

Ghana

Renewable Energy Act, 2011

Act 832 of 2011

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Renewable Energy Act, 2011

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Renewable Energy Act, 2011

Act 832 of 2011

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AN ACT to provide for the development, management, utilisation, sustainability and adequate supply of renewable energy for generation of heat and power and for related matters.

Preliminary provisions

1. Object of the Act

- (1) The object of this Act is to provide for the development, management and utilisation of renewable energy sources for the production of heat and power in an efficient and environmentally sustainable manner.
- (2) For the purpose of subsection (1), the object shall encompass
 - (a) the provision of
 - (i) a framework to support the development and utilisation of renewable energy sources; and
 - (ii) an enabling environment to attract investment in renewable energy sources;
 - (b) the promotion for the use of renewable energy;
 - (c) the diversification of supplies to safeguard energy security;
 - (d) improved access to electricity through the use of renewable energy sources;
 - (e) the building of indigenous capacity in technology for renewable energy sources;
 - (f) public education on renewable energy production and utilisation; and
 - (g) the regulation of the production and supply of woodfuel and bio-fuel.

2. Meaning of renewable energy

In this Act, “renewable energy” means energy obtained from non-depleting sources including

- (a) wind;
- (b) solar;
- (c) hydro;
- (d) biomass;
- (e) bio-fuel;
- (f) landfill gas;
- (g) sewage gas;

- (h) geothermal energy;
- (i) ocean energy; and
- (j) any other energy source designated in writing by the Minister.

3. Ministerial responsibility

The Minister is responsible for providing policy direction for the achievement of the object of this Act.

Responsibilities of institutions

4. Responsibilities of Energy Commission

The Energy Commission shall

- (a) advise the Minister on renewable energy matters;
- (b) create a platform for collaboration between government and the private sector and civil society for the promotion of renewable energy sources;
- (c) recommend and advise relevant stakeholders on the educational curriculum on efficient use of renewable energy sources and evolve programmes for its mainstreaming on the educational curriculum of educational institutions;
- (d) recommend for exemption from customs, levies and other duties, equipment and machinery necessary for the development, production and utilisation of renewable energy sources;
- (e) in consultation with the Public Utilities Regulatory Commission recommend financial incentives necessary for the development, production and utilisation of renewable energy sources;
- (f) promote the local manufacture of components to facilitate the rapid growth of renewable energy sources;
- (g) promote plans for training and supporting local experts in the field of renewable energy;
- (h) promote the benefits of renewable energy to facilitate its utilisation;
- (i) in consultation with relevant stakeholders set targets for the development and utilisation of renewable energy sources; and
- (j) implement the provisions of this Act.

5. Responsibilities of Public Utilities Regulatory Commission

The Public Utilities Regulatory Commission shall for the purpose of the implementation of this Act, approve

- (a) rates chargeable for the purchase of electricity from renewable energy sources by public utilities;
- (b) charges for grid connection; and
- (c) rates chargeable for wheeling of electricity from renewable energy sources.

6. Public utilities

A public utility licensed under the Energy Commission Act, 1997 (Act 541) to transmit or distribute or sell electricity, shall comply with the relevant provisions of this Act and in general, facilitate the attainment of the object of this Act.

7. Collaboration of relevant institutions

- (1) The relevant institutions responsible for the development, promotion, management and utilisation of renewable energy sources shall collaborate with the Commission in the exercise of its powers and performance of its functions under this Act.
- (2) For the purposes of subsection (1), relevant institutions include
 - (a) the Standards Authority;
 - (b) the Forestry Commission;
 - (c) the Lands Commission;
 - (d) the Environmental Protection Agency;
 - (e) the Ministry of Food and Agriculture;
 - (f) Metropolitan, Municipal and District Assemblies of Local Government;
 - (g) the National Petroleum Authority;
 - (h) the Public Utilities Regulatory Commission;
 - (i) the Water Resources Commission;
 - (j) the Ghana Cocoa Board;
 - (k) the Ministry of Environment, Science and Technology;
 - (l) the Ghana Revenue Authority; and
 - (m) any other institution designated by the Minister by publication in the *Gazette*.

Licensing provisions

8. Requirement for licence

- (1) A person shall not engage in a commercial activity in the renewable energy industry without a licence granted under this Act.
- (2) For the purposes of this Act, the commercial activities in the renewable energy industry are
 - (a) production;
 - (b) transportation;
 - (c) storage;
 - (d) distribution, sale and marketing;
 - (e) importation;
 - (f) exportation and re-exportation; and
 - (g) installation and maintenance.
- (3) The Commission may by legislative instrument limit or expand the scope of activities under subsection (2).
- (4) A person who engages in a commercial activity in the renewable energy industry without a licence issued by the Commission as provided under this Act, commits an offence and is liable on summary conviction to a fine not exceeding two thousand penalty units or to a term of imprisonment not exceeding five years or to both.

- (5) Where the offence is committed by a body corporate, that body corporate is liable on summary conviction to a fine not exceeding five thousand penalty units.

9. Qualification for licence

A licence under this Act may only be granted to

- (a) a citizen,
- (b) a body corporate registered under the Companies Act, 1963 (Act 179) or under any other law of Ghana; or
- (c) a partnership registered under the Incorporated Private Partnerships Act, 1962 (Act 152).

10. Application for licence

- (1) An application for a licence shall be made to the Commission in the prescribed form accompanied with the prescribed fee and information required by the Commission.
- (2) The Board shall
 - (a) acknowledge receipt of an application within five working days after receipt, and
 - (b) inform the applicant in writing of the decision of the Board within sixty days after the five days.

11. Grant of licence

- (1) Where an applicant meets the conditions required by this Act for a licence to engage in commercial activity in the renewable energy industry, the Board shall grant the application and issue the applicant with the licence.
- (2) Despite subsection (1), the Board may for reasons founded on
 - (a) technical data;
 - (b) national security;
 - (c) public safety;
 - (d) food security;
 - (e) health; and
 - (f) environmental safety

reject the application for a licence to engage in commercial activity in the renewable energy industry.

12. Conditions of licence

- (1) A licence granted by the Commission is subject to the conditions specified in the licence.
- (2) Without limiting subsection (1), a licence granted under this Act may include conditions requiring the licensee to provide the Commission with the documents, accounts, estimates, returns, environmental impact assessment and management plans or any other information that the Board may require for the purpose of performing its functions under this Act in the manner and at the times as may be reasonably required.

13. Non-transferability of licence

A licence granted under this Act is not transferable except with the prior written approval of the Board.

14. Duration and renewal of licence

- (1) A licence granted under this Act is for the period specified in the licence and may be renewed.
- (2) An application for the renewal of a licence shall be made to the Commission not later than sixty days before the licence expires.
- (3) The procedure for the renewal of a licence granted under this Act shall be the same as that applicable to the granting of the original licence.
- (4) A licensee who fails to renew the licence or that has the application for the renewal of the licence rejected by the Board shall cease to provide the services to which the licence relates.

15. Power to modify licence

- (1) Subject to this Act and Regulations made under it, the Board may modify a licence granted under this Act if the modification is permissible under the terms of the licence or is required in the public interest.
- (2) A modification shall not be made unless the Board has given the licensee and the general public at least sixty working days notice
 - (a) stating that the Board proposes to make the modification;
 - (b) setting out the effect of the modification; and
 - (c) inviting representations or objections regarding the modification for consideration.
- (3) The Board shall consider the representations or objections that are made to it before the modification is made.
- (4) The notice shall be given by
 - (a) publication, in the manner that the Board considers appropriate; and
 - (b) sending a personal copy of the notice to the licenseefor the purposes of bringing the matters to which the notice relates to the attention of persons likely to be affected by it.
- (5) The expense incurred or damage caused as a result of a modification to a licence shall be considered as part of the capital expenditure of the licensee.

16. Suspension or cancellation of licence

- (1) Where the Board is satisfied that a licensee is not complying with or has not complied with any of the conditions of the licence, the Board may suspend or cancel the licence.
- (2) A suspension or cancellation shall not be made unless the Board has given the licensee
 - (a) written notice specifying in it, the cause of dissatisfaction of the Board requiring the suspension or cancellation of the licence,
 - (b) the directions for the rectification of the breach, and
 - (c) the action proposed to be taken by the Board in the event of non compliance with the notice.
- (3) The Board shall
 - (a) not suspend or cancel a licence without first giving the licensee an opportunity of being heard, and
 - (b) where it considers it appropriate, give a period that the Board considers reasonable for the compliance with the directions of the Board.

- (4) The Board shall consider the extent to which a person is likely to sustain loss or damage as a result of the suspension or cancellation of the licence in determining whether it is necessary to suspend or cancel the licence.
- (5) A licence which is not utilised within one year after the date of its grant may be cancelled by the Board after notice of not less than thirty days has been served on the licensee.

17. Complaint to the Minister

- (1) A person who is aggrieved by
 - (a) a refusal to grant a licence or the renewal of a licence under this Act;
 - (b) the modification, suspension or cancellation of a licence under this Actmay within thirty days of the decision of the Board lodge a complaint with the Minister.
- (2) The Minister shall within thirty days of receipt of the complaint
 - (a) investigate and take a decision in respect of the complaints; or
 - (b) set up an arbitration panel under the Alternative Dispute Resolution Act, 2010 (Act 798) to settle the matter amicable with the aggrieved person.
- (3) Where the Minister and the aggrieved person are unable to reach an amicable settlement or the Minister fails to take a decision under paragraphs (a) or (b) respectively of subsection (2), the aggrieved person may within a period of fourteen days after the decision pursue the matter in the High Court.

18. Settlement of disputes by arbitration

- (1) The Board shall on its own initiative or at the request of a licensed person set up an arbitration panel under the Alternative Dispute Resolution Act, 2010 (Act 798).
- (2) The arbitration panel is to arbitrate and settle any dispute that arises between licensees where the parties concerned cannot reach an agreement.

Special requirements relating to licences

19. Application

Without limiting the provisions of section 12, section 20 to 24 shall apply to licences for the following activities:

- (a) production;
- (b) transportation;
- (c) storage;
- (d) distribution;
- (e) sale and marketing;
- (f) exportation and re-exportation; and
- (g) installation and maintenance.

20. Production and supply licence

Where the Board grants a licence to an applicant to produce and supply a renewable energy product, the licensee shall

- (a) manufacture and assemble that renewable energy product;
- (b) install, generate and supply electrical energy; or
- (c) produce bio-fuel or woodfuel

in accordance with the directives of the Commission.

21. Bulk storage licence

- (1) Where the Board grants a licence to an applicant to store renewable energy products in commercial quantities, the licensee shall install a facility for the storage of the renewable energy products.
- (2) The suitability of a facility shall be determined by the Commission.
- (3) The Commission shall determine what constitutes commercial quantities.

22. Marketing licence

Where the Board grants a licence to an applicant to market a renewable energy product, the licensee shall obtain from the Commission, approval for the export of each consignment of woodfuel and bio-fuel.

23. Installation and maintenance licence

- (1) Where the Board grants a licence to an applicant to provide for the installation and maintenance services for a renewable energy system, the licensee shall engage in a commercial activity that correlates to the specific renewable energy technology.
- (2) For the purpose of this section, a 'specific renewable energy technology' includes technologies for solar, wind, mini hydro, biogas digester, charcoal kilns and a bio-fuel processing plant.

24. Bulk transportation licence

- (1) Where the Board grants a licence to an applicant to transport renewable energy products, the licensee shall
 - (a) transport bio-fuel products, or woodfuel, and
 - (b) use a registered vehicle to transport the bio-fuel product or woodfuel productin accordance with the directives of the Commission.
- (2) For the purpose of this section, 'a registered vehicle' is a vehicle that has been registered with the Commission to transport bio-fuel and woodfuel products.

Requirements for electricity generation

25. Feed-in-tariff scheme

- (1) There is established by this Act a feed-in-tariff scheme for the purpose of guaranteeing the sale of electricity generated from renewable energy sources.
- (2) The feed-in-tariff scheme consists of
 - (a) the renewable energy purchase obligation;

- (b) the feed-in-tariff rate; and
- (c) a connection to transmission and distribution systems.

26. Renewable energy purchase obligation

- (1) An electricity distribution utility or bulk customer shall procure a specified percentage of its total purchase of electricity from renewable energy sources.
- (2) The Public Utilities Regulatory Commission shall in consultation with the Energy Commission specify the percentage level of electricity to be purchased by the electricity distribution utility or bulk customer.
- (3) The Public Utilities Regulatory Commission shall take into account the
 - (a) technology being used to generate electricity from renewable energy sources;
 - (b) assurance of the financial integrity of public utilities; and
 - (c) net effect of the cost of renewable energy on the end user tariff,in specifying the percentage level of electricity.
- (4) An electricity distribution utility or a bulk customer permitted by the Commission, shall
 - (a) purchase a specified percentage of its total purchase of electricity from renewable energy sources; or
 - (b) pay to the Commission a premium as determined by the Commission.
- (5) The premium payable shall be paid by the Commission into the bank account opened for the purpose under section 34.
- (6) Where an electricity distribution utility or a bulk customer fails to purchase a specified percentage of its total purchase of electricity from renewable energy sources or refuses to pay the premium required under subsection (4)
 - (a) the Commission may suspend the permit obtained by the bulk customer to purchase electricity from a wholesale supplier; and
 - (b) the bulk customer shall pay
 - (i) the sum total of the difference between the end user tariff and the purchase price of the renewable energy payable calculated from the date the amount was due and payable, and
 - (ii) a fine of five thousand penalty units.

27. Feed-in-tariff rates

- (1) An electricity distribution utility shall not
 - (a) negotiate a Power Purchase Agreement with a generator of electricity; and
 - (b) buy power from a generator of electricityfrom a renewable energy source without the written approval of the Public Utilities Regulatory Commission.
- (2) The Public Utilities Regulatory Commission shall prepare and provide public utilities with guidelines on the level of rates that may be charged by the public utility for electricity generated from renewable energy sources.

- (3) The Public Utilities Regulatory Commission shall take into account the
 - (a) technology being used in the renewable energy industry;
 - (b) location of the generation facility;
 - (c) operating norms for the specific technology under consideration;
 - (d) costs associated with construction, commissioning, operation and maintenance of the plant;
 - (e) the reasonable rate of return; and
 - (f) the balance between the interest of the consumer and the investor,in preparing the guidelines.
- (4) The feed-in-tariff rate fixed for electricity from renewable energy sources shall be guaranteed for a period of ten years and subsequently be subject to review every two years.
- (5) The Public Utilities Regulatory Commission shall, in determining the mechanism for the regulated electricity market, factor into the tariff, the price differential between the purchase price of electricity generated from renewable energy sources and the price of electricity purchased from other sources.
- (6) An electricity distribution utility or a bulk customer which contravenes subsection (1) commits an offence and is liable on summary conviction to a fine of ten thousand penalty units.

28. Approval of feed-in-tariff rates

- (1) A public utility shall not demand a feed-in-tariff rate for electricity generated from renewable energy sources unless the feed-in-tariff rate chargeable has been approved by the Public Utilities Regulatory Commission.
- (2) A public utility shall not directly or indirectly demand or receive a feed-in-tariff rate higher than the feed-in-tariff rate approved by the Public Utilities Regulatory Commission in relation to electricity generated from renewable energy sources.
- (3) Despite section 26(2), a public utility may demand and receive from a consumer a higher feed-in-tariff rate agreed to by both the public utility and the consumer with the written permission of the Public Utilities Regulatory Commission.
- (4) The power to approve a rate under this section shall not apply to the export of electricity generated from renewable energy sources.
- (5) A public utility which contravenes subsections (1) or (2) commits an offence and is liable on summary conviction to a fine of ten thousand penalty units.

29. Publication of feed-in-tariff rates

Feed-in-tariff rates approved by the Public Utilities Regulatory Commission for electricity generated from renewable energy sources shall be published by the Public Utilities Regulatory Commission in the *Gazette* and in at least one national daily newspaper.

30. Connection to transmission and distribution systems

- (1) An operator of a transmission or distribution system shall connect a generator of electricity from a renewable energy source within the coverage area of the transmission or distribution system where a generator of electricity from renewable energy sources so requests.

- (2) An operator of a transmission or distribution system shall
 - (a) upgrade the transmission or distribution system at reasonable economic expense to feed in the electricity from the generator of electricity from renewable energy sources; and
 - (b) upgrade the transmission and distribution system as soon as practicable if so requested by a generator interested in feeding in electricity.
- (3) The cost associated with connecting installations to the metering point of the grid shall be borne by the generator of electricity from renewable energy sources.
- (4) An operator of a transmission or distribution system that commits an offence under this section is liable on summary conviction to a fine not exceeding ten thousand penalty units and the Commission may in addition to the fine suspend the licence of that operator.
- (5) For the purposes of subsection (1), the operator of a transmission or distribution system shall enter into a connection agreement with a generator of electricity from renewable energy sources within the coverage area of the transmission or distribution system.

Establishment and management of the Renewable Energy Fund

31. Establishment of the Renewable Energy Fund

There is established by this Act the Renewable Energy Fund.

32. Object of the Fund

- (1) The object of the Fund is to provide financial resources for the promotion, development, sustainable management and utilisation of renewable energy sources.
- (2) For the purposes of achieving the object of the Fund, moneys from the Fund shall be applied primarily to the provision of financial incentives, feed-in-tariffs, capital subsidies, production based subsidies and equity participation for
 - (a) grid interactive renewable electricity;
 - (b) mini-grid and off-grid renewable power systems for remote areas and island;
 - (c) renewable energy projects for non-electricity purposes; and
 - (d) any other renewable energy activity that the Commission may determine.
- (3) Moneys from the Fund may be applied for
 - (a) the promotion of
 - (i) scientific, technological and innovative research into renewable energy;
 - (ii) research into the establishment of standards for the utilisation of renewable energy;
 - (iii) the production or fabrication of equipment for the development and utilisation of renewable energy in the country;
 - (iv) programmes to adopt international best practices; and
 - (v) innovative approaches to the development and utilisation of renewable energy sources; and
 - (b) the development of
 - (i) infrastructure for renewable energy; and
 - (ii) capacity building for renewable energy development.

- (4) For the purposes of this section, 'equity participation' means the participation in the ownership of an organisation or venture through an investment for renewable energy.

33. Sources of money for the Fund

The sources of money for the Fund are

- (a) moneys approved by Parliament,
- (b) the premium payable under section 26 (4) (b),
- (c) donations, grants and gifts received for renewable energy activities,
- (d) money which is generated by the Commission from the provision of services for renewable energy activities;
- (e) moneys approved by the Board from the Energy Fund established under the Energy Commission Act, 1997 (Act 541) for the promotion of projects for the development, management and utilisation of renewable energy resources, including solar energy,
- (f) the proportion of Government levy from the export of bio-fuel as approved by Parliament, and
- (g) any other moneys that are provided by the Minister responsible for Finance.

34. Bank account for the Fund

- (1) The moneys for the Fund shall be paid into a bank account for the purpose, opened by the Commission with the approval of the Controller and Accountant-General.
- (2) The bank account for the Fund shall be kept separate from the bank account for any other Fund that relates to energy resources.
- (3) A person in possession of money intended for the Fund shall pay the money into a bank account opened under subsection (1) on the next working day after receipt of the money.

35. Management of the Fund

- (1) Moneys for the Fund shall be vested in the Board.
- (2) The Board of the Energy Commission is responsible for the management of the Fund subject to the Financial Administration Act, 2003 (Act 654).
- (3) The Board shall
 - (a) pursue policies to achieve the object of the Fund;
 - (b) collect or arrange to be collected, moneys lawful due to the Fund, through procedures determined by the Minister;
 - (c) ensure accountability of the Fund by defining appropriate procedures for the utilisation of the Fund;
 - (d) prepare and publish the criteria for the disbursement of moneys from the Fund with the approval of the Minister;
 - (e) disburse moneys from the Fund;
 - (f) receive and examine reports from designated persons or institutions in respect of financial assistance granted those persons or institutions; and
 - (g) perform any other function assigned to it under this Act or incidental to the achievement of the object of the Fund.

36. Internally generated funds

- (1) Subject to the Ministries, Departments and Agencies (Retention of Funds) Act, 2007 (Act 735), the Fund is authorised to retain all moneys realised in the performance of its functions.
- (2) The preparation and submission of estimates and the reporting and accounting of estimates are subject to the Financial Administration Act, 2003 (Act 654).
- (3) The provisions of Article 187 of the Constitution which relate to the Auditor-General shall apply to the moneys retained under this Act.
- (4) Despite any other provision in any enactment to the contrary, internally generated funds
 - (a) can only be utilised when the activities on which the expenditure will be incurred have been programmed and approved in the expenditure budget of the Fund; and
 - (b) shall not be used for the payment of salaries, staff benefits and other allowances except where the allowances are directly related to the provision of services that will lead to increased revenue.

37. Tax exemption

The Fund is exempt from payment of tax.

38. Administrative expenses of the Fund

The administrative expenses of the Fund related to the management of the Fund shall be charged on the Fund.

39. Accounts and audit

- (1) The Board shall keep books of account and proper records in relation to them in the form determined and approved by the Auditor-General.
- (2) The Board shall submit the account of the Fund to the Auditor-General for audit within three months after the end of the financial year.
- (3) The Auditor-General shall conduct the audit of the account exclusively for the Fund.
- (4) The Auditor-General shall, not later than three months after the receipt of the accounts, audit the accounts and forward a copy of the audit report to the Minister.
- (5) The financial year of the Commission shall be the same as the financial year of the Government.

40. Annual report and other reports

- (1) The Board shall within one month after the receipt of the audit report, submit an annual report to the Minister covering the activities and operations of the Fund for the year to which the report relates.
- (2) The annual report shall include the report of the Auditor-General.
- (3) The Minister shall within one month after receipt of the annual report submit the report to Parliament with a statement that the Minister considers necessary.
- (4) The Board shall also submit to the Minister any other report which the Minister may require in writing.

Control and management of bio-fuel and woodfuel

41. Feedstock production

A licensee that has been granted a licence under this Act to produce bio-fuel from feedstock, shall obtain the relevant permit from the Ministry of Food and Agriculture and the Environmental Protection Agency.

42. Designation and pricing of bio-fuel blend

- (1) The Minister shall on the commencement of this Act, designate bio-fuel blend as a petroleum product in accordance with the National Petroleum Authority Act, 2005 (Act 691).
- (2) The National Petroleum Authority shall be responsible for the pricing of bio-fuel blend in accordance with the prescribed petroleum pricing formula provided for under the National Petroleum Authority Act, 2005 (Act 691).

43. Sale of bio-fuel blend

- (1) The proportion of bio-fuel in bio-fuel blend offered for sale to consumers at the point of sale, shall be determined from time to time by the National Petroleum Authority in consultation with the Energy Commission.
- (2) A person who sells bio-fuel blend at the point of sale shall display conspicuously the proportion of the bio-fuel contained in the biofuel blend.

44. Sustainability of woodfuel production

The Commission shall collaborate with

- (a) the Forestry Commission,
- (b) the Environmental Protection Agency,
- (c) the relevant Metropolitan, Municipal or District Assembly, and
- (d) any other relevant institution to ensure the development and implementation of programmes to sustain wood fuel production and consumption.

Miscellaneous provisions

45. Duty of renewable energy producers

A person licensed under this Act to produce renewable energy shall

- (a) maintain the equipment and property used in the provision of the service in a condition that would enable it to effectively provide the service;
- (b) comply with technical standards and guidelines established by the Commission; and
- (c) comply with the terms of the respective environmental impact assessment permit.

46. Integration of renewable energy projects into energy system

- (1) The Public Utilities Regulatory Commission and the Energy Commission shall in developing Regulations and guidelines for the provision of electricity, take into account the particular nature of the electricity generated from renewable energy sources to ensure that relevant renewable energy projects are integrated into the power system.

- (2) The National Petroleum Authority shall in developing guidelines for the provision of petroleum products take into account the particular nature of the fuel produced from renewable energy sources to ensure that relevant renewable energy projects are integrated into the fuel supply system.

47. Other offences and penalties

A person who fails to

- (a) obtain the relevant permit from the Ministry of Food and Agriculture after the grant of the licence contrary to section [41](#);
- (b) display at the point of sale the proportion of bio-fuel contained in the bio-fuel blend contrary to section [43](#);
- (c) maintain the equipment and property used in the provision of the service contrary to paragraph (a) of section [45](#); or
- (d) comply with the technical standards established by the Commission

commits an offence and is liable on summary conviction to a fine of not more than five thousand penalty units and in the case of a continuing offence to a further fine of not more than fifty penalty units for each day during which the offence continues after written notice has been served on the offender.

48. Modification of existing enactments

The provisions of the Energy Commission Act or any other relevant enactment shall have effect subject to the modifications necessary to give effect to this Act and to the extent that the provisions of an enactment are inconsistent with this Act, the provisions of this Act shall prevail.

49. Guidelines and codes of practice

- (1) The Commission may issue guidelines for the
 - (a) development, efficient management and utilisation of renewable energy sources;
 - (b) connection of electricity generated from renewable energy sources to transmission or distribution systems; and
 - (c) technical standards for the use of renewable energy sources.
- (2) The Commission shall publish guidelines in the *Gazette* or in at least one national daily newspaper.
- (3) Where the Commission amends or revokes a guideline, it shall publish the amendment or revocation in the *Gazette* or in at least one national daily newspaper.
- (4) The Board may impose the following sanctions for failure to apply the guidelines:
 - (a) imposition of a fine not more than one thousand penalty units,
 - (b) suspension or revocation of a licence, and
 - (c) any other administrative sanction determined by the Board.
- (5) In any proceedings, where the Court is satisfied that a guideline is relevant to the determination of a matter
 - (a) the guideline shall be admissible in evidence, and
 - (b) proof as to whether or not a person contravened a guideline may be relied on by any party to the proceedings to establish or negate the matter.
- (6) The Board may issue a code of practice for the purpose of giving effect to the provisions of this Act.

50. Regulations

The Minister may on the recommendation of the Board, by legislative instrument make Regulations

- (a) to prescribe fees and charges;
- (b) for the conditions of licences;
- (c) to prescribe standards for construction, operation and maintenance of facilities and installations in respect of bio-fuel and electricity from renewable energy sources;
- (d) to prescribe standards of performance for the development, management and utilisation of renewable energy resources;
- (e) to prescribe technical standards for the use of renewable energy sources;
- (f) for the control and management of
 - (i) bio-fuel, and
 - (ii) woodfuel;
- (g) to establish a scheme for creating, trading and extinguishing of renewable energy certificates;
- (h) to review the
 - (i) percentage level of the proportion of bio-fuel referred to in section 43(2); and
 - (ii) producer prices for bio-fuel;
- (i) to provide for financial and other incentives necessary for the development, production and utilisation of renewable energy sources; and
- (j) to provide for any other matter necessary for the effective implementation of the provisions of this Act.

51. Interpretation

In this Bill unless the context otherwise requires,

“animal waste” means livestock, manure or any other material like bedding, milk house waste, soil, hair, feathers or debris normally included in animal waste handling operations;

“Auditor-General” includes an auditor appointed by the Auditor-General;

“bio-degradable” means material that has the

- (a) ability to break down safely and relatively quickly by biological means, into the raw materials of nature; or
- (b) proven capability to decompose into non-toxic soil, water, carbon dioxide or methane;

“bio-fuel” means non fossil fuel produced from crops and plants;

“bio-fuel blend” means the mixture of a proportion of bio-fuel and petroleum-based fuel;

“bio-fuel production” means the process and method employed to transform energy crops and plants into bio-fuel;

“biogas” means gas that comprises primarily of methane and carbon dioxide produced by the biological breakdown of organic matter in the absence of oxygen and produced by anaerobic digestion or fermentation of bio-degradable materials like biomass manure sewage, municipal waste, green waste and energy crops;

“biogas digester” means an equipment that has the capacity to degrade organic matter to produce biogas;

“biomass” means organic matter like agricultural crops and residue, wood and wood waste, animal waste, aquatic plants and organic components of municipal and industrial waste;

“Board” means the governing body of the Energy Commission;

“bulk customer” means a customer that purchases or receives electricity in the amount or level specified by the Board;

“Commission” means the Energy Commission established under the Energy Commission Act, 1997 (Act, 541);

“distribution system” means the portion of the equipment used to deliver electricity between the distribution utility and the bulk customer or consumer;

“distribution utility” means a person licensed to distribute and sell electricity without discrimination to consumers in an area or zone designated by the Board;

“energy crop” includes a plant

- (a) that can be directly exploited for its energy content,
- (b) that is grown for the sole purpose of energy production but not for food production, or
- (c) that is grown specifically for its fuel value;

“energy security” means the availability, adequacy, reliability and environmental sustainability of energy supply;

“energy sources” includes coal, wind, oil, gas or wood consumed in the generation of power;

“end-user-tariff” means the rate per unit of electricity paid by consumers of the distribution utility;

“feed in tariff” means a fixed guaranteed price at which power producers are required to sell renewable energy into the electric power system;

“feed in-tariff scheme” means a policy that guarantees grid access to renewable energy producers and sets the feed-in-tariffs;

“feedstock” means a material that can be used to produce bio-fuel;

“generator of electricity” means the person that generates electricity from renewable energy sources and supplies it to the general public;

“geothermal energy” means energy extracted from heat available in the earth;

“grid connection” means the physical linkage between a renewable energy system and the utility grid;

“grid interactive renewable electricity” means a system which has the capacity to feed electricity from renewable energy source into the utility grid;

“hydro” means a water based energy system which produces electricity with generating capacity not exceeding one hundred megawatts;

“industrial hazardous waste” means discarded solid or liquid waste from industrial activity that

- (a) contains any solvent, pesticide or paint stripper and one or more of 39 carcinogenic, mutagenic or teratogenic compounds at levels that exceed established limits;
- (b) can catch fire easily like gasoline, paints and solvents;
- (c) is reactive or unstable enough to explode or release toxic fumes including acids, bases, ammonia and chlorine bleach, or
- (d) is capable of corroding metal containers like tanks, drums and barrels, industrial cleaning agents and oven and drain cleaners;

“industrial waste” means waste produced as a result of the industrial activity in a factory, mill or mine but that is neither hazardous nor toxic as waste fiber produced by agriculture and logging;

“landfill gas” means the gas produced in landfills due to the anaerobic digestion by microbes on any organic matter which can be collected and flared off or used to generate electricity;

“licensed facility” means a part of or the whole portion of a building, structure, equipment or plant that is licensed for the purpose of activities in the renewable energy industry;

“mini grid renewable power system” means a network of electricity supply from renewable energy technologies which is not connected to the grid;

“Minister” means the Minister responsible for Energy;

“municipal area” includes a metropolis, municipality or district;

“municipal waste” includes waste that arises from domestic activity and is predominantly household, commercial waste collected within a municipal area in a liquid, solid or semi solid form but excludes industrial hazardous or toxic waste;

“non-depleting resources” means resources that replenish themselves or reproduce easily;

“ocean energy” means energy created by the power of ocean currents, waves and tides with the use of technology;

“off grid renewable power system” means electricity supply from renewable energy technologies which is not connected to the grid;

“premium” means the amount payable by the bulk customer instead of the purchase of electricity required under subsection (4) (a) of section 26;

“power system” means the interconnected system of generation units, transmission and distribution system operated as an integrated arrangement for the supply of electricity;

“Power Purchase Agreement” means an agreement that sets out the rights and liabilities between the generator of electricity and the distribution utility or bulk customer;

“production based subsidy” means financial assistance given for the generation of electricity;

“Public Utilities Regulatory Commission” means the Public Utilities Regulatory Commission established under the Public Utilities Regulatory Commission, Act 1997 (Act 538);

“public utility” means a person licensed under the Energy Commission Act, 1997 (Act 541) to provide transmission and interconnection services for electricity without discrimination throughout the country or a person licensed under that Act to distribute and sell electricity without discrimination to consumers in an area or zone designated by the Board of the Commission.

“renewable energy certificates” means a tradable environmental commodity that represents proof that electricity was generated from an acceptable source and which can be sold, traded or bartered by the owner of the certificate claiming to have purchased renewable energy;

“renewable energy product” means goods and services produced from renewable energy;

“renewable energy resources” includes natural resources such as sunlight, wind, rain, tides and geothermal plant, which are renewable and naturally replenished;

“renewable energy sources” means renewable non-fossil energy sources like wind, solar, geothermal, wave, tidal, hydro-power, biomass, landfill gas;

“renewable energy system” means equipment that transforms renewable energy sources into electrical or heat energy;

“sewage gas” means biogas produced by the digestion and incineration of sewage sludge which can be used to generate energy;

"transmission system" means an interconnected group of electric transmission lines and associated equipment for moving or transferring electrical energy in bulk between points of supply and points at which it is transformed for delivery over the distribution system lines to consumers or is delivered to other electric systems;

"wheeling" means the use of the facilities of one transmission system to transmit power and energy from one power system to another;

"wholesale supplier" means a person licensed under the Energy Commission Act to install and operate a facility to procure or produce electricity for sale to bulk customers or to a distribution utility for distribution and sale to customers; and

"woodfuel" includes firewood and charcoal.

52. Consequential amendments

(1) The National Petroleum Authority Act, 2005 (Act 691) is amended in subsection (2) of section 2

(a) by the insertion after paragraph (m) of the new paragraph

"(ma) establish producer prices for bio-fuel and review these prices periodically"; and

(b) in section 81 by the insertion of the definition of

"“bio-fuel” means non fossil fuel produced from crops and plants;"

after "Basel Convention".

53. Transitional provisions

Until such time that a Renewable Energy Authority is established, the Renewable Energy Directorate under the Ministry of Energy shall

- (a) Oversee the implementation of renewable energy activities in the country;
- (b) execute renewable energy projects initiated by the State or in which the State has an interest; and
- (c) manage the assets in the renewable energy sector on behalf of the State.