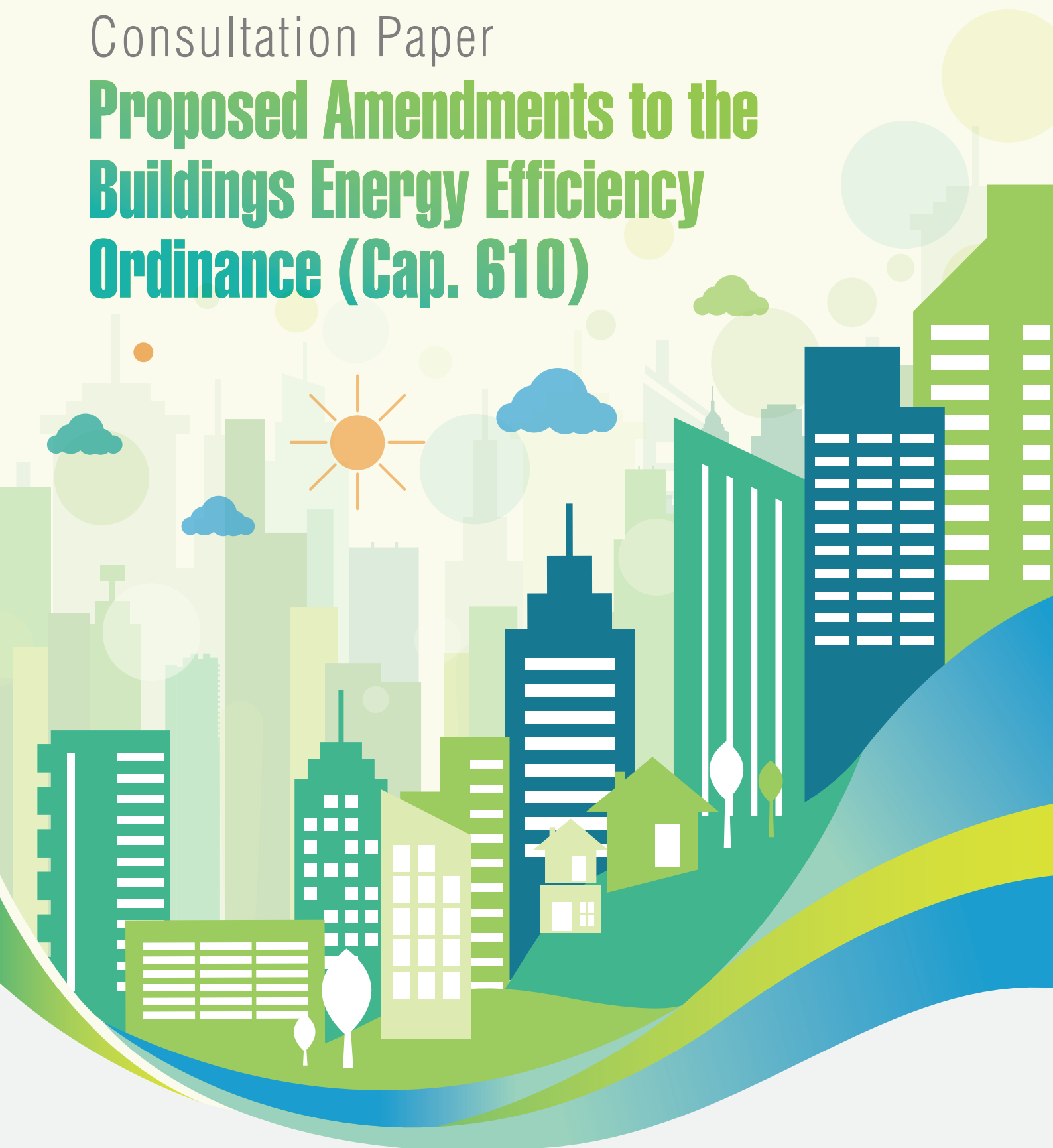


Consultation Paper

Proposed Amendments to the Buildings Energy Efficiency Ordinance (Cap. 610)



機電工程署
EMSD



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Consultation Paper

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Personal data collection statement

- It is voluntary for any member of the public to supply his/her personal data upon providing views on the consultation document. Any personal data provided with a response form for consultation will only be used for this consultation exercise. The response forms and personal data collected may be transferred to the relevant Government bureaux, departments or agencies for purposes directly related to this consultation exercise. The relevant parties receiving the data are bound by such purposes in their subsequent use of such data.
- The names and views of individuals and organisations which submit response forms in response to the consultation document (senders) may be published for public viewing after conclusion of the consultation exercise. Electrical and Mechanical Services Department (EMSD) may, either in discussion with others or in any subsequent report, whether privately or publicly, attribute comments submitted in response to the consultation document. We will respect the wish of senders to remain anonymous and/or keep the views confidential in relation to all or part of a submission; but if no such wish is indicated, it will be assumed that the sender can be named and his/her views be published for public information.
- Any sender providing personal data to EMSD in the submission will have the right of access and correction with respect to such personal data. Any request for data access or correction of personal data should be made in writing to the contact specified above.



Chapter 1

Background

1. Buildings account for about 90% of Hong Kong's total electricity consumption, and over 50% of our carbon emissions is attributable to generating electricity for our buildings. To strive for achieving carbon neutrality before 2050, the Hong Kong Special Administrative Region (HKSAR) Government has set targets to reduce the overall electricity consumption of buildings in Hong Kong through improving buildings' energy efficiency in the Hong Kong's Climate Action Plan 2050. The goal is to reduce the electricity consumption of commercial buildings by 30% to 40% and that of residential buildings by 20% to 30% from the 2015 level by 2050, and to achieve half of the above targets by 2035.
2. The Buildings Energy Efficiency Ordinance (Cap. 610; the Ordinance) stipulates that certain types of buildings shall comply with the energy efficiency standards and conduct energy audits for building services installations. Since the implementation of the Ordinance, more than 2 000 newly constructed buildings and more than 13 000 major retrofitting works in existing buildings have met the energy efficiency standard. In addition, more than 2 600 commercial buildings have completed their first energy audit. The Code of Practice for Energy Efficiency of Building Services Installation (Building Energy Code) and the Code of Practice for Building Energy Audit (Energy Audit Code) pursuant to the Ordinance are reviewed once every three years. The 2021 edition, which is the latest edition, of the Building Energy Code uplifts the energy efficiency standards with an improvement of more than 15% as compared with the 2015 edition. By 2035, the estimated annual energy saving is expected to bring about an annual energy saving of around 4.7 billion to 5.3 billion kWh from buildings in Hong Kong (compared with 2015). We consider that it would be very effective to make good use of the current legal basis to further enhance the energy efficiency of buildings.

3. The Chief Executive's 2023 Policy Address stated that the Government would consult the trade in 2023 on the proposal of amending the Ordinance, including extending the scope of regulation to more types of buildings, mandating the disclosure of information in energy audit reports, and shortening the interval of energy audit. Our target is to commence the legislative exercise next year.
4. This paper outlines the amendment proposals to the Ordinance and seeks views from interested parties and the general public, so that we would take into account the views and concerns of the community in formulating the legislative amendment proposals.





Chapter 2

The Buildings Energy Efficiency Ordinance (Cap. 610)

5. The Ordinance has been fully implemented since 21 September 2012. There are two subsidiary legislations, the Buildings Energy Efficiency (Fees) Regulation (Cap. 610A) and the Buildings Energy Efficiency (Registered Energy Assessors) Regulation (Cap. 610B). EMSD publishes in the gazette the Building Energy Code and the Energy Audit pursuant to the Ordinance.
6. The Ordinance requires the compliance with relevant codes of practice concerning the energy efficiency of building services installations (including air-conditioning installations, electrical installations, lift and escalator installations and lighting installations) and energy audits in respect of several types of buildings and to provide for related matters.
7. Currently, the Ordinance mainly regulates:
 - (a) The building services installations of the following 13 types of buildings listed in Schedule 1 of the Ordinance (include newly constructed buildings or existing buildings when undergoing major retrofitting works) shall comply with the minimum energy efficiency standard stipulated in the Building Energy Code:
 - (1) Commercial building;
 - (2) A portion of composite building that is not for residential or industrial use;
 - (3) Hotel or guesthouse;

- (4) Common area of a residential building;
- (5) Common area of a portion of a composite building that is for residential or industrial use;
- (6) Common area of an industrial building;
- (7) Building that is occupied principally for education purpose;
- (8) Building that is occupied principally as a community building including a community hall and social services centre and composite building occupied as 2 or more such places;
- (9) Building that is occupied principally as a municipal services building including a market, cooked food centre, library, cultural centre and indoor games hall and composite building occupied as 2 or more such places;
- (10) Building that is occupied principally for medical and health care services including a hospital, clinic and rehabilitation centre;
- (11) Building that is owned by the Government and used principally for the accommodation of people during the performance of any function of the Government;
- (12) Passenger terminal building of an airport; and
- (13) Railway station.

(b) The following 2 types of existing buildings listed in Schedule 4 of the Ordinance shall undergo energy audit in accordance to the Energy Audit Code at intervals no longer than 10 years:

- (1) Commercial building; and
- (2) A portion of a composite building that is for commercial use.

(c) Intervals of energy audits

According to Section 22 of the Ordinance, the owner of a building must cause an energy audit to be carried out at intervals no longer than 10 years in respect of the central building services installations of the building.

The first energy audit of a building issued with a Certificate of Compliance Registration must be carried out within 10 years after the building is first issued with a Certificate of Compliance Registration.

For buildings without a Certificate of Compliance Registration, the first energy audit must be carried out according to the schedule specified in Schedule 5 of the Ordinance.

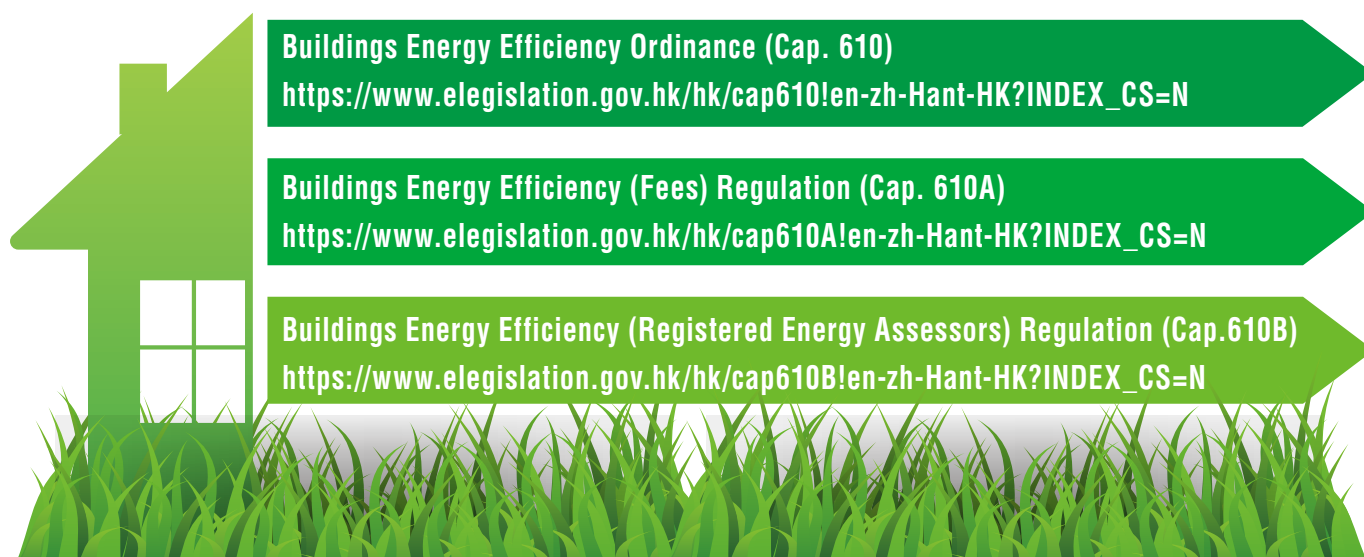
(d) Building Owner to exhibit Energy Audit Form

After the energy audit is conducted, the copy of the energy audit report and a specified energy audit form shall send to EMSD for examination and record. The owner of the building must exhibit a copy of the specified energy audit form in a conspicuous position at the main entrance of the building. The content of the specified energy audit form mainly include the address of the building, the energy utilization index of the central building services installations of the building, completion date of the energy audit and the particulars of the Registered Energy Assessor issuing the specified energy audit form. EMSD has made available on the website the key information of the specified energy audit form received to facilitate convenience inspection by the public.



(e) To facilitate the developer, owner or responsible person of buildings to comply with the regulatory requirements, the Ordinance has established the role of Registered Energy Assessor. According to the Buildings Energy Efficiency (Registered Energy Assessors) Regulation (Cap. 610B), one of the criteria for acceptance of the application for registration as Registered Energy Assessor is that the applicant is a registered professional engineer within the meaning of section 2(1) of the Engineers Registration Ordinance (Cap. 409) and is registered in the electrical, mechanical, environmental or building services discipline under Cap.409; or is a corporate member of Hong Kong Institution of Engineers in the electrical, mechanical, environmental or building services discipline.

8. For details of the Ordinance and its subsidiary legislations, please refer to the following websites:



Cap. 610



Cap. 610A



Cap. 610B

Proposed Amendments to the Buildings Energy Efficiency Ordinance (Cap. 610)

9. To further improve the energy efficiency of buildings in Hong Kong, the Government proposes amending the Ordinance as follows:

(a) To include building or part of the building that is occupied principally as data centre under the regulatory scope of energy efficiency standard for building services installations

With the development into a smart city, the business of the data centre industry has been growing fast in Hong Kong in recent years. The average annual growth rate of the gross floor area of data centres from 2015 to 2021 is about 9.5%. According to the information in Hong Kong Energy End-use Data 2023 published by EMSD, the trend of electricity consumption by data centre is increasing. The electricity consumption of data centre in 2021 has increased by 10% and 31% as compared to that in 2020 and 2019 respectively, contributing to about 4% of the total electricity consumption of buildings in Hong Kong.

Currently, the Ordinance does not cover building or part of the building that is occupied principally as data centre (such as data centre developed in existing industrial lot or part of an industrial building converted into data centre). We propose incorporating this type of building into the regulatory scope of the Ordinance, which will lead to an increase in the coverage of types of buildings from the current 13 types to 14 types. Please refer to Appendix A of this paper for details of the proposed amendments.

(b) To require more types of buildings to conduct energy audits

Energy audits can identify energy management opportunities of a building effectively for improve its energy efficiency. We propose increasing the types of buildings required to undergo energy audits, including data centre and those types of buildings that were already within the scope of regulation on the minimum energy efficiency design standard (except common area of residential buildings and common area of industrial buildings) under the Ordinance. The types of buildings to be covered under the regulation would be increased from the current 2 types to 11 types. Please refer to Appendix A of this paper for details of the proposed amendments.

(c) To shorten the interval of energy audits

The average intervals of energy audit of other major countries and cities is 5 years. There are also opinions in the society that the current energy audit interval is comparatively long so that the benefits of energy audit may not be fully utilized. If the energy audit intervals is shorten, building owners or property management companies can learn about and consider the adoption of latest energy saving technologies and management practices in more timely manner.

We propose shortening the energy audit intervals from current 10 years to 5 years. Please refer to Appendix A of this paper for details of the proposed amendments.



(d) To mandate disclosure of energy audit report information

Currently, the Ordinance requires that the owner of a building must exhibit a copy of the specified energy audit form in a conspicuous position at the main entrance of the building after completion of the energy audit. The content of the specified energy audit form mainly include the address of the building, the energy utilization index of the central building services installations of the building, completion date of the energy audit and the particulars of the Registered Energy Assessor issuing the specified energy audit form.

We propose amending the Ordinance to facilitate the disclosure of technical information in the energy audit reports. We are of the view that, by disclosing these technical information, the data transparency can be enhanced and the public can inspect the energy management performance of the buildings. This in turn would encourage the trade to proactively offer energy saving retrofit proposals to the building owners, and speed up the implementation of energy management opportunities and development of green economy. Please refer to Appendix A of this paper for details of the proposed amendments.

(e) To include professional engineer of energy discipline as one of the assessment criteria for the application for registration as Registered Energy Assessor, and include corporate member of the Hong Kong Institution of Engineers in the energy discipline as the compositions of Disciplinary Board Panel and Appeal Board Panel

To facilitate the developer, owner or responsible person of buildings to comply the regulatory requirements, the Ordinance has established the role of Registered Energy Assessor.



According to the Buildings Energy Efficiency (Registered Energy Assessors) Regulation (Cap. 610B), one of the criteria for accepting the application for registration as Registered Energy Assessor is that the applicant is a registered professional engineer (RPE) within the meaning of section 2(1) of the Engineers Registration Ordinance (Cap. 409) and is registered in the electrical, mechanical, environmental or building services discipline under Cap. 409; or is a corporate member of Hong Kong Institution of Engineers (MHKIE) in the electrical, mechanical, environmental or building services discipline.

The trade has suggested to EMSD that being a MHKIE or a RPE in the energy discipline should be considered as one of the assessment criteria for accepting the application for registration as Registered Energy Assessor to encourage the trade's compliance to the Ordinance. Considering that MHKIE or RPE in the energy discipline have the relevant professional knowledge generally required for becoming Registered Energy Assessor, and taking into account the number of buildings that need to comply with the Ordinance upon the amendments will be increased for about 2 times, this suggestion can facilitate legal compliance by the trade and the society.

We propose amending the Ordinance and the Buildings Energy Efficiency (Registered Energy Assessors) Regulation to include MHKIE or RPE in the energy discipline as one of the assessment criteria for accepting the application for registration as Registered Energy Assessor, and to include MHKIE in the energy discipline as one of the appointing members of the Appeal Board Panel and Disciplinary Board Panel. Please refer to Appendix A of this paper for details of the proposed amendments.

Chapter 4

Proposed Transitional Arrangement

10. To facilitate the stakeholders to make necessary preparation, we propose introducing a transitional period of 12 months after the amendments to the Ordinance.



Chapter 5

Collection of Views

11. We welcome views from interested parties and the general public on the proposed amendments to the Ordinance. Please let us have your views on or before 15 January 2024 using the Response Form in Appendix B of this paper, through either one of the following channels:

Mail : Energy Efficiency Office
Electrical and Mechanical Services Department
3 Kai Shing Street
Kowloon

E-mail : beeo-consultation@emsd.gov.hk

Facsimile : (+852) 2890 6081



Details of Proposed Amendments

The Government proposes amending the Ordinance as follows:

(a) To include building or part of the building that is occupied principally as data centre under the regulatory scope of energy efficiency standard for building services installations

We propose amending Schedule 1 of the Ordinance to include the following type of building:

- Building or part of the building that is occupied principally as data centre

(b) To require more types of buildings to conduct energy audits

We propose amending Schedule 4 of the Ordinance for inclusion of the following 9 types of buildings:

- Building or part of the building that is occupied principally as data centre;
- Hotel or guesthouse;
- Building that is occupied principally for education purpose;

- Building that is occupied principally as a community building including a community hall and social services centre and composite building occupied as 2 or more such places;
- Building that is occupied principally as a municipal services building including a market, cooked food centre, library, cultural centre and indoor games hall and composite building occupied as 2 or more such places;
- Building that is occupied principally for medical and health care services including a hospital, clinic and rehabilitation centre;
- Building that is owned by the Government and used principally for the accommodation of people during the performance of any function of the Government;
- Passenger terminal building of an airport; and
- Railway station.

(c) To shorten the interval of energy audit

We propose shortening the energy audit intervals from current 10 years to 5 years by amending Section 22 of the Ordinance, including:

- The owner of a building must cause an energy audit to be carried out at intervals no longer than 5 years in respect of the central building services installations of the building.
- The first energy audit for the central building services installations of a building issued with a Certificate of Compliance Registration must be carried out within 5 years after the building is first issued with a Certificate of Compliance Registration.

In response to the proposed addition on the types of buildings in Schedule 4 of the Ordinance, the period within which the first energy audit must be carried out for those buildings without issue with the Certificate of Compliance Registration needs to be clearly defined. We propose amending Schedule 5 of the Ordinance by adding time schedule of the first energy audit of buildings without Certificate of Compliance Registration which applicable to the newly added 9 types of buildings:

Retaining the following time schedule of the first energy audit of buildings without Certificate of Compliance Registration which is applicable to the 2 types of buildings currently under regulation.

Date of issue of occupation approval in respect of the building	Period within which the first energy audit must be carried out
On or after 1 January 1988	12 months from the commencement of Part 4 of this Ordinance
After 31 December 1977 but before 1 January 1988	24 months from the commencement of Part 4 of this Ordinance
After 31 December 1969 but before 1 January 1978	36 months from the commencement of Part 4 of this Ordinance
On or before 31 December 1969	48 months from the commencement of Part 4 of this Ordinance

Including the following time schedule of the first energy audit of buildings without Certificate of Compliance Registration which applicable to the newly added 9 types of buildings.

Date of issue of occupation approval in respect of the building	Period within which the first energy audit must be carried out
On or after 1 January 1988	12 months from the commencement of this Ordinance (amendment)
After 31 December 1977 but before 1 January 1988	24 months from the commencement of this Ordinance (amendment)
After 31 December 1969 but before 1 January 1978	36 months from the commencement of this Ordinance (amendment)
On or before 31 December 1969	48 months from the commencement of this Ordinance (amendment)

(d) To mandate disclosure of energy audit report information

We propose amending Part 4 of the Ordinance to empower the Director of Electrical and Mechanical Services to disclose the technical information of the energy audit reports under a specified format. These technical information may include the energy efficiency coefficient, year of service and control system of individual building services installations; identified energy management opportunities and the energy conservation recommendations, etc.

(e) To include professional engineer of energy discipline as one of the assessment criteria for the application for registration as Registered Energy Assessor, and include corporate member of the Hong Kong Institution of Engineers in the energy discipline as the compositions of Disciplinary Board Panel and Appeal Board Panel

We propose amending Part 2 of the Buildings Energy Efficiency (Registered Energy Assessors) Regulation to include corporate member of Hong Kong Institution of Engineers or a registered professional engineer in the energy discipline as one of the assessment criteria for accepting the application for registration as Registered Energy Assessor.

We propose amending Part 3 of the Buildings Energy Efficiency (Registered Energy Assessors) Regulation to include corporate member of Hong Kong Institution of Engineers in the energy discipline as one of the appointing members of the Disciplinary Board Panel.

We propose amending Part 8 of the Ordinance for including corporate member of the Hong Kong Institution of Engineers in the energy discipline as one of the appointing members of the Appeal Board Panel.



Appendix B

Response Form for Consultation

Please send this Response Form to us on or before 15 January 2024 by one of the following channels:

Mail : Energy Efficiency Office
Electrical and Mechanical Services Department
3 Kai Shing Street
Kowloon

E-mail : beeo-consultation@emsd.gov.hk

Facsimile : (+852) 2890 6081

This is a

- corporate response (representing the views of a group or an organization).
- individual response (representing the views of an individual).

Name and Organization (if applicable):

(optional)

Collection of Views

Question 1

Do you agree to include building or part of the building that is occupied principally as data centre under the regulatory scope of energy efficiency standard for building services installations? If disagree, why?

- Agree
- Disagree, please specify the reason:

Comment:

Question 2

Do you agree to require more types of buildings to conduct energy audit? If disagree, why?

- Agree
- Disagree, please specify the reason:

Comment:

Question 3

Do you agree to shorten the interval of energy audit from 10 years to 5 years? If disagree, why?

- Agree
- Disagree, please specify the reason:

Comment:

Question 4

Do you agree to mandate disclosure of the technical information in energy audit report? If disagree, why?

- Agree
- Disagree, please specify the reason:

Comment:

Question 5

Do you agree to include professional engineer of energy discipline as one of the assessment criteria for the application for registration as Registered Energy Assessor, and include corporate member of the Hong Kong Institution of Engineers in the energy discipline as the compositions of Disciplinary Board Panel and Appeal Board Panel? If disagree, why?

- Agree
- Disagree, please specify the reason:

Comment:

Question 6

Do you agree to introduce a transitional period of 12 months after the amendments to the Ordinance? If disagree, why?

- Agree
- Disagree, please specify the reason:

Comment:

Other Views and Comments

Please provide other views and comments below: