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UniSource Energy
SERVICES

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AZ CORP COMMISS
DOCKET CONTROL

April 13, 2015

Docket Control
Utilities Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, AZ 85007

Re: Notice of Filing – UNS Electric, Inc.’s Report on Distribution Indices
Docket No. E-04204A-09-0206, Decision No. 71914

Pursuant to Decision No. 71914 (September 30, 2010), UNS Electric, Inc. (“UNS Electric”) is required to file an annual report of the distribution indices including a listing of the worst performing circuits and what step are being taken to mitigate these circuits’ poor performance.” Please find enclosed UNS Electric’s report on the worst performing circuits and mitigation efforts for 2014.

If you have any questions regarding the report, please contact me at (520) 884-3680.

Sincerely,

Melissa Morales
Regulatory Services

Arizona Corporation Commission
DOCKETED

APR 14 2015

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cc: Compliance Section, ACC

UNISOURCE ELECTRIC WORST PERFORMING DISTRIBUTION CIRCUITS CALENDAR YEAR 2014

Kingman District List of Worst Performing Circuits

SUBSTATION	CIRCUIT #	# FORCED OUTAGES 2014	2014 PRIMARY OUTAGE CAUSES	COMPOSITE CIRCUIT IMPORTANCE RATING
Golden Valley	8016	43	Animal (6), Equipment Failure (4), Momentary (9), Unknown (4), Weather (20)	60
Casson	5005	24	Animal (2), Equipment Failure (1), External Caused (1), Momentary (3), UES Caused (1), Unknown (2), Weather (14)	37.5
Jagerson	5063	21	Animal (6), Equipment Failure (2), External Caused (1), Momentary (7), Unknown (2), Weather (3)	50

Mitigation Efforts

Mitigation for Golden Valley-8016: Circuit is lightly loaded with 31% circuit loading with 1835 customers. The Customer Outage Minutes Ratio is 3.689. Golden Valley is very flat and prone to lots of lightning and wind. Circuit needs to be reviewed to make sure lateral fuses are properly placed to minimize the number of customers that will be affected by a lightning strike if a lateral fuse operates. The majority of outages on this circuit are transformer fuses, thus minimizing the number of customers affected by a lightning strike.

Mitigation for Casson-5005: Circuit has a 79% circuit loading with 2081 customers. The Customer Outage Minutes Ratio is very low at 0.203. All 14 of the weather related outages were due to lightning during monsoon season in July. All of those outages were transformer fuses affecting anywhere from 1 to 7 customers at a time.

Mitigation for Jagerson-5063: Circuit has a 60% circuit loading with 2260 customers. The Customer Outage Minutes Ratio is low at 0.539.

Mitigations for all circuits:

1. All circuits are regularly patrolled in the Kingman District.
2. Immediate maintenance or repair is completed for Equipment Failure and/or External Caused damages.
3. Bird guard and bird wire are presently specified on all new designs, and trouble crews install bird guard and bird wire at locations where fuses have blown.

**UNISOURCE ELECTRIC WORST PERFORMING DISTRIBUTION
CIRCUITS CALENDAR YEAR 2014**

**Lake Havasu District
List of Worst Performing Circuits**

SUBSTATION	CIRCUIT #	# FORCED OUTAGES 2013	2013 PRIMARY OUTAGE CAUSES	COMPOSITE CIRCUIT IMPORTANCE RATING
Palo Verde	6006	27	Animal (16), External Caused (2), Momentary (4), Multiple (1), Unknown (3), Weather (1)	25
Clearwater	6026	23	Animal (9), Equipment Failure (2), Momentary (7), Weather (5)	23.75
Palo Verde	6008	21	Animal (6), Equipment Failure (1), External Caused (3), Momentary (6), Unknown (4), Weather (1)	15

Mitigation Efforts

Mitigation for Palo Verde-6006: Circuit has an 81% circuit loading with 1848 customers. The Customer Outage Minutes Ratio is 1.750.

Mitigation for Clearwater-6026: Circuit has a 58% circuit loading with 2075. The Customer Outage Minutes Ratio is very low at 0.031.

Mitigation for Palo Verde-6008: Circuit has a 57% circuit loading with 1915 customers. The Customer Outage Minutes Ratio is very low at 0.096.

Mitigations:

1. All circuits are regularly patrolled in the Lake Havasu District.
2. Immediate maintenance or repair is completed for equipment failure and/or external caused damages.
3. Bird guard and bird wire are presently specified on all new designs, and trouble crews install bird guard and bird wire at locations where fuses have blown.
4. An underground cable replacement project is underway to replace old direct buried cable that has been failing.