

Summary of changes between EN 16001:2009 and ISO 50001:2011

Clause Title		ISO 50001:2011	EN 16001:2009
1	Scope	ISO 50001 refers to continual improvement of energy performance, including energy efficiency, energy use and consumption.	EN 16001 refers to continual improvement of its energy efficiency.
2	Terms and Definitions	ISO 50001 includes new definitions for boundaries, correction, energy baseline, energy management team, energy review, energy services, scope and significant energy use.	The following definitions in EN 16001 are now removed: energy aspect, energy factor and energy management programme
4.1	General requirements	No significant change between standards. 4.1 c) refers to energy performance	
4.2.1	Top management	This new clause clearly specifies the role of top management.	The role was addressed in various clauses of EN 16001.
4.2.2	Management representative	This new clause refers to "appropriate skills and competence" and outlines the responsibility and authority of the role.	The responsibility and authority or the role has been expanded from the role specified in clause 3.4.2 of EN 16001.

NSAI

Contact certification@nsai.ie for further details

4.3	Energy policy	<p>Generally the requirements are similar but clause 4.3 f) requires that the policy “supports the purchase of energy-efficient products and services, and design for energy performance improvement”.</p> <p>The requirement that the policy shall define the scope and boundaries of the energy management system is not required in ISO 50001.</p> <p>ISO 50001 does not require the policy to be made publicly available.</p>	<p>EN 16001 requires the policy to be made publicly available.</p>
4.4.1	Energy planning - General	<p>ISO 50001 includes a new requirement to document an energy planning process.</p>	<p>EN 16001 refers to a review of energy aspects at predefined intervals.</p>
4.4.2	Legal requirements and other requirements	<p>ISO 50001 refers to energy use, consumption and efficiency.</p> <p>There is a requirement to review these requirements at defined intervals.</p>	<p>EN 16001 refers to energy aspects.</p>

4.4.3	Energy review	<p>ISO 50001 includes a requirement to document the methodology and criteria used to develop the review and to update the review as a result of major changes in facilities, equipment, systems or processes.</p> <p>Part b) requires identification of other variables affecting significant energy uses</p>	EN 16001 refers to energy aspects.
4.4.4	Energy baseline	This is a new clause. This is established using data from the initial energy review.	This is not addressed in EN 16001.
4.4.5	Energy performance indicators	This is a new clause in ISO 50001.	Energy performance indicators are the equivalent of 'energy factors' in EN 16001.
4.4.6	Energy objectives, energy targets and energy management action plans	<p>ISO 50001 refers to action plans.</p> <p>Additional requirements include:</p> <ul style="list-style-type: none"> ○ a statement of the method by which an improvement in energy performance shall be verified ○ a statement of the method of verifying the results. 	EN 16001 refers to management programmes.

4.5.1	Implementation and operation - general	<p>This is new clause and links the outputs from the planning process to implementation and operation.</p> <p>The requirement to <u>define and document</u> roles and responsibilities has been removed.</p>	<p>This clause replaces EN 16001 clause 3.4.1 Resources, roles, responsibility and authority.</p>
4.5.2	Competence, training and awareness	<p>Competence focus is limited to person(s)...related to significant energy use.</p> <p>ISO 50001 requires awareness of the benefits of improved energy performance.</p> <p>ISO 50001 does not require that each level of management is trained.</p> <p>ISO 50001 addresses the role of the management representative in clause 4.2.2</p>	<p>Competence focus is limited to person(s)...related to significant energy use as opposed to persons who could have a significant impact on consumption in En 16001.</p> <p>EN 16001 requires awareness of the benefits of improved energy efficiency.</p> <p>EN 16001 addresses the role of the management representative in clause 3.4.2.</p>

NSAI

Contact certification@nsai.ie for further details

4.5.3	Communication	<p>ISO 50001 requires a process for persons to "make comments or suggest improvements"</p> <p>Requirement to document an external communication plan is dropped.</p>	<p>EN 16001 requires personnel to take an "active part in the energy management and the improvement of the energy performance."</p>
4.5.4.1	Documentation requirements	<p>ISO 50001 is more prescriptive about the documentation required within the management system.</p> <p>Note added regarding the appropriate degree of documentation required.</p>	
4.5.4.2	Control of documents	<p>ISO 50001 is more prescriptive about the document control and a procedure is required.</p>	<p>EN 16001 addresses the control of document and records in clause 3.4.5.</p>
4.5.5	Operational control	<p>Maintenance activity added in operational control Requirements.</p> <p>ISO 50001 refers to operations and maintenance activities associated with significant energy uses.</p> <p>Note added regarding emergency planning.</p>	<p>EN 16001 addresses operational control associated with significant energy aspects.</p>

4.5.6	Design	This is a new clause.	Design was mentioned in clause 3.4.6 d) of EN 16001.
4.5.7	Procurement of energy services, products, equipment and energy	This is a new clause. ISO 50001 addresses the procurement of <u>energy using products</u> , equipment and services.	EN 16001 addresses this in clause 3.4.6 c EN 16001 addresses the purchase of equipment, <u>raw materials</u> and services.
4.6.1	Monitoring, measurement and analysis	The focus is on measurement of specific indicators of performance ISO 50001 refers to an energy measurement plan. ISO 50001 refers to variables and performance used instead of factors and consumption in En 16001 ISO 50001 includes Energy Performance Indicators, EnPIs ISO 50001 requires an organization to “investigate and respond to significant deviations in energy performance”.	EN 16001 refers to an energy metering plan. EN 16001 refers to factors and consumption EN 16001 requires an organization to maintain records of all significant accidental deviations from expected energy consumption,

NSAI

Contact certification@nsai.ie for further details

		ISO 50001 does not require benchmarking of its' energy performance against similar organizations.	including causes and remedies.
4.6.2	Evaluation of compliance with legal requirements and other requirements	ISO 50001 requires that compliance be evaluated at planned intervals.	EN 16001 requires that compliance be evaluated periodically.
4.6.3	Internal audit of the EnMS	ISO 50001 has removed the following requirement: "The management responsible for the area being audited shall ensure that actions are taken without undue delay... etc"	
4.6.4	Nonconformities, correction, corrective action and preventive action	ISO 50001 is more prescriptive in the requirements.	
4.6.5	Control of records	There is no significant change.	
4.7	Management review	There is no significant change.	