

RENEWABLE ENERGY ACT 2011

RENEWABLE ENERGY (TECHNICAL AND OPERATIONAL REQUIREMENTS) RULES 2011

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RENEWABLE ENERGY ACT 2011

RENEWABLE ENERGY (TECHNICAL AND OPERATIONAL REQUIREMENTS) RULES 2011

In exercise of the powers conferred by paragraphs 61(a) and (c) of the Renewable Energy Act 2011 [Act 725], the Sustainable Energy Development Authority Malaysia, with the concurrence of the Energy Commission, makes the following rules:

PART I

PRELIMINARY

Citation and commencement

1. (1) These rules may be cited as the **Renewable Energy (Technical and Operational Requirements) Rules 2011**.

(2) These Rules come into operation on [***].

Interpretation

2. In these Rules, unless the context otherwise requires—

“acceptance test” means a test to measure the performance of a renewable energy installation at a designed generation output;

“communication facilities” means the facilities and equipment necessary, in accordance with prudent utility practices, to enable a designated control centre to communicate with a renewable energy installation connected to a connection point through a medium or high voltage direct connection;

“connection point” means the physical point where the supply lines of a renewable energy installation and a distribution licensee are connected;

“consumption meter” means, in relation to a low voltage renewable energy installation connected to a connection point through a low voltage indirect connection, the meter used to record the electricity consumption referred to in paragraph 8(b);

“designated control centre” means, in relation to a major renewable energy installation, the control centre of the distribution licensee as designated in writing by the distribution licensee from time to time, but not more than one at any one time, as being the sole distribution licensee control centre, for the purposes of communicating with the major renewable energy installation;

“electrical protective scheme” means a scheme for detecting and protecting an installation from—

- (a) possible damage caused by electrical disturbances arising within the installation; and
- (b) other faults or malfunctions arising from the operation or non-operation of another person’s protective scheme;

“emergency condition” means a condition or situation that is—

- (a) described or regarded as such in any code issued or approved by the Commission; or
- (b) in the distribution licensee’s reasonable judgment, based on prudent utility practices—
 - (i) presents an imminent physical threat of danger to life, health or property;
 - (ii) threatens the safety, reliability or security of its electricity distribution network;
 - (iii) could reasonably be expected to cause a significant disruption to its electricity distribution network; or
 - (iv) could reasonably be expected to adversely affect the distribution licensee’s ability to meet its obligations to provide safe, adequate and reliable electricity service to consumers, including other utilities with which the electricity distribution network is interconnected;

“high voltage” means a voltage exceeding [fifty thousand] volts;

“high voltage direct connection” means the connection of a renewable energy installation directly to a high voltage supply line;

“initial operation date” means, in relation to a feed-in approval holder, the date on which its renewable energy installation first transmits renewable energy to the distribution licensee’s electricity distribution network for testing purposes, following the fulfilment of the conditions set out in subparagraph 5(5) of the Third Schedule;

“installed capacity” means the maximum level of electrical power which a renewable energy installation can produce based on its specifications;

“insulation co-ordination study” means a study to determine the adequacy of insulation used in an electricity distribution network in light of a proposed connection of a medium voltage renewable energy installation to a connection point;

“interconnection facilities” means all the facilities and equipment necessary, in accordance with prudent utility practices, to connect a renewable energy installation to a connection point and enable a distribution licensee to receive renewable energy from the renewable energy installation while maintaining the stability of the electricity distribution network, including protective devices, metering equipment and any applicable communication facilities;

“low voltage” has the meaning assigned to it in the Electricity Regulations 1994 [*P.U. (A) 38/94*];

“low voltage direct connection” means the connection of a renewable energy installation directly to a low voltage supply line;

“low voltage indirect connection” means the connection of a renewable energy installation to a low voltage supply line indirectly through the internal distribution board of the feed-in approval holder where the renewable energy installation is connected to an electrical point within the premises of the feed-in approval holder instead of the point of common connection;

“low voltage renewable energy installation” means a renewable energy installation having an installed capacity of up to and including one hundred and eighty kilowatts;

“maintenance outage” means a planned outage that is for the purpose of performing work on a major renewable energy installation, which work could be postponed by at least seventy two hours, but in the opinion of the feed-in approval holder should not be postponed until the next scheduled outage;

“major renewable energy installation” means—

(a) in relation to Peninsular Malaysia, a renewable energy installation having an installed capacity of above five megawatts; and

(b) in relation to the State of Sabah and the Federal Territory of Labuan, a renewable energy installation having an installed capacity of above [three] megawatts;

“medium voltage” means a voltage exceeding low voltage but not exceeding [fifty thousand] volts;

“medium voltage direct connection” means the connection of a renewable energy installation directly to a medium voltage supply line;

“medium voltage renewable energy installation” means a renewable energy installation having an installed capacity of above one hundred and eighty kilowatts;

“network reinforcement works” means works or actions to upgrade or reinforce a distribution licensee’s electricity distribution network in order to accept and distribute renewable energy generated from a renewable energy installation in accordance with prudent utility practices;

“outage” means the occurrence of any loss of, interruption to or reduction in the ability of a renewable energy installation to generate renewable energy;

“ownership boundary” means—

- (a) in relation to a renewable energy installation connected to a connection point through a low voltage direct or indirect connection, the connection point; and
- (b) in relation to a renewable energy installation connected to a connection point through a medium or high voltage direct connection, the perimeter of the renewable energy installation;

“power system study” means a study to determine the optimal technically feasible method for a proposed connection of a medium voltage renewable energy installation to a connection point, including the matters set out in paragraphs (a) to (e) of subrule 3(6);

“protection co-ordination study” means a study on the co-ordination between the electrical protective schemes of a renewable energy installation and the distribution licensee’s electricity distribution network, including the calculation of all relay settings in the renewable energy installation based on the short circuit levels at the connection point;

“protective devices” means devices and equipment within an electrical protective scheme including relays, their associated circuit breakers and fuses;

“prudent utility practices” means [the practices, methods and standards generally followed by the electricity supply industry in Malaysia during the applicable period, with respect to the design, construction, installation, testing, operation and maintenance of the electricity generating and distribution installations of the type used by the renewable energy installation, interconnection facilities, communication facilities or the electricity distribution network, as the case may be, and includes—

- (a) the requirements of all applicable laws including the Act, the Electricity Supply Act 1990 [Act 447] and their subsidiary legislation;
- (b) the requirements of all codes issued or approved by the Commission;
- (c) such requirements as may be determined by the Authority from time to time pursuant to guidelines;
- (d) applicable guidelines issued or promulgated by distribution licensees that are consistent with the requirements of paragraphs (a) to (c);

- (e) the operation and maintenance standards recommended by the suppliers and manufacturers of such electricity generating and distribution equipment; and
- (f) the International Electrotechnical Commission standards.]

“qualified person” means a person possessing such qualifications as may be determined by the Authority under rule 23;

“reliability run” means a test to measure the generation stability of a renewable energy installation over a period of time;

“scheduled outage” means a planned outage, other than a maintenance outage, that is required for—

- (a) the inspection, preventive maintenance or corrective maintenance, repair or improvement of a major renewable energy installation; or
- (b) a major overhaul of a major renewable energy installation in accordance with prudent utility practices;

that has been co-ordinated with the distribution licensee in accordance with subparagraphs 4(1) to (3) of the Fourth Schedule;

PART II

PLANNING

Power system study required for medium voltage renewable energy installations

3. (1) An eligible producer who proposes to construct and connect a medium voltage renewable energy installation to a connection point shall, before making an application to the Authority for a feed-in approval, submit a written request to the distribution licensee whose area of supply the renewable energy installation is proposed to be located in to carry out a power system study in respect of the proposed connection.

(2) The request submitted under subrule (1) shall be accompanied by such technical information in respect of the proposed renewable energy installation that is required by the distribution licensee in order to carry out of the power system study, as may be specified by the Authority pursuant to guidelines.

(3) Upon receipt of the request under subrule (1) and the information under subrule (2), the distribution licensee shall conduct a power system study in accordance with these Rules and such other requirements as may be determined by the Authority from time to time pursuant to guidelines.

(4) The distribution licensee shall complete the study within the period as set out in the second column of the First Schedule corresponding to the installed capacity of the proposed renewable energy installation as set out in the first column of the First Schedule.

(5) The eligible producer shall pay to the distribution licensee the costs for carrying out the power system study in the amount as set out in the third column of the First Schedule corresponding to the installed capacity of the proposed renewable energy installation as set out in the first column of the First Schedule.

(6) Upon the completion of a power system study and payment of the applicable costs under subrule (5), the distribution licensee shall prepare and submit a report to the eligible producer setting out—

- (a) the technical feasibility of a connection between the proposed renewable energy installation and a connection point;
- (b) the determination of the location of the connection point in accordance with the provisions of rule 4;
- (c) any network reinforcement works required to be undertaken by the distribution licensee;
- (d) any equipment ratings or specifications required of the proposed renewable installation in order to safely connect it to the connection point; and
- (e) such other matters as may be determined by the Authority from time to time pursuant to guidelines.

(7) In the event of any change in the installed capacity or type of renewable resource to be utilised by the proposed renewable energy installation after the completion of a power system study—

- (a) a new power system study shall be carried out by the distribution licensee; and
- (b) the provisions of subrules (2), (3), (4), (5) and (6) shall apply, *mutatis mutandis*, to the new power system study.

(8) A distribution licensee who fails to comply with subrule (3), (4) or (6) commits an offence under these Rules.

Determination of location of connection point

4. (1) The connection point shall be located at the shortest linear distance from a proposed renewable energy installation having regard to—

(a) the total installed capacity of installations including the proposed renewable energy installation, as specified in the second column of the Second Schedule, that can be technically connected to the connection point at its nominal voltage level as specified in the first column of the Second Schedule; and

(b) public and private safety.

(2) In the event a distribution licensee determines the location of a connection point other than in accordance with subrule (1), the provisions of subrule 12(2) shall apply.

(3) In the event of any difference of opinion between a distribution licensee and an eligible producer described in subrule 3(1) as to whether the distribution licensee has made a determination in accordance with subrule (1)—

(a) the eligible producer may appoint a qualified person to carry out a new power system study to verify the location of the connection point in accordance with subrule (1);

(b) not later than thirty days after receiving a written request from the eligible producer, the distribution licensee shall submit to it all relevant data relating to its electricity distribution network as may be required for such new power system study;

(c) the distribution licensee may, upon receipt of the new power system study report, make a decision to re-determine the location of the connection point or maintain its earlier determination;

(d) in the event there is still a difference of opinion between the distribution licensee and eligible producer as to whether the distribution licensee has made a determination in accordance with subrule (1), either of them may appeal to the Authority and the determination of the Authority shall be final and binding on both of them; and

(e) the cost of the new power system study shall be borne by the eligible producer, provided that if—

(i) a re-determination of the location of the connection point is made by the distribution licensee under paragraph (c); or

(ii) the Authority determines under paragraph (d) that the distribution licensee had not made a determination in accordance with subrule (1),

such cost shall be reimbursed by the distribution licensee to the eligible producer.

(4) In the event of any difference of opinion between a distribution licensee and any other eligible producer as to whether the distribution licensee has made a determination in

accordance with subrule (1), either of them may appeal to the Authority and the determination of the Authority shall be final and binding on both of them.

(5) The location of the connection point determined or re-determined, as the case may be, under this rule shall be the location identified by the eligible producer in making an application to the Authority for a feed-in approval.

Submission and review of conceptual design of interconnection facilities

5. (1) A feed-in approval holder shall, no later than sixty days before the scheduled feed-in tariff commencement date specified in his feed-in approval, submit to the distribution licensee—

(a) the conceptual design of such facilities; and

(b) a certificate from a qualified person certifying that the interconnection facilities when constructed in accordance with such conceptual design shall conform to prudent utility practices and the minimum requirements of the distribution licensee's applicable specifications and operational characteristics.

(2) The distribution licensee may at its own cost—

(a) review the conceptual design submitted under subrule (1); and

(b) recommend to the feed-in approval holder modifications, revisions and improvements to the interconnection facilities in accordance with prudent utility practices, provided that such recommendations are made in writing to the feed-in approval holder no later than thirty days after the submission made under subrule (1).

(3) The feed-in approval holder shall at its own cost comply with any recommendations made by the distribution licensee under paragraph (2)(b) if they relate to the safe and secure operation of the interconnection facilities with the distribution licensee's electricity distribution network.

PART III

CONNECTION

Conditions to connection

6. (1) No connection between a renewable energy installation owned by a feed-in approval holder and a connection point shall be made unless—

- (a) the feed-in approval holder and distribution licensee shall have entered into a renewable energy power purchase agreement in accordance with section 12 and the Renewable Energy (Renewable Energy Power Purchase Agreements) Rules 2011;
- (b) the renewable energy power purchase agreement shall have been registered by the Authority in accordance with subsection 12(6);
- (c) the feed-in approval holder shall have submitted a written application to the distribution licensee for connection of his renewable energy installation to a connection point;
- (d) the connection is made at the location referred to in subrule 4(5);
- (e) the method of connection is permitted under this Part;
- (f) the requirements of rule 11 and, where applicable, subparagraph 5(5) of the Third Schedule have been met; and
- (g) the connection is carried out by the distribution licensee or a qualified person authorised by the distribution licensee in accordance with prudent utility practices.

(2) Subject to subrule (1), the distribution licensee shall connect the renewable energy installation to the connection point within [thirty/sixty] days from receiving an application made by the feed-in approval holder under subsection 13(1),

(3) A person who contravenes subrule (1) commits an offence under these Rules.

Low voltage direct connection

7. Subject to rule 8, a low voltage renewable energy installation shall be connected to a connection point through a low voltage direct connection.

Low voltage indirect connection

8. A low voltage renewable energy installation may be connected to a connection point through a low voltage indirect connection if—

- (a) it utilises solar photovoltaic technology as its renewable resource and is installed in the premises of the applicable feed-in approval holder;
- (b) the distribution licensee's supply line at the connection point supplies electricity to such premises exclusively for the consumption of the feed-in approval holder who owns such renewable energy installation; and

- (c) the total installed capacity of installations including the proposed renewable energy installation, as specified in the second column of the Second Schedule, does not exceed the nominal voltage level of the connection point as specified in the first column of the Second Schedule.

Medium voltage direct connection

9. (1) Subject to rule 10, a medium voltage renewable energy installation shall be connected to a connection point through a medium voltage direct connection, provided that such connection is found to be technically feasible pursuant to a power system study carried out under rule 3.

(2) In the event a medium voltage direct connection is required to be carried out under subrule (1), the relevant feed-in approval holder and distribution licensee shall comply with the provisions of the Third Schedule.

High voltage direct connection

10. (1) A medium voltage renewable energy installation may be connected to a connection point through a high voltage direct connection if—

- (a) the distribution licensee and feed-in approval holder agree to such connection; and
- (b) such connection is found to be technically feasible pursuant to a power system study carried out under rule 3.

(2) In the event a high voltage direct connection is agreed to be carried out under subrule (1), the relevant feed-in approval holder and distribution licensee shall comply with the provisions of the Third Schedule and all other applicable prudent utility practices.

Electrical protective schemes

11. (1) A feed-in approval holder and distribution licensee shall each design, procure and install, and be responsible for the cost, type, design and installation of, its own electrical protection scheme, in accordance with prudent utility practices.

(2) The distribution licensee shall ensure that such electrical protection schemes are properly co-ordinated for the reliable and safe operation of its electricity distribution network.

(3) The type and design of an electrical protection scheme shall ensure that:

- (a) a fault occurring within the renewable energy installation will not adversely affect any part of the electricity distribution network;

- (b) a fault occurring within the electricity distribution network will not damage any part of the renewable energy installation; and
- (c) on the detection of a fault or malfunction, the protective devices must trip appropriate circuit breakers to isolate the faulty part of the installation to—
 - (i) minimise equipment damage and safety hazards during such fault or malfunction; and
 - (ii) maintain the continuity of power supply to the functioning parts of the installation.

PART IV

ALLOCATION OF RESPONSIBILITIES AND COSTS

Pre-operational responsibilities and costs

12. (1) Subject to subrule (2)—

- (a) a feed-in approval holder shall be responsible at its own cost for carrying out the design, construction, installation and testing of its renewable energy installation and applicable interconnection facilities up to the connection point in accordance with prudent utility practices; and
- (b) a distribution licensee shall be responsible at its own cost for carrying out any required network reinforcement works in accordance with prudent utility practices,

unless the feed-in approval holder and distribution licensee mutually agree otherwise.

(2) In the event that the location of a connection point is determined by a distribution licensee other than in accordance with subrule 4(1), the distribution licensee shall reimburse to the feed-in approval holder the difference, if any, between—

- (a) the costs of all installations, including any applicable interconnection facilities, and works required for the connection of the renewable energy installation up to the location of the connection point as determined by the distribution licensee; and
- (b) the costs of all installations, including any applicable interconnection facilities, and works, required for the connection of the renewable energy installation up to the location of a connection point situated at the shortest linear distance from the renewable energy installation having regard to the matters described in paragraphs (a) and (b) of subrule 4(1).

Operational responsibilities and costs

13. (1) Subject to subrule (2)—

(a) a feed-in approval holder shall own, and shall be responsible at its own cost for operating and maintaining all installations located within his ownership boundary; and

(b) a distribution licensee shall own, and shall be responsible at its own cost for operating and maintaining all installations located beyond such ownership boundary,

in accordance with prudent utility practices.

(2) A feed-in approval holder shall transfer such assets to a distribution licensee as may be required to comply with the provisions of subrule (1).

(3) Subrule (1) shall be without prejudice to any provisions in the renewable energy power purchase agreement entered into between a feed-in approval holder and distribution licensee dealing with their rights and liabilities in the event one of them is unable to operate its installation, or any part thereof, due to a fault, malfunction or other failure of any installation, or part thereof, of the other.

PART V

COMMENCEMENT

Acceptance test

14. (1) A feed-in approval holder shall, upon completion of the design and construction of its renewable energy installation, carry out, or procure the carrying out of, an acceptance test on the installation in accordance with such requirements and procedures as may be determined by the Authority from time to time pursuant to guidelines.

(2) A feed-in approval holder shall not make or permit to be made any material modification to the design or physical form of the renewable energy installation except with the prior written consent of the Authority, if the modification results in any change in any information earlier submitted by or on behalf of the feed-in approval holder to the Authority in the application for its feed-in approval.

Feed-in tariff commencement date

15. (1) Unless otherwise permitted under the terms of an effective renewable energy power purchase agreement, no feed-in tariff commencement date shall occur until—

- (a) the submission by the feed-in approval holder to the distribution licensee and the Authority of—
 - (i) in relation to all renewable energy installations, a certificate from a qualified person stating that the renewable energy installation and interconnection facilities have been designed, constructed, installed and tested in accordance with prudent utility practices; and
 - (ii) in relation to renewable energy installations connected to a connection point through a medium or high voltage direct connection, the documents described in paragraph 7 of the Third Schedule;
 - (b) where applicable, the submission by the feed-in approval holder to the Authority of the documentary evidence specified in the third column of the Schedule to the Renewable Energy (Eligibility Criteria for Feed-in Tariff Rate) Rules 2011; and
 - (c) the meters to measure the renewable energy generated and delivered from the renewable energy installation have been sealed by the distribution licensee as coordinated with and witnessed by the feed-in approval holder, within such period as may be determined by the Authority.
- (2) No feed-in tariff commencement date shall occur earlier than six months before the scheduled feed-in tariff commencement date specified in the applicable feed-in approval.
- (3) A feed-in approval holder shall provide the distribution licensee and the Authority with no less than fourteen days prior written notice of the estimated occurrence of the feed-in tariff commencement date.
- (4) A feed-in approval holder shall—
- (a) no later than five days from the feed-in tariff commencement date, provide the distribution licensee and the Authority with written confirmation of the occurrence of the feed-in tariff commencement date; and
 - (b) no later than fourteen days from the feed-in tariff commencement date, submit a report on the occurrence of the feed-in tariff commencement date to the Authority in such form and containing such details as may be determined by the Authority pursuant to guidelines.

PART VI
OPERATION

Operation consistent with prudent utility practices

16. (1) A feed-in approval holder shall operate its renewable energy installation in accordance with prudent utility practices.

(2) Without prejudice to the generality of subrule (1), a feed-in approval holder who owns a major renewable energy installation, and a distribution licensee, shall comply with the provisions of the Fourth Schedule.

(2) A person who fails to comply with subrule (1) commits an offence under these Rules.

PART VII
METERING AND PAYMENT

Revenue meter

17. (1) Subject to subrule (6), a feed-in approval holder shall at its own cost procure and install a revenue meter to measure the quantity of renewable energy supplied and delivered by its renewable energy installation to a distribution licensee.

(2) The specifications, type and location of the revenue meter shall comply with such requirements as may be determined by the Authority from time to time pursuant to guidelines.

(3) The revenue meter shall be—

(a) installed by the distribution licensee or a qualified person authorised by the distribution licensee;

(b) sealed by the distribution licensee; and

(c) owned and maintained in accordance with the principles set out in rule 13.

(4) No person may break the seal on a revenue meter except pursuant to an inspection or test carried out under rule 18.

(5) A feed-in approval holder may at its own cost procure and install such back-up meters as he deems appropriate.

(6) In the event any additional meter is procured and installed by the feed-in approval holder at the request of the distribution licensee, the distribution licensee shall reimburse the feed-in approval holder for the cost of such meter.

Inspection and testing of revenue meter

18. (1) Without prejudice to subrules (2) and (3), a distribution licensee shall at its own cost inspect and test a revenue meter at regular intervals of no longer than twelve months each; provided that the distribution licensee shall provide the relevant feed-in approval holder with not less than twenty-four hours' prior written notice of such inspection or test, and permit the feed-in approval holder and its representatives to witness and verify such inspection or test and any adjustment made to the revenue meter.

(2) A feed-in approval holder may at any time submit a written request to the distribution licensee to test a revenue meter.

(3) The distribution licensee shall, no later than seven working days from receipt of a request submitted under subrule (2), test the revenue meter, and shall permit the feed-in approval holder and its representatives to witness and verify such test and any adjustment made to the revenue meter.

(4) If any revenue meter is found to be defective or inaccurate by more than one per centum—

- (a) the revenue meter shall be adjusted, repaired, recalibrated or replaced, as the case may be, by the distribution licensee at its own cost;
- (b) if the feed-in approval holder and the distribution licensee are unable to agree on the amount of adjustment necessary to correct the measurements made by any defective or inaccurate revenue meter and the feed-in approval holder has installed a back-up meter, such back-up meter shall be used to determine the amount of such inaccuracy;
- (c) if there is no back-up meter, or if the back-up meter is also found to be defective or inaccurate by more than one per centum and the feed-in approval holder and the distribution licensee are unable to agree on the amount of adjustment necessary to correct the measurements made by such defective or inaccurate back-up meter, the distribution licensee shall install a new and calibrated meter in parallel with the revenue meter to determine the inaccuracy of the revenue meter;
- (d) if the feed-in approval holder and the distribution licensee are unable to agree on the actual period during which the inaccurate measurements were made, the period during which the measurements are to be adjusted shall be one half of the period from the last previous test of the revenue meter to the test that found such revenue meter to be defective or inaccurate.

- (e) if the period determined under paragraph (d) covers a period for which feed-in tariffs have already been paid by the distribution licensee, the distribution licensee shall use the corrected measurement as determined under the preceding paragraphs to recalculate the amount of feed-in tariffs due for the period of inaccuracy and shall subtract from such re-calculated amount the feed-in tariffs previously paid by the distribution licensee for such period, and—
 - (i) if the subtraction results in a positive balance, that balance shall be paid by the distribution licensee to the feed-in approval holder; and
 - (ii) if the subtraction results in a negative balance, that balance shall be paid by the feed-in approval holder to the distribution licensee;
- (f) any balance required to be paid under paragraph (e) shall be made within fifteen calendar days from receipt by the distribution licensee or feed-in approval holder, as the case may be, of a statement from the feed-in approval holder or distribution licensee, as the case may be, requesting such balance; and
- (g) any balance required to be paid under subparagraph (e)(i) may be set off against any payments due from the feed-in approval holder to the distribution licensee.

Meter readings

19. (1) Subject to subrule (2), a distribution licensee shall—
- (a) read all revenue meters on a monthly basis;
 - (b) no later than seven days after reading each revenue meter, issue a payment advice to the relevant feed-in approval holder setting out—
 - (i) the amount of renewable energy generated and delivered by the feed-in approval holder to the distribution licensee; and
 - (ii) the amount of feed-in tariffs payable by the distribution licensee to the feed-in approval holder for such energy.
- (2) In the event a low voltage renewable energy installation is connected to a connection point through a low voltage indirect connection—
- (a) the feed-in approval holder who owns such installation shall read the applicable revenue meter and consumption meter on the same day and at as proximate in time as possible on a monthly basis in such manner as may be specified by the distribution licensee;
 - (b) the feed-in approval holder shall submit the readings made under paragraph (a) to the distribution licensee, in such form and method as may be specified by the

distribution licensee, no later than the seventh day of the month following the month during which the renewable energy was generated and delivered by the feed-in approval holder to the distribution licensee; and

- (c) the distribution licensee shall, no later than seven days after receiving the meter readings submitted under paragraph (b), issue a payment advice to the feed-in approval holder setting out—
 - (i) the amount of renewable energy generated and delivered by the feed-in approval holder to the distribution licensee; and
 - (ii) the amount of feed-in tariffs payable by the distribution licensee to the feed-in approval holder for such energy.

(3) Without prejudice to subrule 18(4), meter readings shall be *prima facie* evidence of the amount of renewable energy supplied by the feed-in approval holder to the distribution licensee.

Payment of feed-in tariffs

20. (1) A distribution licensee shall pay the applicable feed-in tariffs to each feed-in approval holder no later than thirty days after the issuance of a payment advice under paragraph 18(1)(b) or 18(2)(c), as the case may be.

(2) In the event a distribution licensee fails to—

- (a) pay a feed-in approval holder the applicable feed-in tariffs in accordance with subsection (1); or
- (b) issue a payment advice to a feed-in approval holder under paragraph 18(1)(b) or 18(2)(c), as the case may be,

the feed-in tariffs which the feed-in approval holder would have otherwise received if not for such failure shall be a debt due to the feed-in approval holder by the distribution licensee.

Disputes

21. Any claim, difference of opinion or dispute between a feed-in approval holder and distribution licensee arising out of or in connection with this Part shall be adjudicated and resolved in accordance with any applicable provisions of the renewable energy power purchase agreement entered into by them.

PART VIII

GENERAL

Prudent utility practices

22. All actions required by or taken pursuant to these Rules by any person shall be consistent with prudent utility practices.

Qualified persons

23. (1) The Authority may, from time to time pursuant to guidelines, determine the qualifications to be possessed by any person tasked with the carrying out of any work, action, certification, obligation or responsibility in relation to the compliance with any provision of these Rules or any other subsidiary legislation made pursuant to the Act.

(2) A person shall not carry out of any work, action, certification, obligation or responsibility in relation to the compliance with any provision of these Rules or any other subsidiary legislation made pursuant to the Act unless he meets the qualifications described in subrule (1).

(3) A person who fails to comply with subrule (2) commits an offence under these Rules.

Approval of drawings, plans and other documents

24. Any—

(a) review, comment or approval by the Authority or distribution licensee, or both of them, as the case may be, of any drawings, plans or other documents submitted by a feed-in approval holder under these Rules or any guidelines issued by the Authority; or

(b) inspection or test undertaken by the Authority or distribution licensee, or both of them, as the case may be, of any renewable energy installation,

shall not constitute an endorsement of the design of the renewable energy installation, nor a warranty or other assurance by the Authority or distribution licensee of the safety, durability or reliability of the installation, nor shall it relieve or release the feed-in approval holder from any of its duties, obligations or liabilities imposed on or provided for under these Rules or such guidelines or under the provisions of any renewable energy power purchase agreement.

Guidelines

25. The Authority may, generally in respect of these Rules, or in respect of any particular provision of these Rules, or generally in respect of the conduct of feed-in approval holders,

distribution licensees or qualified persons, issue such guidelines as the Authority may deem necessary for the purposes of the implementation of these Rules.

Extension of time

26. (1) Notwithstanding anything contained in these Rules, where a time period is specified under these Rules or in any request by the Authority for an act to be done or a condition to be fulfilled, the person affected may request for an extension of time in writing.

(2) The Authority may, upon receipt of a request made under subrule (2), grant such extension of time as it deems fit, provided that such person has furnished sufficient evidence to the Authority's satisfaction that the proposed extension of time—

- (a) is not required as a result of such person's act, omission or negligence;
- (b) could not have been reasonably foreseeable at the time of the application for the grant of the feed-in approval;
- (c) is just and reasonable; and
- (d) is not inconsistent with the matters set out in subsection 3(3) of the Act.

General penalty

27. Any person who commits an offence under these Rules shall on conviction be liable to a fine not exceeding three hundred thousand ringgit or to imprisonment for a term not exceeding three years or to both.

Transitional provisions

28. (1) Upon the grant of a feed-in approval to an eligible producer referred to in subsection 64(2), these Rules shall apply *mutatis mutandis* to the feed-in approval holder; except that—

- (a) where his renewable energy installation had generated electricity for commercial sale prior to the grant of the feed-in approval, the provisions of Part II, Part III, rule 12, Part V (except for paragraph 15(1)(b)), the First Schedule, Second Schedule and Third Schedule (except for paragraph 11) shall not apply to such feed-in approval holder; and
- (b) where his renewable energy installation has not generated electricity for commercial sale prior to the grant of the feed-in approval, the feed-in approval holder may apply to the Authority for an exemption from any of the provisions referred to in paragraph (a).

(2) The Authority may, upon receipt of an application made under paragraph (1)(b), grant such exemption as it deems fit, provided that such feed-in approval holder has furnished sufficient evidence to the Authority's satisfaction that the proposed exemption is—

(a) just and reasonable; and

(b) not inconsistent with prudent utility practices.

FIRST SCHEDULE

(Rule 3)

POWER SYSTEM STUDY COMPLETION PERIOD AND COSTS

First Column	Second Column	Third Column
<i>Installed capacity of renewable energy installation</i>	<i>Period to complete power system study (commencing from the day all the information is provided under subrule 3(2))</i>	<i>Power system study costs (in ringgit)</i>
Up to and including 1 megawatt	30 days *	20,000.00 #
Above 1 megawatt, and up to and including 12 megawatts	30 days *	40,000.00 #
Above 12 megawatts, and up to and including 30 megawatts	42 days *	60,000.00 #

* An additional period of 10 days shall be granted to the distribution licensee if an insulation co-ordination study is deemed necessary and carried out by the distribution licensee as part of the power system study.

Additional costs of twenty thousand ringgit shall be paid to the distribution licensee if an insulation co-ordination study is deemed necessary and carried out by the distribution licensee as part of the power system study.

SECOND SCHEDULE

(Rules 4 and 8)

TOTAL INSTALLED CAPACITY OF INSTALLATIONS THAT CAN BE TECHNICALLY CONNECTED TO A CONNECTION POINT AT ITS THE NOMINAL VOLTAGE LEVEL

First Column	Second Column
<i>Nominal voltage level at connection point</i>	<i>Total installed capacity of installations including the proposed renewable energy installation that can be technically connected to the connection point</i>
230 volts	Up to and including 24 kilowatts
400 volts	Between 10 kilowatts to 180 kilowatts
11 kilovolts (distribution substation)	Between 180 kilowatts to 1 megawatt
11 kilovolts (main distribution substation, main switching station and main intake substation)	Between 1 megawatt to 12 megawatts
33 kilovolts	Between 1 megawatt to 30 megawatts

THIRD SCHEDULE

(Rules 9 and 10)

PROVISIONS APPLICABLE TO MEDIUM AND HIGH VOLTAGE DIRECT CONNECTIONS

Rights of way

1. (1) A feed-in approval holder shall at its own cost acquire all necessary easements, licences, rights-of-way and access rights required to construct and install the interconnection facilities including the laying of any cables and erection of overhead lines.

(2) The distribution licensee shall, whenever possible, assist the feed-in approval holder with such acquisition.

(3) The feed-in approval holder shall reimburse the distribution licensee for all reasonable expenses incurred by the distribution licensee in providing such assistance.

Protection co-ordination study

2. (1) The feed-in approval holder shall procure at its own cost a protection co-ordination study to be carried out by a qualified person appointed by him.

(2) Not less than sixty days prior to the initial operation date, the feed-in approval holder shall submit to the distribution licensee with the results of the protection co-ordination study, together with details of the proposed electrical protection scheme, including electrical protection methods, proposed relay types, relay settings, and breaker ratings, with the relevant calculations, for the generators, transformers, and interconnecting cables.

(3) Within thirty days of receiving the submission made under subparagraph (2), the distribution licensee shall inform the feed-in approval holder in writing as to whether such proposed electrical protection scheme, electrical protection methods, relay types, relay settings and breaker ratings are acceptable to the distribution licensee.

(4) If such proposed electrical protection scheme, relay types and relay settings are not acceptable to the distribution licensee—

(a) the distribution licensee shall specify in writing to the feed-in approval holder its reason for such non-acceptance;

(b) the feed-in approval holder shall comply at its own cost with any reasonable requests of the distribution licensee to provide an acceptable electrical protection scheme, relay types and relay settings.

Monitoring and inspection of construction of interconnection facilities

3. (1) The distribution licensee may at its own cost monitor and inspect the construction of the interconnection facilities, including carrying out inspections at the site of such facilities.

(2) The feed-in approval holder shall at its own cost comply with any request of the distribution licensee relating to—

(a) the compliance with the conceptual design of the interconnection facilities; and

(b) the safe and secure operation of the interconnection facilities in parallel with the distribution licensee's electricity distribution network.

No modification to interconnection facilities without consent

4. The feed-in approval holder shall not make or permit to be made any material modification to the design or form of the interconnection facilities except with the prior written consent of:

(a) the distribution licensee; and

(b) the Authority, if the modification results in any change in any information earlier submitted by the feed-in approval holder to the Authority in the application for its feed-in approval.

Requirements for initial operation date

5. (1) Upon the completion of the construction of the interconnection facilities—

(a) the feed-in approval holder shall submit a written notice to the distribution licensee informing the distribution licensee of such completion, accompanied by—

(i) the feed-in approval holder's proposed initial operation date which shall fall no less than fourteen days after the date of such notice;

(ii) the feed-in approval holder's proposed hourly schedule of renewable energy to be generated and delivered from the renewable energy installation from the proposed initial operation date until the feed-in tariff commencement date; and

(iii) a certificate from a qualified person stating that the interconnection facilities have been designed and constructed in accordance with prudent utility practices;

- (b) the distribution licensee shall at its own cost, no later than fourteen days after receiving the notice in sub-subparagraph (a), inspect the interconnection facilities in the presence of the feed-in approval holder or his representatives.
- (2) The distribution licensee shall, after carrying out the inspection under sub-subparagraph (1)(b), either—
 - (a) accept the proposed initial operation date; or
 - (b) reschedule the initial operation date of the renewable energy installation if it reasonably determines that the parallel operation of the interconnection facilities with its electricity distribution network could adversely affect the safety and security of such network.
- (3) In the event of any rescheduling of the initial operation date under sub-subparagraph (2)(b)—
 - (a) the distribution licensee shall, no later than three days after the inspection under sub-subparagraph (1)(b), inform the feed-in approval holder in writing of any defects or deficiencies identified during such inspection; and
 - (b) the feed-in approval holder shall rectify such defects or deficiencies.
- (4) Upon completion of the rectification under sub-subparagraph (3)(b), the provisions of subparagraphs (1), (2) and (3) shall apply, *mutatis mutandis*, in respect of the rectified interconnection facilities.
- (5) The initial operation date shall only occur upon the fulfilment of the following conditions—
 - (a) the procedure as set out in subparagraphs (1) to (4) shall have been completed;
 - (b) the feed-in approval remains in full force and effect;
 - (c) no material default by the feed-in approval holder under the renewable energy power purchase agreement shall have occurred and be continuing;
 - (d) no permit, licence, approval or other governmental authorisation required under applicable to construct, own and operate the renewable energy installation shall have been revoked or withdrawn; and
 - (e) the feed-in approval holder shall have submitted to the distribution licensee a written confirmation that the conditions set out in sub-subparagraphs (a) to (d) have been fulfilled.

(6) The feed-in approval holder shall, no later than five days from the initial operation date, provide the distribution licensee and the Authority with written confirmation of the occurrence of the initial operation date.

Reliability run

6. Upon the occurrence of the initial operation date, the feed-in approval holder shall carry out a reliability run on its renewable energy installation in accordance with such requirements and procedures, and for such duration, as may be determined by the Authority pursuant to guidelines.

Requirements for feed-in tariff commencement date

7. Unless otherwise permitted under the terms of an effective renewable energy power purchase agreement, the feed-in tariff commencement date shall only occur upon the fulfilment of the following conditions—

- (a) the feed-in approval holder shall have submitted to the distribution licensee and the Authority a certificate from a qualified person stating that the renewable energy installation has successfully completed a reliability run in accordance with paragraph 6;
- (b) the feed-in approval remains in full force and effect;
- (c) no material default by the feed-in approval holder under the renewable energy power purchase agreement shall have occurred and be continuing;
- (d) no permit, licence, approval or other governmental authorisation required under applicable to own and operate the renewable energy installation shall have been revoked or withdrawn; and
- (e) the feed-in approval holder shall have submitted to the distribution licensee a written confirmation that the conditions set out in sub-subparagraphs (b) to (d) have been fulfilled.

No change to initial operation date or feed-in tariff commencement date without approval

8. No change to the scheduled initial operation date or feed-in tariff commencement date of a renewable energy installation from that set out in the feed-in approval applicable to such installation, shall be made by the feed-in approval holder or distribution licensee without the prior written approval of the Authority.

Submission of drawings and manuals to the distribution licensee

9. A feed-in approval holder shall no later than thirty days after the feed-in tariff commencement date submit to the distribution licensee—

- (a) copies of as-built drawings of the renewable energy installation and interconnection facilities; and
- (b) copies of operation and maintenance manuals in connection with the interconnection facilities.

Transfer of interconnection facilities

10. (1) Upon the completion of the interconnection facilities, the feed-in approval holder shall transfer the interconnection facilities to the distribution licensee and take all actions necessary to effectuate the transfer to the distribution licensee of all rights, title and interest to the interconnection facilities so that the Distribution Licensee shall become the owner thereof.

(2) Without prejudice to paragraph 11, the distribution licensee shall be responsible for the operation and maintenance of the interconnection facilities following the transfer under subparagraph (1).

Defects in interconnection facilities

11. (1) Subject to subparagraph (2), in the event the distribution licensee discovers that the interconnection facilities or any part thereof—

- (a) was not been designed, constructed, installed and tested in accordance with prudent utility practices; or
- (b) contains any defect in its design, materials or workmanship,

the feed-in approval holder shall at its own cost make all necessary repairs or replacements so that the interconnection facilities shall conform with the requirements of prudent utility practices and be free from any such defect.

(2) The obligation of the feed-in approval holder under subparagraph (1) shall not apply in respect of any non-conformance or defect arising—

- (a) from the distribution licensee's failure to operate and maintain the interconnection facilities in accordance with the operation and maintenance manuals referred to in paragraph 9 and prudent utility practices;
- (b) from the effects of ordinary wear and tear or erosion or corrosion effects for which such facilities were not designed for; or

- (c) after an initial period of twelve months from the feed-in tariff commencement date, and, in respect of any part of such facilities that was repaired or replaced during such initial period, after a period of twelve months from the date of completion of such repair or replacement.

FOURTH SCHEDULE

(Rule 16)

PROVISIONS APPLICABLE TO MAJOR RENEWABLE ENERGY INSTALLATIONS

Declaration of daily availability of renewable energy

1. A feed-in approval holder shall, commencing from the day falling immediately before its feed-in tariff commencement date and continuing for each day throughout the effective period, declare to the designated control centre—

- (a) the estimated operational and maximum levels of renewable energy which his major renewable energy installation can make available to the distribution licensee; and
- (b) any anticipated interruption to or unavailability of renewable energy from such installation and the level thereof,

for the subsequent day.

Normal operation

2. A feed-in approval holder shall, during normal operating conditions, provide the designated control centre such continuous information as is reasonably practicable under prevailing circumstances on the operational conditions of the major renewable energy installation, including its load, voltage, reactive power, frequency and any other condition that may affect the stability of the distribution licensee's electricity distribution network.

Emergency condition

3. During an emergency condition, the feed-in approval holder shall—

- (a) upon a request made by the designated control centre, make all reasonable efforts to deliver renewable energy from his major renewable energy installation into the distribution licensee's electricity distribution network;
- (b) comply with reasonable instructions of the designated control centre until the electricity distribution network has returned to normal;

- (c) co-operate with the designated control centre in establishing emergency plans including a recovery plan from a local or widespread electrical blackout or load curtailment;
- (d) co-operate with the designated control centre in executing restoration procedures requiring an orderly plan for the safe and rapid restoration of the distribution licensee's electricity distribution network;
- (e) if his major renewable energy installation has been isolated from the distribution licensee's electricity distribution network due to an emergency condition—
 - (i) be allowed to reconnect only under the direction of the designated control centre; and
 - (ii) be ready for his installation to pick up load as soon as possible;
- (f) be contactable by the designated control centre at all times;
- (g) take all reasonable steps to reschedule any upcoming maintenance outage or scheduled outage of his renewable energy installation that coincide with the emergency condition, and in the event any such outage cannot be rescheduled in accordance with prudent utility practices, inform the designated control centre of the nature, commencement and duration of such outage; and
- (h) maintain automatic voltage regulators in operation until the designated control centre requests that manual adjustments be made.

Planned outages

4. (1) A feed-in approval holder shall, within thirty days after the feed-in tariff commencement date and thereafter no less than sixty days prior to the first day of each subsequent calendar year, submit to the distribution licensee a proposed schedule of scheduled outages for such calendar year in respect of his major renewable energy installation.

(2) The schedule submitted under subrule (1) shall include the feed-in approval holder's estimate of—

- (a) the times of operation;
- (b) the quantities of renewable energy to be generated;
- (c) the number of scheduled outages and other reductions of output and the reasons for such outages and reductions;

- (d) the earliest and latest commencement dates, times and durations of such scheduled outages, including a description of the scope of work to be carried out during such outages,

in respect of his major renewable energy installation.

(3) The distribution licensee may, upon giving no less than thirty days prior written notice to the feed-in approval holder, request the feed-in approval holder to revise its proposed schedule for the timing and duration of any scheduled outage or other reduction of output of the major renewable energy installation to accommodate the requirements of the distribution licensee in accordance with prudent utility practices.

(4) The feed-in approval holder shall provide the designated control centre with no less than twenty four hours prior notice of each scheduled outage of his major renewable energy installation co-ordinated and agreed under subparagraphs (1) to (3).

(5) The feed-in approval holder shall co-ordinate maintenance outages with the distribution licensee in accordance with prudent utility practices and the requirements of the electricity distribution network, including providing the distribution licensee with at least forty eight hours prior written notice of any maintenance outage, which notice shall include the scheduled commencement date, time and estimated duration of such maintenance outage.

Unplanned outages

5. A feed-in approval holder may interrupt the delivery of renewable energy to a distribution licensee due to an unplanned outage, provided that the feed-in approval holder—

- (a) notifies the distribution licensee of such interruption as soon as practicable;
- (b) provides the distribution licensee with an estimate of the expected duration of the unplanned outage; and
- (c) provides the distribution licensee with an explanation of such unplanned outage after its occurrence.

Distribution licensee's maintenance schedule

6. The distribution licensee shall, no later than forty eight hours prior to any planned maintenance of its supply lines, facilities or meters which may impact the operations of a major renewable energy installation, submit to the feed-in approval holder the proposed schedule and description of such maintenance.

Communications facilities

7. A feed-in approval holder shall at its own cost purchase, install and operate such communications facilities as may be required for the operation of his major renewable energy

installation and export of renewable energy to the distribution licensee in accordance with prudent utility practices.

Records on operation

8. (1) A feed-in approval holder shall maintain an accurate and up-to-date operating log at his major renewable energy installation with records of active and reactive renewable energy generation for each clock hour; changes in operating status, scheduled outages, maintenance outages, unplanned outages and any unusual conditions found during operation or inspections.

(2) The Authority and distribution licensee shall have the right from time to time, upon reasonable written notice to the feed-in approval holder and at reasonable times of the day, to examine the operating log throughout the period described in subparagraph (3).

(3) The records and data in the operating log shall be maintained by the feed-in approval holder for a minimum period of eight years after the creation of such records or data and for such longer period as may be required under any applicable law.

Made [***] 2011
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Chairman
Sustainable Energy Development Authority Malaysia