



The cost of poor quality can represent 20% to 30% of a company's total revenues. The following case studies demonstrate how Six Sigma deployment creates breakthrough performance, captures cost savings and increases customer satisfaction. Often, the savings associated with a first project justify the entire cost of Six Sigma training.

Condenser Air In-Leak Reduction

At a generating station of an electric utility in the Southeast, the air in-leakage flow for one of the unit's condensers was out of specification compliance by 25 scfm at full load. The annual cost of this deviation was approximately \$200,000. Through the use of the PFMEA, it was determined that the existing process control measurement (turbine backpressure) was inadequate. Thorough analysis concluded that if Helium leak detection equipment were used as the control measurement, it would resolve the air in-leaking problems. The change of the measurement tool produced final results of a 67.5% reduction in air in-leak flow and a 13.4% reduction of turbine backpressure. This improvement produced annual savings of \$206,466, in addition to the intangible savings due to improved boiler reliability. To maintain this reduction, control plans were put in place.

Call Center Effectiveness

Within a call center of an electric utility company, poor communication with call-ins resulted in a high abandoned call rate, multiple transfers, and an inefficient utilization of call handling resources. Using the Six Sigma methodology, improvements were made that enhanced staff utilization, messaging systems, and a reduction of abandoned call rates and transfers. The improvements translated into savings of \$515,000 annually. Customer surveys were generated to measure customer satisfaction and continuous improvements are made regularly.

Procurement Redundancy and Waste

Within the purchasing department of a major utility in the Northeast, too many vendors and too few leveraged agreements resulted in redundancy and waste within the procurement process. The process was mapped and Six Sigma methodology was applied, identifying that poor planning and communication contributed to low contract utilization rates throughout the 14 locations. By tracking dollars spent by each location and analyzing vendor deliveries, they learned that the cost of direct labor superseded any price advantage gained. The team began working with local purchasing personnel to increase the use of approved vendors. They also met with vendors and discussed a "shared" incentive program. During the first six-month period of implementation, leveraged purchases increased by 46% or \$664,000. The company also received two rebate checks in excess of \$52,000.

Contract Complaint Reduction

Within the contract department of a major utility company, excavation, cable-laying and re-instatement contract complaints resulted in customer dissatisfaction and high costs. Using the Six Sigma methodology, a Quality Control System was developed reducing contract complaints from 109 to 55 during 2000-2001.