KBC

A Yokogawa Company

Visual MESA Greenhouse Gas Emissions Management

Emissions management systems are becoming a required tool for monitoring,controlling, and reporting all greenhouse gas emissions. As a result, industry must be prepared to improve the integrity, discipline, and credibility of emissions data systems, while meeting minimum system requirements to operate.

Today, modern digital twins, data health check, automated auditable reporting and web based systems offer businesses real benefits. It goes beyond data and reporting when compared with informal tools of the past. These advanced technologies offer improved energy efficiency, increased data quality, reduced troubleshooting time, and increased ROI that lead to better cost/margin performance and better investment decisions.

Worldwide Best-In-Class Solution

100's of sites globally use the Visual MESA platform

LARTC Los Premios de Excelencia
DIGITAL TECHNOLOGY PROVIDER OF THE YEAR 2025

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Regular Surveillance
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Bringing **DECARBONIZATION** *to Life*®

Data Control and Reporting Systems Boost Business Performance

> We are very satisfied with the job performed by KBC on implementing this emissions management solution. The attention to detail and professional support was essential to achieve our goals.
>
> **~Brazilian refinery**

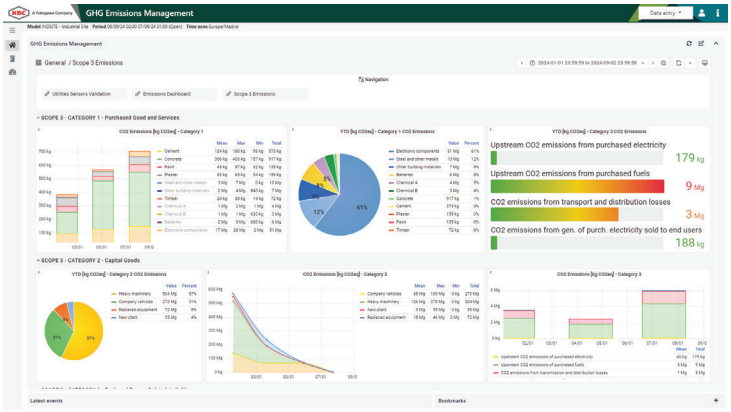
New Practices and System Technology That Make Real Business Sense

The Visual MESA® Greenhouse Gas Emissions Management (VM-GEM) solution integrates energy management and production accounting expertise to provide a unique way for managing emissions with reliable monitoring, effective optimization, and accurate accounting of greenhouse gas (GHG) emissions.

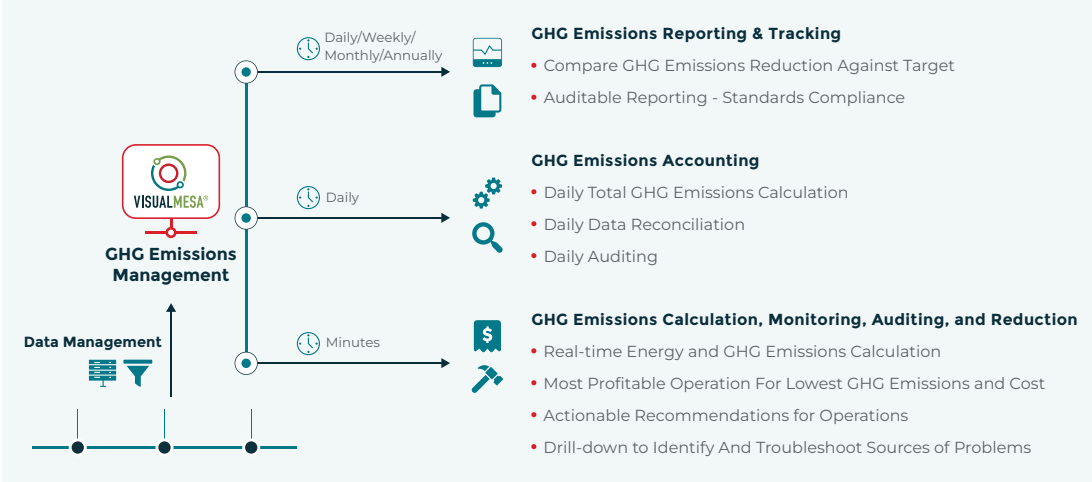
- **Compliance**
  Adopts regulations and adapts to the changes as needed.
- **Control**
  Monitors and analyzes processes to cut costs and emissions while optimizing operations.
- **Auditability**
  Tracks the entire life cycle of every piece of data used in GHG emissions accounting calculations.
- **Reliability**
  Generates accurate data to support decision-making.
- **Flexibility**
  Adheres to real-time, daily, weekly, monthly, and custom timelines.
- **Standardization**
  Ensures everyone follows the same accounting and calculation rules.

Universal Approach

An effective emissions management system is one that provides monitoring, optimization, and solid sound production accounting techniques in a single web platform. KBC's Visual MESA software has vast experience providing best-in-class energy optimization and yield accounting solutions worldwide.



Emissions Management



Feature	Benefit
Emissions scope 1, 2 and 3 tracking and reporting	Enhances transparency, trust, and reputation while exposing value chain hot spots, cost-cutting opportunities, and more
Accounts for GHG emissions and others like VOC or particulated material	Monitors VOC from tank evaporative emissions and other sources
Energy efficiency optimization and indicators	Reduces carbon emissions
Emissions management for various fuel sources	Tracks & records all energy sources - coal, NG, fuel gas, hydrogen, biomass, and biofuels - from one platform
Internal production & electric power consumption integration	Considers the grid's emission factor (relies on renewables, nuclear, or fossil fuels) & internal power generation (may account as carbon credits for reducing grid emissions)
Hydrogen management	Yields data on purchasing, manufacturing, selling, using and injection into fuel networks, which may differ based on source (natural gas or biofuels reforming with or without carbon capture, electrolysis)
Multi-objective optimization of energy system	Aims to reduce emissions while controlling cost. Integrates all subsystems, for all time spans, from real-time optimization to multi-period scheduling & planning
Emissions mitigation management	Reduces problems via real-time monitoring
Emissions accounting reporting	Ensures mandatory compliance, auditability and standardization functions
Calculation of measurements uncertainty as required by standards. Data reconciliation and custom data validation for continuous data quality control	Calculation of measurements uncertainty as required by standards. Data reconciliation and custom data validation for continuous data quality control.
Accounting for bioprocessing or co-processing	Tracks products and consumed energy to the origin of feed
Certification support	Helps obtain certification in complex accounting for bioprocessing operations (e.g., "mass balance approach," ISCC plus)
Carbon intensity tracking	Produces information for net-zero carbon strategies
Real-time emissions optimization, monitoring and alarming	Allows operators to take quick action to keep GHG emissions on target

Contact KBC: www.kbc.global/contact-us info@kbc.global