

## SMU S.A.

*Gold Seal Energy Excellence Award by Energy Sustainability Agency in 2023*



### Case Study Snapshot

<b>Industry</b>	Retail – Commerce
<b>Product/Service</b>	Food and non food products
<b>Location</b>	Chile
<b>Energy performance improvement percentage</b> (over the improvement period)	9,54% improvement over 1 year
<b>Total energy cost savings</b> (over the improvement period)	USD 47,738.00
<b>Cost to implement Energy Management System (EnMS)</b>	USD 127,529.81
<b>Case Study Snapshot</b> (over the improvement period)	1,101.58 MWh
<b>Total CO<sub>2</sub>-e emission reduction</b> (over the improvement period)	2,528.0 Metric Tons

### Organization Profile / Business Case

SMU is a supermarket company that was born in December 2007 from the acquisition of more than 60 supermarket chains, having a wide geographical coverage, with strategic locations and presence in all regions of the country. It has a multi-format strategy that allows it to meet the needs of end customers and merchants through the subsidiaries Unimarc, Alvi, Mayorista 10 and Super10, which together project to be 400 installations by the end of 2024. We also have a growing presence in Peru, through the brands Mayorsa and Maxi Ahorro. The company's vision is to be the closest supermarket network to meet the needs of our customers and generate shared value for all our stakeholders in a sustainable way.

What makes us stand out is that we maintain a comprehensive approach to sustainability, on which our corporate purpose was structured: "With Proximity, we make life easier for our customers". To achieve this and build the future of the company, our values (CERCA: Closeness, Excellence, Respect, Collaboration and Agility) are fundamental, which we promote in all areas of our management. Sustainability has to do with our vision of the future and the ability to comprehensively manage our economic, social and environmental performance across all activity and lines of business, within a framework of integrity and transparent corporate behavior.

At SMU we have a Corporate Sustainability Model, a Code of Ethics and Business Conduct that are the basis of our execution, delivering ethical guidelines and tracing the axes for sustainable management in terms of governance, integrity, people, customers, supply, environment, society and financial performance. We want to be protagonists and part of the solution to global warming and that is why Sustainability is committed to the main corporate strategic axes, as well as efficiency and productivity, which is why its commitment is reflected in a corporate sustainability

policy, where the strategic plan of Efficiency is related. Committed and Sustainable Organization based on energy efficiency.

From the above, the corporate objectives that are focused on the 2023-2025 strategic plan were born, which seek to reduce energy and water consumption, continuously improving energy performance, with goals associated with reducing the energy consumption indicator per square meter by 8%, additionally, covering 40% of the company's total consumption with renewable energies and finally reducing its carbon intensity by 8%, all of these goals are for the year 2025.

These objectives and goals were generated after an Energy Diagnosis conducted in 2020, paving the way for the planning of the Energy Management System (EnMS) following the enactment of the Energy Efficiency Law. Initially, a Pilot EnMS was developed at 3 sites (2 supermarkets and 1 distribution center) in 2022. **These three sites are the focus of this case study**, with their respective savings shown in the annex.

On the following year, our milestone was to extend the system due to the fact that the current EnMs was certified under the ISO 50001 standard, with procedures that were transversal to the subsidiaries within Chile and the strategic commitment to sustainability and energy efficiency, it was decided to extend the scope to 382 facilities across the 4 operational subsidiaries. This was done to align with the goal of implementing and certifying the entire company, going beyond the requirements mandated by the Energy Efficiency Law for Companies with Energy Management Capacity (CCGE), of which only one of the four subsidiaries is obligated. It is important to note that this expansion has not yet been in operation for a full year, as it was implemented at the end of 2023.

But the EnMS is not the only project associated with improving our processes, as there are other initiatives that accompany and feed the management system. These include:

1. **Consumption Management (UBM: Utility Bill Management):** This allows us to collect billing information from more than 1700 accounts, identifying consumption, service rates, generating performance indicators, and opportunities for improvement, which provide our first layer of monthly information for energy consumption in the EnMS.
2. **Free Customer:** Stores that meet the criteria to migrate from the regulated electricity market to negotiate a rate in the market that allows us to reduce our electricity costs and ensure the supply of renewable energy. Being a free customer allows us to request from electricity generators our second layer of information with consumption data every 15 minutes, which will enable us to feed into the energy review.
3. **Sustainable Stores:** A project for controlling and monitoring electrical systems, which started with 4 stores in its pilot phase and is currently expanding to 16 locations. This project allows for detailed identification of the energy distribution of usage and consumption in the stores, enabling us to achieve our second and third layer of energy information by measuring significant energy systems to focus on energy efficiency measures for the EnMS within these stores.
4. **Carbon Footprint Reduction:** These are projects and initiatives aimed at decarbonizing our services, including the incorporation of photovoltaic systems, the addition of an electric fleet for store deliveries, green hydrogen production and consumption projects, as well as a program focused on reducing the carbon footprint by reducing food waste.

*“This achievement is a milestone to demonstrate our commitment to caring for the environment and reflects our dedication to operate in a more efficient way.”*

—Marcela Salas, Sustainability Manager

## Business Benefits

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Implementing a Pilot EnMS allowed us to integrate different managements in search of improvement in energy performance. One of the main results of this is the formation of the Energy team, as it is present in different areas of the company, achieved with the commitment that Senior Management maintains in force. Thanks to the commitment and formation of a competent energy team, it was possible to certify both the EnMS pilot and its expansion, where these points mentioned in the internal and external audit processes stand out as strengths.

If we describe the energy results, we can show how the EnMS Pilot locations have improved their energy performance. Energy consumption during 2023 was 11.5 [GWh] between the three, but if we compare it to our projected consumption by baseline, we saved 9.54% which translates to 1.11 [GWh], these savings allowed us to decrease our energy costs by USD\$47,738.

As for our contribution to reducing our carbon footprint, both stores and the distribution center maintain the Free Customer tariff, because what we can choose is for its electricity supply to come from 100% renewable sources, so in 2023 we avoid emitting 2,528[ton] of CO<sub>2</sub>.

As we have seen good results in our Pilot, we hope that in the expansion of the energy management system we will be able to demonstrate the improvement in our energy performance, where our greatest difficulty or challenge is the objective of covering 382 premises, with transversal operational procedures and activities, but with different energy realities.

In addition to energy reduction, the EnMS allows us to have solid tools for energy planning and monitoring and thus support projects that are a contribution from the company's sustainable point of view. Additionally, having an EnMS facilitates the implementation of other types of management systems that can be integrated into the energy system as they have similarities in structural requirements.

On the other hand, multisite and format implementation allows the generation of standardization processes, learning synergies and replicability in initiatives developed by recognizing similarities between different facilities. By being coupled with the corporate sustainability policy, the organizational culture is integrally strengthened, impacting the commitment and transversality of the development of continuous improvement.

As external achievements, it is associated with obtaining a national award for companies, corresponding to the Seal of Energy Excellence granted by the Energy Sustainability Agency, in its highest gold category, which is awarded to us for having implemented an EnMS and for the efficiency measures implemented and verified in the CD Lo Aguirre.

## Plan

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After the completion of the first Energy Diagnosis in 2020, the management is committed to taking a leading role, where the Senior Management is formed for the implementation and operation of the EnMS, in the same way the Energy team begins to be formed for the implementation of the Pilot and its Expansion, together with all the projects that complement the company's strategic plan. Senior Management, in its commitment, becomes a protagonist in the validations of the energy team, participating every month in the progress meetings of the EnMS.

Understanding that Energy Efficiency is a process that goes within the company's Sustainability axes and with the support of Senior Management, financial funds were requested to execute all the projects mentioned above and in terms of human resources, positions are created in different managements to shape a multi-management energy team with the aim of implementing the different projects. The financing of energy efficiency initiatives and projects is prioritized due to their impact within the strategic axes at the company level, corresponding to efficiency and productivity, as well as the axis of sustainability. In this way, projects are profitable, but it also contributes to the sustainable development goals to which the company is committed.

# ISO 50001 Energy Management System – Case Study

2024

Chile

To execute our projects we had to know the consumption and realities of our premises, which is why thanks to our alliance with a company specialized in energy solutions, billing processing services are initiated to obtain the complete energy information of all our facilities. Then, thanks to one of our sustainable store projects, we were able to understand beyond the billed consumption, determining based on a sample, how is the distribution of energy uses and consumption, along with operational proposals to validate the implementation of operational control measures, the impact of technological change and good operational practices.

From the above, we were able to understand the use and consumption of energy within our company for certain categories of premises, mainly by having certainty about how each of our energy-consuming systems contribute. If we go into detail, each of our premises houses 4 main systems: Refrigeration, Air Conditioning, Lighting and Power, the first being the one with the largest participation with 50%, while Power and Air Conditioning together consume approximately 40% and Lighting 10% of the total consumption.

These analyses and evaluations of energy uses and consumption in SMU were carried out by the EnMS Team. This evaluation is carried out through the quantitative analysis (past, present and future) of the energy consumed and updated annually in the face of significant changes in the operation, leaving a record in our energy planning, which is communicated monthly to Senior Management.

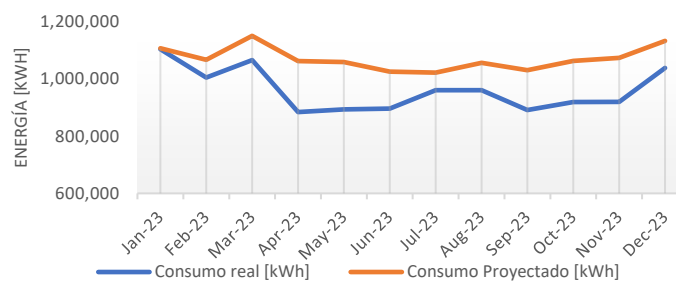
In order to be a contribution to the EnMS, different projects are developed that provide information to be able to better carry out energy management in the company. In the first instance, to execute them, business cases must be formed and presented to the Investment Committee to obtain the financial resources, these are evaluated and prioritized in aspects such as economic profitability, impact on strategic objectives, sustainability and regulatory aspects. If the project is approved, its execution is managed and the commitment is monitored in the committed impact, in the case of energy efficiency: energy savings, reduction of KPIs, carbon and/or economic footprint in each of the premises that are affected by these projects.

The projects mentioned above are being executed and are part of the company's strategic plan, which considers efficiency and productivity as well as sustainable development as axes, part of the objectives at the company level correspond to a reduction in energy performance of 8% measured through the kWh/m<sup>2</sup> energy indicator. improve its certified consumption of renewable energies, as well as certify the EnMS under the ISO 50.001:2018 standard for all operating subsidiaries (Unimarc, Mayorista 10, Alvi Supermarkets Wholesalers and Super 10).

To achieve our goals, we must plan where to focus our projects, since one of our main challenges is the large number of locations present in Chile. To address it in the EnMS, an EnMS Pilot with 3 sites was implemented and certified at the end of 2023, which would allow us to generate the structural requirements and organizational learning that accompanies a process like this to form the Energy team. Having clear the guidelines of the project and the company, it is decided to advance the expansion of the EnMS to 382 sites for all operating subsidiaries, in which their energy consumption is monitored.

The main objective of our projects is to improve our performance or energy expenditure and, with the above, the reduction in Greenhouse Gas Emissions, such as our projects associated with Renewable Energies or change of tariff to Free Customer.

***“Important steps have been taken in increasing energy performance. Improvements must continue and we continue to work to achieve our goals”***  
—Rafael Pardo, Operational Excellence Manager



## Do, Check, and Act

For the implementation of the EnMS, a multidisciplinary and multi-managerial team was created to work within their respective management areas, ensuring that the EnMS could be addressed immediately by all management levels associated with senior leadership. Initially, the pilot was executed with 3 sites, and the following year, the expansion to 382 locations was implemented. It is important to note that the results presented in this case study correspond to the EnMS pilot.

To address the implementation of the EnMS, support management such as Procurement, Organizational Development, Operations, Quality Control, Document Control, among others, are involved. These are taken as areas committed together with senior management (Operational Excellence, Construction, Maintenance and Sustainability). To promote their commitment and improve the review of each aspect of the EnMS, they commit and request to generate monthly meetings in order to increase the detail of the system reviews, validations and decision-making associated with continuous improvement in the EnMS.

Within the framework of the implementation, development and continuous improvement of the EnMS, there are a series of activities that contribute to the improvement of energy performance. Among them, we generate a plan of communication descents with the areas of communications, training and organizational development to give the necessary information at the beginning and thus publicize the operational controls and a correct awareness of how each location is affected in energy performance. In our monitoring procedure, alert ranges were created for each location in the event that there are significant variations in consumption in order to activate reviews with operations, maintenance and management control management. The EnMS team, being multi-managerial, allows us to relate different management projects and follow up on them in order to improve our energy results.

All of the above was in pursuit of the fulfillment of the objectives and goals associated with the Pilot SGE and its Expansion. Specifically, in the Pilot it was reported that according to the initiatives studied as an action plan, consumption should be reduced by 5%, this was overcome with a reduction of 9.54% per year.

In order to corroborate our improvements in energy performance, we align ourselves with our planning and monitoring that is carried out from the measurement and verification of savings, guided mainly by the IPMVP protocol, which is described in our procedures. It should be taken into account that we are reviewing energy consumption on a monthly basis through the electricity billing of our baseline in our EnMS Expansion, which also includes the premises of the Pilot.

The baselines for the 3 locations were generated using environmental performance variables, specifically the variable used was cooling degree days (CDD), to demonstrate the impact between our operational temperatures and the environmental temperature. This helps explain the consumption in our locations, as the majority of consumption comes from refrigeration and air conditioning (around 60 to 70% of total consumption). Therefore, if the ambient temperature increases, the consumption tends to increase as well. Currently, for the expansion of the scope, 21 locations are being worked on as significant energy uses.

In order to keep track of our premises, our monitoring indicator is directly the energy consumption in each premises. To make comparisons between premises, an energy indicator is used on the surface area of our sales rooms, which gives us a view of the behaviour of our premises, whether they are old, reconversions, improvements or new openings.

Our projection equations are related to our environmental performance variable, which allows us to estimate consumption based on the behavior of the previous year according to climatic records or in case there are forecasts of temperature variability, energy consumption can be estimated.

# ISO 50001 Energy Management System – Case Study

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The normalization of our consumption was carried out together with the relationship it had with the surface area of each premises, so this indicator is monitored, in order to make comparisons between the different realities of our premises and formats.

In all our analysis of energy planning and monitoring of the EnMS, we use our generated procedures and plan the work of each person in the energy team, in order to make progress on different associated fronts.

For operational control, existing procedures and routines within the facilities were used, so that everything involved in energy efficiency was not an additional procedure, but a complement to the already existing activities. Some of the measures used were to occupy quality temperature control procedures, store start and close routines, operational talks, communication downloads and routine inspections.

To engage employees with respect to energy efficiency, comprehensive plans are generated to reinforce it through a culture of sustainability with energy efficiency. To this end, audiovisual material is generated in stores, communication downloads from management, operational talks, training and also talks with activities and contests.

Because our company is continuously opening stores, the design and procurement has been a key stage in defining an operational standard of energy efficiency in the intervened or opened stores. In accordance with the commitment of the strategic axes, it is defined that both openings and purchasing processes are considered and even committed in some processes to choose equipment with greater energy efficiency. This is reflected with store openings with high-efficiency equipment: LED lighting, inverter equipment, insulation of refrigeration systems, among others.

For audit processes, reinforcements and intensive tests are generated to ensure the commitment and good result of what is worked on during the continuous improvement cycle. This applies to both internal and external processes.

In addition to the core monitoring of energy performance, the amount of NC generated per process, progress status, training plan and awareness are monitored with its verification and compliance in progress meetings with senior management.



## Transparency

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We continuously publish updates on LinkedIn and through electronic media, such as newspapers, journals and supermarket media, informing about the main milestones achieved by the company, such as the implementation of the Energy Management System and the Energy Excellence Seal in the Gold category, awarded by the Sustainability Agency.

Information related to our objectives, goals, and achievements are also published in our corporate report. Additionally, we have made publications on the SMU website, both of which are freely accessible to the public.

## What We Can Do Differently

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Because one of our biggest challenges is the large number of locations, a comprehensive communications and awareness plan should be generated from the beginning and make it known that we are working on an EnMS within the company.

In order to have a better knowledge of the equipment in our premises, it would be necessary to carry out surveys and evaluations of the equipment and systems. This is in order to develop project evaluations for future technological replacements. Additionally, it is important to have a solid plan for data collection and calibration verification of electric meters, along with a repository for collecting necessary documents.

Involve the operation and other areas at tables or instances of AD for decision-making with a holistic approach and that encompasses a wider range of people so that the EnMS can be developed in an integral way in the company's processes and projects.

Due to the fact that our organization is continuously opening premises or acquiring new sites, we must incorporate them into our EnMS and carry out the corresponding activities, such as energy monitoring once it has a period of analysis, communications, delivering talks, training, among others.

Regarding our energy review, we will gradually increase the number of locations considered as significant energy uses, allowing us to cover a higher percentage of the company's energy consumption with corresponding monitoring to match and integrate operational procedures as annual budgets, monthly and quarterly reports.



The Energy Management Leadership Awards is an international competition that recognizes leading organizations for sharing high-quality, replicable descriptions of their ISO 50001 implementation and certification experiences. The Clean Energy Ministerial (CEM) began offering these Awards in 2016. For more information, please visit [www.cleanenergyministerial.org/EMAwards](http://www.cleanenergyministerial.org/EMAwards).