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ENERGY CONSERVATION ACT
(CHAPTER 92C)

ENERGY CONSERVATION
(ENERGY MANAGEMENT PRACTICES)
(AMENDMENT) REGULATIONS 2021

In exercise of the powers conferred by section 78(1) of the Energy Conservation Act, the Minister for Sustainability and the Environment makes the following Regulations:

Citation and commencement

1. These Regulations are the Energy Conservation (Energy Management Practices) (Amendment) Regulations 2021 and come into operation on 22 December 2021.

Amendment of regulation 8

2. Regulation 8 of the Energy Conservation (Energy Management Practices) Regulations 2013 (G.N. No. S 246/2013) (called in these Regulations the principal Regulations) is amended —

(a) by inserting, immediately after paragraph (2), the following paragraph:

“(2A) The energy manager and the chief executive must use reasonable endeavours to ensure that the energy use report submitted was prepared based on accurate information.”;

(b) by deleting the words “paragraph (6A)” in paragraph (6) and substituting the words “paragraphs (6A) and (6B)”;

(c) by inserting, immediately after paragraph (6A), the following paragraphs:

“(6B) Despite paragraph (6), any quantity or figure required in paragraph (4)(d)(v) must, in respect of

every energy-consuming system of a relevant business activity installed on or after 1 January 2022, be expressed as a measured value.

(6C) Any quantity or figure required in paragraph (4)(e) and reported on or after 1 January 2028 must, in respect of each relevant business activity, be expressed as a measured value.”;

(d) by inserting, immediately after the words “measured value” in paragraph (8), the words “(as defined in paragraph (9))”; and

(e) by inserting, immediately after paragraph (8), the following paragraph:

“(9) In this regulation, unless the context otherwise requires, “measured value” means a value that is —

(a) measured directly; or

(b) derived from one or more measured variables relating to the following:

(i) where sub-paragraph (a) of paragraph (4A) applies —

(A) the quantity;

(B) the net calorific value; or

(C) the energy content value,

of each type of fuel or energy commodity mentioned in that sub-paragraph;

(ii) where paragraph (6) applies —

(A) the annual energy consumption of the energy-consuming system;

(B) the intended output of the energy-consuming system;

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- (C) the specific energy consumption of the energy-consuming system;
 - (D) the predicted specific energy consumption of the energy-consuming system;
 - (E) the processes or activities of the relevant business activity that result in greenhouse gas emissions; or
 - (F) each fuel or energy commodity used as feedstock in the relevant business activity to produce products containing carbon;
- (iii) where paragraph (6A) applies —
- (A) the annual energy consumption;
 - (B) the intended output;
 - (C) the specific energy consumption; or
 - (D) the predicted specific energy consumption,
- of the energy-consuming system;
- (iv) where paragraph (6B) applies — the specific energy consumption of the energy-consuming system;
- (v) where paragraph (6C) applies — the specific energy consumption of the relevant business activity.”.

Amendment of regulation 10

3. Regulation 10 of the principal Regulations is amended by inserting, immediately after paragraph (2), the following paragraph:

“(2A) The energy manager and the chief executive must use reasonable endeavours to ensure that the energy efficiency improvement plan submitted was prepared based on accurate information.”.

New Part IIIA

4. The principal Regulations are amended by inserting, immediately after regulation 11, the following Part:

“PART IIIA

ENERGY MANAGEMENT SYSTEM
FOR REGISTERED CORPORATIONS

Division 1 — General

Definitions of this Part

11A.—(1) In this Part, unless the context otherwise requires —

“accredited ISO 50001 certification” means the ISO 50001 certification issued by a certification body accredited by any of the following to perform the certification of an energy management system to the ISO 50001 standard:

- (a) the Singapore Accreditation Council;
- (b) any accreditation body that is a signatory to the International Accreditation Forum Multilateral Recognition Arrangement;

“energy baseline” means a quantitative reference that is used as a baseline for comparing the energy performance of an SEU of a relevant business activity of a registered corporation, calculated on the basis of data derived over a period of time by that registered corporation;

“energy management team” means a group of at least 2 individuals in a registered corporation, at least one of whom is an energy manager, authorised to implement an energy management system in respect of the relevant business activity of the registered corporation and responsible for improving the energy performance of that relevant business activity;

“energy performance indicator value” means a numerical value which, when taken together with its measure or unit of energy performance, quantifies energy performance at a point in time or over a period of time;

“energy target” means a quantifiable objective that relates to improving the energy performance of a relevant business activity or any EnMS SEU of a relevant business activity;

“EnMS report” means a report relating to the performance of an energy management system in respect of any relevant business activity;

“EnMS SEU” means an SEU to which an energy management system applies;

“non-conformity”, in relation to an energy management system, means —

(a) any non-conformity of the energy management system with any requirement in Division 2 for the energy management system; or

(b) any failure on the part of the registered corporation to implement any part of the energy management system that complies with the requirements in Division 2;

“objective” means a result that is targeted to be achieved by a registered corporation, due to its implementation of an energy management system;

“SEU”, in relation to a relevant business activity of a registered corporation, means any of the following:

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- (a) an energy-consuming system of the relevant business activity having significant energy use and mentioned in the energy use report submitted under regulation 8;
 - (b) any other equipment, facility, system or process used in the relevant business activity that is not mentioned in the energy use report mentioned in paragraph (a);

“top management” means the individual or individuals in a registered corporation principally responsible for the management and conduct of a relevant business activity, and may include any of the following:

- (a) the chief executive officer or equivalent;
- (b) the president or vice-president or equivalent;
- (c) the general manager of the relevant business activity or equivalent.

(2) In this Part, the total energy consumed by a relevant business activity —

- (a) must be derived from all fuel and energy commodities used to provide or produce the energy consumed; but
- (b) excludes energy produced from any fuel or energy commodity that is already accounted for in the total figure.

Assessment cycles

11B.—(1) This regulation provides for the determination of the first assessment cycle and the assessment cycles after the first assessment cycle (each called in these Regulations a subsequent assessment cycle) for any relevant business activity of a registered corporation, in relation to the energy management system implemented for the relevant business activity.

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- (2) The first assessment cycle is, as the case may be —
- (a) the year 2021, the year 2022 or the year $X + 1$, in relation to which the first EnMS report must be submitted under regulation 11J; or
 - (b) the period of the ISO 50001 certification submitted under regulation 11J.
- (3) The subsequent assessment cycles are, as the case may be —
- (a) subject to paragraph (4), where an EnMS report is submitted for the first assessment cycle —
 - (i) the period of 3 years commencing on the date on which the registered corporation receives a notice that an authorised officer is satisfied that there are no non-conformities in relation to the first assessment cycle; and
 - (ii) each consecutive period of 3 years after that; and
 - (b) where an accredited ISO 50001 certification is submitted in relation to the first assessment cycle —
 - (i) the period of 3 years commencing on the date immediately after the date of expiry of the certification; and
 - (ii) each consecutive period of 3 years after that.
- (4) If —
- (a) the registered corporation submits an EnMS report in respect of any assessment cycle; and
 - (b) within the period of 3 years after that assessment cycle, the registered corporation obtains an accredited ISO 50001 certification for the energy management system in respect of the relevant business activity,
- then the subsequent assessment cycles after that assessment cycle are —

- (c) the period of the ISO 50001 certification; and
- (d) each consecutive period of 3 years after the expiry of the ISO 50001 certification.

Prescribed business activity

11C. Every relevant business activity is a prescribed business activity for the purposes of section 27A of the Act.

Division 2 — Requirements for energy management systems

Application of this Division

11D. An energy management system must satisfy the requirements in this Division unless the energy management system is certified to the ISO 50001 standard.

Obligations of top management of registered corporation

11E. An energy management system in respect of a relevant business activity of a registered corporation must provide for the top management of the registered corporation to —

- (a) inform all individuals in that registered corporation of —
 - (i) the objectives of the energy management system, including the objectives and energy targets for the relevant business activity;
 - (ii) the strategic interest of the registered corporation in improving the energy performance of the relevant business activity; and
 - (iii) the commitment of the registered corporation to the continual improvement of the energy performance of, and the energy management system in respect of, the relevant business activity; and
- (b) establish an energy management team for the purposes of —

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- (i) ensuring that the energy management system is implemented, maintained and continually improved;
 - (ii) ensuring that the registered corporation or its top management (as the case may be) complies with the requirements mentioned in regulations 11F, 11G and 11H; and
 - (iii) reporting on the performance of the energy management system, and the improvement of the energy performance of the relevant business activity, to the top management.

Annual energy review, establishment of criteria and performance evaluation

11F.—(1) An energy management system in respect of a relevant business activity of a registered corporation must provide for the registered corporation to conduct an annual energy review for the relevant business activity for the purposes of —

- (a) selecting one or more SEUs for the relevant business activity to which the energy management system applies, as follows:
 - (i) the registered corporation must select one or more SEUs mentioned in paragraph (a) of the definition of “SEU” in regulation 11A(1), where the energy consumption of the SEU or the aggregate energy consumption of the SEUs (as the case may be) is 80% or more of the total energy consumption of the relevant business activity;
 - (ii) in addition to the SEU or SEUs selected under sub-paragraph (i), the registered corporation may select any one or more SEUs mentioned in paragraph (b) of the definition of “SEU” in regulation 11A(1);

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- (b) determining an appropriate measure or unit of energy performance (expressed as a simple metric, ratio or model) and establishing a corresponding energy baseline for each EnMS SEU, to assess energy performance;
 - (c) establishing objectives and energy targets, in relation to each EnMS SEU; and
 - (d) assessing the feasibility of potential energy efficiency measures and preparing the energy efficiency improvement plan mentioned in regulation 10.

(2) An energy management system in respect of a relevant business activity of a registered corporation must provide for the registered corporation, in relation to the operational matters of that relevant business activity —

- (a) to establish and review, when necessary, criteria specifying the standards to be met for the effective operation and maintenance of each EnMS SEU of the relevant business activity;
- (b) to inform the relevant operation and maintenance personnel of those criteria; and
- (c) to ensure that the operation and maintenance of each EnMS SEU of the relevant business activity are carried out in accordance with those criteria.

(3) An energy management system in respect of a relevant business activity of a registered corporation, must provide for the registered corporation to —

- (a) evaluate the energy performance of each EnMS SEU of the relevant business activity by —
 - (i) comparing a specific energy performance indicator value against its corresponding energy baseline —
 - (A) on a monthly basis, if the EnMS SEU consumes 2% or more of the total energy

consumption for that relevant business activity; or

(B) at a frequency determined by the registered corporation, if the EnMS SEU consumes less than 2% of the total energy consumption for that relevant business activity; and

(ii) carrying out an investigation to determine the cause or causes of any deviation from a projected energy performance indicator value that satisfies the criteria specified in its EnMS report for a significant deviation from that projected energy performance indicator value; and

(b) if necessary, identify steps to be taken to address the cause or causes identified in sub-paragraph (a)(ii), with the aim of identifying practices that will improve one or more of the following:

(i) the energy performance of the EnMS SEU in question;

(ii) the energy performance of any other EnMS SEU of the relevant business activity;

(iii) the performance of the energy management system in respect of the relevant business activity.

(4) The Director-General may, in respect of an EnMS SEU that consumes 2% or more of the total energy consumption of a relevant business activity —

(a) vary the frequency mentioned in paragraph (3)(a)(i) for one assessment cycle or any part of one assessment cycle; or

(b) waive the requirement in paragraph (3)(a) to evaluate the energy performance of the EnMS SEU for one assessment cycle or any part of one assessment cycle, if the Director-General is satisfied, on a written application by the registered corporation accompanied by supporting documents, that the registered corporation is unable to comply with the requirement due to circumstances beyond the registered corporation's reasonable control.

Management review of energy management system

11G.—(1) An energy management system in respect of a relevant business activity of a registered corporation, must provide for the top management of the registered corporation to —

- (a) conduct a management review of the energy management system at least once a year to assess its suitability and adequacy in achieving the objectives and energy targets set by the registered corporation for the relevant business activity; and
- (b) upon completion of each such review, take such steps as are necessary and reasonable to improve the suitability and adequacy of the energy management system in respect of the relevant business activity.

(2) For the purpose of the management review in paragraph (1)(a), the energy management system must provide for the registered corporation to consider the following:

- (a) the results of all previous management reviews and any action taken following those reviews;
- (b) the results of all previous reviews carried out under regulation 11H(a) and (c) and any action taken following those reviews;
- (c) the results of the evaluation mentioned in regulation 11F(3)(a) and any steps mentioned in regulation 11F(3)(b);

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- (d) all energy use reports submitted under regulation 8 and energy efficiency improvement plans submitted under regulation 10 in the current assessment cycle, including the extent of the accuracy of the information contained in those reports and plans;
 - (e) whether, and if so, the extent to which the objectives and energy targets mentioned in regulations 11E(a)(i) and 11F(1)(c) have been met.

Non-conformities raised during compliance check

11H. An energy management system in respect of a relevant business activity of a registered corporation, must provide, in the event that a non-conformity is identified during a compliance check conducted by an authorised officer under section 35 of the Act, for the registered corporation to —

- (a) conduct a review to determine all causes of that non-conformity and assess if similar non-conformities exist or could potentially occur;
- (b) within —
 - (i) the period of 3 months after the date on which the registered corporation receives a written notice from the authorised officer concerning the non-conformity; or
 - (ii) where in any particular case the authorised officer is of the view that the registered corporation will require more than 3 months to correct that non-conformity and address the cause or causes identified, any longer period specified by that authorised officer,

correct that non-conformity and address the cause or causes identified in paragraph (a) with the aim of preventing that non-conformity from occurring again, or other similar non-conformities from occurring; and
- (c) conduct a second review to evaluate the effectiveness of any steps taken.

Division 3 — Energy management system reports

EnMS reports, etc.

11I.—(1) Subject to paragraph (2), a registered corporation must submit EnMS reports in accordance with this Division.

(2) If the registered corporation obtains an accredited ISO 50001 certification for the energy management system in respect of a relevant business activity for the whole or any part of an assessment cycle for the relevant business activity, the registered corporation need not submit an EnMS report for that assessment cycle if the registered corporation submits the certification in accordance with regulations 11J, 11K and 11L.

(3) Without affecting section 31A(2) of the Act, the registered corporation must not, in connection with the preparation of any EnMS report, rely on any information that is incomplete or inaccurate, and in particular, any energy use report submitted under regulation 8 or any energy efficiency improvement plan submitted under regulation 10, which the registered corporation has been notified by the Director-General to contain errors.

Time of submitting first EnMS report, etc.

11J.—(1) The registered corporation must —

- (a) if the relevant business activity was under its operational control as a registered corporation on 31 December 2020; and
- (b) if the amount of energy consumed annually by the relevant business activity in at least 2 of the years 2018, 2019 and 2020 is 500 terajoules or more,

submit to the Director-General on or before 31 December 2021 —

- (c) an EnMS report for the year 2021; or
- (d) (where regulation 11I(2) applies) its accredited ISO 50001 certification for the energy management system in respect of the relevant business activity that —

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- (i) is effective for the whole or any part of the year 2021; and
 - (ii) is effective up to and including at least 31 December 2021.

(2) The registered corporation must —

- (a) if the relevant business activity was under its operational control as a registered corporation on 31 December 2020; and
- (b) if the amount of energy consumed annually by the relevant business activity in at least 2 of the years 2018, 2019 and 2020 is 54 terajoules or more but less than 500 terajoules,

submit to the Director-General on or before 31 December 2022 —

- (c) an EnMS report for the year 2022; or
- (d) (where regulation 11I(2) applies) its accredited ISO 50001 certification for the energy management system in respect of the relevant business activity that —
 - (i) is effective for the whole or any part of the year 2022; and
 - (ii) is effective up to and including at least 31 December 2022.

(3) The registered corporation must —

- (a) if the registered corporation was registered as such at any time in any year (*X*) subsequent to the year 2020;
 - (b) if a relevant business activity comes under the operational control of the registered corporation at any time in any year (*X*) subsequent to the year 2020;
- or

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- (c) if any business activity over which the registered corporation has operational control becomes a relevant business activity in any year (X) subsequent to the year 2020,

submit to the Director-General on or before 31 December of the year $X + 1$ —

- (d) an EnMS report for the relevant business activity for the year $X + 1$; or
- (e) (where regulation 11I(2) applies) an accredited ISO 50001 certification for the relevant business activity that —
- (i) is effective for the whole or any part of the year $X + 1$; and
 - (ii) is effective up to and including at least 31 December of the year $X + 1$.

(4) Paragraphs (1), (2) and (3) do not apply if —

- (a) the registered corporation ceases to have operational control of the relevant business activity; or
- (b) the registration of the registered corporation is cancelled under section 25(2) of the Act,

at any time on or before —

- (c) where paragraph (1) applies — 31 December 2021;
- (d) where paragraph (2) applies — 31 December 2022;
- and
- (e) where paragraph (3) applies — 31 December of the year $X + 1$.

Time of submitting subsequent EnMS reports, etc.

11K.—(1) The registered corporation must, for any subsequent assessment cycle of the relevant business activity (called in this regulation the subject assessment cycle), submit to the Director-General within the time provided in paragraph (2) —

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- (a) an EnMS report for the subject assessment cycle; or
 - (b) (where regulation 11I(2) applies) an accredited ISO 50001 certification for the energy management system in respect of the relevant business activity that is effective for the whole of the subject assessment cycle.
- (2) The time for the purposes of paragraph (1) is as follows:
- (a) for an EnMS report —
 - (i) where an EnMS report was submitted for the assessment cycle immediately prior to the subject assessment cycle, at any time during the first 6 months of a period of 12 months that ends on the last day of the subject assessment cycle; or

Illustration

Assume the last day of the subject assessment cycle is 31 December 2023. The relevant period under this sub-paragraph is 1 January 2023 to 30 June 2023 (both dates inclusive).

- (ii) where an accredited ISO 50001 certification was submitted for the assessment cycle immediately prior to the subject assessment cycle, not later than the expiry of the period of 3 months after the date of expiry of that certification;

Illustration

Assume the date that the accredited ISO 50001 certification in question expires is 31 December 2023. The EnMS report for the subject assessment cycle (that commences on 1 January 2024) must be submitted on or before 31 March 2024.

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- (b) for an accredited ISO 50001 certification — not later than the expiry of the period of 3 months from and including the effective date of the certification.

Illustration

Assume the date that the accredited ISO 50001 certification in question commences is 1 January 2024. The certification for the subject assessment cycle (that commences on 1 January 2024) must be submitted on or before 31 March 2024. This applies whether an EnMS report or an accredited ISO 50001 certification was submitted for the assessment cycle immediately prior to the subject assessment cycle.

(3) The Director-General may extend the period provided in paragraph (2) on such terms as the Director-General thinks fit, if the Director-General is satisfied, on a written application by the registered corporation accompanied by supporting documents —

- (a) that the registered corporation is unable to comply with the requirement due to circumstances beyond the registered corporation's reasonable control; or
- (b) that an extension of any such time would be otherwise appropriate having regard to the circumstances of the case.

(4) Paragraph (1) does not apply if —

- (a) the registered corporation ceases to have operational control of the relevant business activity; or
- (b) the registration of the registered corporation is cancelled under section 25(2) of the Act,

at any time on or before the last day of the period during which an EnMS report or an accredited ISO 50001 certification must be submitted under this regulation.

Mode of submitting EnMS report, etc.

11L. The EnMS reports and the accredited ISO 50001 certifications must be submitted by the energy manager of the registered corporation —

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- (a) using the electronic service provided at <http://www.nea.gov.sg>; or
 - (b) in any other manner allowed by the Director-General.

Energy performance indicator values

11M.—(1) The registered corporation must express any energy performance indicator value or energy baseline stated in an EnMS report as an estimated value or a measured value, except for the following, which must be expressed as a measured value:

- (a) any system-level energy performance indicator value for any new energy-consuming system installed on or after 1 January 2022;
- (b) any plant-level energy performance indicator value reported on or after 1 January 2028.

(2) In this regulation, “measured value” means a value that is measured directly or derived from one or more measured variables relating to the system or plant in question.

Division 4 — Miscellaneous

Application for waiver of application of section 27A of Act

11N. Every application by a registered corporation under section 31B(2) of the Act for the waiver of the application of section 27A of the Act to the registered corporation must —

- (a) be in writing;
- (b) state the reasons for the inability of the registered corporation to comply with section 27A of the Act; and
- (c) be accompanied by supporting documents.

Records to be kept for this Part

11O.—(1) A registered corporation must keep and maintain complete and accurate records of any information or records relied upon by the registered corporation in preparing an EnMS

report under this Part for not less than 5 years after the date on which the report to which the information or records relate is submitted to the Director-General.

(2) The records kept and maintained pursuant to this regulation may be kept and maintained in electronic form.”.

*[G.N. Nos. S 752/2017; S 605/2018; S 898/2019;
S 972/2020]*

Made on 16 December 2021.

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