



Integrated management of energy efficiency and GHG emissions

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kept

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The integrated energy efficiency and GHG emissions management system ensures the achievement of sustainable development goals by implementing comprehensive measures aimed at reducing energy and carbon intensity of production processes.

The goal of implementing this system is to improve the company's economic performance and investment appeal as well as to actualize the opportunities associated with governmental and international low-carbon development initiatives.



The system





Energy efficiency

- Inventory of energy-consuming and energy-generating installations
- Assessment of an energy efficiency enhancement potential
- Identification of a baseline scenario
- Identification of energy efficiency goals and objectives
- Monitoring
- Automation of calculations of processes energy intensity
- Forecasting and modeling of energy efficiency indicators
- Employee engagement improvement
- Notifying the stakeholders about the effectiveness of energy efficiency improvement measures



Climate-related risks (as per the TCFD recommendations)

- Assessment of climate-related risks and threats (global temperature rise, extreme weather, etc.)
- Accessibility and quality of water resources
- Sustainability of supply chain and operating processes
- Local community engagement
- Indirect risks associated with state control
- Benefits of low-carbon and carbon-neutral products
- Carbon finance



GHG emissions

- Identification of the company's operational boundaries
- Inventory of GHG emission sources
- Quantification of direct and indirect emissions
- Assessment of emission reduction potential
- Setting emission reduction targets
- Monitoring
- Implementation of projects
- Automation of GHG emissions and PCF calculations
- Forecasting and modeling of GHG emission rates and PCF
- Carbon reporting
- Improvement of personnel engagement and training

Core capabilities of the integrated management system

- 01 → Analysis of the carbon and energy intensity reduction potential of the main and auxiliary production processes
- 02 → Strategy implementation and goals achievement in energy efficiency and GHG emission management
- 03 → Attraction of additional investments, which includes participation in government programs for energy efficiency enhancement and GHG emissions reduction
- 04 → Preparedness to implement the GHG emissions state regulatory measures

Core objectives in implementing the integrated management system

- 01 → Analysis of the enterprise's fuel and energy balance
- 02 → Identification and assessment of the fuel and energy saving potential
- 03 → Inventory analysis of processes that cause significant GHG emissions, including energy saving systems
- 04 → Quantification of GHG emissions
- 05 → Development of a comprehensive strategy to improve energy efficiency and reduce GHG emissions
- 06 → Company personnel training
- 07 → Automation of calculations of energy and carbon intensity of processes

Goals

01

To ensure the continuity and efficiency of management processes

02

To retain the historical data that confirms effectiveness of the integrated energy efficiency and GHG emissions management system

03

To perform an independent certification of the management system and verification of GHG emissions data

04

To establish internal and external communication and keep the stakeholders informed of the gains in energy efficiency enhancement and GHG emissions reduction

Development and integration of documented procedures

> Policy



- Observance of statutory and other applicable requirements
- Appropriateness of the integrated energy efficiency and GHG emissions management system for the company's scale
- Compliance of the management system with ISO 50001, ISO 14001, etc.

> Goals



- Agreed methodological approach to inventory, quantification of emissions and monitoring of GHG accounting in the context of the production activities specifics
- Proposals on GHG emission reduction target indicators and strategy

> Action plans to achieve the goals



- Implementation of organizational measures to enhance energy efficiency
- Enhancement of energy efficiency by maintaining operation reliability of equipment and sustainability of production processes
- Determination of key performance indicators based on the assessment of the potential for economically feasible increase in the fuel and energy resources utilization efficiency
- Engagement of production and management personnel
- Training of personnel on reducing power consumption, etc.

> Documented information supporting the operation of the system, reporting



- Building an energy balance model of an enterprise with due account of the specifics of the processes
- Visual display of problem zones
- Automation of calculations of energy and carbon intensity of processes
- Elaboration of reporting in line with the stakeholders' expectations
- Optimization of document flow; cybersecurity protection
- Forecasting and modeling of energy efficiency and carbon intensity indicators

The integrated system implementation project life cycle

STAGE 01 →

Inspection of production facilities.
Analysis of fuel and energy balance.
Inventory of GHG emission sources

STAGE 02 →

Development of a target management model in terms of energy efficiency and GHG emissions

STAGE 03 →

Introduction of the integrated energy efficiency and GHG emission management system

01

Inspection of production facilities.
Development/update of fuel and energy balance. Inventory of GHG emission sources.

Analysis of source information for inspection

- Analysis of the company's fuel and energy management policies, goals and procedures
- Analysis of technological processes and equipment specifications
- Analysis of power, heat and water supply layouts
- Analysis of actual fuel and energy consumption data

Development and implementation of a comprehensive energy inspection program. Inventory of GHG emission sources

- Development and implementation of a comprehensive energy inspection program
- Determination of GHG emissions management operational boundaries
- Determination of a significance level
- Inventory and development of a GHG emission sources register
- Development of functional and technical requirements for an automated system for calculating energy and carbon intensity of processes

Energy balance update. Quantification of GHG emissions

- Energy balance development/update
- Determination of applicable methodological approaches and quantification of GHG emissions
- Assessment of GHG emissions reduction potential

Development of a target energy efficiency and GHG emissions management model

02

Determination of goals

- Determination of goals in energy saving and GHG emissions reduction
- Determination of basic energy efficiency and GHG emissions indicators

Development of procedures

- Development of energy efficiency and GHG emissions management procedures
- Development and implementation of energy efficiency and GHG emissions monitoring system
- Development of architecture of the system for automated calculation of energy efficiency, GHG emissions and PCF

Preparation of reporting forms

- Development and adaptation of primary accounting forms of energy efficiency and carbon intensity indicators
- Development of analytical reporting forms for company management
- Development of quality control and information security procedures for energy efficiency and GHG emissions data

03

Introduction of the integrated energy efficiency and GHG emission management system

Training of specialists engaged in the energy efficiency and GHG emission management system

- Conducting training workshops for managers and specialists responsible for monitoring the energy efficiency and GHG emissions management
- Updating internal guidelines and regulations, forms of entries and reports on energy efficiency and GHG emissions

Assessment of compliance of the energy efficiency and GHG emission management system

- Internal audit of the energy efficiency and GHG emission management system
- Assessment of the energy management system performance
- Verification of the GHG emissions reporting

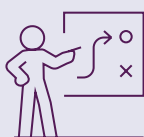
Development/update of a corporate energy efficiency and low-carbon development strategy

- Development of a list of measures to enhance energy efficiency and reduce GHG emissions
- Development of measures to enhance the GHG emissions corporate monitoring system
- Assessment of the measures' cost efficiency and their prioritization
- Implementation of an automated system for calculating energy efficiency and carbon intensity of processes

Why Kept

Operational Risk & Sustainability Group
at the forefront of ESG transformation

Based on its vast experience in sustainability, Kept is here to offer leading-edge services in the development of an integrated energy efficiency and GHG emission management system



Best practice in ensuring compliance with environmental laws across Eurasia



A balanced team of certified specialists in energy efficiency and GHG emission management with advanced experience



Profound industry expertise and in-depth understanding of production processes that impact the environment

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years of successful work with sustainability leaders, and the growing client base

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