Registration No : GP/ST/No.12/2017 (Pindaan 2024)



# **Guidelines** For New Enhanced Dispatch Arrangement



#### **Registration Record**

Version	Reg. Number	Reg. Date	Effective Date	Issuance / Amendments
2.0	GP/ST/ No.12/2017	17 April 2017	17 April 2017	-
2.1	GP/ST/ No.12/2017 (Pin. 2019)	28 May 2019	28 May 2019	To include Solar Power Producers as a category of NEDA Participants
2.2	GP/ST/ No.12/2017 (Pindaan No. 2/2019)	5 December 2019	5 December 2019	To incorporate short-term recommendation from NEDA Viability Study
2.3	GP/ST/ No.12/2017 (Pindaan 2024)	22 November 2024	22 November 2024	To cater for CRESS, CGPP and LSS Participation



### ELECTRICITY SUPPLY ACT 1990 [Act 447]

#### GUIDELINES FOR NEW ENHANCED DISPATCH ARRANGEMENT

GP/ST/No.12/2017 (Pindaan 2024)

In exercise of the powers conferred by section 50C of the Electricity Supply Act 1990 [*Act 447*], the Commission issues the following guidelines:

#### **Citation and commencement**

- 1. These Guidelines may be cited as the Guidelines for New Enhanced Dispatch Arrangement.
- 2. These Guidelines shall come into operation on the date of registration.

#### Purpose

- 3. The purposes of these Guidelines are—
  - *(a)* to provide the principles on the operation of the New Enhanced Dispatch Arrangement;
  - *(b)* to state the arrangement for scheduling and dispatch of generation used by the Single Buyer; and

(c) to specify the obligations and rights of the Participants, the Single Buyer, the Grid System Operator, the Grid Owner as well as the Distributors.

#### Application

4. These Guidelines shall apply to the generation licensee or other licensee as approved by Commission to supply and sell electricity through the power system to the Single Buyer who is authorised under the Act and responsible for the management of procurement of electricity and related services.

Dated: 22 November 2024

DATO' IR. TS. ABDUL RAZIB BIN DAWOOD **Chief Executive Officer** for Energy Commission



## Guidelines For New Enhanced Dispatch Arrangement

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#### **PART I**

#### PRELIMINARY

#### 1. OBJECTIVES

The objectives of the New Enhanced Dispatch Arrangement are to:

- (a) improve cost efficiency in the generation through short-run competition;
- (b) enable energy-efficient options, particularly the use of efficient technology, such as cogeneration, to participate in the electricity market; and
- (c) provide opportunity for non-PPA/SLA generators, such as co-generators, franchise utilities with generation facilities, Ex-PPA/SLA generators and other generators which manage their own fuel requirements and with the approval of the Commission to operate as merchant generators to supply and sell energy to the Single Buyer to enhance their business options by maximizing the use of their facilities in a costefficient manner for the benefit of the electricity supply industry and the consumers.

#### 2. APPLICATION AND ADMINISTRATION

- 2.1 These Guidelines are supplementary to and should be read together with the Guidelines for Single Buyer Market (Peninsular Malaysia) and Guidelines for Corporate Renewable Energy Supply Scheme.
- 2.2 These Guidelines apply in conjunction with the following documents:
  - (a) the Electricity Supply Act 1990 and the subsidiary legislations made under it subject to the exclusion of Guidelines for Corporate Renewable Energy Supply Scheme;
  - (b) the Energy Commission Act 2001;
  - (c) the Grid Code for Peninsular Malaysia;
  - (d) the Distribution Code for Peninsular Malaysia and Labuan;
  - (e) the Guidelines for Single Buyer Market (Peninsular Malaysia);
  - (f) the licences issued by the Commission under the Electricity Supply Act 1990; and
  - (g) the relevant power purchase agreements or the service level agreements.
- 2.3 In the event of any inconsistency or conflict between these Guidelines and the documents listed in paragraph 2.2 above, the documents listed in paragraph 2.2 are to take precedence over these Guidelines only to the extent that these Guidelines affects the security, reliability and safety of the power system and the terms and conditions in the commercial agreements.

- 2.4 The Commission may suspend the operation of New Enhance Dispatch Arrangement in emergency situation to maintain the security and safety of the Grid System and/or Distribution Network in accordance with the provisions in the Malaysian Grid Code, the Distribution Code or any other relevant laws of Malaysia.
- 2.5 The Commission shall be responsible for the administration and maintenance of these Guidelines.
- 2.6 The New Enhanced Dispatch Arrangement will be under the oversight of the Single Buyer oversight panel chaired by the Commission to ensure the operation is fair, independent and transparent.
- 2.7 The New Enhanced Dispatch Arrangement framework is used in the Corporate Renewable Energy Supply Scheme, whereby a Renewable Energy Generator is allowed to sell electricity directly to Green Consumer through Open Access of Peninsular Malaysia Grid System and/or Distribution Network.
- 2.8 Under the Corporate Renewable Energy Supply Scheme, the Single Buyer shall administer the registration of Renewable Energy Generator to become a New Enhanced Dispatch Arrangement Participant, manage the operation of electricity generated by the Renewable Energy Generator and any other function as specified under the Guidelines for Corporate Renewable Energy Supply Scheme.

#### 3. LIMITATION OF LIABILITY

- 3.1 If any contract, agreement or arrangement exists at the date of any of the provisions of these Guidelines comes into force, the Commission shall make a determination whether the technical conditions of the specific contract, agreement or arrangement are in line with the provisions of theseGuidelines.
- 3.2 If the technical conditions of the specific contract, agreement or arrangement are in line with the provisions of these Guidelines, then these Guidelines shall prevail.
- 3.3 It is recognised that some New Enhanced Dispatch Arrangement Participants have existing commercial agreements with the Single Buyer, Grid Owner, the Distributor or other parties. Nothing contained in these Guidelines, including any amendments, is intended to modify the parties' rights and obligations under these agreements.

In the event of any conflict, the existing commercial agreements take precedence only to the extent that it does not affect the security and safety of the Grid System and the Distribution Network or seek to impose any liability on the Commission, Single Buyer, Grid System Operator and the Distributor in the discharge of their obligations under these Guidelines, the Guidelines for Single Buyer Market (Peninsular Malaysia), the Grid Code for Peninsular Malaysia and the Distribution Code for Peninsular Malaysia and Labuan in accordance with the terms thereof.

#### **PART II**

#### INTERPRETATION AND DEFINITIONS

#### 4. INTERPRETATION

- 4.1 In the NEDA Guidelines, unless the contrary intention appears, words and phrases used that are not defined in the Guidelines shall have the same meaning as defined in the Guidelines for Single Buyer Market (Peninsular Malaysia).
- 4.2 In these Guidelines, unless the context other requires, the definitions of the terms are as follow:

Term	Definition
Act	means the Electricity Supply Act 1990 [Act 447];
Actual System Marginal Price	means the price of the most expensive Marginal Generator dispatched by the Grid System Operator to meet actual demand in a Half-Hour Period;
Applicant	means a Generator who submits his application to participate in the NEDA in accordance with these Guidelines;
Availability	means an Export Capacity from a Generation Facility that a NEDA Participant is available for participation in NEDA and " <b>Available</b> " shall be construed accordingly;
Back-feed Agreement	means an agreement entered between the NEDA Applicant and EUC to allow transfer of electricity from the Grid System or Distribution Network to Generation Facility;
Back-feed Energy	means an energy consumed by NEDA Participant from the EUC;
Bid	means any bid made by a Bidding NEDA Participant in accordance with, and subject to, the provisions of Part VI;
Bidding NEDA Participants	means all NEDA Participants, other than Price Takers, who submit Bids under NEDA;

Term	Definition
Bid Price	means the price (in RM/kWh) of electricity for a Half-Hour Period;
Bidding Period	means each one of the forty-eight (48) half-hour periods of each Trading Day.
Bidding Window	means the twenty-four (24) hour period where Bidding NEDA Participants may submit Bids for a Trading Day, commencing on Gate Opening and closing on Gate Closure;
Billing Period	means a month for the purposes of Settlement;
Cancelled Start Event	has the meaning given to the term in paragraph 24.1;
Cessation Application	has the meaning given to the term in paragraph 10.1;
Cessation Approval	has the meaning given to the term in paragraph 10.2;
Centrally Dispatched Generation Facility	means a Generation Facility connected to either the Grid System or the Distribution Network with a Registered capacity rating of not less than 30 MW and classified as a Centrally Dispatched Generating Facility by the Commission. " <b>Central</b> <b>Dispatch</b> " and " <b>Centrally Dispatched</b> " shall be construed accordingly;
Cogeneration Plant	means a Generation Facility where a single fuel source is used for the simultaneous production of thermal energy and electrical or mechanical energy.
Corporate Green Power Program (CGPP)	means a program where an eligible consumer of the EUC is allowed to enter into an agreement with a solar Generator for the virtual sale and purchase of the renewable energy produced by the solar Generator under a mutually agreed terms and conditions and price structure;
Corporate Renewable Energy	means a Renewable Energy Generator that is governed by these Guidelines and the Guidelines for Corporate Renewable Energy Supply Scheme unless specified otherwise in the Guidelines for Corporate Renewable Energy Supply Scheme;

Term	Definition
CRESS	means the Corporate Renewable Energy Supply Scheme;
CRESS Guidelines	means the Guidelines for Corporate Renewable Energy Supply Scheme;
Day	a calendar day lasting twenty-four (24) hours.
Day Ahead Dispatch Interval	means a thirty (30) minute period ending on the hour or on the half hour;
Day Ahead Dispatch Schedule	means the finalised schedule for the dispatch of each Generation Facility by each Day Ahead Dispatch Interval for the Trading Day to meet the Day Ahead Load Forecast;
Day Ahead Load Forecast	means a day ahead forecast of total electricity sent out to the Grid System to meet customer's demand for the following day;
Default Bid	has the meaning given to the term in paragraph 18.1;
Delivery Obligation	means the obligation by a NEDA Participant, other than a Solar Power Producer and a Price Taker, to deliver in a Half-Hour Period in accordance with its successful Bids and the dispatch instructions issued by the Grid System Operator;
De-registration	has the meaning given to the term in paragraph 9.1;
Dispatch Instruction	means the oral or written instruction or electronic signal communicated to the NEDA Participant by the Grid System Operator directing the Generation Facility to commence, increase, decrease, maintain or cease the generation and delivery of electricity energy into the Grid System;
Distribution Network	means the system consisting of (wholly or mainly) of electric lines which are owned or operated by a Distributor and used for the distribution of electricity to electricity consumers or other Distributors in Peninsular Malaysia;
Distributor	means a person who is licenced under section 9 of the Act and is connected to the Grid System and distributes electricity for the purpose of enabling a supply to be given to any premises

Term	Definition
	and is registered under the Guidelines for Single Buyer Market (Peninsular Malaysia) as a Distributor in accordance with the registration process outlined in the Guidelines for Single Buyer Market (Peninsular Malaysia);
Draft Rule Change Recommendation	means a draft recommendation on a Rule Change provided to the Commission by a Rule Change Panel under paragraph 33;
CRESA	means the Corporate Renewable Energy Supply Agreement and has the meaning assigned to it under the Guidelines for Corporate Renewable Energy Supply Scheme;
Electricity Utility Company (EUC)	means a person who is licensed under section 9 of the Act to distribute and supply electricity in the Peninsular Malaysia with the electricity supplied from the Single Buyer market;
Eligible Generator	means a Generator that is eligible to participate in NEDA in accordance with the these Guidelines;
Commission	has the meaning assigned to it under the Energy Commission Act 2001 [ <i>Act 610</i> ];
Export Capacity	means energy that is not required for on-site demand or contracted under an existing PPA/SLA and therefore is available for export onto the Grid System and/or Distribution Network and is Registered under NEDA;
Ex-PPA/SLA Generator	means a Generator that has previously held a PPA or SLA in respect of a Generation Facility, which has now expired, utilising Power Sector Gas. (For clarity, the term does not include a Generator that has previously held a PPA or SLA which has expired and its fuel supply is not under the Power Sector Gas arrangement);
Failure to Meet Dispatch	means where the electricity exported to the Grid System by an Ex-PPA/SLA Generator or a Large Merchant Generator is less than its Delivery Obligation in that Half-Hour Period;
Fast Start Generator	means a Generating Facility of an Ex-PPA/SLA Generator or a Large Merchant Generator which is capable of Two-Shifting;

Term	Definition
Final Rule Change Recommendation	means a final recommendation on a Ru Change provided to the Commission by a Ru Change Panel under paragraph 33;
Forecast System Marginal Price	means the price of the most expensive Margin Generator included in the Day Ahead Dispato Schedule to meet the Day Ahead Load Foreca in a Half-Hour Period;
Franchise Utility	means an electricity network operator whic owns and operates on-site generation and hold a Generation Licence issued by the Commission
Gas Framework Agreement	means the agreement between Petronas ar Tenaga Nasional Berhad for the supply of natur gas for the purposes of electricity generation;
Gas Supply Agreement	means the agreement between Petronas and Generator for the supply of natural gas to Generation Facility;
Gate Closure	means 09.59 hours on the Working Da preceding the Trading Day;
Gate Opening	means 10.00 hours two (2) Working Days pri to the Trading Day;
Generation Facility	means any plant capable of producing electrici and connected to the Grid System or Distributic Network in Peninsular Malaysia;
Generation Licence	means a generation licence issued by th Commission pursuant to section 9 of the Act;
Generator	means a person who is licensed under section of the Act for the purpose of generation electricity in Peninsular Malaysia;
Green Consumer	has the meaning assigned to it under th Guidelines for Renewable Energy Supp Scheme;
Grid Owner	means the party that owns the high voltage backbone Transmission Network and responsible for maintaining adequate Gr System capacity in accordance with the provisions of the Malaysian Grid Code ar Licence standards and registered as the Gr Owner under the Guidelines for Single Buye Market (Peninsular Malaysia) in accordance with the registration process outlined in the

Guidelines for Single Buyer Market (Peninsular Malaysia);Grid Systemmeans the Transmission System in Peninsular Malaysia under the operation and control of the Grid System Operator as prescribed in the Malaysian Grid Code;Grid System Operatormeans the entity responsible for operational planning, real time rescheduling, dispatch and control of the Grid System in compliance with the provisions of the Malaysian Grid Code and coordinating all parties connected to the Grid System and registered as the Grid System Operator under the Guidelines for Single Buyer Market (Peninsular Malaysia);GSO Non-Compliance Noticemeans a notice to be issued by the Grid System Operator under the Guidelines for Single Buyer Market (Peninsular Malaysia);GSO Non-Compliance Noticemeans a notice to be issued by the Grid System Operator where the Ex-PPA/SLA Generator or the Large Merchant Generator has a Failure to Meet Dispatch occur in a Half-Hour Period;Half-Hour Periodmeans a period of thirty (30) minutes beginning on the hour or the half hour;Heat Ratemeans a table containing either: (a) for Ex-PPA/SLA Generators, up to ten (10) heat rate points; or (b) for PPA/SLA Generators, such number of heat rate points provided for in the relevant PPA or SLA, expressed in kJ/kWh;Hydro Plantmeans a Generation Facility where the prime movers and/or driving turbines are driven by water;Installed Capacitymeans a rate equal to one per cent (1%) above the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in appendix b;	Term	Definition
Malaysia under the operation and control of the Grid System OperatorGrid System Operatormeans the entity responsible for operational planning, real time rescheduling, dispatch and control of the Grid System in compliance with the provisions of the Malaysian Grid Code and coordinating all parties connected to the Grid System and registered as the Grid System Operator under the Guidelines for Single Buyer Market (Peninsular Malaysia);GSO Non-Compliance Noticemeans a notice to be issued by the Grid System Operator where the Ex-PPA/SLA Generator or the Large Merchant Generator has a Failure to Meet Dispatch occur in a Half-Hour Period;Half-Hour Periodmeans a period of thirty (30) minutes beginning on the hour or the half hour;Heat Ratemeans a table containing either: (a) for Ex-PPA/SLA Generators, up to ten (10) heat rate points; or (b) for PPA/SLA Generators, such number of heat rate points; or (b) for PPA/SLA Generator, such number of heat rate points provided for in the relevant PPA or SLA, expressed in kJ/kWh;Hydro Plantmeans the installed capacity as declared in the NEDA Registration form;Interest Ratemeans a rate equal to one per cent (1%) above the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in paragraph 12.1;		
planning, real time rescheduling, dispatch and control of the Grid System in compliance with the provisions of the Malaysian Grid Code and coordinating all parties connected to the Grid System and registered as the Grid System Operator under the Guidelines for Single Buyer Market (Peninsular Malaysia);GSO Non-Compliance Noticemeans a notice to be issued by the Grid System Operator where the Ex-PPA/SLA Generator or the Large Merchant Generator has a Failure to Meet Dispatch occur in a Half-Hour Period;Half-Hour Periodmeans a period of thirty (30) minutes beginning on the hour or the half hour;Heat Ratemeans a table containing either: (a) for Ex-PPA/SLA Generators, up to ten (10) heat rate points; or (b) for PPA/SLA Generators, such number of heat rate points provided for in the relevant PPA or SLA, expressed in kJ/kWh;Hydro Plantmeans a Generation Facility where the prime movers and/or driving turbines are driven by water;Installed Capacitymeans the installed capacity as declared in the NEDA Registration form;Interest Ratemeans a rate equal to one per cent (1%) above the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in paragraph 12.1;	Grid System	Malaysia under the operation and control of the Grid System Operator as prescribed in the
Operator where the Ex-PPA/SLA Generator or the Large Merchant Generator has a Failure to Meet Dispatch occur in a Half-Hour Period;Half-Hour Periodmeans a period of thirty (30) minutes beginning on the hour or the half hour;Heat Ratemeans a table containing either: (a) for Ex-PPA/SLA Generators, up to ten (10) heat rate points; or (b) for PPA/SLA Generators, such number of heat rate points provided for in the relevant PPA or SLA, expressed in kJ/kWh;Hydro Plantmeans a Generation Facility where the prime movers and/or driving turbines are driven by water;Installed Capacitymeans a rate equal to one per cent (1%) above the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in paragraph 12.1;	Grid System Operator	planning, real time rescheduling, dispatch and control of the Grid System in compliance with the provisions of the Malaysian Grid Code and coordinating all parties connected to the Grid System and registered as the Grid System Operator under the Guidelines for Single Buyer
Interest Ratemeans a table containing either: (a) for Ex-PPA/SLA Generators, up to ten (10) heat rate points; or (b) for PPA/SLA Generators, such number of heat rate points provided for in the relevant PPA or SLA, expressed in kJ/kWh;Hydro Plantmeans a Generation Facility where the prime movers and/or driving turbines are driven by water;Installed Capacitymeans the installed capacity as declared in the NEDA Registration form;Interest Ratemeans a rate equal to one per cent (1%) above the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in paragraph 12.1;	GSO Non-Compliance Notice	Operator where the Ex-PPA/SLA Generator or the Large Merchant Generator has a Failure to
(a) for Ex-PPA/SLA Generators, up to ten (10) heat rate points; or(b) for PPA/SLA Generators, such number of heat rate points provided for in the relevant PPA or SLA, expressed in kJ/kWh;Hydro Plantmeans a Generation Facility where the prime movers and/or driving turbines are driven by water;Installed Capacitymeans the installed capacity as declared in the NEDA Registration form;Interest Ratemeans a rate equal to one per cent (1%) above the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in paragraph 12.1;	Half-Hour Period	
heat rate points; or(b) for PPA/SLA Generators, such number of heat rate points provided for in the relevant PPA or SLA, expressed in kJ/kWh;Hydro Plantmeans a Generation Facility where the prime movers and/or driving turbines are driven by water;Installed Capacitymeans the installed capacity as declared in the NEDA Registration form;Interest Ratemeans a rate equal to one per cent (1%) above the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in paragraph 12.1;	Heat Rate	means a table containing either:
heat rate points provided for in the relevant PPA or SLA, expressed in kJ/kWh;Hydro Plantmeans a Generation Facility where the prime movers and/or driving turbines are driven by water;Installed Capacitymeans the installed capacity as declared in the NEDA Registration form;Interest Ratemeans a rate equal to one per cent (1%) above the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in paragraph 12.1;		
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movers and/or driving turbines are driven by water;Installed Capacitymeans the installed capacity as declared in the NEDA Registration form;Interest Ratemeans a rate equal to one per cent (1%) above the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in paragraph 12.1;		expressed in kJ/kWh;
Interest Ratemeans a rate equal to one per cent (1%) above the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in paragraph 12.1;	Hydro Plant	movers and/or driving turbines are driven by
the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its successor-in-title;Key Informationhas the meaning given to the term in paragraph 12.1;	Installed Capacity	
12.1;	Interest Rate	the base rate per annum then in effect at the principal office of Malayan Banking Berhad or its
<i>Key Information Items</i> has the meaning given to the term in appendix b;	Key Information	
	Key Information Items	has the meaning given to the term in appendix b;

Term	Definition
Large Merchant Generator	means any—
	<ul> <li>(a) Generator with Cogeneration Plant;</li> <li>(b) Generator with Renewable Plant;</li> <li>(c) Franchise Utility;</li> <li>(d) Part-PPA/SLA Generator;</li> <li>(e) expired PPA/SLA Generator on Own Fuel; or</li> <li>(f) other Generator with Generation Facility approved by the Commission to participate in NEDA;</li> </ul>
	with an Export Capacity of not less than 30MW who manages its own fuel supply arrangements and does not hold a PPA/SLA with the Grid Owner or a Distributor;
Least Cost Dispatch Scheduling Methodology	means a methodology for developing the Dispatch Schedules such that the lowest cost marginal Generation Facility is forecast to be dispatched first to meet demand followed by the next lowest cost marginal Generation Facility until all demand is met;
Licence	means a licence issued by the Commission under section 9 of the Act;
Malaysian Distribution Code	means the Distribution Code for Peninsular Malaysia and Labuan that sets out the principles governing the relationship between the Distributors, the Grid System Operator and all users of the Distribution Network;
Malaysian Grid Code	means the Grid Code for Peninsular Malaysia sets out the principles governing the relationship between the Grid System Operator, the Grid Owner, the Single Buyer and all users of the Grid System, as amended from time to time;
Marginal Generator	has the meaning given to the term in paragraph 20.2;
Market Participant Interface or MPI	has the meaning given to the term in paragraph 11.1;
<i>Maximum Ramp Down Rate of Generation Facility</i>	means the maximum speed at which a Generation Facility is capable of reducing its

Term	Definition
	output, specified as a negative number in MW/min;
<i>Maximum Ramp Up Rate of Generation Facility</i>	means the maximum speed at which a Generation Facility is capable of increasing its output, specified as a positive number in MW/min;
Merchant Generator	means the NEDA Participants other than PPA/SLA Generators and Solar Power Producers;
Metered Output	means the active energy (expressed in kWh) delivered to the Grid System or the Distribution Network by a Generation Facility at the delivery point (as may be specified in the Metering Guidelines) as measured by a dedicated physical meter approved for Settlement during Registration, provided at all times that such meters meet the requirements of the Metering Guidelines, the Grid Code for Peninsular Malaysia and/or the Distribution Code for Peninsular Malaysia and Labuan. Where the Generation Facility is situated with on-site load, the Metered Output shall be the net output delivered to the Grid System or the Distribution Network;
Metering Guidelines	means the Guidelines issued and updated from time to time by the Single Buyer with the approval of the Commission, specifying the requirements to be met by the NEDA Participant in respect of its Generation Facilities' metering equipment for the purposes of Settlement.
Minimum Stable Load	means the minimum level of generation required for stable output in respect of a Generation Facility.
Month(s)	means a calendar month or, where applicable, a part-calendar month.
Monthly Cap	means the cap on the price, Heat Rate and VOR that Bidding NEDA Participants shall not exceed in their Bids, calculated in accordance to paragraph 19.2 and 19.3 and published under paragraph 19.4.
NEDA	means the New Enhanced Dispatch Arrangement is the mechanism used by the

Term	Definition
	Single Buyer for scheduling the dispatch of generation under the Single Buyer Market.
NEDA Agreement(s)	means an agreement between a NEDA Participant and the Single Buyer whereby these Guidelines and/or Guidelines for Corporate Renewable Energy Supply Scheme are given contractual effect and made binding between the relevant parties.
NEDA Connection Agreement	means an agreement that governs the technical and operational requirements of the Grid System, Distribution Network, Grid System Operator and Single Buyer for NEDA Participants (excluding the Corporate Renewable Energy) to be connected to the Grid System or Distribution Network.
NEDA Participant	means a Generator who dispatches electricity to the Single Buyer Market and has fulfilled all condition set out under paragraph 8.1.
Non Centrally Dispatched Generation Facility	means a Generation Facility connected to either the Transmission System or the Distribution Network with a Registered rating of less than 30 MW and classified as a Non Centrally Dispatched Generation Facility by the Commission. "Non Central Dispatch" and "Non Centrally Dispatched" shall be construed accordingly.
Open Access	has the meaning assigned to it under CRESS;
Own Fuel	means all fuel that is not Power Sector Gas;
Part-PPA/SLA Generator	means a PPA/SLA Generator that has greater Export Capacity than the capacity contracted under the PPA or SLA, and which registers such additional capacity as a Part PPA/SLA Generator, provided that such additional Registered capacity must be equal to or more than 30 MW. The energy for the purpose of NEDA must be generated by a dedicated unit and measured by a dedicated physical meter;
Petronas	means a Petroliam Nasional Berhad;
Planned Generation Schedule	means the planned generation for a Price Taker's Generation Facility and Corporate

Term	Definition	
	Renewable Energy's Generation Facility for a Trading Day based on forecasts and prudent utility practice;	
Power Sector Gas	means a Gas procured under the Gas Supply Agreement by Generators and listed in the Gas Framework Agreement;	
PPA	means a power purchase agreement between a Generator and the Single Buyer or the Grid Owner for the supply of electrical energy and ancillary services by the Generator to the Single Buyer;	
PPA/SLA Generator	means a Generator that hold a PPA or a SLA with the Single Buyer, Grid Owner or a Distributor and excludes Solar Power Producer;	
Price as Bid	has the meaning given to the term in paragraph 14.5;	
Price Quantity Pair	means each price (in RM/kWh) for a specific quantity of electricity (in MW) in respect of a Generation Facility;	
Price Taker	means any—	
	<ul> <li>(a) Generator with Cogeneration Plant;</li> <li>(b) Generator with Renewable Plant;</li> <li>(c) Small Franchise Utility;</li> <li>(d) expired PPA/SLA Generator on Own Fuel;</li> <li>(e) Generator with Generation Facility which uses by-product (such as steam and flue gas) of an industrial process to generate electricity; or</li> <li>(f) Generation Facility approved by the Commission to participate in NEDA,</li> <li>with an Export Capacity between 100kW and not exceeding 30MW and without a PPA/SLA;</li> </ul>	
Reduced VOR	means a value of VOR lower than the value specified in the relevant PPA/SLA;	
Reference Generator	means a Generation Facility having the meaning given to the term in paragraph 19.3;	

Term	Definition
Registration	means a Registration of a Generation Facility to participate in NEDA in accordance with part IV and " <b>Registered</b> " should be construed accordingly;
Registration Data	means the information provided by a NEDA Participant as part of Registration;
Registered Start-Up Cost	means the costs incurred by a Fast Start Generator calculated on the basis of its assessment of the Start-Up Costs, as provided by the Fast Start Generator on Registration;
Registration Amendment	has the meaning given to the term in paragraph 8.4.
Registration Amendment Notice	means a request to amend a NEDA Participant's Registration Data provided in accordance with paragraph 8;
Renewable Energy Generator	means the renewable energy plant that is connected to the Grid System under CRESS;
Renewable Energy System Access Agreement	has the meaning assigned to it under the Guidelines for Corporate Renewable Energy Supply Scheme;
Renewable Plant	means a Generation Facility that generates power from renewable resources, other than Generation Facility of a Solar Power Producer;
Rule Change	means the process of amending these Guidelines, or any such amendment to these Guidelines, as set out in part XI;
Rule Change Panel	means a panel convened by the Commission under paragraph 31 to provide recommendations on Rule Change Proposals;
Rule Change Proposal	means a proposal for amending these Guidelines developed in accordance with part XI;
Settlement	means a processes and procedures for the calculation of payments under relevant PPA/SLA and/or under These Guidelines;
Settlement Invoice	has the meaning given to the term in paragraph 21.4.
Settlement Letter	has the meaning given to the term in paragraph 21.7.

Term	Definition
Single Buyer	means any person or a unit, department or division forming part of a licensee who is authorised under the Act for management of procurement of electricity and related services, which includes planning, scheduling, procuring and settlement, and registered as the Single Buyer in accordance with the Guidelines for Single Buyer Market (Peninsular Malaysia);
SLA	means a service level agreement between TNB Power Generation Sdn. Bhd. and the Single Buyer or the Grid Owner in respect of a TNB Power Generation Sdn. Bhd. Facility for the supply of electrical energy and ancillary services by the Generation Facility to the Single Buyer;
Small Franchise Utility	means a Franchise Utility with an Export Capacity of less than 30MW;
Solar Power Producer	means a NEDA Participant that holds PPA with the Single Buyer, Grid Owner or Distributor that produces electricity with solar energy as primary energy source and with an express provision in the PPA that:
	<ul> <li>(a) allows the Solar Power Producer to supply and sell the excess energy in accordance to paragraph 5.6; and</li> </ul>
	<ul> <li>(b) requires Solar Power Producer to declare the capacity of the Generation Facility in accordance with paragraph 5.8;</li> </ul>
Start-Up Costs	means a costs of starting-up a Generation Facility from zero output in order to comply with its Delivery Obligation.
System Access Charge	has the meaning assigned to it under the Guidelines for Corporate Renewable Energy Supply Scheme;
TNB	means Tenaga Nasional Berhad, a limited liability company with the address at Pejabat Setiausaha Syarikat, Tenaga Nasional Berhad, Tingkat 16, Tower A, TNB Platinum, No.3, Jalan Bukit Pantai, Bangsar, 59100 Kuala Lumpur.
Three Month Ahead Dispatch Interval	means a period of one (1) hour;

Term	Definition	
Three Month Ahead Load Forecast	means a three month ahead forecast of electricity sent out by the Three Month Ahead Dispatch Interval for each Generation Facility connected to the Grid System in Peninsular Malaysia to meet the corresponding three month ahead electricity demand of electricity consumers;	
TNB Distribution	The distribution division of TNB;	
TNB Power Generation Sdn. Bhd.	means the wholly owned subsidiary of TNB;	
TNB Metering Equipment	means the main and back-up metering equipment and devices (including telemetering equipment and software) owned by TNB for the measurement of energy to the Grid System or Distribution Network and energy delivered from the Grid System or Distribution Network to the Generation Facility;	
Trading Data	means all relevant data relating to Settlement for a NEDA Participant for a Trading Day, to be provided to the Single Buyer pursuant to paragraph 21.4;	
Trading Day	means a period from 00.00 to 24.00 in which a NEDA Participant shall meet its Delivery Obligation. It is also referred to as "D Day" in some parts of the Guidelines;	
Transmission System	means the system consisting (wholly or mainly) of high voltage electric lines (66kV and above) owned or operated by the Grid Owner and used for the transmission of electricity from one power station to a substation or to another power station or between substations or to or from any external interconnection, and includes any plant, apparatus and meters owned or operated in connection with the transmission of electricity;	
Two-Shifting	means a Generation Facility that is capable of starting-up from zero output and shutting down to zero output within twenty-four (24) hours;	
Urgent Rule Change Procedure	means the procedures undertaken by the Commission under paragraph 36 to make Rule Change unilaterally, where safety and security of electricity supply, the viability of the electricity	

Term	Definition
	supply industry or NEDA Participants, or the achievement of the Commission's objectives under the Act are threatened;
Variable Operating Rate or VOR	means a unit of measurement expressed in RM/kWh;
Week	means the seven (7) day period commencing 00.00 hours on Monday and ending at 24.00 hours on Sunday;
Week Ahead Dispatch Interval	means a period of one (1) hour;
Week Ahead Dispatch Schedule	means a schedule for the dispatch of all Generation Facilities by the Week Ahead Dispatch Interval to meet the Week Ahead Load Forecast;
Week Ahead Load Forecast	means a week ahead forecast of total electricity sent out to the Grid System to meet customer's demand for the following week;
Working Day(s)	means any day on which commercial banks are open for business in Kuala Lumpur, Wilayah Persekutuan. Working Days shall not include: public holidays in Kuala Lumpur, Wilayah Persekutuan; Saturdays; or Sundays.

#### PART III

#### **PRINCIPLES OF NEDA**

#### 5. GENERATION SCHEDULING AND DISPATCH ARRANGEMENTS

- 5.1 Under NEDA, the cost-based bidding system is complemented by an optional price-based bidding by which a NEDA Participant may offer bids in accordance and subject to these Guidelines (the **"Bid"**). This will enhance competition in generation dispatch and result in more competitive energy prices.
- 5.2 Scheduling and dispatch under NEDA is as prescribed in the Guidelines for Single Buyer Market (Peninsular Malaysia) but incorporates Bids made by NEDA Participants in accordance with these Guidelines and co-optimises PPA/SLA Generators and Merchant Generators at the same time.
- 5.3 If dispatched, the PPA/SLA Generator shall be paid based on the lower of the VOR specified in the PPA/SLA or any optionally offered VOR provided pursuant to these Guidelines and any such approved amendments. All settlement of PPA/SLA Generators shall be under the arrangements, and subject to the rights and obligations, specified in the relevant PPA/SLA. The optional offered VOR shall only be of a value less than the VOR specified in the PPA or SLA.
- 5.4 A Generator may participate in more than one capacity (for example, as a PPA/SLA Generator and as a Part PPA/SLA Generator). Where that is the case, they shall (except to the extent approved by the Commission otherwise) comply with all obligations imposed on them severally in each capacity.
- 5.5 There shall be no violation of contract with existing PPAs/SLAs as, once a PPA/SLA is registered pursuant to the These Guidelines, the PPA/SLA Generator may choose whether to participate and submit Bids under NEDA.
- 5.6 A Solar Power Producer, other than selling the Excess Energy at the Excess Energy Rate under the PPA, may participate under NEDA to sell Excess Energy to the Single Buyer up to the Established Capacity after delivering the Maximum Annual Allowable Quantity (MAAQ) for the applicable year.

The terms Energy Rate, Excess Energy, Excess Energy Rate, Established Capacity and Maximum Annual Allowable Quantity wherever appear in these Guidelines bear the same meaning as prescribed in the PPA.

- 5.7 The Solar Power Producer shall provide the Single Buyer with no less than seven (7) Days' notice of its intention to sell Excess Energy under NEDA and the Single Buyer shall confirm that the Maximum Annual Allowable Quantity has been sold and delivered or otherwise no later than five (5) Working Days after the end of the Month in which the said notice was issued by the Solar Power Producer.
- 5.8 A Solar Power Producer that is required by the PPA to declare the capacity of their Generation Facility shall submit a daily declaration of their availability through NEDA via MPI. For the avoidance of doubt and notwithstanding any other provisions to the contrary, such Solar Power Producer shall not be required to submit any Bid into NEDA.

#### 6. FUEL MANAGEMENTS

- 6.1 All Merchant Generators, other than Ex-PPA/SLA Generators, shall manage their Own Fuel requirements for their Generation Facilities.
- 6.2 Subject to paragraph 6.4, all Ex-PPA/SLA Generators supplying electricity solely to the designated off taker approved by Commission shall be eligible for Power Sector Gas.
- 6.3 An Ex-PPA/SLA Generator shall specify whether it will be utilising Power Sector Gas or Own Fuel as part of Registration requirements.
- 6.4 An Ex-PPA/SLA Generator shall obtain the approval of Commission that it is eligible for Power Sector Gas prior to becoming a NEDA Participant.
- 6.5 An Ex-PPA/SLA Generator shall amend its Registration in order to switch from using Power Sector Gas to managing its Own Fuel requirements.
- 6.6 A re-registration made pursuant to paragraph 6.5 shall be effective:
  - (a) where an Ex-PPA/SLA Generator has provided a Registration Amendment Notice by 1 June in a calendar year, from 1 January of the next calendar year; or
  - (b) where an Ex-PPA/SLA Generator has provided a Registration Amendment Notice after 1 June in a calendar year, from 1 January of the calendar year following the next calendar year.
- 6.7 An Ex-PPA/SLA Generator that switches from utilising Power Sector Gas to Own Fuel and amends its Registration in accordance with paragraph 6.5 may not switch back to Power Sector Gas.

#### **PART IV**

#### **NEDA PARTICIPATION AND REGISTRATION**

#### 7. PARTICIPATION IN NEDA

- 7.1 To participate in NEDA, the Generators shall register with the Commission as a NEDA Participant. The Commission will keep and maintain a register of the NEDA Participant.
- 7.2 The categories of the NEDA Participants are as follows:
  - (a) PPA/SLA Generators;
  - (b) Merchant Generators;

Merchant Generators consist of the following categories of Generators without a PPA/SLA with the Grid Owner or a Distributor:

(i) Ex-PPA/SLA Generators;

This category of Generators consists of expired PPA/SLA Generators supplying power solely to the Grid Owner and approved by Commission on Power Sector Gas.

(ii) Large Merchant Generators;

This category of Generators consists of Cogeneration Plants, Part PPA/SLA Generators, expired PPA/SLA Generators on Own Fuel, Franchise Utilities, Renewable Plants, and any other Generation Facilities licenced by the Commission with export capacity of not less than 30MW.

(iii) Price Takers;

This category of Generators consists of Cogeneration Plants, Small Franchise Utilities, expired PPA/SLA Generators on Own Fuel, Renewable Plants, Generation Facilities which use by-product (such as steam and flue gas) of an industrial process to generate electricity and any other Generation Facilities approved by the Commission to participate in NEDA with export capacity of less than 30MW but not less than 100kW.

(c) Solar Power Producers whether distribution system connected or transmission system connected, complying with paragraph 5.6 and where applicable, paragraph 5.8; and

(d) Corporate Renewable Energy

This category of Generators consists of Renewable Energy Generator with firm output or non-firm output, complying with the CRESS Guidelines.

- 7.3 NEDA Participant shall comply with the legal and regulatory requirements in the documents listed in the paragraph 2.2, where relevant.
- 7.4 A NEDA Participant may require to provide the Single Buyer with collateral in the form and with the amount as approved by the Commission ahead of making any Bids.

#### 8. **REGISTRATION AND PARTICIPATION AS NEDA PARTICIPANTS**

- 8.1 No Generator shall dispatch electricity to the Single Buyer unless it has registered as a NEDA Participant.
- 8.2 To participate in NEDA, an Applicant shall:
  - (a) register with the Single Buyer as NEDA Participant in accordance with the Registration process set out in Appendix D;
  - (b) have concluded the relevant NEDA Agreement(s); and
  - (c) obtained the Generation Licence granted by the Commission.
- 8.3 Applicants shall be responsible for their own costs and expenses incurred in relation to the Registration process.
- 8.4 Each NEDA Participant shall keep the Registration Data relating to it and its relevant Generation Facilities under review to ensure that the Registration Data is accurate and complete.
- 8.5 Where a NEDA Participant wishes to or is required to amend its Registration Data in whole or in part ("**Registration Amendment**"), it shall submit a Registration Amendment Notice to the Commission.
- 8.6 A Registration Amendment Notice shall contain:
  - (a) details of the NEDA Participant's existing Registration Data; and
  - (b) details of the NEDA Participant's proposed Registration Data.
- 8.7 Within three (3) Months of receipt of a Registration Amendment Notice, the Commission shall either:
  - (a) refuse the Registration Amendment and provide the NEDA Participant with an explanation of why such Registration Amendment is not possible; or
  - (b) approve the Registration Amendment and send the NEDA Participant a Registration Amendment Confirmation.

#### 9. DE-REGISTRATION

- 9.1 The Commission may de-register a NEDA Applicant or NEDA Participant by way of written notice to the relevant NEDA Applicant or NEDA Participant in the following circumstances:
  - (a) where a NEDA Applicant except for PPA/SLA Generator and Solar Power Producer has failed to execute the NEDA Connection Agreement or Renewable Energy System Access Agreement within six (6) Months after the execution of NEDA Agreement;
  - (b) where a NEDA Applicant has failed to secure the compliance and obligations under the NEDA Connection Agreement or Renewable Energy System Access Agreement as advised by the relevant parties;
  - (c) when the NEDA Connection Agreement or Renewable Energy System Access Agreement is terminated;
  - (d) where a NEDA Participant has not been Available for a period of twelve (12) consecutive Months and does not provide satisfactory evidence on request that it will become Available within the following six (6) Months;
  - (e) where a NEDA Participant has not submitted a Bid under NEDA for a period of one (1) calendar year;
  - (f) where a NEDA Participant no longer holds a Generation Licence;
  - (g) where a NEDA Participant has not, in the reasonable opinion of the Commission, complied with the conditions imposed on it by the Single Buyer in relation to the number of GSO Non-Compliance Notices of which it has been the subject pursuant to paragraph 23;
  - (h) where a NEDA Participant has, in the reasonable opinion of the Commission, materially breached these Guidelines and has not rectified such breach within thirty (30) Working Days of written notice of such breach from the Commission, provided that this shall not preclude the relevant NEDA Participant from raising a Dispute pursuant to the These Guidelines, and the relevant provisions of these Guidelines shall apply for resolution of the Dispute;
  - *(i)* where a NEDA Participant has contravened any regulations, codes, guidelines or directions made under the Act;
  - (*j*) where a NEDA Participant has failed to secure the compliance and obligations under the titles or approvals of the relevant authorities; or
  - (*k*) any other circumstance which, in the reasonable opinion of the Commission, justifies de-registration of the relevant NEDA Participant ("**De-registration**").

- 9.2 The date on which such De-registration shall take effect shall be specified by the Commission in its De-registration notice to the NEDA Participant. The De-registration notice shall also be published on the MPI.
- 9.3 De-registration shall be without prejudice to all liabilities and obligations accrued prior to the date of De-registration specified by the Commission in the notice provided under paragraph 9.2.
- 9.4 The effect of a De-registration shall be the following:
  - (a) the relevant NEDA Participant shall cease to be a NEDA Participant;
  - *(b)* the Single Buyer shall update the list of NEDA Participants on the MPI, removing the relevant NEDA Participant; and
  - (c) the relevant NEDA Agreement(s) shall be terminated or the NEDA Participant shall cease to be a party to the relevant NEDA Agreement(s) (as applicable).
- 9.5 Following De-registration, an Eligible Generator wishing to participate in NEDA shall be required to complete a new Registration process and, to the extent relevant, enter into the relevant NEDA Agreement(s) in order to participate in NEDA.

#### 10. VOLUNTARILY CEASING TO BE A NEDA PARTICIPANT

- 10.1 Where a NEDA Participant no longer wishes to be a NEDA Participant, it shall apply to the Commission in writing to cease to be a NEDA Participant ("**Cessation Application**").
- 10.2 The Commission shall, within twenty-eight (28) Working Days after receiving a Cessation Application, approve the Cessation Application by written notice to the NEDA Participant, where it is satisfied that the relevant NEDA Participant should no longer be required to comply with the relevant provisions of these Guidelines ("**Cessation Approval**").
- 10.3 The date on which such cessation shall take effect shall be specified by the Commission in its Cessation Approval notice to the NEDA Participant. The Cessation Approval notice shall also be published on the MPI.
- 10.4 Cessation shall be without prejudice to all liabilities and obligations accrued prior to the date of cessation specified by the Commission in the notice under paragraph 10.3.
- 10.5 The effect of a Cessation Approval shall be the following:
  - (a) the relevant NEDA Participant shall cease to be a NEDA Participant;
  - (b) the Single Buyer shall update the list of NEDA Participants on the MPI, removing the relevant NEDA Participant; and
  - (c) the relevant NEDA Agreement(s) shall be terminated or the NEDA Participant shall cease to be a party to the relevant NEDA Agreement(s) (as applicable).

10.6 Following ceasing to be a NEDA Participant, an Eligible Generator wishing to participate in NEDA shall be required to complete a new Registration process and, to the extent relevant, enter into any relevant NEDA Agreement(s) in order to participate in NEDA.

#### **PART V**

#### MARKET PARTICIPATION INTERFACE AND PROVISION OF INFORMATION

#### 11. MARKET PARTICIPANT INTERFACE (MPI)

- 11.1 The Single Buyer will provide a software portal ("**Market Participant Interface**" or "**MPI**") and make available a virtual location on the World Wide Web for the MPI that is accessible to the NEDA Participants to interface with NEDA.
- 11.2 The Single Buyer will ensure that the MPI:
  - (a) is accessible by all NEDA Participants on the World Wide Web;
  - (b) presents data and information clearly;
  - (c) is updated regularly;
  - (d) is adequately resourced, responsive and stable; and
  - (e) utilises access security with respect to each NEDA Participant.
- 11.3 The Single Buyer will, in addition to any other matters specified in the Guidelines for Single Buyer Market (Peninsular Malaysia) and these Guidelines and publish and keep updated the following information on the MPI:
  - (a) Registration forms;
  - (b) a list of all NEDA Participants and their capacity within NEDA; and
  - (c) the Key Information required by NEDA Participants to prepare their Bid.
- 11.5 The Single Buyer shall provide adequate documentation and reasonable training for NEDA Participants regarding the use of the MPI.
- 11.6 Each NEDA Participant shall install or have available hardware, equipment and information technology systems that allow it to participate in and use the MPI and shall bear its own costs and expenses in so doing.

#### 12. PUBLICATION OF INFORMATION BY THE SINGLE BUYER

- 12.1 The Single Buyer shall publish on the MPI each Key Information Items in Appendix B in accordance with the provisions of that Appendix (the "**Key Information Items**").
- 12.2 The Single Buyer may publish any additional material or information on the MPI if it reasonably believes it is expedient and necessary to do so for the proper and efficient operation of NEDA.
- 12.3 Where there is a technical error or defect in the MPI which prevents the Single Buyer from publishing the Key Information or any Key Information Item at the times specified in Appendix B, then the Single Buyer shall use reasonable endeavors to identify an alternative physical or virtual location for the publishing of the Key Information or any Key Information Item.
- 12.4 If there is any delay in the publishing of the Key Information or Key Information Item at the times specified in Appendix B, the Single Buyer shall notify the Commission and the NEDA Participants of the delay, which notification shall include at a minimum the reason for the delay.
- 12.5 In the event of any errors in the information provided by the Single Buyer on the MPI, the Single Buyer shall be entitled to correct such information and shall use reasonable endeavors to notify the Commission and the NEDA Participants, via the MPI, of such corrections. NEDA Participants shall notify the Commission and the Single Buyer of any manifest errors they identify as soon as reasonably practicable.

#### **PART VI**

#### **BIDDING, SCHEDULING AND DISPATCH**

#### 13. SUMMARY OF RULES ON BIDDING

NEDA Participants may submit Bid as follows:

- (a) PPA/SLA Generators may submit Bid with Reduced VOR for each Bidding Period, subject to a cap being the values specified in the applicable PPA/SLA and in the format specified in the PPA/SLA. Only one VOR value shall be specified for each Bidding Period. If a PPA/SLA Generator does not submit any Bid, the value of VOR in PPA/SLA will be taken as a default value for VOR;
- (b) Ex-PPA/SLA Generators and Large Merchant Generators may submit Bid up to ten (10) Price Quantity Pairs for each Bidding Period, each Bid increment separated by a minimum of 10MW and not be less than the Minimum Stable Load and with prices increasing as the quantity increases;
- (c) Solar Power Producers with an express provision in the PPA that allows the Solar Power Producer to supply and sell the excess energy, may submit a half-hourly Bid Price for each Bidding Period; provided that the Bid Price shall not exceed the Energy Rate in the PPA; and
- (d) Price Takers and Corporate Renewable Energy are not entitled to submit any Bids into NEDA.

#### 14. BIDDING INTO NEDA

14.1 NEDA Participants may submit Bids for each Trading Day (in the usual course) as follows:

Dispatch on (D Day)	Bidding Window opens on (D-2 day)	Gate Closure on (D-1 Day)
Monday from 00.00 hours	Thursday at 10.00 hours	Friday at 9.59 hours
Tuesday from 00.00 hours	Friday at 10.00 hours	Monday at 9.59 hours
Wednesday from 00.00 hours	Monday at 10.00 hours	Tuesday at 9.59 hours
Thursday from 00.00 hours	Tuesday at 10.00 hours	Wednesday at 9.59 hours

Dispatch on (D Day)	Bidding Window opens on (D-2 day)	Gate Closure on (D-1 Day)
Friday from 00.00 hours	Wednesday at 10.00 hours	Thursday at 9.59 hours
Saturday from 00.00 hours	Thursday at 10.00 hours	Friday at 9.59 hours
Sunday from 00.00 hours	Thursday at 10.00 hours	Friday at 9.59 hours

- 14.2 A Price Taker and Corporate Renewable Energy shall submit the planned generation of its Generation Facility for a Trading Day based on forecast and prudent utility practice (the "**Planned Generation Schedule**") to the Single Buyer by 09.59 hours on the Working Day preceding the Trading Day (i.e. on D-1 Day) via the MPI. The Price Taker and Corporate Renewable Energy may also, on D-1 Day, submit Planned Generation Schedules up to six (6) subsequent Days.
- 14.3 The timeline of the Day Ahead (D-1 Day) Dispatch Schedule is as summarised in Appendix A.
- 14.4 Bids may be offered for the Bidding Period in each Trading Day in the time interval 00.00 hours to 24.00 hours up to 48 half-hourly tranches.
- 14.5 Bidding NEDA Participants may submit Bids during the Bidding Window in respect of each Bidding Period of the Trading Day as follows:
  - (a) For all Bidding NEDA Participants, Bids for up to forty-eight (48) Half-Hour Periods;
  - (b) PPA/SLA Generators shall submit a Reduced VOR, which shall be lower than the VOR set out in the relevant PPA/SLA;
  - (c) Ex-PPA/SLA Generators and Large Merchant Generators shall submit Price Quantity Pairs as Bid ("**Price as Bid**"); and
  - (*d*) Solar Power Producers with an express provision in the PPA that allows the Solar Power Producer to supply and sell the Excess Energy shall submit Bid Price.
- 14.6 Ex-PPA/SLA Generators and Large Merchant Generators may provide segments of capacity from its Generation Facility at different prices for each Bidding Period provided that each Bid must be for a minimum capacity of 10MW and must not be less than the Minimum Stable Load.
- 14.7 Bidding NEDA Participants shall submit their Bids to the Single Buyer by Gate Closure via the MPI.
- 14.8 Bidding NEDA Participants may update their Bids via the MPI during the Bidding Window up to Gate Closure. There shall be no amendments to the prices included in the Bids submitted after Gate Closure.

- 14.9 Where a Bidding NEDA Participant has confirmed it is Available prior to Gate Closure but does not provide a Bid in accordance with this paragraph 14, the Default Bid for that Bidding NEDA Participant shall be used to prepare the Day Ahead Dispatch Schedule, for dispatch by the Grid System Operator and for Settlement where dispatched.
- 14.10 The Single Buyer shall update the MPI to reflect Bids received from Bidding NEDA Participants.

#### 15. VALIDATION

- 15.1 The Single Buyer shall review Bids to confirm whether, for each Half-Hour Period, Bids comply with the requirements of these Guidelines and any additional validation criteria specified by the Single Buyer from time to time.
- 15.2 The Single Buyer may reject any Bid, in whole or in part, where the Bid:
  - (a) does not comply with the requirements of these Guidelines (including, for the avoidance of doubt, any guidance issued alongside the these Guidelines); or
  - (b) would in its view be likely to involve the Single Buyer being in breach of:
    - (i) any duties under legislation or its licence;
    - (ii) the Malaysian Grid Code;
    - (iii) the Malaysian Distribution Code; or
    - (iv) any PPA or SLA.
- 15.3 The Single Buyer shall inform the affected Bidding NEDA Participant via the MPI where a Bid has been rejected and the reason it was rejected. A rejected Bid shall not be considered for the purposes of the Least Cost Dispatch Methodology (a methodology for developing the Dispatch Schedules such that the lowest cost marginal Generation Facility is forecast to be dispatched first to meet demand followed by the next lowest cost marginal Generation Facility until all demand is met).

#### 16. MODIFICATIONS TO AVAILABILITY

16.1 A Bidding NEDA Participant may modify its Bid for a Trading Day by notice to the Single Buyer in accordance with the MPI before Gate Closure for that Trading Day.

- 16.2 After Gate Closure, a NEDA Participant (other than Price Taker) may modify the Availability of a Generation Facility downwards or upwards (provided that the maximum Availability shall be limited to the Availability included in its Bid) via the MPI:
  - (a) one (1) hour prior to the relevant Half-Hour Period of the relevant Delivery Obligation; or
  - *(b)* where it is not possible to comply with paragraph 16.2 (a) above, as soon as reasonably practicable prior to the relevant Half-Hour Period of the relevant Delivery Obligation and notify GSO,

and any failure to modify a Generation Facility's Availability in accordance with this paragraph 16 shall be subject to the provisions of paragraph 23.

- 16.3 Any other Bid information may only be modified with the express consent of the Single Buyer.
- 16.4 Where after Gate Closure a NEDA Participant, other than a Solar Power Producer and a Price Taker notifies to the GSO a reduction or an increase in the Availability of a Generation Facility in accordance with paragraph 16 in respect of any Half-Hour Period of the relevant Trading Day, Settlement shall be on the basis of the actual capacity dispatched by the Grid System Operator.

#### 17. SCHEDULING AND DISPATCH

- 17.1 The Single Buyer shall schedule the NEDA Participants based on a Least Cost Dispatch Scheduling Methodology such that the lowest marginal cost Generation Facility is forecast to be dispatched first to meet demand followed by the next lowest marginal cost Generation Facility until all demand is met as prescribed in the Guidelines for Single Buyer Market (Peninsular Malaysia).
- 17.2 The Single Buyer shall prepare and submit the Day Ahead Dispatch Schedule to the Grid System Operator by 12.00 hours on the Working Day preceding the commencement of the Trading Day.
- 17.3 In preparation of the Day Ahead Dispatch Schedule, the Single Buyer shall take into account the Start-Up Costs in the Bids submitted by Ex-PPA/SLA Generators and Large Merchant Generators with two-shifting Generation Facilities which are capable of starting-up from zero output and shutting down to zero output within twenty-four (24) hours (the **"Fast Start Generators"**).
- 17.4 A solar Generator connected to the Grid System shall comply with the *Single Buyer Technical Guide for Grid Connected GENCO (Solar)* as provided and amended from time to time on Single Buyer website.
- 17.5 The Grid System Operator may provide feedback to the Single Buyer on the Day Ahead Dispatch Schedule by 15.00 hours on the Working Day preceding the commencement of the Trading Day.
- 17.6 The Single Buyer shall prepare, finalise, revise and publish on the MPI the relevant sections of the Day Ahead Dispatch Schedule, which shall take into account the feedback provided by the Grid System Operator, by 17.00 hours on the Working Day preceding the commencement of the Trading Day.
- 17.7 On the Trading Day, the Grid System Operator will issue dispatch instructions to the NEDA Participants in accordance with the Day Ahead Dispatch Schedule or the latest least cost dispatch schedule produced by the Grid System Operator in accordance with Least Cost Dispatch Scheduling Methodology, taking into account, and subject to:
  - (a) real-time Grid System conditions;
  - (b) its obligations under its Licence and the Malaysian Grid Code; and
  - (c) the latest Bids received from NEDA Participants prior to Gate Closure and the latest Availability declared by NEDA Participants, other than Solar Power Producers and Price Takers.

## 18. DEFAULT BID

The Default Bid for a relevant Bidding NEDA Participant shall be:

- (a) for PPA/SLA Generators, the VOR set out in the relevant PPA/SLA as recorded in the Registration Data; and
- (b) for Ex-PPA/SLA Generators, Large Merchant Generators, the default Price Quantity Pairs submitted in the Registration Data,

as may be amended from time to time, provided such amendment has taken effect.

## 19. MONTHLY CAP

- 19.1 Merchant Generators (except Price Taker) shall not submit any Bid beyond the Monthly Cap. Any Bid higher than the Monthly Cap shall be rejected via the MPI. The Monthly Cap is calculated and published by the Single Buyer in the MPI for each applicable month.
- 19.2 The Single Buyer shall calculate the monthly price cap by identifying the most expensive PPA/SLA Generator that:
  - (a) is available for dispatch during the relevant Month according to the Three Month Ahead Load Forecast;
  - (b) operates on primary fuel; and

- (c) for the avoidance of doubt, the reference PPA/SLA Generators for the most expensive Heat Rate and the most expensive VOR may be different PPA/SLA Generators, using a simple merit order stack (the "**Reference Generator**").
- 19.3 Using the Reference Generator's Heat Rate, VOR and fuel price, the Single Buyer shall calculate the monthly price cap for the purposes of the Monthly Cap, which shall be of:

Monthly price cap =

(Monthly Cap for Heat Rate  $\times$  most expensive primary fuel price) + Monthly Cap for VOR

19.4 The Monthly Cap shall be published by the Single Buyer on the MPI one (1) Week prior to the start of the Month to which the Monthly Cap relates.

## 20. SYSTEM MARGINAL PRICE

- 20.1 The Single Buyer shall publish the **Forecast System Marginal Price**, which is the price of the most expensive Marginal Generator included in the Day Ahead Schedule to meet the Day Ahead Load Forecast in a Half-Hour Period, based on the current draft of the Day Ahead Dispatch Schedule on the MPI by 17.00 hours on the Working Day preceding the commencement of the Trading Day.
- 20.2 The **Marginal Generator** for the purposes of the calculation of the Forecast System Marginal Price and the Actual System Marginal Price shall be:
  - (a) a Centrally Dispatched Generation Facility;
  - (b) not ramping up or down at the Maximum Ramp Up Rate of Generation Facility or Maximum Ramp Down Rate of Generation Facility;
  - (c) not generating at Minimum Stable Load or maximum load;
  - (d) not a Hydro Plant;
  - (e) not Renewable Plant;
  - (f) not Solar Power Producer;
  - (g) not a testing unit;
  - (h) running under normal industry conditions;
  - (i) not a constrained generator due to transmission or fuel constraint;
  - (j) not subject to gas curtailment;
  - (k) running on primary fuel (i.e. not running on back-up fuel); and
  - (*I*) not a must run plant whether on active power or ancillary service.

20.3 Price Takers shall be paid for the energy delivered to the Grid Owner or a Distributor by a Generation Facility at the delivery point as measured by approved meters (the "**Metered Output**") at the Actual System Marginal Price, which is the price of the most expensive Marginal Generator dispatched by the Grid System Operator to meet the actual demand in a Half- Hour Period.

## PART VII

## **METERING**

## 21. METERING

- 21.1 TNB Metering Equipment shall be sealed and the seal shall not be broken for any reason except when the TNB Metering Equipment is to be inspected, tested or adjusted.
- 21.2 The NEDA Participant shall not permit any of its employees, agents, contractors or subcontractors of any tier to tamper with the TNB metering equipment without TNB's prior written consent.

## PART VIII

## SETTLEMENT

## 22. SETTLEMENT

- 22.1 This part of the Guidelines on Settlement shall not apply to Settlements for PPA/SLA Generators or Part PPA/SLA Generator in relation to their PPA/SLA contracted capacity and Heat Rate, which shall be governed by the terms of their respective PPAs and SLAs, except in relation to Bids of Reduced VOR that are lower than the PPA/SLA VOR.
- 22.2 The Single Buyer shall use information provided by NEDA Participants provided in the Registration or in Bids for Settlement. It is the responsibility of each NEDA Participant to ensure that any information affecting them is accurate and to notify any identified discrepancies to the Single Buyer as soon as reasonably practicable.
- 22.3 NEDA Participants dispatching energy to the Single Buyer shall be paid:
  - (a) subject to the Monthly Cap, prices for Metered Output as follows for each type of NEDA Participant:
    - (i) PPA/SLA Generators, at the PPA/SLA VOR or Reduced VOR as Bid, whichever lower;
    - Ex-PPA/SLA Generators and Large Merchant Generators, at the Actual System Marginal Price, capped at the capacity on Registration, determined by reference to the Price as Bid
    - (iii) Price Takers, at the Actual System Marginal Price, capped at the capacity on Registration. Any Metered Output below the higher of 100kW and 1% of the Price Taker's Installed Capacity, shall be disregarded for purposes of Settlement. For a Price Taker under the Corporate Green Power Program, in addition to this, the actual annual export energy (MWh) shall not be more than 10% of the total annual export energy as projected in the submission of application for participation. Any energy exported in excess of that will be disregarded for purposes of Settlement; or
    - (iv) Solar Power Producers with an express provision in the PPA that allows the Solar Power Producer to supply and sell the Excess Energy, either—
      - (A) at the Bid Price if the Bid Price is not more than the Energy Rate in the PPA and the Actual System Marginal Price; or
      - (B) at the Excess Energy Rate in the PPA if the Solar Power Producer does not submit any Bid, or the Bid Price is more than the Energy Rate in the PPA or the Actual System Marginal Price; and

- (b) if the relevant NEDA Participant is a Fast Start Generator and it has been issued with a dispatch instruction by the Grid System Operator to start-up, it shall be paid:
  - (i) its Start-Up Costs as Bid; or
  - (ii) in the event of a Cancelled Start Event, its Registered Start-Up Costs where it has complied with its obligations under paragraph 24.
- 22.4 Each NEDA Participant shall send an invoice to the Single Buyer for amounts owed to the NEDA Participant by the Single Buyer in respect of each relevant Billing Period within seven (7) Working Days after the end of the relevant Billing Period, which shall:
  - (a) be based on the pricing principles and formulae set out in Appendix C and the Metered Output in each Half-Hour Period provided in paragraph 21.3;
  - (b) specify the Trading Data (in a format as shall be specified by the Single Buyer from time to time) for that NEDA Participant for each relevant Trading Day, ("Settlement Invoice").
- 22.5 For the purpose invoicing under paragraph 21.4, Large Merchant Generators (excluding Part PPA/SLA Generator) and Price Takers shall use the meter reading obtained from the MPI.
- 22.6 Subject to paragraph 21.8, paragraph 21.9 and paragraph 22, the Single Buyer shall pay the amounts owed to the NEDA Participant in relation to the Billing Period within thirty (30) Days of receipt of the hard copy Settlement Invoice by the Single Buyer.
- 22.7 The Single Buyer shall issue a letter to the relevant NEDA Participant for each relevant Billing Period as soon as reasonably practicable after payment of the amounts owed to the NEDA Participant in relation to the Billing Period by the Single Buyer ("**Settlement Letter**"). The Settlement Letter shall state the amount assessed as payable, including where the Single Buyer disagrees with any information specified in a Settlement Invoice, specifying the amount in dispute and the undisputed amount. For the avoidance of doubt, the amounts paid by the Single Buyer under this paragraph 21.7 shall be the amount specified in the Settlement Invoice, unless modified by the Settlement Letter.
- 22.8 If any amount in a Settlement Letter is different to the Settlement Invoice, such amount shall be considered to be not agreed and Settlement shall be carried out according to the Single Buyer's assessment of the amount owed in the Settlement Letter. Any dispute in relation to a Settlement Invoice shall be raised promptly by the NEDA Participant and in any event within three (3) Months of the date of the Settlement Letter and if the dispute is not raised within that time then the Settlement Letter is taken to have been agreed. Disputes shall be resolved in accordance with These Guidelines.
- 22.9 The settlement formula is as provided in Appendix C.
- 22.10 Any amount which is due and payable by either party under these Guidelines which has not been paid by the due date for the payment of such amount shall accrue interest calculated on a simple basis at the Interest Rate from the date such amount was due (including such date) until the date such amount is fully paid (excluding such date).

## 23. SET OFF

- 23.1 Where the Single Buyer is under an obligation under Guidelines for Single Buyer Market (Peninsular Malaysia) to make any payment to a NEDA Participant, the Single Buyer may (but shall not be obliged to) set off such payment against any amounts the relevant NEDA Participant owes the Single Buyer in pursuant to these Guidelines provided that it is in accordance with and not in violation of the provisions in the PPA/SLA and any other commercial agreements between the NEDA Participant and the Single Buyer .
- 23.2 The obligations of the relevant NEDA Participant in respect of any such amounts referred to in paragraph 22.1 shall be deemed to be satisfied and discharged to the extent of any set-off in accordance with this paragraph 22.

## 24. SYSTEM ACCESS CHARGE

- 24.1 System Access Charge will be imposed on Corporate Renewable Energy for utilising the Grid System and Distribution Network, and the relevant services to supply energy to its Green Consumer.
- 24.2 The System Access Charge for firm-output and non-firm output Renewable Energy Generator is determined by Commission as per the CRESS Guidelines.
- 24.3 Single Buyer shall send an invoice to the Corporate Renewable Energy for the amount of System Access Charge in respect of each relevant Billing Period within seven (7) Working Days after the end of the relevant Billing Period, which shall be based on the pricing principles and formula set out in Appendix C and the total Metered Output in the Billing Period; ("System Access Charge Invoice")
- 24.4 The Corporate Renewable Energy shall pay the amount owed to Single Buyer in relation to the Billing Period within thirty (30) Days of the System Access Charge Invoice date.

## 25. BACK-FEED ENERGY CHARGE

- 25.1 A NEDA Applicant requiring Back-feed Energy shall enter into a Back-feed Agreement with TNB, where the applicable tariff is 'C1: Medium Voltage General Commercial Tariff', for energy (kWh) usage only without maximum demand (kW) charges or any other tariff as may be determined by Commission.
- 25.2 The Back-feed Energy charge shall take effect on the Initial Operation Date (IOD).

## **PART IX**

## **NON-DISPATCH**

## 26. FAILURE TO MEET DISPATCH BY GENERATOR

- 26.1 Where a Merchant Generator (except Price Taker) has successfully Bid into NEDA and has been issued a Dispatch Instruction but is subject to a Failure to Meet Dispatch, the Grid System Operator shall issue a GSO Non-Compliance Notice to the Merchant Generator and the Single Buyer.
- 26.2 The Single Buyer may conduct an investigation into a Failure to Meet a Dispatch.
- 26.3 The Single Buyer may, following an investigation, impose such conditions as it considers appropriate in the circumstances on continued participation in NEDA by the relevant Merchant Generator. Where a Merchant Generator has failed to comply with its Delivery Obligation, the Single Buyer shall notify the Merchant Generator in writing to make a payment for such non-compliance. Such payment shall not exceed RM 150 (Ringgit One Hundred and Fifty Only) for each MW shortfall in its Delivery Obligation as set out in the GSO Non-Compliance Notice. Such amount shall be set off from the next invoice from that Merchant Generator in accordance with paragraph 23. The Single Buyer shall inform the Commission of any such non-compliance by the Merchant Generators.

## 27. NON-DISPATCH BY GSO

- 27.1 A Fast Start Generator shall be paid its Registered Start-Up Costs by the Single Buyer where:
  - (a) the Grid System Operator has issued a dispatch instruction for the NEDA Participant to provide its Delivery Obligation; and
  - (b) the Grid System Operator cancels such dispatch instruction after the commencement of start-up of the Generation Facility in accordance with the dispatch instruction given earlier, (the "Cancelled Start Event").
- 27.2 Following a Cancelled Start Event, the Fast Start Generator shall submit an invoice for the Registered Start-Up Costs incurred due to the Cancelled Start Event to the Single Buyer as part of its Settlement Invoice for that Billing Period issued in accordance with part VIII.

## PART X

## **DISPUTE RESOLUTION**

## 28. THE PROCEDURES FOR DISPUTE RESOLUTION

- 28.1 The procedures for raising and resolving disputes concerning the compliance with these Guidelines shall be the same and in accordance to the provisions in the Guidelines for Single Buyer Market (Peninsular Malaysia).
- 28.2 The Commission may decide to hear and determine a dispute itself or refer the dispute to arbitration by the Asian International Arbitration Centre (AIAC) for mediation or arbitration.

## 29. APPLICATION OF DISPUTE RESOLUTION PROCESS

- 29.1 The dispute resolution process set out in this part of the Guidelines does not apply to disputes between NEDA Participants concerning the performance of obligations under the generator contracts.
- 29.2 Subject to paragraph 26.1, the dispute resolution process set out in this part relates to disputes that may arise between NEDA Participants concerning:
  - (a) the application or interpretation of the These Guidelines;
  - (b) a NEDA Participant's view that the Single Buyer has performed its functions or otherwise acted in a manner that is inconsistent with the Guidelines for Single Buyer Market (Peninsular Malaysia) and/or these Guidelines;
  - (c) the Single Buyer's view that a NEDA Participant has acted in a manner that unreasonably prevents the Single Buyer from achieving its objectives under the These Guidelines; or
  - (d) a NEDA Participant's view that the Single Buyer has performed its functions or otherwise acted in manner that unreasonably discriminates against a NEDA Participant as prescribed in the Guidelines for Single Buyer Market (Peninsular Malaysia) and/or These Guidelines.
- 29.3 It is intended that the dispute resolution process set out in this part or implemented in compliance with these Guidelines should to the maximum extent possible:
  - (a) be simple, quick and inexpensive;
  - (b) preserve or enhance the relationship between the parties to the dispute;
  - (c) take account of the skills and knowledge that are required for the relevant procedure;

- (d) place emphasis on conflict avoidance; and
- (e) encourage resolution of disputes without the involvement of the Commission, formal legal representation or reliance on legal procedures.

## 30. RAISING A DISPUTE

- 30.1 Subject to paragraph 26.1 and paragraph 27.2, a dispute relating to any of the matters set out in paragraph 26.2 may be raised with the Commission by a Participant by serving a statement to the Commission that sets out:
  - (a) a brief history of the dispute and the circumstances giving rise to it;
  - (b) a statement of its issues in relation to the dispute, and in particular, how the dispute relates to the matters set out in paragraph 26.2; and
  - (c) a statement of the actions that have been taken by the parties to the dispute in attempting to resolve the dispute prior to raising it with the Commission.
- 30.2 Prior to raising a dispute with the Commission under paragraph 27.1, a party to a dispute shall ensure that:
  - (a) it has raised the dispute with the other NEDA Participant or NEDA Participants that are party to the dispute; and
  - (b) it has made every attempt to negotiate the dispute in good faith and come to an agreement that resolves the dispute without the involvement of the Commission.
- 30.3 Subject to paragraph 27.4, where a dispute is raised with it under paragraph 27.1, the Commission shall within 10 Working Days elect to:
  - (a) hear and determine a dispute itself; or
  - (b) refer the dispute for mediation or arbitration by AIAC.
- 30.4 The Commission shall only hear and determine a dispute itself where:
  - (a) doing so would not give rise to a conflict of interest; and
  - (b) it has the necessary expertise to hear and determine the dispute itself.

## 31. DISPUTES REFERRED TO AIAC

- 31.1 If the Commission refers the dispute for mediation or arbitration by AIAC, the Commission shall serve a written notice on the parties to the dispute to that effect and the rules of arbitration of AIAC shall apply.
- 31.2 Any mediation or arbitration conducted in accordance with paragraph 28.1 shall be conducted in Kuala Lumpur, in English, by a single mediator or arbitrator in accordance with the laws of Malaysia.

## 32. DISPUTES HEARD AND DETERMINED BY THE COMMISSION

- 32.1 In hearing and determining a dispute raised under paragraph 27.1 itself, the Commission may:
  - (a) request a meeting of the parties to the dispute, either together or separately;
  - (b) request parties to the dispute to provide it with any information of the form and type that it considers necessary to assist it in making a decision.
- 32.2 A determination on a dispute may be made by the Commission after consideration of the issues raised under paragraph 27.1, or any other matters considered relevant by the Commission.
- 32.3 A determination on a dispute by the Commission may require a party to do any or all of the following in such manner and within such time or times as is specified in the decision:
  - (a) take specified action;
  - (b) refrain from taking specified action; or
  - (c) pay a monetary amount to another party.
- 32.4 Each party to a dispute that is required by a determination of the Commission to take specified action, to refrain from taking specified action or to pay a monetary amount must:
  - (a) do so within such period after being notified of the determination as is specified in the decision; and
  - (b) report to the Commission as soon as practicable after doing so.
- 32.5 Where a dispute is heard by the Commission, the costs of a dispute resolution process shall be recovered from one or both parties to the dispute or in a manner otherwise decided by the Commission. In deciding to allocate costs against one or more parties to a dispute, the Commission may have regard to any relevant matters, including (but not limited to) whether the conduct of a party to the dispute unreasonably prolonged or escalated the dispute or otherwise increased the costs of the proceedings.

## PART XI RULE CHANGE

## 33. RULE CHANGE

- 33.1 The process to be followed in relation to submitting and deciding a Rule Change is similar to the provisions in the Guidelines for Single Buyer Market (Peninsular Malaysia).
- 33.2 The Commission may amend these Guidelines on its own initiative or in response to a Rule Change Proposal by a NEDA Participant, a Distributor, the Single Buyer, the Grid System Operator, the Grid Owner or other interested persons, which shall be assessed by either the Commission (in the case of minor or urgent amendments to the These Guidelines) or a standing Rule Change Panel (for all other Rule Change Proposals).
- 33.3 Subject to the following provisions, the Commission may amend these Guidelines via a Rule Change:
  - (a) if a Rule Change Panel has provided a Final Rule Change Recommendation to the Commission in which it declares that it considers that the Rule Change would better facilitate the objectives and operation of NEDA; or
  - (b) under the Minor Rule Change Procedures specified under paragraph 34; or
  - (c) under the Urgent Rule Change Procedures specified under paragraph 35.
- 33.4 The Commission may appoint any person with the relevant experience and expertise in the related matters as required to assist it in coming to a decision on whether or not to make a Rule Change.

## 34. RULE CHANGE PANEL

- 34.1 The Commission shall convene a standing Rule Change Panel to assess and make recommendations on Rule Change Proposals.
- 34.2 The Rule Change Panel for these Guidelines shall be chaired by the Commission and may consists of members appointed by the Commission from any of the following NEDA Participants and organizations:
  - (a) at least two but not more than three representatives from PPA/SLA Generators;
  - (b) one representative from Ex-PPA/SLA Generators on power sector gas supply;
  - (c) one representative from Price Takers;
  - (d) one representative from Large Merchant Generators;
  - (e) one representative from Solar Power Producers;
  - (f) one representative from the Single Buyer;

- (g) one representative from the Grid System Operator;
- (h) one representative from Grid Owner;
- (i) one representative from Distributors;
- (j) one representative from Commission, excluding the chairman of the panel; and
- (k) any other independent expert or experts as deemed necessary by the Commission.
- 34.3 In order to be eligible to sit on the Rule Change Panel, a person shall have an understanding of the Electricity Industry and the operation of the Single Buyer market or the capacity to readily acquire such understanding.
- 34.4 The Rule Change Panel may request that the Commission engage independent experts as required to assist the Rule Change Panel in performing its functions in hearing and making decisions on Rule Change Proposals.
- 34.5 The Commission shall provide secretariat support to the Rule Change Panel.
- 34.6 Any costs incurred by the Rule Change Panel in assessing a Rule Change Proposal are to be borne by the Commission.

## 35. SUBMISSION AND ASSESSMENT OF RULE CHANGE PROPOSAL

- 35.1 Any person may submit a Rule Change Proposal in writing to the Commission, which shall be assessed by either the Commission (in the case of minor or urgent amendments to the These Guidelines) or a standing Rule Change Panel (for all other Rule Change Proposals).
- 35.2 Each Rule Change Proposal shall:
  - (a) set out in sufficient detail the nature and purpose of the Rule Change Proposal;
  - (b) set out the basis upon which the Proposer considers that it would better facilitate the achievement of the objectives as specified in the These Guidelines;
  - (c) propose detailed drafting suggestions for the relevant chapters and rules of these Guidelines which are to be amended or otherwise affected by the Rule Change Proposal; and
  - (d) state the name of the Proposer and the Proposer's Representative.
- 35.3 The Commission shall by the end of 5 Working Days after receipt of a Rule Change Proposal, decide whether it has merit and should be considered for further assessment or should be rejected and publish its decision on the Single Buyer Website.
- 35.4 Pursuant to paragraph 32.3, if the Commission decides that a Rule Change Proposal should be rejected, then the Commission shall provide a written response to the Proposer outlining its reasons for rejecting the Rule Change Proposal.
- 35.5 Pursuant to paragraph 32.3, if the Commission decides that the Rule Change Proposal has merit and should be considered for further assessment, then the Commission shall:

- (a) take any additional steps required to convene a Rule Change Panel in accordance with paragraph 31 to hear and decide upon the Rule Change;
- (b) publish the Rule Change Proposal in its entirety on the Single Buyer Website; and
- (c) circulate the Rule Change Proposal to Participants and any other parties it considers relevant.

## 36. RECOMMENDATION OF RULE CHANGE

36.1 After consideration of the Rule Change Proposal, the Rule Change Panel shall, by the end of 20 Working Days, provide a Draft Rule Change Recommendation to the Commission.

The Draft Rule Change Recommendation shall contain:

- (a) details of the Rule Change Proposal;
- (b) a summary of any submissions received on the Rule Change Proposal;
- (c) a recommended change to the These Guidelines, based on the Rule Change Proposal and reflecting any amendments that the Rule Change Panel considers necessary to better facilitate the achievement of the objectives of the Guidelines for Single Buyer Market (Peninsular Malaysia) and/or the These Guidelines;
- (d) a statement of reasons setting out how the Rule Change Panel considers that the Draft Rule Change Recommendation would better facilitate the achievement of the objectives of the Guidelines for Single Buyer Market (Peninsular Malaysia) and/or the These Guidelines; and
- (e) any other matters the Rule Change Panel considers relevant.
- 36.2 The Draft Rule Change Recommendation shall be published on the Single Buyer Website and the MPI and circulated to Participants and any other parties considered relevant by the Rule Change Panel and provide a deadline for submissions, which must be at least 15 Working Days from the circulation of the Draft Rule Change Recommendation.
- 36.3 After consideration of any submissions on the Draft Rule Change Recommendation, the Rule Change Panel shall, by the end of 15 Working Days, provide a Final Rule Change Recommendation to the Commission. The Final Rule Change Recommendation shall contain:
  - (a) details of the Rule Change Proposal;
  - (b) a summary of any submissions received on the Draft Rule Change Recommendation;
  - (c) a recommended change to the These Guidelines, based on the Rule Change Proposal and reflecting any amendments that the Rule Change Panel considers necessary to better facilitate the achievement of the objectives as specified in Guidelines for Single Buyer Market (Peninsular Malaysia) and /or These Guidelines;
  - (d) a statement of reasons setting out how the Rule Change Panel considers that the Final Rule Change Recommendation would better facilitate the achievement of the

objectives as specified in Guidelines for Single Buyer Market (Peninsular Malaysia) and/or the These Guidelines;

- (e) proposed drafting to amend these Guidelines in accordance with the Rule Change Recommendation; and
- (f) any other matters the Rule Change Panel considers relevant.

The Final Rule Change Recommendation must be provided to the Commission and published on the Single Buyer Website and the MPI.

## 37. FINAL RULE CHANGE DECISION

- 37.1 After receipt of the Rule Change Panel's Final Rule Change Recommendation, the Commission shall, within 10 Working Days:
  - (a) produce a Final Rule Change Decision; or
  - (b) refer the Final Rule Change Recommendation to the Government.
- 37.2 In the event that the Commission decides to refer a Final Rule Change Recommendation to the Government, the Government may direct the Commission to make a Final Rule Change Decision.
- 37.3 A Final Rule Change Decision by the Commission under paragraph 34.1 or paragraph 34.2 shall be published on the Single Buyer Website and contain:
  - (a) details of the Rule Change Proposal and Rule Change Recommendation;
  - (b) a summary of any submissions or advice from Government received on the Rule Change Recommendation;
  - (c) a decision by the Commission, which either:
    - (i) rejects the Rule Change Recommendation; or
    - accepts the Rule Change Recommendation, either in its current form or with any revisions that it considers are necessary to better facilitate the achievement of the objectives as specified in the Guidelines for Single Buyer Market (Peninsular Malaysia) and /or these Guidelines;
  - (d) in the event that the Commission decides to reject the Rule Change Recommendation, a statement of reasons setting out how the Commission considers that the Rule Change Recommendation would not better facilitate the achievement of the objectives as specified in the Guidelines for Single Buyer Market (Peninsular Malaysia) and/or These Guidelines;
  - (e) in the event that the Commission has decided to accept the Draft Rule Change;

- a statement of reasons setting out how the Commission considers that the Rule Change Recommendation would better facilitate the achievement of the objectives as specified in the Guidelines for Single Buyer Market (Peninsular Malaysia) and/or the These Guidelines; and
- (ii) a revised draft of the These Guidelines, amended in accordance with its Final Rule Change Decision.

## 38. MINOR RULE CHANGE PROCEDURES

- 38.1 Where the Commission is of the view that a Rule Change or Rule Change Proposal will not materially impact or disadvantage any NEDA Participant, it may commence Minor Rule Change Procedures to amend these Guidelines to address the issue identified.
- 38.2 Under Minor Rule Change Procedures, the Commission may unilaterally amend these Guidelines without calling for submissions or referring the Rule Change to the Rule Change Panel or Government.
- 38.3 Any Rule Change via the Minor Rule Change Procedures must be published on the Single Buyer Website and the MPI, accompanied by:
  - (a) a statement of reasons setting out the necessity for the Rule Change and how the Commission considers that the Rule Change would address the issue identified; and
  - (b) a revised draft of the These Guidelines.

## **39. URGENT RULE CHANGE PROCEDURES**

- 39.1 In the event that the Commission becomes aware of a material error in the These Guidelines, or an event occurs which:
  - (a) threatens security of supply;
  - (b) threatens the viability of the Electricity Industry or a NEDA Participant; or
  - (c) would otherwise materially jeopardise the achievement of the Commission's objectives as set out in the Act.
- 39.2 The Commission may commence Urgent Rule Change Procedures to amend these Guidelines to address the issue identified.
- 39.3 Under Urgent Rule Change Procedures, the Commission may unilaterally amend these Guidelines without calling for submissions or referring the Rule Change to the Rule Change Panel or Government.
- 39.4 Any Rule Change via the Urgent Rule Change Procedures must be published on the Single Buyer Website, accompanied by:

- (a) a statement of reasons setting out the necessity for the Rule Change and how the Commission considers that the Rule Change would address the issue identified under paragraph 36.1; and
- (b) a revised draft of these Guidelines.

PART XII APPENDICES

#### **APPENDIX A**

## TIMELINE OF DAY AHEAD DISPATCH SCHEDULE

## Timeline of Day Ahead Dispatch ( D-1 Day ) Schedule

Time	Task
D-1 09.59hrs	Gate Closure for NEDA Participants to submit Bids and Planned Generation Schedule for Trading Day
D-1 10.00hrs	Generators with PPA/SLA submit Day Ahead Declaration. Grid System Operator updates Single Buyer of Transmission and Generation Outage Plans. Single Buyer updates Day Ahead Load Forecast.
10.30hrs	Nominated gas supplier submits to the Single Buyer Daily Update Gas Report.
11.00hrs	Single Buyer updates dispatch model for all inputs.
12.00hrs	Single Buyer prepares Day Ahead Dispatch Schedule and submits it to Grid System Operator for validation.
14.00hrs	Participants who are Price Takers submit their Planned Generation Schedule to Single Buyer.
15.00hrs	Grid System Operator provides feedback on Day Ahead Dispatch Schedule.
17.00hrs	Single Buyer finalizes the Day Ahead Dispatch Schedule. Single Buyer sends the finalized Day Ahead Dispatch Schedule to Grid System Operator. Single Buyer makes available to Generators their Day Ahead Dispatch Schedule for each of its Generation Facility. Single Buyer publishes Day Ahead Load Forecast. Single Buyer publishes forecasted half-hourly SMP.

## **APPENDIX B**

## **KEY INFORMATION PUBLISHED BY THE SINGLE BUYER**

## 1. KEY INFORMATION

- 1.1 The following Key Information Items shall be published by the Single Buyer on the MPI:
  - (a) at 17.00 hours one (1) Working Day before each Trading Day:
    - (i) the Day Ahead Load Forecast used for the Day Ahead Dispatch Schedule;
    - (ii) the NEDA Participant-specific Day Ahead Dispatch Schedule; and
    - (iii) the Forecast System Marginal Price based on the indicative Day Ahead Dispatch Schedule;
  - (b) on the last Working Day of each Week:
    - (i) the Week Ahead Load Forecast for the following Week; and
    - (ii) one (1) Week in arrears, the Actual System Marginal Price;
  - (c) on the first Working Day of the last Week before the end of each Month, the Monthly Cap for Price for the upcoming Month; and
  - (d) whenever required:
    - (i) any Generation, Grid System or Distribution System constraints; and
    - (ii) any suspension of NEDA,

## **APPENDIX C**

## SETTLEMENT FORMULA

Settlements for electricity dispatch under NEDA shall be calculated in accordance with the formula in this Appendix C.

All intermediate calculations under this Appendix C shall be made to five (5) decimal places without rounding and the final product shall be rounded to the second (2<sup>nd</sup>) decimal place and a figure of five (5) or more in the third (3<sup>rd</sup>) decimal place shall result in a rounding up of the second (2<sup>nd</sup>) decimal.

## C1. PPA/SLA Generators

In accordance with the formula provided in the PPA/SLA subject to the reduced VOR as Bid.

## C2. Ex- PPA/SLA Generators

## **Energy Payment**

ENERGY PAYMENT	EP =	SMP × MO	
----------------	------	----------	--

where:

- EP = the Energy Payment (in RM) for the Generation Facility in such Billing Period;
- SMP = the Actual System Marginal Price in such Billing Period;
- MO = the Metered Output (in kWh) delivered from the Generation Facility in such Billing Period.

## C3. Large Merchant Generators

## **Energy Payment**



where:

- EP = the Energy Payment (in RM) for the Generation Facility in such Billing Period.
- SMP = the Actual System Marginal Price in such Billing Period;
- MO = the Metered Output (in kWh) delivered from the Generation Facility in such Billing Period.

For paragraphs C2 and C3, all calculations for the Billing Period shall be determined in accordance with Attachment A of this Appendix C.

**Energy Payment** 

ENERGY PAYMENT	EP =	SMP x MO	

where:

- EP = the Energy Payment (in RM) for the Generation Facility in such Billing Period;
- SMP = the Actual System Marginal Price in such Billing Period;
- MO = the Metered Output (in kWh) delivered from the Generation Facility in such Billing Period, capped at the Export Capacity.

For paragraph C4, all calculations for the Billing Period shall be determined in accordance with Attachment B of this Appendix C.

## <u>C5. Solar Power Producers (with an express provision in the PPA that allows the Solar</u> <u>Power Producer to supply and sell the excess energy)</u>

## Energy Payment

<b>ENERGY PAYMENT EP</b> = $\mathbf{E}_i \times \mathbf{MO}$
--

where:

- EP = the Energy Payment (in RM) for the Generation Facility in such Billing Period;
- E<sub>i</sub> = the Excess Energy Rate under the relevant PPA; or the price offered by such Solar Power Producer in its Bid if such Bid satisfies the conditions in paragraph 21.3(a)(iv);
- MO = the Metered Output (in kWh) delivered from the Generation Facility in such Billing Period, capped at the Established Capacity.

For paragraph C5, all calculations for the Billing Period shall be determined in accordance with Attachment C of this Appendix C.

## C6. Corporate Renewable Energy

System Access Charge	SAC = (M <sub>RED</sub> x SACR)

where:

- SAC = System Access Charge (in RM);
- M<sub>RED</sub> = as defined in CRESS Guidelines (kWh);
- SACR = System Access Charge as published in the Commission's website at <u>www.st.gov.my</u>.

## ATTACHMENT A OF APPENDIX C

## CALCULATION OF ENERGY PAYMENT FOR EX PPA/SLA GENERATORS AND LARGE MERCHANT GENERATORS

## CA.1 Calculation Guidelines

For the purpose of determining the Energy Payment for the Billing Period (i.e. EP), the principles outlined above are applied as follows:

Energy Payment for each day in a Billing Period

(a) NEDA Participant shall provide Single Buyer with a schedule, set out in a format similar to the following table, for the Generation Facility for each day of a Billing Period.

Index i	Period	Applicable Time	Metered Output (MO <sub>i</sub> ) (in kWh)	Actual System Marginal Price (SMP <sub>i</sub> ) (RM/kWh)	Energy Payment (EP) (RM)
1	0:00 – 0:30				
2	0:30 – 1:00				
3	1:00 – 1:30				
4	1:30 – 2:00				
	$\downarrow$				
48	23:30 – 24:00				

(b) For the Generation Facility, the Energy Payment for each Trading Day of a Billing Period is determined as follows:

 $\mathsf{EP}(\mathsf{daily}) = \sum_{i=1}^{48} (\mathsf{SMP}_i \times \mathsf{MO}_i)$ 

- $MO_i$  = the Metered Output (in kWh) from the Generating Facility during the Half-Hour Period *i*;
- *i* = an index referring to each Half-Hour Period of each Trading Day of the Billing Period;
- $SMP_i =$  The applicable Actual System Marginal Price for the Half-Hour Period *i* (in RM/kWh);

## ATTACHMENT B OF APPENDIX C

## **CALCULATION OF ENERGY PAYMENT FOR PRICE TAKERS**

## CB.1 Calculation Guidelines

For the purpose of determining the Energy Payment for the Billing Period (i.e. EP), the principles outlined above are applied as follows:

Energy Payment for each day in a Billing Period

(a) NEDA Participant shall provide Single Buyer with a schedule, set out in a format similar to the following table, for the Generation Facility for each day of a Billing Period.

Index i	Period	Export Capacity (Registered) and equivalent export energy		Metered Output and equivalent Export Capacity		Non Paid Meter Output (Capped at below the higher of 100kW or 1% of the Price Taker's Installed Capacity)	Paid Meter Output (Capped at the Export Capacity) (kWh)	Actual System Marginal Price (SMP <sub>i</sub> ) (RM/kWh)	Energy Payment (EP) (RM)
		MW	kWh	kWh	MW	(kWh)			
1	0:00 – 0:30								
2	0:30 – 1:00								
3	1:00 – 1:30								
4	1:30 – 2:00								
	Ļ								
48	23:30  24:00								

(b) For the Generation Facility, the Energy Payment for each Trading Day of a Billing Period is determined as follows:

$$\mathsf{EP}(\mathsf{daily}) = \sum_{i=1}^{48} (\mathsf{SMP}_i \times \mathsf{MO}_i)$$

where	
MO <sub>i</sub> =	the Metered Output (in kWh) from the Generation Facility during the Half- Hour Period <i>i</i> ;
i =	an index referring to each Half-Hour Period of each Trading Day of the Billing Period;
SMP <sub>i</sub> =	The applicable Actual System Marginal Price for the Half-Hour Period <i>i</i> (in RM/kWh);

## ATTACHMENT C OF APPENDIX C

## <u>CALCULATION OF ENERGY PAYMENT FOR SOLAR POWER PRODUCERS</u> (With An Express Provision in The PPA That Allows the Solar Power Producer to Supply and Sell The Excess Energy)

#### CC.1 Calculation Guidelines

For the purpose of determining the Energy Payment for the Billing Period (i.e. EP), the principles outlined above are applied as follows:

Energy Payment for each day in a Billing Period

(a) NEDA Participant shall provide Single Buyer with a schedule, set out in a format similar to the following table, for the Generation Facility for each day of a Billing Period.

Inde x i		Cap a equiv	olished acity nd /alent <u>lished</u> kWh	Outp equiv Ex Cap	ered ut and /alent port <u>acity</u> MW	Energy Rate	Actual System Marginal Price, (SMP <sub>i</sub> )	Bid Price	Applicabl e Price, (E <sub>i</sub> )	Energy Payment (EP) (RM)
1	0:00 – 0:30									
2	0:30 – 1:00									
3	1:00 – 1:30									
4	1:30 – 2:00									
48	23:30 – 24:00									

(b) For the Generation Facility, the Energy Payment for each Trading Day of a Billing Period is determined as follows:

$$\mathsf{EP}(\mathsf{daily}) = \sum_{i=1}^{48} (\mathsf{E}_i \times \mathsf{MO}_i)$$

where	
MO <sub>i</sub> =	the Metered Output (in kWh) from the Generation Facility during the Half-Hour Period, capped at the Established Capacity;
E <sub>i</sub> =	the Excess Energy Rate under the relevant PPA; or the price offered by such Solar Power Producer in its Bid if such Bid satisfies the conditions in paragraph 21.3(a)(iv);
SMP =	the Actual System Marginal Price in such Billing Period;
$SMP_i$ =	the applicable SMP for the Half-Hour Period <i>i</i> (in RM/kWh);
i =	an index referring to each Half-Hour Period of each Trading Day of the Billing Period;

## **APPENDIX D**

## **REGISTRATION PROCESS**

## 1. THE REGISTRATION PROCESS

- 1.0 The Registration process shall be as follows:
  - 1.1 The applicant shall register as a NEDA Participant via online at the Single Buyer website. This include uploading the supporting documents required for the registration;
  - 1.2 The Applicant shall print and submit the completed Registration forms (in hard copy and soft copy) to the postal and electronic addresses specified by the Single Buyer from time to time, together with the Registration Data;

Postal address:	Chief Executive Officer Single Buyer Level 9, Menara Pernas, Tower 7, Avenue 7 Bangsar South City No.8, Jalan Kerinchi 59200, Kuala Lumpur
Email address:	mo-neda@singlebuyer.com.my

1.3 A copy of the Registration together with the Registration Data (hard copy and soft copy) should be sent to the postal & electronic addresses of the Commission:

Postal address:	Chief Executive Officer
	Energy Commission
	No. 12, Jalan Tun Hussein
	Precinct 2, 62100 Putrajaya.
Email address:	neda@st.gov.my

1.4 Upon receipt of an application from the applicant, the Single Buyer shall request the applicant to commence a power system study and submit the study report to the Grid Owner with a copy to Single Buyer.

- 1.5 The Single Buyer:
  - (a) shall verify the Registration Data requiring verification by consulting with the Grid System Operator and other relevant parties within three (3) Months from the date of receipt of the Registration Data; and
  - (b) may choose to verify any other Registration Data provided by the Applicant to the extent it considers appropriate;

("Verification");

- 1.6 The Single Buyer may request that the Applicant provide any further information required by the Single Buyer in order to progress with the Verification and the Applicant shall provide such information within ten (10) Working Days from the date of receipt of such a request;
- 1.7 Following Verification, the Single Buyer shall make a recommendation to the Commission attached with the Registration Data which have been verified, with comments if any to either:
  - (a) accept the Registration of the Applicant ("**Verification Confirmation**") and notify the Applicant; or
  - (b) reject the Registration of the Applicant, stating the reasons why such rejection is recommended ("**Verification Rejection**");

provided that where in the opinion of Commission that the information is insufficient, Commission may request additional data from the Applicant;

- 1.8 The Single Buyer shall notify the Applicant of the Verification Rejection and the Applicant may within twenty (20) Working Days following a Verification Rejection (or such longer time period as may be agreed by the Single Buyer) provide such further information to the Single Buyer in order to allow the Single Buyer to review its Verification recommendation. The Single Buyer shall review its Verification recommendation on the basis of such new information as soon as reasonably practicable and in any event within three (3) Months from the date of receipt of such information. The Single Buyer shall also review its Verification recommendation when directed to do so by the Commission;
- 1.9 On receipt of a Verification Confirmation, Applicants shall submit Licence Application to Commission in a manner as specified by Commission from time to time;

- 1.10 On issuance of Verification Confirmation to the Applicants, the Single Buyer shall within twenty (20) Working Days send the relevant NEDA Agreement, where applicable to the Applicant for execution;
- 1.11 The Applicant shall return the executed relevant NEDA Agreement to the Single Buyer with a copy to the Commission not later than sixty (60) days from the date of receipt of the relevant NEDA Agreement by the Applicant;
- 1.12 Upon execution of NEDA Agreement, TNB shall within two (2) months send the NEDA Connection Agreement or the Renewable Energy Supply Access Agreement to the Applicant for the purpose of execution, where applicable;
- 1.13 The Applicant shall return the executed NEDA Connection Agreement or the Renewable Energy Supply Access Agreement, to TNB with a copy to Single Buyer not later than sixty (60) days from the date of receipt of the NEDA Connection Agreement or the Renewable Energy Supply Access Agreement, where applicable, by the Applicant;
- 1.14 The Applicant to fulfill the Conditions Precedent to the effectiveness of the NEDA Connection Agreement or the Renewable Energy Supply Access Agreement within ninety (90) days after the date of execution of the NEDA Connection Agreement or the Renewable Energy Supply Access Agreement, where applicable;
- 1.15 Prior to the application of Generation License with the Commission, the Applicant requiring Back-feed Energy shall execute the Back-feed Agreement with TNB. The Applicant shall within ten (10) Working Days of execution send a copy of the executed Back-feed Agreement and the electricity supply agreement, where applicable to the Single Buyer;
- 1.16 Three (3) Months to the expected Firm Participation Date, having executed:
  - (a) the NEDA Agreement;
  - (b) the NEDA Connection Agreement or the Renewable Energy Supply Access Agreement, where applicable;
  - (c) the Back-feed Agreement, where applicable; and
  - (d) the CRESA, where applicable,

the Applicant may begin NEDA Generation License application with the Commission.

- 1.17 Upon obtaining the Generation License from the Commission, the Participant shall within ten (10) working days send a copy to Single Buyer and Single Buyer shall create and provide relevant information on NEDA Participant's accounts for the MPI, the settlement and any other requirements to participate in NEDA.
- 1.18 Upon completion of Initial Operation Date tests, Commercial Operation Date tests and other tests as may be required by the Grid Owner, TNB Distribution or Grid System Operator, the Single Buyer shall issue a firm participation notice confirming the date on which the NEDA Participant may commence energy export under NEDA ("Firm Participation Date").
- 2.0 The Registration Data shall comprise of but not limited to the following:
  - 2.1 Confirmation from the Applicant that the relevant Generating Facility has met the pre-requisites as follows:
    - (a) sufficient land rights for the ongoing operation of the Generation Facility over the site where the Generation Facility is situated;
    - (b) sufficient fuel arrangements in place at the Generation Facilities to enable participation in NEDA up to its full Export Capacity, including where an Ex-PPA/SLA Generator is not utilising Own Fuel that it is in receipt of Power Sector Gas;
    - (c) accurate metering installed and operational, and confirmed as adequate for Settlement purposes by the Single Buyer in accordance with the Metering Guidelines;
    - (*d*) an interconnection point with capacity for export onto the Grid System or Distribution Network for its full Export Capacity;
    - (e) for Grid System connected Generation Facilities, submitted an endorsement from the Grid Owner that it has successfully completed a power system study and received a commissioning test certificate from the Commission;
    - (f) for Distribution Network connected Generation Facilities, submitted an endorsement from TNB Distribution that it has successfully completed a power system study;
    - (g) no material on-going disputes and is not in default under any material agreement required for the ongoing operation of the Generation Facility;
  - 2.2 The Applicant has the corporate authority to bind the relevant Generation Facility and to become a NEDA Participant.
  - 2.3 Technical information included in the Registration form;

- 2.4 Contact details for communication, service and notification in respect of the Applicant;
- 2.5 Bank details for Settlement and other financial operations in respect of the Applicant; and
- 2.6 Confirmation that the Applicant has the corporate authority to bind the relevant Generating Facility and to become a NEDA Participant.
- 3.0 Failure to submit each of the Registration Data in full to the satisfaction of the Single Buyer shall result in a Verification Rejection.
- 4.0 All Applicants shall bear their own cost in relation to Registration including but not limited to any upgrades to their systems or software requirements.

## **Application for Registration as NEDA Participant**

- All Applicants (PPA/SLA Generators, Ex-PPA/SLA Generators, Part-PPA/SLA Generators, Large Merchant Generators, Solar Power Producer, Price Takers and Corporate Renewable Energy) who wish to participate in the New Enhanced Dispatch Arrangement (NEDA) in accordance with the proposed new bidding process under NEDA Guidelines shall complete the Registration Form and submit it to Single Buyer which is representing the Energy Commission in the Registration Process for the purpose of NEDA.
- 2. The completed Registration Form shall be returned to the following address with a scanned copy emailed to Single Buyer at the corresponding address:

Single Buyer Level 9, Menara Pernas Tower 7 Avenue 7 No. 8, Jalan Kerinchi 59200 Kuala Lumpur

Email: mo-neda@singlebuyer.com.myWebsite: www.singlebuyer.com.myPhone: (03) 2245 8000Fax: (03) 2241 1854

3. A scanned copy of the completed Registration Form shall also be emailed to Energy Commission at the following address:

Chief Executive Officer Energy Commission No. 12, Jalan Tun Hussein Precinct 2, 62100 Putrajaya

Email: <u>neda@st.gov.my</u>

- 4. Upon receiving a Verification Confirmation notice from Single Buyer, the data submitted during the Registration Process will be considered as Registration Data. If there is any deviation from the Registration Data, the Applicant is required to immediately submit amendments to the Registration Data. Where in the opinion of the Energy Commission or Single Buyer that the information is insufficient, the Energy Commission or Single Buyer may request additional data from the Applicant.
- 5. General guidelines for completing the Registration Form:
  - 1. Please ensure that <u>all</u> fields under "Submitted Data" column are clearly filled.
  - 2. If the item is **not relevant**, please fill in the "Submitted Data" column as "Not Applicable" or "N/A".
  - 3. Failure to comply with no. 1 and 2, the submission is considered as **incomplete** and may not be considered for NEDA registration application.
  - 4. If there are any additional notes, please use the "*Remarks*" column. Otherwise, leave as blank.
  - 5. If in doubt, please refer to the relevant sections of the NEDA Guidelines, NEDA Registration Process Guideline, Single Buyer Rules (SBR), Malaysian Grid Code (MGC) and Malaysia Distribution Code (MDC) for definitions of terms and further information.

#### DISCLAIMER

- 1. It is the responsibility of the Applicant to submit accurate data in relation to its Generating Facility. The Applicant also has the responsibility of immediately notifying any changes to information submitted during the Registration Process or the Registration Data once it has become a NEDA Participant.
- 2. ST and SB shall not be held responsible for any consequences which arise from its actions on the basis of such information supplied by any Applicant.
- 3. ST and SB may disclose the information submitted to the specialists, experts or consultants it may engage in the course of verification process and the Applicant has no objections for such submission.
- 4. ST and SB may reasonably request additional data to represent correctly the technical parameters or other relevant information in relation to such Generating Facility.
- 5. ST and SB shall not be liable for any claims, demands, cost, actions, losses and/or damages suffered by any party (including the Applicant) whatsoever arising out of and/or in connection with NEDA including any claims, demands, cost, actions, losses and/or damages which may arise as a result of the ST's and SB's reliance on or use of the information provided by the Applicant. The Applicant agrees to indemnify ST and SB from and against all claims, demands, actions and proceedings brought against the ST and SB.

# **Registration Form**

(This form for Registration as a NEDA Participant is issued by the Energy Commission and may be revised as and when necessary. The latest version of the form may be downloaded from the Energy Commission website or the Single Buyer website).

## **1. APPLICANT DETAILS**

Company / Business Name:	
Company Registration Num Registered Business Address:	ber:
Phone Number:	Fax Number:
Email Address:	
(Preferred Mailing Address	s, if different than above)
Other Address:	
Phone Number:	Fax Number:
Email Address:	
Main Contact Person	
Name:	
Designation:	
Phone Number:	Email Address:
2. SITE DETAILS	
Site Address:	
Registered Land Owner:	

Please do not leave any item as an empty field. Fill in "N/A" if it is not applicable
# PART 1: General Registration Data Requirement

## PART 1.1: Category Data

Registration Data	Submitted Data	Remarks
Registration Category (please tick ONE only)		
Centrally Dispatched Generating Facility:		
PPA/SLA Generator		
Ex-PPA/SLA Generator		
Large Merchant – Co-generation Plant		
Large Merchant – Renewable Plant		
Large Merchant – Franchise Utility		
Large Merchant – Part PPA/SLA Generator		
Large Merchant – Expired PPA/SLA Generator on Own Fuel		
Large Merchant – Any other Generating Facility		
Non-Centrally Dispatched Generating Facility		
Solar Power Producer		
Price Taker – Co-generation Plant		
Price Taker – Renewable Plant		
Price Taker – Small Franchise Utility		
Price Taker – Expired PPA/SLA Generator on Own Fuel		
Price Taker – Any other Generating Facility		
Corporate Renewable Energy		

## PART 1.2: Bank Data (for payment)

Registration Data	Submitted Data	Remarks
Bank Name		
Bank's Address		
Account Number		

# PART 2: Detailed Registration Data Requirement

## PART 2.1: PPA/SLA Generator Data

Registration Data	Submitted Data	Remarks
As per PPA/SLA		

### PART 2.2: Ex-PPA/SLA Generator Data

Registration Data	Submitted Data	Remarks
Facility name		
Unit number		
License Registration number		
Date of : (dd/mm/yyyy)		
Estimated Participation Date		
Retirement (if applicable)		
Generating Unit Type		
Steam coal		
Steam gas		
Open cycle gas turbine		
Combined cycle gas turbine		
Others (please specify)		
Fuel		
Primary		
Alternate		
For combined cycle gas turbine, please state the Generating Unit's configuration		
1GT + 1ST		
2GT + 1ST		
3GT + 1ST		
Others (please specify)		
Rated/Nameplate Facility capacity (main fuel)		
Max Generation Output (MW)		
Min Generation Output (MW)		
Despatch Ramp Rates of Generating Facility (between max & min)		
Maximum Ramp Up Rate (MW/min)		
Maximum Ramp Down Rate (MW/min)		
Minimum Up Time from GSO's Dispatch Instruction (hours)		
Minimum Down Time from GSO's Dispatch Instruction (hours)		

Registration Data	Submitted Data	Remarks
Start-up Time (hours):		
Hot		
Warm		
Cold		
Technical Heat Rate	<b>Refer to Part 2.2.1</b> Requirement for heat rate test will be discussed during Registration Process depending on the Generating Facility and gas supply facility design.	
Fast Start capability? [Yes/No]		
Default Bid Data		
Default Price Quantity Pair	Refer to Part 2.2.2	
Start-up Cost (RM per start-up)		
Fuel Arrangement		
Gas Supply Agreement (GSA)		
Effective date (dd/mm/yyyy)		
End date (dd/mm/yyyy)		

### PART 2.2.1: Technical Heat Rate (for Ex-PPA/SLA Generator)

Schedule of Heat Rates (at the higher heating value)(in 1 MW steps) for each Generation Facility, with Heat Rates displaying a monotonically decreasing trend.

Load (MW)	Heat Rate (kJ/kWh)
Full Load	
Minimum Load	

### PART 2.2.2: Default Price and Quantity Pair (for Ex-PPA/SLA Generator)

Bidding	g Period :	
Band	Load (MW)	Price (RM/kWh)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Note: All figures can be specified up to 2 decimal points. Please refer to Registration Form sample in the MPI.

# PART 2.3: Large Merchant Generator Data

Description of Data	Submitted Data	Remarks
Facility name		
Unit number		
Generating Unit Type		l
Steam coal		
Steam gas		
Open cycle gas turbine		
Combined cycle gas turbine		
Others (please specify)		
Licensing (Type and Registration Number)		
Generating License		
Other co-existing Licenses (if any)		
Date of : (dd/mm/yyyy)		
Estimated Participation Date		
Rated/Nameplate Generating Facility capacity		
Max (MW)		
Min (MW)		
Excess capacity to be registered under NEDA (MW)		
For combined cycle gas turbine, please state the Generating Unit's configuration		
1GT + 1ST		
2GT + 1ST		
3GT + 1ST		
Others (please specify)		
Despatch Ramp Rates of Generating Facility (between max & min):		
Maximum Ramp Up Rate (MW/min)		
Maximum Ramp Down Rate (MW/min)		
Minimum Up Time from GSO's Dispatch Instruction (hours)		
Minimum Down Time from GSO's Dispatch Instruction (hours)		
Start-up Time (hours):		
Hot		
Warm		
Cold		
Fast Start capability? [Yes/No]		

Description of Data	Submitted Data	Remarks
Default Bid Data		
Default Price Quantity Pair	Refer to Part 2.3.1	
Start-up Cost (RM per start-up)		
Fuel Arrangement		
Effective date (dd/mm/yyyy)		
End date (dd/mm/yyyy)		

## PART 2.3.1: Default Price and Quantity Pair (for Large Merchant Generator)

Bidding	g Period :	
Band	Quantity (MW)	Price (RM/kWh)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Note: All figures can be specified up to 2 decimal points. Please refer to Registration Form sample in the MPI.

## PART 2.4: Price Takers Data

Description of Data	Submitted Data	Remarks
Facility Name		
Facility Capacity:		
Installed Capacity (kW or MW)		
Export Capacity to be registered under NEDA (based on PSS as approved by TNB) Facility's Fuel Type (Coal/Gas/Others-please specify)		
Generating Unit Type:		
Steam coal		
Steam gas		
Open cycle gas turbine		
Combined cycle gas turbine		
Others (please specify)		
Existing Connection to TNB:		
Registered TNB Account Number		
Connection Voltage Level: 500kV		
Connection Voltage Level: 275kV		
Connection Voltage Level: 132kV		
Connection Voltage Level: 33kV		
Connection Voltage Level: 11kV		
Connection Voltage Level: Others (please specify)		
Date of: (dd/mm/yyyy)		I 
Estimated Participation Date		
Licensing (Type and Registration Number)		
Generating License		
Other co-existing Licenses (if any)		

## PART 2.5: Solar Power Producers Data

Description of Data	Submitted Data	Remarks
Facility name		
Licensing (Type and Registration Number)		
Generation Licence		
Other co-existing Licences (if any)		
Established Capacity to be registered under NEDA(MW)		

# PART 2.6: Corporate Renewable Energy Data

No	GC Name	% of Energy Allocated	
	No	Image: Control of the second secon	No GC Name Energy

PART 2.6.1:	Company	<b>Profile for</b>	Renewable	<b>Energy Developer</b>

No.	Particulars				
1.	Type of company	Private Limited / Li Others (please spec		lic Listed /	
2.	Nature of Business				
3.	Status of Company	Foreign / Local			
4.	Place of Incorporation				
5.	Date of Incorporation *To submit certified copy of SSM registration				
6.	Details of Shareholders (Please i	indicate type of shar	e)		
No.	Name	Company Registration / NRIC / Passport No.	% Equity	Type of share	Designation
7.	Details of Board of Directors				
No.	Name	NRIC / Passport No.	% Equity		Designation
8.	Equity Structure (%)				
0.	(a) Bumiputera Individual				
	(b) Non-Bumiputera Individual				
	(c) Institutional/Government Lir	ked Entities			
	(d) Foreign / Non-Malaysian citi	zen (if applicable)			
9.	Execution Date of Back-feed		1		
	Agreement with EUC *This execution date and a copy of the executed and stamped Back-feed Agreement to be submitted after obtaining license approval from ST	(DD/MM/YYYY):	//		

### **Declaration of Renewable Energy Developer**

 Has the company and/or any of its Directors declared/committed to any of the following which may result in ineligibility and from participating in the Corporate Renewable Energy Supply Scheme (CRESS)?

 a) Bankruptcy
 [] Yes
 [] No

 b) Insolvency or subject of a sequestration Petition
 [] Yes
 [] No

by insolvency of subject of a sequestration relation	[] Tes	
c) Being in receivership or subject to a winding up order	[]Yes	[ ] No
d) Conviction of a criminal offence relating to the conduct of the business	[]Yes	[ ] No
e) Any previous/current arbitration or court proceeding, if yes, please provide details.	[]Yes	[ ] No
f) Committed an act of grave misconduct in the course of a business or profession	[]Yes	[ ] No
g) Failure to fulfil Employees Provident Fund obligations	[]Yes	[ ] No
h) Overdue debts toward contractors or the revenue or customs authorities of Malaysia	[]Yes	[ ] No
i) Misrepresentation of information concerning eligibility, economic and	[]Yes	[ ] No
financial standing and technical capacity of the company		
j) Any Directors have any exposure and/or are related to the Directors, shareholders, or executive officers of Energy Commission or its advisors	[ ] Yes	[ ] No
k) A record of unsatisfactory past performance, including breach of contract, untimely completion, poor claims history and defective workmanship, if yes, please provide details.	[ ] Yes	[ ] No
I) Others, please provide details	1	

.....

Signature of Authorised Representative of the Renewable Energy Developer

Name in Full	:
Designation	:
Address	:
Email	:
Date	:

## PART 2.6.2: Company Profile for Green Consumer

No.	Particulars			
1.	Company Name			
2.	Company Registration No. *A certified copy of SSM			
3.	registration shall be submitted Registered Address in Malaysia			
4.	Correspondence Address in Malaysia			
5.	Address of Headquarters (if located overseas)			
6.	Telephone No.			
7.	Fax No.			
8.	Email Address			
9.	Website			
10.	Type of Company	Private Limited / Limited / Public Listed / Others (please specify)		
11.	Nature of Business			
12.	Status of Company *To provide document proof	Foreign / Local RE100: Yes / No ESG Commitment / Compliance: Yes / No		
13.	Status of Consumer	<ul> <li>[ ] New Consumer</li> <li>(a) Date of Application for Electricity Supply to EUC</li> <li>(DD/MM/YYYY):/</li></ul>		
14.	Maximum Demand (MW) *Maximum Demand as stated in the Corporate Renewable Energy Supply Agreement between Green Consumer and the EUC	<ul> <li>[ ] New Consumer</li> <li>(a) Declared Maximum Demand = MW</li> <li>(b) Load Factor =%</li> <li>[ ] Existing Consumer</li> <li>(a) Additional Maximum Demand =MW</li> </ul>		
15.	Average Monthly Energy Consumption (MWh)			
16.	Percentage of Energy Allocated out of the Maximum Monthly			

	Energy Output of the Green				
	Energy Plant (%)				
17.	Electricity Utility Company				
	(EUC) Account No.				
18.	Place of Incorporation				
19.	Date of Incorporation				
20.	Details of Shareholders (for local	company, please i	indicate type	of share)	
No.	Name	Company Registration / NRIC / Passport No.	% Equity	Type of share	Designation
21.	Details of Board of Directors (for			[	
No.	Name	NRIC/ Passport No.	% Equity		Designation
22.	Equity Structure (%)		1		
	a) Malaysian				
	b) Foreign				
23.	Execution Date of Bilateral Energy Contract between Renewable Ene and Green Consumer *A copy of executed and stamped Bild	ergy Developer	(DD/MM,	/үүүү):/	//
	Supply Contract shall be submitted				
24.	Execution Date of Corporate Rene Supply Agreement between Gree EUC		(DD/MM,	/YYYY):/	//
	*This execution date and a copy of ex stamped Corporate Renewable Energ Agreement shall be submitted after t Number is available	y Supply			

### **Declaration of Green Consumer**

Has the company and/or any of its Directors declared/committed to any of the following which may result in ineligibility and from participating in the Corporate Renewable Energy Supply Scheme (CRESS)?

and nom participating in the corporate hereitable Energy cappy contents (creec	·)·	
a) Bankruptcy	[]Yes	[ ] No
b) Insolvency or subject of a sequestration Petition	[]Yes	[ ] No
c) Being in receivership or subject to a winding up order	[]Yes	[ ] No
d) Conviction of a criminal offence relating to the conduct of the business	[]Yes	[ ] No
e) Any previous/current arbitration or court proceeding, if yes, please provide details.	[ ] Yes	[ ] No
f) Committed an act of grave misconduct in the course of a business or profession	[ ] Yes	[ ] No
g) Failure to fulfil Employees Provident Fund obligations	[]Yes	[ ] No
h) Overdue debts toward contractors or the revenue or customs authorities of Malaysia	[ ] Yes	[ ] No
i) Misrepresentation of information concerning eligibility, economic and financial standing and technical capacity of the company	[ ] Yes	[ ] No
j) Any Directors have any exposure and/or are related to the Directors, shareholders, or executive officers of Energy Commission or its advisors	[]Yes	[ ] No
k) A record of unsatisfactory past performance, including breach of contract, untimely completion, poor claims history and defective workmanship, if yes, please provide details.	[ ] Yes	[ ] No
I) Others, please provide details		
	1	

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Signature of Authorised Representative of the Green Consumer

Name in Full	:
Designation	:
Address	:
Email	:
Date	:

### PART 2.6.3: Project Details and Costs of Green Energy Plant

The applicant shall submit details of peak installed capacity of PV (MWp) (if applicable), installed capacity in a.c. rating (MWa.c.), capacity of BESS (if applicable), export capacity (MWa.c.), levelised cost of electricity (RM/kWh), commercial operation date, average annual export energy (MWh), capacity factor (%), performance ratio (if applicable), capital expenditures (RM), operation expenditures (RM) etc. of the Green Energy Plant in the following list.

#### A. Project Cost, Plant Capacity, Export Energy and Other Main Items of the Project

1.	Execution Date of Land Lease Agreement or	
	Sale and Purchase Agreement	(DD/MM/YYYY):/
	*A copy of executed and stamped Land Lease	
	Agreement or Sale and Purchase Agreement or Land Title shall be submitted	
2.	Levelised Cost of Electricity (RM/kWh)	
3.	Installed PV Peak Capacity (MWp) (if	
	applicable)	
4.	Installed Capacity in A. C. Rating. (MWa.c. at inverter output)	
5.	Export Capacity (MWa.c.)	
6.	Average Annual Energy Production (MWh) <sup>1</sup>	
7.	Average Annual Export Energy (MWh) of Green	
	Energy Plant <sup>2</sup>	
8.	Capacity Factor (%)	
9.	Performance Ratio (if applicable)	
10.	Battery Energy Storage System (MW and MWh) (if applicable)	
11.	Scheduled Commercial Operation Date	
	(DD/MM/YYYY)	
12.	Interconnection Voltage (kV)	
13.	Interconnection Point (Location and name of	
	substation/line)	
14.	Execution Date of Renewable Energy System	
	Access Agreement	(DD/MM/YYYY)://
	*This execution date and a copy of the executed and	
	stamped Renewable Energy System Access	
	Agreement shall be submitted after the agreement	
15.	<i>is executed</i> Total Project Cost (RM)	
16.	Project IRR	

#### Note:

<sup>1</sup>*This figure shall be the average annual quantity energy over the project period based on the plant parameters, system design, prudent industry practices and the forecast irradiance at the plant site (applicable for solar).* 

<sup>2</sup>*This figure shall be the average annual quantity of the Green Energy Plant, i.e. the solar PV system and the BESS (if applicable) over the project period.* 

Please use attachment where necessary. Each attachment must be certified, signed and dated by the authorised representative of the applicant.

#### B. Capital and Operation Expenditures

#### (a) Capital Expenditures

No.	Items	Capital Cost (RM million)
1.	PV Modules / Generating Facility	
2.	Mounting Structures (Please indicate whether installed with tracking system) (if applicable)	
3.	Inverters (if applicable)	
4.	Balance of System (LV, MV switchgears, transformers, cables etc. at Plant Site)	
5.	Battery Energy Storage System (if applicable)	
6.	Civil, Building and other Ancillary Works	
7.	Interconnection Facility (substation/switching station, transformers, switchgear, cabling works etc. outside the plant Site)	
8.	Land Purchase Costs (if relevant)	
9.	Power System Study (PSS)	
10.	Design, Installation, Supervision, Testing, Commissioning and other Project and Other Engineering Services	
11.	Others (Please provide details)	
12.	Total	

#### (b) **Operation Expenditures**

No.	Items	Levelised Cost (RM)
1.	Staff Salaries, Wages, Remuneration and other Administration Costs	
2.	Plant Operation and Maintenance Expenses	
3.	Insurances	
4.	Annual Land Lease (if relevant)	
5.	Other Operation Costs and Expenses (excluding above items 1 to 4)	

6.	Others, if any (Please provide details)	
7.	Total	

### PART 2.6.4: Technical Information

#### 1.0 Technical Information

The following technical information shall be submitted by the Renewable Energy Developer.

#### 2.0 General

A brief description of the Green Energy Plant project includes but not limited to the following:

- a) brief description of the Green Energy Plant such as PV peak capacity (if applicable), export capacity, type of solar PV installation (roof mounted/ground mounted/ mounted on structure/floating on water body) (if applicable), type of tracking system (if applicable), type and capacity of battery energy storage system (if applicable), plant equipment data, etc.;
- b) brief description of the site of the Green Energy Plant and the neighborhood with site photographs such as land use, environment, current facilities, economic activities etc.;
- c) brief description of the interconnection facility such as location, interconnection voltage, interconnection arrangement etc.;
- d) project schedule with milestones of important activities.
- e) plant efficiency (%)

#### 3.0 Export Energy

Renewable Energy Developer shall declare the daily, monthly and annual export energy of the Green Energy Plant according to the following format and submit a copy of the results of simulation and evaluation of export energy of the plant using the latest **PVsyst Simulation (for solar)** or other latest energy simulation software (for other technologies).

- a) Typical Daily Energy Export Energy Profiles of typical daily export energy of the of the Green Energy Plant (with BESS) (if applicable) in graphs and bar charts in hourly intervals.
- b) Typical Monthly Energy and Export Energy:

Month	Export Energy of Green Energy Plant (MWh)*
January	
February	
March	
April	
May	

June	
July	
August	
September	
October	
November	
December	
Annual Total	

(\*Note: Export Energy of the Green Energy Plant and the BESS (if applicable))

c) Annual Energy Export Energy:

Project Year	Export Energy of Green Energy Plant (MWh) *
Year 1	
Year 2	
Year 3	
<b>↓</b>	
Average Over the project period	

(\*Note: Export Energy of the Green Energy Plant and the BESS (if applicable))

#### 4.0 Solar PV System (if applicable)

- a) Type, model and brand name of PV modules (e.g. polycrystalline/monocrystalline, bifacial, PERC etc.)
- b) PV peak capacity of each PV module.
- c) Module efficiency of PV module (%).
- d) Reference yield of PV module (kWh/kWp).
- e) Capacity factor of solar PV system.
- f) Performance ratio of solar PV system.

#### 5.0 Inverters (if applicable)

- a) Type, model and brand name of inverters.
- b) Inverter configuration (string, centralized etc.).
- c) d.c and a.c ratings of each inverter (rated kW, kVA, voltage and current, range of power factor adjustment etc.).
- d) Inverter efficiency (%).

#### 6.0 Battery Energy Storage System (if applicable)

a) Type, model and brand name of battery system.

- b) a.c. or d.c coupled.
- c) Voltage of each battery block.
- d) Power and energy capacity of each battery block (MW/MWh).
- e) Total number of battery blocks.
- f) Total power and energy capacity of the BESS (MW/MWh).
- g) Useable capacity of the BESS (MWh);
- h) Rated depth of discharge DoD (%).
- i) Charge-discharge efficiency.
- j) Life expectance (years and number of discharge-charge cycles).

#### 7.0 Other information (if applicable)

- a) Max generation output (MW) Rated/nameplate facility capacity (main fuel)
- b) Min generation output (MW) Rated/nameplate facility capacity (main fuel)
- c) Maximum ramp up rate (MW/min) Despatch ramp rates of generating facility (between max & min)
- d) Maximum ramp down rate (MW/min) Despatch ramp rates of generating facility (between max & min)
- e) Minimum up time from GSO's Dispatch Instruction (hours)
- f) Minimum down time from GSO's Dispatch Instruction (hours)
- g) Start-up time Hot (hours)
- h) Start-up time Warm (hours)
- i) Start-up time Cold (hours)
- j) Fast start capability (Yes/No)

### PART 2.6.5: Decommissioning of Green Energy Plant

The following decommissioning plan and information shall contain the following details:

- a) The name, address, telephone number, and e-mail address of the person(s) or entity(ies) responsible for implementing the decommissioning plan;
- b) A statement of conditions that require the decommissioning plan to be implemented;
- c) Identification of all components of the Green Energy Plant;
- d) A plan with timeline and estimated cost for removing all components of the Green Energy Plant from the property in the event of decommissioning; and
- e) A plan for recycling or otherwise reusing all components to the greatest extent practicable

## PART 3: List of Documentation

All copies must be certified true copies.

No.	Item	Tick if applicable
1	A copy of SSM Registration of the Company (Applicant)	appricable
2	Corporate Authorisation	
3	Land Title / Land Sale and Purchase Agreement / Land Lease Agreement	
4	Bank Statement	
5	A copy of Power System Study (PSS) report and letter of PSS approval	
6	A copy of generation License as registered with ST (if applicable)	
7	A copy of advice letter from TNB Metering on the CT size (if applicable)	
8	A copy of Gas Supply Agreement (for Generating Facility under Power Sector Gas)	
9	Proof of approval from TNB & PETRONAS (for Generating Facility under Power Sector Gas)	
10	A copy of fuel supply agreement (for own fuel)	
11	A copy of test report by Independent Engineer (for technical parameters, if applicable)	

## Part 4: Declaration Form

- 1. I/We declare that I/we have read and understood the terms and conditions set out in the disclaimer.
- 2. I/We declare that all information provided in this application and in documents submitted is true and correct.

Name:	on behalf of Company (Applicant):
Title:	
Signature (authorised signatory):	Date:

NEDA\_RF 2024.1

Suruhanjaya Tenaga Energy Commission

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