



Global energy-related CO2 emissions grew by 1.4% in 2017, reaching a historic high of 32.5 gigatonnes

- THE CBE APPROACH
- ISO 50001 ENERGY MANAGEMENT SYSTEM
- BENEFITS OF ISO 50001:2018
- STRATEGIC ENERGY MANAGEMENT
- NEXT STEPS

HOW CAN YOU REDUCE ENERGY COSTS?

ENHANCE ENERGY MANAGEMENT WITH ISO 50001:2018

BE THE BENCHMARK

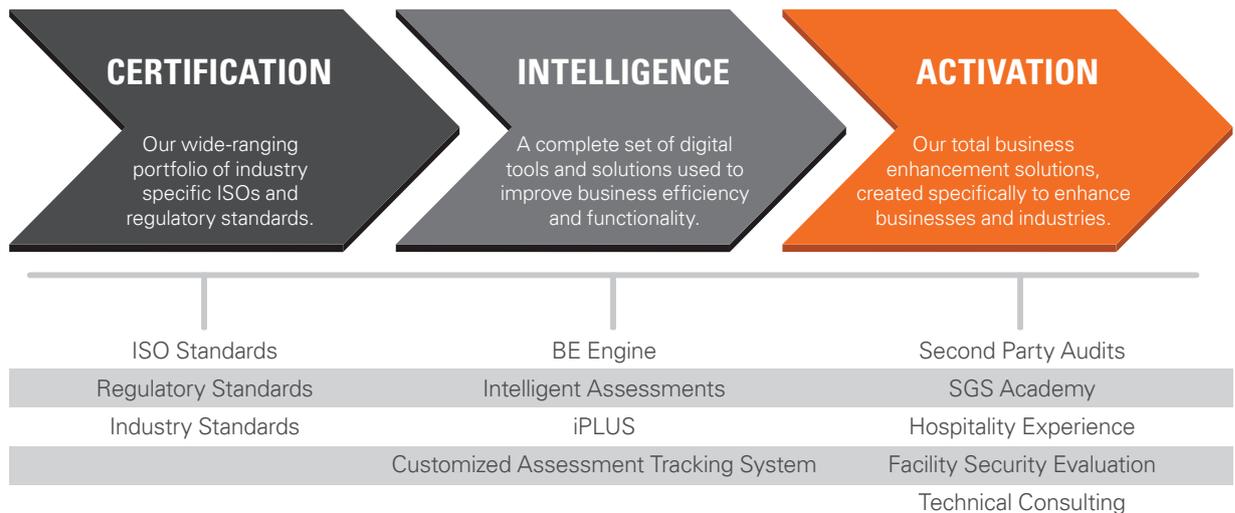


THE CERTIFICATION AND BUSINESS ENHANCEMENT APPROACH

Organizations today are met with a variety of operational and business challenges. External forces, like competitors and regulatory bodies, also add a secondary level of pressures that must be anticipated. Additionally, both B2B and B2C firms are experiencing a large influx of customer data, across multiple touchpoints. The dividing factor between those who are successful and those who are not, is how they analyze and use that data for business enhancement. At SGS, we have developed a variety of solutions to not only meet these needs, but establish more efficient and profitable ways of working. Using our 140 years of experience and operational data set, we partner with clients to gain intelligent insights into their current business functions while simultaneously strategizing for the future. To meet the needs of our current customers and provide effective and modern solutions to current and future business issues, we offer three pillars of insights driven, customizable products and solutions.

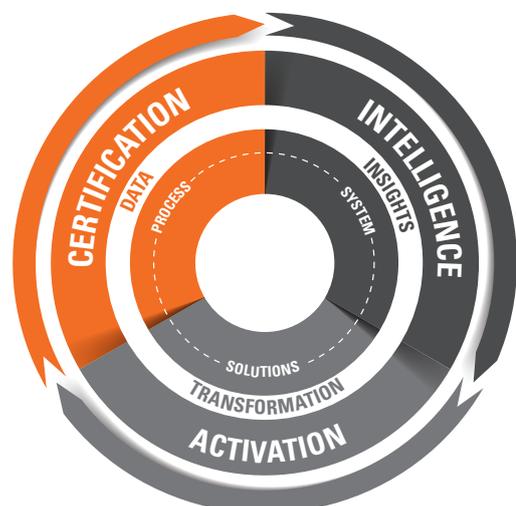
SGS BUSINESS BENEFITS

-  Deliver innovative solutions and services that enhance businesses
-  Offer customized solutions, driven by proprietary insights
-  Provide services fundamental to ongoing success and sustained growth
-  Enable continuous improvement
-  Transform value chains



THE BUSINESS ENHANCEMENT PLATFORM

For decades, SGS has been known as the global leader in certification, working with clients in virtually any sector. This deep and broad experience in quality control management, regulatory compliance, and training has resulted in a staggering array of data points across industries. Utilizing this dataset, we have evolved our service offerings to include Business Enhancement—the process of transformation that improves or increases the value of an organization’s people, processes, product or service. Our Business Enhancement solutions offer the most up to date, practical insights to help you achieve your goals and ultimately BE the Benchmark.



ISO 50001:2018 ENERGY MANAGEMENT SYSTEM

ISO 50001:2018, Energy Management System (EnMS) – requirements with guidance for use, specifies requirements for establishing, implementing, maintaining and improving an energy management system. The aim is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance, including energy efficiency, use and consumption.

Broad implementation of the ISO 50001:2018 standard across the commercial and industrial sectors could achieve significant energy savings for individual organizations, while driving progress towards meeting climate actions globally.

ENMS QUICK FACTS

Earth's temperature in 2017 ranked as the 2nd warmest since 1880, causing an increase in extreme climate events such as:

-  Heat wave
-  Droughts
-  Sea ice coverage depletion
-  Blizzard
-  Cyclones
-  Increase in ocean acidity
-  Heavy rainfall
-  Rise in sea levels
-  Increase in concentration of atmospheric CO₂

CHANGES OVERVIEW FROM ISO 50001:2011 TO ISO 50001:2018

ISO/TC 301 Energy management and energy savings Technical Committee indicated the main changes compared to the previous edition include:

Adoption of the Annex SL Appendix 2, High Level Structure (HLS) text	Identification of risks and opportunities	Strategic Energy Management
Better energy understanding/further opportunities identifications	Actions to address risks and opportunities	Leadership
Energy data collection plan and related requirements (previously energy measurement plan)	Energy Review has been clarified	Risk-based thinking
		EnPI and EnB text
		Documentation

ISO 50001:2018 DEVELOPMENT PROCESS TIMELINE



THE BENEFITS OF ISO 50001:2018

ISO 50001:2018 transforms the way organizations manage energy, offering a systematic approach with sustaining results. The standard has value both as a best practice model for strategic management of energy and as a global benchmark for climate and clean energy action.

ISO 50001:2018 is:



Business-friendly: Impressive savings based on a proven management framework;



Globally relevant: Developed by over 50 countries; many of whom have implemented supporting policies and programs;



Transformational: Embeds best practices into any organization, allowing efficiency and productivity gains to endure and grow.

According to ISO, available evidence shows that organizations adopting the ISO 50001:2018 standard benefit from initial energy improvements of 10% or more and achieve net cost savings, mostly through low cost or no cost changes to operations.



HIGH LEVEL STRUCTURE (ANNEX SL)

Annex SL is now the required framework for all new and revised ISO Management Systems Standards. The clause structure specified in Annex SL are below:

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Context of the organization
- 5 Leadership
- 6 Planning
- 7 Support
- 8 Operation
- 9 Performance evaluation
- 10 Improvement

ISO 50001:2018 PDCA FRAMEWORK

Energy management is based on the **Plan Do Check Act (PDCA)** continual improvement framework and incorporates energy management into existing organizational practices as the figure shows. The PDCA approach can be outlined as follows:



PLAN

Understand the context of the organization, establish an energy policy, an energy management team, consider actions to address risks and opportunities, conduct the energy review, identify significant energy uses (SEUs) and establish the energy performance indicators (EnPIs), energy baseline(s) (EnBs), objectives and energy targets, and action plans necessary to deliver results that will improve energy performance in accordance with the organization's energy policy.



DO

Implement the action plans, operational and maintenance controls, and communication, ensure competence and consider energy performance in design and procurement.



CHECK

Monitor, measure, analyze, evaluate, audit and conduct management review(s) of energy performance and the EnMS.



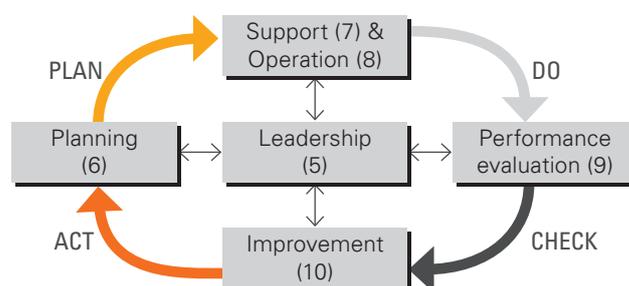
ACT

Take actions to address nonconformities and continually improve energy performance and the EnMS.

CONTEXT OF THE ORGANIZATION (4)

Internal & external issues (4.1)

Needs & expectations of interested parties (4.2)



Intended outcomes of the EnMS

PLANNING

Energy planning provides the foundation for developing an EnMS that is based on an understanding of an organization’s energy performance. This is the step where the organization’s analysis of its energy data, along with other energy information is used to make informed decisions on actions to continually improve energy performance.

Planning is:

- Review of the organization’s activities and processes that can affect energy performance.
- Consistent with the energy policy and that lead to continual improvement of energy performance.

This figure provides a conceptual diagram to improve understanding of the energy planning process, including both strategic and tactical approaches.

- **Strategic approach** needs to identify the risks and opportunities. Input information includes internal and external issues and the needs and expectations of interested parties.
- **Tactical approach** is conducting energy review majorly. The input information are energy data.

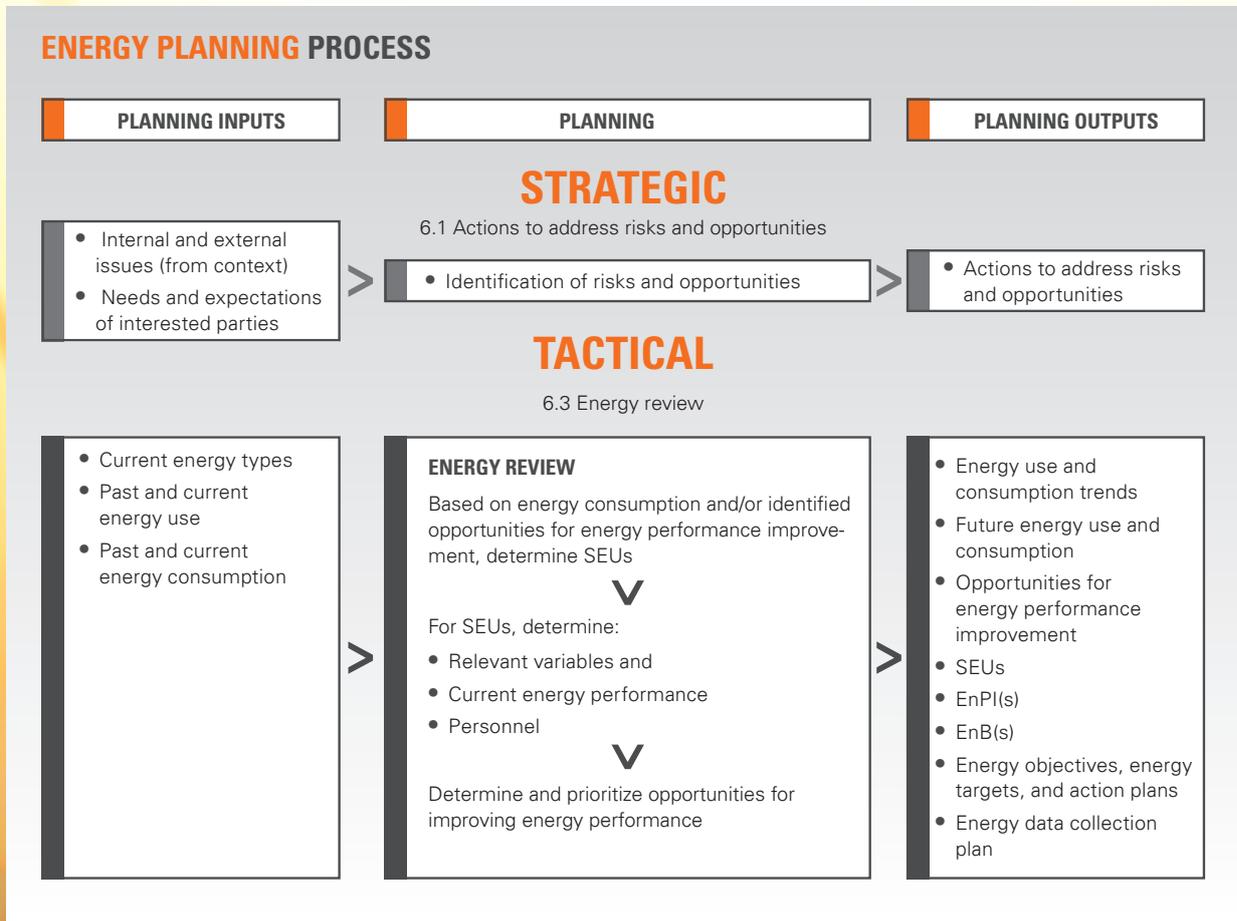
STRATEGIC ENERGY MANAGEMENT

There is a new requirement (cl. 4.1) to understand the context of the organization, determining external and internal issues relevant to achieve the intended outcome(s) of its EnMS and to improve its energy performance.

When determining organizational context, the organization shall consider their activities and processes that can affect energy performance.

Particular focus now on the needs and expectations of interested parties that can affect, or be affected by, the organization. In this context the organization shall identify and determine actions to address risk associated with threats and opportunities, in addition to significant energy use and compliance obligations.

Most importantly, by embedding strategic energy management as an integral business practice, companies ensure that energy efficiency opportunities are continually realized and energy gains endure and grow over time.



ACTIONS TO ADDRESS RISKS AND OPPORTUNITIES

DETERMINE THE RISKS AND OPPORTUNITIES THAT NEED TO BE ADDRESSED TO:

- Achieve its intended outcomes(s), including energy performance improvement
- Prevent/reduce undesired effects
- Achieve continual improvement

CONSIDER THE ISSUES REFERRED TO:

- Internal and external issues
- Needs and expectations of interested parties
- The organization's activities and processes that can affect energy performance

AN ORGANIZATION SHALL PLAN:

- Actions to address the identified risks and opportunities
- How to integrate and implement the actions into its processes and evaluate the effectiveness of these actions

NEXT STEPS

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WHITEPAPER**

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WEBINAR**

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ENERGY@SGS.COM**

COCA-COLA BOTTLING EGYPT (CCBE) CASE STUDY



ABOUT COCA-COLA BOTTLING EGYPT (CCBE)

CCBE is the largest soft drinks bottler in the Middle East Region. CCBE focuses their effort on protecting and preserving the planet, which requires attention to areas such as water, energy use, packaging and emissions. As part of the Coca-Cola Company's commitment to sustainability, it encourages its bottling partners to do the same. Therefore all of CCBE's new machinery and equipment is environmentally friendly.



WHY AN ENERGY MANAGEMENT SYSTEM CERTIFICATION?

To further improve and demonstrate to stakeholders its on-going commitment to energy management, CCBE turned to SGS for certification against ISO 50001.



BENEFITS OF CERTIFICATION

The systematic approach to energy saving that ISO 50001 brings helped CCBE focus on the benefits that continual energy savings can offer. After implementing ISO 50001, CCBE now has several initiatives in place as part of an on-going improvement programme for energy performance, efficiencies, use and consumption.

CONTACT SGS

To speak to an SGS expert about initiating your ISO 50001:2018 certification journey, contact us today.



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WHEN YOU NEED TO BE SURE