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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 to ISO 50001 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 The accreditation criteria for energy management system certification include HKAS 002, HKCAS 003: 2015, ISO 50003, HKCAS SC-04, the relevant HKAS and HKCAS Supplementary Criteria, the relevant International Accreditation Forum (IAF) and Pacific Accreditation Cooperation (PAC) requirement documents and the current edition of this document which serves to amplify the accreditation requirements in the above documents.
- 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 HKAS operates its accreditation process in accordance with Annex AA of HKCAS 003: 2015 and Appendix A of this document. Applicant or accredited certification bodies shall take note of the process applicable to them.
- 1.5 Details of the HKCAS accreditation for an accredited certification body are given in its current scope of accreditation. For an accredited certification body offering certification service(s) in respect of certification scheme(s), the details include identification of the certification scheme(s), a brief description of each scheme such as certification criteria, normative references, evaluation and surveillance regime.

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- 1.6 Fees for application, assessment and other accreditation services are charged in accordance with HKCAS 006.
- 1.7 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 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 In this document, the definitions of the following terms in ISO 50001:2011 apply:
- (a) energy management system (EnMS)
 - (b) energy baseline
 - (c) energy consumption
 - (d) energy objective
 - (e) energy performance
 - (f) energy performance indicator (EnPI)
 - (g) energy policy
 - (h) energy review
 - (i) energy target
 - (j) energy use
- 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

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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: 2015.

3 GENERAL REQUIREMENTS

3.1 There shall be a contract signed between the applicant organisation and the applicant or accredited certification body to confer the applicant or accredited certification body the authority to carry out its responsibility in accordance with HKCAS 003: 2015. 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: 2015 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 comply with such criteria through a proper appraisal system, and evidence of competence shall be kept.

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- 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 in Hong Kong applicable to the client organisation which it audits.
- 4.4 The audit of an applicant 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 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 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: 2011.
- 4.6 Technical experts may be included in the audit team. They provide technical support to the auditor or the team. Technical experts need not be trained on auditing techniques but must have the required 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 auditor or a lead auditor.
- 4.7 The audit team may include a trainee auditor who works under close supervision of a qualified lead auditor or auditor. The responsibility assigned to him/her should be less than the level for a qualified auditor.
- 4.8 An applicant or accredited certification body shall identify and evaluate training needs for its personnel and provide them with necessary training, such as up-to-date

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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 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 all names 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 applicant organisation and stated in the certification documents in a way that would not create

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misleading impression. The certification body shall also ensure the integrity of the EnMS within the defined scope and boundaries such that it can be implemented effectively.

6 PROCESS REQUIREMENTS

- 6.1 An applicant or accredited certification body shall specify the information to be provided by an applicant organisation which applies for its certification. Upon receiving an application, the certification body shall review and check whether sufficient information has been provided by the organisation and ask for supplementary information if necessary. To ensure that essential information will not be missed out, the certification body should design an application form which lists all the information required for use by the organisations.
- 6.2 An applicant or accredited certification body shall confirm the suitability of the scope and boundaries at 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 its audit work to ensure that it has the competence and ability required 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 on-site visit at an applicant organisation's premises including both permanent location(s) and temporary site(s) where the organisation carries out work or service unless there are justifications for not doing so, e.g. the certification body has audited the organisation recently for certification of another management system, and all important information relevant to the EnMS certification has been collected.
- 6.5 An applicant or accredited certification body shall audit an applicant 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 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 an applicant organisation's EnMS have rendered the information collected in the original stage 1 audit invalid.

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- 6.6 Where parts of an applicant 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: 2011 requirements at each audit stage. The audit duration determined by the certification body and the justification for the determination shall be recorded.
- 6.8 The EnMS audit can be combined with 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 as specified in ISO 50003 and with all relevant HKAS accreditation criteria.
- 6.9 Where an applicant or accredited certification body offers multiple-site certification, 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 An applicant or accredited certification body shall follow the requirements in IAF MD 2: 2007 IAF Mandatory Document for the Transfer of Accredited Certification of Management Systems when allowing the transfer of an existing EnMS certification from another accredited certification body.
- 6.11 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 the certification activities are operating effectively and certification decisions are made by parties not involved in the audit.
- 6.12 During audits, an applicant or accredited certification body shall evaluate whether the applicant organisation has appropriate process for ensuring the competence of personnel and any persons working on behalf of the organisation responsible for EnMS activities. 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.

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- 6.13 An applicant or accredited certification body shall ensure that the applicant organisation has established an appropriate interval for reviewing and evaluating compliance with legal requirements and other energy-related requirements to which the applicant 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.
- 6.14 An applicant or accredited certification body shall evaluate whether the applicant organisation has relevant analysis of energy use and consumption, and whether the areas of significant energy use and the opportunities for improving energy performance have been appropriately identified. The certification body shall also ensure that methodology and criteria for prioritizing opportunities for improving energy performance have been developed and documented by the organisation.
- 6.15 An applicant or accredited certification body shall ensure that the applicant 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 the justification for accepting the frequency shall be recorded. The certification body shall ensure 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 have been defined and documented by the organisation.
- 6.16 The applicant or accredited certification body shall ensure that the applicant organisation uses recent and reliable data to establish the energy baseline, and periodically review the energy baseline to determine if adjustments are required.
- 6.17 An applicant or accredited certification body shall ensure that the applicant organisation has selected and used appropriate methods or models for calculating EnPIs. Reference to international practices such as ISO 50006: 2014 shall be made as far as possible.
- 6.18 An applicant or accredited certification body shall ensure that the applicant 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.
- 6.19 An applicant or accredited certification body shall ensure that the applicant organisation has reviewed, and updated if necessary, their EnPIs at appropriate time intervals.
- 6.20 An applicant or accredited certification body shall ensure that the applicant

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organisation's energy objectives and targets are consistent with the energy policy, and appropriate action plans are in place for achieving its objectives and targets. The action plans shall be documented and updated at appropriate time intervals.

- 6.21 An applicant or accredited certification body shall ensure that the applicant 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.
- 6.22 An applicant or accredited certification body shall require the applicant 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.
- 6.23 Subject to the agreement of its applicant organisations, an 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

- 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: 2015. The management system and documented procedures shall also cover the auditing of the EnMS of the applicant organisation in accordance with ISO 50001:2011 or the certification scheme.

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Appendix A (informative)

HKAS Assessment Process for EnMS Certification Bodies

- A.1 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.
- A.2 To apply for accreditation, 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 022 application questionnaire. All supporting documents, including the quality manual, documents of the certification programme as required in HKCAS 022, and the appropriate application fee shall be provided together with the completed HKCAS 005 and HKCAS 022 to HKAS Executive.

Preliminary visit

- A.3 HKAS Executive will conduct a preliminary visit for applicant certification body which has not been accredited previously under HKCAS. If an applicant certification body has already been accredited for another certification field 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: 2015 and if the certification body has not been accredited for certifications carried out in accordance with HKCAS 003: 2015, 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.

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Initial assessment

A.4 Assessments are conducted by HKAS assessment team(s). A HKAS assessment team usually consists of a team leader and where necessary, technical assessors and/or technical experts. The certification system of an applicant certification body will be assessed against the requirements in the HKCAS 003: 2015 and this document.

Surveillance Visit

A.5 After accreditation has been granted, HKAS Executive will normally conduct surveillance visits to an accredited certification body routinely every six months. HKAS Executive has discretion to vary the period for surveillance visit as it sees fit. Similar to an initial assessment, a surveillance visit is performed by a HKAS assessment team. Surveillance visit for different types of accredited certification systems may be combined.

Reassessment

A.6 An accredited certification body to be reassessed will be requested to provide briefing notes for use by the HKAS assessment team in accordance with given instruction.

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Appendix B

(normative)

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), Non-conformities and their grading
5. HKCAS Supplementary Criteria No. 4 (HKCAS SC-04), Accreditation Regulations Specific for HKCAS – Certification Body
6. HKCAS 003: 2015, Technical Criteria for Accreditation of Management System Certification Bodies
7. ISO 50001: 2011, Energy management systems – Requirements with guidance for use
8. ISO 50003: 2014, Energy management systems – Requirements for bodies providing audit and certification of energy management systems
9. ISO 19011: 2011, Guidelines for auditing management systems
10. IAF MD 2: 2007 IAF Mandatory Document for the Transfer of Accredited Certification of Management Systems

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Appendix C
(normative)

SCOPE OF ACCREDITATION

Accreditation will be granted area by area. The areas are as defined by the statistical nomenclature for economic activities (NACE Rev. 1) 1994 published by the Commission of European Communities (Official Journal L 083 1993) summarised in the table below.

Area No	Description	NACE Code
1	Agriculture, fishing	A, B
2	Mining and quarrying	C
3	Food products, beverages and tobacco	DA
4	Textiles and textile products	DB
5	Leather and leather products	DC
6	Wood and wood products	DD
7	Pulp, paper and paper products	DE 21
8	Publishing companies	DE 22.1
9	Printing companies	DE 22.2, 3
10	Manufacture of coke and refined petroleum products	DF 23.1, 2
11	Nuclear fuel	DF 23.3
12	Chemicals, chemical products and fibres	DG minus 24.4
13	Pharmaceuticals	DG 24.4
14	Rubber and plastic products	DH
15	Non-metallic mineral products	DI minus 26.5, 6
16	Concrete, cement, lime, plaster etc	DI 26.5, 6
17	Basic metals and fabricated metal products	DJ
18	Machinery and equipment	DK
19	Electrical and optical equipment	DL
20	Shipbuilding	DM 35.1
21	Aerospace	DM 35.3
22	Other transport equipment	DM 34, 35.2, 4, 5
23	Manufacturing not elsewhere classified	DN 36
24	Recycling	DN 37
25	Electricity supply	E 40.1
26	Gas supply	E 40.2
27	Water supply	E 41, 40.3
28	Construction	F
29	Wholesale and retail trade; Repair of motor vehicles, motorcycles and personal and household goods	G
30	Hotels and restaurants	H
31	Transport, storage and communication	I
32	Financial intermediation; real estate; renting	J, K 70, K 71
33	Information technology	K 72
34	Engineering services	K 73, 74.2
35	Other services	K 74 minus K 74.2
36	Public administration	L
37	Education	M
38	Health and social work	N
39	Other social services	O