

ENERGY MANAGEMENT PROGRAM 2025

Kesko Corporation Energy Management programme



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1. INTRODUCTION

This document contains a description of Kesko Corporation's energy efficiency system ETJ⁺. The system is applied across all companies within the Kesko Group, such as Onninen Oy, K-Auto Oy, and K-Market Oy. The system provides an effective and efficient energy management operating model for the real estate portfolio managed by Kesko. The system was created in 2019 and officially launched on 1 December 2019. Subsequent updates are recorded at the end of the document.

The document contains a description of the roles, responsibilities and timetables of the different actors involved in implementing energy management. Its annexes contain instructions for monthly, quarterly and annual energy management tasks.

The document also describes Kesko's energy efficiency targets, the underlying energy policy and management's commitment to improving energy efficiency.



Figure 1. Continuous improvement model for energy management.

2. COVERAGE OF THE ENERGY MANAGEMENT SYSTEM

The system covers all properties under Kesko's centralised maintenance. In 2023, the total gross area of the Finnish real estate portfolio was 3.8 million m^{2.} Energy use within



the K Group that takes place in properties that are owned and operated by retailer entrepreneurs themselves (so-called retailer-managed sites) is not included in the system.

Property types	Gross floor area
K-Citymarket	1,137,439
K-Supermarket	633,802
K-Market	440,585
K-Rauta	440,048
Onninen	122 948
K-Auto	164,616
K service stations	53,067
Cash-and-carry outlet	47,962
Other retail trade	155,711
Shopping centres	249,278
Office	32,720
Office and warehouse	223,174
Store room	103,146
Other not included above	42,083
Total	3,846,578

Table 1. Real estate portfolio covered by the system.



3. KESKO'S COMMITMENT TO ENERGY MANAGEMENT

3.1. ENERGY STRATEGY

Kesko's energy strategy has been prepared and adopted for the period 2024–2030 and its key targets are:

We will improve energy efficiency by 10% by the end of 2030. The reference figure is the comparable energy consumption of the K Group in 2022, and the target requires 95 GWh of energy efficiency measures implemented and recorded in the system.

Electricity purchased by Kesko must be carbon dioxide free (either renewable or nuclear)

The Group's energy reporting uses the same reporting system in all operating countries

The Energy Management Group is responsible for monitoring the implementation of the strategy and for updating the strategy. The strategy is reviewed annually in the context of the ETJ⁺ management inspection.

The targets set out in the strategy are presented in the next section.

3.2. TARGETS

Kesko's energy management targets are defined in the Energy Efficiency Agreement and the Energy Strategy. The Energy Efficiency Agreement has a saving target of -7.5%, or 78 GWh, for the period 2017–2025. Kesko already met its target under the Energy Efficiency Agreement during the previous strategy period. The 10% or 105 GWh energy efficiency target for the previous strategy period 2018–2023 was also met, and around 115 GWh of energy efficiency measures were recorded in the reporting system.

The indicative target from 2024 onwards is a 10% or 95 GWh efficiency improvement by the end of 2030, covering all countries of operation. The reference figure for the target is the total energy consumption in 2022, which takes into account not only Kesko's own energy consumption but also that of K-retailers in Finland. In other words, the target applies to the entire K Group.

The principal ways to improve energy efficiency are lighting renovations and store refurbishments (retrofitting the refrigeration system with carbon dioxide technology, using heat pumps for heat recovery and modernising automation). A comprehensive energy and maintenance inspection is carried out before store refurbishments, and the project is then carried out on the basis of the measures proposed. In addition, energy



efficiency measures are implemented, for example, in building services systems through energy management, and action points are identified, for example, through energy inspections or various analytical services.

In addition to the energy management targets, Kesko's responsibility programme sets targets for the entire supply chain:

https://www.kesko.fi/en/sustainability/sustainable-kesko/sustainability-strategy/

3.3. MANAGEMENT ROLE

Senior management participate through the Energy Management Group, which conducts Energy Management System inspections. The Energy Management Group consists of the Board of Directors of Ankkuri-Energia Oy, Kesko's subsidiary focusing on energy procurement, and the chair of the Board of Directors is the CFO of Kesko.

4. STATUTORY AND OTHER REQUIREMENTS

In all its operations, Kesko complies with applicable laws and other official regulations. This document has a description of the energy efficiency scheme ETJ+, which is an option for large companies under the Energy efficiency act 30.12.2014/1429.



5. ENERGY USE IN THE K GROUP

In the context of this energy efficiency system, energy use naturally includes all energy used in Kesko's stores. Administratively, part of the electricity consumption of a store site is the responsibility of the chain company doing business at the site, i.e. the retailer, or of any other users of the premises (front space tenants). The document therefore also reports the electricity consumption of retailer entrepreneurs, which is why the figures reported differ from the energy figures reported in Kesko's annual report.

Total energy consumption in Finland in 2023 was around 918 GWh, of which 693 GWh was electricity and 225 GWh heat (including district and other forms of heating). Kesko's share of the electricity consumption was 279 GWh.

The energy metering coverage of Finnish sites in relation to their gross floor areas was 94.7% for electricity and 93% for district heating.

Total energy consumption in the other operating countries in 2023 was around 47 GWh, of which 34 GWh was electricity and 13 GWh heat.

Thus the K Group's total energy consumption in all operating countries in 2023 was approximately 966 GWh, of which 727 GWh was electricity and 239 GWh heat.

The combined water consumption of all operating countries in 2023 was about 741,000 m^3 , of which Finland's share is 724,000 m^3 and other countries' share 17 m^3 . Calculated on an area basis, water metering coverage was around 76%.

Consumption	2022	2023	Change
Electricity [GWh]	723.0	693.0	-4.1%
Heat [GWh]	214.5	225.4	5.1%
Heat, normalised [GWh]	220.5	224.1	1.6%
Water [1000 m ³]	751.0	724.0	-3.6%
Specific consumption			
Electricity [kWh/GFA]	191.7	180.2	-6.0%
Heat [kWh/GFA]	56.9	58.6	3.0%
Heat, standardised [kWh/GFA]	58.5	58.3	-0.4%
Water [I/GFA]	199.2	188.2	-5.5%
Real estate portfolio [GFA]	3,770,900	3,846,600	2.0%

Table 2. Trend in K-Group consumption in Finland 2022–2023



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6. ENERGY MANAGEMENT MODEL AND ORGANISATION

This chapter describes in general terms the tasks, schedules and responsibilities involved in maintaining an energy management system. Energy management tasks include monthly, quarterly and annual actions, which are shown in the annual calendar in Figure 2.



Figure 2. Energy management annual calendar.

Energy management is steered by a dedicated Energy Management Group. This Energy Management Group assesses the operation and performance of the system annually in a management review and, if necessary, makes decisions on corrective measures to achieve the targets set in Kesko's energy strategy.

Kesko's Energy Team is responsible for the operational implementation of energy management in cooperation with Kesko Real Estate Services, the various units of store site acquisition and the partner network. The smooth functioning of cooperation and possible development needs are regularly assessed at Energy Group meetings. It includes Kesko's maintenance unit, energy managers, control room and analytics service providers and EnerKey. The Energy Group monitors the achievement of the targets set and is in charge of the general development of the energy management system.





Figure 3. Leadership and partners in energy management.

The role	es and	responsibilities	of the differen	parties are	described in	n more detail below.
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Energy Management Group			
Chair	Group CFO		
Tasks	Adopting Kesko's energy efficiency targets and monitoring the progress of energy efficiency work. Defining and adopting an energy procurement policy. Decisions on any necessary corrective measures.		
Meetings	In February after the turn of the year, more often if necessary		



Energy Group	
Chair	Director of Energy
Members	Energy managers, control rooms and analytical services, maintenance personnel and EnerKey
Tasks	Monitoring the impact of measures, internal review of the ETJ+ system, exchanging good practices, developing the policy model
Meetings	As needed, usually in May and November (internal review)

EnerKey	
Tasks/role	Producing an energy management software service, management of measurement data, measurement projects, energy analytics, and energy efficiency process development etc.
Meeting with Kesko	• As needed

Monitoring and analytical services			
Tasks/roles	Investigating the causes of abnormal energy consumption at the request of the energy manager and on its own initiative at sites where an analytics service is in use. Addressing deviations and malfunctions of technical building services. Entering measures affecting and comments on energy consumption in EnerKey		
Meeting with Kesko	Quarterly		



Energy manager	
Tasks	Dealing with abnormal consumption and identifying its causes, summaries of quarterly meetings, proposing energy efficiency measures and preparing their implementation. Responsibility for reporting measures taken in EnerKey.
Meeting with Kesko	Quarterly by manager company The content of the meeting is defined in Annex 3

Real estate Manager	
Tasks	Carrying out monthly consumption monitoring and assisting the energy manager in resolving abnormal consumption. Informing the energy manager of measures taken that affect energy consumption.

6.1. MEASURING AND MONITORING ENERGY CONSUMPTION

The technical implementation of energy metering and the required accuracy of the measurements are defined in Kesko's energy measurement guidelines. The measurement guide is part of the design guidelines and can be found in Kesko's design guidelines for construction. The measurement guide is regularly reviewed and updated as necessary. The most recent update is from 2024.

The general principle is that at least the connection meters (electricity, heat and water) of sites are always monitored on an hourly basis. In general, the principal energy-consuming systems, such as refrigeration in stores, are also measured separately with sub-metering. Metering also takes into account the need to share energy costs between the various users of a building.

Metering will be improved as necessary, e.g. in the context of modernising of building automation systems, to ensure cost-effectiveness.

The energy consumption of Kesko's store sites is monitored through the EnerKey reporting system. EnerKey is responsible for managing the measurement data and monitoring the performance of the measurements. Metering data is collected on an hourly basis from energy companies, and from building automation and remote metering systems purchased by Kesko.



6.2. SIGNIFICANT ENERGY USERS

The grocery trade properties – K-citymarkets, K-supermarkets and K-markets – represent approximately 75 per cent of Kesko's energy consumption. The rest of the consumption is from many different functions.

In the most important consumer group, the grocery trade, refrigeration systems are the most significant energy consumer. They account for more than a quarter of electricity consumption in Citymarkets and almost half in Supermarkets. The next most important area of consumption is lighting.

In the retail group as a whole, just over a quarter of energy consumption is used for refrigeration systems, just under a third for lighting, just under a quarter for heating and the rest for other purposes, the largest single item being the so-called 'building electricity'.



Figure 4. Estimated distribution of energy consumption at store group level

6.3. ENERGY CONSUMPTION INDICATORS

When implementing an energy performance management system, the energy efficiency indicator used is specific consumption per unit area (kWh/m^2). Changes in the indicator are monitored monthly and annually, and as a rolling 12-month trend at quarterly meetings of energy managers.

The indicator is mainly suitable for identifying change from the previous time period or from a reference population, as the energy use of many systems or activities that affect energy consumption – such as commercial refrigeration, ventilation with heating, cooling



and fan energy, or lighting – depends on factors other than floor area. Such factors include opening hours, the number of refrigeration units, shelving in and cleaning the store, the characteristics and age of the building and its technical services, and, in the case of leased properties, the allocation of costs from electricity and heating energy.

The development of a better indicator will be adopted as a long-term target of energy efficiency work. Either by narrowing the scope of the comparison with more precise definitions and additional information, or by using estimation to help take the impact of the above-mentioned differences on energy consumption into account.

These alternative and complementary energy efficiency indicators will be calculated and tested during the strategy period 2024–2030. Based on the experiences gained, a decision will be taken on their implementation.

The indicator used for reporting energy efficiency measures is the saving effect (MWh) of the measures taken. For investment measures (TEK), the saving effect is calculated or measured as the energy saving effect over a period of one year.

In the case of setting changes and other technical operational measures (KTEK), the saving effect is calculated over a three-month period by calculating the effect for the whole year and dividing the figure by four. The energy saving effect of the operational measures must correspond to the change observed by measurements.

6.4. TREATMENT OF ENERGY CONSUMPTION DEVIATIONS

The energy manager analyses consumption on a monthly basis and identifies changes that need to be addressed. These are entered in the EnerKey system and their causes are investigated together with the control room and the site manager. The results of the survey are recorded in a deviation note and its status (to be investigated/under investigation/resolved) is updated as the process progresses.

According to the agreed process, EnerKey's energy consumption monitoring for electricity and heat is inspected monthly for significant deviations. EnerKey's consumption alarm function can be used for the process or a monthly comparison report can be generated on selected sites. The overall situation and follow-up of the deviations is discussed at the quarterly meetings of the energy managers.

For electricity, a change of at least 5 MWh and 5% of the reference period consumption OR at least 100 MWh is considered a *significant deviation*. For heating energy, the threshold is 10%, and for buildings with energy recovery systems, the change in demand for purchased heat is also monitored alongside total heating energy.



With regard to the *reference period*, both the change in monthly consumption compared to the corresponding month in the previous year AND the consumption in a rolling 12-month period compared to the previous rolling 12-month period are reviewed.

Consumption deviation monitoring can be supported with EnerKey's Ines analytics, which can be used to identify anomalies in energy use in terms of the onset of heating demand or night/day variation.

6.5. MANAGEMENT OF ENERGY EFFICIENCY

6.5.1. PRINCIPAL MEASURES

The energy strategy's target of 95 GWh savings through measures to be taken between 2024 and 2030 is divided into four main categories:

- Overall refurbishment of store sites, implementation of the energy concept
- Other energy efficiency measures

The above measures have their own budget, the level of which is determined each year.

6.5.2. SOLAR POWER PLANTS

Kesko's existing 45 solar power plants generate around 8 GWh per year. The construction of additional solar power plants is limited by the load-bearing capacity of roofs and the high proportion of rental properties.

6.5.3. THE ENERGY EFFICIENCY CONCEPT OF THE OVERALL REFORMS

The overall renovation of commercial premises is carried out every year and driven not only by energy efficiency improvements, but also by the F-gas Regulation, which requires, among other things, the replacement of R404A refrigerants with CO₂ by 2030. In connection with the renewal of cooling systems, an energy recycling system, which has won the 2019 Energianerokas energy efficiency award, will be built in suitable locations and Kesko's energy efficiency concept solution will be implemented.

In the overall reform of the energy efficiency concept:

- condensation heat and other waste heat from the refrigeration system is collected with a heat pump and used to heat buildings
- where possible, refrigeration equipment with doors are chosen to reduce energy consumption and better control indoor air conditions in stores



- lighting systems will be completely modernised to continuously adjustable LED lighting systems in line with the renewed lighting concept
- ventilation systems will be renewed
- building automation will be modernised for remote operation
- refrigerators with door curtains will be made more energy efficient

6.5.4.OTHER MEASURES

Other energy-saving measures include:

- Operational real estate maintenance measures
- Other energy efficiency projects than those mentioned above, often related to technical building services, proposed by energy managers.
- Replacement of fluorescent lighting with LED lighting systems
- Energy-saving changes through the long-term maintenance process
- Improvements in connection with unplanned repairs to equipment

The implementation of the long-term maintenance plan (PTS), is subject to annual budgets. Repairs will be made as part of the maintenance costs, where necessary.

6.6. HANDLING OF ENERGY EFFICIENCY MEASURES IN MAINTENANCE AND ENERGY MANAGEMENT INFORMATION SYSTEMS (ENERKEY AND GRANLUND MANAGER)

Energy efficiency measures are carried out as part of long-term maintenance plan projects and unplanned maintenance repairs, as well as purely energy-saving measures. All energy efficiency measures are entered in the EnerKey system, which is the most efficient way to monitor and report on them.

Energy efficiency improvements related to investment projects are processed in the Granlund Manager long-term maintenance plan tool, from where they are integrated into EnerKey. The first time a measure appears in EnerKey is when its status in Granlund Manager is changed to Project decision made. In addition to the energy efficiency impact, the reporting system also monitors the emission reduction impact.

The data for the measures is mainly managed in Granlund Manager, which acts as the master system for most of the measures' data. Measures also have data fields in EnerKey that are not accessible from Granlund Manager. If necessary, they can be used to enrich the data of the integration measure in EnerKey. An example of such information is the owner of a measure, which can be added to a measure in EnerKey. Ownership



information is related, for example, to the monitoring of targets agreed with management companies.

Technical measures are entered directly in EnerKey.

In Granlund Manager, energy efficiency measures are always labelled with E, which includes all energy-saving measures with a balance sheet impact. These include, for example:

- Energy-saving measures with a balance sheet impact effect, e.g.
- Replacing lighting fixtures with LED fixtures
- Energy renovation of ventilation machines (fan refurbishment, control mode change, frequency converters)
- Installation of exhaust air heat recovery equipment
- Energy recycling systems

6.6.1. MEASURES TO BE ENTERED DIRECTLY IN ENERKEY

Saving measures implemented without investment from Kesko can be entered directly in EnerKey in the Completed status. Such measures include operational saving measures taken by the control room.

6.6.2. MEASURES TO BE INCLUDED IN THE LONG-TERM MAINTENANCE PLAN (PTS)

An annual inspection system has been developed for Kesko's real estate and energy managers have developed, which includes a list of questions to identify the most important sites for review.

Real estate managers are responsible for keeping the long-term maintenance plans (PTS) of the sites (in Granlund Manager) up to date:

- Observations from various sources are entered into Granlund Manager for action
- Measures are scheduled according to the manager's best judgement
- The long-term maintenance plan (PTS) proposals for action are timely and consistent
- In particular, the current and coming year should reflect the manager's view of the property's renovation needs
- Completed measures are marked as completed, non-implemented measures are cancelled or rescheduled
- The property has been inspected during a site visit and observed needs for repairs have been entered into the Granlund Manager's long-term maintenance plan (PTS).



Granlund Manager is used as a tool for annual property inspections. In the inspections:

- Ensure that the most significant easily identifiable repair needs and energy measures are inspected
- Prioritise and identify the most important properties to be inspected
- Consider the property's rent liabilities, age, properties on the project list, etc.

6.7. ENERGY REVIEWS

K Group's building stock largely consists of store sites used for grocery, hardware or car sales. Lighting, building services and commercial refrigeration systems play the biggest role in their energy consumption, and their systematic upgrading to more energy-efficient technologies will be one of the cornerstones of energy efficiency work.

Long-term maintenance plan (PTS) reviews and energy audits covering all systems in the building will be carried out selectively for those sites where upgrades to technical systems are planned in the coming years. The purpose of the audits is to find out what opportunities and needs there are related to the maintenance and energy efficiency of the store site, and relevant measures will be taken in the upgrading project. Identified energy efficiency measures will be entered in Kesko's systems in accordance with the principles laid out in section 6.6, including PTS measures.

Targeted inspections and review visits will be carried out as necessary to sites identified through consumption deviations and analyses, as proposed by the energy manager.

6.8. ANNUAL REPORTING

Annual reporting on energy efficiency work consists of the following regulatory and stakeholder reporting elements:

- Annual reporting to Motiva on the retail sector Energy Efficiency Agreement, where the energy consumption and energy efficiency measures that have been carried out are entered into Motiva's database. The data is maintained in the EnerKey system and EnerKey is responsible for submitting it to Motiva.
 - a. NB! For implemented measures, the year of completion is entered as the 'Year of implementation' in EnerKey. The reporting year is the year in which the measures are to be reported under the Energy Efficiency Agreement. Normally, these are the same year, but in exceptional cases it is possible that measures completed at the very end of a year are only reported in the annual reporting for the following year.



- Energy managers are responsible for calculating or estimating the saving effects of the measures. The values applied are reviewed and approved by Kesko's Energy Team.
- 2. Reporting on energy use and its environmental impacts as part of Kesko's annual report. The report is compiled under the supervision of Kesko's Corporate sustainability team.

7. ENERGY PROCUREMENT

The electrical energy purchased by Kesko and other electrical energy used by Kesko (such as electricity purchased by the landlord in shopping centre properties) is carbon dioxide-free. Procurement methods are defined in more detail in Kesko's energy strategy and procurement decisions are made by Ankkuri-Energia Oy.

8. TRAINING AND AWARENESS

The presentation of the energy efficiency system to the entire real estate organisation and training started with an event in 2019 to provide information on the system. The development and updating of the system will be carried out together with the energy managers and real estate management contract managers, as necessary and at least twice a year at Energy Group meetings.

Detailed training on the system for real estate managers is provided by the energy manager in each organisation.

Energy efficiency training will also be provided as necessary in relation to ISO certification where energy issues have been identified as an essential environmental concern for the site concerned. Kesko Logistics, the K Group construction B2B services and all of Onninen's operating countries, excluding Poland, have a certified environmental management system (ISO 14001).

Kesko's K-Kampus head office has a WWF Green Office environmental management system in place, which aims to reduce the carbon footprint of the office and use natural resources wisely. One of the key themes of our environmental management system is Energy and Water, the purpose of which is to guide our employees in energy-efficient and water-saving measures in their work.



9. COMMUNICATION

Internal communication on the energy management system is provided to partner companies through regular cooperation meetings and an annual information event. There is also a common workspace (Teams) for dealing with energy and other maintenancerelated issues.

Kesko participates in the discussion on energy management in the retail sector and openly communicates its approach and provides information on its ETJ+ system.

10. SYSTEM MAINTENANCE AND DEVELOPMENT

10.1. INTERNAL REVIEW

An internal review is carried out every year in November. Its purpose is to ensure that the energy management system has been adhered to as agreed, operations have been carried out appropriately and that it is delivering the results expected. The parties involved in the operational aspects of energy management participate in the review.

A memo is drafted of the review and any suggestions for improvement are discussed at the management review. The internal review is carried out by the Energy Group, and the first internal review took place in autumn 2020.

10.2. MANAGEMENT INSPECTIONS

Management inspections are conducted annually in February after the turn of the year. The management inspections ensure the suitability, adequacy and effectiveness of the energy management system. Minutes of the inspections are kept in Ankkuri-Energia's archives.

The management inspections cover the following:

- i. Follow-up to previous management inspections
- ii. Kesko's energy strategy
- iii. Level of energy efficiency and related energy efficiency indicators
- iv. Assessment of compliance with legislation and changes in statutory and other obligations to which Kesko is committed
- v. Level at which energy targets and targets have been met
- vi. Results of energy management system reviews
- vii. Corrective and preventive measures



10.3. ENERGY EFFICIENCY PROCESS DEVELOPMENT

The energy efficiency process is being developed in close collaboration with Kesko, EnerKey, and energy managers. The goal of this development work is to eliminate unnecessary and non-value-adding tasks while significantly improving energy data analysis and utilization by advancing machine-learning-based analytics.

One of the latest achievements is the **Ines analytics**, integrated into EnerKey, which identifies inefficient ventilation usage patterns. Another effective and valuable development is the **heating power analytics**, which compares the heating power demand of similar properties as a function of outdoor temperature. This has enabled the identification of properties with suboptimal heating system settings, even among those without remote-accessible building automation systems.

In 2024, **automated consumption alerts** have also been refined. Each property has been assigned specific alerts and thresholds for electricity, heating energy, and water consumption. The alert function triggers a notification if consumption changes beyond the set threshold on a daily, weekly, or monthly level. Regarding water consumption, an alert is also issued if the hourly consumption never drops to zero, indicating a potential water leak. Alerts are sent to the energy manager, the property manager, and the control room if the property is included in the monitoring service. The accuracy of alert thresholds is monitored and adjusted as needed at least annually, and new alert functionalities are being developed in collaboration with Enerkey.

Consumption alerts automatically generate a consumption comment in the Enerkey system. To streamline further processing, an integration with the property maintenance service request system (Granlund Manager) is planned in 2025.

10.4. UPDATING THE ENERGY MANAGEMENT HANDBOOK

This is the responsibility of the Director of Energy. The handbook will be updated as necessary in line with the decisions taken at the management inspection.



List of annexes

- 1. Content and results of the management inspection
- 2. Content and results of the internal review of the energy management system
- 3. Energy manager's quarterly meeting
- 4. Guidance on handling consumption deviations
- 5. History of changes



ANNEX 1: Content and results of the management inspection

Agenda

- 1. Opening of the meeting
- 2. Follow-up to the previous management inspection
- 3. Development of Kesko's energy consumption and energy efficiency indicators in the previous 12 months
 - a. Total group consumption
 - b. Consumption by chain and region
 - c. Addressing the key changes

4. Energy efficiency measures

- a. Summary of energy efficiency measures implemented in the previous 12 months (number, euros and MWh)
- b. Summary of ongoing energy efficiency projects
- c. Summary of known energy efficiency measure proposals
- d. Comparison of results and potential against the targets set in the Energy Strategy
- 5. Results of the internal review
- 6. Changes in the operating environment
- 7. Energy policy review
- 8. Resources for energy management
- 9. Monitoring and corrective measures

The Director of Energy is responsible for collecting the material needed for the management inspection.



ANNEX 2: Content and results of the internal review of the energy management system

Agenda

- 1. Opening of the meeting
- 2. Follow-up to the previous internal review
- 3. Evaluation of the functioning of the deviation management process and corrective actions
- 4. Evaluation of the functioning of the energy efficiency improvement process and corrective measures
- 5. Energy efficiency results against targets
- 6. Suggestions for improvement



ANNEX 3: Content of the energy manager's quarterly meeting

Agenda

1. Current issues for energy managers

- 2. Evolution of consumption and specific consumption (1 month and long-term changes)
 - a. by energy type (electricity and heat)
 - b. by chain
 - c. by region
 - d. comments from the energy manager on the situation
 - e. trend data for 36 months on the evolution of the rolling 12-month consumption period

3. Consumption alerts/deviations

- a. Significant consumption deviations in the reference period
- b. Energy manager's key points on consumption deviations
- c. Consumer comments on deviations: causes and follow-up measures

4. Management of energy efficiency

- a. Energy efficiency measures implemented (number, euros and MWh), broken down as per item 2
- b. Summary of known proposed measures based on EnerKey data
- c. If necessary, a proposal for sites to be inspected
- 5. Other matters



ANNEX 4: Detecting consumption deviations and finding their causes

In accordance with an agreed process, Enerkey's energy consumption monitoring for electricity and heat is reviewed monthly for deviations. In this process, EnerKey's consumption alarm function can be used or a monthly comparison report can be generated on selected sites. Quarterly explanations for deviations are reviewed as part of the energy manager's quarterly meetings. This review must have identified all significant deviations and identified the causes of the deviations or initiated the necessary further investigation.

For electricity, a change in consumption of at least 5 MWh and 5% of the consumption in the reference period OR at least 100 MWh is considered a significant deviation. For heating energy, the action threshold is 10%.

The reference period is both the change in consumption in a month compared to the corresponding month in the previous year AND the consumption in the rolling 12-month period compared to the previous rolling 12-month period.

ANNEX 5: Changes to the Energy Management Handbook

Version	Date	Description
1.0	1 Dec 2019	First version of the Energy Management System implemented
1.1	21 Jul 2021	Changes to the text in line with the revised ENE and PTS decision- making process, as well as changes to the text as decided in the management review.
1.2	22 May 2024	Updated targets in line with the new energy strategy and updated text in other areas
1.3	31 March 2025	Updated product development process description, alerts, and energy management partners