FACT SHEET

SA Power Networks' Summer Performance December 2013 to March 2014

The Essential Services Commission of South Australia (**the Commission**), has regulatory focus on SA Power Networks to assess its reliability of supply performance. Whilst the Commission assesses some performance aspects against annual targets set out in the Distribution Code, events may occur during the year that warrant special reporting. For example, a severe weather event may result in large numbers of customers being without electricity supply for extended periods.

The Commission's special reporting assesses SA Power Networks' performance, having regard to matters such as the response to customer calls, resources deployed, the impacts of external events (such as severe weather or third party actions or damage) and operational practices.

The Commission has monitored SA Power Networks' summer network performance since 2006. This monitoring regime began as a result of unsatisfactory performance during a heatwave in January 2006, after which, an Inquiry was referred to the Commission by the Minister for Energy. During the summer months, the electricity network is likely to be subject to maximum demand and maximum stress. Accordingly, the Commission closely monitors the actual performance of the network during summer, with particular focus on the performance of the network during heatwaves and severe weather events.

- During the summer period South Australia experience a number of hot spells, some of which were followed by damaging storms and winds.
- The electricity network coped with demand during the hot spells but many customers suffered power outages as a result of four severe weather events.
- SA Power Networks was appropriately resourced to respond to anticipated outages caused by the forecast severe weather events.
- Although nearly 8,000 customers experienced outages of over 24 hours duration during these events, SA Power Networks responded appropriately and effectively in systematically restoring supply to customers.

WEATHER SUMMARY 2013/14 SUMMER

South Australia experienced a series of hot spells during summer 2013/14, with record temperatures occurring at several locations. Adelaide experienced 26 days where the temperature reached 35 °C or higher, including a record 13 days exceeding 40 °C, of which 11 days exceeded 42 °C. From 12 to 17 January 2014, Adelaide experienced a six-day heatwave where the temperature exceeded 42 °C on five consecutive days with minimum overnight temperatures nearing 30 °C.

A number of the hot spells concluded with sharp drops in temperature which resulted in severe weather events (**SWE**) with thunderstorms and, in some cases, strong winds. The SWEs of 20-21 December 2013, 14-17 January and 3-4 February 2014 are of particular note. Each of these events, noted below, resulted in large number of power outages for customers, predominantly in the Adelaide metropolitan area.

20-21 December 2013

Strong to gale force winds hit Kangaroo Island, the southern Yorke Peninsula and the Adelaide region from the afternoon of the 20 December. The severe winds brought down many dozens of trees and tree limbs, which fell onto power lines, cars, fences and homes, resulting in major disruptions to power and property damage. About 150 power lines were brought down.

14 January 2014

A mass of extremely hot air led to thunderstorms and gusty winds up to 90 km/h developing across many areas of South Australia. Storms brought down trees in some areas and widespread lightning strikes ignited over 200 fires.

17 January 2014

High winds developed over the southeast of the State from a cooler change following 5 days where the temperature reached 42 °C or more.

3-4 February 2014

On the evening of 3 February and the morning of 4 February, severe winds hit the Adelaide foothills and nearby eastern and southern suburbs of Adelaide. The winds, gusting up to 100 km/h, brought down many hundreds of trees and tree limbs, damaged houses, cars and network infrastructure.

This was a high impact event for eastern Adelaide, due to the large population exposed to the conditions as well as the intensity and duration of the severe winds. About 700 power lines were brought down and the State Emergency Service responded to over 1100 calls for assistance.

IMPACTS OF THE SUMMER SEVERE WEATHER EVENTS

The electricity network appeared to cope well with the periods of extreme heat and the demands placed on it over the summer by high peak electricity demands. Peak operational demand reached 3,281 MW at 6.30 pm on 16 January[1], less than the record peak of 3,383 MW which occurred on 29 January 2009 during a heatwave.

Disruptions to customers' supply during the 2013/14 summer were largely due to the storms and gale-force winds which followed the periods of extreme heat. The table below summarises the number of customers affected by outages and the length of outages experienced during these SWEs.

TABLE 1: CUSTOMERS INTERRUPTED BY ELECTRICITY OUTAGES DURING SUMMER 2013/14 SEVERE WEATHER EVENTS

Time Band	20-21 December	14 January	17 January	3-4 February
< 12 hours	52,271	32,365	38,024	56,317
12 - 15 hours	1,872	348	199	10,889
15 - 18 hours	1,465	124	0	5,284
18 - 24 hours	1,742	223	0	10,281
> 24 hours	450	90	27	7,229
Total	**57,800**	**33,150**	**38,250**	**90,000**

The event on 3-4 February had the greatest impact on the network and on customers. 90,000 customers were affected with 33,000 of these experiencing outages of 12 hours or more. More than 7,000 customers lost power for more than 24 hours. The eastern parts of Adelaide experienced the greatest disruption with many customers in the suburbs of Burnside, Stonyfell and Beaumont being without power for more than 24 hours.

Under the Electricity Distribution Code, SA Power Networks is required to make payments, known as Guaranteed Service Level (GSL) payments, to customers who have experienced service that is worse than a pre-determined standard. GSL payments must be made for interruptions exceeding 12 hours, and the amounts payable increase with the length of outage. GSL payments are made to some extent, to acknowledge the inconvenience a power interruption may cause. [2]GSL payments totalling approximately $6.3 million were generated as a result of the 3-4 February 2014 event. 42% of the total GSL payments relate to outages over 24 hours. This is by far the single biggest GSL payment by SA Power Networks since they were introduced in 2005, and reflects the magnitude of the damage caused by the SWE.

SA POWER NETWORKS' SUMMER PREPAREDNESS

Prior to summer each year, SA Power Networks takes steps, such as reviewing transformer condition, to prepare for the impact of anticipated high demand on the network. In addition, following a severe weather event, the Commission may request SA Power Networks to provide details of its performance during the event, and prior preparation to ensure it was ready and suitably resourced to manage any resultant interruptions. For example, during the heatwave of 12-17 January 2014, SA Power Networks confirmed to the Commission that it had cancelled all planned maintenance work and made all crews available for outage work, and that it was monitoring weather forecasts regularly.

For the four days preceding the SWE on 3-4 February, Commission staff monitored SA Power Networks' website for reported outages. Interruptions that occurred during the hot weather preceding the SWE were addressed quickly and resources, on standby for the hot weather, were available for the initial response to the SWE.

1 AEMO – refer http://www.aemo.com.au/News-and-Events/News/2014-Media-Releases/Heatwave-13-to-17-January-2014

2 GSL payments are distinct from compensation payments where customers claim for financial losses incurred directly or indirectly from a power outage.

SA POWER NETWORKS' RESPONSE TO 3-4 FEBRUARY 2014 EVENT

High winds hit the metropolitan area from about 9 pm on 3 February through to 4 February, resulting in significant network damage. The first outage was reported at about 10 pm on 3 February. There were about 700 outage reports including 370 wires down as a result of this SWE. Accordingly, SA Power Networks mobilised all available crews, contractors and support staff from across the state. Additional resources from interstate arrived on 5 February to assist in network repairs.

As a result of this SWE, about 400 customers in the eastern suburbs/foothills still remained without power on the morning of 6 February. Sixty of these customers were located in the eastern Adelaide suburb of Stonyfell where extensive works was required to replace or repair multiple poles and wires brought down by the severe winds. All remedial work around the region was complete by around 6 pm on 6 February - a period of 68 hours from the first outages reported. SA Power Networks reported that its crews and additional contracted resources contributed approximately 15,000 hours to repair work over the three days of the response.

CALL CENTRE PERFORMANCE DURING THE SEVERE WEATHER EVENTS

The table below summarises SA Power Networks' reported call centre performance during the summer severe weather events.

TABLE 2: SA POWER NETWORKS CALL CENTRE PERFORMANCE SUMMER 2013/14 SEVERE WEATHER EVENTS

Date	Received	Abandoned*	Answered within 30 sec	Average wait time (minutes)
20/12/2013	5,250	540	83.8%	1:51
21/12/2013	17,208	3,704	81.3%	9:31
14/01/2014	10,120	1,551	82%	2:37
17/01/2014	6,954	685	85.5%	1:27
04/02/2014	39,893	3,663	90%	1:38
Total	**79,425**	**10,143**	**87.9%**	**3:05**

*Note: Of the 10,143 calls abandoned, 4,734 were abandoned within 30 seconds.

On 4 February 2014, SA Power Networks' call centre received approximately 20 times the average number of daily calls received. Note that the Commission assesses SA Power Networks against an annual telephone responsiveness target in the Electricity Distribution Code. The annual target is 85% of calls answered within 30 seconds.

IMPACT OF SWE ON SA POWER NETWORKS' RELIABILITY SERVICE STANDARDS

The Commission has established annual standards for duration and frequency of unplanned supply interruptions to customers connected to the network for seven geographic regions within the SA Power Networks network. The targets were set based on historical reliability of the network, including the impact of past severe weather events.

TABLE 3: IMPACTS OF SUMMER SEVERE WEATHER EVENTS ON 2013/14 DURATION OF INTERRUPTIONS TARGETS (MINUTES)

	Adelaide Business Area	Major Metro Areas	Central	Eastern Hills & Fleurieu Peninsula	Upper North & Eyre Peninsula	South East	Kangaroo Island
Target (Min)	25	130	260	295	425	295	450
Impact of SWEs (Min)	0	121.1	33.4	9.9	20.8	0	0

Table 3 highlights that the Major Metro Areas region, notably the eastern Adelaide suburbs, experienced the major impact of severe weather events during summer 2013/14. Other regions were only affected, to a relatively minor extent, by the storms and winds in mid-January. The influence of 2013/14 severe weather events means that SA Power Networks will exceed its annual duration of interruptions target for the Major Metro Areas region. Note that the 3-4 February 2014 event accounted for 74% (89 minutes) of interruption duration over the summer.

SUMMARY

SA Power Networks directed appropriate resources, including utilisation of interstate assistance, in repairing the extensive damage to its network caused by severe weather events over the 2013/14 summer. Although a few locations experienced interruptions greater than 48 hours, SA Power Networks restored network segments methodically and efficiently, taking into account safety priorities associated with downed wires. SA Power Networks also took appropriate steps prior to the SWEs to ensure resources (including call centre staff) would be available if required.

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