

Control system health assessments prove valuable ABB 'Fingerprint' ensures DCS health status is recordable, remediation scheduled for DTE Energy

DTE Energy is a diversified energy development and management company that operates DTE Electric and DTE Gas. In operation for more than a century, these regulated utilities provide electric and gas services to more than three million residential, business and industrial customers across the state of Michigan.

Recently DTE agreed to the implementation of twenty three 'Fingerprint' health assessments of their Harmony and 800xA control systems. This technology is an update from the Remote Monitoring Service previously utilized to provide control system assessments. The deal not only strengthens the 25 year history between the two companies, but also ensures the health status of the DCS is recordable and remediation plans scheduled. This order is the result of extensive collaboration efforts between DTE and ABB to openly share feedback and desired measurements in order to yield a valuable end health assessment.

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The order includes five health assessments for the Harmony control system, eight for the 800xA control system, and ten for Cyber Security. This is one of the largest single orders for these diagnostic audits and will be distributed across multiple plant locations for the duration of a three year time period. The health assessments are to be conducted six months prior to planned outages to allow for the completion of any work orders that may result. Issues can then be corrected and changes made to plants based on the report results.

Health assessments for turbines, boilers or other equipment, are common. However, health assessments are not typically performed for a control system. The value behind these diagnostic audits is that they can detect potential system vulnerabilities long before they happen, rather than having



to repair because of a crisis. Having the control system vendor conduct the audit frees up the valuable time of system engineers and operators, and provides full documentation for internal reporting requirements and work orders.

Through extensive collection and analyzing of data, the audit establishes a 'Fingerprint' -- a unique performance benchmark of the system. The key performance indicators of the benchmark indicate any gap between the system's current and potential performance. A report is then compiled detailing practical recommendations to improve performance and increase efficiency.

The Harmony Performance and 800xA Advanced System Fingerprints identify system performance, network communication, controller loading and reliability issues. The Cyber Security Fingerprint identifies a control system's ability to defend against a cyber-attack or security breach. The report results then recommend solutions for cyber security vulnerabilities and can help to develop a sustainable security strategy for control systems. The automated data collection can be conducted without a system shutdown, on-site or remotely using a secure ABB Remote Access Link connection.

Harry Dohalick, ABB account manager, feels that these health assessments will be revolutionary to the industry, especially Cyber Security. "[Cyber Security fingerprints] can reduce the amount of hours... to determine what needs fortified on a specific control system in regards to cyber security," says Dohalick. The combination of saving time while preventing system crises ensures the efficient protection of a plant, courtesy of ABB fingerprint diagnostic services.

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