

SentientMonitor

Accurate, Auditable Greenhouse Gas Monitoring

Technical Fact Sheet

Introduction

SentientMonitor is Synengco's leading technology solution for greenhouse gas emissions.

Key features

The key features of SentientMonitor are:

- ☑ Full compliance with Greenhouse Gas Benchmark Rule (Generation) No.2 of 2003 Method 2 Performance Improvement Testing Regime Guidance Document.
- ☑ Full compliance with Generator Efficiency Standards and American Society of Mechanical Engineers Performance Test Codes (ASME PTC).
- ☑ Able to post correct for ambient conditions, fuel quality, carbon in ash and instrument calibrations.
- ☑ Independently assessed against Performance Improvement Testing Regime to provide an uncertainty to <1.5% ($\pm 0.50\%$ to $\pm 1.00\%$).
- ☑ Real time 1 minute monitoring and reporting of weighted averages at 30 minute intervals compliant to Performance Improvement Testing Regime.
- ☑ Reporting tailored to suit your needs.
- ☑ Uses existing plant instrumentation.
- ☑ Fully validated against standard performance testing.
- ☑ Integrates with existing data and reporting systems or provides New South Wales Greenhouse Abatement Certificate's reporting using web-based system.
- ☑ Analyses historical data for selection of pre improvement reference conditions for performance improvement testing regime.

SentientMonitor Data Collection

SentientMonitor collects real time data via the DCS, SCADA, PLC, historian or a combination of these. Periodic information such as coal quality, carbon in ash, etc, can be manually entered or obtained from other databases.

Plant data inputs are validated using comparison to standard (expected) values and the use of mass and energy balances to reconcile accurate data. Bad data is flagged for attention to plant operators or technicians and replaced by default values using averaging techniques. If insufficient valid data is available the system will stop, alert the authorised person and cease calculation.

Before we install SentientMonitor, we undertake an engineering study to identify and assess critical instruments. It is our experience that most organisations have sufficient existing instrumentation to enable SentientMonitor to provide greenhouse intensity and plant performance improvement to a <1.5% uncertainty.

The methodology used by SentientMonitor reduces or eliminates your dependence upon otherwise inherently inaccurate instrumentation to measure greenhouse gas emissions.

Calculations

SentientMonitor models all components within a process and can automatically correct for a range of different operating configurations. SentientMonitor can operate in either a monitoring or a simulation mode.

If historical data is available, the monitoring mode can be operated over the historical data for the analysis and development of the pre-improvement reference performance curves.

The simulation mode provides learning functions, supported by complex mass and energy balances, to provide guidance on

optimising plant performance through the analysis of possible operation changes.

Data Outputs

SentientMonitor uses an open architecture philosophy so we can integrate with and use your existing data and reporting systems to give you more efficiency.

Reports are tailored to meet your needs at intervals specified by you.

Our expertise

Synengco's people and technologies operate at the coalface in various industries across the globe. We are world specialists in information intensive systems and our SentientMonitor technology leads the way in greenhouse gas emission accountability.

The Payback Period

SentientMonitor rapidly pays for itself and provides immediate benefits and accountability. Clients have experienced payback periods ranging from 6 to 18 months.

To Contact us

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