APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 179054
Division – Meramec Valley
Area Served – Franklin District, MO
SAIFI Value – 10.40

Analysis Results:

This circuit serves 58 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, trees, overhead equipment failures, and unknown causes which resulted in 603 CI. Circuit 179054 experienced two significant outages in 2012 which resulted in 573 (95%) of the total CI. The first outage occurred when the primary came off a temporary insulator during construction on the circuit. The second outage occurred when a thunderstorm caused a tree to fall onto the circuit. Additional, smaller, outages occurred due to animal intrusions, lightning strikes, tree contacts, and unknown causes which resulted in 30 (5%) of the total CI.

However, the SAIFI value for this circuit is misleading due to a change in the customer count from 465 to 58 at the end of the year. In 2012, a new substation was constructed and 407 of the 465 customers were transferred to one of the circuits supplied by the new substation. The reduced number of customers was used to calculate the SAIFI value. If the original customer count were included, the overall SAIFI value for this circuit would have been 1.30.

Corrective Actions:

Approximately one mile of this circuit, along Hwy AB, was reconductored in 2012.

Tree trimming was performed on this circuit in early 2013.

Division engineering personnel performed an inspection of the circuit and one improvement opportunity was identified. An animal guard will be added to a transformer under DOJM Work Request number 23FR053473 which will be completed in May 2013.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 287053
Division – Underground
Area Served – Saint Louis, MO
SAIFI Value – 6.72

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2010 and 2012. The SAIFI values for this circuit in the last three years were: 2.90 in 2010, 0.0 in 2011 and 6.72 in 2012. This circuit serves 18 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by underground equipment failures which resulted in 121 CI. Circuit 287053 experienced three significant outages in 2012. These three outages all occurred due to splice failures.

Corrective Actions:

Previous reliability work performed on this circuit:

A new conduit system was built to replace failing 3 inch clay conduits on 7th Street north of Washington in 2011.

After a series of failures on this circuit, an aggressive replacement of paper insulated lead covered (PILC) cables in the Ashley 53 circuit began in 2012. This work included replacing 2,300 feet of PILC cable with new EPR cable. This work was completed in December 2012.

Planned MWPC reliability improvement work:

A project will be constructed on 7th Street, south of Washington. A new duct bank and new manholes will bypass a manhole with elevated temperatures at 7th and Washington. This work will be completed in 2013,

The remaining 3,200 feet of PILC cable will be replaced on the Ashley 53 circuit in 2013.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 824003
Division – SEMO
Area Served – Bernie, MO
SAIFI Value – 5.04

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2011 and 2012. The SAIFI values for this circuit in the last two years were: 2.97 in 2011 and 5.04 in 2012. This circuit serves 423 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and a public vehicle accident which resulted in 2,131 CI. Circuit 824003 experienced five significant outages in 2012. The first three outages occurred when high winds and storms caused the primary to fail which tripped the substation breaker. The fourth outage occurred when a tree contacted the primary during a storm which tripped the substation breaker. The fifth outage occurred when a public vehicle struck a pole which broke the primary and resulted in a substation breaker trip.

Corrective Actions:

Previous reliability work performed on this circuit:

Tree trimming was performed on this circuit in 2011.

A visual inspection of this circuit was performed by division personnel in 2012. This inspection identified needed animal guarding, tap fusing, and other maintenance items. Repairs were performed under DOJM Work Request number 2TSE099753 which was completed in November 2012.

Planned MWPC reliability improvement work:

An overhead visual and ground line inspection will be performed on this circuit in 2013. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 622054
Division – SEMO
Area Served – Charleston, MO
SAIFI Value – 4.95

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2011 and 2012. The SAIFI values for this circuit in the past two years were: 2.15 in 2011 and 4.95 in 2012. This circuit serves 375 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, an animal intrusion, and defective equipment which resulted in 1,857 CI. Circuit 622054 experienced four significant outages in 2012. The first three outages occurred when storms and high winds caused the primary to fail. The fourth outage occurred when a squirrel tripped the substation circuit breaker and a dead circuit breaker battery did not allow the circuit breaker to clear the fault.

Corrective Actions:

Previous reliability work performed on this circuit:

Un-fused taps were corrected and fuse coordination verified on this circuit in 2010 to minimize future outages. This work was performed under DOJM Work Request number 2TSE092582 which was completed in December 2010.

A special overhead visual inspection was performed on this circuit in 2010. This inspection focused on animal guarding, tap-fusing, and maintenance items. Repairs were performed under DOJM Work Request number 2TSE093546 which was completed in December 2010.

The Vegetation Management Department performed mid-cycle maintenance tree trimming on this circuit in 2012.

An overhead visual inspection was performed on this circuit in 2012. The repair work identified as a result of the inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy.

Planned MWPC reliability improvement work:

The previously completed reliability work is expected to improve the performance of this circuit. No work is planned on this circuit in 2013

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 957053
Division – Central Ozark
Area Served – Jefferson City, MO
SAIFI Value – 4.74

Analysis Results:

This circuit serves 94 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by underground cable failures and overhead equipment problems which resulted in 446 CI. Circuit 957053 experienced four significant outages in 2012 which resulted in 357 (80%) of the total CI. Three of these outages occurred due to underground feeder cable failures. The fourth outage occurred due to excess slack in one overhead span.

Corrective Actions:

The section of line with excessive slack was rebuilt in 2012.

Tree trimming will be performed on this circuit in 2013.

Division engineering personnel are working to replace the cable which failed multiple times in 2012. A new route requiring new easements is planned with construction scheduled to be completed in 2013. The work will be performed under DOJM Work Request number 2JCP086893.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 451054
Division – SEMO
Area Served – Viburnum, MO
SAIFI Value – 4.54

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2011 and 2012. The SAIFI values for this circuit in the past two years were: 3.31 in 2011 and 4.54 in 2012. This circuit serves 389 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by storms, customer equipment, a forest fire, trees, and pole failures which resulted in 1,765 CI. Circuit 451054 experienced two significant outages in 2012. The first outage occurred due to problems at a large customer substation which resulted in a 34kV outage. The second outage occurred due to a massive forest fire. Additional, smaller outages occurred due to tree contacts, broken poles, and storms

Corrective Actions:

Previous reliability work performed on this circuit:

Additional reclosers, fuses, and switches were installed on various sections of this circuit to improve reliability and increase fault isolation during outages. This work was performed under DOJM Work Request numbers 28IR034384 and 28IR034193 which were completed in December 2010 and January 2011, respectively.

An overhead visual and ground line inspection was performed on this circuit in 2011. This inspection identified approximately 150 pole replacements and various other hardware repairs. The repair work identified as a result of the inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy.

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2012 which identified and removed tree hazards.

Automated switch installations on single phase circuit taps were performed under DOJM Work Request number 28IR036322 in October 2012.

Squirrel guards were installed on selected taps under DOJM Work Request numbers 28IR035890 and 28IR035904 which were completed in December 2012.

Planned MWPC reliability improvement work:

Division engineering personnel will perform a circuit coordination analysis in 2013 to determine whether additional isolation of this circuit may be accomplished by adding layers of protection to reduce the exposure on this long circuit.

Pole replacements, tap fusing, transformer replacements, and animal guard installations will be performed under DOJM Work Request numbers 28IR035332, 28IR035889, 28IR035903, and 28IR036193. This work will be completed in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 223054
Division – Archview
Area Served – South St. Louis County, MO
SAIFI Value – 4.31

Analysis Results:

This circuit serves 1,101 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by public damage, overhead equipment failures, and overhead line contacts which resulted in 4,746 CI. Circuit 223054 experienced four significant outages in 2012 which resulted in 4,370 (92%) of the total CI. The first outage occurred when a customer's tree trimming contractor caused a tree to contact the wires. The second outage occurred when a phase conductor came off its insulator and faulted. The third outage occurred when a primary conductor failed during rain, which in turn resulted in a solid blade switch (D12343) burning. This outage was compounded when solid blade switch (D2615) broke when it was operated during the outage restoration. The fourth outage occurred when primary conductors contacted each other during windy conditions.

Corrective Actions:

The circuit outage caused by the customer tree trimming contractor was cleared and an affected jumper was repaired.

The entire pole and its associated hardware were replaced where the phase conductor came off its insulator. This work was performed under DOJM Work Request number 21MT560332 which was completed in September 2012.

The primary conductor was repaired and all three solid blade switches were replaced at both D12343 and D2615. This work was performed under DOJM Work Request numbers 21MT559834, 21MT559826, and 21MT559833 which were all completed in September 2012.

Spacing insulators were installed between the phase wires at Lat-14238 to prevent wire contacts during wind. In addition, an unused circuit tap just south of the lateral; which also had close phase spacing, was removed from the distribution system. This work was performed under DOJM Work Request number 21MT559962 which was completed in September 2012.

A special visual inspection was performed on this circuit in late 2011 by the Reliability Engineering group. This inspection found a variety of concerns which have since been repaired. These items included a loose and hot Lightning Arrestor stinger repaired under DOJM Work Request number 21MT540692 which was completed in November 2011, tap fuses added under DOJM Work Request number 21MT542115 which was completed in December 2011, and a bad pole replaced under DOJM Work Request number 21MT542148 which was completed in January 2013. In addition to these completed repairs, work is underway to repair issues found at nine locations on this circuit, which include items such as a partially cracked pole, loose pole top pins, and missing Lighting Arrestor squirrel guards. This work will be performed under DOJM Work Request number 21MT569180 which is scheduled to be completed in March 2013.

Tree trimming will be performed on this circuit in 2013.

An overhead visual and ground line inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 103002
Division – Gateway
Area Served – Ladue, MO
SAIFI Value – 4.06

Analysis Results:

This circuit serves 211 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by a public vehicle accident, overhead equipment failures, and human error which resulted in 856 CI. Circuit 103002 experienced three significant outages in 2012. The first outage occurred when the primary along Clayton Rd. came down during calm weather. The second outage occurred when a delivery truck contacted communication wires and broke a pole. The third outage occurred when circuit load was dropped due to a switching order error during work on a project to replace the substation.

Corrective Actions:

The Foxboro substation was completely rebuilt in 2012 due to age and condition. The old substation was rusted to the point of structural failure and had a history of problems with the load tap changer and operating scheme. The new substation has over twice the capacity and should operate more reliably than the old substation.

A project to reconductor 1,700 feet of overhead wire along Clayton Rd. from 4/0 Cu to 556AA was performed under DOJM Work Request number 21MT557823 which was completed in March, 2013.

An overhead visual inspection and an underground detailed inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

A project to add fuses to three unfused CSP transformers on the circuit backbone will be performed under DOJM Work Request number 21MT570231 which will be completed in June 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 553057
Division – Meramec Valley
Area Served – Cedar Hill, MO
SAIFI Value – 3.89

Analysis Results:

This circuit serves 577 commercial and residential customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, tree contacts, a public vehicle accident, and a construction error which resulted in 2,247 CI. Circuit 553057 experienced a number of outages in 2012 which resulted in 2,183 (97%) of the total CI. The majority of the outages occurred due to tree contacts. One outage occurred due to a public vehicle accident. Another outage occurred due to storm damage. Finally, an outage occurred when 12kV primary phases contacted each other while a 34kV pole was being replaced by construction crews. Additional, smaller, outages occurred due to animal intrusions and equipment malfunctions.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

An underground visual inspection was performed on this circuit in 2012. The repair work identified as a result of this inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 621005
Division – SEMO
Area Served – Cape Girardeau, MO
SAIFI Value – 3.88

Analysis Results:

This circuit serves 60 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 233 CI. Circuit 621005 experienced one significant outage in 2012. The one outage occurred when a lightning strike tripped the substation breaker.

Corrective Actions:

An overhead visual inspection was performed on this circuit in 2012. The repair work identified as a result of the inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy.

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2012 to identify any spot trim locations requiring attention prior to the four year cycle trim scheduled for 2014.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 734053
Division – SEMO
Area Served – Catron, MO
SAIFI Value – 3.76

Analysis Results:

This circuit serves 49 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and an equipment failure which resulted in 184 CI. Circuit 734053 experienced four significant outages in 2012. The first three outages occurred when the 34kV breaker tripped during a thunderstorm. The fourth outage occurred when the 34kV breaker at the Lilbourn switching station tripped.

Corrective Actions:

The Vegetation Management Department will perform mid-cycle maintenance tree trimming on this circuit in 2013.

An overhead visual and ground line inspection will be performed on this circuit in 2013. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 287055
Division – Underground
Area Served – Saint Louis (Downtown), MO
SAIFI Value – 3.75

Analysis Results:

This circuit serves 12 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by public damage and an underground equipment failure which resulted in 45 CI. Circuit 287055 experienced two significant outages in 2012. The first outage occurred when a contractor dug into a duct bank next to the Globe Building. The second outage occurred when a splice failed in a manhole near 4th and Broadway.

Corrective Actions:

Prior to 2012, the only other outages which occurred on this circuit were a circuit outage and a device outage, both of which occurred in 2005.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 082053
Division – Underground
Area Served – Saint Louis (Downtown), MO
SAIFI Value – 3.70

Analysis Results:

This circuit serves 46 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by underground equipment failures which resulted in 170 CI. Circuit 082053 experienced two significant outages in 2012. The first outage occurred when a cable failed near 19th and Olive Street. The second outage occurred when a splice failed at 18th & Olive Street.

The length of the Cole 53 circuit is a significant reliability issue. There are essentially two sections of the circuit: the area east of Jefferson Ave. and the area west of Jefferson Ave. The circuit cannot be subdivided because there are no available feeder spaces at the existing Cole substation.

Corrective Actions:

Construction of the Martin Luther King (MLK) switching station will begin in 2013. Existing Cole circuits will be served by the Martin Luther King switching station in 2015. The designs of the MLK switching station incorporate route diversity for all circuits. The switching station includes the following features:

1. The average Cole radial feeder length is presently 23,200 feet. The MLK switch station reduces average circuit length to 11,400 feet, increasing circuit reliability.

2. The MLK switching station project will remove approximately 12,000 feet of existing paper insulated lead covered cable (PILC), and install approximately 18,600 feet of new EPR cable. The new cable should improve circuit reliability.

3. The four supply circuits to the MLK switching station will have diverse routes, new duct banks, and be protected by pilot differential relaying. The relaying includes redundant fiber optic communication lines.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 203053
Division – Gateway
Area Served – St. Ann, MO
SAIFI Value – 3.57

Analysis Results:

This circuit served 35 customers at the end of 2012. However, as of March 2013, this circuit serves 24 customers. This circuit serves what was formerly known as the Northwest Plaza shopping mall. Due to the scheduled demolition and redevelopment of Northwest Plaza, a large number of meters have been removed, therefore reducing the number of customers. At present the mall has been vacant for some time and some meters remain for security reasons only.

The customer interruptions (CI) experienced on this circuit in 2012 were caused by a cable failure which resulted in 125 CI. Circuit 203053 experienced one significant outage in 2012. This outage occurred when an underground cable failed. However, at the time of this outage there were 125 customers on the circuit, which would have resulted in a SAIFI value of 1.00.

Corrective Actions:

The failed cable was repaired under DOJM Work Request number 21MT556331 which was completed in July 2012.

No work is planned for this circuit in 2013.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 452053
Division – SEMO
Area Served – Braggadocio, MO
SAIFI Value – 3.54

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2010, 2011, and 2012. The SAIFI values for this circuit in the last three years were: 2.32 in 2010, 3.11 in 2011, and 3.54 in 2012. This circuit serves 291 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 1,031 CI. Circuit 452053 experienced three significant outages in 2012. The first two outages occurred when trees contacted the line during storms and caused the substation breaker to trip. The third outage occurred when a storm caused primary phases to contact each other which tripped the substation.

Corrective Actions:

Previous reliability work performed on this circuit:

The Vegetation Management Department performed mid-cycle maintenance tree trimming on this circuit in 2010.

A project to coordinate and add fuses to this circuit was performed in 2010. The work was performed under DOJM Work Request number 2TSE092735 which was completed in October 2010.

An overhead visual inspection for animal guarding, tap fusing, and maintenance issues was performed on this circuit in 2011. Repairs were performed under DOJM Work Request numbers 2TSE096750 and 2TSE097700 which were completed in June 2011 and October 2011 respectively.

Planned MWPC reliability improvement work:

Tree trimming will be performed on this circuit in 2013.

The division has begun work to re-establish the 34kV looped system that was lost when the energy supply contract with Entergy expired. A work order has been initiated to acquire the easements for the new Hayti-73 34kV line from the Hayti Bulk substation to the Steele substation.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 835004
Division – SEMO
Area Served – Chaffee, MO
SAIFI Value – 3.38

Analysis Results:

This circuit serves 120 customers. The customer interruptions (CI) experienced on this circuit in 2012 were due to this circuit being improperly assigned an outage which resulted in 403 (99.5%) or the total 405 CI. The SEMO division completed a new substation and reconfigured the circuit exits in 2011. This resulted in circuits 835004 and 835002 being relocated. As a result, the outage reported to circuit 835004 actually occurred on circuit 835002. Therefore, circuit 835004 experienced no outages in 2012.

Corrective Actions:

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 452057
Division – SEMO
Area Served – Braggadocio, MO
SAIFI Value – 3.29

Analysis Results:

This circuit serves 162 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 533 CI. Circuit 452057 experienced one significant outage in 2012. This outage occurred when the primary failed during a thunderstorm.

Corrective Actions:

An underground visual inspection was performed on this circuit in 2012. The repair work identified as a result of this inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy.

Tree trimming will be performed on this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 555051
Division – Meramec Valley
Area Served – Franklin District, MO
SAIFI Value – 3.21

Analysis Results:

This circuit serves 192 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, overhead malfunctions, animal intrusions, and trees which resulted in 617 CI. Circuit 555051 experienced two significant outages in 2012 which resulted in 598 (97%) of the total CI. The first outage occurred when a dead tree fell on the primary during windy conditions and caused the circuit recloser to open. The second outage occurred when a tree in a creek bed fell on the primary which caused one phase of the circuit recloser to open. Additional, smaller, outages occurred due to animal intrusions and overhead malfunctions which resulted in 19 (3%) of the total CI.

However, the SAIFI value for this circuit is misleading due to a change in the customer count from 355 to 192 at the end of the year. In 2012, a new substation was constructed and 163 of the 355 customers were transferred to one of the circuits supplied by the new substation. The reduced number of customers was used to calculate the SAIFI value. If the original customer count were included, the overall SAIFI value for this circuit would have been 1.74.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. Animal guards will be added to three transformers, a phase to a pole presently supported by a 24-inch standoff arm will be dead-ended, and one-span of deenergized primary conductor will be removed. This work will be performed under DOJM Work Request number 23FR053481 which will be completed in July 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 128007
Division – Archview
Area Served – North City, St Louis, MO
SAIFI Value – 3.18

Analysis Results:

This circuit serves 34 customers in an industrial area in North City, St Louis. The customer interruptions (CI) experienced on this circuit in 2012 were caused by substation equipment failures which resulted in 108 CI. Circuit 128007 experienced three significant outages in 2012. The three significant outages were caused by a loose relay wire in substation equipment which caused three outages over two days. The remaining outage was caused by the substation breaker tripping during a lightning storm.

Corrective Actions:

Tree trimming was last performed on this circuit in 2011.

The loose substation relay wire was repaired by the Ameren Relay Department.

An inspection performed after the suspected lightning caused outage identified a problem at the substation feeder exit pole which was repaired under DOJM Work Request number 21MT548482 which was completed in March 2012.

An overhead visual inspection and an underground detailed inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 282051
Division – Meramec Valley
Area Served – Ellisville, MO
SAIFI Value – 3.05

Analysis Results:

This circuit serves 1,022 customers in a predominantly residential area on large tracts or in residential developments located along Kehrs Mill, Strecker and Valley Roads. The circuit is constructed within the roadway's right-of-ways (ROW) and on private easements (a portion is constructed along Ameren's transmission ROW). A large portion of Kehrs Mill, Valley and Strecker Roads are narrow two lane winding roads with large trees lining both sides of the roads in most areas. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and trees which resulted in 3,122 CI. Circuit 282051 experienced three significant outages in 2012 which resulted in 2,561 (82%) of the total CI. The first outage occurred when a large tree off the ROW uprooted and took down the primary along with poles and cross-arms. The second outage occurred when a micro-burst storm broke a tree which contacted the circuit. The third outage occurred when a limb came down across the circuit. Because this happened four days after the micro-burst storm, it is suspected that the limb was damaged by the storm and subsequently fell on its own.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 211053
Division – Meramec Valley
Area Served – Arnold, MO
SAIFI Value – 3.04

Analysis Results:

This circuit serves 215 commercial and residential customers. The customer interruptions (CI) experienced on this circuit in 2012 were primarily caused by weather and overhead equipment malfunctions which resulted in 654 CI. Circuit 211053 experienced three significant outages in 2012 which resulted in 639 (98%) of the total CI. Two of the three outages occurred when storms caused a 34kV guy failure at the intersection of Arnold Tenbrook Rd and Fannie Rd in Arnold. The other outage occurred when a storm caused the primary to fail at the same location.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

Division engineering department personnel recommend the 34kV guying at the intersection of Arnold Tenbrook Rd and Fannie Rd in Arnold be inspected for improvements. If improvements are recommended, a DOJM job will be established to perform this work.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 692057
Division – SEMO
Area Served – Scott City, MO
SAIFI Value – 2.96

Analysis Results:

This circuit serves 414 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 1,227 CI. Circuit 692057 experienced two significant outages in 2012. The first outage occurred when the primary failed during a thunderstorm. The second outage occurred when a fuse blew during a thunderstorm.

Corrective Actions:

A special overhead visual inspection was performed on this circuit in 2011. The inspection identified needed animal guarding, tap-fusing, and other maintenance items. Repairs will be performed under DOJM Work Request number 2TSE099533 in 2013.

An underground detailed inspection was performed on this circuit in 2012. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Tree trimming was performed on this circuit in 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 145060
Division – Gateway
Area Served – Town and Country, MO
SAIFI Value – 2.86

Analysis Results:

This circuit serves 901 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions and public damage which resulted in 2,579 CI. Circuit 145060 experienced four significant outages in 2012. The first outage occurred when the A-phase connection on the circuit backbone burned on one of the hottest days of 2012. The second outage occurred when 17 customers remained isolated following repairs to the A-phase connection. The third outage occurred when excessive heat caused the B-phase switch at terminal pole D11126 on the circuit backbone to burn. The fourth outage occurred when a Clayco/Concrete Strategies contractor for Missouri Baptist Hospital broke two phases of primary at Missouri Baptist Hospital's campus.

Corrective Actions:

The primary damaged as a result of a public contact was repaired under DOJM Work Request number 21MT544891 which was completed in January 2012.

The A-phase connection was repaired under DOJM Work Request number 21MT555322 which was completed in July 2012.

The B-phase switch was repaired under DOJM Work Request number 21MT555268 which was completed in June 2012.

An overhead visual inspection was performed on this circuit in 2012. The repair work identified as a result of this inspection included seven pole replacements which were performed under DOJM Work Request numbers 21MT561568, 21MT561569, 21MT561570, 21MT561571, 21MT561572, 21MT561573, and 21MT561574. These jobs were completed in October and November 2012. In addition, one primary riser and one service were repaired under DOJM Work Request numbers 21MT559845 and 21MT561576 which were completed in September and December 2012. Lastly, several pieces of equipment, i.e. insulator pins, secondary brackets, grounds, anchors, etc. were repaired under DOJM Work Request number 21MT561575, which was completed in February 2013.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 828056
Division – SEMO
Area Served – Blodgett, MO
SAIFI Value – 2.80

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2011 and 2012. The SAIFI values for this circuit in the last two years were: 3.88 in 2011 and 2.80 in 2012. This circuit serves 330 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment failures, vehicle damage and animal contact which resulted in 925 CI. Circuit 828056 experienced three significant outages in 2012. The first outage occurred when the primary failed. The second outage occurred when a public vehicle hit a pole. The third outage occurred when the recloser tripped due to an animal contact.

Corrective Actions:

Previous reliability work performed on this circuit:

An overhead visual and ground line inspection was performed on this circuit in 2012. The repair work identified as a result of the inspection will be completed under DOJM Work Request number 2TSE099535 in accordance with Ameren Missouri's infrastructure inspection policy.

Planned MWPC reliability improvement work:

A 2.75 mile section of the circuit from Vanduser to Crowder will be converted from #6Cu wire to 1/0AAAC. This work will be performed under DOJM Work Request numbers 2TSE102325, 2TSE102326, and 2TSE102327 which will be completed in December 2013.

Defective regulators at Vanduser will be replaced under DOJM Work Request number 2TSE103171 which will be completed in December 2013.

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2013 to identify any spot trim locations requiring attention.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 083004
Division – Archview
Area Served – North City, St Louis, MO
SAIFI Value – 2.78

Analysis Results:

This circuit serves 320 customers in a mostly commercial/industrial area. The customer interruptions (CI) experienced on this circuit in 2012 were caused by an underground primary fault and an overhead line problem which resulted in 888 CI. Circuit 083004 experienced two significant outages in 2012 which resulted in 647 (73%) of the total CI. The first outage occurred due to an underground primary fault outside the substation. The second outage occurred due to a slack line in an overhead line contacting other lines.

Corrective Actions:

The underground primary fault was repaired under DOJM Work Request number 21MT555089 which was completed in June 2012.

The slack in the primary line was repaired under DOJM Work Request number 21MT559311 which was completed in August 2012.

Tree trimming will be performed on this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 117051
Division – Gateway
Area Served – Maryland Heights, MO
SAIFI Value – 2.76

Analysis Results:

This circuit serves 131 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by unknown causes which resulted in 361 CI. Circuit 117051 experienced one significant outage in 2012. This outage was initially thought to be caused by an underground primary cable failure. However, further testing of the cable by the Service Test Department did not find a cable fault. As a result the outage was designated as resulting from unknown causes.

Corrective Actions:

Fuses and fault indicators, designed to prevent future outages and help locate faults more quickly, were installed on the portion of the circuit which provides the reserve supply to the St. Louis Post Dispatch. This work was performed under DOJM Work Request number 21MT557940 which was completed in August 2012.

An overhead visual inspection and an underground visual inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 082051
Division – Underground
Area Served – Saint Louis (Downtown)
SAIFI Value – 2.73

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2010, 2011, and 2012. The SAIFI values for this circuit in the last three years were: 2.99 in 2010, 2.83 in 2011, and 2.73 in 2012. This circuit serves 371 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by underground equipment failures and animal intrusions which resulted in 1,013 CI. Circuit 082051 experienced two significant outages in 2012. The first outage occurred when a splice failed. The second outage occurred when a rat climbed into underground padmounted switchgear.

The Cole 51 circuit length is a significant issue. There are essentially two sections of the circuit: the area east of Jefferson Ave. and the area west of Jefferson Ave. The circuit cannot be subdivided since there are no available feeder spaces at the existing Cole substation.

Corrective Actions:

Previous reliability work performed on this circuit:

Automated switchgear was installed to tie the Cole 51 and Cole 52 circuits at switch pad 18414 in 2011. This equipment transfers customers to alternate circuits following circuit lockouts. Like the switchgear at Beaumont and Market (described below), it reduces customer minutes out but does not prevent circuit outages.

Distributed automation equipment was installed at Beaumont and Market Streets in 2012. Two three-way vault switchpads, SWPD 30114 and 30115, connect Cole circuits 082051 and 082052. This allows customers to be quickly restored to the remaining circuit, and the faulted circuit section will still lock out the circuit for repair.

Planned MWPC reliability improvement work:

Construction of the Martin Luther King (MLK) switching station began in 2013. Existing Cole supplied customers will be served through the Martin Luther King switching station in 2015. The designs of the MLK switching station incorporate route diversity for all circuits.

The average Cole radial feeder length is presently 23,200 feet. The Cole 51 circuit is the longest at 28,200 feet. The MLK switch station reduces average circuit length to 11,400 feet, positively impacting circuit reliability.

The MLK switching station project will remove approximately 12,000 feet of existing paper insulated lead covered (PILC) cable and install approximately 18,600 feet of new EPR cable. The new cable should improve circuit reliability.

The four supply circuits to the MLK switching station will have diverse routes, new duct bank construction, and be protected by pilot differential relaying. The relaying includes redundant fiber optic communication lines.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 607054
Division – SEMO
Area Served – Benton, MO
SAIFI Value – 2.64

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2011 and 2012. The SAIFI values on this circuit in the last two years were: 2.26 in 2011 and 2.64 in 2012. This circuit serves 269 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and a substation malfunction which resulted in 711 CI. Circuit 607054 experienced five significant outages in 2012. Four of these outages occurred when storms caused the recloser west of I55 to trip. The other outage occurred when the high side bushing at the substation failed.

Corrective Actions:

Previous reliability work performed on this circuit:

Tree trimming was last performed on this circuit in 2010.

A special overhead visual inspection was performed on this circuit in 2010 which inspected for animal guarding, tap-fusing, and maintenance issues. Repairs were performed under DOJM Work Request number 2TSE093454 which was completed in August 2010.

An overhead visual inspection was performed on this circuit in 2011 which inspected for animal guarding, tap fusing, and other maintenance issues. Repairs were completed under DOJM Work Request number 2TSE099528 which was completed in April 2012.

Planned MWPC reliability improvement work:

An overhead visual and ground line inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The Benton Substation is being rebuilt in 2013. New steel will be installed in the substation to replace the wood pole structure identified as needing replacement by Condition Based Maintenance (CBM). The three breakers have been rebuilt and SCADA metering has been added. The substation transformer high side bushing has been repaired. Three new overhead feeder exits were added under DOJM Work Request number 2TSE101275 which was completed in March 2013. A new circuit tie was added under DOJM Work Request number 2TSE103102 which was completed in February 2013. Additionally, work to prevent wire contacts will be performed under DOJM Work Request number 2TSE103179 which will be completed in December 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 231056
Division – Archview
Area Served – South St. Louis County, MO
SAIFI Value – 2.57

Analysis Results:

This circuit serves 361 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by an underground cable failure and an overhead equipment failure which resulted in 928 CI. Circuit 231056 experienced two significant outages in 2012 which resulted in 897 (97%) of the total CI. The first outage occurred due to an underground primary cable failure. The second outage occurred when two B and C phase 600 amp switches failed.

Corrective Actions:

The underground primary cable failure was repaired under DOJM Work Request number 21MT554779 which was completed in June 2012.

The failed overhead switches were replaced with new type switches as part of the outage restoration in June 2012.

Tree trimming was performed on this circuit in 2012.

The circuit was patrolled and a defective squirrel guard was identified. The squirrel guard was repaired under DOJM Work Request number 21MT565923 which was completed in February 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 642056
Division – Boone Trails
Area Served – Wentzville, MO
SAIFI Value – 2.57

Analysis Results:

This circuit serves 1,269 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 3,258 CI. Circuit 642056 experienced four significant outages in 2012 which resulted in 2,953 (91%) of the total CI. The first outage occurred when high wind wrapped phase wires together. The second outage occurred when primary wire failed at the substation during a storm. The third outage occurred when a lightning arrestor and transformer failed during a thunderstorm which caused recloser 6357 to lock out. The fourth outage occurred when recloser 6357 locked out during high winds.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

Animal protection was upgraded on Bus D of the O'Fallon Hills Substation.

The phase wires were tightened following the circuit outage. This work was completed in April 2012.

As part of the repairs at the O'Fallon Hills Substation following the circuit outage caused by primary wire failures, a pole and insulators were replaced in addition to the primary wire. This work was completed in January 2012.

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. These included re-conductoring three spans of primary, fusing CSP transformers on the backbone, installing lightning arrestors, and animal guarding. This work will be performed under DOJM Work Request number 2WWZ154367 which will be completed in November 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 649052
Division – Boone Trails
Area Served – Winfield, MO
SAIFI Value – 2.53

Analysis Results:

This circuit serves 488 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and overhead equipment failures which resulted in 1,237 CI. Circuit 649052 experienced three significant outages in 2012. The first outage occurred when a lightning strike brought down the center phase of a 3 phase line which caused the circuit to trip. The second outage occurred when a pole failed due to age and caused the O'Fallon-74 subtransmission feeder to trip. The third outage occurred when a 34kV pole top caught fire and fell into the 12kV circuit under build.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

Division engineering personnel will patrol the circuit in 2013 to verify that all backbone transformers are properly fused and to determine if additional sectionalizing of the circuit is possible.

Subtransmission poles are being replaced on the O'Fallon-74 circuit under DOJM Work Request number 2WWZ147487 which will be completed in June 2013. This will complete a three year pole replacement initiative on this long stretch of subtransmission line.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 646055
Division – SEMO
Area Served – Cape Girardeau, MO
SAIFI Value – 2.47

Analysis Results:

This circuit serves 1,308 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by an overhead equipment malfunction and vegetation which resulted in 3,233 CI. Circuit 646055 experienced two significant outages in 2012. The first outage occurred when an overloaded single phase transformer failed and caused the backbone breaker to trip. The second outage occurred when vines caused a single phase transformer to fail, which caused the backbone breaker to trip.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 473052
Division – SEMO
Area Served – Bismarck, MO
SAIFI Value – 2.47

Analysis Results:

This circuit serves 588 customers in a mix of commercial and residential areas in and around the city of Bismarck. The circuit consists of 29 miles of three phase and single phase circuits. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 1,452 CI. Circuit 473052 experienced three significant outages and four smaller outages in 2012 which resulted in 1,132 (78%) of the total CI. The first outage occurred when a storm caused a large tree to fall through the primary. The second outage occurred when a storm caused a large tree to fall through the primary. The third outage occurred due to a pre-arranged outage to make repairs to the circuit following the second outage. The four smaller outages occurred when recloser number 3316, which feeds a two phase circuit, tripped in response to storms.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2012 to identify any spot trim locations requiring attention prior to the four year cycle trim scheduled for 2015.

An overhead visual and ground line inspection and an underground detailed inspection were performed on this circuit in 2012. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

A line extension project was completed on this circuit in 2013. As part of this project, 0.7 miles of mixed single-phase and two-phase 12kV primary was converted to three phase 12kV primary. As a result, a 0.28 mile cross country section of a two phase line fed by recloser 3316 was removed. This modification should have a positive impact on the reliability of this tap. This work was performed under DOJM Work Request number 28IR037328, which was completed in March 2013.

An overhead visual inspection will be performed on the circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

A project to fuse and animal guard all unprotected transformers on the backbone of this circuit will be developed in 2013. All un-fused taps on the circuit backbone will be evaluated for potential fusing.

Division engineering personnel will perform a circuit coordination analysis in 2013 to insure that all the protective devices will operate as prescribed.

A project to replace the existing 12kV circuit reclosers with new Viper reclosers is planned in 2014. SCADA metering and control will be added to the feeders at this time. SCADA control of the 34kV switches feeding the Bismarck Substation is also planned. These two items will positively impact the overall reliability of the customers fed from the Bismarck Substation.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 270052
Division – Gateway
Area Served – Berkeley, MO
SAIFI Value – 2.47

Analysis Results:

This circuit serves 1,358 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, overhead equipment malfunctions, trees, public damage, and unknown caused outages which resulted in 3,350 CI. Circuit 270052 experienced two significant outages in 2012 resulting in 2,747 (82%) of the total CI. The first outage occurred when bad weather downed primary conductor. The second outage occurred when a switch on the circuit backbone failed. In addition, smaller outages were caused by unknown events, various tree problems, and customer caused damage.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

An overhead visual inspection was performed on this circuit in 2012. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 214053
Division – Gateway
Area Served – Berkeley
SAIFI Value – 2.46

Analysis Results:

This circuit serves 779 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, trees, and an unknown outage which resulted in 1,913 CI. Circuit 214053 experienced two significant outages in 2012 which resulted in 1,829 (96%) of the total CI. The first outage occurred when a jumper burned during adverse weather. The second outage occurred due to unknown causes. In addition, smaller outages occurred as a result of adverse tree conditions.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

Division engineering personnel performed an inspection of this circuit and several improvement opportunities were identified. This work will be performed under DOJM Work Request number 21MT570634 which will be completed in December 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 459051
Division – SEMO
Area Served – Hayti, MO
SAIFI Value – 2.43

Analysis Results:

This circuit serves 701 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by animal intrusions and overhead equipment failures which resulted in 1,700 CI. Circuit 459051 experienced two significant outages in 2012. The first outage occurred when a squirrel contacted a 34kV transformer on the Loxcreen tap. This caused the Hayti 71 34kV circuit to trip the Hayti North Bulk Substation. The second outage occurred when a single phase transformer failed on the circuit backbone and the substation breaker tripped. The substation breaker tripped because the station Viper recloser was set in manual and did not clear the fault after one cycle.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

An overhead visual and ground line inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

A 34kV Viper recloser will be installed to prevent the Loxcreen 34kV tap from tripping other 34kV circuits. This work will be performed under DOJM Work Request number 2TSE103173, which will be completed in December 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 162051
Division – Gateway
Area Served – Berkeley, MO
SAIFI Value – 2.39

Analysis Results:

This circuit serves 1,230 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions, trees, weather, and a public vehicle accident which resulted in 2,945 CI. Circuit 162051 experienced two significant outages in 2012 which resulted in 2,471 (84%) of the total CI. The first outage occurred due to a public vehicle accident. The second outage occurred when a tree branch broke. Other, smaller, outages were caused by overhead equipment malfunctions or failures and lightning strikes.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

An overhead visual inspection was performed on this circuit in 2012. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 556053
Division – Meramec Valley
Area Served – Franklin District, MO
SAIFI Value – 2.39

Analysis Results:

This circuit serves 667 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions, public vehicle accidents, trees, and animal intrusions which resulted in 1,596 CI. Circuit 556053 experienced two significant outages in 2012 which resulted in 1,325 (83%) of the total CI. The first outage occurred when a pole on the three-phase primary circuit broke which caused the circuit recloser to open. The second outage occurred when a public vehicle struck and broke a pole which caused the circuit recloser to open. Other, smaller, outages were caused by animal intrusions and trees which resulted in 271 (17%) of the total CI.

Corrective Actions:

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. Animal guards will be added to ten transformers under DOJM Work Request number 23FR053492, which was completed in March 2013, and DOJM Work Request number 23FR053461, which will be completed in August 2013.

Fused switches will be installed at five locations on taps off the three-phase circuit backbone. In addition three reclosers will be installed on the circuit backbone about two miles from the substation. This work will be performed under DOJM Work Request number 23FR053460 which will be completed in August 2013.

The Vegetation Management Department has been asked to review several locations with trees near the circuit for potential trimming opportunities.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 453055
Division – SEMO
Area Served – Caruthersville, MO
SAIFI Value – 2.39

Analysis Results:

This circuit serves 404 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 965 CI. Circuit 453055 experienced two significant outages in 2012. The first outage occurred when a storm broke a circuit backbone pole which tripped the substation breaker. The second outage occurred when a tree fell into the primary during a storm, which tripped the substation breaker.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 297053
Division – Gateway
Area Served – Maryland Heights, MO
SAIFI Value – 2.37

Analysis Results:

This circuit serves 198 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment failures and weather which resulted in 469 CI. Circuit 297053 experienced two significant outages in 2012. The first outage occurred when this circuit was abnormally switched to repair a defective jumper. While switched to another circuit, that circuit experienced a cable failure which caused an outage on circuit 297053. The second outage occurred during a storm when two spans of primary came down. This situation was made worse by a lack of SCADA communication.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

Fuses will be added to six CSP transformers on the circuit backbone under DOJM Work Request number 21MT570234, which will be completed in July 2013.

A project to improve tie capacity between the Lackland and Fee Fee substations will be performed in 2013. This project, which will convert 3,350 ft. of 1/0 wire to 556AA wire, will be performed under DOJM Work Request number 21MT564370, which will be completed in October 2013. In addition, fusing will be installed in the project area.

A patrol of the circuit by division personnel revealed some map discrepancies. These were submitted to the Drafting Department for correction.

Division engineering personnel will investigate the practicability of adding sectionalizing reclosers or distributed automation to the circuit.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 217051
Division – Meramec Valley
Area Served – Ellisville, MO
SAIFI Value – 2.36

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2010 and 2012. The SAIFI values for this circuit in the past three years were: 3.96 in 2010, 1.81 in 2011, and 2.36 in 2012. This circuit serves 233 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by a pole fire and a public vehicle accident which resulted in 551 CI. Circuit 217051 experienced two significant outages in 2012. The first outage occurred when power was dropped to address a pole fire and allow crews to make repairs to the pole and the primary. The second outage occurred due to a public vehicle accident which broke a pole.

The area served by this circuit is mostly rural and the circuit is constructed predominately along Old Olive Street, Eatherton, and Wild Horse Creek Road within the right-of-way. Wild Horse Creek Road and a portion of Eatherton are narrow two lane winding roads with large mature trees lining both sides of the roads in most areas.

Corrective Actions:

Previous reliability work performed on this circuit:

Tree trimming was performed on this circuit in 2010.

The Vegetation Management Department performed mid-cycle maintenance tree trimming on this circuit in 2012.

Planned MWPC reliability improvement work:

An overhead visual inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2013 to identify any spot trim locations requiring attention.

Division engineering personnel will review the circuit for increased sectionalizing, additional tap fusing, and/or pole locations in 2013

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 255010
Division – Archview
Area Served – North City, St Louis, MO
SAIFI Value – 2.36

Analysis Results:

This circuit serves 437 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by underground primary cable faults which resulted in 1,033 CI. Circuit 255010 experienced two significant outages in 2012 which resulted in 941 (91%) of the total CI. The first outage occurred due to an underground primary cable fault. The second outage occurred due to an underground primary cable fault in the same cable 25 days later.

Corrective Actions:

The underground cable faults were repaired under DOJM Work Request number 21MT544487, and DOJM Work Request number 21MT545897 which were both completed in February 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 771053
Division – Central Ozark
Area Served – Gerald, MO
SAIFI Value – 2.34

Analysis Results:

This circuit serves 333 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and an overhead equipment failure which resulted in 778 CI. Circuit 771053 experienced two significant outages in 2012 which resulted in 661 (85%) of the total CI. The first outage occurred when a tree in the City Park and outside the normal trim corridor blew into the circuit. The second outage occurred due to a pole fire caused by a phase conductor laying on the cross-arm. It appeared the insulator tie had either broken or been burned off by lightning.

Corrective Actions:

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 656055
Division – SEMO
Area Served – Dexter, MO
SAIFI Value – 2.33

Analysis Results:

This circuit serves 1,315 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 3,059 CI. Circuit 656055 experienced two significant outages in 2012. The first outage occurred when high winds and storms caused primary wire phase contacts which tripped the substation breaker. The second outage occurred when a tree contact with the primary during a storm tripped the substation breaker.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2011 to identify any spot trim locations requiring attention prior to the four year cycle trim scheduled for 2014.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 126054
Division – Boone Trails
Area Served – St. Charles, MO
SAIFI Value – 2.27

Analysis Results:

This circuit serves 1,403 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, overhead equipment malfunctions, animals, and trees which resulted in 3,180 CI. Circuit 126054 experienced two significant outages in 2012 which resulted in 2,808 (88%) of the total CI. The first outage occurred when a tree branch broke and made contact with the overhead lines during a thunderstorm. The second outage occurred when a cross-arm broke and caused the overhead wires to contact each other. In addition, smaller device outages were caused by animal intrusions, tree contacts, and overhead equipment malfunctions.

Corrective Actions:

The Vegetation Management Department performed hot spot tree trimming near Woodlawn Dr. and Boonslick Rd. where the tree contact was made in 2012.

An overhead visual inspection and an underground visual inspection were performed on this circuit in 2012. The repair work identified as a result of this inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy.

The broken cross-arm was replaced under DOJM Work Request number 25SC054334 which was completed in September 2012. In addition, several poles and cross-arms were replaced and a section of overhead lines reconductored along Boonslick Rd. This work was performed under DOJM Work Request number 25SC052108 which was completed in January 2013.

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2013 to identify any spot trim locations requiring attention prior to the four year cycle trim scheduled for 2015.

Division engineering personnel will patrol this circuit in 2013 to determine whether additional protection devices are required.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 167053
Division – Gateway
Area Served – Berkeley, MO
SAIFI Value – 2.26

Analysis Results:

This circuit serves 633 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions, trees, animal intrusions, and an unknown cause which resulted in 1,432 CI. Circuit 167053 experienced one significant outage in 2012 which resulted in 1,138 (79%) of the total CI. This outage occurred due to an overhead equipment malfunction. In addition, smaller outages resulting from unknown or unidentified causes, various tree issues, and animal intrusions resulted in the remaining CI experienced on this circuit.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 025005
Division – Archview
Area Served – North City, St Louis, MO
SAIFI Value – 2.25

Analysis Results:

This circuit serves 331 customers in a mostly commercial/industrial area. The customer interruptions (CI) experienced on this circuit in 2012 were caused by a jumper failure, an underground cable fault, and tree issues which resulted in 744 CI. Circuit 025005 experienced two significant outages in 2012 which resulted in 560 (61%) of the total CI. The first outage occurred when a burned jumper caused a major device outage. The second outage occurred when an underground primary fault caused a circuit outage. In addition, tree issues added another 108 CI to the circuit.

Corrective Actions:

The burned jumper was replaced under OAS order number 120454549 which was completed in February 2012.

The underground primary cable fault was repaired under DOJM Work Request number 21MT564877 which was completed in November 2012.

The Vegetation Management Department performed mid-cycle maintenance tree trimming on this circuit in 2012.

An overhead visual inspection and an underground detailed inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 223052
Division – Archview
Area Served – South St. Louis County, MO
SAIFI Value – 2.22

Analysis Results:

This circuit serves 1,049 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by an operating error and an underground cable fault which resulted in 2,330 CI. Circuit 223052 experienced two significant outages in 2012 which resulted in 2,096 (90%) of the total CI. The first outage occurred as a result of a switching operation. During an attempt to utilize this circuit to supply a neighboring circuit the substation breaker tripped open. It was believed that a fault on the neighboring circuit had been identified prior to utilizing circuit 223052 to reenergize the other circuit via a tie switch. However, a second fault on the neighboring circuit caused circuit 223052 to trip open. This second fault was cleared and the tie was made successfully. The second outage occurred when an underground primary lateral cable failed.

Corrective Actions:

The failed underground primary lateral cable was repaired under DOJM Work Request number 21MT566429 which was completed in December 2012.

Tree trimming will be performed on this circuit in 2013.

An overhead visual inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 647052
Division – Boone Trails
Area Served – Defiance, MO
SAIFI Value – 2.22

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2011 and 2012. The SAIFI values for this circuit in the past two years were: 1.99 in 2011 and 2.22 in 2012. This circuit serves 316 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 701 CI. Circuit 647052 experienced three significant outages in 2012. All of the outages occurred when thunderstorms caused trees and tree limbs off the right of way to contact devices on the circuit.

Corrective Actions:

Previous reliability work performed on this circuit:

Tree trimming was performed on this circuit in 2011.

An overhead visual and ground line inspection was performed on this circuit in 2012. There were a total of 217 individual DOJM jobs created for this circuit as a result of this inspection. There was one 1,086 man-hour DOJM job created for the overhead hardware and device problems which required repair. The other 216 DOJM jobs were individual pole repairs or replacements. The repair work identified as a result of the inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Planned MWPC reliability improvement work:

The Vegetation Management Department will perform spot tree trimming on areas identified by division engineering personnel in 2013.

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. These included some spot tree trimming, a capacitor with an open switch, fusing CSP transformers on the backbone, and some mapping corrections. This work will be completed under DOJM Work Request number 2WWZ154419 which will be completed in November 2013.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 454055
Division – SEMO
Area Served – Caruthersville, MO
SAIFI Value – 2.22

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2010, 2011, and 2012. The SAIFI values for this circuit in the past three years were: 3.41 in 2010, 3.32 in 2011, and 2.22 in 2012. This circuit serves 1,116 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and overhead equipment failures which resulted in 2,472 CI. Circuit 454055 experienced three significant outages in 2012. The first outage occurred when the low side bushing at the substation failed during a lightning storm. The remaining two outages occurred when trees contacted the line during storms which caused the substation breaker to trip.

Corrective Actions:

Previous reliability work performed on this circuit:

A major rebuild and re-conductor project was performed on this circuit in 2010. This work was performed under DOJM Work Request numbers 2TSE090495, 2TSE090496, and 2TSE090784 which were completed in November 2010, December 2010, and December 2010 respectively.

Tree trimming was performed on this circuit in 2011.

A special overhead visual inspection was performed on this circuit in 2011 which inspected for animal guarding, tap fusing, and maintenance issues. Repairs were performed under DOJM Work Request number 2TSE097702 which was completed in December 2011.

An Intellirupter recloser was installed on this circuit in 2012 to establish a tie with the Caruthersville West (455053) circuit.

Planned MWPC reliability improvement work:

An underground visual inspection will be performed on this circuit in 2013. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 633058
Division – SEMO
Area Served – Cape Girardeau, MO
SAIFI Value – 2.21

Analysis Results:

This circuit serves 973 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, a public vehicle accident, and an overhead equipment failure which resulted in 2,148 CI. Circuit 633058 experienced four significant outages in 2012. The first outage occurred when the high side fuse at the substation failed during a storm. The second outage occurred when a public vehicle hit a 34kV pole. The third outage occurred when a storm caused a tree to fall into the primary resulting in a substation breaker trip. The fourth outage occurred when a primary lightning arrester failed causing a line recloser to lock out the circuit.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2011 to identify any spot trim locations requiring attention prior to the four year cycle trim scheduled for 2014.

A special overhead visual inspection was performed on this circuit in 2011. The inspection identified needed animal guarding, and other maintenance items. Repairs will be performed under DOJM Work Request number 2TSE099532 in 2013.

An underground detailed inspection will be performed on this circuit in 2013. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 162054
Division – Gateway
Area Served – Berkeley, MO
SAIFI Value – 2.21

Analysis Results:

This circuit serves 983 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by underground equipment malfunctions, animals, unknown causes, and operator error which resulted in 2,168 CI. Circuit 162054 experienced two significant outages in 2012 which resulted in 1,930 (89%) of the total CI. The first outage occurred due to an operating error. The second outage occurred due to an animal intrusion on the circuit. In addition, smaller outages resulted from underground equipment malfunctions and unknown causes.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 215052
Division – Gateway
Area Served – Berkeley, MO
SAIFI Value – 2.17

Analysis Results:

This circuit serves 570 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions, underground equipment malfunctions, and trees which resulted in 1,235 CI. Circuit 215052 experienced two significant outages in 2012 which resulted in 1,180 (96%) of the total CI. The first outage occurred due to an underground equipment malfunction. The second outage occurred due to a broken tree limb. In addition, smaller outages were caused by overhead equipment malfunctions or failures which resulted in 49 (4%) of the total CI.

Corrective Actions:

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 264054
Division – Gateway
Area Served – Maryland Heights, MO
SAIFI Value – 2.16

Analysis Results:

This circuit serves 1,682 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions and extreme heat which resulted in 3,640 CI. Circuit 264054 experienced two significant outages in 2012. The first outage occurred when a 600 amp switch on the B phase burned, which then burned a hole through the cross-arm which failed and tripped the circuit. The second outage occurred when a leaning pole created a clearance problem which tripped the circuit. Extreme heat was a factor in both of these outages.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

A project to improve the tie between the two Schuetz substation units was performed in 2013. This project, which converted 1,200 ft. of #4 wire and 1,200 ft. 1/0 wire to 336 ACSR wire on circuits 264054 and 264060 was performed under DOJM Work Request number 21MT537876, which was completed in February 2013. In addition, fuses were added to all previously unfused taps located in the project area.

A project to relocate reclosers in conjunction with reconductoring the circuit backbone to a location better suited to protect the backbone was performed under DOJM Work Request number 21MT565062 which was completed in March 2013.

Fuses will be added to nine CSP transformers on the circuit backbone under DOJM Work Request number 21MT570237, which will be completed in August 2013.

Division engineering personnel will investigate the practicability of adding sectionalizing reclosers or distributed automation to the circuit.

A patrol of the circuit by division personnel revealed some map discrepancies. These were submitted to the Drafting Department for correction.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 455053
Division – SEMO
Area Served – Caruthersville, MO
SAIFI Value – 2.16

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2010, 2011, and 2012. The SAIFI values for this circuit in the last three years were: 2.21 in 2010, 3.36 in 2011, and 2.16 in 2012. This circuit serves 815 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, overhead equipment malfunctions, substation failures, and public vehicle accidents which resulted in 1,763 CI. Circuit 455053 experienced four significant outages in 2011. The first outage occurred when the substation regulator malfunctioned. The second outage occurred when a public truck hit a pole. The third outage occurred when a wire connection failed and caused a jumper to burn. The fourth outage occurred when a thunderstorm caused primary phases to contact each other.

Corrective Actions:

Previous reliability work performed on this circuit:

A major rebuild and re-conductor project was performed on this circuit in 2010. This work was performed under DOJM Work Request numbers 2TSE090495, 2TSE090496, and 2TSE090784 which were completed in November 2010, December 2010, and December 2010 respectively.

A project to build a new 34kV loop to serve the previously radial fed Caruthersville West substation was performed under DOJM Work Request numbers 2TSE090497 and 2TSE091155. This work was completed in August 2010 and September 2010 respectively.

The Vegetation Management Department performed mid-cycle maintenance tree trimming on this circuit in 2011.

The following upgrades were made to the substation in 2011: Animal spinners were added to the overhead line and a Viper recloser was installed.

An overhead visual inspection was performed on this circuit in 2011. The repair work identified as a result of this inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy. This work was performed under DOJM Work Request number 2TSE097988 which was completed in September 2011.

An Intellirupter recloser was installed on this circuit in 2012 to establish a tie with circuit 455055, Caruthersville West.

Planned MWPC reliability improvement work:

Tree trimming will be performed on this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 144052
Division – Gateway
Area Served – Berkeley,
SAIFI Value – 2.15

Analysis Results:

This circuit serves 13 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions which resulted in 28 CI. Circuit 144052 experienced two significant outages in 2012 which resulted in 27 (96%) of the total CI. The first outage occurred when a switch failed. The second outage occurred when a lightning arrestor failed.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 215054
Division – Gateway
Area Served – Berkeley, MO
SAIFI Value – 2.14

Analysis Results:

This circuit serves 1,197 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions, trees, weather, and unknown causes which resulted in 2,558 CI. Circuit 215054 experienced two significant outages in 2012 resulting in 2,386 (93%) of the total CI. Both outages occurred due to trees. A number of smaller outages were caused by lightning strikes and unknown causes which resulted in 77 (3%) of the total CI.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2012 to identify any spot trim locations requiring attention.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 980052
Division – Missouri Valley
Area Served – Maysville, MO
SAIFI Value – 2.13

Analysis Results:

This circuit serves 271 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by an animal intrusion which resulted in 577 CI. Circuit 980052 experienced one significant outage in 2012. This outage occurred when an animal contact locked out the circuit.

Corrective Actions:

A new line extension on this circuit will offer a second supply to the Maysville Substation and eliminate outages caused by the loss of a single supply to the substation. This work will be performed under DOJM Work Request number 2HGH042694 which will be completed in December 2013.

Division engineering personnel will perform an inspection of the circuit to identify improvement opportunities. These will include replacement of cracked or distorted cross arms, insulators, lightning arrestors, and deteriorated poles.

An underground visual inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 483054
Division – SEMO
Area Served – Pilot Knob, MO
SAIFI Value – 2.13

Analysis Results:

This circuit serves 1,295 commercial and residential customers in and around the city of Pilot Knob. The circuit is composed of 25 miles of three-phase and single-phase wire. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and trees which resulted in 2,755 CI. Circuit 483054 experienced one significant and six smaller outages in 2012 which resulted in 2,369 (86%) of the total CI. The significant outage occurred when high winds and ice loading broke a cross-arm. The smaller outages occurred when tree contacts and storms caused device outages on the circuit.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013. This will have a significant positive impact on this circuit's reliability.

Division engineering personnel will perform a circuit coordination study on this circuit in 2013. Depending on the results of this study, it may be possible to install backbone reclosers to limit circuit exposure.

A project to replace the four Pilot Knob 12kV circuit reclosers with new Viper reclosers, including SCADA metering and control, is scheduled for completion in June 2014. This work will also include an evaluation of the substation components for replacement.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 179052
Division – Meramec Valley
Area Served – Franklin District, MO
SAIFI Value – 2.12

Analysis Results:

This circuit serves 705 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions, trees, public vehicle accidents, lightning, unknown causes, and animal intrusions which resulted in 1,498 CI. Circuit 179052 experienced two significant outages in 2012 resulting in 1,078 (72%) of the total CI. The first outage occurred when a tree fell and broke one of the phase conductors which caused the line reclosers to open. The second outage occurred when a camper truck struck a wire, breaking a pole and causing the line reclosers to trip. A smaller outage occurred when the overhead conductor to a line recloser failed resulting in 270 (18%) of the total CI. Other small outages occurred due to lightning strikes, animal intrusions, and unknown causes resulting in 150 (10%) of the total CI.

The SAIFI value for this circuit is misleading due to a change in the customer count from 1,200 to 705 at the end of the year. In 2012, a new substation was constructed and 495 of the 1,200 customers were transferred to one of the circuits supplied by the new substation. The reduced number of customers was used to calculate the SAIFI value. If the original customer count were included, the overall SAIFI value for this circuit would have been 1.25.

Corrective Actions:

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. Animal guards were added to 22 transformers and a lightning arrester was replaced on the circuit terminal pole under DOJM Work Request numbers 23FR052795 and 23FR052797. This work was completed in December 2012 and January 2013 respectively. Animal guards will be added to three transformers and two fused switches will be installed. This work will be performed under DOJM Work Request numbers 23FR053494 and 23FR053497 which will be completed in June 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 692053
Division – SEMO
Area Served – Scott City, MO
SAIFI Value – 2.12

Analysis Results:

This circuit serves 1,278 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 2,712 CI. Circuit 692053 experienced one significant outage in 2012. The outage occurred when a storm caused a tree contact on the Viaduct-76 34kV line feeding the Warner substation.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

An overhead visual inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 386053
Division – Boone Trails
Area Served – Dutzow & Augusta, MO
SAIFI Value – 2.11

Analysis Results:

This circuit serves 611 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and a public vehicle accident which resulted in 1,291 CI. Circuit 386053 experienced two significant outages in 2012. The first outage occurred when a public vehicle accident caused a guy wire to contact a 34kV conductor. The second outage occurred when a tree branch came into contact with a 12kV conductor during a thunderstorm.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

Division engineering personnel will patrol the circuit in 2013 to verify that all backbone transformers are properly fused and to determine if additional sectionalizing of the circuit is possible.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 212007
Division – Archview
Area Served – South St. Louis City, MO
SAIFI Value – 2.10

Analysis Results:

This circuit serves 1,015 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 2,127 CI. Circuit 212007 experienced two significant outages in 2012 which resulted in 2,012 (95%) of the total CI. The first outage occurred when a thunderstorm broke a tree limb which caused the substation breaker to trip four times and lock out. The second outage occurred when high winds caused the primary to fail. In addition, a smaller outage occurred as a result of a device failure.

Corrective Actions:

Tree trimming was last performed on this circuit in 2011.

The tree limb which caused the first circuit outage was removed from the primary as part of the outage recovery in June 2012.

The circuit was patrolled following a blown fuse which caused the device outage. A combination of low hanging primary and a loose span guy were identified as possible causes of the outage and repairs were completed in July 2012.

The primary was repaired under DOJM Work Request number 21MT566183 which was completed in December 2012.

An overhead special visual inspection and an underground visual inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 716002
Division – Missouri Valley
Area Served – Plattsburg, MO
SAIFI Value – 2.09

Analysis Results:

This circuit serves 743 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by tree contacts and overhead equipment failures which resulted in 1,556 CI. Circuit 716002 experienced two significant outages in 2012. The first outage occurred when a tree contacted the line. The second outage occurred when a conductor failed.

Corrective Actions:

Division engineering personnel will perform an inspection of the circuit to identify improvement opportunities. These will include replacement of cracked or distorted cross arms, insulators, lightning arrestors, and deteriorated poles.

An overhead special visual inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 253054
Division – Archview
Area Served – South St. Louis County, MO
SAIFI Value – 2.09

Analysis Results:

This circuit serves 2,229 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and a public vehicle accident which resulted in 4,663 CI. Circuit 253054 experienced two significant outages in 2012 which resulted in 4,456 (96%) of the total CI. Both of these outages occurred on the same day. The first outage occurred during a thunderstorm when lightning struck a tree which caused the substation breaker to trip. The second outage occurred when a public vehicle hit a pole.

Corrective Actions:

The Vegetation Management Department performed a special spot tree trim on this circuit in 2012 to address a blown fuse discovered during a circuit patrol in July 2012.

The public vehicle accident damage was repaired under DOJM Work Request number 21MT561936 which was completed in December 2012.

An underground visual inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 317001
Division – Archview
Area Served – North City, St Louis, MO
SAIFI Value – 2.09

Analysis Results:

This circuit serves 787 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by public damage and tree issues which resulted in 1,646 CI. Circuit 317001 experienced two significant outages in 2012 which resulted in 1,582 (96%) of the total CI. The first outage occurred when a trash truck contacted the primary causing a circuit outage. The second outage occurred when a broken tree limb caused a substation breaker to trip.

Corrective Actions:

The primary contacted by the trash truck was inspected and no damage was found.

The tree limb was removed, the cable was inspected and tested and no damage was found.

Tree trimming will be performed on this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 464054
Division – SEMO
Area Served – Portageville, MO
SAIFI Value – 2.09

Analysis Results:

This circuit serves 932 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 1,949 CI. Circuit 464054 experienced two significant outages in 2012. The first outage occurred when a tree contacted the primary during high winds. The second outage occurred when the substation breaker tripped during a storm.

Corrective Actions:

An overhead visual inspection was performed on this circuit in 2012. The repair work identified as a result of this inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy.

The Portageville substation was rebuilt at a new location in 2012. Programing adjustments to the new substation switchgear were made after initial operation during a storm.

Tree trimming will be performed on this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 168057
Division – Meramec Valley
Area Served – Hillsboro, MO
SAIFI Value – 2.09

Analysis Results:

This circuit serves 787 commercial and residential customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by operator errors, overhead equipment failures, weather, tree contacts, and animal intrusions which resulted in 1,644 CI. Circuit 168057 experienced two significant outages in 2012 which resulted in 1,371 (83%) of the total CI. The first outage occurred due to an operating department error during switching. The second outage occurred due to a pole top failure and a possible fuse coordination problem. Additional, smaller, outages were caused by storms, trees, or animal intrusions.

Corrective Actions:

Division engineering department personnel will perform a coordination study to assure proper isolation and fusing in the Raintree Lake area of this circuit. If improvements are recommended, a DOJM job will be created to perform this work.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 603005
Division – SEMO
Area Served – Cape Girardeau, MO
SAIFI Value – 2.09

Analysis Results:

This circuit serves 94 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 196 CI. Circuit 603005 experienced two significant outages in 2012. Both outages occurred when lightning strikes tripped the substation recloser.

Corrective Actions:

The Vegetation Management Department will perform mid-cycle maintenance tree trimming on this circuit in 2013.

A special overhead visual inspection will be performed on this circuit in 2013. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 246001
Division – Archview
Area Served – St. Louis, MO
SAIFI Value – 2.08

Analysis Results:

This circuit serves 890 customers in western St. Louis. The customer interruptions (CI) experienced on this circuit in 2012 were caused by underground cable failures which resulted in 1,853 CI. Circuit 246001 experienced two significant outages in 2012 which resulted in 1,703 (90%) of the total CI. The first outage occurred when an underground cable joint in a manhole failed. The second outage occurred when a 34kV underground cable failed, which resulted in Automatic Load Reduction (ALR) on Kingsbury Substation tripping this circuit to prevent overloading substation equipment.

Corrective Actions:

The failed cable joint was replaced under DOJM Work Request number 21MT550163 which was completed in April 2012.

The failed 34kV cable was replaced in July 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 871053
Division – SEMO
Area Served – Scott City, MO
SAIFI Value – 2.06

Analysis Results:

This circuit serves 444 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, animal intrusions, and human error which resulted in 916 CI. Circuit 871053 experienced four significant outages in 2012. The first two outages occurred when squirrels caused the substation transformer high side fuse to blow. The third outage occurred when the circuit recloser was inadvertently left in manual which caused the recloser to lock out after one cycle. The fourth outage occurred when the primary failed during a storm.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 564053
Division – Boone Trails
Area Served – St. Charles, MO
SAIFI Value – 2.06

Analysis Results:

This circuit serves 1,300 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by an underground cable failure, tree failures, and animal intrusions which resulted in 2,676 CI. Circuit 564053 experienced two significant outages in 2012 which resulted in 2,611 (98%) of the total CI. The first outage occurred when an underground cable on a terminal pole along Second St. near Adams St. failed. The second outage occurred when a tree branch broke and made contact with the overhead lines along Adams St. near 6th St. Other smaller outages occurred due to tree contacts and animal intrusions.

Corrective Actions:

The terminal pole and the failed underground primary cable were replaced under DOJM Work Request number 25SC053252 which was completed in March 2012.

Tree trimming was performed on this circuit in 2012.

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2013 to identify any spot trim locations requiring attention prior to the four year cycle trim scheduled for 2016.

An underground detailed inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Division engineering personnel will patrol this circuit in 2013 to determine whether additional protection devices are required.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 020002
Division – Archview
Area Served – South St. Louis City, MO
SAIFI Value – 2.05

Analysis Results:

This circuit serves 111 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by an unknown cause and an underground cable failure which resulted in 228 CI. Circuit 020002 experienced two significant outages in 2012 which resulted in 226 (99%) of the total CI. The first outage occurred when the ACB breaker tripped at the substation. The circuit was patrolled and no cause was found, however there were extremely windy conditions present that day. The second outage occurred when an underground primary cable failed in a manhole.

Corrective Actions:

The underground primary cable was repaired under DOJM Work Request number 21MT566598. This work was completed in January 2013.

An overhead visual inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 190054
Division – Meramec Valley
Area Served – High Ridge, MO
SAIFI Value – 2.05

Analysis Results:

This circuit serves 1,178 commercial and residential customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by trees, overhead equipment malfunctions, weather, public damage, and animal intrusions which resulted in 2,417 CI. Circuit 190054 experienced two significant outages in 2012 which resulted in 2,184 (90%) of the total CI. The first outage occurred due to a tree failure. The second outage occurred due to a pole fire. Additional, smaller, outages occurred due to storms, animal intrusions, and public damage.

Corrective Actions:

An overhead visual inspection and an underground detailed inspection were performed on this circuit in 2012. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Division engineering department personnel will perform a circuit protection study to recommend a circuit backbone recloser location. If an adequate location is recommended, a DOJM job will be created to perform this work.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 713001
Division – Missouri Valley
Area Served – Nettleton, MO
SAIFI Value – 2.05

Analysis Results:

This circuit serves 41 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment failures which resulted in 84 CI. Circuit 713001 experienced two significant outages in 2012. Both of these outages occurred when overhead equipment failed.

Corrective Actions:

The Nettleton substation was rebuilt and the transformers were reconfigured on the line in 2012. In addition, all defective line equipment was replaced and the neutral bonded to ground.

Division engineering personnel will perform an inspection of the circuit to identify improvement opportunities. These will include replacement of cracked or distorted cross arms, insulators, lightning arrestors, and deteriorated poles.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 582052
Division – Boone Trails
Area Served – St. Charles, MO
SAIFI Value – 2.04

Analysis Results:

This circuit serves 1,073 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 2,193 CI. Circuit 582052 experienced two significant outages in 2012 which resulted in 2,170 (99%) of the total CI. Both outages occurred on the same day when strong winds during thunderstorms caused the overhead lines to make contact with each other and fail which caused the circuit breaker to trip.

Corrective Actions:

Division personnel will patrol the area where the overhead lines made contact near the Hwy 94 crossing at Hemsath Rd. to determine whether any additional corrective action is required. This patrol will be performed in 2013.

An underground detailed inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2013 to identify any spot trim locations requiring attention prior to the four year cycle trim scheduled for 2015.

Division engineering personnel will patrol this circuit in 2013 to determine whether additional protective devices are required.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 216053
Division – Central Ozarks
Area Served – Lake Ozark, MO
SAIFI Value – 2.04

Analysis Results:

This circuit serves 428 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by lightning, public damage, unknown causes, and animal intrusions, which resulted in 871 CI. Circuit 216053 experienced two significant outages in 2012 which resulted in 862 (99%) of the total CI. The first outage occurred when a customer cut down a tree which fell on the primary overhead line. The second outage occurred when a contractor hit the primary overhead line with a backhoe.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 260056
Division – Gateway
Area Served – Berkeley, MO
SAIFI Value – 2.03

Analysis Results:

This circuit serves 34 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by underground equipment malfunctions which resulted in 69 CI. Circuit 260056 experienced one significant outage in 2012 which resulted in 34 (51%) of the total CI. The outage occurred when underground equipment malfunctioned. Other, smaller, underground equipment malfunctions resulted in the remaining CI experienced on this circuit.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 465051
Division – SEMO
Area Served – Steele, MO
SAIFI Value – 2.02

Analysis Results:

This circuit serves 548 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and human error which resulted in 1,108 CI. Circuit 465051 experienced three significant outages in 2012. The first outage occurred when a substation technician closed in on a grounded switch in the substation. The other two outages occurred when storms caused primary failures.

Corrective Actions:

A special overhead visual inspection was performed on this circuit in 2011. This inspection identified needed animal guarding, tap fusing, and other maintenance issues. Repairs will be performed under DOJM Work Request number 2TSE099555 in 2013.

The Vegetation Management Department will perform mid-cycle maintenance tree trimming on this circuit in 2013.

An overhead visual and ground line inspection and an underground detailed inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 224002
Division – Archview
Area Served – Affton, MO
SAIFI Value – 2.01

Analysis Results:

This circuit serves 95 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment failures which resulted in 191 CI. Circuit 224002 experienced three significant outages in 2012 which resulted in 190 (99%) of the total CI. The first outage occurred when a fuse failed as a result of a transformer jumper burning. The second outage occurred when A phase solid blade disconnect switch D11363 burned. The third outage occurred on the same day when the B phase solid blade switch D11363 failed when it was operated by the crew repairing the A phase switch. This failure resulted in the loss of power to customers that had just been restored from an adjacent circuit.

Corrective Actions:

The transformer jumper which burned and caused the first outage was replaced.

All three solid blade switches at the location where the A and B phase switches failed were replaced under DOJM Work Request number 21MT558988. This work was completed in August 2012.

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2012 to identify any spot trim locations requiring attention prior to the four year cycle trim scheduled for 2014.

An overhead visual and ground line inspection and an underground visual inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 629051
Division – Boone Trails
Area Served – Clarksville, MO
SAIFI Value – 2.01

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2010, 2011, and 2012. The SAIFI values for this circuit in the last three years were: 2.92 in 2010, 2.19 in 2011, and 2.01 in 2012. This circuit serves 499 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment failures which resulted in 1,003 CI. Circuit 629051 experienced two significant outages in 2012 which resulted in 968 (97%) of the total CI. The first outage occurred due to an overhead equipment failure. The second outage occurred when a guy wire rusted through at ground level and contacted the primary.

Corrective Actions:

Previous reliability work performed on this circuit:

A special overhead visual inspection was performed on this circuit in 2011. Defective cross arms, insulators, and broken down guys were repaired or replaced. Animal guards and fuses were installed and some poles replaced. This work was performed under DOJM Work Request numbers 2WWZ146067 and 2WWZ147718 which were completed in November 2011.

A set of three phase reclosers was installed on the circuit under DOJM Work Request number 2WWZ151872 which was completed in December 2012.

Planned MWPC reliability improvement work:

Tree trimming will be performed on this circuit in 2013.

Division engineering personnel will perform an inspection of the circuit in 2013. This inspection will identify un-fused backbone transformers and deteriorated guy wires.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 466057
Division – SEMO
Area Served – Wardell, MO
SAIFI Value – 2.00

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2010 and 2012. The SAIFI values for this circuit in the last three years were: 2.12 in 2010, 1.06 in 2011, and 2.00 in 2012. This circuit serves 224 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and overhead equipment failures which resulted in 448 CI. Circuit 466057 experienced two significant outages in 2012. The first outage occurred when an animal intrusion on the Loxcreen 34kV tap tripped the circuit. The second outage occurred when the substation breaker tripped during a thunderstorm.

Corrective Actions:

Previous reliability work performed on this circuit:

A special overhead visual inspection was performed on this circuit in 2011. The inspection identified needed animal guarding, tap-fusing, and other maintenance items. Repairs were performed under DOJM Work Request number 2TSE097101 which was completed in July 2011.

Planned MWPC reliability improvement work:

Tree trimming will be performed on this circuit in 2013.

A 34kV Viper recloser will be installed on the circuit to prevent the Loxcreen 34kV tap from tripping other 34kV circuits. This work will be performed under DOJM Work Request number 2TSE103173 which will be completed in December 2013.

This circuit will be re-coordinated with the newly installed substation Viper recloser under DOJM Work Request number 2TSE103174 which will be completed in December 2013.

Additional 34kV Viper reclosers will be installed on both sides of the Wardell Substation under DOJM Work Request numbers 2TSE103237 and 2TSE103238 which will be completed in December 2013. This project will enable the Wardell Substation to be served from either the Portageville or Hayti North Bulk substations.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 858052
Division – Missouri Valley
Area Served – Canton, MO
SAIFI Value – 2.00

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2011 and 2012. The SAIFI values for this circuit in the last two years were: 2.00 in 2011 and 2.00 in 2012. This circuit serves 1 customer. The customer interruptions (CI) experienced on this circuit in 2012 were caused by lightning damage to the customer's equipment, resulting in 2 CI. Circuit 858052 experienced 2 major outages in 2012. These outages occurred when lightning strikes caused customer equipment failures.

Corrective Actions:

Previous reliability work performed on this circuit:

Tree trimming was last performed on this circuit in 2010.

Significant animal guarding work was completed at the Canton Substation in 2011. This animal guarding included installation of Zapshield Wildlife Guards, Critter Line Guards for overhead feeder exit lines, metal flashing around poles and an electric fence inside the substation fence.

In response to an animal caused outage at the Canton Substation in 2012, the conduit on a primary riser was wrapped with metal flashing to prevent animal intrusions into the substation.

An overhead visual and ground line inspection was performed on this circuit in 2012. The repair work identified as a result of this inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy.

Planned MWPC reliability improvement work:

Division engineering personnel will perform an inspection of the circuit and identify improvement opportunities. These will include replacement of cracked or distorted cut outs, insulators, lightning arrestors, and deteriorated poles.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 882052
Division – Missouri Valley
Area Served – Moberly, MO
SAIFI Value – 2.00

Analysis Results:

This circuit serves 14 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by unknown causes, which resulted in 28 CI. Circuit 882052 experienced one significant outage in 2012. This outage occurred due to unknown causes.

Corrective Actions:

Division engineering personnel will perform an inspection of the circuit to identify improvement opportunities. These will include replacement of cracked or distorted cut outs, insulators, lightning arrestors, and deteriorated poles.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 563051
Division – SEMO
Area Served – Bonne Terre, MO
SAIFI Value – 2.00

Analysis Results:

This circuit serves 214 customers west of the City of Bonne Terre, Missouri. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 427 CI. Circuit 563051 experienced two significant outages in 2012 which resulted in 420 (98%) of the total CI. The first outage occurred when a storm caused a tree limb to fall into the primary. The second outage occurred when lightning caused the primary to fail.

Corrective Actions:

The Vegetation Management Department performed a spot trim of the circuit backbone in 2012. This work was performed at the request of the Operating Supervisor at the St. Francois works headquarters.

An overhead visual and ground line inspection was performed on this circuit in 2012. The repair work identified as a result of this inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy.

Division engineering personnel will perform a circuit coordination analysis in 2013. Depending on the results, there is an opportunity to install distribution automation (DA) on the circuit backbone to keep portions of the circuit in service based on fault location.

Division engineering personnel will analyze the circuit for general reliability improvements, including tap fusing, animal guards, and additional fuses for the backbone transformers.

An underground visual inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 726055
Division – Boone Trails
Area Served – Wentzville, MO
SAIFI Value – 1.99

Analysis Results:

This circuit serves 545 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 1,086 CI. Circuit 726055 experienced three significant outages in 2012. All three outages occurred on the same day when a thunderstorm caused the subtransmission static line to break multiple times.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. These included fusing CSP transformers on the backbone, installing lightning arrestors, and installing animal guards. This work was completed under DOJM Work Request number 2WWZ154142 which was completed in March 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 203052
Division – Gateway
Area Served – Bridgeton, MO
SAIFI Value – 1.99

Analysis Results:

This circuit serves 419 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by an underground cable failure which resulted in 833 CI. Circuit 203052 experienced one significant outage in 2012. This outage occurred when a cable failed right outside the Pattonville Substation.

Corrective Actions:

The failed cable was replaced under DOJM Work Request number 21MT565871 which was completed in December 2012.

Tree trimming was performed on this circuit in 2012.

No work is planned for this circuit in 2013.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 854051
Division – Central Ozark
Area Served – South of New Haven, MO
SAIFI – 1.98

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2011 and 2012. The SAIFI values for this circuit in the most recent two years were: 2.39 in 2011 and 1.98 in 2012. This circuit serves 448 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by tree contacts, animal intrusions, and overhead equipment failures which resulted in 888 CI. Circuit 854051 experienced multiple outages in 2012. The majority of these outages occurred due to tree contacts and animal contacts in the Whispering Valley Lake area which caused two fuses to blow multiple times. Additional outages occurred due to failures of the old #6 copperweld and #6 Crapo conductor on cross country lines in the Highway YY area west of Highway C. In addition, a review of the OAS data found that one outage was misclassified as having resulted in 61 CI when it actually resulted in 2 CI.

Corrective Actions:

Previous reliability work performed on this circuit:

The 34 kV insulators were replaced during the outages and the circuit was patrolled for additional damaged insulators and none were found. This work was completed in 2011.

The circuit recloser which consisted of three single phase reclosers located outside the substation was replaced with a three phase electronic recloser with remote indication and control. This project was completed in April 2012 and the recloser has not operated since.

The tree and animal problems associated with the two fuses in the Whispering Valley Lake area were addressed under DOJM Work Request numbers 2JCP084543 and 2JCP085204 which installed animal protection on the transformers in the area and replaced aluminum dead-end insulators. Both jobs also included spot tree trimming of the area. These jobs were completed in August 2012 and November 2012 respectively. Division personnel believe that these jobs will correct the issues in the Whispering Valley Lake area in 2013.

Planned MWPC reliability improvement work:

Division engineering personnel will issue DOJM jobs to rebuild the cross country portions of the circuit containing #6 copperweld lines in 2013. Where possible, the circuit will be relocated along Highway YY to eliminate tree contacts and provide better access for patrolling and maintaining the lines.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 258056
Division – Gateway
Area Served – Fenton, MO
SAIFI Value – 1.98

Analysis Results:

This circuit serves 165 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by a public vehicle accident and overhead equipment failures which resulted in 327 CI. Circuit 258056 experienced two significant outages in 2012. The first outage occurred when a truck hit a guy wire which caused the circuit to trip. The situation was aggravated when an automated switch failed to operate. The second outage occurred when a jumper burned.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

Fuses will be added to seven unfused CSP transformers on the circuit backbone under DOJM Work Request numbers 21MT570238 and 21MT570239 which will be completed in September 2013.

A Fuse will be added to an unfused tap on the circuit backbone under DOJM Work Request number 21MT570242 which will be completed in September 2013.

Division engineering personnel will investigate the practicability of adding sectionalizing reclosers or distributed automation to the circuit.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 546051
Division – Meramec Valley
Area Served – House Springs, MO
SAIFI Value – 1.98

Analysis Results:

This circuit serves 571 commercial and residential customers. The customer interruptions (CI) experienced on this circuit in 2012 were primarily caused by trees which resulted in 1,130 CI. Circuit 546051 experienced multiple outages in 2012. The majority of the outages occurred due to tree related problems which resulted in 902 (80%) of the total CI.

Corrective Actions:

The Vegetation Management Department will work with division engineering personnel to inspect this circuit for possible hot spot tree trimming and determine the best course of action. This work will be performed in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 265051
Division – Gateway
Area Served – Berkeley, MO
SAIFI Value – 1.97

Analysis Results:

This circuit serves 334 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions, trees, and unknown caused outages which resulted in 659 CI. Circuit 265051 experienced one significant outage in 2012 which resulted in 338 (51%) of the total CI. This outage occurred due to an overhead equipment malfunction. Additional smaller outages due to overhead equipment malfunctions or failures resulted in 224 (34%) of the total CI. Tree issues such as limbs on primary, primary down due to trees, or limbs falling on wires accounted for 59 (9%) of the total CI. Lastly, unknown causes accounted for 26 (4%) of the total CI.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 246004
Division – Archview
Area Served – St. Louis, MO
SAIFI Value – 1.93

Analysis Results:

This circuit serves 862 customers in western St. Louis. The customer interruptions (CI) experienced on this circuit in 2012 were caused by an underground cable failure and a public vehicle accident which resulted in 1,660 CI. Circuit 246004 experienced two significant outages in 2012 which resulted in 1,658 (99%) of the total CI. The first outage occurred when a 34kV underground cable failed, which resulted in the Automatic Load Reduction (ALR) on the Kingsbury Substation tripping to prevent overloading substation equipment. The second outage occurred when a trash truck hit and broke a pole.

Corrective Actions:

The failed cable was replaced in July 2012.

The broken pole was replaced on the day of the incident in July 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 472054
Division – SEMO
Area Served – Bellefountaine, MO
SAIFI Value – 1.90

Analysis Results:

This circuit serves 89 customers in rural northern Washington County near the Washington State Park. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and repair work which resulted in 169 CI. Circuit 472054 experienced three significant outages in 2012 which resulted in 135 (80%) of the total CI. The first outage occurred when one phase of the circuit backbone failed during a rain shower. The second outage occurred on the same day when the other two phases of the circuit were opened at the substation to make repairs to the broken phase. The third outage occurred when a tree broke and fell through the primary during a storm.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2012 to identify any spot trim locations requiring attention prior to the cycle trim scheduled for 2015. No tree issues were found.

The Bellefountaine Substation feeders will be equipped with SCADA metering in 2013.

Division engineering personnel will perform a circuit coordination study on this circuit in 2013. Depending on the results of this study, several long taps currently protected by fusing will have circuit reclosers installed.

Division engineering personnel will evaluate the #6 copper circuit backbone in detail to identify aging issues, accessibility, and conditions of long spans lengths.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 566051
Division – Boone Trails
Area Served – West Alton, MO
SAIFI Value – 1.90

Analysis Results:

This circuit serves 556 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by a public vehicle accident and unknown causes which resulted in 1,055 CI. Circuit 566051 experienced two significant outages in 2012 which resulted in 1,003 (95%) of the total CI. The first outage occurred due to a public vehicle accident along Hwy 94 near Dresser Island Dr. A truck slid off the road in the snow and broke a pole. The second outage occurred for unknown reasons; however it is believed to have been caused by high winds blowing the phases together.

Corrective Actions:

Division personnel will patrol this circuit in 2013. Any problems identified as a result of the inspection will be addressed. Other smaller device outages due to equipment malfunctions and tree contacts will be inspected to determine if any additional action is required.

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2013 to identify any spot trim locations requiring attention.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 673053
Division – Boone Trails
Area Served – Moscow Mills/Troy, MO
SAIFI Value – 1.87

Analysis Results:

This circuit serves 574 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by a public vehicle accident, weather, and an overhead equipment failure which resulted in 1,072 CI. Circuit 673053 experienced three significant outages in 2012. The first outage occurred due to a public vehicle accident. The second outage occurred when a lightning strike during a thunderstorm brought down a section of primary. The third outage occurred when a lightning arrestor failed at the Point Prairie bulk substation.

Corrective Actions:

An overhead visual and ground line inspection was performed on this circuit in 2012. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Division engineering personnel will patrol the circuit in 2013 to verify that all backbone transformers are properly fused and to determine if additional sectionalizing of the circuit is possible.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 119005
Division – Gateway
Area Served – Berkeley, MO
SAIFI Value –1.81

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2010 and 2012. The SAIFI values for this circuit in the last three years were: 2.88 in 2010, 0.98 in 2011 and 1.81 in 2012. This circuit serves 585 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions, trees, and unknown causes which resulted in 1,060 CI. Circuit 119005 experienced multiple outages in 2012. The majority of the outages occurred due to overhead equipment malfunctions or failures. The second largest number of outages occurred due to unknown or unidentified causes. The remaining outages occurred due to tree contacts (e.g., limbs on primary, primary down due to trees or limbs falling, etc.).

Corrective Actions:

Previous reliability work performed on this circuit:

Tree trimming was performed on this circuit in 2010.

Hot spot tree trimming was performed under OAS jobs 110635062 and 110634953 which were completed in March 2011.

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. Additional fuse switches were installed under DOJM Work Request number 21MT471260 which was completed in December 2010. Overhead transformers on the feeder backbone were fused under DOJM Work Request number 21MT525759 which was completed in August 2012.

An overhead visual inspection was performed on this circuit in 2012. The repair work identified as a result of the inspection was completed in accordance with Ameren Missouri's infrastructure inspection policy.

Planned MWPC reliability improvement work:

Division engineering personnel patrolled this circuit in March 2013 and several problems were identified and will be repaired under DOJM Work Request number 21MT570850. This work will be completed in December 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 718053
Division – Missouri Valley
Area Served – Excelsior Springs, MO
SAIFI Value – 1.81

Analysis Results:

This circuit serves 670 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by a maintenance outage which resulted in 1,210 CI. Circuit 718053 experienced one significant outage in 2012. This outage occurred when the circuit's power was dropped to perform necessary maintenance.

Corrective Actions:

Division engineering personnel will perform an inspection of the circuit to identify improvement opportunities. These will include replacement of cracked or distorted cross arms, insulators, lightning arrestors, and deteriorated poles.

An underground detailed inspection and an overhead visual inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 647051
Division – Boone Trails
Area Served – Wentzville, MO
SAIFI Value – 1.80

Analysis Results:

This circuit serves 20 customers, including a US Army Reserve center and PWSD #2 of St. Charles County. The customer interruptions (CI) experienced on this circuit in 2012 were caused by an animal intrusion and a transformer failure which resulted in 36 CI. Circuit 647051 experienced two significant outages in 2012 which resulted in 34 (94%) of the total CI. The first outage occurred when a squirrel caused a device outage. The second outage occurred when a non-fused CSP transformer failed.

Corrective Actions:

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. These included fusing CSP transformers on the backbone, animal guarding, and replacing a 3-phase fuse with a recloser. This work will be performed under DOJM Work Request number 2WWZ154373 which will be completed in November 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 687051
Division – Boone Trails
Area Served – Wentzville, MO
SAIFI Value – 1.79

Analysis Results:

This circuit serves 1,236 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 2,216 CI. Circuit 687051 experienced two significant outages in 2012 which resulted in 2,132 (96%) of the total CI. The first outage occurred due to a thunderstorm. The second outage occurred when switchgear flooded during a storm.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

In response to the outage caused by flooded switchgear, brush was cleared away from the location to improve water flow away from the area, and holes were drilled in the low side of the switchgear cabinet to allow water drainage.

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. These included fusing CSP transformers on the backbone, installing lightning arrestors, animal guards, and tap fusing. This work will be performed under DOJM Work Request numbers 2WWZ154149, 2WWZ154188, and 2WWZ154144 which will be completed in November 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 585051
Division – Meramec Valley
Area Served – Franklin District, MO
SAIFI Value – 1.77

Analysis Results:

This circuit serves 56 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, overhead equipment failures, trees, and unknown causes which resulted in 99 CI. Circuit 585051 experienced four significant outages in 2012 which resulted in 85 (86%) of the total CI. The first outage occurred when a fuse failed during a lightning storm. The second outage occurred when a tree fell across the road and broke a single-phase circuit conductor. The remaining two outages occurred due to tree limbs falling on a single-phase tap and blowing a fuse. Additional, smaller, outages occurred for unknown reasons which resulted in 14 (14%) of the total CI.

Corrective Actions:

An animal guard was added to a transformer under DOJM Work Request number 23FR052716 which was completed in August 2012. In addition, a few trees on a single-phase tap to Ross Lane were trimmed.

Division engineering personnel performed an inspection of the circuit and an improvement opportunity was identified. An animal guard was added to a transformer under DOJM Work Request number 23FR053476 which was completed in March 2013.

The Vegetation Management Department has been asked to review several locations with trees near the circuit for potential trimming opportunities.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 212005
Division – Archview
Area Served – South St. Louis City, MO
SAIFI Value – 1.76

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2010 and 2012. The SAIFI values for this circuit in the last three years were: 2.32 in 2010, 0.30 in 2011, and 1.76 in 2012. This circuit serves 571 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by a 34kV cable failure and circuit design which resulted in 1,003 CI. Circuit 212005 experienced one significant outage in 2012. This outage occurred when a 34kV supply cable to the Cherokee Substation failed on an extremely hot summer day. This overloaded the substation transformers so Automatic Load Reduction (ALR) dropped this circuit to prevent customer outages on other circuits fed by the substation.

Corrective Actions:

Previous reliability work performed on this circuit:

Tree trimming was performed on this circuit in 2011.

A major circuit relief project was completed in December 2012. Circuits 212004, 212005, and 220009 were each relieved of over 200 amps and the load diverted to circuits 220002 and 220003 at the Connecticut Substation. This project not only relieved the load on circuit 212005 but also lowered the total load on the Cherokee Substation so that its loading will not exceed equipment ratings on loss of a supply cable or transformer.

Planned MWPC reliability improvement work:

An underground visual inspection and an overhead visual special inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 131007
Division – Gateway
Area Served – Berkeley, MO
SAIFI Value – 1.75

Analysis Results:

This circuit serves 624 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by overhead equipment malfunctions, trees, and unknown causes which resulted in 1,095 CI. Circuit 131007 experienced one significant outage in 2012 which resulted in 624 (57%) of the total CI. The first outage occurred due to unknown causes. Additional, smaller, outages occurred due to overhead equipment malfunctions or failures resulting in 241 (22%) of the total CI. Tree problems, including limbs on primary, primary down due to trees, or limbs falling on wires accounted for 120 (11%) of the total CI. Lastly, unknown causes resulted in 110 (10%) of the total CI.

Corrective Actions:

Tree trimming was performed on this circuit in 2012.

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 113006
Division – Archview
Area Served – St. Louis, MO
SAIFI Value – 1.75

Analysis Results:

This circuit serves 53 customers in a primarily commercial/industrial area in central St. Louis. The customer interruptions (CI) experienced on this circuit in 2012 were caused by a public vehicle accident which resulted in 93 CI. Circuit 113006 experienced one significant outage in 2012 which resulted in 88 (95%) of the total CI. The outage was caused by a public vehicle accident. Switching was performed to restore power and repairs were completed that same day.

In addition, in 2012 the circuit load increased and planned diversions reduced the total number of customer served from 88 to 53 which was used to calculate the SAIFI value for the circuit.

Corrective Actions:

An overhead visual and ground line inspection will be performed on this circuit in 2013. The repair work identified as a result of this inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 267057
Division – Gateway
Area Served – Chesterfield, MO
SAIFI Value – 1.74

Analysis Results:

This circuit serves 256 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and trees which resulted in 446 CI. Circuit 267057 experienced two significant outages in 2012. The first outage occurred when a tree fell across the circuit backbone and brought down the primary. The second outage occurred when a windstorm caused an overhanging tree to fall onto the primary which broke a pole.

Corrective Actions:

The broken primary conductor was repaired under DOJM Work Request number 21MT550174 which was completed in April 2012.

The pole and primary were repaired under OAS order number 12355B489 which was completed in December 2012.

An overhead visual and ground line inspection and an underground visual inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

Multi-Year WPC Analysis and Remedial Action Report

Circuit Number – 473053
Division – SEMO
Area Served – Bismarck, MO
SAIFI Value – 1.73

Analysis Results:

This circuit is a Multi-Year Worst Performing Circuit (MWPC) based on its performance in 2011 and 2012. The SAIFI values for this circuit in the last two years were: 1.88 in 2011 and 1.73 in 2012. This circuit serves 630 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, a subtransmission problem, and tree contacts which resulted in 1,088 CI. Circuit 473053 experienced two significant outages in 2012. The first outage occurred due to a subtransmission problem which resulted in a circuit outage. The second outage occurred due to a tree contact. Additional, smaller outages occurred due to tree contacts and storms.

Corrective Actions:

Previous reliability work performed on this circuit:

An automated SCADA controlled 34.5 kV Viper recloser was installed in the circuit substation to allow for faster transfer to a contingent 34.5 kV supply during an outage on the circuit. This work was performed under DOJM Work Request number 28IR033316 which was completed in July of 2010.

Additional reclosers, fuses, and switches were installed on various sections of this circuit to improve reliability and increase fault isolation during outages. This work was performed under DOJM Work Request numbers 28IR034384 and 28IR034193 which were completed in December 2010 and January 2011 respectively.

A new tie was established between circuits 473053 and 475052 which enabled switching operations and improved reliability for the southern half of circuit 473053. This work was performed under DOJM Work Request number 28IR035635 which was completed in November 2011.

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2012 which identified and removed tree hazards.

An overhead visual and ground line inspection were performed on this circuit in 2012. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Reliability projects at Bismarck Ridge Rd. and Highway 32 were performed under DOJM Work Request numbers 28IR036217 and 28IR035949 which were completed in May 2012 and October 2012 respectively. These projects replaced poles, added animal guards, and added fuses in this area.

Planned MWPC reliability improvement work:

Division engineering personnel will perform a circuit protection coordination study to insure the proper coordination of the existing fuses and reclosers. This analysis will identify additional circuit isolation devices for installation to limit the exposure of the 630 customers served by this circuit.

Division engineering personnel will study the feasibility of establishing three phase tie points to surrounding circuits.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 880053
Division – Central Ozark
Area Served – New Bloomfield, MO
SAIFI Value – 1.72

Analysis Results:

This circuit serves 98 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and tree contacts which resulted in 169 CI. Circuit 880053 experienced two significant outages in 2012 which resulted in 157 (93%) of the total CI. Both outages occurred as a result of wind/ice and tree contacts.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 208001
Division – Archview
Area Served – North County, St Louis, MO
SAIFI Value – 1.72

Analysis Results:

This circuit serves 685 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather and overhead equipment failures which resulted in 1,176 CI. Circuit 208001 experienced two significant outages in 2012. The first outage occurred when a cross arm broke during a minor storm. The second outage occurred when primary came down during a thunderstorm.

However, the reported CI is misleading as two of the outages experienced on the circuit were counted twice. When the duplicate outage is removed, the overall SAIFI calculation for this circuit would have been 1.43.

Corrective Actions:

The broken cross arm was repaired under OAS order number 122706992 which was completed in September 2012.

The downed primary wire was repaired under OAS order number 122700479 which was completed in September 2012.

An overhead visual and ground line inspection and an underground visual inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 552055
Division – Meramec Valley
Area Served – Festus and Crystal City, MO
SAIFI Value – 1.71

Analysis Results:

This circuit serves 493 commercial and residential customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by a public vehicle accident, overhead equipment malfunctions, weather, animal intrusions, and trees which resulted in 842 CI. Circuit 552055 experienced two significant outages in 2012 which resulted in 710 (84%) of the total CI. The first outage occurred due to a public vehicle accident. The second outage occurred due to an equipment malfunction during very hot weather. Additional smaller outages occurred due to animal intrusions, tree contacts, or weather.

Corrective Actions:

No work is planned for this circuit in 2013.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 504053
Division – Meramec Valley
Area Served – Franklin District, MO
SAIFI Value – 1.70

Analysis Results:

This circuit serves 480 customers. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather, overhead equipment malfunctions, and a public vehicle accident which resulted in 814 CI. Circuit 504053 experienced three significant outages in 2012 which resulted in 724 (89%) of the total CI. The first outage occurred when the primary and neutral on a single-phase tap burned, which caused a line recloser to open. This outage occurred on a windy day. The second outage occurred when a public vehicle hit a pole. The third outage occurred when the primary on a long single-phase tap fell, apparently after a tree fell near the circuit, which caused a line recloser to open. Additional, smaller, outages occurred due to trees, lightning, and animal intrusions which resulted in 90 (11%) of the total CI.

Corrective Actions:

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. A fused switch was installed on the single-phase 7.2kV circuit along Robertsville Road. This work was performed under DOJM Work Request number 23FR052908 which was completed in January 2013. Animal guards were added to three transformers, one pole was straightened, and one transformer was tightened to the pole under DOJM Work Request number 23FR053475 which was completed in March 2013. A 0.9 mile section of cross-country single-phase 7.2kV circuit will be relocated to Robertsville Road as under-build on an existing 34.5kV circuit. This work will be performed under DOJM Work Request number 23FR053501 which will be completed in November 2013.

The Vegetation Management Department has been asked to review several locations with trees near the circuit for potential trimming opportunities.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 019051
Division – SEMO
Area Served – Belgrade, MO
SAIFI Value – 1.67

Analysis Results:

This circuit serves 401 customers. The circuit covers 53 miles along both roadways and open country and is comprised of mostly single phase line. The customer interruptions (CI) experienced on this circuit in 2012 were caused by weather which resulted in 675 CI. Circuit 019051 experienced two significant outages in 2012 which resulted in 460 (68%) of the total CI. The first outage occurred when a storm caused a large tree to fall into the primary. The second outage occurred when an insulator broke during a snow storm.

Corrective Actions:

Tree trimming will be performed on this circuit in 2013.

An overhead visual inspection will be performed on this circuit in 2013. The repair work identified as a result of these inspections will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Division engineering personnel will perform a circuit coordination study on this circuit in 2013. Depending on the results of this study, upgrades to the number and spacing of circuit isolation devices will be performed.

Division engineering personnel will study the feasibility of installing three phase circuit ties with automated or dispatcher controlled switches in 2013.

Animal guards and additional fusing will be installed on Furnace Rock Road and Douglas Road under DOJM Work Request number 28IR036192 and DOJM Work Request number 28IR035887. This work will be completed in December 2013.

Division engineering personnel will investigate whether the insulator failure caused outages were isolated incidents or a pattern of faulty or damaged insulators.