Energy Management System (EnMS) – The Alpina Gstaad

Location: The Alpina Gstaad, Switzerland
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Framework: ISO 50001:2018 | EarthCheck | The Alpina Sustainability Policy V1-2026 | Environmental Management System (EMS) | Annual Risk Assessment | Swiss Energy Act | Energy Ordinance | CO_2 Act | MuKEn (Canton Bern) | CSRD

1. Purpose and Scope

The purpose of the Energy Management System (EnMS) at The Alpina Gstaad is to establish a structured framework for measuring, monitoring and improving energy performance in a luxury Alpine hotel environment. The EnMS implements the energy and resource-efficiency requirements of The Alpina Sustainability Policy V1-2026 and operates as the specialist energy subsystem of the Environmental Management System (EMS).

- **Hotel operations:** accommodation, F&B outlets, Six Senses Spa, wellness and pools, events, laundry, housekeeping, gardens and technical infrastructure under hotel operational control.
- **Scope exclusion:** apartment/private residence operations are excluded in accordance with the Sustainability Policy unless a specific shared energy service is demonstrably under hotel operational control and separately accounted for.
- **Energy sources:** grid electricity, natural gas, geothermal, solar PV, hydropower and other material energy sources used by the hotel.
- **Emissions:** direct and indirect CO_2 emissions linked to hotel energy use and relevant energy services.

Energy consumption and carbon performance are therefore controlled in the EnMS and reported into the EMS and EarthCheck performance system using the same validated source data.

2. Sustainability Policy and Energy Commitments (Clause 5.2)

The Alpina Sustainability Policy V1-2026 is the overarching binding policy. It requires energy consumption to be managed as a controlled operational parameter, monitored against occupancy and activity, and investigated when deviations occur. The EnMS translates that requirement into energy review, baselines, EnPIs, operational controls, objectives and improvement actions.

- Reduce avoidable energy consumption across departments and facilities.
- Increase renewable/green energy use where technically and commercially appropriate.
- Meet applicable Swiss and Cantonal regulatory obligations.
- Integrate energy awareness into staff training, operational procedures, procurement and stakeholder communication.
- Maintain evidence-based reporting and traceable performance data.
- Continually improve energy performance using a structured Plan–Do–Check–Act approach.

The General Manager is accountable for policy implementation and resources. The EnMS does not replace or contradict the Sustainability Policy; it provides the detailed operating controls required to achieve its energy commitments.

3. Energy Review, Baseline and Risk Assessment

Baseline Year: 2024

3.1 Significant Energy Uses (SEUs)

- HVAC systems serving guest rooms, spa and public spaces.
- Pools and wellness facilities.
- Kitchens and food & beverage outlets.
- Laundry operations.
- Lighting in rooms and common areas.
- Electric vehicle charging and other new material electrical loads where separately measurable.

The 2024 baseline and subsequent reporting periods are reviewed using consumption data, occupancy/activity information and relevant climate factors. New or materially changed loads shall be identified so that operational growth or new services are not incorrectly interpreted as efficiency deterioration.

3.2 Annual Risk Assessment Interface

The hotel's Annual Risk Assessment is a mandatory input to the energy review and planning process. Energy-related risks are not maintained in a disconnected duplicate register. Instead, the EnMS cross-references applicable hotel risks and translates them into energy controls, monitoring or contingency actions.

- **Unexpected Operational Cost:** utility-price volatility, excessive consumption and unplanned technical expenditure are considered in objective setting and budget planning.
- **Hotel Poor Performance:** equipment failure, maintenance backlog and operational inefficiency are addressed through preventive maintenance and performance monitoring.
- **Fire in Electrical Equipment:** electrical loading, maintenance and equipment condition are incorporated into technical controls and emergency planning.
- **Severe Weather Events:** climate and weather conditions are considered where they materially affect heating/cooling demand, energy continuity or baseline interpretation.
- **Flooding and other technical emergencies:** energy infrastructure resilience and safe shutdown/recovery arrangements are considered where applicable.

The Sustainability Coordinator and Chief Engineer review the EnMS energy risks against the Annual Risk Assessment at least annually and following significant equipment, infrastructure or operational change.

3.3 Baseline Consumption (existing baseline)

- Electricity: 1,628,000 kWh.
- Natural Gas: 105,483 MJ.
- District heating: 1,979,350 kWh.

These baseline figures are retained from the existing EnMS and remain subject to validation through the hotel's controlled benchmarking methodology and source records.

4. Objectives and Action Plan (2025–2027)

Objective	Target	Responsible	Timeline	Explanation
Reduce electricity	−7% per guest night	Chief Engineer	2025–2027	Operational efficiency and cost control.
Reduce natural gas	−5% annual consumption	Engineering Dept.	2025–2027	Energy and CO_2 reduction.
Increase renewable share	From 20% → 30%	Sustainability Coordinator	By 2027	Support lower-carbon energy mix.
Install monitoring system	100% zone coverage	Engineering	Programme 2025–2027	Improve SEU control and data quality.
Pool & Spa efficiency	−10% kWh/guest night	Spa Manager	2026	High SEU requiring operational optimisation.
LED & sensors	100% public zones	Engineering	Programme	Reduce unnecessary lighting demand.
Guest engagement	80% participation	Green Team	2025–2026	Support responsible use without affecting guest comfort.
Staff training	100% completion	HR & Green Team	Annual	Embed energy awareness across operations.

Objectives shall be reviewed against actual EarthCheck performance, the Sustainability Policy, the Annual Risk Assessment and validated energy data. Where a target becomes outdated because of material changes in scope, new energy services or revised baselines, the change shall be documented and approved rather than silently replaced.

5. Roles & Responsibilities

- **General Manager:** strategic leadership, resources, Sustainability Policy accountability and Management Review.
- **Sustainability Coordinator / EnMS Manager:** coordinates EnMS documentation, reporting, EnPIs, EarthCheck alignment, EMS integration and risk review.
- **Chief Engineer:** technical systems, SEU monitoring, BMS operation, preventive maintenance, submetering and investigation of deviations.
- **Financial Controller:** supports validation of consumption and cost data in accordance with the Sustainability Policy.
- **Department Heads:** integrate energy controls into daily operations and explain operational drivers of significant variance.
- **Green Team / Bee Guardians:** awareness, staff engagement and support to internal verification and improvement activities.

6. Operational Controls

- **HVAC:** seasonal setpoints, BMS optimisation, maintenance and avoidance of uncontrolled override.
- **Spa & Pools:** heat recovery, reduced idle heating and controlled setpoints.
- **Kitchens:** shutdown/start-up protocols and efficient equipment scheduling.
- **Laundry:** efficient cycles, load management and heat recovery where applicable.
- **Lighting:** LED systems, motion controls and daylight strategies.
- **EV Charging:** separate monitoring/submetering where practicable so that mobility electricity is distinguishable from core hotel operational consumption.
- **Procurement:** energy performance considered in relevant equipment and service purchasing decisions.

Energy controls shall be aligned with EMS requirements where the same equipment or activity also creates environmental aspects such as air emissions, water consumption, waste, refrigerant risk or carbon emissions.

7. Monitoring, Measurement & Analysis

- Monthly review of invoices, meters and available submetering data.
- Investigation of unexplained or material deviations in accordance with the Sustainability Policy.
- kWh/guest night.
- kWh/m^2 floor area.
- Renewable/green energy share %.
- kg CO_2e/guest night.
- Separate indicators for material new loads, including EV charging, once reliable submetering is available.
- Benchmarking through EarthCheck and relevant internal/Swiss reference data.

Energy and carbon data used in the EnMS shall be the same validated data used in the EMS and EarthCheck reporting process. This ensures that one system does not report a different energy result from the other.

8. Internal Audits & Management Review

- Annual internal EnMS audit coordinated with the wider sustainability internal-audit programme.
- Non-conformities and observations documented with corrective actions, deadlines and responsible persons.
- Management Review chaired by the General Manager and integrating EnMS results, EMS environmental impacts, Sustainability Policy implementation, Risk Assessment status, legal obligations, KPI performance and budget priorities.
- Corrective actions verified for effectiveness before closure.

9. Continual Improvement

The EnMS action plan is reviewed annually. Improvement opportunities are identified through energy performance, audits, maintenance information, the Annual Risk Assessment, EarthCheck benchmarking, operational feedback and available Swiss/Cantonal incentive programmes. Relevant emerging technologies, including improved meters, controls and optimisation tools, are assessed where they offer a practical operational benefit.

10. Documentation & Records

EnMS documentation is maintained in accordance with The Alpina Record Keeping & Document Control Methodology and the Sustainability Policy. Records include baseline data, EnPI tracking, SEU analysis, invoices/source evidence, monitoring data, Risk Assessment cross-references, audit results, training records, corrective actions and improvement-project files.

Controlled documents shall identify version, approval status and applicable year. Where a valid document continues from a prior year, a controlled copy shall be placed in the current applicable folder while the historical record is retained. The minimum internal retention period is five years unless a longer legal, contractual or certification requirement applies.

11. Integration with the Environmental Management System (EMS)

The EnMS is the detailed energy-control component of the EMS. The EMS identifies energy use and CO_2 emissions as environmental aspects and maintains overall environmental governance; the EnMS defines the energy baseline, SEUs, EnPIs, operational controls and energy improvement actions needed to manage those aspects effectively.

Information flows in both directions. EMS legal, environmental and risk requirements that affect energy are incorporated into the EnMS. EnMS performance, energy risks, carbon impacts and corrective actions are reported back into the EMS and Sustainability Policy review. Common data, common governance and coordinated audits are used to prevent duplication or conflicting targets.

12. Alignment with ISO 50001:2018 and Alpina Governance

The EnMS continues to follow the existing ISO 50001 structure for scope, policy, objectives, energy review, EnPIs, baseline, competence, operational control, procurement, monitoring, Management Review and continual improvement. The 2026 revision adds explicit linkage to the Sustainability Policy, EMS and Annual Risk Assessment so that energy management is demonstrably part of the hotel's wider controlled governance system rather than a standalone document.

13. EnMS Cross-Reference Matrix

Requirement	Alpina Implementation	Evidence Required	Audit Risk if Missing
Scope	Hotel operations only; apartments excluded under Sustainability Policy	Scope statement + meter boundary	Incorrect baseline / blind spots
Sustainability Policy	Energy commitments derived from V1-2026 Policy	Approved Policy + communication	EnMS not aligned with governance
EMS Integration	Energy/CO_2 aspects controlled in EnMS and reported into EMS	Cross-reference + common data	Duplicated/conflicting systems
Risk Assessment	Energy risks cross-checked with Annual Risk Assessment	Risk Assessment + action links	Uncontrolled energy risk
Objectives	SMART energy targets reviewed against actual performance	Action Plan + KPI records	Weak or outdated targets
Energy Review	Baseline, SEUs, relevant variables and material new loads	Review + source evidence	Misleading performance
EnPIs	kWh/guest night, kWh/m², renewable share, CO_2e/guest night	KPI dashboard	No measurable improvement
Operational Control	HVAC, spa, kitchens, laundry, lighting, EV charging	SOPs + BMS/meter records	Operational drift
Monitoring	Invoices, meters, submetering and variance investigation	Monitoring reports	No reliable data
Review & Improvement	GM review integrating EMS, risk and policy	Minutes + project files	Paper system / no improvement

The list of tasks does not claim to be complete. Day-to-day hotel operations, applicable legislation, EarthCheck requirements, the Sustainability Policy, EMS controls and material energy risks remain the focus of management action.

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