	3.699	4.680	3.840	4.799	<b>2.132</b>	<b>15</b>
Urban feeders	90.813	76.670	76.261	73.092	<b>70.575</b>	<b>106</b>
Short rural feeders	178.592	180.890	164.641	187.384	<b>178.883</b>	<b>218</b>

### Performance against the SAIFI limits

**Table 2 Energex SAIFI performance (number of interruptions)**

	2014-15	2015-16	2016-17	2017-18	2018-19	SAIFI MSS limits 2018-19
<b>Total before exclusions</b>						
CBD feeders	0.158	0.131	0.044	0.0355	0.0146	
Urban feeders	0.957	0.793	0.842	0.8649	0.749	
Short rural feeders	1.861	1.760	1.991	1.8566	1.7547	
<b>Total net of exclusions</b>						
CBD feeders	0.158	0.032	0.024	0.0352	<b>0.0141</b>	<b>0.150</b>
Urban feeders	0.786	0.740	0.671	0.6712	<b>0.6432</b>	<b>1.260</b>
Short rural feeders	1.546	1.562	1.453	1.4561	<b>1.4423</b>	<b>2.460</b>

## Excluded interruptions

**Table 3 Energex exclusions from MSS reporting for 2018-19**

	Exclusions from SAIDI (minutes)	Exclusions from SAIFI (interruptions)
<b>Interruption of a duration of one minute or less</b>		
None in 2018-19		
<b>Interruption resulting from load shedding due to a shortfall in generation</b>		
None in 2018-19		
<b>Interruption resulting from a direction by AEMO, a system operator or any other body exercising a similar function under the Electricity Act, National Electricity Rules or National Electricity Law</b>		
None in 2018-19		
<b>Interruption resulting from automatic shedding of load under the control of under-frequency relays following the occurrence of a power system under-frequency condition described in the power system security and reliability standards</b>		
None in 2018-19		
<b>Interruption resulting from failure of the shared transmission grid</b>		
None in 2018-19		
<b>Interruption from direction by police officer or other authorised person in relation to public safety</b>		
	<b>SAIDI</b>	<b>SAIFI</b>
CBD feeder	0.0000	0.0000
Urban feeder	0.0860	0.0004
Short rural feeder	0.0000	0.0000
<b>Interruption to the supply of electricity on a distribution entity's supply network which commences on a major event day</b>		
	<b>SAIDI</b>	<b>SAIFI</b>
CBD feeder	0.539	0.0005
Urban feeder	22.100	0.1054
Short rural feeder	143.183	0.3106
<b>Interruption caused by customer electrical installations</b>		
	<b>SAIDI</b>	<b>SAIFI</b>
CBD feeder	0.0000	0.0000
Urban feeder	0.0040	0.0000
Short rural feeder	0.0850	0.0018
<b>Total exclusions</b>		
	<b>SAIDI</b>	<b>SAIFI</b>
CBD feeder	<b>0.5390</b>	<b>0.0005</b>

Urban feeder	<b>22.190</b>	<b>0.1058</b>
Short rural feeder	<b>143.268</b>	<b>0.3124</b>

## Major event days

**Table 4 Major event details**

<b>Event Date/s</b>	<b>Event Description</b>
21 October 2018	Severe storms with damaging winds and hail affected parts of South East Queensland
17 November 2018	Severe storm with destructive winds and hail affected parts of South East Queensland
28 November 2018	Severe storm with damaging winds and large hail impacted parts of South East Queensland
21 and 22 December 2018	Severe storms with strong winds caused extensive damage across South East Queensland
15 March 2019	Severe storms, heavy rain and damaging winds in South East Queensland



## Summary of Ergon Energy performance

### Performance against the MSS limits

Ergon Energy's reliability performance for the 2018-19 regulatory year was favourable to the MSS for 5 of the 6 performance measures, with the MSS limit for Long Rural SAIDI exceeded during 2018-19. Factors contributing to Ergon Energy's exceedance of this performance measure are included on page 8.

Ergon Energy's SAIDI and SAIFI performance before and after exclusions and its MSS limits for 2018-19 as prescribed in its distribution authority are presented in Tables 5 and 6.

Table 7 details the interruptions that Ergon Energy has excluded in determining performance against its SAIDI and SAIFI limits during 2018-19.

Ergon Energy reported four major events during 2018-19, these are detailed in Table 8.

### Performance against the SAIDI limits

**Table 4 Ergon Energy SAIDI performance (minutes)**

	2014-15	2015-16	2016-17	2017-18	2018-19	SAIDI MSS limits 2017-18
	<b>Total before exclusions</b>					
Urban feeders	836.4232	145.3321	482.095	211.5665	515.0658	
Short rural feeders	1042.8636	397.0792	1225.878	484.9407	523.3031	
Long rural feeders	1590.7802	1040.4344	1235.369	1259.9457	1170.1658	
	<b>Total net of exclusions</b>					
Urban feeders	133.6567	127.7016	106.988	134.0039	<b>147.7199</b>	<b>149</b>
Short rural feeders	359.0826	349.5913	279.380	315.5424	<b>409.6936</b>	<b>424</b>
Long rural feeders	1052.7546	954.7147	780.761	891.2906	<b>1017.9883</b>	<b>964</b>

### Performance against the SAIFI limits

**Table 5 Ergon Energy SAIFI performance (number of interruptions)**

	2014-15	2015-16	2016-17	2017-18	2018-19	SAIFI MSS limits 2017-18
	<b>Total before exclusions</b>					
Urban feeders	1.8846	1.3957	1.378	2.0537	1.5107	
Short rural feeders	3.8963	3.1983	3.098	3.5103	3.525	
Long rural feeders	7.3054	7.1775	6.457	6.8572	6.4706	

	Total net of exclusions					
Urban feeders	1.2686	1.2723	1.135	2.0537	1.2966	1.98
Short rural feeders	3.1501	3.0234	2.637	3.5103	3.1412	3.95
Long rural feeders	6.7643	6.7663	5.804	6.8572	5.8625	7.40

## Excluded interruptions

**Table 6 Ergon Energy exclusions from MSS reporting for 2018-19**

	Exclusions from SAIDI (minutes)	Exclusions from SAIFI (interruptions)
<b>Interruption of a duration of one minute or less</b>		
None in 2017-18		
<b>Interruption resulting from load shedding due to a shortfall in generation</b>		
None in 2017-18		
<b>Interruption resulting from a direction by AEMO, a system operator or any other body exercising a similar function under the Electricity Act, National Electricity Rules or National Electricity Law</b>		
None in 2017-18		
<b>Interruption resulting from automatic shedding of load under the control of under-frequency relays following the occurrence of a power system under-frequency condition described in the power system security and reliability standards</b>		
	<b>SAIDI</b>	<b>SAIFI</b>
Urban feeder	0.0000	0.0000
Short rural feeder	0.0019	0.0000
Long rural feeder	0.0145	0.0000
<b>Interruption resulting from failure of the shared transmission grid</b>		
	<b>SAIDI</b>	<b>SAIFI</b>
Urban feeder	0.0000	0.0000
Short rural feeder	0.1733	0.0094
Long rural feeder	0.6269	0.0286
<b>Interruption from direction by police officer or other authorised person in relation to public safety</b>		
	<b>SAIDI</b>	<b>SAIFI</b>
Urban feeder	351.9114	0.0926
Short rural feeder	36.9578	0.0458
Long rural feeder	2.5545	0.0297

<b>Interruption to the supply of electricity on a distribution entity's supply network which commences on a major event day</b>		
	<b>SAIDI</b>	<b>SAIFI</b>
Urban feeder	14.8488	0.1182
Short rural feeder	76.3483	0.3280
Long rural feeder	148.3363	0.5344
<b>Interruption caused by customer electrical installations</b>		
	<b>SAIDI</b>	<b>SAIFI</b>
Urban feeder	0.5857	0.0042
Short rural feeder	0.1282	0.0006
Long rural feeder	0.6454	0.0153
<b>Total exclusions</b>		
	<b>SAIDI</b>	<b>SAIFI</b>
Urban feeder	<b>367.3459</b>	<b>0.2140</b>
Short rural feeder	<b>113.6095</b>	<b>0.3838</b>
Long rural feeder	<b>152.1775</b>	<b>0.6081</b>

## Major event days

**Table 8 Major event details**

<b>Event Date</b>	<b>Event Details</b>
11 October 2018	Severe storms with strong winds and hail affected Bundaberg and Fraser Burnett areas
28 November 2018	Severe storms affected Fraser Burnett area and forced outage due to bushfires in Capricornia
4 December 2018	Severe storms affected Capricornia and Bundaberg areas
10 December 2018	Impact of ex-TC Owen that crossed the coast near Port Douglas in the Far North Queensland area

## MSS Exceedance in 2018-19

Long Rural SAIDI exceeded the MSS Limit for 2018-19.

Ergon Network unplanned performance was significantly impacted in October 2018 and March 2019, due to severe storms and lightning events experienced throughout the Wide Bay, South West, North West and Capricornia regions.

Long Rural Network also experienced a significant increase in the frequency of planned supply interruptions. This was the result of an increase in high priority maintenance on power lines and substation works across the Ergon Supply Network.