ENERGY MANAGEMENT SYSTEM (EnMS) REPORT

Aceros Arequipa (CAASA) has implemented an Energy Management System based on the ISO 50001:2018 standard, with the aim of reducing its greenhouse gas (GHG) emissions and the costs associated with the use of energy in the forms of electricity, natural gas, and B5 diesel.

I BOUNDARIES AND SCOPE OF THE ENERGY MANAGEMENT SYSTEM

The scope of the EnMS applies to and is limited to the "Steelmaking" and "Rolling" processes at CAASA's Steel Complex, which use electricity, natural gas, and B5 diesel. The physical site is located at: Panamericana Sur Highway Km 241, Paracas, Pisco – Ica. The specific scope is as follows:

> **"Steelmaking (scrap reception and classification, industrialization, charge mix preparation, refractory services, melting and refining, chemical composition adjustment, continuous casting, and billet storage) and Rolling (billet heating, rolling, bar and wire rod cutting, bar and wire rod finishing, and final finishing processes)."**

II ENERGY POLICY

At Corporación Aceros Arequipa S.A., a leading company in the steel industry, we are aware that proper management of resources and energy is essential for business sustainability. Therefore, we are committed to:

1) Using resources efficiently, establishing this principle as a key pillar for competitiveness and sustainability.
2) Continuously improving our energy management system and the energy performance of our facilities.
3) Ensuring the availability of the resources and information necessary to meet our objectives and targets.
4) Promoting and supporting the acquisition of energy-efficient equipment and services, as well as the design of new facilities, systems, and processes that contribute to improved energy performance.
5) Complying with legal and other applicable requirements related to energy efficiency, energy use, and energy consumption.

III RESPONSIBILITIES

III.1 Top Management

Top Management of the EnMS is composed of Eng. Fernando Bustamante Cilloniz (Strategic Management Control Manager) and Eng. Michael Lecca La Torre (Chief Production Officer). Their main responsibilities are:

- Establish the scope and boundaries of the EnMS by identifying them within the activities of CAASA's sites and facilities.
- Define, establish, implement, and maintain the energy policy, energy objectives, and targets, and ensure their alignment with CAASA's strategic direction.
- Ensure the EnMS requirements are integrated into business processes through regular involvement and participation in management committees.
- Ensure the approval and implementation of action plans.

- Allocate the necessary human, technological, and financial resources to establish, implement, maintain, and improve the EnMS.
- Communicate the importance of energy management within the organization through the Energy Management Committee.
- Ensure the intended results are achieved within the defined timeframes.
- Promote continual improvement of energy performance and the EnMS through the establishment of objectives, targets, and energy performance indicators.
- Establish an energy management team, which will be primarily responsible for executing the energy management program.
- Lead and support people to contribute to the effectiveness of the EnMS and the improvement of energy performance.
- Support other relevant top management functions to demonstrate leadership, as applicable to their areas of responsibility.
- Ensure that the Energy Performance Indicators (EnPIs) are appropriate for CAASA and adequately represent its energy performance.
- Ensure that when changes occur that affect the EnMS and energy performance within the scope and boundaries, the impact of such changes is analyzed.

III.2 Energy Management Committee

The "Energy Management Committee" is composed of members from the main operational areas:

- Steelmaking
- Rolling
- Maintenance, Workshops, and Utilities
- Environment
- Integrated Management System
- PMO (Project Management Office)

The following chart shows the members of the Energy Management Committee:

Figure N° 01 Energy Management System Committee

The Energy Management Committee has the responsibility and authority to:

- Ensure that the EnMS is established, implemented, maintained, and continually improved.
- Ensure that the EnMS complies with the requirements of this document.
- Implement action plans to continuously improve energy performance.
- Report on the performance of the EnMS and on the improvement of energy performance to top management at defined intervals.
- Establish the necessary criteria and methods to ensure the effective operation and control of the EnMS.

IV USOS DE LA ENERGÍA

Below is the distribution of energy consumption for the year 2024:

Table N° 01 2024 Energy Distribution by Type of Energy

Type of energy	Consumption
Electricity	60%
Natural Gas	39%
B5 Diésel	1%
Total	**100%**

The energy uses are presented in the following table:

Table N° 02 2024 Energy Consumption by Use

Use	Proportion	Cumulative
Electric Furnace (E)	39.56%	39.56%
Rolling Mill 2 (NG)	21.92%	61.48%
Rolling Mill 1 (NG)	9.60%	71.08%
Electric Furnace (NG)	6.47%	77.54%
Rolling Mill 2 (E)	5.89%	83.43%
Rolling Mill 1 (E)	3.12%	86.56%
Ladle Furnace (E)	2.69%	89.25%
Others	10.75%	100.00%

Donde:

- **E: Electricity.**
- **NG: Natural Gas.**

The Significant Energy Uses (SEUs) represent the first 90% of a Pareto analysis within the scope of the EnMS and are highlighted in yellow in the table above.

V ENERGY BASELINE (EnBL)

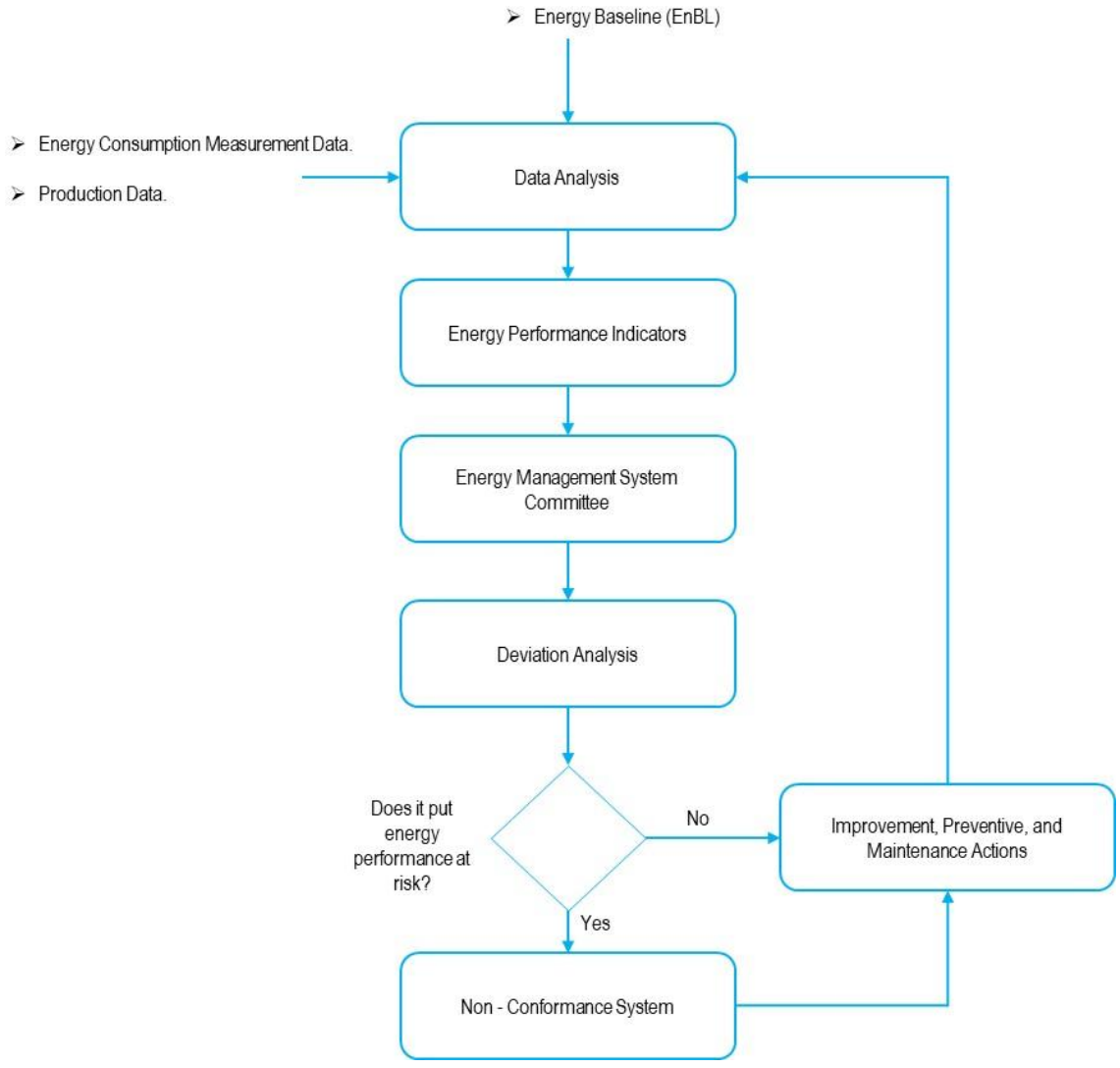
To estimate the energy baseline, we developed linear regression models for each of the SEUs, considering as relevant variables the production mix of the Steelmaking area, Rolling Mill 1, and Rolling Mill 2 for the year 2023.

VI ENERGY PERFORMANCE INDICATORS (EnPIs)

Table N° 03 Energy Performance Indicators (EnPIs)

Description	Unit
Specific electricity consumption in the Electric Furnace	kWh/t
Specific electricity consumption in the Ladle Furnace	kWh/t
Specific natural gas consumption in the Electric Furnace	Sm^3/t
Specific electricity consumption in Rolling Mill 1	kWh/t
Specific electricity consumption in Rolling Mill 2	kWh/t
Specific natural gas consumption in Rolling Mill 1	Sm^3/t
Specific natural gas consumption in Rolling Mill 2	Sm^3/t

Figure N° 02 Monitoring and Verification of Energy Performance Indicators



VII ENERGY CONSUMPTION REDUCTION ACTIONS

Table N° 04 Energy Consumption Reduction Actions

Specific electricity consumption in the Electric Furnace
- Implementation of the scrap cleaning machine - Implementation of the vertical lime kiln - Prediction and control of foamy slag - Implementation of the second scrap cleaning machine
Specific electricity consumption in the Ladle Furnace
- Increase in ladle capacity.
Specific natural gas consumption in the Electric Furnace
- Maximize the utilization of chemical energy in the electric furnace.
Specific electricity consumption in Rolling Mill 1
- Migration from direct current (DC) motors to alternating current (AC) motors.
Specific electricity consumption in Rolling Mill 2
- Migration from direct current (DC) motors to alternating current (AC) motors
Specific natural gas consumption in Rolling Mill 1
- Control of operating hours.
Specific natural gas consumption in Rolling Mill 2
- Increase in hot charging

VIII EVALUATION OF PROGRESS IN ENERGY REDUCTION

Table N° 05 Energy Review of Electricity Consumption in the Electric Furnace

Objective	2024
	Result (kWh/t)
Reduce the specific electricity consumption in the Electric Furnace of the Steelmaking area	

Chart N° 01 Cumulative Monitoring of Electricity Consumption in the Electric Furnace

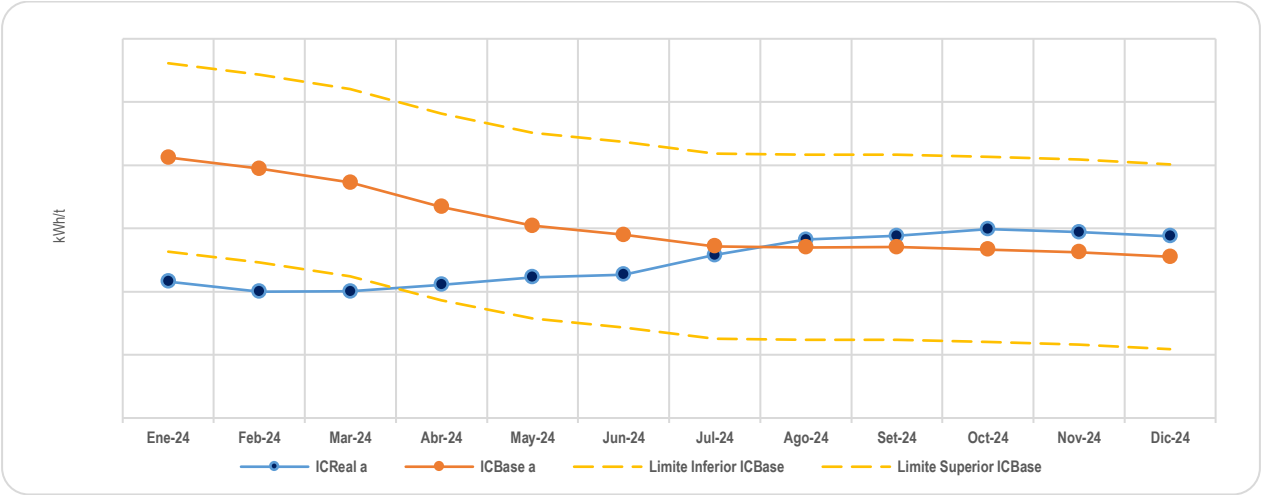


Table N° 06 Energy Review of Electricity Consumption in the Ladle Furnace

Objective	2024
	Result (kWh/t)
Reduce the specific electricity consumption in the Ladle Furnace	

Chart N° 02 Cumulative Monitoring of Electricity Consumption in the Ladle Furnace

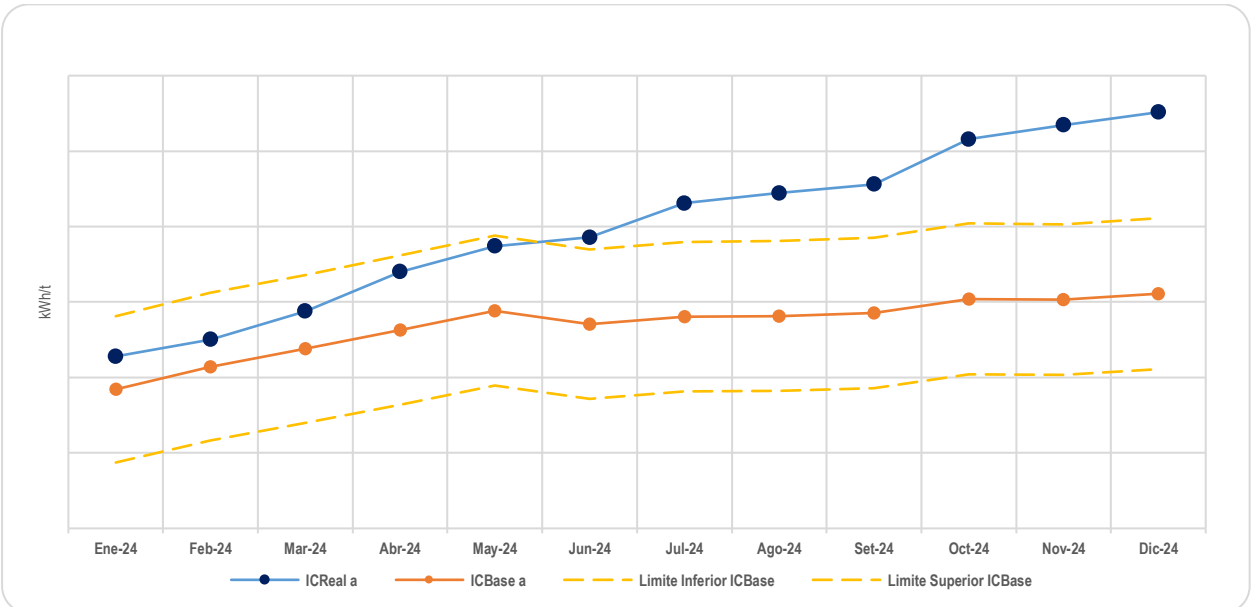


Table N° 07 Energy Review of Natural Gas Consumption in the Electric Furnace

Objective	2024 Result (Sm^3/t)
Reduce the specific natural gas consumption in the Electric Furnace	

Chart N° 03 Cumulative Monitoring of Natural Gas Consumption in the Electric Furnace

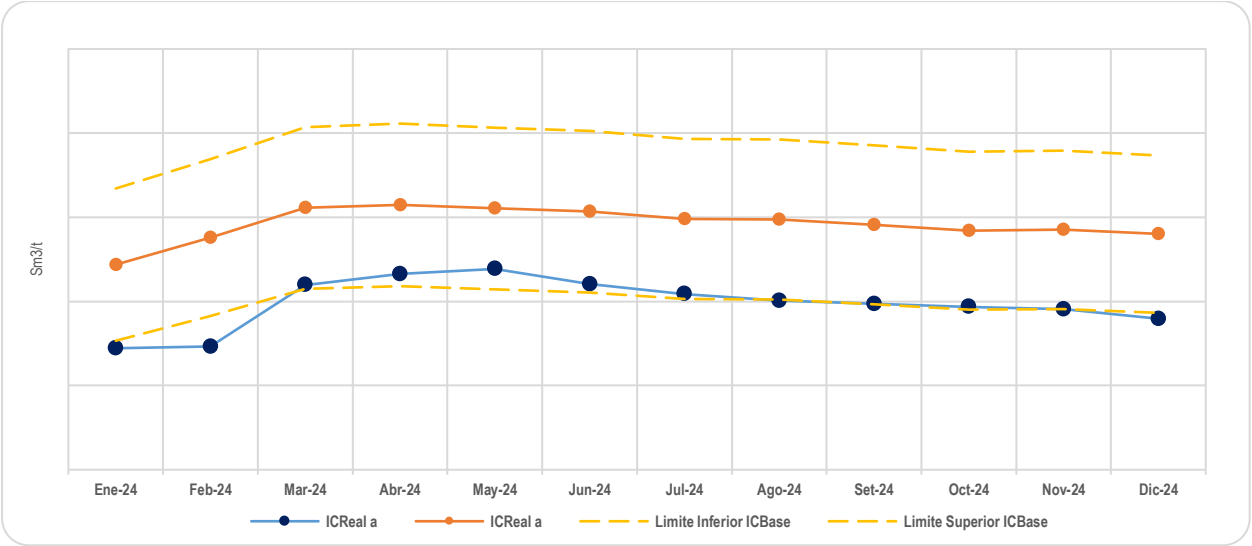


Table N° 08 Energy Review of Electricity Consumption in Rolling Mill 1

Objective	2024 Result (kWh/t)
Reduce the specific electricity consumption in Rolling Mill 1	

Chart N° 04 Cumulative Monitoring of Natural Gas Consumption in the Electric Furnace

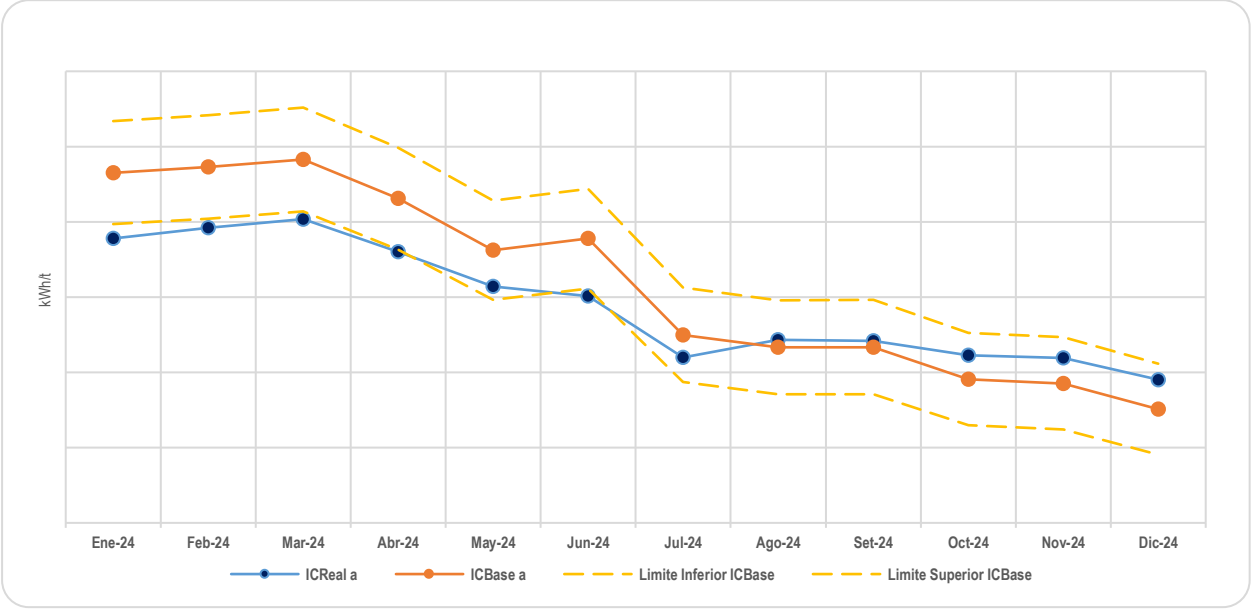


Table N° 09 Energy Review of Electricity Consumption in Rolling Mill 2

Objective	2024
	Result (kWh/t)
Reduce the specific electricity consumption in Rolling Mill 2	

Chart N° 05 Cumulative Monitoring of Electricity Consumption in Rolling Mill 2

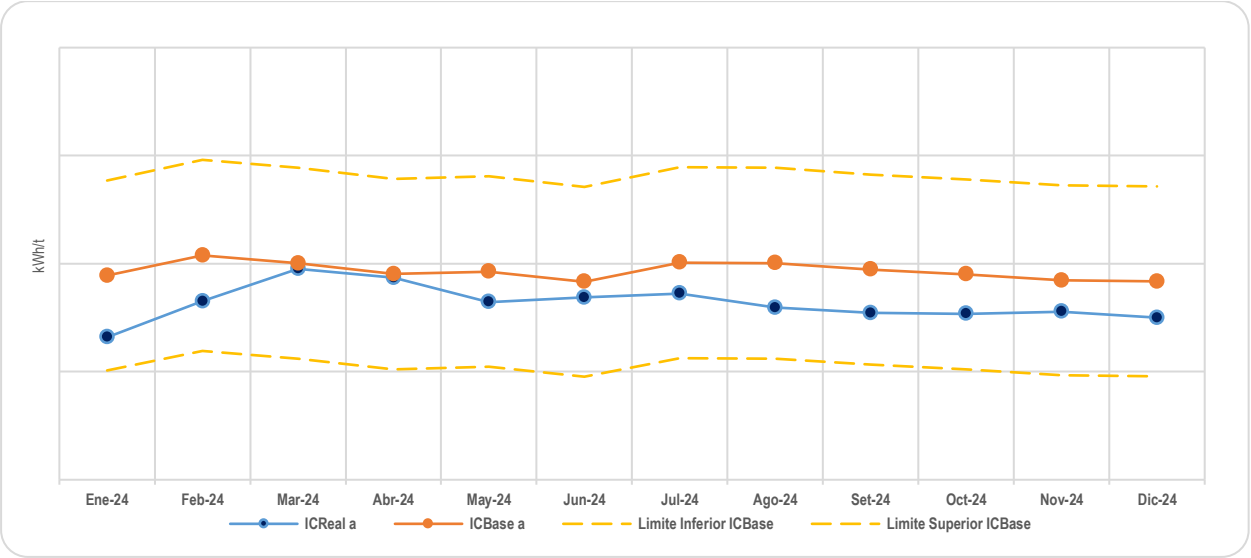


Table N° 10 Energy Review of Natural Gas Consumption in Rolling Mill 1

Objective	2024
	Result (Sm^3/t)
Reduce the specific natural gas consumption in Rolling Mill 1	

Chart N° 06 Cumulative Monitoring of Natural Gas Consumption in Rolling Mill 1

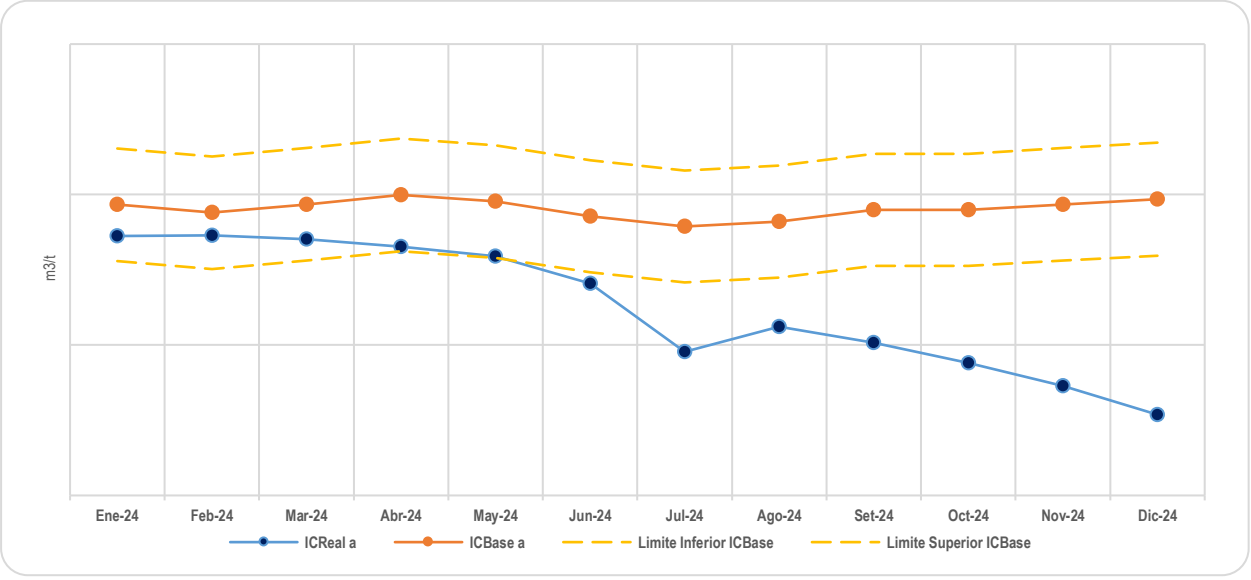


Table N° 11 Energy Review of Natural Gas Consumption in Rolling Mill 2

Objective	2024
	Result (Sm^3/t)
Reduce the specific natural gas consumption in Rolling Mill 2	●

Chart N° 07 Cumulative Monitoring of Natural Gas Consumption in Rolling Mill 2

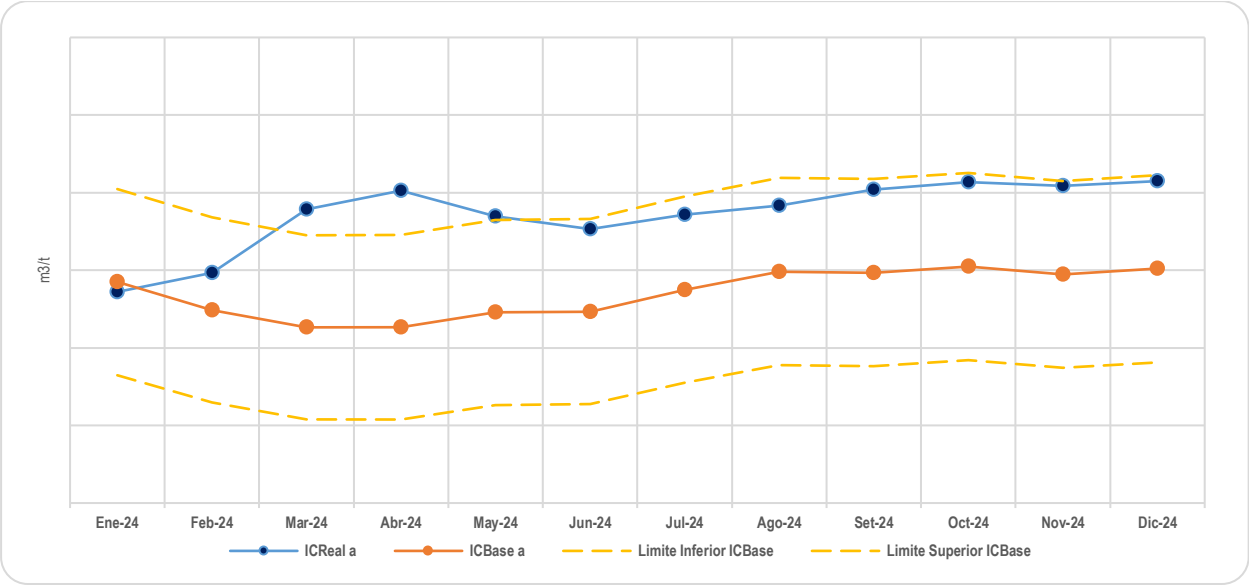


Table N° 12 Cumulative Evaluation of Energy Consumption and Greenhouse Gas Emissions

SEU	Excess Energy Consumption	Excess GHG Emissions
Total Electricity	+ 3,576,621.6 kWh	+ 488.4 tCO_2e
Total Natural Gas	- 717,687.1 Sm^3	

IX ENERGY AUDITS TO IDENTIFY IMPROVEMENT OPPORTUNITIES

All areas included in the EnMS are evaluated at planned intervals to determine conformity with the requirements of the ISO 50001 standard and those established by the organization. Energy audits consist of the periodic analysis of energy efficiency and consumption based on data and evidence. Through this analysis, areas of significant energy use are identified, and opportunities to improve the organization's energy performance are detected. The activities related to the energy audit process are carried out in accordance with the established procedure:

- GCSG01 "Integrated Management System Audit Management"

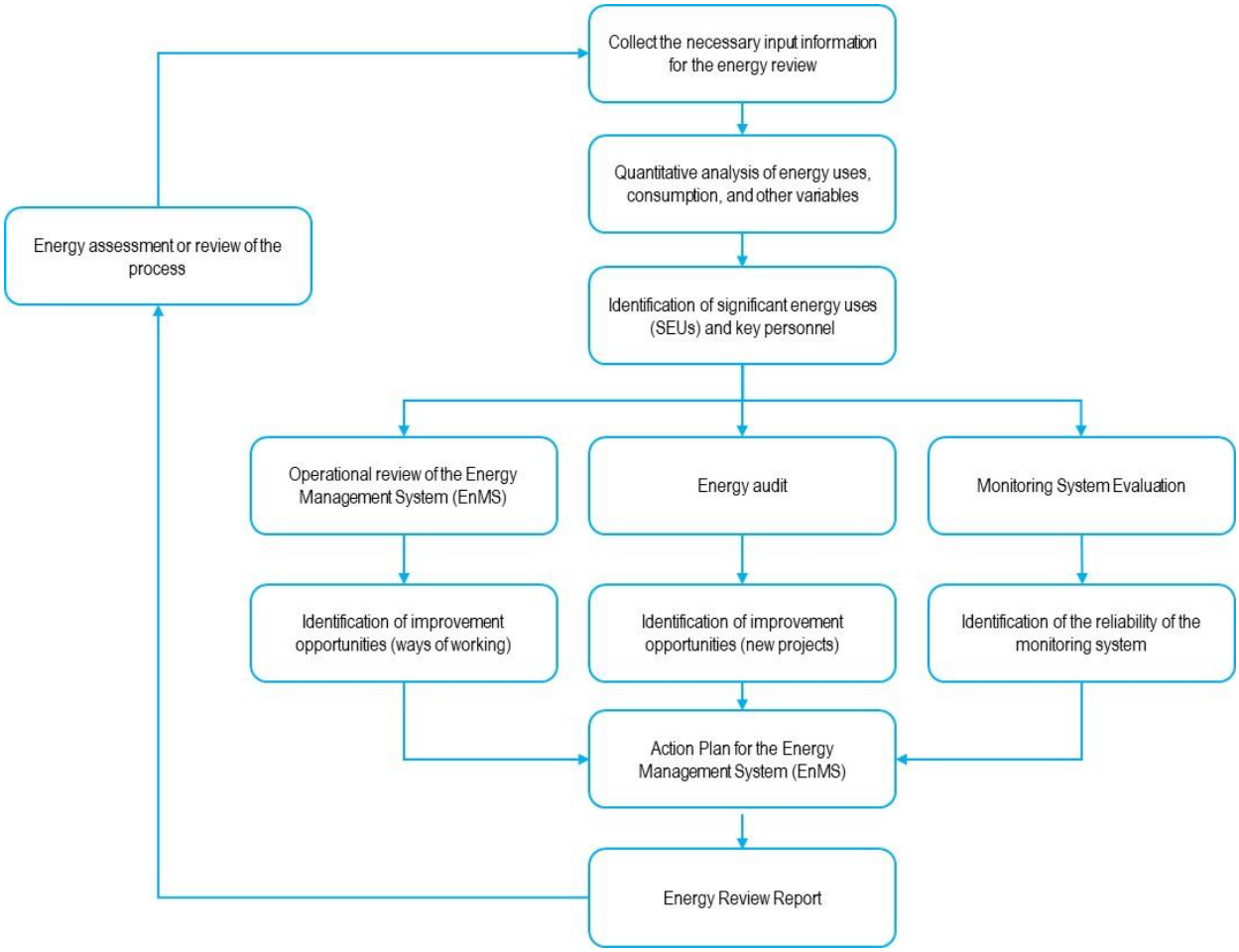
Figure N° 03 Energy Management Auditors

CAASA promotes the continuous pursuit of improvement through:

- The implementation of its Energy Policy
- The ongoing measurement and evaluation of EnMS objectives
- The follow-up on internal audit results and the implementation of improvements
- The implementation of corrective actions across all EnMS processes
- The channeling of employees' creativity and experience through improvement ideas, managed under procedure GCMC02 "Suggestion Program Management"
- The formation of multidisciplinary teams for problem-solving, through procedure GCMC01 "Improvement Project Management"

Additionally, we have an energy review process, described below:

Figure N° 03 Energy Review Process



X AWARENESS ON THE IMPORTANCE OF REDUCING ENERGY CONSUMPTION

In 2024, we carried out various activities to raise awareness among CAASA employees about the importance of reducing energy consumption. Part of our climate change strategy is energy efficiency. In 2024, we conducted the training **"Strategy for Climate Change and Carbon Footprint"**, reaching **793 trained employees**.

The training sessions aimed to promote changes in everyday practices related to energy use and to strengthen an organizational culture committed to energy efficiency. Additionally, on **March 5, 2024**, we published an internal communication with **tips focused on energy savings in office environments**.

Figure N° 04 Internal Communication for World Energy Efficiency Day