APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 645056
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 48.68

Analysis Results:

This circuit originally served 626 customers. However, in 2010 this circuit was reconfigured, which reduced the customer count to 19. This reduced number of customers was used to calculate the SAIFI value which placed this circuit on the WPC list. If the original customer count were to be included, the overall SAIFI calculation for this circuit would have been 3.87. As a result, the overall SAIFI value for this circuit was artificially inflated.

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a switching error and wire failures. Circuit 645056 experienced three outages in 2010. One outage was caused by a switching error. The second outage was caused by a failed 34kv line splice which caused the 34kV line to fall into the 12kv line. The third outage was caused by failed primary during a storm. This section of primary is inaccessible and results in extended outages.

Corrective Actions:

The switching error was identified, corrected, power restored, and the switching operations completed. Conditions surrounding the incident were reviewed and discussed to prevent any re-occurrences.

The 34kv incident was caused by a failed splice in the McClay-78 circuit causing the line to drop into the 12kv circuit (645056). The 12kv line was cleared and restored, the 34kv splice was replaced, and the McClay-78 line was returned to service.

The section of inaccessible primary was diverted to another circuit (687051) for load balancing. In addition, a reliability improvement project for relocation to underground along O'Fallon Road is being submitted as a specific work order project.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 638052
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 19.00

Analysis Results:

This circuit originally served 326 customers. However, in 2010 this circuit was reconfigured, which reduced the customer count to 1. This reduced number of customers was used to calculate the SAIFI value which placed this circuit on the WPC list. If the original customer count were to be included, the overall SAIFI calculation for this circuit would have been 0.06. As a result, the overall SAIFI value for this circuit was artificially inflated.

Corrective Actions:

No work is planned on this circuit in 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 516051
Division – Meramec Valley
Area Served – Byrnsville, MO
SAIFI Value – 6.94

Analysis Results:

This circuit originally served 839 customers. However, in 2010 a large number of these customers were transferred to circuit 516054. As a result of this transfer the customer count on this circuit was significantly reduced. This reduced number of customers was used to calculate the SAIFI value which placed this circuit on the WPC list. If the original customer count were to be included, the overall SAIFI calculation for this circuit would have been 1.29. As a result, the overall SAIFI value for this circuit was artificially inflated.

Corrective Actions:

No work is planned on this circuit in 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 153007
Division – Gateway
Area Served – Castle Point (Unincorporated St. Louis County), Missouri area
SAIFI Value – 5.28

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by tree and wire problems. Circuit 153007 experienced five outages in 2010. The first circuit outage occurred on April 24, 2010, during rain and winds of 16 to 31 miles per hour. These winds resulted in a limb falling on the primary. The remaining four outages occurred during the same thunderstorm on June 2, 2010. The outages on this day were caused by vines and tree issues on the circuit, along with a neutral wire found in the primary.

Corrective Actions:

Tree trimming will be performed on this circuit in 2011.

Overhead visual and ground-line inspections will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The circuit was field checked by engineering personnel in the first quarter of 2011. DOJM Work Request number 21MT521777 was created to fuse backbone transformers and relocate tap fuses to the circuit backbone where prudent.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 690057
Division – SEMO
Area Served – Richland
SAIFI Value – 5.11

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by tree contacts and primary failures. Circuit 690057 experienced five outages in 2010. Four outages were caused by a substation recloser tripping on four different occasions due to tree contacts. The other outage occurred when a lightning strike caused the primary to fail.

Corrective Actions:

The Substation Department performed maintenance on the breaker to insure correct operation.

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2011 to identify and remove tree hazards.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 130002
Division – Gateway
Area Served – Bel-Ridge, Missouri area
SAIFI Value – 4.61

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by unknown causes and pre-arranged outages. One circuit outage was caused during a thunderstorm where no damage was found and the second circuit outage was a result of a pre-arranged outage for construction work. However, over the course of 2010 a large 4 KV to 12 KV conversion project was performed. As a result of this project the customer count on this circuit was reduced from 552 customers to 140 customers. The customer count on this circuit was 552 when the outages recorded on this circuit occurred. If the original customer count were to be included, the overall SAIFI calculation for this circuit would have been 1.17. As a result, the overall SAIFI count for this circuit was artificially inflated.

Corrective Actions:

Tree trimming was last performed on this circuit in 2008. Tree trimming is next scheduled for this circuit in 2012.

DOJM Work Request number 21MT480347 extended circuit 130002 along Ramona Avenue in 2010 to create a circuit tie with St. Johns substation circuit 274005. DOJM Work Request number 21MT504710 will re-conductor two spans of the circuit to improve this circuit tie capacity in 2011.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The circuit was field checked by engineering personnel in the first quarter of 2011. DOJM Work Request number 21MT522000 was created to address various maintenance issues including fusing unfused taps and fusing unfused transformers on the circuit backbone.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 475052
Division – SEMO
Area Served – Ironton, MO
SAIFI Value – 4.52

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by pole hardware problems, lightning, and animal intrusions. Circuit 475052 experienced multiple outages in 2010. Outages were caused by failed primary insulators, broken pole tops, lightning strikes, and a broken cross-arm during a re-conductoring project. Additional outages were caused by animal intrusions on fused taps.

Corrective Actions:

The main three-phase backbone of this circuit was rebuilt and re-conductored during the fall of 2010, which addressed a number of structural, voltage, and capacity issues. This project also converted this 13.2kV circuit to 12kV, allowing new ties to be established between the 483054 and 475053 circuits. Tree trimming concerns were also addressed on this project.

Multiple Device Interruption (MDI) projects were completed by Ameren crews during 2010 which included upgrades such as tap fusing, animal guards, additional lightning arresters, and circuit tie switches. This work was completed in December 2010.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Division Engineering personnel will evaluate the long single-phase taps on this circuit to ensure proper protection and identify circuit tie opportunities.

Division Engineering personnel will develop projects to install one mile of new single-phase circuit to build a tie between two existing long circuits, and convert approximately seven miles of existing 25kV circuit on the 473053 circuit to 13.2kV so that ties exist between the 473053 and the 475052 circuits.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 577055
Division – Boone Trails
Area Served – St. Peters, Missouri
SAIFI Value – 4.36

Analysis Results:

This circuit experienced 899 customer interruptions (CI) in 2010 caused by public vehicle accidents, unknown causes, and various material failures. Circuit 577055 experienced four circuit outages resulting in 815 of the 899 CI. One of the circuit outages was caused by a public vehicle accident. The causes of the other three circuit outages are unknown. In addition, other smaller outages were caused by blown fuses on single-phase overhead taps, overhead equipment malfunctions, and lightning strikes.

Corrective Actions:

Tree trimming will be performed on this circuit in 2011.

Division engineering personnel will evaluate the feasibility of installing additional system protection devices such as fuses and lightning arrestors to help improve the reliability of this circuit.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number - 264057
Division – Gateway
Area Served – Creve Coeur, MO
SAIFI Value – 4.25

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by cable failures. A section of the direct buried cable in dip D-5407 failed on July 15, 2010 causing a circuit outage until the failed section could be bypassed. The failed cable was repaired on August 06, 2010. Beginning on December 19, 2010 three direct buried cable sections in this dip failed, including the section that was repaired earlier in the year. These failures caused several outages to this circuit as well as circuit 264056 due to abnormal switching required to repair the circuit.

Corrective Actions:

The failed sections of direct buried cable were replaced with new cable buried in conduit on an emergency basis by December 21, 2010, except for one section which was replaced in February, 2011 under DOJM Work Request number 21MT519414. All sections of cable in dip D-5407 are now buried in conduit. Newer cable in conduit is expected to be more reliable than older direct buried cable, is less subject to damage, and is easier to replace in the event of a failure.

Tree trimming was last performed on this circuit in 2008.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 571051
Division – SEMO
Area Served – Knob Lick, MO
SAIFI Value – 4.10

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by substation equipment malfunctions, trees, and overhead equipment malfunctions. Circuit 571051 experienced two substation outages in 2010 which accounted for the majority of the CI. The first substation malfunction was caused by a faulty 27 relay which failed to operate the high side transfer during a loss of the normal 34.5kV sub-transmission circuit. The second was caused by a single-phase substation 12kV circuit recloser which was found to be slightly slower than normal which produced a high speed ground trip at the substation.

Corrective Actions:

After these outages the Substation Department replaced the 27 relays at the station to eliminate the possibility of another high side 34kV transfer failure. The Substation Department also replaced all three reclosers on the circuit where the one recloser was found to be slower than typical, to eliminate another high speed ground trip at the substation. The Relay Department also evaluated the relay settings for the substation circuits and made changes accordingly. The control wiring was meggered and the CT circuit tested to ensure proper operation. This equipment was found to be in good working condition.

Other improvements were made to the 571051 circuit, including installing fuses on all single-phase taps from the main three-phase backbone as well as phase balancing on the circuit. This work was done under DOJM Work Request number 28SF033318. This work was completed in February, 2010.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy. This work will be performed under DOJM Work Request number 28SF034706.

Division Engineering personnel will analyze long single-phase taps for recloser or fuse additions to reduce large scale outages in the future.

Division Engineering personnel will identify and submit a future project for automated 12kV switches to create automatic transfer of load between circuits 161053 and 571051. This project must be budgeted before proceeding further in design and construction.

Tree trimming is next scheduled for this circuit in 2012.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 217051
Division – River Bluffs
Area Served – Chesterfield, MO
SAIFI Value – 3.96

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by tree failures. Circuit 217051 experienced two outages in 2010. The first outage occurred on August 20, 2010 when a tree broke and brought down the 12KV primary. The second outage occurred on August 21, 2010 when a tree off the right-of-way (ROW) uprooted and broke the primary.

Corrective Actions:

Tree trimming was last performed on this circuit in 2010.

An overhead visual inspection on that area of the circuit where the outages occurred will be performed in 2011. 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 – 138002
Division – Archview
Area Served – St. Louis, Missouri
SAIFI Value – 3.81

Analysis Results:

This circuit serves 647 customers. The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees, unknown causes, and a primary wire failure resulting in 2,463 CI. Circuit 138002 experienced four outages in 2010, resulting in nearly all the CI experienced on the circuit. The first outage occurred on April 24, 2010 and affected the entire circuit. A tree limb fell on the overhead wires during a rain storm and tripped the circuit breaker. The second outage occurred on July 25, 2010. The circuit tripped but no damage was found. The third outage took place on October 26, 2010 during a thunderstorm. A dead tree limb was found on the overhead wires. The fourth outage occurred on December 31, 2010 during a thunderstorm. A primary wire failure resulted in a loss of power to 456 of the 647 customers served by this circuit.

Corrective Actions:

Tree trimming will be performed on this circuit in 2011.

Division Engineering personnel have identified a portion of the circuit that can be fused, thereby reducing the amount exposed to the circuit breaker. This work will be completed in 2011.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 267059
Division – Gateway
Area Served – Creve Coeur, Missouri
SAIFI Value – 3.78

Analysis Results:

This circuit serves 1,005 customers. The customer interruptions (CI) experienced on this circuit in 2010 were caused by a primary cable fault and by public damage. Circuit 267059 experienced three outages in 2010 resulting in 3,784 CI. The first outage was caused by a primary cable fault. The second outage occurred when a public utility operating a backhoe knocked down the circuit. The third outage occurred when a public utility digging in the vicinity of this circuit knocked a tree into the circuit.

Corrective Actions:

The primary cable fault was repaired under DOJM Work Request number 21MT516107 in November, 2010.

Tree trimming was last performed on this circuit in 2007. Tree trimming is next scheduled for this circuit in 2011.

An overhead visual inspection was performed on this circuit in February 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy under DOJM Work Request number 21MT523498.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 795051
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 3.72

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by tree failures and overhead equipment failures.

Corrective Actions:

Tree trimming was last performed on this circuit in 2010, which should greatly reduce the number of outages due to tree failures.

The 34kV subtransmission line that serves this circuit is being rebuilt as part of a project that began in 2009. The last phase of this project will be completed in 2011.

A project to re-conductor 17,000 feet of the distribution wire and the associated poles on this circuit was completed in late 2010.

Division engineering personnel will submit a budget request to re-conductor the last 12,000 feet of the distribution wire on this circuit to eliminate many splices in the #4 and #6 copperweld wire and to replace poles.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 211051
Division – Meramec Valley
Area Served – Arnold, MO
SAIFI Value – 3.72

Analysis Results:

This circuit experienced 4,385 customer interruptions (CI) in 2010 which were caused by storms animal intrusions, failed primary conductor connections, trees, and public vehicle accidents. Tree contacts accounted for 166 CI, public vehicle accidents accounted for 1,193 CI, animal intrusions accounted for 2,009 CI, and unknown accounted for 1,017 CI.

Corrective Actions:

Vegetation Management performed hot-spot trimming on the circuit in 2010 to address tree contacts.

Tree trimming was last performed on this circuit in 2007. Tree trimming will be performed on this circuit again in 2011.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 674052
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 3.53

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees, unknown reasons, and overhead failures.

Corrective Actions:

Vegetation Management will patrol this circuit for additional vegetation problems in 2011.

Work to improve the overhead sections of the Highway BB, Mackville Road, and Paris Branch Road portions of this circuit was completed in 2010.

Fuses and reclosers were added to the circuit in 2010 to address multiple device outages.

A circuit tie is being built along Highway K to circuit 691052 in 2011 to improve the reliability of this circuit.

A project to address phase contacts on the circuit along Highway H is being developed and will be performed this year.

A project to replace and convert an old 4kV section of this circuit to 12kV will be submitted for budget approval this year. If approved, this work will be performed in 2011 or 2012.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 645051
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 3.48

Analysis Results:

This circuit originally served 1,129 customers. However, in 2010 this circuit was reconfigured, which reduced the customer count to 330. This reduced number of customers was used to calculate the SAIFI value which placed this circuit on the WPC list. If the original customer count were to be included, the overall SAIFI calculation for this circuit would have been 1.02. As a result, the overall SAIFI value for this circuit was artificially inflated.

Corrective Actions:

No work is planned on this circuit in 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 747052
Division – MO Valley
Area Served – Moberly, MO
SAIFI Value – 3.44

Analysis Results:

The outages incurred on this circuit in 2010 were primarily (75%) caused by storm damage. Almost half the damage included failed primary connectors and the other half included tree contacts with the line.

Corrective Actions:

Vegetation Management crews performed hot-spot trimming on the circuit in 2010 and discovered several hazard and dead trees off the right-of-way which required removal. Vegetation Management will patrol this circuit for additional vegetation problems in 2011.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Additional tap fusing work on this circuit will be completed in 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 772051
Division – MO Valley
Area Served – Polo, MO
SAIFI Value – 3.42

Analysis Results:

The outages incurred on this circuit in 2010 were primarily (75%) caused by lines damaged during severe weather, including failed primary connectors, damaged poles, and hardware.

Corrective Actions:

Vegetation Management crews performed hot-spot trimming of the circuit in 2010 and discovered several hazard and dead trees off the right-of-way which required removal. Vegetation Management will patrol this circuit for additional vegetation problems in 2011.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Additional tap fusing work on this circuit will be completed in 2011.

Load data associated with this circuit has been analyzed for potential overloads.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 454055
Division – SEMO
Area Served – Caruthersville
SAIFI Value – 3.41

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by pre-arranged maintenance, animal intrusions, and trees. Circuit 454055 experienced 45 outages in 2010. 35 outages were caused by pre-arranged maintenance. Nine outages were caused by animal intrusions. One outage was caused by a tree contact.

Corrective Actions:

In 2010 this circuit was rebuilt and re-conductored under DOJM Work Request number 2TSE025919. This work resulted in the large number of pre-arranged outages experienced on the circuit.

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove tree hazards.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 083005
Division – Archview
Area Served – Geraldine
SAIFI Value – 3.41

Analysis Results:

This circuit experienced 201 customer interruptions (CI) in 2010. The CI experienced on this circuit in 2010 were caused by primary failures and weather. Circuit 083005 experienced three outages in 2010. A storm on August 12, 2010 accounted for 137 of the 201 CI (68%) experienced on this circuit. The storm resulted in the circuit tripping and was found to have been caused by primary wires falling into the neutral. The tornado which occurred on December 31, 2010 caused a primary failure which tripped the circuit and resulted in 59 CI (29%). In addition, there were four prearranged outages that contributed 16 CI to this circuit.

During the August 12, 2010 storm, the circuit was initially restored when no problems were found and resulted in 59 CI. However, within a few hours the circuit tripped again when primary was found sagging into the neutral. A second order was created for this circuit, adding 45 CI to the circuit. At the same time a third order was created adding 33 CI to the circuit. These additional orders resulted in customers being double and triple counted for this same storm. Reducing the SAIFI by the 78 CI resulting from the orders double and triple counted on this outage would reduce the SAIFI on this circuit to 2.08.

Corrective Actions:

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Tree trimming will be performed on this circuit in 2011.

The section of primary that failed during the December 31, 2010 storm is a radial feed with no customers connected. This section of line will be removed.

There are eleven locations on this circuit where primary taps off of the backbone cross Hall Street to a transformer pole that are not shown as fused. Although these have not contributed to any outages, Division Engineering personnel will patrol the lines to determine whether tap-fusing will limit future outages.

Seventy five percent of the customers are on a radial fed section of the circuit. Engineering Division personnel are evaluating the installation of a tie switch to improve operating flexibility by supplying the circuit from another direction to facilitate maintenance work and future outages.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 745051
Division – MO Valley
Area Served – Moberly, MO
SAIFI Value – 3.40

Analysis Results:

The outages incurred on this circuit in 2010 were primarily (90%) caused by lightning. A majority of the outage minutes incurred came from hardware failure, 20% of which were attributed to damage from lightning strikes and another 20% of which were unexplained, but probably caused by storm damage.

Corrective Actions:

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Additional tap fusing and lightening arrestor installations will be performed on this circuit in 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 264056
Division – Gateway
Area Served – Creve Coeur, MO
SAIFI Value – 3.38

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by cable failures. On December 19, 2010 three direct buried cable sections in dip D-5407 on circuit 254057 failed. These faults caused several outages to this circuit due to abnormal switching which tied this circuit to circuit 264057.

Corrective Actions:

The failed sections of direct buried cable were replaced with new cable buried in conduit on an emergency basis by December 21, 2010, except for one section which was replaced in February, 2011 under DOJM Work Request number 21MT519414. All sections of cable in dip D-5407 are now buried in conduit. Newer cable in conduit is expected to be more reliable than older direct buried cable, less subject to damage, and easier to replace in the event of a failure.

Tree trimming was last performed on this circuit in 2009.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 873051
Division – MO Valley
Area Served – New Franklin, MO
SAIFI Value – 3.36

Analysis Results:

The outages incurred on this circuit in 2010 were primarily (75%) caused by severe weather damage. The majority of the damage occurred as a result of two outages, one caused by a loss of supply and the other caused by hardware failures and tree contacts.

Corrective Actions:

The Vegetation Management Department has patrolled this circuit to identify and remove additional tree hazards.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Additional tap fusing work on this circuit will be completed in the summer of 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 629053
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 3.33

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees and overhead failures. Circuit 629053 experienced three outages in 2010. The three outages were caused by pole breaking, the failure of a line that runs cross country, and a recloser operating during a storm.

Corrective Actions:

Vegetation Management will patrol this circuit for additional vegetation problems in 2011.

Division engineering personnel will submit a project to limit the number of customers exposed to the cross country portion of this circuit.

This circuit has a limited number of ties. Division engineering personnel will submit a project request to convert the circuit to the north to the same voltage as this circuit so this circuit will have better tie capacity and therefore improved reliability.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 159003
Division – Archview
Area Served – Geraldine
SAIFI Value – 3.25

Analysis Results:

This circuit serves 523 customers. The customer interruptions (CI) experienced on this circuit in 2010 were caused by a cable failure, an overhead equipment failure, trees, and an unknown cause resulting in 1,985 CI. Circuit 159003 experienced three outages in 2010, all occurring during adverse weather conditions and resulting in 82% of the total CI experienced on the circuit. The first outage was caused by an underground circuit entrance cable failure. The second outage was caused by the failure of a PG clamp on the circuit backbone near the terminal pole. The third outage was a substation trip (unknown cause) during a thunderstorm. In addition, approximately 14% of the CI experienced was the result of prearranged outages for maintenance or safety. Adverse tree conditions (e.g., limbs on primary, primary down due to trees or limbs falling, etc.) accounted for less than 5% of the CI. Other overhead equipment malfunctions or failures constituted less than 4% of the total CI experienced on the circuit during 2010.

Corrective Actions:

Tree trimming was last performed on this circuit in 2009. Tree trimming is next scheduled for this circuit in 2013

Portions of this Circuit were reconductored during 2010 in preparation for load relief to the Humboldt Substation. Several new poles, switches, conductors, etc., were installed, replacing the deteriorated facilities. A portion of circuit 159003 will be transferred to circuit 317007.

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. These included replacement of cracked or distorted cross arms, insulators, lightening arrestors, and deteriorated poles.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy under DOJM Work Request number 21MT525759.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 719051
Division – Central Ozarks
Area Served – Jefferson City, MO
SAIFI Value – 3.24

Analysis Results:

All of the outages experienced on this circuit occurred on one day, September 2, 2010 during a severe thunderstorm. Repair crews recall that the outages were caused by lightning damage to the primary lines at multiple locations. Because this circuit runs cross-country there were problems finding and repairing all of the damaged sections of the circuit. This resulted in multiple orders being created for essentially one event on the circuit. This resulted in customers being reported out of service multiple times when in reality they were only out one time.

Corrective Actions:

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The division plans to analyze the #2 ACSR conductors on this circuit to determine whether they should be replaced.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 879006
Division – SEMO
Area Served – Lilbourn
SAIFI Value – 3.18

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by high winds, storms, pre-arranged outages, and public vehicle accidents. Circuit 879006 experienced nine outages in 2010. Three outages were caused by substation recloser trips during high winds and storms. Four outages were caused by pre-arranged maintenance outages. Lastly, two outages were caused by public vehicle accidents.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove tree hazards.

Division personnel will re-conductor and add lightning arrestors to a portion of the circuit near Ristine, MO. This project will be performed under DOJM Work Request numbers 2TSE095450 and 2TSE095451.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 456057
Division – SEMO
Area Served – Deering
SAIFI Value – 3.17

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a substation insulator failure, pre-arranged outages, lightning strikes, animal intrusions, and public damage. Circuit 456057 experienced 19 outages in 2010. One outage was caused by a substation recloser tripping due to a bad substation insulator. Seven outages were caused by pre-arranged maintenance. Seven outages were caused by lightning strikes. Two outages were caused by animal intrusions. Two outages were caused by public damage.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove tree hazards.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 461053
Division – SEMO
Area Served – Hayti
SAIFI Value – 3.15

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by pre-arranged maintenance, substation breakers, and high winds. Circuit 461053 experienced 61 outages in 2010. 58 outages were caused by pre-arranged maintenance. Two outages were caused by substations breakers tripping while set on hazard. One outage was caused by high winds.

Corrective Actions:

In 2010 this circuit was rebuilt and re-conductored under DOJM Work Request number 2TSE025919. This work resulted in the large number of pre-arranged outages experienced on the circuit.

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2011 to identify and remove tree hazards.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 668051
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 3.14

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees and overhead failures. Circuit 668051 experienced outages in 2010 due to equipment failures resulting from bad weather.

Corrective Actions:

Circuit 668051 is old and is in need of upgrading. This circuit is also 14.4kV delta and has no ties. Division engineering personnel will submit a project request to rebuild this circuit, adding a neutral, and ultimately converting it to 12kV wye configuration.

Converting this circuit to 12kV will require building a new substation which will have to be budgeted and approved. However, after conversion, this circuit will tie to four feeders from three different substations which will greatly increase circuit reliability.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 635001
Division – SEMO
Area Served – Cape Girardeau
SAIFI Value – 3.11

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a substation transformer failure, pre-arranged outages, public vehicle accidents, trees, and a switch failure. Circuit 635001 experienced 25 outages in 2010. One major outage was caused by a substation transformer failure. Thirteen outages were caused by pre-arranged outages. Five outages were a result of public vehicle accidents. Five outages were a result of tree contacts. Lastly, one outage was caused by a switch failure.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove tree hazards.

The failed substation transformer was replaced.

In 2010 a portion of this circuit underwent major line relocation under DOJM Work Request number 2TSE091458. This work resulted in the large number of pre-arranged outages.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 261005
Division – Archview
Area Served – Geraldine
SAIFI Value – 3.10

Analysis Results:

This circuit serves 494 customers. The customer interruptions (CI) experienced on this circuit in 2010 were caused by a substation trip, a cable failure, wire failures, and prearranged outages. Circuit 261005 experienced three outages in 2010, all occurring during adverse weather conditions and resulting in 1,577 CI or 94% of the total CI experienced on the circuit. The first outage occurred during a storm when the Baden Substation tripped for unknown reasons. The second outage occurred during high winds when the underground circuit exit cable failed. The third outage occurred when the 34kV supply to the substation single-phased into the substation during a rain storm. In addition, prearranged outages, for maintenance or safety, constituted about 4% of the total CI experienced by this circuit in 2010.

Corrective Actions:

Tree trimming was last performed on this circuit in 2009. Tree trimming is next scheduled for this circuit in 2013

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. These included replacement of cracked or distorted cross arms, insulators, lightening arrestors, and deteriorated poles. In addition, additional tap fusing locations were identified.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy under DOJM Work Request number 21MT525773.

The Baden Substation will be retired in 2011. Circuit 261005 will be moved to the new second unit being installed at Gimblin Substation. This transfer is anticipated to occur in mid-2011. This should eliminate spurious trips, fires, and malfunctions previously caused by the aging equipment at Baden Substation.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 454051
Division – SEMO
Area Served – Caruthersville
SAIFI Value – 3.09

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by pre-arranged maintenance and substation breakers tripping. Circuit 454051 experienced 67 outages in 2010. 64 outages were caused by pre-arranged maintenance. The remaining three outages were caused by substation breakers tripping while set on hazard.

Corrective Actions:

In 2010 this circuit was rebuilt and re-conductored under DOJM Work Request number 2TSE025919. This work resulted in the large number of pre-arranged outages experienced on the circuit.

Tree trimming was performed on this circuit in 2010.

The Substation Department replaced a 70 Amp breaker with a 140/280 amp breaker in 2010.

Division personnel made modifications so that this circuit can now be tied to the 461053 circuit.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 218053
Division – River Bluffs
Area Served – Ballwin, MO
SAIFI Value – 3.07

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees and a cable failure. Circuit 218053 experienced two outages in 2010. The first outage occurred when a 45 foot limb fell across the phases during a rain storm. The second outage occurred when an underground exit cable faulted. This circuit exits the substation and runs underground for a considerable distance before it goes overhead. The exit cable is installed in conduit; however, when the duct bank was originally installed, blind splice boxes were installed at three of the cable splice locations. The cable failed at one of these blind splice boxes.

Corrective Actions:

Tree trimming was last performed on this circuit in 2010.

During the repair of the faulted cable a manhole was installed to replace the blind splice box where the failure occurred. In addition, the remaining two blind splice boxes will be replaced with manholes in 2011. These manholes will provide better access to the splices in the future.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 020012
Division – River Bluffs
Area Served – St. Louis, MO
SAIFI Value – 3.05

Analysis Results:

This circuit serves 402 customers and experienced 1,228 customer interruptions (CI) in 2010. The major cause of the CI experienced on this circuit (98%) was tree contacts which occurred on three consecutive days during thunderstorms. On July 19, 20, and 21, 2010 high winds caused trees and limbs to knock down primary lines which resulted in three circuit outages.

Corrective Actions:

This circuit was being trimmed as part of the normal trim cycle when the storm occurred. Tree trimming on this circuit was completed on July 28, 2010. The entire circuit was patrolled and all tree limbs are now clear. Numerous trees were removed with the cooperation of the City of St. Louis.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 165056
Division – River Bluffs
Area Served – Eureka, MO
SAIFI Value – 3.01

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by primary failures and tree failures. Circuit 165056 experienced four device outages in 2010. The first outage occurred on June 1, 2010 when a 140T fuse blew due to the failure of a single span of 4ACSR primary. The second outage occurred on June 15, 2010 when a 140L recloser tripped due to failed primary. The third outage occurred on August 7, 2010 when this same recloser tripped when a broken tree brought down sections of secondary and #2 neutral. The fourth outage occurred on December 14, 2010 when this same recloser tripped due to a primary failure.

Corrective Actions:

An overhead visual inspection downstream of both the 140T fuse and the 140L recloser will be performed in 2011. 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 – 559052
Division – Meramec Valley
Area Served – Festus,, MO
SAIFI Value – 3.00

Analysis Results:

This feeder serves approximately 21 metered customers. It also serves auxiliary loads at the Rush Island Power Plant. It runs east out of Wildcat Hollow substation, along Wildcat Hollow Rd. to the Rush Island Power Plant. Part of the circuit backbone runs along the roadway and some runs cross country. This circuit experienced 63 customer interrupted (CI) in 2010. Two outages caused 98% of the year's CMI on this circuit. The biggest outage on this circuit in 2010 was caused by a substation outage on May 26, 2010 due to the static wire falling into the Selma-Howe-Clvy-1 circuit along Highway 61. Wildcat Hollow Substation is a single unit, single 34kV supply substation. This 34kV outage resulted in 42 CI. Another outage on May 23, 2010, which resulted in 20 CI, was caused by a tree falling into the circuit.

Corrective Actions:

Tree trimming was last performed on this circuit in 2008. This is considered a rural circuit and tree trimming will next be performed on this circuit in 2014.

DOJM Work Request number 26JF111556 will build a second 34kV supply into Wildcat Hollow substation in 2011. This will greatly improve the reliability of the customers supplied by this substation.

Overhead visual and ground-line inspections will be performed on this circuit in 2010. 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 – 082051
Division – Archview
Area Served – Saint Louis, Missouri
SAIFI Value – 2.99

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by underground cable faults and prearranged maintenance. The circuit experienced three outages due to underground primary faults, and one prearranged maintenance outage to perform switching. The 082051 circuit is an underground circuit without fault locating devices, or the ability to automatically restore intact sections of the circuit following a cable fault.

Corrective Actions:

Ameren Standards Department personnel were contacted to determine whether any sections of cable should be pro-actively replaced based on a history of failures considering age or type. Considering that the three primary faults occurred in manholes, the problem appears to be caused by splice problems rather than the cable itself. Unfortunately, the technology to find cable problems has had very limited success.

This circuit is part of the St. Louis Underground Revitalization Project. This Ameren engineering group is evaluating projects to improve reliability on this and other downtown St. Louis circuits. This includes the evaluation of individual sections of cable on this circuit for possible replacement.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 488052
Division – SEMO
Area Served – Sunnen Area, MO
SAIFI Value – 2.98

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by primary wire failures, unknown causes, equipment failures, maintenance outages, animal intrusions, and a substation related outage. Circuit 488052 experienced multiple outages in 2010. Several outages were caused by primary wire failures due to age and condition. Outages were also caused by tree contacts. There were other outages caused by other unknown causes but which were possibly caused by lightning. An outage was also caused by a failed 600 amp switch. Animal intrusions also resulted in outages. An outage resulted from a maintenance outage which was performed to correct an out-of-phase condition with the tie to circuit 484052. Lastly, this circuit experienced a substation outage due to a relay setting coordination problem.

Corrective Actions:

In 2010 division personnel installed fuses on the unfused taps along the entire length of the circuit's three-phase backbone.

Division personnel also installed reclosers on 3 long single-phase taps where multiple device interruptions (MDI) problems existed. Other small MDI projects were performed to address animal guarding, lightning protection, and tree trimming issues.

Tree trimming was performed on this circuit in 2010.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Division personnel will replace the existing three-phase breaker at the substation with a new SCADA controlled Viper with single-phase fault clearing capabilities. This will eliminate approximately two thirds of the customer outages on this circuit by not opening all three phases of the circuit during a single-phase outage. Most past events on the circuit have been single-phase problems.

Division personnel will correct an out of phase situation between the 488052 and 484052 circuits so that future switching operations will not require an open transition which causes an outage.

Division Engineering personnel will submit a project to reconductor 2.5 miles of center phase wire from #6 copper to 1/0 AAAC. This center phase has been the phase which has caused primary wire failure outages in the past.

Division Engineering personnel will propose a future project to automate a normal open circuit tie switch and add an automated mid-point switch so that future circuit outages will be limited to partial circuit outages. This project will depend on budget approval.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 113005
Division – Archview
Area Served – St. Louis, Missouri
SAIFI Value – 2.97

Analysis Results:

This circuit serves 318 customers. The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees and a wire failure resulting in 944 CI. Circuit 113005 experienced three outages in 2010, resulting in nearly all the CI experienced on the circuit. The first outage occurred on April 24, 2010 during a thunderstorm and affected 119 of the customers on the circuit. The outage was caused by a large limb that had broken and fallen on the primary. The second outage occurred during a thunderstorm on June 15, 2010. The outage was caused by trees contacting the primary wires. The third outage occurred during a thunderstorm on August 14, 2010. The outage was caused by a primary failure.

Corrective Actions:

Tree trimming was last performed on this circuit in 2010.

Division Engineering personnel identified two unfused three-phase taps on this circuit. They will be fused in 2011.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 629051
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 2.92

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees, lightning, and overhead failures. Circuit 629051 experienced two outages in 2010. The two outages were caused by poles breaking during a storm and the failure of a line that runs cross country. In addition, miscellaneous individual outages occurred on various circuit transformers.

Corrective Actions:

Vegetation Management will patrol this circuit for additional vegetation problems in 2011.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The cross country portion of this circuit will be inspected in 2011 and, if necessary, relocated to the road to eliminate its reliability exposure.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 147057
Division – Gateway
Area Served – Creve Coeur, Missouri
SAIFI Value – 2.92

Analysis Results:

This circuit serves 960 customers. The customer interruptions (CI) experienced on this circuit in 2010 were caused by cable faults and tree failures. Circuit 147057 experienced two outages in 2010. The first outage was caused by a cable fault in July, 2010. The second outage was caused by a tree falling across the circuit backbone in September, 2010. These two outages resulted in 2,803 CI.

Corrective Actions:

The cable fault occurred in a manhole near the Craig Substation and was repaired under DOJM Work Request number 21MT510183 in August, 2010

A special overhead visual inspection was performed on this circuit in 2010. Repairs were completed under DOJM Work Request number 21MT507605.

Tree trimming was last performed on this circuit in 2007. Tree trimming is next scheduled for this circuit in 2011.

Overhead visual and ground-line inspections were performed on this circuit in 2009 and 2010 respectively. The repair work identified as a result of these inspections was completed in accordance with Ameren Missouri's infrastructure inspection policy.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 287053
Division – Archview
Area Served – Saint Louis, MO
SAIFI Value – 2.90

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by underground cable faults. The circuit experienced three outages in 2010. These circuit outages were caused by primary faults, assumed to be caused by splice failures because all three outages occurred in manholes.

Corrective Actions:

This circuit is part of the St. Louis Underground Revitalization Project. This Ameren engineering group is evaluating projects to improve reliability on this and other downtown St. Louis circuits. This includes the evaluation of individual sections of cable on this circuit for possible replacement.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 288051
Division – Gateway
Area Served – Bridgeton, Missouri
SAIFI Value – 2.90

Analysis Results:

This circuit serves 319 customers. The customer interruptions (CI) experienced on this circuit in 2010 were caused by vines and an overhead equipment failure. Circuit 288051 experienced two outages in 2010. The first outage was caused by excessive vine growth which caused a primary failure. The second outage was caused by a burned jumper.

Corrective Actions:

Tree trimming was last performed on this circuit in 2008. Tree trimming is next scheduled for this circuit in 2012.

An overhead visual inspection was performed on this circuit in 2010. The repair work identified as a result of the inspections was worked under DOJM Work Request number 21MT512679 in October, 2010.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy under DOJM Work Request number 21MT523505.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 559053
Division – Meramec Valley
Area Served – Festus,, MO
SAIFI Value – 2.89

Analysis Results:

This circuit serves approximately 376 metered customers. It runs south out of Wildcat Hollow substation along Rouggly-Kiepe Rd. to the Jefferson County line. This circuit experienced 1,086 customer interrupted (CI) in 2010. Three outages accounted for 96% of the CI on the circuit. A substation outage due to the loss of the 34kV supply into the Wildcat Hollow Substation when the static wire fell into the 34kV conductors resulted in 744 CI. Another circuit outage occurred on September 18, 2010 during a storm, when tree caused outages resulted in 151 CI. Lastly, an outage occurred when the C-phase substation recloser locked out during a rain storm, which resulted in 149 CI.

Corrective Actions:

Tree trimming was last performed on this circuit in 2008. This is considered a rural circuit and tree trimming will next be performed on this circuit in 2014.

This circuit was recently upgraded from single-phase construction to three-phase construction along approximately a mile and a half of the circuit.

DOJM Work Request number 26JF111556 will build a second 34kV supply into Wildcat Hollow substation in 2011. This will greatly improve the reliability of the customers supplied by this substation.

DOJM Work Request number 26JF113140 installed two sets of three fault indicators on the line to help limit outage search time. This work was completed October 7, 2010.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 119005
Division – Gateway
Area Served – University City, MO Area
SAIFI Value – 2.88

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by an overhead malfunction. There was one circuit outage on circuit 119005 in 2010. The circuit outage occurred during windy weather and resulted from an overhead malfunction.

Corrective Actions:

Tree trimming was last performed on this circuit in 2010. In addition, hot-spot trimming on the circuit was requested in 2011.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The circuit was field checked by engineering personnel in the first quarter of 2011. DOJM Work Request number 21MT522761 was created to replace a damaged ceramic insulator on the Warson-73 sub-transmission circuit. DOJM Work Request number 21MT521715 was created to fuse transformers on the circuit backbone. DOJM Work Request number 21MT471260 was created to install fuses on the circuit. DOJM Work Request number 21MT517928 was created to fuse transformers and three-phase taps on the circuit.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 824007
Division – SEMO
Area Served – Bernie
SAIFI Value – 2.88

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by high winds and tree contacts. Circuit 824007 experienced three outages in 2010. One outage occurred when a substation recloser tripped as a result of the wind blowing debris into the primary. Two other outages were caused by tree contacts.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove tree hazards.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 546054
Division – Meramec Valley
Area Served – House Springs, MO
SAIFI Value – 2.80

Analysis Results:

This circuit experienced 426 customer interruptions (CI) in 2010 which were caused by storms, failed primary conductor connections, trees, employee errors, and cold-load pickup issues. Tree contacts accounted for 6 CI, employee errors accounted for 120 CI, and cold-load pickup accounted for 141 CI of the total 426 CI.

Corrective Actions:

Vegetation Management performed hot-spot trimming on the circuit in 2010 to address tree contacts.

DOJM Work Request number 26JF110855 replaced a recloser that accounted for the cold load pickup outage of 141 CI.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 637053
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 2.80

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees, animal intrusions, a lightning strike, and public damage. Circuit 637053 experienced four outages in 2010. One outage was caused by a broken tree limb which fell on the line during a thunderstorm. The tree was located outside of the Right Of Way (ROW). One outage was caused by animal contact in the circuit substation, which caused the entire substation to trip. One outage was caused by an apparent lightning strike. One outage was caused when a contractor dug into an underground tie which extends into a portion of the St. Charles district.

Corrective Actions:

This circuit had fuses added where needed.

Tree trimming will be performed on this circuit in 2011.

The substation which experienced the animal intrusion was upgraded with new circuit reclosers, new animal guards, the addition of line spinners on all circuit exits, and an electric fence.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 564052
Division – Boone Trails
Area Served – St. Charles, Missouri
Original SAIFI Value – 2.71

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a cable failure and a subtransmission failure. This circuit experienced two outages in 2010 which caused the majority of the CI. One of the outages was caused by a cable fault. The second outage was caused by an outage on the Subtransmission system and not related to a failure on this circuit. If the effect of the subtransmission outage were removed, the overall SAIFI calculation for this circuit would have been 1.70.

Corrective Actions:

The cable fault was repaired under DOJM Work Request number 25SC048691, which was completed in 2010.

Tree trimming was last performed on this circuit in 2007. Tree trimming will be performed on this circuit in 2011.

No further corrective action is planned for this circuit.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 218055
Division – River Bluffs
Area Served – Ellisville, MO
SAIFI Value – 2.69

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a public vehicle accident and a cable fault. Circuit 218055 experienced two outages in 2010. The first outage occurred when a vehicle hit a three-phase backbone pole during a snow storm. The second outage occurred due to an underground cable fault on the substation exit cable. The circuit exits the substation and runs underground for a considerable distance to the terminal pole. Approximately half the substation exit cable is direct buried and the remainder is in a concrete encased duct bank. The cable fault on the substation exit cable occurred in the direct buried section of the cable.

Corrective Actions:

Tree trimming was last performed on this circuit in 2010.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Division Engineering personnel are developing a project to replace the direct buried section of substation exit cable with a conduit duct bank.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 512055
Division – Meramec Valley
Area Served – Washington, Missouri
SAIFI Value – 2.69

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by tree failures and animal intrusions. Specifically, several interruptions were caused by trees falling on the circuit during inclement weather (rain, wind, thunderstorms) which caused conductors and/or poles to break.

Corrective Actions:

The majority of the problems experienced on this circuit in 2010 were on the 1-phase circuit. A portion of the cross-country section of the 1-phase line was eliminated in 2010 by relocating a pole along the road.

DOJM Work Request numbers 23FR043708, 23FR048730, 23FR049693, and 23FR049694 were created to address problems on this circuit. Two of the DOJM Work Requests include installing animal protection to transformers and adding a fused switch on a tap. The other two projects relocate a short portion of the cross-country circuit to the road. Both of these projects include the addition of 4-6 spans of 1-phase circuit along the road to eliminate 3-4 spans of cross-country circuit through heavily treed areas. All four of these projects are scheduled to be completed in 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 318052
Division – Gateway
Area Served – Des Peres, MO
SAIFI Value – 2.67

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by tree and equipment failures. A circuit outage on May 13, 2010 was caused by a tree limb that fell on a recloser at 1823 Topping Rd. and shorted the lightning arrestor. A circuit outage on July 1, 2010 occurred when a relay technician tripped a high speed ground at the substation. On November 3, 2010 a suspension insulator failed and caused a conductor to fall and fail switch D5394, causing a circuit outage. On May 24, 2010 a tree failure at 13029 Thornhill Rd. caused an outage to the recloser at 1823 Topping Rd. Another outage at this recloser occurred on September 15, 2010 when a cable faulted downstream of the recloser. The recloser is suspected to have been set to single operation mode.

Corrective Actions:

A new lightning arrestor was installed on the recloser at 1823 Topping Rd. on June 1, 2010 under DOJM Work Request number 21MT504553 and was verified to be operating normally after the September 15, 2010 outage.

Switch D5394 was replaced on November 3, 2010 under DOJM Work Request number 21MT516859.

Tree trimming was last performed on this circuit in 2010.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 261001
Division – Archview
Area Served – Geraldine
SAIFI Value – 2.64

Analysis Results:

This circuit serves 492 customers. The customer interruptions (CI) experienced on this circuit in 2010 were caused by abnormal switching, wire failures, substation failures, overhead equipment failures, and public vehicle accidents resulting in 1,900 CI. Circuit 261001 experienced three outages in 2010, all occurring during adverse weather conditions and resulting in 80% of the total CI experienced on the circuit. One outage occurred during abnormal switching after load was transferred to this circuit from the Humboldt circuit and an overhead wire in the backbone broke. About 69% of all CI resulted from malfunctions of substation or overhead equipment. Another outage occurred when the substation tripped for unknown reasons during high winds. The third outage occurred as a result of a primary failure due to a public vehicle accident. Public initiated outages constituted 26% of this circuit's CI. In addition, approximately 5% of the CI experienced on the circuit was caused by prearranged outages for maintenance or safety.

Corrective Actions:

Tree trimming was last performed on this circuit in 2009. Tree trimming is next scheduled for this circuit in 2013

Division engineering personnel performed an inspection of the circuit and several improvement opportunities were identified. These included replacement of cracked or distorted cross arms, insulators, lightening arrestors, and deteriorated poles. In addition, additional tap fusing locations were identified.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy under DOJM Work Request number 21MT525771.

The Baden Substation will be retired in 2011. Circuit 261005 will be moved to the new second unit being installed at Gimblin Substation. This transfer is anticipated to occur in mid-2011. This should eliminate spurious trips, fires, and malfunctions previously caused by the aging equipment at Baden Substation.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 945052
Division – MO Valley
Area Served – Lathrop, MO
SAIFI Value – 2.63

Analysis Results:

The outages incurred on this circuit in 2010 were caused by downed lines during storms, failed primary connectors, and primary line failures. Over 93% of the outages incurred on this circuit were caused by severe weather. Of these outages, almost 90% of them were caused by overhead lines contacting or breaking during high winds.

Corrective Actions:

An overhead visual inspection will be performed on this circuit in 2011. 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 – 259051
Division – Gateway
Area Served – Florissant, MO Area
SAIFI Value – 2.60

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by public vehicle accidents and primary conductor failures. There were two circuit outages experienced on circuit 259051 in 2010. One circuit outage was caused by a public vehicle accident which broke a pole, and the other circuit outage was caused by primary conductor failure during a thunderstorm.

Corrective Actions:

Tree trimming will be performed on this circuit in 2011. In addition, hot-spot trimming on the circuit was requested in 2011.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The circuit was field checked by engineering personnel in the first quarter of 2011. DOJM Work Request number 21MT523449 was created to fuse transformers on the circuit backbone and install animal guards where required. DOJM Work Request numbers 21MT521119 and 21MT517928 were created to fuse transformers and three-phase taps.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 107001
Division – Gateway
Area Served – St Ann, MO Area
SAIFI Value – 2.59

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by tree failures and underground cable failures. There were two circuit outages on circuit 107001 in 2010. One outage occurred during a thunderstorm and was tree-caused. The other outage was an underground cable failure within a substation.

Corrective Actions:

Tree trimming was last performed on this circuit in 2008. In addition, hot-spot trimming on the circuit was requested in 2011. Tree trimming is next scheduled for this circuit in 2012.

Overhead visual and ground-line inspections were performed on this circuit in 2010. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The circuit was field checked by engineering personnel in the first quarter of 2011. DOJM Work Request number 21MT521928 was created to fuse twelve transformers on the circuit backbone. DOJM Work Request number 21MT521931 was created to replace solid blade switches with 50T fused switches on a three-phase tap. DOJM Work Request number 21MT521932 was created to install 100T fused switches on a three-phase tap. DOJM Work Request number 21MT521933 was created to remove a de-energized phase and install fuse switches on a single-phase tap. DOJM Work Request number 21MT521934 was created to install line cover and install fused switches on a single-phase tap.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 922058
Division – Central Ozarks
Area Served – Jefferson City, MO
SAIFI Value – 2.58

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily due to a contractor boring into a backbone cable. Excluding the CI associated with this incident reduces the SAIFI on this circuit to 0.58.

Corrective Actions:

Tree trimming on this circuit was last performed in 2010.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 835002
Division – SEMO
Area Served – Chaffee
SAIFI Value – 2.58

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a primary failure, a tree contact, and transformer failures. Circuit 835002 experienced four outages in 2010. One outage was caused by the 34kV primary falling into the 12kV circuit during a storm. One outage was caused by tree contacts. Lastly, two outages were caused by faulty step-up transformer banks on the circuit.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove tree hazards.

A major substation project to replace the existing substation and switchgear will be performed in 2011.

New 34kV and 4kV circuit feeder exits will be installed along with regaining the third circuit feeder position that was lost in 2007 when the existing switch gear failed. This work will be done under DOJM Work Request numbers 2TSE095456, 2TSE095460, 2TSE095461, and 2TSE095580.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 563052
Division – SEMO
Area Served – Bonne Terre, MO
SAIFI Value – 2.57

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by overloads, animal intrusions, and maintenance outages. Circuit 563052 experienced multiple outages in 2010. Repeated outages were caused by a normal overload situation on a long single-phase tap which fed a lake development community. This overload melted fuses on parts of the circuit and also caused multiple recloser trips causing outages to downstream customers. Other outages were caused by animal intrusions and a planned maintenance outage to clear a regulator which could not be lowered to the neutral position.

Corrective Actions:

The long (3.5 mile) single-phase overload was addressed by re-conductoring this portion of the circuit with a new three-phase line. This project was completed in late 2010 under DOJM Work Request number 28SF034663.

Division Engineering personnel will perform a special visual circuit inspection for reliability and maintenance improvement opportunities to eliminate future reliability problems. This work will be performed under DOJM Work Request number 28SF034657.

The Division will install an automated normal open tie switch (Intellirupter) so that the circuit can be isolated and re-energized in sections if an outage occurs at the substation or another location by utilizing an existing midpoint Intellirupter along with this new Intellirupter. This work will be performed under DOJM Work Request number 28SF034660. This installation will also aid switching operations between the 34kv/12kv Bonne Terre substation and the 138/12kv Boyd Branch circuit at this normally open circuit tie.

Fuses will be installed on the un-fused taps along the length of the three-phase backbone of the circuit under DOJM Work Request numbers 28SF034662 and 28SF034663.

Division Engineering personnel will develop a project to install a new phase to the Cedar Lake Community to reduce the reliability exposure of the existing circuit. This work will be performed under DOJM Work Request number 28SF034665.

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2011 to identify and remove tree hazards.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 258051
Division – Gateway
Area Served – Fenton, MO
SAIFI Value – 2.55

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by cable failures. A direct buried feeder exit cable failed on September 19, 2010 and again on November 10, 2010 in different locations. Each of these faults caused a circuit outage.

Corrective Actions:

The feeder exit cable was first repaired on September 21, 2010 under DOJM Work Request number 21MT514082. The second repair was completed on November 20, 2010 under DOJM Work Request number 21MT517818. The entire length of direct buried cable from the manhole at the end of the substation driveway to the terminal pole will be replaced and placed in conduit in 2011 under DOJM Work Request number 21MT517702.

Tree trimming was last performed on this circuit in 2008.

An overhead visual and ground line inspection will be performed on this circuit in 2011. 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 – 542053
Division – Boone Trails
Area Served – St. Charles, Missouri
Original SAIFI Value – 2.50

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a subtransmission failure. This circuit experienced one outage in 2010 which caused the majority of the CI. The outage was caused by an outage on the Subtransmission system and not related to a failure on this circuit. If the effect of the subtransmission outage were removed, the overall SAIFI calculation for this circuit would have been 1.50.

Corrective Actions:

Tree trimming was last performed on this circuit in 2007. Tree trimming will be performed on this circuit in 2011.

No further corrective action is planned for this circuit.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 466055
Division – SEMO
Area Served – Wardell
SAIFI Value – 2.48

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by pre-arranged maintenance, trees, animal intrusions, lightning, and primary failures. Circuit 466055 experienced 24 outages in 2010. Nine outages were caused by pre-arranged maintenance. One outage was caused by tree failures. Two outages were caused by animal intrusions. Six outages occurred when lightning strikes tripped a 34kV Nulec recloser. Four outages were caused by primary failures during storms. Lastly, two outages occurred when transmission lines failed and fell on the distribution primary.

Corrective Actions:

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2011 to identify and remove tree hazards.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 571052
Division – SEMO
Area Served – Knob Lick, MO
SAIFI Value – 2.47

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by substation equipment malfunctions, trees, animal intrusions, and overhead equipment malfunctions. Circuit 571052 experienced two substation outages in 2010 which accounted for the majority of the CI. The first substation malfunction was caused by a faulty 27 relay which failed to operate the high side transfer during a loss of the normal 34.5kV sub-transmission circuit. The second was caused by a single-phase substation 12kV circuit recloser which was found to be slightly slower than normal which produced a high speed ground trip at the substation.

Corrective Actions:

After these outages the Substation Department replaced the 27 relays at the station to eliminate the possibility of another high side 34kV transfer failure. The Substation Department also replaced all three reclosers on the circuit where the one recloser was found to be slower than typical, to eliminate another high speed ground trip at the substation. The Relay Department also evaluated the relay settings for the substation circuits and made changes accordingly. The control wiring was meggered and the CT circuit tested to ensure proper operation. This equipment was found to be in good working condition.

Other improvements were made to the 571052 circuit, including installing fuses on all single-phase taps from the main three-phase backbone as well as phase balancing on the circuit. This work was done under DOJM Work Request number 28SF033320. This work was completed in February, 2010.

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove tree hazards.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy under DOJM Work Request number 28SF034708.

Division Engineering personnel will analyze long single-phase taps for recloser or fuse additions to reduce large scale outages in the future. This work will be performed under DOJM Work Request number 28SF034707.

Division Engineering personnel will meet with System Planning engineers about the possibility of upgrading the substation transformer or installing a second unit at this substation in the future. A second unit at Knob Lick would allow for load transfer capabilities during a single transformer failure.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 267058
Division – Gateway
Area Served – Creve Coeur, Missouri
SAIFI Value – 2.42

Analysis Results:

This circuit serves 898 customers. The customer interruptions (CI) experienced on this circuit in 2010 were caused by a primary cable fault and public damage. Circuit 267058 experienced two outages in 2010. The first outage was caused by a primary cable fault. The second outage occurred when a public utility working in the vicinity of this circuit knocked a tree into the circuit.

Corrective Actions:

The primary cable fault was repaired under DOJM Work Request number 21MT516639 in November, 2010.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy under DOJM Work Request number 21MT523507.

Tree trimming was last performed on this circuit in 2007. Tree trimming is next scheduled for this circuit in 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 765051
Division – MO Valley
Area Served – Turney, MO
SAIFI Value – 2.39

Analysis Results:

The outages incurred on this circuit in 2010 were caused by downed lines during storms, hardware failure, and equipment failure. Most of the outages minutes were attributed to two outages, one caused by equipment failure, and the other hardware failure due to storm damage.

Corrective Actions:

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Additional tap fusing work on this circuit will be completed in September of 2011.

This circuit has been analyzed for any overloaded equipment and replacements have been made as needed.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 873004
Division – MO Valley
Area Served – New Franklin, MO
SAIFI Value – 2.37

Analysis Results:

The outages incurred on this circuit in 2010 were caused by severe weather, tree contacts, and maintenance outages. Severe weather accounted for two thirds of all the outage minutes incurred and most of these minutes resulted from the loss of supply to the substation during high winds.

Corrective Actions:

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Additional tap fusing work has been engineered to protect the circuit.

The Vegetation Management Department will conduct hot spot patrolling in 2011 and trim trees as required.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 571053
Division – SEMO
Area Served – Knob Lick, MO
SAIFI Value – 2.36

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by substation equipment malfunctions, trees, thunderstorm related damage, and overhead equipment malfunctions. Circuit 571053 experienced two substation outages in 2010 which accounted for the majority of the CI. The first substation malfunction was caused by a faulty 27 relay which failed to operate the high side transfer during a loss of the normal 34.5kV sub-transmission circuit. The second was caused by a single-phase substation 12kV circuit recloser which was found to be slightly slower than normal which produced a high speed ground trip at the substation.

Corrective Actions:

After these outages the Substation Department replaced the 27 relays at the station to eliminate the possibility of another high side 34kV transfer failure. The Substation Department also replaced all three reclosers on the circuit where the one recloser was found to be slower than typical, to eliminate another high speed ground trip at the substation. The Relay Department also evaluated the relay settings for the substation circuits and made changes accordingly. The control wiring was meggered and the CT circuit tested to ensure proper operation. This equipment was found to be in good working condition.

Other improvements were made to the 571053 circuit, including installing fuses on all single-phase taps from the main three-phase backbone as well as phase balancing on the circuit. This work was done under DOJM Work Request number 28SF033321. This work was completed in February, 2010.

Tree trimming is next scheduled for this circuit in 2012.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy under DOJM Work Request number 28SF034710.

Division Engineering personnel will analyze long single-phase taps for recloser or fuse additions to reduce large scale outages in the future. This work will be performed under DOJM Work Request number 28SF034709.

Division Engineering personnel will meet with System Planning engineers about the possibility of upgrading the substation transformer or installing a second unit at this substation in the future. A second unit at Knob Lick would allow for load transfer capabilities during a single transformer failure.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 392051
Division – Central Ozarks
Area Served – Jefferson City, MO
SAIFI Value – 2.36

Analysis Results:

This circuit experienced 2,029 customer interruptions (CI) in 2010. 1,716 of these CI were caused by two feeder outages. The first feeder outage was caused by an insulator/connector failure just outside of the substation. The second feeder outage was caused by a tree limb during a storm. The tree limb blew out of a tree located off the right-of-way.

Corrective Actions:

Tree trimming was last performed on this circuit in 2006. Tree trimming is next scheduled for this circuit in 2012.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 553053
Division – Meramec Valley
Area Served – Cedar Hill, MO
SAIFI Value – 2.35

Analysis Results:

This circuit experienced 4,385 customer interruptions (CI) in 2010 which were caused by storms, tree contacts, animal intrusions, and unknown causes. Two of the largest outages were of unknown causes, consisting of 924 CI.

Corrective Actions:

Vegetation Management performed hot-spot trimming on the circuit in 2010 to address tree contacts.

DOJM Work Request number 26JF114349 replaced a defective recloser on the circuit that accounted for 28 CI.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 643053
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 2.34

Analysis Results:

This circuit experienced 1,238 customer interruptions (CI) in 2010. The CI experienced on this circuit in 2010 were caused by trees, primary failures, a pole failure, and overhead failures. Circuit 643053 experienced one outage in 2010 resulting from a storm which occurred on August 10, 2010. The storm accounted for 1,045 of the 1,238 CI experienced on this circuit. Switching was performed on this circuit as repairs were made, which resulted in some of the outages being counted multiple times. The actual CI for this outage should have been 529 CI which would have resulted in an overall CI for this circuit of 722 CI and a SAIFI value of 1.36.

Corrective Actions:

No work is planned on this circuit in 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 212005
Division – River Bluffs
Area Served – St. Louis, MO
SAIFI Value – 2.32

Analysis Results:

This circuit serves 934 customers and experienced 2,167 customer interruptions (CI) in 2010. Of the 2,167 CI experienced on this circuit in 2010, 86% were caused by one outage. On August 10, 2010 a 34kv supply cable to the Cherokee substation failed. This circuit then tripped on automatic load reduction when load exceeded equipment ratings.

Corrective Actions:

A project is underway to divert load from circuits 212004 and 212005 to the Connecticut Substation. This will not only relieve the load on the two circuits, but also lower the total load on the Cherokee (212) Substation.

Tree trimming will be performed on this circuit in 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 648051
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 2.32

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by animal intrusions and overhead equipment failures. Circuit 648051 experienced two major outages in 2010. The first outage occurred when an animal contact caused jumpers on the circuit to burn open. The second outage occurred when phase contacts caused an overhead failure. Both of these failures occurred on the same portion of the circuit.

Corrective Actions:

Fuses were added to this portion of the circuit which will increase the reliability of the rest of the circuit.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 452053
Division – SEMO
Area Served – Braggadocio
SAIFI Value – 2.32

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by primary failures, a regulator failure, and a tree caused outage during a small storm.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove tree hazards.

Division personnel coordinated and added fuses to this circuit under DOJM Work Request number 2TSE092735, which was completed in October 2010.

An overhead visual inspection was performed on this circuit in 2010. 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 – 121004
Division – Archview
Area Served – St. Louis, Missouri
SAIFI Value – 2.29

Analysis Results:

This circuit serves 7 customers on a very short span of underground cable. The customer interruptions (CI) experienced on this circuit in 2010 were caused by cable failures and a prearranged outage. Circuit 121004 experienced two outages in 2010 resulting in 16 CI. The first outage was caused by 2 separate cable failures. The second outage was a prearranged outage taken to replace a transformer.

Corrective Actions:

The cable failures were repaired. No further work is planned on this circuit in 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 214052
Division – Gateway
Area Served – Spanish Lake, Missouri area
SAIFI Value – 2.28

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by tree failures and a wire failure. There were three outages experienced on circuit 214052 in 2010. Two of the outages were caused by tree failures, one which occurred during a thunderstorm and the other which occurred on a calm day. The third outage was caused by a wire failure on a windy day.

Corrective Actions:

Tree trimming was last performed on this circuit in 2009. Tree trimming is next scheduled for this circuit in 2013.

Division and operations personnel patrolled circuit MALINE-MANOR-T-2, the 34KV supply for the Parker W transformer. DOJM Work Request number 21MT509650, created for minor repairs found in the MALINE-MANOR-T-2 patrol, was completed in August 2010. DOJM Work Request number 21MT493606, which replaced a Lightning Arrestor on a single-phase distribution transformer, was completed in 2010.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The circuit was field checked by engineering personnel in the first quarter of 2011. DOJM Work Request number 21MT521836 was created to fuse backbone transformers and relocate tap fuses to the circuit backbone where prudent.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 184051
Division – River Bluffs
Area Served – Sunset Hills, Missouri
SAIFI Value – 2.27

Analysis Results:

This circuit serves 62 customers and experienced 141 customer interruptions (CI) in 2010. Of the 141 CI experienced on this circuit in 2010, 130 CI were caused by two outages. Both of these outages were caused by underground cable failures resulting from water infiltration into the cable. The outages experienced on this circuit were due to a common cause. Both cable failures occurred in the same manhole between the substation and the terminal pole.

Corrective Actions:

The first failure was repaired under DOJM Work Request number 21MT501115. Upon the second failure roughly 1,000 feet of cable from the substation to the terminal pole was replaced. This cable replacement was completed under DOJM Work Request number 21MT502036.

Division Engineering personnel reviewed the tap fusing on this circuit and determined it to be appropriate.

The division engineer inspected the unfused backbone of this circuit in January 2011 and identified no issues with the circuit.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove additional tree hazards. Tree trimming is next scheduled for this circuit in 2012.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 922054
Division – Central Ozarks
Area Served – Jefferson City, MO
SAIFI Value – 2.26

Analysis Results:

1,634 of the 1,909 total customer interruptions (CI) experienced on this circuit in 2010 were due to two summer storms which damaged overhead backbone facilities which run through a heavily wooded area along a creek. Following those storms the division reorganized the circuit and installed fuses to isolate this section of line from the main backbone. In the process, 301 customers were moved from this circuit to another circuit, decreasing the number of customers on this circuit from 795 to 494. The lower number of customers (494) was used to calculate the SAIFI value. The SAIFI value, if calculated using the actual number of customers on the circuit at the time of the customer interruptions, would be 1.46.

Corrective Actions:

No additional corrective work is planned for this circuit since the major cause for outages has been corrected.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 573053
Division – Boone Trails
Area Served – St. Peters, Missouri
SAIFI Value – 2.26

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees, underground primary cable fault, equipment malfunctions, and animal intrusions. Circuit 573053 experience two outages in 2010 which accounted for the majority of the CI. Both of the outages were caused by tree branches breaking and making contact with the overhead lines which run along heavily wooded areas. Other smaller outages were caused by an underground primary cable fault, several equipment malfunctions, and animal intrusions.

Corrective Actions:

Vegetation Management performed hot-spot trimming on the circuit in 2010 to address tree contacts.

Maintenance tree trimming was last performed on this circuit in 2009. Tree trimming is next scheduled for this circuit in 2013. In addition, a patrol will be performed in 2011 to determine whether any hot spot tree trimming is required.

The underground primary cable failure which resulted in a device outage was replaced under DOJM Work Request number 25SC048222 in early 2010.

An overhead visual and an underground detailed inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Division engineering personnel will submit a project to convert existing overhead lines that run through wooded areas to an underground system to eliminate the potential for tree caused feeder outages, thereby improving circuit reliability.

The other smaller outages caused by animal intrusions and equipment malfunctions will be inspected by division personnel to determine whether further action is required.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 565054
Division – Boone Trails
Area Served – St. Charles, Missouri
SAIFI Value – 2.26

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees, overhead equipment malfunctions, public vehicle accidents, and lightning strikes. Circuit 565054 experienced one outage in 2010 which accounted for approximately half of the CI. This circuit outage was caused by a broken tree limb making contact with the overhead lines. The remaining CI were largely due to a variety of problems, including overhead equipment malfunctions, public vehicle accidents, and lightning strikes.

Corrective Actions:

Tree trimming was last performed on this circuit in 2010.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

This circuit will be patrolled to evaluate the feasibility of installing additional fusing on single-phase overhead taps while still maintaining proper device coordination.

The other smaller outages caused by animal intrusions, equipment malfunctions, and lightning strikes will be inspected by division personnel to determine whether further action is required.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 504055
Division – Meramec Valley
Area Served – Pacific, Missouri
SAIFI Value – 2.25

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by tree failures, animal intrusions, and overhead equipment failures. Specifically, several interruptions were caused by trees falling on the circuit during high winds or thunderstorms, pole-top transformer failures and a broken pole during a thunderstorm, and animal intrusions on equipment.

Corrective Actions:

DOJM Work Request numbers 23FR049615, 23FR049617, and 23FR049618 were created to add animal protection to circuit transformers.

An overhead visual inspection was performed on this circuit in March 2011. 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 – 138001
Division – Archview
Area Served – St. Louis, Missouri
SAIFI Value – 2.24

Analysis Results:

This circuit serves 639 customers. The customer interruptions (CI) experienced on this circuit in 2010 were caused by a misidentified switch, poles, cross-arms, and transformers resulting in 1,432 CI. Circuit 138001 experienced two outages in 2010, resulting in nearly all the CI experienced on the circuit. The first outage occurred on October 11, 2010 and affected the entire circuit. A misidentified switch caused a switching error and resulted in a circuit outage. The second outage occurred during the December 31, 2010 thunderstorm. This storm produced significant wind and tornado damage in parts of the St. Louis area. The storm resulted in three broken poles and five broken cross-arms which caused a circuit outage. In addition, one transformer on the circuit experienced three trips, two due to unknown causes and one due to trees, while another transformer outage was due to maintenance.

Corrective Actions:

The misidentified switch was field checked and properly tagged.

Tree trimming will be performed on this circuit in 2011.

Division Engineering personnel have developed a project to replace the open-wire secondary on the transformer which is scheduled to be completed in 2011. In addition, a pole and cross-arm have been identified as needing replacement and will also be repaired in 2011.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 151007
Division – River Bluffs
Area Served – Affton, Missouri
SAIFI Value – 2.23

Analysis Results:

This circuit serves 585 customers and experienced 1,307 customer interruptions (CI) in 2010. Of the 1,307 CI experienced on this circuit in 2010, 1,170 CI were caused by two outages. The first outage was caused by a 34kv pothead failure on the L-GRAVS-72 supply to Gravois Substation on a high load day which caused the loss of this Automatic Load Reduction (ALR) circuit. The second outage occurred one day later when the 34kv pothead failed on the L-GRAVS-71 supply to Gravois Substation which occurred before the L-GRAVS-72 pothead could be repaired, thus causing the loss of the Gravois Substation.

Corrective Actions:

The cable pothead failure on L-GRAVS-72 was repaired under DOJM Work Request number 21MT510576 and the cable pothead failure on L-GRAVS-71 was repaired under DOJM Work Request number 21MT510960.

In an effort to improve the reliability of this circuit, all old style 600 Amp porcelain switches on circuit 151007 were replaced with open air switches under DOJM Work Request number 21MT512194.

Overhead visual and ground-line inspections were performed on this circuit in 2010. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2011 to identify and remove additional tree hazards. Tree trimming is next scheduled for this circuit in 2012.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 691051
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 2.23

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by public vehicle accidents and overhead failures. Circuit 629051 experienced two outages in 2010. The first outage occurred when a dump truck left Highway 61 and hit a pole, which caused a cascading failure of five poles. The second outage was caused by overhead failures on one section of the circuit which runs cross country through woods and crosses a creek twice.

Corrective Actions:

This circuit splits three ways but has only one circuit tie. It could use additional circuit ties to take advantage of the multiple split points available. The division engineering department will submit a project to build a feeder tie to the west. In addition, the division engineering department will submit a project to convert the circuit to the north to the same voltage as this circuit in order to make a tie to this circuit.

The division engineering department will submit a project to relocate the cross country portion of this circuit to the road.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 215055
Division – Gateway
Area Served – Black Jack and Unincorporated St. Louis County, Missouri area
SAIFI Value – 2.23

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by tree, primary, and switch failures. Circuit 215055 experienced two outages in 2010. The first outage occurred on January 25, 2010, during snow with winds of 23 to 38 miles per hour. These winds resulted in a tree falling on the circuit. A second outage occurred on July 20, 2010, during rain and a thunderstorm. As a result of this weather, one span of B-phase primary failed and the B-phase of the circuit exit pole 600 amp switch failed.

Corrective Actions:

Tree trimming was last performed on this circuit in 2009. Tree trimming is next scheduled for this circuit in 2013.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The circuit was field checked by engineering personnel in the first quarter of 2011. DOJM Work Request numbers 21MT522254 and 21MT522274 were created to fuse backbone transformers, fuse unfused taps and relocate tap fuses to the circuit backbone where prudent.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 262058
Division – Gateway
Area Served – Des Peres, MO
SAIFI Value – 2.22

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by cable failures, equipment failures, and animal intrusions. A circuit outage occurred on March 31, 2010 due to a feeder exit cable failure. A second outage occurred on the same day because fuses blew protecting a section of wire which was being used to re-route power on the circuit. On March 21, 2010 a goose flew into the lines causing switch R1007 to open and loss of service to 63 customers.

Corrective Actions:

DOJM Work Request number 21MT502966 was completed on May 21, 2010 to re-conductor the circuit from #2 Al cable to 4/0 Al and replace the fuses with solid blade switches. The cable was originally installed to serve only one customer. These changes will better allow the cable to be used to reestablish service to more customers in the event of a disruption.

R1007 has been re-programmed to behave as a recloser and to attempt to automatically restore power if a fault has self-cleared.

Tree trimming was last performed on this circuit in 2009.

An overhead visual and ground-line inspection was performed on this circuit in 2010. The repair work identified as a result of the inspections is being completed in accordance with Ameren Missouri's infrastructure inspection policy.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy under DOJM Work Request number 21MT522846.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 542051
Division – Boone Trails
Area Served – St. Charles, Missouri
Original SAIFI Value – 2.22

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a failed lightning arrestor and a subtransmission failure. This circuit experienced two outages in 2010 which caused the majority of the CI. One of the outages was caused by a lightning arrestor that failed violently. The second outage was caused by an outage on the Subtransmission system and not related to a failure on this circuit. If the effect of the subtransmission outage were removed, the overall SAIFI calculation for this circuit would have been 1.22.

Corrective Actions:

Tree trimming was last performed on this circuit in 2007. Tree trimming will be performed on this circuit in 2011.

No further corrective action is planned for this circuit.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 455053
Division – SEMO
Area Served – Caruthersville
SAIFI Value – 2.21

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by pre-arranged maintenance, a substation breaker trip, animal intrusions, and trees. Circuit 455053 experienced 30 outages in 2010. 26 outages were caused by pre-arranged maintenance. One outage was caused by a substation breaker tripping while set on hazard. One outage was caused by an animal intrusion. Two outages were caused by tree contacts.

Corrective Actions:

In 2010 this circuit was rebuilt and re-conductored under DOJM Work Request number 2TSE025919. This work resulted in the large number of pre-arranged outages experienced on the circuit.

Division personnel built a new 34kV loop to serve the prior radial-fed Caruthersville West substation. This work was done under DOJM Work Request number 2TSE026920.

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2011 to identify and remove tree hazards.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 146007
Division – River Bluffs
Area Served – St. Louis, MO
SAIFI Value – 2.20

Analysis Results:

This circuit serves 182 customers and experienced 401 customer interruptions (CI) in 2010. Two circuit outages contributed to the majority of the CI experienced on this circuit. On October 26, 2010 the substation breaker tripped but no cause was found. A circuit outage occurred on November 24, 2010 when a primary conductor failed during a rainstorm. Lastly, some of the CI were caused by a blown fuse which occurred during a thunderstorm and was probably caused by lightning.

Corrective Actions:

Tree trimming was performed on this circuit in 2010.

This circuit had all of its porcelain switches replaced in 2010.

Following the outage on October 26, 2010, the substation breaker was checked and found to be functioning normally.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 956053
Division – Central Ozarks
Area Served – Jefferson City, MO
SAIFI Value – 2.20

Analysis Results:

This circuit experienced 2,181 customer interruptions (CI) in 2010. Two outages accounted for 1,996 of the total CI experienced on this circuit. One outage was caused when a heavy truck snagged communication cables and broke a pole. The other was caused when a substation breaker did not operate properly after a squirrel intrusion on an overhead transformer on a single-phase fused tap.

Corrective Actions:

The substation breaker was fixed in October, 2010.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 276053
Division – River Bluffs
Area Served – St. Louis, MO
SAIFI Value – 2.19

Analysis Results:

This circuit serves 414 customers and experienced 908 customer interruptions (CI) in 2010. Of the 908 CI experienced on this circuit in 2010, 94% were caused by two circuit outages. On June 8, 2010 a cottonwood tree 20 feet off the right of way (ROW) broke and fell across all three phases causing a circuit outage. Another circuit outage occurred on July 31, 2010 due to an animal intrusion. There were also three device outages that contributed to some of the circuit CI. These device outages were caused by an overhead transformer failure, an animal intrusion, and one fuse failure for unknown reasons.

Corrective Actions:

The Vegetation Management Department removed all of the cottonwood trees in the area of the circuit where the damage occurred. The circuit was also patrolled to ensure all trees are clear of the lines. Lastly, tree trimming is scheduled for this circuit in 2012.

The failed transformer was replaced.

An animal guard was installed on the failed transformer.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 542052
Division – Boone Trails
Area Served – St. Charles, Missouri
Original SAIFI Value – 2.19

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a subtransmission failure. This circuit experienced one outage in 2010 which caused the majority of the CI. The outage was caused by an outage on the Subtransmission system and not related to a failure on this circuit. If the effect of the subtransmission outage were removed, the overall SAIFI calculation for this circuit would have been 0.54.

Corrective Actions:

Tree trimming was last performed on this circuit in 2007. Tree trimming will be performed on this circuit in 2011.

No further corrective action is planned for this circuit.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 029010
Division – Archview
Area Served – St. Louis, Missouri
SAIFI Value – 2.19

Analysis Results:

This circuit experienced 722 customer interruptions (CI) in 2010. An analysis of the circuit revealed that two outages contributed nearly all of the CI experienced on this circuit. The first outage occurred on October 25, 2010 and affected the entire circuit. It was caused by a failure of one of the 34kV supplies to the substation, when a portion of a new substation was being put in service. The second circuit outage occurred on December 31, 2010 during a severe thunderstorm. This storm produced significant wind and tornado damage in parts of the St. Louis area. The storm caused a failure of the entire feeder. No damage was found when the feeder was patrolled.

Corrective Actions:

Tree trimming was last performed on this circuit in 2009.

The Folsom substation is being rebuilt next to the existing substation. Two of the new substation's units were installed in 2010 and the third and final unit will be installed in 2012. Circuit 029010 will be cutover to the new substation, in May of 2012.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 195054
Division – Meramec Valley
Area Served – Horine, MO
SAIFI Value – 2.17

Analysis Results:

This circuit serves approximately 1,035 customers. It runs west of Horine along Front Street and then along State Highway Z, before branching out to service a large area. The major cause of the outages experienced on this circuit in 2010 was vehicle caused damage. Three circuit outages, which occurred on February 15, 2010, May 15, 2010, and May 19, 2010, were all caused by vehicle accidents and resulted in a total of 1,991 customer interruptions (CI). This CI represents 89% of the total CI (2,248) experienced on the circuit. These accidents were not restricted to a specific location on the circuit route. The circuit was built on the edge of the road right of way (ROW).

Corrective Actions:

State Highway Z is a stretch of highway from Pevely to Mapaville. It is a very well-traveled and winding road, and there are no shoulders along the route. The speed limit is 45 mph but this limit is not observed. Due to the narrow ROW the only option for relocating the line would require obtaining private easements from the residents along the highway. Since the incidents do not occur in a defined location, approximately two miles of ROW would need to be obtained.

Tree trimming was last performed on this circuit in 2010.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 564056
Division – Boone Trails
Area Served – St. Charles, Missouri
Original SAIFI Value – 2.17

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a public vehicle accident and a subtransmission failure. This circuit experienced two outages in 2010 which caused the majority of the CI. One of the outages was caused by a public vehicle accident. The second outage was caused by an outage on the Subtransmission system and not related to a failure on this circuit. If the effect of the subtransmission outage were removed, the overall SAIFI calculation for this circuit would have been 1.17.

Corrective Actions:

Tree trimming was last performed on this circuit in 2007. Tree trimming will be performed on this circuit in 2011.

No further corrective action is planned for this circuit.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 287056
Division – Archview
Area Served – Saint Louis, Missouri
SAIFI Value – 2.17

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by underground cable faults. The circuit experienced two outages in 2010. Both circuit outages were caused by primary faults, assumed to be caused by splice failures because both outages occurred in manholes.

Corrective Actions:

This circuit is part of the St. Louis Underground Revitalization Project. This Ameren engineering group is evaluating projects to improve reliability on this and other downtown St. Louis circuits. This includes the evaluation of individual sections of cable on this circuit for possible replacement.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 195055
Division – Meramec Valley
Area Served – Pevely, MO
SAIFI Value – 2.17

Analysis Results:

This circuit serves approximately 506 customers. It runs east out of Horine, along Herky-Horine Road, across I-55 to the commercial area along McNutt Road and Scenic Avenue. Almost one mile of the backbone is built cross country and is difficult to patrol during outages. 96% of the total 1,096 customer interrupted (CI) experienced on this circuit were caused by two outages. The first occurred on August 9, 2010. The cause of this outage was unknown and resulted in 513 CI. The second outage occurred on September 18, 2010 during a minor storm where trees caused a circuit outage. This outage resulted in 541 CI.

Corrective Actions:

Fault indicators were installed on both ends of the cross county section of this circuit.

Tree trimming was last performed on this circuit in 2010 and should limit tree caused outages on this feeder.

The division plans to re-conductor 1.6 miles of 3-1/0 AAAC wire along Herky-Horine Road including the cross country section in 2012 or 2013, depending on planned commercial development at the intersection of I-55 and McNutt Road. A three-phase fuse tap (Switch 6074) with significant failure exposure will be replaced with reclosers which should limit future extended outages on this portion of the circuit.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 458008
Division – SEMO
Area Served – Gideon
SAIFI Value – 2.12

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by a substation recloser and tree contacts. Circuit 458008 experienced two outages in 2010. One outage was caused by a substation recloser trip. The second outage was caused by tree contacts during a storm.

Corrective Actions:

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove tree hazards.

Division personnel will coordinate and add fuses to this circuit under DOJM Work Request number 2TSE095956.

An overhead visual inspection will be performed on this circuit in 2011. 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 – 233007
Division – River Bluffs
Area Served – Shrewsbury, Missouri
SAIFI Value – 2.12

Analysis Results:

This circuit serves 440 customers and experienced 934 customer interruptions (CI) in 2010. Of the 934 CI experienced on this circuit in 2010, 872 CI were caused by two outages. One of these outages was caused by a 34kv splice pulling loose and causing the 34kv conductor to drop into the 233007 circuit below. The second outage occurred when a contractor crew replacing a transformer dropped a ground into the primary on the circuit.

Corrective Actions:

The 34kv splice that pulled loose causing the 34kv conductor to drop across the 4kv primary was repaired under DOJM Work Request number 21MT496424.

The second outage was caused by a contractor error and not due to an equipment failure. Once the ground fell through the primary no repair was required and the circuit was re-energized.

Division Engineering personnel reviewed the tap fusing on this circuit and determined it to be appropriate.

An overhead visual and an underground detailed inspection were performed on this circuit in 2010. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove additional tree hazards. Tree trimming is next scheduled for this circuit in 2012.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 466057
Division – SEMO
Area Served – Wardell
SAIFI Value – 2.12

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by pre-arranged maintenance, trees, animal intrusions, substation equipment failures, and overhead equipment failures. Circuit 466057 experienced 13 outages in 2010. Eight outages were caused by pre-arranged maintenance. Two outages were caused by tree failures. One outage was caused by an animal intrusion. One outage occurred when a substation recloser tripped due to a storm. Lastly, one outage occurred when a lighting strike tripped a 34kV Nulec recloser.

Corrective Actions:

The Vegetation Management Department will perform a mid-cycle patrol of this circuit in 2011 to identify and remove tree hazards.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Division Engineering personnel will develop a project to install lightning arresters along the six miles of exposed line that run to the town of Wardell.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 178054
Division – Gateway
Area Served – Manchester, MO
SAIFI Value – 2.12

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by a cable failure. A direct buried feeder exit cable failed on May 23, 2010 causing a circuit outage. Power was restored by cross connecting this circuit to circuit 178052, which also experienced a cable fault.

Corrective Actions:

The feeder exit cable was repaired on May 25, 2010 under DOJM Work Request number 21MT505144. The cable will be replaced with new cable and placed in conduit in 2011 under DOJM Work Request numbers 21MT505779 and 21MT505781. The feeder exit cable for circuit 178052 was repaired on May 25, 2010 under DOJM Work Request number 21MT505059.

Tree trimming was last performed on this circuit in 2010.

An overhead visual inspection was performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Repairs on an overheated jumper wire were made under DOJM Work Request numbers 21MT522024 in March 2011. Additional repairs will repair three animal guards, two insulators, one ground wire, three split or decayed pole tops, two primary wires, and one transformer and will be made under DOJM Work Request numbers 21MT522845, scheduled for completion in May 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 561051
Division – SEMO
Area Served – Terre Du Lac, MO
SAIFI Value – 2.11

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by loss of 34kV subtransmission supply to the substation, poles, a faulty switch, lightning strikes, trees, and animal intrusions. Circuit 561051 experienced multiple outages in 2010. An outage was caused by the loss of the 34kV subtransmission supply to the circuit substation. Another outage was caused by a broken three-phase pole. Another outage resulted from a faulty switch. Outages were also caused by lightning strikes on the circuit. In addition, minor outages were caused by tree conditions and animal intrusions. Other issues which impacted the circuit were low voltage conditions in outlying areas during extreme cold weather.

Corrective Actions:

Tree trimming was performed on this circuit in 2010.

The broken three-phase pole was replaced and the span guy which caused the 34kV subtransmission outage was also repaired. The faulty 12kV switch was replaced as well during 2010.

Division personnel repaired or replaced stolen/missing ground wires on the ESTR-74 sub-transmission supply circuit which feeds this circuit's substation.

Division personnel will install new reclosers at the mid-point of the circuit to limit future total circuit outages. This work will be performed under DOJM Work Request number 28SF034666.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed under DOJM Work Request number 28SF034667.

Division personnel will install additional fuses on the circuit three-phase backbone and balance load between phases of the circuit under DOJM Work Request number 28SF034668.

Division personnel will install a new regulator platform near the town of Frankclay to eliminate voltage problems in this area. This work will be performed under DOJM Work Request number 28SF034669.

Division personnel will install new single-phase tap on approximately one half mile of the circuit to divide the existing single-phase circuit loading and limit outages to this area. This work will be performed under DOJM Work Request number 28SF034670.

Division Engineering personnel proposed a project for a future circuit tie to the 484056 circuit so that during a substation or sub-transmission outage this circuit could be re-energized from other ties in the area. This project will depend on budget approval.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 169052
Division – River Bluffs
Area Served – Ellisville, MO
SAIFI Value – 2.11

Analysis Results:

This circuit consists of both overhead and underground sections and runs along roadway right-of-ways and private property. A large portion of the underground section is installed in the Wildwood Town Center area and is installed in a concrete encased conduit duct bank. The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees and public damage. Circuit 169052 experienced two outages in 2010. The first outage was caused by a tree limb falling across the three-phase backbone. The second outage was caused by a third-party excavation incident in the underground section of the circuit.

Corrective Actions:

Overhead visual and ground-line inspections, as well as an underground detailed inspection were performed on this circuit in 2010. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The Vegetation Management Department performed a mid-cycle patrol of this circuit in 2010 to identify and remove tree hazards. Tree trimming is next scheduled for this circuit in 2012.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 235053
Division – Gateway
Area Served – Valley Park, MO
SAIFI Value – 2.10

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by public vehicle accidents. Circuit outages on March 31, 2010 and June 27, 2010 were both caused by public vehicle accidents which occurred at different locations.

Corrective Actions:

The accident on March 31, 2010 required a new pole and cross-arm to repair. The accident on June 27, 2010 required a new cross-arm to repair.

Tree trimming was last performed on this circuit in 2009

An overhead visual inspection was performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy. Repairs to two animal guards, one lightning arrestor, two insulators, two ground wires, and one split pole top will be made under DOJM Work Request number 21MT522844, scheduled for completion in June 2011.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 232005
Division – Archview
Area Served – Saint Louis, MO
SAIFI Value – 2.10

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by splice failures. This is a very short circuit that is approximately three blocks long and is about half overhead and half underground. It experienced two outages in 2010. Both circuit outages were caused by splice failures in manhole number 6 on the west side of Vandeventer, just south of Lindell. This circuit also experienced outages in 2008 and 2009 which were caused by splice failures in the same manhole. The outage in 2008 was caused by a fire in manhole 6 which probably resulted in the installation of several splices in this manhole. These splices failed in 2010.

Corrective Actions:

DOJM Work Request number 21MT525037 was created for division personnel to visually inspect the splices in manhole 6.

Division engineering personnel verified that circuit exit pole D9841 had proper terminations on the exit cables. There was concern that if cable conductor was routed directly into the switch it could allow water into the cable causing a failure.

The overhead section of the circuit was patrolled by division engineering personnel on March 23, 2011. No additional problems were identified as a result of this patrol. There are short taps off the circuit backbone; however they do not warrant fusing.

Overhead visual and ground-line inspections were performed on this circuit in 2011. 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 – 873003
Division – MO Valley
Area Served – New Franklin, MO
SAIFI Value – 2.09

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were primarily caused by trees and loss of the sub-transmission supply. A majority of the CI experienced on this circuit were caused by loss of supply to the substation while the other one third of the outages was caused by tree limbs contacting the power line.

Corrective Actions:

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

Additional tap fusing work, as well as fusing backbone transformers, will be completed in 2011.

The Vegetation Management Department will conduct hot spot patrolling this year and trim trees as required.

The sub-transmission supply will be inspected for any required maintenance.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 215053
Division – Gateway
Area Served – Black Jack and Unincorporated St. Louis County, Missouri area
SAIFI Value – 2.09

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by cable and tree failures. Circuit 215053 experienced two separate major outages on January 25, 2010. The initial outage occurred at 9:10 a.m. and was attributed to failed cable terminations at switch D10541. This initial circuit outage was restored through switching. The circuit downstream of switch D10541 was cross-connected to circuit 215055 to restore power. The second major outage on January 25, 2010, occurred at 2:53 p.m. and was attributed to a broken tree on the backbone. The weather during these two outages was light snow with winds between 21 and 40 miles per hour.

Corrective Actions:

Tree trimming was last performed on this circuit in 2009. Tree trimming is next scheduled for this circuit in 2013.

An overhead visual inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The circuit was field checked by engineering personnel in the first quarter of 2011. DOJM Work Request number 21MT523706 was created to fuse backbone transformers, fuse unfused taps, replace lightening arrestors, and relocate tap fuses to the circuit backbone where prudent.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 162058
Division – Gateway
Area Served – Florissant, MO Area
SAIFI Value – 2.08

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by substation malfunctions. There were two circuit outages on circuit 162058 in 2010. Both outages were due to substation malfunctions resulting from heat. The first outage occurred on June 26, 2010 while the maximum temperature was 96.1 °F. The second circuit outage occurred on August 8, 2010 while the maximum temperature was 100.4 °F.

Corrective Actions:

Tree trimming was last performed on this circuit in 2008. In addition, hot-spot trimming on the circuit was requested in 2011. Tree trimming is next scheduled for this circuit in 2012.

An overhead visual and an underground detailed inspection will be performed on this circuit in 2011. The repair work identified as a result of the inspection will be completed in accordance with Ameren Missouri's infrastructure inspection policy.

The circuit was field checked by engineering personnel in the first quarter of 2011. DOJM Work Request number 21MT522767 was created to repair an unattached ground boss on a transformer.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 901051
Division – Central Ozarks
Area Served – Jefferson City, MO
SAIFI Value – 2.07

Analysis Results:

This circuit experienced 2,840 customer interruptions (CI) in 2010. 2,756 of these CI were due to two circuit outages. One circuit outage was determined to have been caused by the breaker not reclosing. This problem has been corrected. The other outage was caused by an inline switch and insulator which failed on the main backbone circuit. This resulted in the phase conductor falling to the ground. This problem has been corrected.

Corrective Actions:

An overhead visual inspection will be performed on this circuit in 2011. 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 – 193051
Division – Boone Trails
Area Served – St. Charles, Missouri
SAIFI Value – 2.06

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by overhead phase contacts and tree damage. Circuit 193051 experienced two outages in 2010 which accounted for the majority of the CI. One of the outages was caused by high winds which caused overhead phase contacts. The cause of the second outage was unknown although it was likely to have been tree related as a large portion of this circuit runs along wooded areas behind private property.

Corrective Actions:

Tree trimming was last performed on this circuit in 2010.

Division engineering personnel will evaluate the feasibility of re-routing a portion of the circuit that runs along wooded areas to improve its reliability and accessibility.

A patrol of this circuit will be performed to determine whether additional fusing on single-phase overhead taps is needed.

APPENDIX B

WPC Analysis and Remedial Action Report

Circuit Number – 726051
Division – Boone Trails
Area Served – Wentzville
SAIFI Value – 2.05

Analysis Results:

The customer interruptions (CI) experienced on this circuit in 2010 were caused by trees and public damage. Circuit 726051 experienced two outages in 2010. The first outage was caused by a broken tree limb on the circuit which occurred during a thunderstorm. The tree was located outside of the Right of Way (ROW). The second outage was caused by a contractor contact at an overhead crossing during a road construction project.

Corrective Actions:

The circuit was inspected for adequate tree clearance and is trimmed on cycle.

Although the overhead clearance was sufficient and the road project was completed without further incident, the taps for the residential loop were relocated underground to the other side of the subdivision, eliminating the road crossing. This work was done under DOJM Work Request number (2WWZ140272) and completed in 2010.