

# The Valley Group, Inc.

## CAT-1™ Transmission Line Monitoring Systems

### Increasing Reliability While Decreasing Operating Costs

Real Time Ratings Provides Real Time Benefits to CAT-1 System Users

The following summary is from a presentation made by Kansas City Power & Light at the Edison Electric Institute fall 2003 meeting. It shows how information from the CAT-1 Transmission Line Monitoring System enables operators to make well informed decisions, resulting in increased grid reliability and reduced operating costs.

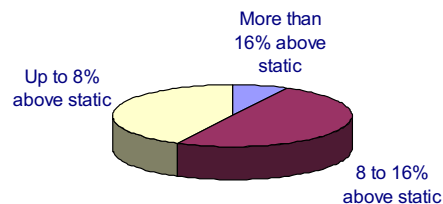
In February 2002, KCPL began making plans to equip their 32-mile long 345KV Stilwell-LaCygne line with a CAT-1 Transmission Line Monitoring System. The line had a summer static rating of 1251 MVA.

By June, the system was purchased, delivered, installed, calibrated, and field measurements were taken to assure operations that the data being displayed on their EMS screen was accurate. Over the course of that summer, **KCPL was able to safely and reliably operate this line up to 16% above its static rating for 167 hours, recovering the cost of the entire CAT-1 system project in a matter of days!**

Since that time, the Stilwell-LaCygne line has been re-conducted, and the CAT-1 system relocated to another line, ready to help KCPL continue to economically provide reliable energy to its customers. This also demonstrates that the CAT-1 Transmission Line Monitoring System is never a stranded investment - it is fully portable, and will repeatedly pay for itself time and time again.

### KCPL Conclusions: Late June to September 2002

- Line was operated above static limit for **167 hours**:



- KCPL avoided “a significant amount” of energy redispatch
- Calculated **less than 3-month payback** for total installed cost
  - Acquisition, installation and calibration
  - Engineering and project management
  - Equipment maintenance
  - Field verification of readings

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Edison Electric Institute

Fall Meeting