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# HKCAS Supplementary Criteria No. 10

## Accreditation Programme for Energy Management System (EnMS)

### Certification

#### 1 INTRODUCTION

- 1.1 HKAS accreditation for energy management system certification is provided under Hong Kong Certification Body Accreditation Scheme (HKCAS) and is open for voluntary application from any certification body offering third-party certification for energy management system to ISO 50001 for technical areas as defined in Appendix C of this document or energy management system in respect of a certification scheme. The certification scheme shall satisfy the criteria set out in HKCAS SC-11.
- 1.2 Specific accreditation requirements for EnMS certification include HKCAS 003 and ISO 50003.
- 1.3 The normative documents listed in Appendix B form part of the accreditation requirements of this document. For dated references, only the edition cited applies. For undated references, the latest editions (including any amendments) apply.
- 1.4 Applicant or accredited certification bodies shall take note of the accreditation process stipulated in HKCAS AP001 and Appendix A of this document.
- 1.5 Accreditation of a certification body for a particular management system certification is an attestation that the certification body is competent in offering a third-party certification service on that management system for which it is accredited in accordance with the accreditation criteria. An accredited certification body shall comply with the relevant accreditation criteria at all times for maintaining accreditation. Nevertheless, accreditation is not a guarantee that an accredited certification body will

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carry out its accredited activities in accordance with the relevant accreditation criteria all the time. Furthermore, accreditation is not a guarantee that any organisation certified by an accredited certification body is in conformity with all certification requirements. HKAS does not endorse, sanction or approve in any way, any organisation certified by any accredited certification body. Conversely, failure to obtain certification from an accredited certification body does not imply that HKAS has refused to endorse, sanction or approve in any way the organisation to be certified.

## **2 TERMS AND DEFINITIONS**

- 2.1 For the purposes of this document, the terms and definitions given in ISO 50003 apply. For applicant and accredited certification bodies offering certification services to ISO 50001, the terms and definitions given in ISO 50001 also apply.
- 2.2 The term “assessment” refers to the process in which HKAS Executive assesses the competence of a certification body while the term “audit” refers to the process in which a certification body evaluates the conformity of an organisation with the certification criteria.
- 2.3 The term “shall” is used throughout this document to indicate those provisions which are mandatory. The term “should” is used to indicate guidance which, although not mandatory, is provided by HKAS as a recognised means of meeting the requirements.
- 2.4 In this document, the term “lead auditor” is used. It has the same meaning as the term “audit team leader” which is used in HKCAS 003.

## **3 GENERAL REQUIREMENTS**

- 3.1 There shall be a contract signed between the client organisation and the applicant or

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accredited certification body to confer the certification body the authority to carry out its responsibility in accordance with HKCAS 003. The contract shall also confer the applicant or accredited certification body the authority to carry out its responsibility in accordance with this document.

## **4 RESOURCE REQUIREMENTS**

- 4.1 An applicant or accredited certification body shall have at least one competent auditor or audit team in every area (classified in accordance with Appendix C) for which it has applied or is holding current accreditation.
- 4.2 An applicant or accredited certification body shall define the competence criteria and the pre-requisite levels of education, work experience and training for personnel responsible for each certification function, such as conducting contract review, selecting and verifying the competence of EnMS auditors, auditing, leading the audit team, reviewing audit reports and making certification decisions. The requirements in Annex A of HKCAS 003 and the competence requirements for the auditor(s) and personnel involved in the EnMS certification process as defined in ISO 50003 shall be applied. The certification body shall demonstrate that its personnel is evaluated against such competence criteria through a proper appraisal system, and evidence of the competence of its personnel shall be kept.
- 4.3 An applicant or accredited certification body shall have a process to ensure that the audit team is composed of auditors with appropriate competence for conducting an EnMS audit. The audit team shall have appropriate technical knowledge and knowledge of the requirements on energy management or energy utilisation laid down by the relevant regulatory bodies applicable to the client organisation which it audits.
- 4.4 The audit of a client organisation shall be performed by an audit team consisting of a lead auditor and where necessary, auditor(s) and technical expert(s). When the audit is

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conducted by a team (more than one auditor), the level of skills required shall be held within the team as a whole. The team shall have sufficient knowledge and expertise and appropriate work experience required to audit all relevant EnMS activities of the organisation, including developing energy review, establishing energy baseline, identifying Energy Performance Indicator (EnPI) and legal requirements and other energy-related requirements such as agreements with customers and voluntary programmes, knowledge of design and procurement activities related to energy performance, calibration of equipment, and energy measurement and analysis.

- 4.5 An applicant or accredited certification body shall ensure that its lead auditors and auditors have successfully completed appropriate training on audit technique based on ISO 19011.
- 4.6 Technical experts may be included in the audit team to provide technical support to the team. Technical experts need not be trained on auditing techniques but they shall possess the necessary qualification, experience and technical knowledge on the activities to be audited. During an EnMS audit, technical experts shall work under the direction and close supervision of a qualified lead auditor or auditor.
- 4.7 The audit team may include a trainee auditor who works under the close supervision of a qualified lead auditor or auditor. The trainee auditor shall not be assigned the full responsibility of a qualified auditor.
- 4.8 An applicant or accredited certification body shall identify and evaluate the training needs of its personnel and provide them with the necessary training, such as up-to-date knowledge in operation of energy management system, control of significant energy uses, EnMS standard and other relevant normative documents, HKAS accreditation criteria, and skills in auditing. After training, the competence of the personnel involved in EnMS certification activities shall be evaluated.
- 4.9 Certification decisions may be made by a staff member or a committee. In case the

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certification decision is made by a committee, the applicant or accredited certification body shall ensure that the committee members who make the decision on granting/withdrawing a certification shall have a level of knowledge and experience sufficient for making a sound decision based on the results or information obtained from the auditing processes. The certification body shall also have documented procedures and criteria for the committee to make certification decisions and the committee members shall be trained on the decision criteria. Detailed records of the factors considered by the committee and the deliberation shall be kept. Performance of the committee shall be monitored.

- 4.10 An applicant or accredited certification body shall implement a system to monitor the performance of its personnel involved in the EnMS audit, including lead auditors, auditors and technical experts. On-site performance evaluation shall be performed for every auditor and lead auditor at least once every three years. The evaluation shall cover all aspects of the activities that the auditors have been authorised by the certification body to perform. Corrective actions shall be taken if there is any doubt on their competence.

## **5 INFORMATION REQUIREMENTS**

- 5.1 An applicant or accredited certification body shall include the name and geographic locations of a certified organisation covered by a certification in a certification document. The activities carried out in each geographic location covered by an EnMS certification shall also be clearly specified in the certification documents.
- 5.2 An applicant or accredited certification body shall ensure that the scope and boundaries of the EnMS are clearly defined by the top management of the client organisation and stated in the certification document unambiguously. Suitability of the scope and boundaries shall be confirmed by the certification body in each audit.

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## 6 PROCESS REQUIREMENTS

- 6.1 An applicant or accredited certification body shall specify the information to be provided by a client organisation applying for certification. Upon receiving an application, the certification body shall review and check whether the organisation has provided sufficient information and shall ask for supplementary information where necessary. To facilitate the submission of application by the client organisation, the certification body should provide an application form listing all the required information.
- 6.2 An applicant or accredited certification body shall confirm the suitability of the scope and boundaries in each audit in accordance with ISO 50003.
- 6.3 An applicant or accredited certification body shall have an effective system to enable the analysis of its own competencies in energy management and the corresponding audit work to ensure that it has the required competence for each technical area in the certification process. Such competence analysis shall be conducted by the certification body for each client organisation before performing the contract review. Details of the analysis and the outcome shall be recorded.
- 6.4 For the stage 1 audit, an applicant or accredited certification body shall include an on-site visit at a client organisation's premises including both permanent location(s) and temporary site(s) where the organisation performs its activities unless there are justifications for not doing so, e.g. all important information relevant to the EnMS certification of the client organisation has been collected in another audit conducted by the certification body recently.
- 6.5 An applicant or accredited certification body shall audit a client organisation's EnMS documentation in the stage 1 audit to determine whether and when the organisation is ready for the stage 2 audit. The certification body shall determine the interval between stage 1 and stage 2 audits and shall only conduct stage 2 audit after the findings

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identified in the stage 1 audit have been adequately resolved by the organisation. As in general, the organisation will need some time to adequately resolve findings identified in the stage 1 audit, scheduling the stage 1 and stage 2 audits back to back is not recommended. The interval between stage 1 and stage 2 audits and its justification shall be recorded. The certification body should repeat stage 1 audit if changes to a client organisation's EnMS have rendered the information collected in the original stage 1 audit invalid.

- 6.6 Where parts of a client organisation's EnMS have been confirmed to be in conformity with the certification criteria in the stage 1 audit, they need not be re-audited in the stage 2 audit. However, an applicant or accredited certification body shall in the stage 2 audit verify that no substantial changes have been made to those parts. For such cases, the stage 2 audit report shall state clearly that conformity of those parts has been established during the stage 1 audit.
- 6.7 An applicant or accredited certification body shall have documented procedures for determining the amount of time required for any initial audit (stage 1 and stage 2), surveillance audit and re-certification audit in accordance with ISO 50003. The certification body shall ensure that the audit team have sufficient time to cover all relevant elements in accordance with ISO 50001 requirements at each audit stage. The justification and calculations for the determination of the audit time, including duration of the audit, shall be provided to the client organisation as part of the contract and make it available to HKAS assessment team.
- 6.8 The EnMS audit may be combined with the audits of other management systems, for example, quality management system (QMS) and environment management system (EMS) provided that an applicant or accredited certification body can demonstrate that the EnMS audit complies with all requirements of ISO 50003 and all relevant HKAS accreditation criteria.
- 6.9 Where an applicant or accredited certification body offers multiple-site certification,

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the certification body shall have documented procedures for multiple-site sampling audit in accordance with ISO 50003. The certification body shall record the justification for the sampling plan of a multiple-site sample audit.

- 6.10 To ensure consistent quality of audits, an applicant or accredited certification body shall have documented procedures, criteria and quality assurance measures for all certification schemes it operates. In particular, the certification body shall implement a system to ensure that certification activities are operating effectively and certification decisions are made by parties not involved in the audit.
- 6.11 During each audit, an applicant or accredited certification body shall evaluate whether the client organisation has appropriate process for ensuring the competence of all persons who work under the control of the client organisation and affect the energy performance of the client organisation. The system of the organisation for ensuring that such activities are implemented, operated and maintained properly shall also be examined carefully. The audit teams of the certification body shall have the required expertise to carry out such competence evaluation and have devoted sufficient time to carry out the evaluation properly.
- 6.12 An applicant or accredited certification body shall ensure that the client organisation has established an appropriate interval for reviewing and evaluating compliance with legal requirements and other energy-related requirements to which the client organisation subscribes. The certification body shall also evaluate whether the organisation has appropriate processes in place and has assigned duties and responsibilities of personnel to implement the actions needed for complying with any updated requirements.
- 6.13 An applicant or accredited certification body shall evaluate whether the client organisation has conducted relevant analysis of energy use and consumption, has appropriately identified the areas of significant energy use and the opportunities for improving energy performance, and has developed and documented the methodology

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and criteria for prioritizing opportunities for improving energy performance.

- 6.14 An applicant or accredited certification body shall ensure that the client organisation has developed a process for collecting and recording consistent and reliable data related to energy management at appropriate frequency, for example, annually. The certification body is recommended to consider the industry best practices in evaluating such time intervals, and record the justification for accepting the frequency. The certification body shall ensure that the client organisation has defined and documented details such as identification of required data, roles and responsibilities of personnel involved in the process, frequency of collecting data, data source and storage location, methods of recording data, and verification of data.
- 6.15 The applicant or accredited certification body shall ensure that the client organisation uses recent and reliable data to establish the energy baseline, and periodically review the energy baseline to determine if adjustments are required.
- 6.16 An applicant or accredited certification body shall ensure that the client organisation has selected and used appropriate methods or models for calculating EnPIs. Reference to international practices such as ISO 50006 should be made as far as possible.
- 6.17 An applicant or accredited certification body shall ensure that the client organisation has determined other variables such as weather, seasonal effect and operating schedule that can significantly affect an EnPI. The certification body shall ensure that the organisation has evaluated the correlation of the EnPI with such variables and appropriate model is used in their EnPIs calculation.
- 6.18 An applicant or accredited certification body shall ensure that the client organisation has reviewed, and updated if necessary, their EnPIs at appropriate time intervals.
- 6.19 An applicant or accredited certification body shall ensure that the client organisation's energy objectives and targets are consistent with the energy policy, and appropriate

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action plans are in place for achieving its objectives and targets. The action plans shall be documented and updated at appropriate time intervals.

- 6.20 An applicant or accredited certification body shall ensure that the client organisation has established appropriate calibration programmes for equipment used for monitoring and measurement of key characteristics of an organisation's EnMS. The certification body shall ensure that the organisation has checked and/or calibrated the equipment in accordance with appropriate specifications before use. Calibration methods, requirements and frequencies shall be specified and the responsibilities of personnel involved in the calibration process for ensuring the equipment is properly calibrated shall be defined by the organisation. Records including equipment information and identification, location and status of equipment, adjustments and maintenance of equipment, calibration schedule, calibration report, and verification of calibration results shall be maintained.
- 6.21 An applicant or accredited certification body shall require the client organisation to define an appropriate time interval for conducting internal audit and management review of the EnMS. The applicant or accredited certification body shall record the justification for accepting such time interval.
- 6.22 Subject to the agreement of its client organisations, an applicant or accredited certification body may take and/or keep photos and/or video images of process lines to demonstrate that the organisations have implemented EnMS effectively or to show details of any observed defects. The certification body should also keep records of supplementary information necessary for the interpretation of such photos and video images recorded.

## 7 MANAGEMENT SYSTEM REQUIREMENTS FOR CERTIFICATION BODIES

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- 7.1 An applicant or accredited certification body shall establish and maintain a management system for offering EnMS certification service and appropriate documented procedures covering EnMS specific elements in accordance with the requirements of HKCAS 003. The management system and documented procedures shall also cover the auditing of the EnMS of the client organisation in accordance with ISO 50001 or the certification scheme.

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## Appendix A (informative)

### HKAS Assessment Process for EnMS Certification Bodies

- A1. The purpose of a HKAS assessment is to determine whether the applicant or accredited certification body has the competence and reliability to provide EnMS certification. Emphasis will be given to whether the certification body has the necessary expertise in energy management system such as technical knowledge relevant to EnMS, knowledge of legal and other energy related requirements, knowledge of energy planning, energy management action plans, EnMS implementation, operation and effectiveness review, and the robustness of its auditing process.
- A2. The General application procedures are provided in HKCAS IN001. An applicant certification body shall complete the application form HKCAS 005 and provide the details of its organisation and its certification service to be accredited in HKCAS 007 and the associated Annex I and Annex II(C).
- A3. If an applicant certification body has already been accredited for another certification service under HKCAS, e.g., QMS or EMS, the application for accreditation of EnMS certification will be treated as an application for extension of accreditation and no preliminary visit will be conducted. However, as EnMS certification is to be carried out in accordance with HKCAS 003 and if the certification body has not been accredited for certifications carried out in accordance with HKCAS 003, e.g. if the certification body is accredited only for product certification, the certification body is strongly recommended to request HKAS Executive to conduct a preliminary visit at an additional fee.
- A4. For initial application or application for extension of scope of accreditation to one or more technical areas, at least one witnessing activity shall be conducted for each technical area before granting accreditation.

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- A5. For initial accreditation of an applicant certification body for EnMS certification, both stage 1 and stage 2 audits for at least one of the client shall be witnessed. Prior to the witnessing the stage 2 audit of the same audit, the applicant certification body shall submit the complete report and/or conclusions from the stage 1 audit to HKAS assessment team. If the certification body does not have any new clients, it is possible to witness one renewal or two surveillances which cover the key processes.
- A6. In the first period of five years, after initial accreditation has been granted to a certification body for EnMS certification, at least one witnessing activity in each accredited technical area shall be arranged. This programme will continue until the accredited certification body has demonstrated sufficient experience and performance. When this happens, at least one witnessing activity in each technical area shall be arranged and shall be complemented with other assessment activities to guarantee that each accredited technical area is assessed in a period not exceeding ten years. The witnessing frequency established for the first period would be reinstated if significant changes occur in the accredited certification bodies' auditor qualification process, audit practices or results and audit personnel.
- A7. An applicant certification body to be assessed or an accredited certification body to be reassessed will be requested to provide briefing documents for use by the HKAS assessment team in accordance with given instruction.

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## **Appendix B**

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### **NORMATIVE DOCUMENTS**

1. HKAS 002, Regulations for HKAS Accreditation
2. HKCAS 006, Schedule of Accreditation Fees for Certification Bodies in Hong Kong
3. HKAS Supplementary Criteria No. 1 (HKAS SC-01), Use of HKAS accreditation symbols and claims of accreditation status
4. HKAS Supplementary Criteria No. 2 (HKAS SC-02), Nonconformities and their grading
5. HKCAS Supplementary Criteria No. 4 (HKCAS SC-04), Accreditation Regulations Specific for HKCAS – Certification Body
6. HKCAS Supplementary Criteria No. 11 (HKCAS SC-11), HKAS Policy on Product and Management System Certification Schemes
7. HKCAS 003: 2015, Technical Criteria for Accreditation of Management System Certification Bodies
8. ISO 50001: 2018, Energy management systems – Requirements with guidance for use
9. ISO 50003: 2021, Energy management systems – Requirements for bodies providing audit and certification of energy management systems
10. ISO 19011, Guidelines for auditing management systems

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## **Appendix C**

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### **SCOPE OF ACCREDITATION**

The scope of accreditation for energy management system certification is divided into the eight technical areas as listed in this Appendix. Accreditation will be granted area by area. When a certification body had only demonstrated its competence for EnMS certification to certain activities within a specific area, e.g. activities within particular EAC(s) or NACE Rev. 2, those activities would be indicated as the ‘Extent of Scope’ under the corresponding technical area in the scope of accreditation accordingly.

The eight technical areas are:

- Industry – light to medium
- Industry – heavy
- Buildings
- Building complexes
- Transport
- Mining
- Agriculture
- Energy supply