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**ENERGY CONSERVATION ACT 2012
(ACT 11 OF 2012)**

**ENERGY CONSERVATION
(REGISTRABLE CORPORATIONS)
ORDER 2013**

ARRANGEMENT OF PARAGRAPHS

Paragraph

1. Citation and commencement
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In exercise of the powers conferred by section 22 of the Energy Conservation Act 2012, the Minister for the Environment and Water Resources, after consultation with the National Environment Agency, hereby makes the following Order:

Citation and commencement

1. This Order may be cited as the Energy Conservation (Registrable Corporations) Order 2013 and shall come into operation on 22nd April 2013.

Definitions

2. In this Order, unless the context otherwise requires —

“consumption of energy”, in relation to a business activity, means the use or disposal of energy from the operation of the business activity, including own use and losses in use, extraction, production and transmission;

“energy” means any form of energy derived from any fuel or energy commodity specified in the First Schedule;

“energy commodity” means a commodity from which energy may be derived without combustion, and includes electricity, steam, compressed air and chilled water;

“manufacturing and manufacturing-related services” means one or more of the following activities:

- (a) manufacturing, testing or assembly of products;
- (b) processing of materials or products;
- (c) building, repairing or servicing of equipment and machinery;
- (d) printing;
- (e) reproduction of recorded media;
- (f) other types of manufacturing;

“supply of electricity, gas, steam, compressed air and chilled water for air-conditioning” means the following activities:

- (a) generation, transmission or distribution of electricity;
- (b) production or distribution of gas;
- (c) production or supply of steam;
- (d) production or supply of compressed air;
- (e) production or supply of chilled water for air-conditioning;

“water supply and sewage and waste management” means the following activities:

- (a) collection, treatment or supply of water;
- (b) operation of sewer systems or treatment of sewage;
- (c) collection (except by vehicles), treatment or disposal of waste;
- (d) recovery of materials through recycling.

Qualifications of registrable corporation

3.—(1) A corporation is a registrable corporation if —

- (a) it has operational control over a business activity which has attained the energy use threshold specified in sub-paragraph (2) in at least 2 out of the 3 preceding calendar years; and
- (b) the business activity is carried out at a single site and is attributable to one of the following industry sectors:
 - (i) manufacturing and manufacturing-related services;
 - (ii) supply of electricity, gas, steam, compressed air and chilled water for air-conditioning;
 - (iii) water supply and sewage and waste management.

(2) The energy use threshold referred to in section 22(2)(c) of the Act is 54 terajoules of energy consumed per calendar year, derived from one or more types of fuel or energy commodity specified in the First Schedule.

(3) The energy consumed by a business activity is the total consumption of energy derived from all fuel and energy commodities used to provide or produce energy, but the total shall not include energy so produced from any fuel or energy commodity that is already accounted for in the total figure.

(4) If a quantity of fuel used is to be converted to an amount of energy in joules, the conversion is to be done using —

- (a) the default net calorific values set out in the Second Schedule; or
- (b) the net calorific values specified by a corporation and approved by the Director-General under sub-paragraph (8).

(5) If a quantity of an energy commodity used is to be converted to an amount of energy in joules, the conversion is to be done using —

- (a) the default energy content values set out in the Third Schedule; or

- (b) the energy content values specified by a corporation and approved by the Director-General under sub-paragraph (8).
- (6) A corporation seeking to specify the net calorific value of a fuel shall submit to the Director-General a report by a laboratory containing the results of a test conducted in accordance with the relevant ASTM International, International Organization for Standardization (ISO) or other testing standards approved by the Director-General to ascertain the net calorific value of the fuel concerned.
- (7) A corporation seeking to specify the energy content value of an energy commodity shall submit to the Director-General the method by which the corporation derived the energy content value.
- (8) The Director-General may approve or reject the net calorific value or the energy content value sought to be specified by a corporation under sub-paragraph (6) or (7), as the case may be.

Period for application for registration

4. A registrable corporation shall, within 6 months after the date on which it qualifies as a registrable corporation, apply to the Director-General to be registered.

FIRST SCHEDULE

Paragraphs 2 and 3(2)

FUEL AND ENERGY COMMODITIES

PART I

FUEL

1. Crude Oil and Petroleum Products

- (a) Aviation Gasoline
- (b) Bitumen
- (c) Crude Oil
- (d) Ethane
- (e) Gas/Diesel Oil
- (f) Jet Gasoline

FIRST SCHEDULE — *continued*

- (g) Jet Kerosene
- (h) Other Kerosene
- (i) Liquefied Petroleum Gases
- (j) Lubricants
- (k) Motor Gasoline
- (l) Naphtha
- (m) Natural Gas Liquids
- (n) Orimulsion
- (o) Paraffin Waxes
- (p) Petroleum Coke
- (q) Refinery Feedstock
- (r) Refinery Gas
- (s) Residual Fuel Oil
- (t) Shale Oil
- (u) White Spirit and Special Boiling Point (SBP) Spirit
- (v) Other Petroleum Products

2. Solid Fuel

- (a) Anthracite
- (b) Brown Coal Briquettes
- (c) Coal Tar
- (d) Coke Oven Coke and Lignite Coke
- (e) Coking Coal
- (f) Gas Coke
- (g) Lignite
- (h) Oil Shale and Tar Sands
- (i) Patent Fuel
- (j) Sub-Bituminous Coal
- (k) Other Bituminous Coal

FIRST SCHEDULE — *continued***3. Derived Gases**

- (a) Blast Furnace Gas
- (b) Coke Oven Gas
- (c) Oxygen Steel Furnace Gas
- (d) Town Gas (Gas Works Gas)

4. Natural Gas

- (a) Natural Gas

5. Non Fossil-based Fuel

- (a) Industrial Waste
- (b) Municipal Waste
- (c) Waste Oils

6. Peat

- (a) Peat

7. Biomass and Fuel Derived from Biomass

- (a) Biodiesels
- (b) Biogasoline
- (c) Charcoal
- (d) Landfill Gas
- (e) Sludge Gas
- (f) Sulphite Lyes (Black Liquor)
- (g) Wood/Wood Waste
- (h) Other Biogas
- (i) Other Liquid Biofuel
- (j) Other Primary Solid Biomass

8. Hydrogen

- (a) Hydrogen (H₂)

FIRST SCHEDULE — *continued*

PART II

ENERGY COMMODITIES

1. Energy Commodities

- (a) Chilled water
- (b) Compressed air
- (c) Electricity
- (d) Steam.

SECOND SCHEDULE

Paragraph 3(4)

DEFAULT NET CALORIFIC VALUES

	<i>Factor</i>	<i>Unit</i>
1. Crude Oil and Petroleum Products		
(a) Aviation Gasoline	44.3	TJ/ 10 ³ tonnes
(b) Bitumen	40.2	TJ/ 10 ³ tonnes
(c) Crude Oil	42.3	TJ/ 10 ³ tonnes
(d) Ethane	46.4	TJ/ 10 ³ tonnes
(e) Gas/Diesel Oil	43.0	TJ/ 10 ³ tonnes
(f) Jet Gasoline	44.3	TJ/ 10 ³ tonnes
(g) Jet Kerosene	44.1	TJ/ 10 ³ tonnes
(h) Other Kerosene	43.8	TJ/ 10 ³ tonnes
(i) Liquefied Petroleum Gases	47.3	TJ/ 10 ³ tonnes
(j) Lubricants	40.2	TJ/ 10 ³ tonnes
(k) Motor Gasoline	44.3	TJ/ 10 ³ tonnes
(l) Naphtha	44.5	TJ/ 10 ³ tonnes
(m) Natural Gas Liquids	44.2	TJ/ 10 ³ tonnes
(n) Orimulsion	27.5	TJ/ 10 ³ tonnes
(o) Paraffin Waxes	40.2	TJ/ 10 ³ tonnes
(p) Petroleum Coke	32.5	TJ/ 10 ³ tonnes

SECOND SCHEDULE — *continued*

	<i>Factor</i>	<i>Unit</i>
(q) Refinery Feedstock	43.0	TJ/ 10 ³ tonnes
(r) Refinery Gas	49.5	TJ/ 10 ³ tonnes
(s) Residual Fuel Oil	40.4	TJ/ 10 ³ tonnes
(t) Shale Oil	38.1	TJ/ 10 ³ tonnes
(u) White Spirit and Special Boiling Point (SBP) Spirit	40.2	TJ/ 10 ³ tonnes
(v) Other Petroleum Products	40.2	TJ/ 10 ³ tonnes
2. Solid Fuel		
(a) Anthracite	26.7	TJ/ 10 ³ tonnes
(b) Brown Coal Briquettes	20.7	TJ/ 10 ³ tonnes
(c) Coal Tar	28.0	TJ/ 10 ³ tonnes
(d) Coke Oven Coke and Lignite Coke	28.2	TJ/ 10 ³ tonnes
(e) Coking Coal	28.2	TJ/ 10 ³ tonnes
(f) Gas Coke	28.2	TJ/ 10 ³ tonnes
(g) Lignite	11.9	TJ/ 10 ³ tonnes
(h) Oil Shale and Tar Sands	8.9	TJ/ 10 ³ tonnes
(i) Patent Fuel	20.7	TJ/ 10 ³ tonnes
(j) Sub-Bituminous Coal	18.9	TJ/ 10 ³ tonnes
(k) Other Bituminous Coal	25.8	TJ/ 10 ³ tonnes
3. Derived Gases		
(a) Blast Furnace Gas	2.47	TJ/ 10 ³ tonnes
(b) Coke Oven Gas	38.7	TJ/ 10 ³ tonnes
(c) Oxygen Steel Furnace Gas	7.06	TJ/ 10 ³ tonnes
(d) Town Gas (Gas Works Gas)	38.7	TJ/ 10 ³ tonnes
4. Natural Gas		
(a) Natural Gas	48.0	TJ/ 10 ³ tonnes
5. Non Fossil-based Fuel		

SECOND SCHEDULE — *continued*

	<i>Factor</i>	<i>Unit</i>
(a) Industrial Waste	10.0	TJ/ 10 ³ tonnes
(b) Municipal Waste	8.5	TJ/ 10 ³ tonnes
(c) Waste Oils	40.2	TJ/ 10 ³ tonnes
6. Peat		
(a) Peat	9.76	TJ/ 10 ³ tonnes
7. Biomass and Fuel Derived from Biomass		
(a) Biodiesels	27.0	TJ/ 10 ³ tonnes
(b) Biogasoline	27.0	TJ/ 10 ³ tonnes
(c) Charcoal	29.5	TJ/ 10 ³ tonnes
(d) Landfill Gas	50.4	TJ/ 10 ³ tonnes
(e) Sludge Gas	50.4	TJ/ 10 ³ tonnes
(f) Sulphite Lyes (Black Liquor)	11.8	TJ/ 10 ³ tonnes
(g) Wood/Wood Waste	15.6	TJ/ 10 ³ tonnes
(h) Other Biogas	50.4	TJ/ 10 ³ tonnes
(i) Other Liquid Biofuel	27.4	TJ/ 10 ³ tonnes
(j) Other Primary Solid Biomass	11.6	TJ/ 10 ³ tonnes
8. Hydrogen		
(a) Hydrogen (H ₂)	120	TJ/ 10 ³ tonnes.

THIRD SCHEDULE

Paragraph 3(5)

DEFAULT ENERGY CONTENT VALUES

	<i>Factor</i>	<i>Unit</i>
1. Energy Commodities		
(a) Chilled Water	5.87	GJ/ 10 ³ tonnes
(b) Compressed Air	240	kJ/ cubic metre
(c) Steam	2.64	TJ/ 10 ³ tonnes.

Made this 17th day of April 2013.

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Ministry of the Environment and
Water Resources, Singapore.*

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