

CASE STUDY

# Energy producer in US heartland enlists ABB to uncover and solve issues before they become problems



ABB Ability™ Performance Optimization for control systems – Harmony can identify multiple areas of potential failure in energy company’s Harmony control system so engineers can fix them before they fail

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01 A 250 MW emergency reserve power plant with ABB control systems

### Issues just waiting to be found

To maintain its operations at peak performance, a major electricity and natural gas supplier with 2 million customers in the US heartland needed easier access to control system log and trend data so they could take remedial action more quickly, and improve performance by tracking Key Performance Indicators (KPIs) over time. Although the company’s control system was running without issue, the goal was to take preventive measures to mitigate problems before they started.

### Customer challenge

- Improve access to control system log and trend data
- Improve KPI tracking

### ABB’s solution

To meet these requirements, ABB installed the ABB Ability™ Performance Optimization for control systems – Harmony. Performance Optimization for control systems – Harmony is a solution that identifies, classifies and prioritizes issues before they become problems. To improve the performance of control systems, it collects performance KPIs during scheduled and on-demand analysis for comparison against best practices and standards. This allows operators and ABB engineers to detect performance irregularities, helping to improve system reliability, availability and performance.

The proactive data analysis of Performance Optimization for control systems – Harmony reduces the time and effort needed to identify hardware, network and system performance issues. Performance issues are prioritized based on severity, criticality and/or financial impact, so data-based decisions impacting performance can be made quickly and confidently.

## Results

After the Harmony software scanned the energy producer's control system, ABB found many issues that required action, including high controller memory and CPU utilization, mismatched system firmware, PCU Infi-Net Loop (Harmony's communication network) problems, and fiber optic transmission circuitry issues. Old, out-of-date hardware also was discovered.

After reviewing the reports with the customer, an on-site ABB engineer was able to address these issues and then demonstrate how those changes were reflected in the Harmony KPI data.

## Benefits

- Averted unplanned downtime and system availability issues
- Removed potential throughput issues
- Kept hardware up-to-date
- Decreased time and cost of finding system problems
- Ensured uninterrupted performance by identifying errors between modules
- Improved response time
- Reduced travel expenses by providing remote access to ABB experts for troubleshooting

## Featured Solutions

### ABB Ability™ Performance Optimization for control systems – Harmony

The ABB Ability™ Performance Optimization for control systems – Harmony analyzes control system performance and compares it to optimal operating conditions to help manage control system utilization and prevent unpredictable performance. Proprietary, non-invasive software simplifies control system data analysis and identifies potential issues. Periodic and continuous monitoring options are available. Based on this information, ABB delivers a detailed action plan prioritized by criticality, severity and financial impact to improve system performance.



## Solution features

- Automatic, non-invasive data gathering with ABB's proprietary data collection tool
- On-demand analysis to prepare for and/or verify maintenance and shutdown work
- Continuous visualization and proactive analysis of KPIs
- On-site or remote access
- Bi-annual performance analysis by ABB experts
- Configurable alerts