

Energy Management and Audits (Head Office Building)



The Company places strong emphasis on the sustainable management of resources, with a commitment to continuously improving energy efficiency to maximize benefits. Accordingly, the Company has implemented and certified its Energy Management System for the office building in accordance with the Energy Conservation Promotion Act B.E. 2535 (and its amendment B.E. 2550), through a data-driven energy audit process. The system has been independently verified and certified by Syden Co., Ltd., an accredited third-party verifier recognized by the Department of Alternative Energy Development and Efficiency (DEDE).

This process enables the Company to accurately identify areas of significant energy consumption and leads to the development of concrete energy efficiency improvement measures. The Company continuously monitors performance results and integrates them into its energy performance indicators and greenhouse gas management framework, supporting energy reduction and greenhouse gas reduction, and contributing to the Net Zero Emission target by 2050.

Energy Management Audit Scope Covers 8 Steps as Follows:

1. Energy management team: establishment of roles, structure, and responsibilities in written form
2. Initial energy management assessment: conducted based on data-driven and evidence-based information
3. Energy conservation policy: approved by top management and communicated within the organization
4. Energy performance assessment: identification of significant energy consumption areas
5. Target setting, action plans, and training: preparation of energy reduction plans and training programs
6. Implementation and monitoring: execution of measures and performance tracking against energy targets

7. Internal energy audit: conducted at least once per year
8. Management review and corrective actions: continuous review and system improvement to enhance energy performance

Audit Findings

Based on document review, operational evidence, and interviews with relevant personnel, the Company has implemented energy management activities covering all 8 steps of the defined energy management framework. Evidence is provided for each step, including establishment of the energy management team, policy development, energy assessment, target setting and planning, implementation of measures, performance monitoring, and continuous system improvement.

The Company has achieved energy savings of approximately 55,136.72 kWh following the implementation of improvement measures. Energy performance is continuously monitored within the Company's energy management system, and results are linked to energy performance indicators and greenhouse gas management to support sustainable energy efficiency improvement.

In addition, the audit has provided recommendations and improvement opportunities to further enhance energy efficiency, including:

1. Optimization of a 131 TR chiller system, which was found to operate at 1.630 kW/ton under 30% load conditions, indicating inefficiency during low-load operation
2. Installation of sub-metering systems in major energy consumption areas to enable more detailed energy monitoring and analysis
3. Review of significant energy-consuming equipment to improve coverage and completeness of energy data, and to support prioritization of future energy efficiency improvement measures

Energy Management System Verification and Certification (Ratchaburi Power Plant)

As the principal power plant of the Group, Ratchaburi Power Plant places strong emphasis on enhancing energy efficiency in its power generation processes. The plant has implemented and maintained an Energy Management System in strict compliance with the Energy Conservation Promotion Act B.E. 2535 (and its amendments). The system is operated under an 8-step framework, covering from the establishment of an energy management team and energy performance assessment to continuous system review and improvement.

The audit process focuses on the evaluation of energy performance in core generation processes (Core Process Energy Audit) and key plant equipment. The system has been audited and verified by More Business Co., Ltd., an accredited verifier certified by the Department of Alternative Energy Development and Efficiency (DEDE), to ensure that empirical data is used to improve heat rate and reduce internal electricity consumption (Auxiliary Power Consumption).

Audit Results

Based on document reviews, operational evidence, and interviews with relevant personnel, it was found that Ratchaburi Power Plant implements energy management activities covering all required processes under the established framework, with a focus on improving energy efficiency in power generation processes and reducing internal electricity consumption (Auxiliary Power Consumption). The plant has implemented an energy conservation plan with a total targeted energy saving of 6,280,324.6 kWh per year, equivalent to cost savings of approximately THB 19 million per year. The plant has successfully achieved the planned energy savings target through three main initiatives:

1. **Standby Charge Reduction Project:** delivering the highest energy savings of more than 3.86 million kWh per year
2. **Air Compressor Cooling System Improvement Project:** reducing reliance on the Aux. Cooling RGC-C20 system and achieving energy savings of approximately 2.14 million kWh per year
3. **Main Cooling System Efficiency Improvement Project:** extending the exercise interval from every 7 days to every 14 days, resulting in energy savings of approximately 0.28 million kWh per year

The outcomes of these energy efficiency measures have been integrated into the Company's Corporate KPIs and greenhouse gas (GHG) management framework to support continuous improvement in energy efficiency and GHG emissions reduction, contributing to the Company's Net Zero Emissions target by 2050.