Asset Management
Asset Management

Why Asset Management?

- Demonstrated compliance with stakeholders (transparency and competency)
- Improved reputation and trust with stakeholders
- Higher customer satisfaction
- Demonstrated compliance with regulators
- Better financial results (greater ROI and cost reduction)
- Better alignment with corporate goals
- Increase reliability
- Informed decisions
Asset Management

• Develop an asset management program

• Implement a planning and scheduling program/culture

• Improve the predictive maintenance program for substation and transmission

• Ensure transmission and substation stay compliant with NERC and other agencies
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Asset Management

2013
- Gap Analysis
- Master Plan
- CMMS (Cascade)
- Roles & Responsibilities
- Training
- Goals

2014
- NERC (PRC-005)
- Criticality Analysis
- Root Cause Analysis
- PMO
- Processes
- Bad Actor Analysis

2015
- Health Algorithms
- Equipment Standards
- RCM/FMEA
- KPI
- Benchmarking
- Life Cycle Costing

2016
- Statistical Analysis
- Economic Modeling
- Spare Strategy (Tx)
- Capital Expenditures
- Basic Analytics
- Procurement

2017
- Advanced Analytics
- Advanced Algorithms
- System Risk Scores
- Advanced Economic Modeling
- KCP&L and Westar Integration
Equipment Trends

- Substation Patrol Inspection
- Interval Test - Parent/Relay/EM
- Substation Transformer Maintenance
- Substation Trouble/Emergent Transformer

Asset Management
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**Equipment Event Count 2011 - 2016**
(failed substation equipment only)

**Count of Customers Interrupted 2011 - 2016**
(Failed Substation Equipment Only)

**Customer Minute Interruptions 2011 - 2016**
(failed substation equipment only)

**SAIDI 2011 - 2016**
(failed substation equipment only)

**SAIFI 2011 - 2016**
(failed substation equipment only)

**CAIDI 2011 - 2016**
(failed substation equipment only)
Asset Management

- 2015 Cost Savings $3.6M
- 2016 Cost Savings $2.1M
- 2017 Cost Savings $2.4M

- PdM Cost Avoidance
- Preventative Maintenance Optimization Savings
Westar substations contribute very little to customer interruptions. Mostly coming from transmission substations.

**SAIDI**

- Mean: 6.61
- Quartile 1: 0.68
- Quartile 2: 3.50
- Quartile 3: 8.84

**SAIFI**

- Mean: 0.090
- Quartile 1: 0.023
- Quartile 2: 0.080
- Quartile 3: 0.138

Substation Reliability Page 6
Source: DR30

Substation Reliability Page 2
Source: DR40
Westar has seen a dramatic decline in substation contribution to system outages – both in frequency and minutes.
Asset Management

Contact Information

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