

Guidelines

For Single Buyer Market (Peninsular Malaysia)

Registration Record

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ELECTRICITY SUPPLY ACT 1990

[Act 447]

GUIDELINES FOR SINGLE BUYER MARKET (PENINSULAR MALAYSIA)

GP/ST/ No. 16/2018

IN exercise of the power conferred by Section 50C of the Electricity Supply Act 1990 [Act 447], the Energy Commission issues the following Guidelines:

Purposes

1. Malaysia adopts a Single Buyer Market model in managing its electricity supply industry. An entity called Single Buyer is entrusted to manage procurement of electricity and related services in Peninsular Malaysia. The “Single Buyer Rules” was issued by the Energy Commission on 9 April 2013.
2. In line with the amendments to the Electricity Supply Act 1990 (Act 447), a new Guidelines has to be issued to govern the operation the Single Buyer Market. These Guidelines shall set out the roles, functions of the Single Buyer and the detailed procedures and conducts in performing each function. It also sets out the ring-fencing requirements to ensure that the Single Buyer performs its functions and duties in a fair and non-discriminatory manner in managing the contracts or agreements for the purchase of electricity on behalf of the off-taker.

Interpretation

3. In these Guidelines, the terms and expressions used shall, unless defined in the Guidelines or the context otherwise requires, have the same meaning as in the Electricity Supply Act 1990, including any modification, extension or re-enactment thereof and any subsidiary legislation made there under.

Citation and Commencement

4. These Guidelines may be cited as the “Guidelines for Single Buyer Market (Peninsular Malaysia)” and shall come into operation on the date of its registration.

Content of the Guidelines

5. The contents of these Guidelines shall be as follows:
 - i) Single Buyer Market Rules as in ANNEX 1
 - ii) Ring-Fencing Practices and Procedures for Single Buyer as in ANNEX 2.

Application of the Guidelines

6. These Guidelines shall apply to all participants who participate in the Single Buyer Market such as Single Buyer, Generators, Grid System Operators, Grid Owner and any parties connected to the electricity transmission network and who is licenced under Section 9 of the Electricity Supply Act 1990, or any person as notified by the Energy Commission.
7. Under the present arrangement, these Guidelines shall be applicable only in Peninsular Malaysia.

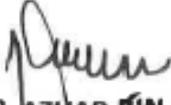
Notice by the Commission

8. The Energy Commission may issue written notices from time to time in relation to these Guidelines.

Amendment and Variation

9. The Energy Commission may at any time amend, modify, vary or revoke these Guidelines or any part thereof, under any of the following circumstances:
- i) to effect changes in the electricity supply industry;
 - ii) where it is expedient to ensure reliability of the electricity supply system;
 - iii) to rectify any inconsistency or unintentional errors giving rise to grave consequences;
 - iv) as recommended by the Grid Code Committee or Oversight Panel and approved by the Energy Commission; and
 - v) any other justifiable reason as the Energy Commission deems necessary.

Dated: 18 April 2018



IR. AZHAR BIN OMAR
Chief Executive Officer
for Energy Commission

ANNEX 1: SINGLE BUYER MARKET RULES

Contents

1	Introduction	9
	1.1 Single Buyer Market Rules	9
	1.2 Standing of the Single Buyer Market Rules	9
	1.3 Limitation of liability	9
	1.4 Derogations for existing contracts or agreements	10
	1.5 Conventions	10
2	Terms and definitions	11
3	Single Buyer Market Participants	30
	3.1 Purpose	30
	3.2 Participants	30
	3.3 Generator	30
	3.4 Grid System Operator	31
	3.5 Grid Owner	31
	3.6 Distributor	31
	3.7 Nominated Coal Supplier	31
	3.8 Nominated Gas Supplier	31
	3.9 Single Buyer	31
	3.10 Registration	32
	3.11 Ceasing to be a Participant	32
4	Objectives of the Single Buyer	33
	4.1 Purpose	33
	4.2 Objectives	33
5	Roles and functions of the Single Buyer	34
	5.1 Purpose	34
	5.2 Roles of the Single Buyer	34
	5.3 Role in procuring electricity to meet demand	34
	5.4 Role in Facilitating Security of Electricity Supply	35
	5.5 Role in Monitoring The Adequacy of The Supply of Fuel	35
	5.6 Role in Promoting Transparency	36
	5.7 Role in Facilitating Competition in the Generation Sector	36
	5.8 Role in Promoting Confidence in the Electricity Industry	37
6	Ring-fencing	38
	6.1 Purpose	38
	6.2 Non-discrimination	38
	6.3 Ring-fencing of operations	38
	6.4 Ring-fencing of accounts	39
	6.5 Cost allocation	39
	6.6 Limits on sharing information	40
	6.7 Compliance with ring-fencing obligations	40
7	Single Buyer governance	41
	7.1 Purpose	41
	7.2 Appointment of the Head of the Single Buyer	41
	7.3 Single Buyer Oversight Panel	41
	7.4 Compliance with Single Buyer Market Rules	42
	7.5 Generator contracts and NEDA Rules	42
	7.6 Single Buyer Working Groups	43
8	Least Cost Dispatch Scheduling Methodology	45
	8.1 Purpose	45
	8.2 Least Cost Dispatch Scheduling Methodology	45
	8.3 Dispatch Scheduling Model	45
9	Three Month Ahead Dispatch Schedule	47
	9.1 Purpose	47
	9.2 Key procedural requirements	47
	9.3 Three Month Ahead Dispatch Period	47

9.4	Three Month Ahead Load Forecast	47
9.5	Generating Unit Operating Data	47
9.6	Three Month Ahead Generation Outage Plan	48
9.7	Three Month Ahead Transmission Outage Plan	48
9.8	Other Dispatch Scheduling Model inputs	48
9.9	Three Month Ahead Dispatch Schedule	48
10	Week Ahead Dispatch Schedule	49
10.1	Purpose	49
10.2	Key procedural requirements	49
10.3	Weekly Dispatch Scheduling Model Update Date	49
10.4	Week Ahead Load Forecast	49
10.5	Week Ahead Generation Outage Plan	50
10.6	Week Ahead Transmission Outage Plan	50
10.7	Other Dispatch Scheduling Model inputs	50
10.8	Week Ahead Dispatch Schedule	50
11	Day Ahead Dispatch Schedule	51
11.1	Purpose	51
11.2	Key procedural requirements	51
11.3	Day Ahead Dispatch Period	51
11.4	Day Ahead Load Forecast	51
11.5	Daily Availability Declaration	51
11.6	Day Ahead Transmission Outage Plan	52
11.7	Other Dispatch Scheduling Model inputs	52
11.8	Day Ahead Dispatch Schedule	53
11.9	Revised Day Ahead Dispatch Schedule	53
11.10	Review of Revised Day Ahead Load Forecast	54
11.11	Review of Revised Day Ahead Dispatch Schedule	54
11.12	Review of System Marginal Price	54
12	Supply capacity adequacy assessment	55
12.1	Purpose	55
12.2	Short-term supply adequacy assessment	55
12.3	Short-Term Supply Adequacy Plan	55
12.4	Demand Control Plan	55
12.5	One Year Demand and Supply Outlook	56
13	Fuel Management	57
13.1	Purpose	57
13.2	Gas Supply Committee	57
13.3	Urgent Gas Procedures	58
13.4	Coal Supply Committee	58
13.5	Urgent Coal Procedures	60
13.6	Hydro generation	60
14	Single Buyer Tariff	61
14.1	Purpose	61
14.2	Single Buyer Tariff setting arrangements	61
14.3	Single Buyer Generation Tariff	62
14.4	Single Buyer Operations Tariff	62
14.5	Settlement	63
15	Long-term supply and demand	64
15.1	Purpose	64
15.2	Ten Year Demand and Supply Forecast Report	64
16	Contracting for new capacity	66
16.1	Purpose	66
16.2	Role of the Energy Commission	66
16.3	Initiation of Process for Contracting for New Capacity	66
16.4	Development of Tenders for New Capacity	67
16.5	Assessment of Tenders for New Capacity	67
16.6	Finalisation	68

17	Dispute resolution	69
	17.1 Purpose	69
	17.2 Application of Dispute Resolution Process	69
	17.3 Raising a Dispute	70
	17.4 Disputes Referred to KLRCA	70
	17.5 Disputes heard and determined by the Energy Commission	70
18	Change to Single Buyer Market Rules	72
	18.1 Purpose	72
	18.2 Role of the Energy Commission	72
	18.3 Rule Change Panel	72
	18.4 Submission of Rule Change Proposal	73
	18.5 Initial Assessment of a Rule Change Proposal	73
	18.6 Draft Rule Change Recommendation	74
	18.7 Final Rule Change Recommendation	74
	18.8 Final Rule Change Decision	75
	18.9 Minor Rule Change Procedures	75
	18.10 Urgent Rule Change Procedures	76
19	Single Buyer Website and publications	77
	19.1 Purpose	77
	19.2 Single Buyer Website	77
	19.3 Publications	77
	19.4 Confidentiality Obligations	78
20	Appendices	79
	20.1 Purpose	79
	20.2 Flow chart of the Three Month Ahead Dispatch Schedule	79
	20.3 Flow chart of the Week Ahead Dispatch Schedule	80
	20.4 Flow chart of the Day Ahead Dispatch Schedule	81

1 Introduction

1.1 Single Buyer Market Rules

- 1.1.1 The Single Buyer Market Rules govern the operation of the Single Buyer Market and conduct of Participants in complying with the Single Buyer Market Rules.
- 1.1.2 The Single Buyer Market Rules shall apply in Peninsular Malaysia and shall be governed by the laws of Malaysia.

1.2 Standing of the Single Buyer Market Rules

- 1.2.1 The Single Buyer Market Rules apply in conjunction with the following documents:
 - a) the Electricity Supply Act 1990;
 - b) the Energy Commission Act 2001;
 - c) the Grid Code For Peninsular Malaysia;
 - d) the Distribution Code For Peninsular Malaysia;
 - e) regulations, guidelines or directions issued by the Minister or Energy Commission except for NEDA Rules;
 - f) the Licences issued by the Energy Commission under the Electricity Supply Act 1990; and
 - g) the Generator Contracts.
- 1.2.2 In the event of any inconsistency or conflict between the Single Buyer Market Rules and the documents listed in Rule 1.2.1, those documents listed in Rule 1.2.1 are to take precedence over the Single Buyer Market Rules.

1.3 Limitation of liability

- 1.3.1 The Single Buyer shall not incur any liability for an act or omission in the performance, or purported performance, of a function of the Single Buyer under the Single Buyer Market Rules including any liability for any loss to any Participant during any constraint of the Grid System or Emergency Condition.
- 1.3.2 Participants are solely responsible for their own operations and participation in the Single Buyer Market and in no event shall the Single Buyer be liable for any damage or destruction of property, or any death or personal injury to any person.
- 1.3.3 All material and information published in good faith by the Single Buyer on the Single Buyer Website is for general information purposes only, All Participants shall solely be responsible for their interpretation and use of the published material and information. There is no representation or warranty (express or implied) of any kind whatsoever that the material and information published are accurate, complete or reasonable, or that they constitute all the information necessary for participation in the Single Buyer Market. Any reliance is strictly at the Participant's own risk.

1.4 Derogations for existing contracts or agreements

- 1.4.1 If any contract, agreement or arrangement exists at the date these Single Buyer Market Rules come into force the Energy Commission shall make a determination whether the technical conditions of the specific contract, agreement or arrangement are in line with the provisions of the Single Buyer Market Rules in consultation with the Single Buyer and Grid System Operator.
- 1.4.2 If the technical conditions of the specific contract, agreement or arrangement are in line with the provisions of the Single Buyer Market Rules then the Single Buyer Market Rules shall prevail.
- 1.4.3 If the technical conditions of the specific contract, agreement or arrangement preclude compliance with certain provisions of the Single Buyer Market Rules then an appropriate specific Derogation will be issued to the Participant, by the Energy Commission after consultation with the Single Buyer and Grid System Operator.
- 1.4.4 The provision of a specific technical derogation or exemption does not release the Derogated Party from compliance with all other provisions of the Single Buyer Market Rules and the provisions of any commercial agreement or from any commercial liability arising from such technical derogation or exemption.

1.5 Conventions

- 1.5.1 In the Single Buyer Market Rules, unless the contrary intention appears:
- a) a capitalised word or phrase listed in the terms and definitions in Chapter 2 has the meaning given in that Chapter;
 - b) the singular includes the plural and the plural includes the singular;
 - c) headings are for convenience only and do not affect the interpretation of the Single Buyer Market Rules;
 - d) a reference to a person includes an individual, company, trust, partnership, joint venture, association, corporation or other body corporate and any government agency;
 - e) a reference to a thing includes the whole and any part of it;
 - f) a reference to a rule, chapter or appendix is a reference to a rule, chapter or appendix in the Single Buyer Market Rules;
 - g) “function” includes a function, power, duty, responsibility and authority;
 - h) the words “include” or “including” are not used as, nor are they to be interpreted as words of limitation, and when introducing an example, do not limit the meaning of the words to which the example relates.

2 Terms and Definitions

Term	Definition
<i>Aggregate Power Sector Gas Volume</i>	The plan that specifies the annual quantities of gas to be made available by the Nominated Gas Supplier for gas based electricity generation and which is based on the Ten year Demand and Supply Forecast Report
<i>Aggregate Three Month Ahead Dispatch Schedule</i>	The forecast of total generation sent out to meet the Three Month Ahead Load Forecast.
<i>Aggregate Week Ahead Dispatch Schedules</i>	The forecast of total generation sent out to meet the Week Ahead Load Forecast.
<i>Apparatus</i>	Any electrical apparatus and includes the device or fitting in which a conductor is used, or of which it forms part of.
<i>Applicable Coal Price</i>	The coal price periodically determined by TNB (as defined in the relevant Generator Contracts) to be used for coal based electricity generation in Peninsular Malaysia.
<i>Centrally Dispatched Generating Unit</i>	A Generating Unit connected to the Transmission Network with a nameplate rating of not less than 30 MW and classified as a Centrally Dispatched Generating Unit by the Energy Commission.
<i>Charter</i>	A document developed by each Single Buyer Working Group and approved by the Energy Commission, providing the detailed scope and objectives of that Single Buyer Working Group.
<i>Coal Supply Committee</i>	The Coal Supply Committee (Jawatankuasa Pembekalan Arang Batu) established by the Energy Commission under Rule 13.4.1 of the Single Buyer Market Rules to (among other things) review and assess the adequacy and efficiency of coal supply for electricity generation in Peninsular Malaysia.
<i>Cogeneration Plant</i>	Generating Units where the prime movers and/or driving turbines are driven by excess heat produced as a by-product from another process.
<i>Cogeneration Usage Plan</i>	The forecast of cogeneration output based on contractual obligations between Grid Owner and operators of Cogeneration Plant.

Term	Definition
<i>Commencement Date</i>	The date upon which the entirety of the Single Buyer Market Rules come into operation.
<i>Customer</i>	A person to whom electricity is provided (whether or not he is the same person as the person who provides the electrical power).
<i>Daily Availability Declaration</i>	A daily declaration made by each Generator to the Grid System Operator and Single Buyer in relation to the level of availability of his Generating Units for operation, equivalent to the term "Availability Declaration" as defined in the Grid Code For Peninsular Malaysia.
<i>Daily Dispatch Variance Report</i>	A daily report submitted to the Single Buyer and the Energy Commission by the Grid System Operator that compares the actual daily dispatch for each Generating Unit to the forecast daily dispatch based on the Revised Day Ahead Dispatch Schedule.
<i>Daily Heat Rate and Variable Operating Rate Bid</i>	A bid by a PPA/SLA Generator or an Ex-PPA/SLA Generator in accordance with the NEDA Rules containing a set of heat rates and variable operating rates that is valid for a specified day.
<i>Daily Load Variance Report</i>	A daily report submitted to the Single Buyer and the Energy Commission by the Grid System Operator that compares the actual daily load to the Revised Day Ahead Load Forecast.
<i>Daily Operations Review Report</i>	A daily report submitted to the Single Buyer by the Grid System Operator that provides updates to key inputs for the Day Ahead Dispatch Schedule and is used by the Single Buyer to produce the Revised Day Ahead Dispatch Schedule.
<i>Daily Price Bid</i>	A bid by a Large Merchant Generator in accordance with the NEDA Rules containing a set of up to 10 price quantity pairs representing prices a Large Merchant Generator is prepared to sell energy to the market from one of its generating units that is valid for a specified day.
<i>Day</i>	A calendar day lasting 24 hours commencing 00:00 hours and ending at 23:59 hours.
<i>Day Ahead Dispatch Interval</i>	A 30 minute period ending on the hour or on the half hour.

Term	Definition
<i>Day Ahead Dispatch Period</i>	The dispatch period for the Day Ahead Dispatch Schedule as defined under Rule 11.3.
<i>Day Ahead Dispatch Schedule</i>	The finalised schedule for the dispatch of each Generating Unit by the Day Ahead Dispatch Interval for the Day Ahead Dispatch Period to meet the Day Ahead Load Forecast.
<i>Day Ahead Load Forecast</i>	A day ahead forecast of total electricity sent out to the Grid System to meet the Customers' demand for the following day.
<i>Day Ahead Transmission Outage Plan</i>	A plan prepared by the Grid System Operator that specifies the planned transmission outages for the Day Ahead Dispatch Period.
<i>Demand Control Plan</i>	A plan developed by the Grid System Operator for demand side response by large Customers based on the Demand Control procedures set out in Operating Code No. 4 of the Grid Code For Peninsular Malaysia.
<i>Derogated Party</i>	The party subject to a permanent or temporary derogation order issued by the Energy Commission.
<i>Derogation</i>	An order issued by the Energy Commission, after full consultation and agreement with the Single Buyer and Grid System Operator, permanently or temporarily for a strictly defined and specific period permitting the Single Buyer and/or a specific Participant's non-compliance with specific provisions of the Single Buyer Market Rules. The temporary derogation being withdrawn by the Energy Commission after completion of the period and ascertaining of completion of remedy by the Single Buyer or the Participant as the case may be.
<i>Dispatch Schedules</i>	The Day Ahead Dispatch Schedule, the Week Ahead Dispatch Schedule and the Three Month Ahead Dispatch Schedule.
<i>Dispatch Scheduling Model</i>	A computerised model that is capable of calculating the least cost of Week Ahead Dispatch Schedule, Day Ahead Dispatch Schedule and Three Month Ahead Dispatch Schedule, owned and operated by the Single Buyer.
<i>Dispatch Scheduling Model Update Date</i>	The Working Day on which the Single Buyer must update the Dispatch Scheduling Model.

Term	Definition
<i>Dispatch Scheduling Working Group</i>	The Single Buyer Working Group established under Rule 7.6 to review, among other things, the efficiency and effectiveness of the dispatch scheduling procedures performed by the Single Buyer and other Participants in facilitating the achievement of the Single Buyer objectives set out in Rule 4.2.
<i>Distribution Code For Peninsular Malaysia</i>	The document that sets out the principles governing the relationship between the Distributors, the Grid System Operator and all users of the Distribution Network, as amended from time to time.
<i>Distribution Network</i>	The system consisting (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.
<i>Distributor</i>	A person which is licensed under Section 9 of the Electricity Supply Act 1990 and is connected to the Grid System and distributes electricity for the purpose of enabling a supply to be given to any premises and is registered as a Distributor under Rule 3.4 in accordance with the registration process outlined in Rule 3.10.
<i>Draft Day Ahead Dispatch Schedule</i>	A draft schedule for the dispatch for each Generating Unit by the Day Ahead Dispatch Interval for the Day Ahead Dispatch Period to meet the Day Ahead Load Forecast.
<i>Draft Rule Change</i>	A draft document setting out a proposed change to the Single Buyer Market Rules developed by the Energy Commission, which is based on a Rule Change Proposal and reflecting any amendments that the Energy Commission considers necessary to better facilitate the achievement of the objectives as specified in Rule 4.2.
<i>Draft Rule Change Recommendation</i>	A draft recommendation on a Rule Change Proposal provided to the Energy Commission by a Rule Change Panel under Rule 18.6.
<i>Electricity Industry</i>	All the parties associated with the generation, transmission, distribution and use of electricity and the institutions related to the governance thereof.

Term	Definition
<i>Electricity Supply Act 1990</i>	The Electricity Supply Act 1990, including any modification, extension or re-enactment thereof and any subsidiary legislation made thereunder.
<i>Electricity Tariff</i>	The per unit electricity price charged to Customers in Peninsular Malaysia in accordance with the Regulatory Implementation Guidelines.
<i>Emergency Condition</i>	The emergency conditions as described in the Grid Code for Peninsular Malaysia.
<i>Energy Commission</i>	Suruhanjaya Tenaga or the Energy Commission established under the Energy Commission Act 2001.
<i>Export and Import Plan</i>	The plan prepared by the Single Buyer which outlines the export and import of electricity to other jurisdictions (including, but not limited to, Singapore and Thailand) or regions connected to the Transmission Network.
<i>Export Capacity</i>	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
<i>Ex-PPA/SLA Generators</i>	A Generator that has previously held a PPA or SLA in respect of a Generating Unit, which has now expired, utilising Power Sector Gas.
<i>External Interconnection</i>	Apparatus for the transmission of electricity to or from the Transmission Network or a Distribution Network into or out of an External System. For the avoidance of doubt, a single External Interconnection may comprise several circuits operating in parallel.
<i>External System</i>	In relation to an Externally Interconnected Party means the transmission or distribution system which it owns or operates which is located outside Peninsular Malaysia and any apparatus or plant which connects that system to the External Interconnection and which is owned or operated by such Externally Interconnected Party.
<i>Externally Interconnected Party</i>	A person who operates an External System which is connected to the Transmission Network or a Distribution Network by an External Interconnection.

Term	Definition
<i>Feed-in Tariff</i>	The feed-in tariff available to approved Renewable Plant Generators pursuant to the Renewable Energy Act 2011.
<i>Final Rule Change Decision</i>	A final decision by the Energy Commission, prepared in accordance with Rule 18.7, which either: (1) rejects a Draft Rule Change; or (2) accepts a Draft Rule Change, 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 Rule 4.2.
<i>Final Rule Change Recommendation</i>	A final recommendation on a Rule Change Proposal under Rule 18.7.
<i>Franchise Utility</i>	An electricity network operator which owns and operates an on-site generation.
<i>Fuel Cost Adjustment</i>	Part of the Imbalance Cost Pass Through Mechanism, which is a six monthly backward-looking adjustment that ensures that the Single Buyer's actual revenue based on its Single Buyer Generation Tariff component equals its actual cost of procuring electricity based on Generator Contracts.
<i>Fuel Price Adjustment</i>	Part of the Imbalance Cost Pass Through Mechanism, which is a six monthly forward-looking adjustment to the Single Buyer Generation Tariff to account for the expected impact of any known changes in gas and coal prices.
<i>Fuel Price Adjustment Formula</i>	A formula developed by the Energy Commission to implement the Fuel Price Adjustment.
<i>Fuel Price Report</i>	A report produced by the Single Buyer for every six month period of the Regulatory Period setting out any proposed amendment to the Single Buyer Tariff based on its expectations of changes in gas and coal prices.
<i>Gas Framework Agreement</i>	The agreement between Petronas and Tenaga Nasional Berhad for the supply of natural gas for the purposes of electricity generation.
<i>Gas Supply Agreement</i>	The agreement between Petronas and a Generator for the supply of natural gas to a Generating Unit.
<i>Gas Supply Committee</i>	A committee (being the National Gas Taskforce working group) established by the Energy Commission to review and assess the adequacy of gas supply for electricity generation in Peninsular Malaysia.

Term	Definition
<i>Generating Unit</i>	Any plant capable of producing electricity and connected to the Transmission Network or Distribution Network in Peninsular Malaysia.
<i>Generating Unit Operating Data</i>	A complete set of generating characteristics required to prepare the Week Ahead Dispatch Schedule, Day Ahead Dispatch Schedule and Three Month Ahead Dispatch Schedule for each Generating Unit consistent with the terms and conditions of its relevant Generator Contract.
<i>Generator</i>	A person who holds a Licence in Peninsular Malaysia and registered under Rule 3.3 as a Generator in accordance with the registration process outlined in Rule 3.10.
<i>Generator Contracts</i>	Agreements for the sale and purchase of electricity which includes but not limited to power purchase agreements, service level agreements and agreement with Externally Interconnected Parties or Network Operators.
<i>Grid Code For Peninsular Malaysia</i>	The document that sets out the principles governing the relationship between the Grid System Operator, the Grid Owner, the Single Buyer and all users the Grid System, as amended from time to time.
<i>Grid System</i>	Transmission Network with directly connected Generating Units as defined in the Grid Code For Peninsular Malaysia.
<i>Grid System Operator</i>	The entity responsible for operational planning, real time rescheduling, dispatch and control of the Grid System in compliance with the provisions of the Grid Code For Peninsular Malaysia and coordinating all parties connected to the Grid System and registered as the Grid System Operator under Rule 3.4 in accordance with the registration process outlined in Rule 3.10.
<i>Grid Owner</i>	The party that owns the high voltage backbone Transmission Network and is responsible for maintaining adequate Grid System capacity in accordance with the provisions of the Grid Code For Peninsular Malaysia and Licence standards and registered as the Grid Owner under Rule 3.5 in accordance with the registration process outlined in Rule 3.10.
<i>Government</i>	The Federal Government of Malaysia as represented by the Minister.

Term	Definition
<i>Head of the Single Buyer</i>	A person nominated by TNB and approved by the Energy Commission to oversee the day-to-day operations of the Single Buyer under Rule 7.2.
<i>Hydro Plant</i>	Generating Units where the prime movers and/or driving turbines are driven by water.
<i>Hydro Plant Management Plan</i>	A forecast of hydro generation for storage-based schemes prepared by the Single Buyer based on hydro generation capacity and lake levels.
<i>Imbalance Cost Pass Through Mechanism</i>	The price control mechanism designed by the Energy Commission for making adjustments to the Single Buyer Generation Tariff component of the Single Buyer Tariff and comprising the Fuel Price Adjustment and Fuel Cost Adjustment.
<i>Incentive Based Regulation</i>	The tariff setting mechanism as established and will be administered by the Energy Commission.
<i>Independent Power Producer</i>	A Generator, other than TNB Generation, with a Generator Contract.
<i>Kuala Lumpur Regional Centre for Arbitration (KLCRA)</i>	The Kuala Lumpur Regional Centre for Arbitration.

Term	Definition
Large Merchant Generator	<p>(a) A Generator with a Cogeneration Plant;</p> <p>(b) A Generator with a Renewable Plant;</p> <p>(c) A Franchise Utility;</p> <p>(d) A Part PPA/SLA Generator;</p> <p>(e) An expired PPA/SLA Generator which is not utilising Power Sector Gas;</p> <p>(f) Any person licensed by Energy Commission to import electricity into Peninsular Malaysia to participate in NEDA; or</p> <p>(g) Any other Generator with Generating Unit approved by the Energy Commission to participate in NEDA;</p> <p>with an Export Capacity of not less than 30MW who manages its own fuel supply arrangements and is registered to participate in NEDA as a NEDA Participant.</p>
Least Cost Dispatch Scheduling Methodology	A methodology for developing the Dispatch Schedules such that the lowest cost marginal Generating Unit is forecast to be dispatched first to meet demand followed by the next lowest cost marginal Generating Unit until all demand is met.
Licence	A licence issued by the Energy Commission under section 9 of the Electricity Supply Act 1990.
Long Term Demand and Supply Working Group	The Single Buyer Working Group established under Rule 7.6 to review, among other things, and Ten Year Ahead Load Forecast Report and the Ten Year Ahead Generation Capacity Report produced by the Single Buyer.
Long Term Demand and Supply Outlook	The Ten Year Demand and Supply Forecast Report prepared by the Single Buyer.
Merchant Generator	All NEDA Participants other than PPA/SLA Generators, including but not limited to Ex-PPA/SLA Generators, Price Takers and Large Merchant Generators.

Term	Definition
Minister	The Minister for the time being charged with the responsibility for matters relating to the supply of electricity.
Minor Rule Change Procedure	The procedures undertaken by the Energy Commission under Rule 18.9 to make a Rule Change unilaterally, where the Energy Commission is of the view that the Rule Change or Rule Change Proposal will not materially impact or disadvantage any Participant.
Month	A calendar month.
National Gas Task Force	The task force convened under Rule 13.3.2 to manage and monitor the adequacy of gas supply for electricity generation.
Network Operator	A person with a User System directly connected to the Transmission Network to which Customers and/or Generating Units (not forming part of the Grid System) are connected, acting in its capacity as an operator of the system, but shall not include a person acting in the capacity of an Externally Interconnected Party.
NEDA	New Enhanced Dispatch Arrangement, pursuant to which a specified range of generators are able to participate in order to increase short-run competition and cost efficiency of generation in Malaysia.
NEDA Participant	PPA/SLA Generators or a Merchant Generator registered with the Energy Commission as a NEDA Participant.
NEDA Rules	The rules which is an Annex of Guidelines For New Enhanced Dispatch Arrangement, issued by the Energy Commission, which set out the objectives, roles and functions of the Single Buyer, the Grid System Operator, the Energy Commission and NEDA Participants in the NEDA market, as amended from time to time.
Net Energy Metering or NEM	An agreement entered into between Tenaga Nasional Berhad and a consumer to enable the consumer to generate electricity for its own consumption and sell the excess electricity to the Distribution Network.
Nominated Coal Supplier	A person registered as a Nominated Coal Supplier under Rule 3.7 in accordance with the registration process outlined in Rule 3.10.

Term	Definition
<i>Nominated Gas Supplier</i>	A person registered as a Nominated Gas Supplier under Rule 3.8 in accordance with the registration process outlined in Rule 3.10.
<i>Non Centrally Dispatched Generating Unit</i>	A Generating Unit connected to the Transmission Network with a nameplate rating of less than 30 MW and classified as a Non Centrally Dispatched Generating Unit by the Energy Commission.
<i>Non-Working Day</i>	Any day that is not a Working Day.
<i>Offtaker</i>	Tenaga Nasional berhad or any person, unit, department or division forming part of a licensee who is authorised under subsection 22B(1) of the Electricity Supply Act 1990, as the case may be.
<i>One Year Demand and Supply Outlook</i>	A report prepared by Single Buyer to project the generation mix and fuel requirement for the coming year.
<i>Operating Code</i>	That Part of the Grid Code For Peninsular Malaysia identified as the Operational Code(s) or Operating Code(s).
<i>Operating Reserve</i>	The additional output from Generators or the reduction in demand, which must be realisable in real time operation to respond in order to contribute to containing and correcting any System Frequency fall to an acceptable level in the event of a loss of generation or imports or mismatch between generation and demand.
<i>Petronas</i>	Petroleum Nasional Berhad.
<i>Part PPA/SLA Generator</i>	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, and is registered to participate in NEDA as a NEDA Participant.
<i>Participant</i>	An entity registered by the Energy Commission as a Participant under Chapter 3 with consequent obligations under the Single Buyer Market Rules.
<i>Planned Generation Schedule for Price Taker</i>	The planned generation for a Price Taker's Generation Unit based on forecasts provided in accordance with the NEDA Rules.

Term	Definition
<i>Power Sector Gas</i>	Gas procured under the Gas Supply Agreement by Generators and listed in the Gas Framework Agreement.
<i>Power Sector Gas Allocation</i>	The quantity of gas allocated by the Nominated Gas Supplier for electricity generation in Peninsular Malaysia.
<i>Power Sector Gas Price</i>	The Government determined price for gas specified in RM/mmBtu to be applied for gas based electricity generation in Peninsular Malaysia
<i>PPA</i>	A power purchase agreement between a Generator and the Offtaker for the supply of electrical energy and ancillary services by the Generator.
<i>PPA/SLA Generator</i>	A Generator with a PPA or SLA.
<i>Price as Bid</i>	The price at which a Large Merchant Generator offers to sell energy to the market from one of its own generating units in accordance with the NEDA Rules.
<i>Price Taker</i>	<p>(a) A Generator with a Cogeneration Plant;</p> <p>(b) A Generator with a Renewable Plant;</p> <p>(c) A Small Franchise Utility;</p> <p>(d) An expired PPA/SLA Generator not utilising Power Sector Gas; or</p> <p>(e) any other Generator approved by the Energy Commission to participate in NEDA;</p> <p>with an Export Capacity between 100kW and not exceeding 30MW, without a PPA/SLA, Feed-in Tariff or NEM, and is registered to participate in NEDA as a NEDA Participant.</p>
<i>Proposer</i>	Any person proposing an amendment to the Single Buyer Market Rules under Rule 18.4.
<i>Proposer's Representative</i>	A person authorised to represent a Proposer in matters related to a Rule Change Proposal.

Term	Definition
Regulatory Implementation Guidelines	The electricity tariff regulatory implementation established by the Energy Commission and as amended from time to time.
Regulatory Period	A period set by the Energy Commission during which the parties as prescribed in the Regulatory Implementation Guidelines are subject to a control mechanism developed and administered by the Energy Commission.
Related Party	<p>As per the Financial Reporting Standard 124 set by the Malaysian Accounting Standards Board (MASB), a Related Party is a person or entity that is related to the entity that is preparing its financial statements (in the Financial Reporting Standard referred to as the 'reporting entity').</p> <p>(a) A person or a close member of that person's family is related to a reporting entity if that person:</p> <ul style="list-style-type: none"> (i) has control or joint control over the reporting entity; (ii) has significant influence over the reporting entity; or (iii) is a member of the key management personnel of the reporting entity or of a parent of the reporting entity. <p>(b) An entity is related to a reporting entity if any of the following conditions applies:</p> <ul style="list-style-type: none"> (i) The entity and the reporting entity are members of the same group (which means that each parent, subsidiary and fellow subsidiary is related to the others). (ii) One entity is an associate or joint venture of the other entity (or an associate or joint venture of a member of a group of which the other entity is a member). (iii) Both entities are joint ventures of the same third party. (iv) One entity is a joint venture of a third entity and the other entity is an associate of the third entity. (v) The entity is a post-employment benefit plan for the benefit of employees of either the reporting entity or an entity related to the reporting entity. If the reporting entity is itself such a plan, the sponsoring employers are also related to the reporting entity. (vi) The entity is controlled or jointly controlled by a person identified in (a). (vii) A person identified in (a)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity).

Term	Definition
<i>Renewable Plant</i>	Generating Units that generate power from Renewable Resources, as defined in the Renewable Energy Act 2011.
<i>Renewable Resources</i>	The recurring and non-depleting indigenous resources or technology as set out in the Renewable Energy Act 2011.
<i>Revised Day Ahead Dispatch Schedule</i>	An amended Day Ahead Dispatch Schedule developed and finalised by 9:00 am on the day of the commencement of the Day Ahead Dispatch Period by the Single Buyer based on the Daily Operations Review Report and Revised Day Ahead Load Forecast.
<i>Revised Day Ahead Load Forecast</i>	An updated Day Ahead Load Forecast developed by the Single Buyer by 8:30 am on the day of the commencement of the Day Ahead Dispatch Period.
<i>Rule Change</i>	The process in relation to amending the Single Buyer Market Rules, as set out in Chapter 18.
<i>Rule Change Panel</i>	A panel convened by the Energy Commission under Rule 18.3 to provide recommendations on Rule Change Proposals.
<i>Rule Change Proposal</i>	A proposal for amending the Single Buyer Market Rules developed in accordance with Rule 18.3.
<i>Settlement</i>	Those processes and procedures for the calculation of payments under relevant Generator Contracts and NEDA.
<i>Short Term Supply Adequacy Plan</i>	A plan developed by the Single Buyer for addressing supply constraints with respect to the development of the Day Ahead Dispatch Schedules and Three Months Ahead Dispatch Schedules.
<i>Single Buyer</i>	The person authorised by the Energy Commission to be responsible for the management of procurement of electricity and related services, which includes scheduling, procuring and settlement and registered under Rule 3.9 as the Single Buyer in accordance with the registration process outlined in Rule 3.10.
<i>Single Buyer Accounts</i>	Regulatory accounts produced by the Single Buyer of a form and type specified by the Energy Commission and as set out in Rule 6.4.

Term	Definition
Single Buyer Generation Tariff	The Single Buyer Generation Tariff component of the Single Buyer Tariff calculated in accordance with Rule 14.3, and comprising all costs to the Single Buyer in purchasing electricity.
Single Buyer Market	The market for supply and procurement of electricity in Peninsular Malaysia where the procurement of electricity and related services is managed by the Single Buyer.
Single Buyer Operations Tariff	The Single Buyer Operations Tariff component of the Single Buyer Tariff calculated in accordance with Rule 14.4, and comprising all of the operational costs incurred by the Single Buyer in undertaking its roles and performing its functions not covered by the Single Buyer Generation Tariff.
Single Buyer Oversight Panel	The panel convened and chaired by the Energy Commission under Rule 7.3 to oversee the compliance of the Single Buyer with the Single Buyer Market Rules.
Single Buyer Tariff	The tariff charged by the Single Buyer to the relevant party as prescribed in the Regulatory Implementation Guidelines calculated in accordance with Chapter 14 and comprising the Single Buyer Generation Tariff and Single Buyer Operations Tariff components.
Single Buyer Market Rules	A document that sets out the objectives, roles and functions of the Single Buyer and the roles of other Participants in the Single Buyer Market, as amended from time to time.
Single Buyer Website	The website maintained jointly by the Single Buyer and the Energy Commission to publish various information concerning the operation of the Single Buyer Market as set out in Chapter 19.
Single Buyer Website Working Group	The Single Buyer Working Group established under Rule 7.6 to review, among other things, the format and accessibility of the information published on the Single Buyer Website and timelines for publication of such information.
Single Buyer Working Groups	Working groups established by the Single Buyer under Rule 7.6 to improve transparency of the Single Buyer functions and improve the operation of the Single Buyer Market by reviewing Single Buyer processes and outcomes and recommending changes to procedures and the Single Buyer Market Rules.

Term	Definition
SLA	A service level agreement between TNB Generation and the Offtaker in respect of a TNB Generating Unit for the supply of electrical energy and ancillary services by the Generating Unit.
Small Franchise Utility	Franchise Utility with an Export Capacity of less than 30 MW.
Stand-by Fuel	Distillate, diesel, medium fuel oil, or other back-up fuel used for electricity generation.
Stand-by Fuel Monthly Price	The relevant Stand-by Fuel price declared by TNB and/or the Generators to be used for the purpose of scheduling Stand-by Fuel based electricity generation in Peninsular Malaysia.
System Constraint	Limit on the operation of the Transmission Network due to thermal rating, stability consideration, voltage consideration and other limits.
System Frequency	The number of alternating current cycles per second (expressed in Hertz) at which a Transmission Network is running.
System Marginal Price	The price of the most expensive marginal generator included in the Draft Day Ahead Dispatch Schedule to meet the Day Ahead Load Forecast in a Half-Hour Period or the Week Ahead Dispatch schedule to meet the Week Ahead Load Forecast.
System Upgrade Plan	An investment plan to upgrade the Dispatch Scheduling Model.
Tenaga Nasional Berhad (TNB)	Tenaga Nasional Berhad, a company incorporated in Malaysia under the Companies Act 2016, having its registered office at 129, Jalan Bangsar, 59200 Kuala Lumpur, Malaysia.
Ten Year Ahead Generation Capacity Report	A report prepared annually by the Single Buyer detailing the adequacy of generation capacity to meet the Ten Year Ahead Load Forecast.
Ten Year Demand and Supply Forecast Report	A report prepared by the Single Buyer that provides an assessment of the adequacy of long term projections of generation capacity to meet demand and any requirements for new capacity based on the Ten Year Ahead Load Forecast Report and Ten Year Ahead Generation Capacity Report.

Term	Definition
<i>Ten Year Generation Planning Report</i>	A report prepared by the Single Buyer as outlined in Rule 15.2.5 that specifies the requirement of new generation capacity over a ten year forecast period.
<i>Ten Year Ahead Load Forecast</i>	A ten year ahead forecast of total electricity sent out to the Grid System to meet the Customers' demand for the next ten years.
<i>Ten Year Ahead Load Forecast Report</i>	A report prepared by the Single Buyer detailing the Ten Year Ahead Load Forecasts and assumptions used in preparing the load forecasts.
<i>Ten-Year System Outlook</i>	A supply and demand outlook for 10 years system horizon.
<i>Terms of Reference</i>	A document developed by the Single Buyer setting out the proposed scope and objectives of a Single Buyer Working Group.
<i>Three Month Ahead Dispatch Period</i>	A period of three calendar months.
<i>Three Month Ahead Dispatch Schedule</i>	A schedule for the dispatch of all Generating Units to meet the Three Month Ahead Load Forecast
<i>Three Month Ahead Generation Outage Plan</i>	A plan prepared by the Grid System Operator that specifies the planned outages for each Generating Unit for the Three Month Ahead Dispatch Period.
<i>Three Month Ahead Load Forecast</i>	A three month ahead forecast of total electricity sent out to the Grid System to meet Customers' demand for the next three months.
<i>Three Month Ahead Transmission Outages</i>	A plan prepared by the Grid System Operator which specifies the planned Transmission outages for three months ahead
<i>TNB Distribution</i>	The distribution division of TNB.
<i>TNB Generation</i>	The generation division of TNB.

Term	Definition
<i>Transmission Network</i>	The system consisting (wholly or mainly) of high voltage electric lines (66kV and above) and used for the transmission of electricity from one power station to a sub-station or to another power station or between substations or to or from any external interconnection, and includes any plant and apparatus and meters owned or operated by the Grid Owner in connection with the transmission of electricity.
<i>Urgent Coal Procedures</i>	The procedures undertaken by the Single Buyer under Rule 13.5 in the event of a disruption to planned and expected coal supply.
<i>Urgent Gas Procedures</i>	The procedures undertaken by the Single Buyer under Rule 13.3 in the event of a disruption to planned and expected gas supply.
<i>Urgent Rule Change Procedures</i>	The procedures undertaken by the Energy Commission under Rule 18.10 to make a Rule Change unilaterally, where security of electricity supply, the viability of the Electricity Industry or Participants, or the achievement of the Energy Commission's objectives under the Energy Supply Act 1990 are threatened.
<i>User System</i>	Any system comprising Generating Units and/or systems consisting (wholly or mainly) and/or electric lines used for the distribution of electricity and any apparatus or plant which connects the system as described above or the non-embedded customers' equipment, as defined in the Grid Code For Peninsular Malaysia.
<i>Week</i>	The seven (7) day period commencing 00:00 hours on Monday and ending at 23:59 hours on Sunday.
<i>Week Ahead Dispatch Schedule</i>	A schedule for the dispatch for each Generating Unit to meet the Week Ahead Load Forecast
<i>Week Ahead Generation Outage Plan</i>	A plan prepared by the Grid System Operator which specifies the planned outages for each Generating Unit for the Week
<i>Week Ahead Load Forecast</i>	A week ahead forecast of total electricity sent out to the Grid System to meet Customers' demand for the following week.
<i>Week Ahead Transmission Outage Plan</i>	A plan prepared by the Grid System Operator which specifies the planned transmission outages for the Week.

Term	Definition
<i>Weekly Scheduling Update Date</i> <i>Dispatch Model</i>	The day upon which the Dispatch Scheduling Model is updated to produce the Week Ahead Dispatch Schedule, as specified in Rule 10.3.
<i>Working Day</i>	Any day other than Saturdays, Sundays and public holidays on which commercial banks are open for business in Wilayah Persekutuan, Kuala Lumpur.

3 Single Buyer Market Participants

3.1 Purpose

3.1.1 This Chapter sets out and describes the various categories of Participant in the Single Buyer Market and the registration procedures. All Participants have different rights and obligations under the Single Buyer Market Rules and must be registered by the Energy Commission.

3.2 Participants

3.2.1 The different categories of Participant are as follows:

- a) Generator;
- b) Grid System Operator;
- c) Grid Owner;
- d) TNB Distribution;
- e) Nominated Coal Supplier;
- f) Nominated Gas Supplier;
- g) Single Buyer;
- h) NEDA Participants; and
- i) any other party approved by the Energy Commission.

3.3 Generator

3.3.1 A person engaged in the activity of owning, controlling or operating a Generating Unit that is connected to the Transmission Network or Distribution Network shall not be a Participant in the Single Buyer market unless that person is registered as a Generator.

3.3.2 As part of the registration process, every Generator shall classify each of its Generating Units as:

- a) a Centrally Dispatched Generating Unit; or
- b) a Non Centrally Dispatched Generating Unit.

3.3.3 A Generating Unit connected to either the Transmission Network or the Distribution Network with a nameplate rating of not less than 30 MW shall be classified as a Centrally Dispatched Generating Unit, unless the Energy Commission approves its classification as a Non Centrally Dispatched Generating Unit.

3.3.4 A Centrally Dispatched Generating Unit shall be scheduled for dispatch based on the Least Cost Dispatch Scheduling Methodology and in accordance with the provisions of the Rules.

3.3.5 Upon registration as a Centrally Dispatched Generating Unit, a PPA/SLA Generator operating a Centrally Dispatched Generating Unit shall provide the Energy Commission with a Generator Contract.

3.3.6 Merchant Generators shall register with the Energy Commission in accordance with the NEDA Rules. Registration in accordance with the NEDA Rules shall be considered as registration as a Participant in the Single Buyer market in accordance with this Rule 3.

3.3.7 A Generating Unit connected to either the Transmission Network or the Distribution Network with a nameplate rating of less than 30 MW shall be classified as a Non

Centrally Dispatched Generating Unit, unless the Energy Commission approves its classification as a Centrally Dispatched Generating Unit.

- 3.3.8 A Non Centrally Dispatched Generating Unit need not be dispatched based on the Least Cost Dispatch Scheduling Methodology.

3.4 Grid System Operator

- 3.4.1 A person engaged in the activity of real time scheduling, dispatch and control of the Grid System shall not be a Participant in the Single Buyer market unless that person is registered as a Grid System Operator.

3.5 Grid Owner

- 3.5.1 A person engaged in the activity of owning, controlling or operating a Transmission Network shall not be a Participant in the Single Buyer market unless that person is registered as a Grid Owner.

3.6 Distributor

- 3.6.1 A person engaged in the activity of owning, controlling or operating a Distribution Network shall not be a Participant in the Single Buyer market unless that person is registered as a Distributor.

3.7 Nominated Coal Supplier

- 3.7.1 A person engaged in the activity of supplying coal for electricity generation in Peninsular Malaysia where the annual quantity of coal procured is forecast to exceed one third of the total annual quantity of coal required by the coal Generators for electricity generation in Peninsular Malaysia shall not be a Participant in the Single Buyer market unless that person is registered as a Nominated Coal Supplier.

3.8 Nominated Gas Supplier

- 3.8.1 A person engaged in the activity of supplying gas for electricity generation in Peninsular Malaysia shall not be a Participant in the Single Buyer Market unless that person is registered as a Nominated Gas Supplier.

3.9 Single Buyer

- 3.9.1 A person, unit, department or division authorised by the Energy Commission to be responsible for the management of procurement of electricity and related services, which includes scheduling, procuring and settlement shall not be a Participant in the Single Buyer Market unless that person is registered as a Single Buyer in accordance with the registration process outlined in Rule 3.10.

3.10 Registration

- 3.10.1 All Participants that are registered shall comply with the provisions of the Single Buyer Market Rules that apply to the registered Participant from the Commencement Date.
- 3.10.2 Applications for registration shall be submitted to the Energy Commission in a form specified by the Energy Commission and must demonstrate the following:
- a) that the potential Participant is willing and able to comply with the relevant obligations of the Single Buyer Market Rules;
 - b) that the potential Participant is not under external administration or under a similar form of administration under any laws applicable to it in any jurisdiction; and
 - c) such other matters as the Energy Commission may consider necessary.
- 3.10.3 The Energy Commission shall within twenty-eight (28) Working Days after receiving an application (or reapplication) for registration either:
- a) approve the registration of the applicant if it is satisfied that the applicant is able to comply with the relevant provisions of the Single Buyer Market Rules and meets the requirements specified in Rule 3.10.2; or
 - b) not approve the application for registration and seek further clarification and information from the applicant.
- 3.10.4 Subject to the confirmation from Energy Commission to the Single Buyer of the registration status of each respective Participant, the Single Buyer shall maintain a list of the Participants on the Single Buyer Website, and list any newly approved Participants on the Single Buyer Website within three (3) Working Days of approving the registration.
- 3.10.5 The Energy Commission shall have the absolute discretion in determining the eligibility criteria for registration as Participants and reserves the right to reject applications for any reason whatsoever.

3.11 Ceasing to be a Participant

- 3.11.1 A Participant shall notify the Energy Commission in writing via an application for de-registration if it wishes to cease being a Participant.
- 3.11.2 The Energy Commission shall within twenty-eight (28) Working Days after receiving an application (or reapplication) for de-registration either:
- a) approve the de-registration of the applicant if it is satisfied that the applicant should no longer be required to comply with the relevant provisions of the Single Buyer Market Rules; or
 - b) not approve the application for de-registration and seek further clarification and information from the applicant.
- 3.11.3 The Energy Commission shall remove a successful applicant's details from the list of Participants on the Single Buyer Website within three (3) Working Days of approving an application for de-registration.

4 Objectives of the Single Buyer

4.1 Purpose

- 4.1.1 This Chapter sets out the objectives that the Single Buyer shall seek to achieve in undertaking its roles and performing its functions under the Single Buyer Market Rules as defined hereinafter.

4.2 Objectives

- 4.2.1 The objectives of the Single Buyer are as follows:
- a) to minimise the cost of electricity procurement to meet demand, subject to:
 - (i) consistency with the terms of the Generator Contracts;
 - (ii) generation and transmission network constraints; and
 - (iii) any other requirements relevant to the Single Buyer as specified in the Grid Code For Peninsular Malaysia,
 - b) to promote transparency in the procurement of electricity by ensuring that it undertakes its functions in a transparent manner, subject to any constraints imposed by the terms and conditions of Generator Contracts, Daily Heat Rate and Variable Operating Rate Bids and Daily Price Bids;
 - c) to facilitate competition in the generation sector and promote confidence in the Electricity Industry by ensuring that it performs its functions in a fair and balanced manner and in compliance with the Single Buyer Market Rules; and
 - d) to facilitate security of electricity supply by proactively reporting any issues it identifies that may adversely affect security of supply to the Energy Commission.

5 Roles and Functions of the Single Buyer

5.1 Purpose

5.1.1 This Chapter sets out the roles of the Single Buyer and each of the functions performed by the Single Buyer in undertaking its roles. All the roles and functions as set out in this chapter are in line with the Electricity Supply Act 1990 and regulations made thereunder. The detailed procedure in performing each of the functions is set out in the following Chapters of the Single Buyer Market Rules.

5.2 Roles of the Single Buyer

5.2.1 The roles of the Single Buyer are as follows:

- a) to procure electricity to meet demand (and related services to meet the Operating Reserve requirements) at least cost;
- b) to facilitate security of electricity supply;
- c) to monitor the adequacy of the supply of fuel to Generators;
- d) to promote transparency in the performance of its functions;
- e) to facilitate competition in the generation sector; and
- f) to promote confidence in the Electricity Industry.

5.3 Role in procuring electricity to meet demand

5.3.1 The Single Buyer shall purchase electricity from Generators on a least cost basis in accordance with the terms and conditions of the Generator Contracts, Daily Heat Rate and Variable Operating Rate Bids and Daily Price Bids. In procuring electricity the Single Buyer must take into consideration the generation and transmission network constraints and configuration and all relevant system security and safety parameters as specified in the Grid Code For Peninsular Malaysia.

5.3.2 The Single Buyer shall perform the following functions in relation to its role in procuring electricity to meet demand:

- a) produce the Three Month Ahead Dispatch Schedule;
- b) produce the Week Ahead Dispatch Schedule;
- c) produce the Day Ahead Dispatch Schedule;
- d) settle Generators' invoices consistent with the terms and conditions of Generator Contracts, Daily Heat Rate and Variable Operating Rate Bids and Daily Price Bids; and
- e) administer the Single Buyer Tariff consistent with the requirements of the regulatory framework for tariff setting administered by the Energy Commission.

5.4 Role in Facilitating Security of Electricity Supply

- 5.4.1 The Single Buyer shall facilitate security of electricity supply by maintaining oversight of demand and supply issues in the performance of its dispatch scheduling functions and in its functions in assessing long term supply and demand conditions. In the event that the Single Buyer becomes aware of any shortfall in generation capacity it shall notify the Energy Commission, prepare a generation planning report and work collaboratively with Participants to address any such shortfall.
- 5.4.2 The Single Buyer shall perform the following functions in relation to its role in facilitating security of electricity supply:
- a) identify any shortfall in the short term adequacy of supply in the preparation of the Three Month Ahead Dispatch Schedule and Week Ahead Dispatch Schedule and notify the Energy Commission as soon as it is aware of such a shortfall;
 - b) develop a Short Term Supply Adequacy Plan for addressing any short term supply constraints;
 - c) produce a Ten Year Demand and Supply Forecast Report;
 - d) identify any projected shortfall in generation capacity, prepare a a Ten Year Generation Planning Report (if required) to identify options for the timing and type of new generation capacity required and immediately notify the Energy Commission of any such shortfall; and
 - e) undertake verification studies to assist the Energy Commission in the verification of transmission development plan submitted by Grid Owner under License condition.

5.5 Role in Monitoring The Adequacy of The Supply of Fuel

- 5.5.1 The Single Buyer shall monitor the adequacy of the supply of fuel to Generators and notify the Energy Commission of any issues identified, including monitoring the adequacy of gas, coal and hydro levels to meet the Week Ahead Dispatch Schedule and the Three Month Ahead Dispatch Schedule and responding to and monitoring any unplanned curtailment or disruption to the planned supply and delivery of forecast quantities of gas and coal and managing the impact of weather or riparian requirements on Hydro Plants.
- 5.5.2 The Single Buyer shall perform the following functions in relation to its role in monitoring the supply of fuel to Generators:
- a) participate in a Gas Supply Committee to monitor the adequacy and security of gas supply for electricity generation and the efficiency and effectiveness of gas procurement by the Nominated Gas Supplier;
 - b) follow the process as stipulated in the Gas Framework Agreement or any other agreement as instructed by the Energy Commission;
 - c) participate in a Coal Supply Committee to monitor the adequacy of coal supply for electricity generation and the efficiency and effectiveness of coal procurement by the Nominated Coal Supplier;
 - d) develop a plan for the use of Stand-by Fuel to make up for loss of gas based generation or loss of coal based generation; and
 - e) develop an annual Hydro Plant Management Plan to manage hydro generation capacity and lake levels for storage-based schemes and plan for the optimum utilisation of Hydro Plants.

5.6 Role in Promoting Transparency

- 5.6.1 The Single Buyer shall promote transparency by ensuring that it performs its functions in a transparent and consistent manner. The Single Buyer shall ensure that it publishes information with regard to the performance of its functions and ensure that such information is accurate, concise, understandable and readily accessible to Participants, stakeholders and the general public. The Single Buyer shall also perform its functions in a spirit of collaboration with Participants, ensuring that Participants are given the opportunity to participate in any Single Buyer Working Groups and consultations that the Single Buyer considers are necessary to assist it in performing its functions.
- 5.6.2 The Single Buyer shall perform the following functions in relation to its role in promoting transparency:
- a) develop and maintain the Single Buyer Website. The Single Buyer Website shall publish information with regard to the performance of the Single Buyer functions, as required pursuant to Rule 19.3, subject to the confidentiality provisions in the Generator Contracts; and
 - b) establish Single Buyer Working Groups comprising appropriate representatives from Participants and other stakeholder groups. The Single Buyer Working Groups shall review processes and outcomes and recommend Rule Changes where appropriate.

5.7 Role in Facilitating Competition in the Generation Sector

- 5.7.1 The Single Buyer shall facilitate competition in the generation sector by performing its functions in relation to the tendering for new capacity in a fair and balanced manner. The Single Buyer shall also ensure that it performs its dispatch functions in a manner that is consistent with principles of least cost and is also consistent with the terms and conditions of Generator Contracts Daily Heat Rate and Variable Operating Rate Bids and Daily Price Bids as required by the Single Buyer Market Rules and the NEDA Rules.
- 5.7.2 The Single Buyer shall ensure that it negotiates the terms and conditions of Generator Contracts in a fair and balanced manner that does not unreasonably discriminate against any party and ensures fair and reasonable terms and conditions for participation in the generation sector for all parties.

5.8 Role in Promoting Confidence in the Electricity Industry

- 5.8.1 The Single Buyer shall promote confidence in the Electricity Industry by performing its functions in relation to the tendering for new capacity in a fair and balanced manner and in compliance with the Single Buyer Market Rules. The Single Buyer shall identify circumstances where interaction with other divisions and units of TNB may give rise to a conflict of interest, lessening of competition or competitive advantage and implement appropriate operational ring-fencing procedures.
- 5.8.2 The Single Buyer shall perform the following functions in relation to its role in promoting confidence in the Electricity Industry:
- a) ensure its compliance with the Single Buyer Market Rules, and notify the Energy Commission in the event that it becomes aware of any non-compliance with the Single Buyer Market Rules, either on the part of the Single Buyer or another Participant to the Single Buyer Market Rules; and
 - b) monitor compliance with the Generator Contracts.

6 Ring-fencing

6.1 Purpose

- 6.1.1 This Chapter sets out the ring-fencing requirements to ensure that the Single Buyer is able to meet its ring-fencing obligations under the Electricity Supply Act 1990 and perform its functions in a fair and non-discriminatory manner, promoting competition in the generation sector and confidence in the Electricity Industry.
- 6.1.2 The ring-fencing requirements are also a key aspect of the Energy Commission's regulatory framework and are a fundamental requirement for the establishment of the Single Buyer Tariff arrangements set out in Chapter 14.

6.2 Non-discrimination

- 6.2.1 Subject to Rule 6.2.2, in performing its functions under the Single Buyer Market Rules the Single Buyer shall ensure that it does not make decisions or act in a manner that unreasonably discriminates against any other Participant by:
- a) offering terms and conditions for a Generator Contract that are less favourable than those available to a Related Party; or
 - b) favouring a Related Party in developing the Dispatch Schedules.
- 6.2.2 Subject to Rule 6.2.3, the Energy Commission shall decide upon whether behaviour of the Single Buyer is unreasonably discriminatory on a case by case basis. In doing so, the Energy Commission shall have regard to:
- a) the Grid Code For Peninsular Malaysia;
 - b) the Generator Contracts;
 - c) the Single Buyer objectives under Rule 4.2; and
 - d) any other matters it considers relevant.
- 6.2.3 Any action required of the Single Buyer under the Grid Code For Peninsular Malaysia or Generator Contracts shall not be deemed to be discriminatory.

6.3 Ring-fencing of operations

- 6.3.1 So long as the Single Buyer is a unit, division, or subsidiary of TNB, then in performing its functions under the Single Buyer Market Rules, the Single Buyer shall implement appropriate operational ring-fencing procedures to address the potential conflict of interest, lessening of competition or competitive advantage. Such ring-fencing procedures may include, but are not limited to:
- a) limitations on employees of the Single Buyer participating in committees, working groups, and meetings concerning tendering for new generation capacities and strategic developments of TNB;
 - b) establishing a work area that is separate from the work areas of other divisions and units within TNB that may obtain a competitive advantage from information held by the Single Buyer with access controls that prevent staff of either the Single Buyer or other divisions or units from entering into the work area of the other; and

- c) access controls for the Single Buyer information technology systems so that other users of information technology systems (other than an outsourced information communication and technology service provider) cannot access information held by the Single Buyer that may give rise to a conflict of interest, lessening of competition or competitive advantage.

6.4 Ring-fencing of accounts

- 6.4.1 The Single Buyer shall establish and maintain a separate set of Single Buyer Accounts relating to the performance of its functions as a Single Buyer.
- 6.4.2 The Single Buyer shall prepare the Single Buyer Accounts, which must be signed off by the Head of the Single Buyer and submitted to TNB for approval before submission to the Energy Commission.
- 6.4.3 The Single Buyer Accounts shall be consistent with the requirements of the Energy Commission's regulatory framework and must, at a minimum, include a profit and loss statement and a statement of assets.
- 6.4.4 The profit and loss statement must comprise the following details:
 - a) revenue based on the Single Buyer Tariff, comprising the Single Buyer Generation Tariff and Single Buyer Operations Tariff;
 - b) payments to, and receipts from, Generators based on Generator Contracts and Settlements;
 - c) payments to, and receipts from, other jurisdictions in relation to imports and exports of electricity;
 - d) operating expenditure incurred by the Single Buyer in performing its functions;
 - e) allocation of corporate overheads; and
 - f) book depreciation.
- 6.4.5 The statement of assets must include all Single Buyer's assets, and be able to accurately account for the value, age and useful life of the assets required for the performance of the Single Buyer functions.
- 6.4.6 The statement of assets must be an automatically generated report from TNB financial systems.
- 6.4.7 The Single Buyer Accounts shall be subject to audit at least annually and submitted to the Energy Commission.

6.5 Cost allocation

- 6.5.1 TNB shall ensure that any costs that are shared between the Single Buyer and any other division or business unit within TNB are allocated between these parties in accordance with a cost allocation methodology that is consistent with the Incentive Based Regulation and Regulatory Implementation Guidelines issued by the Energy Commission, or is otherwise consistent with any cost allocation rules developed by the Energy Commission.

6.6 Limits on sharing information

- 6.6.1 The Single Buyer shall ensure that to the extent that it has access to information about other Participants that may give cause to a conflict of interest, lessening of competition or competitive advantage to TNB in either its existing generation activities or when contracting for additional capacity, the Single Buyer shall not divulge this information to any other party, except to the extent required in the performance of its functions under the Single Buyer Market Rules.
- 6.6.2 The Single Buyer shall not disclose any information that is confidential to TNB or any other party, except to the extent required in the performance of its functions under the Single Buyer Market Rules.

6.7 Compliance with ring-fencing obligations

- 6.7.1 The Energy Commission may undertake any such actions that it considers necessary to monitor the compliance of the Single Buyer with the ring-fencing principles set out in this Chapter, including, but not limited to:
- a) requiring the Single Buyer to prepare a statement of compliance demonstrating how it is in compliance with the ring-fencing principles;
 - b) issuing rules which set out detailed ring-fencing requirements in addition to the principles contained in this Chapter; and
 - c) requiring the Single Buyer to furnish it with any such information necessary to satisfy the Energy Commission that the Single Buyer is compliant with the ring-fencing principles.
- 6.7.2 In the event that the Single Buyer is uncertain about the potential for a conflict of interest, lessening of competition or competitive advantage, the Single Buyer shall consult with the Energy Commission to determine whether or not such potential exists.
- 6.7.3 Where the Single Buyer considers that it is unable to comply with the conditions set out in this Chapter, it shall consult with the Energy Commission to determine an appropriate course of action to address any non-compliance or minimise the potential impacts of any non-compliance.

7 Single Buyer Governance

7.1 Purpose

7.1.1 This Chapter outlines the governance arrangements for the Single Buyer including independent oversight of the Single Buyer, requirements for the Single Buyer to comply with the Single Buyer Market Rules, the establishment of Single Buyer Working Groups to add transparency to the Single Buyer functions and the Single Buyer's role in monitoring compliance with the Generator Contracts.

7.2 Appointment of the Head of the Single Buyer

7.2.1 The appointment of the Head of the Single Buyer shall be undertaken in accordance with the requirements of the Electricity Supply Act 1990, the Licence conditions, and any rules or directions issued by the Minister or Energy Commission.

7.2.2 In the event that the position of the Head of the Single Buyer is left vacant due to the departure of the incumbent at short notice, or the processes for appointment of the Head of the Single Buyer have not been able to be completed for any reason, the Chief Executive Officer of TNB shall appoint a person to act in the position of the Head of the Single Buyer until the appointment process is completed.

7.2.3 TNB shall establish appropriate reporting arrangements for the Head of the Single Buyer which ensure that:

- a) the Single Buyer is empowered to perform its functions under the Single Buyer Market Rules in a manner that does not unduly discriminate against any other Participant as specified in Rule 6.2; and
- b) any potential conflicts of interest are appropriately addressed.

7.2.4 The terms of employment for the Head of the Single Buyer and the staff of the Single Buyer shall be consistent with TNB's employment policy and appropriate Malaysian benchmarks.

7.2.5 The Head of the Single Buyer shall report directly to the Chief Executive Officer of TNB.

7.3 Single Buyer Oversight Panel

7.3.1 The Energy Commission shall establish and maintain a Single Buyer Oversight Panel to oversee the compliance of the Single Buyer with the Single Buyer Market Rules.

7.3.2 The Single Buyer Oversight Panel shall be chaired by the Energy Commission, and shall be comprised of suitable members as determined by the Energy Commission.

7.3.3 In selecting members of the Single Buyer Oversight Panel, the Energy Commission shall give due consideration to the requisite skills and qualifications of the members, and any conflicts of interest that might arise in performing the functions of the Single Buyer Oversight Panel.

- 7.3.4 The functions of the Single Buyer Oversight Panel shall include, but not be limited to:
- a) overseeing the compliance of the Single Buyer with the Single Buyer Market Rules;
 - b) providing advice and issuing guidance to the Single Buyer and Participants on achieving compliance with the Single Buyer Market Rules;
 - c) reviewing suggestions for amendments to the Single Buyer Market Rules as required by the Rule Change Panel or Energy Commission;
 - d) recommending changes to procedures and the Single Buyer Market Rules where it considers that the recommended change would better facilitate the objectives set out in Rule 4.2; and
 - e) assisting the Energy Commission in selecting and appointing an external auditor to assess the compliance with Rule 7.4.3.
- 7.3.5 The Single Buyer shall brief the Single Buyer Oversight Panel from time to time, and as requested by the Single Buyer Oversight Panel, in relation to the operational actions taken and the implementation of the provision in the Single Buyer Market Rules.

7.4 Compliance with Single Buyer Market Rules

- 7.4.1 The Single Buyer shall ensure that it has appropriate policies, systems and procedures in place to ensure that it is capable of complying with the Single Buyer Market Rules.
- 7.4.2 In the event that the Single Buyer becomes aware that it is non-compliant with the Single Buyer Market Rules it shall immediately inform the Single Buyer Oversight Panel and Energy Commission and put in place procedures to address the non-compliance.
- 7.4.3 The Energy Commission shall appoint a suitably qualified auditor to assess the compliance of the Single Buyer with the requirements of the Single Buyer Market Rules:
- a) 12 months from the Commencement Date of the Single Buyer Market Rules; and
 - b) at least once every three years thereafter, or as specified by the Energy Commission.
- 7.4.4 The Single Buyer shall ensure that the information provided to the auditor is accurate and complete.
- 7.4.5 The cost of the audit shall be borne by the Single Buyer and treated as recoverable operating expenditure for the purposes of calculating the Single Buyer Operations Tariff.

7.5 Generator contracts and NEDA Rules

- 7.5.1 The Single Buyer shall monitor compliance of parties with the Generator Contracts and the NEDA Rules
- 7.5.2 In the event that the Single Buyer becomes aware of any non-compliance with the Generator Contracts and/or the NEDA Rules that it considers will have a material effect on its ability to achieve its objectives under Rule 4.2 then it shall notify the Energy Commission.

7.6 Single Buyer Working Groups

- 7.6.1 The objectives of the Single Buyer Working Groups are to:
- a) review the Single Buyer processes and outcomes and provide recommendations to the Single Buyer, other Participants and the Energy Commission on changes to procedures that it considers would improve the efficiency of the discharge of responsibilities set out in the Single Buyer Market Rules; and
 - b) recommend changes to procedures and the Single Buyer Market Rules where it considers that the recommended change would better facilitate the objectives set out in Rule 4.2.
 - (i) Rule Change proposals made by the Single Buyer Working Groups shall be subject to the Rule Change procedures set out in Chapter 18;
 - (ii) recommendations on changes to procedures that do not require a Rule Change shall be submitted to the Energy Commission for approval. If the Energy Commission approves a recommendation, the Energy Commission and Single Buyer shall work collaboratively with any relevant Participants to implement the recommendation.
- 7.6.2 The Single Buyer shall establish the Single Buyer Working Groups as specified in Rule 7.6.3 no later than three months after the Commencement Date.
- 7.6.3 The Single Buyer Working Groups shall be as follows:
- a) Dispatch Scheduling Working Group comprising members from the Energy Commission, the Single Buyer and the Grid System Operator. In meeting its objectives under Rule 7.6.1, the Dispatch Scheduling Working Group shall meet at least quarterly and shall review issues including, but not limited to:
 - (i) efficiency and effectiveness of the dispatch scheduling procedures performed by the Single Buyer and other Participants in facilitating the achievement of the Single Buyer objectives set out in Rule 4.2;
 - (ii) appropriateness of timelines in the dispatch scheduling procedures;
 - (iii) appropriateness of the form and content of Participants' submissions of inputs to the Single Buyer for the purpose of producing the Dispatch Schedules;
 - (iv) appropriateness of the form and content of information disseminated by the Single Buyer to other Participants; and
 - (v) any other related issues by the Generators and other Participants.

The Dispatch Scheduling Working Group may invite Generators and other Participants to participate in such meetings.
 - b) Long-Term Demand and Supply Working Group comprising members from the Energy Commission, the Ministry of Energy, Green Technology and Water and any other relevant Government agencies or authorities, the Nominated Gas Supplier, the Single Buyer, the Grid System Operator and the Grid Owner. In meeting its objectives under Rule 7.6.1, the Long-Term Demand and Supply Working Group shall meet at least once every six months and shall review issues including, but not limited to, the development and content of:
 - (i) the Ten Year Ahead Load Forecast Report produced by the Single Buyer as set out in Rule 15.2.3; and
 - (ii) the Ten Year Ahead Generation Capacity Report produced by the Single Buyer as set out in Rule 15.2.4.

- c) Single Buyer Website Working Group comprising (at a minimum) members from the Energy Commission, the Single Buyer, the appointed information communication and technology service provider and the Grid System Operator. In meeting its objectives under Rule 7.6.1, the Single Buyer Website Working Group shall meet at least quarterly and shall review issues including, but not limited to:
- (i) the information published on the Single Buyer Website, with particular consideration of whether additional information should be published;
 - (ii) the format and accessibility of the information published on the Single Buyer Website; and
 - (iii) appropriateness of timelines in the Single Buyer Market Rules for Participants and the Energy Commission to publish information on the Single Buyer Website.

The Single Buyer Website Working Group may invite other persons including the relevant Generators to participate in such meetings.

7.6.4 The Single Buyer may establish additional Single Buyer Working Groups as a platform to discuss emerging issues. The Single Buyer may determine the scope of each Single Buyer Working Groups and their Terms of reference from time to time.

7.6.5 The Energy Commission may direct the Single Buyer to establish additional Single Buyer Working Groups to discuss specific matters not covered by the existing Single Buyer Working Groups.

7.6.6 For each Single Buyer Working Group, establishment will be as follows:

- a) the Single Buyer shall propose a Terms of Reference;
- b) the Single Buyer shall seek nominations from the relevant stakeholders specified in Rule 7.6.3 and as deemed appropriate from key stakeholders including, but not necessarily limited to:
 - (i) the Energy Commission;
 - (ii) relevant Government agencies and statutory bodies;
 - (iii) Generators;
 - (iv) the Grid System Operator;
 - (v) the Grid Owner;
 - (vi) TNB Distribution;
 - (vii) the Nominated Coal Supplier;
 - (viii) the Nominated Gas Supplier;
 - (ix) industry bodies; and
 - (x) Customer Groups; other relevant persons as may be determined by the Single Buyer.
- c) upon receipt of nominations, the Single Buyer shall propose the membership of the Working Group, including a chair to the Energy Commission;
- d) the Energy Commission shall review the proposed Terms of Reference and the membership of the Working Group and finalise and approve them in consultation with the Single Buyer;
- e) within three months of its establishment, each Working Group shall propose a draft Charter for approval by the Energy Commission, which shall include, but not necessarily be limited to, a process for developing and finalising recommendations of the Working Group; and
- f) in the event that the Working Group requires a secretariat to meet its Terms of Reference and comply with its Charter, the Single Buyer shall provide a secretariat, with any costs incurred by the Single Buyer in doing so recovered via the Single Buyer Tariff.

8 Least Cost Dispatch Scheduling Methodology

8.1 Purpose

8.1.1 This Chapter defines the Least Cost Dispatch Scheduling Methodology which the Single Buyer shall follow to prepare the Day Ahead Dispatch Schedule, the Week Ahead Dispatch Schedule and the Three Month Ahead Dispatch Schedule (collectively referred to as Dispatch Schedules) and the requirements of the Dispatch Scheduling Model.

8.2 Least Cost Dispatch Scheduling Methodology

8.2.1 The Single Buyer shall develop the Dispatch Schedules based on a Least Cost Dispatch Scheduling Methodology such that the lowest marginal cost Generating Unit is forecast to be dispatched first to meet demand followed by the next lowest marginal cost Generating Unit until all demand is met. The marginal cost of generation shall comprise all payments that vary with the amount of electricity procured, that are made by the Single Buyer to the Generators, pursuant to Generator Contracts, Daily Heat Rate and Variable Operating Rate Bids or Daily Price Bids.

8.2.2 At all times the Single Buyer shall ensure that the Dispatch Schedules cater adequately for system security, Operating Reserve requirements, transmission constraints, generation constraints, fuel availability and any other factors which could influence the security and reliability of electricity supply as specified by the Grid Code For Peninsular Malaysia or the Grid System Operator.

8.2.3 The Single Buyer shall ensure that it has the required data and information to accurately calculate its marginal cost for the procurement of generation from each Generating Unit.

8.2.4 In preparing and finalising the Dispatch Schedules the Single Buyer shall ensure that it promotes transparency by publishing key results on the Single Buyer Website and discusses and seeks feedback on the dispatch process and methodology regularly at the meetings of the Dispatch Scheduling Working Group.

8.3 Dispatch Scheduling Model

8.3.1 The Single Buyer shall ensure that the Dispatch Scheduling Model used to produce and finalise the Dispatch Schedules minimises the cost of electricity procurement given all transmission and system constraints and the key input data. Specifically, the Single Buyer shall ensure that the Dispatch Scheduling Model is based on the Least Cost Dispatch Scheduling Methodology and is capable of adequately taking the following parameters into consideration in optimising the Dispatch Schedules:

- a) System Constraints;
- b) Operating Reserve requirements as set out in the Grid Code For Peninsular Malaysia;
- c) key input data for the Three Month Ahead Dispatch Schedule as specified in Chapter 9;

- d) key input data for the Week Ahead Dispatch Schedule as specified in Chapter 10;
 - e) key input data for the Day Ahead Dispatch Schedule as specified in Chapter 11; and
 - f) any other system security measures as deemed appropriate by the Grid System Operator in compliance with the Grid Code For Peninsular Malaysia.
- 8.3.2 If the Dispatch Scheduling Model does not satisfy the conditions as specified in Rule 8.3.1, then the Single Buyer shall prepare a System Upgrade Plan which must specify the timeframe and the cost required to upgrade the current Dispatch Scheduling Model such that it is compliant with the requirements as specified in Rule 8.3.1.
- 8.3.3 The Single Buyer shall submit the System Upgrade Plan to the Energy Commission for approval. Once the System Upgrade Plan has been approved by the Energy Commission the Single Buyer shall implement the System Upgrade Plan as per the timeline specified in the System Upgrade Plan.
- 8.3.4 The Single Buyer shall review the Dispatch Scheduling Model in the event of any revision to the Least Cost Dispatch Scheduling Methodology or every 12 months, whichever is earlier, to ensure that the Dispatch Scheduling Model is compliant with the provisions of Rule 8.3.1. In conducting the review the Single Buyer shall ensure that:
- a) the review is finalised no later than two months after expiration of the 12 month period;
 - b) the outcomes of the review are submitted to the Energy Commission and the Dispatch Scheduling Working Group within fifteen (15) days after the completion of the review; and
 - c) if the Dispatch Scheduling Model is non-compliant, a System Upgrade Plan to upgrade the model to ensure compliance is submitted to the Energy Commission.
- 8.3.5 The first review and any resultant System Upgrade Plan must be prepared no later than three months after the Commencement Date of the Single Buyer Market Rules.
- 8.3.6 If at any time the Single Buyer proposes to enhance or upgrade the Dispatch Scheduling Model then it shall seek prior approval from the Energy Commission and consult with the Dispatch Scheduling Working Group before implementing its proposal.

9 Three Month Ahead Dispatch Schedule

9.1 Purpose

9.1.1 This Chapter sets out the procedures and processes which the Single Buyer shall follow to prepare and finalise the Three Month Ahead Dispatch Schedule, including key principles, inputs and timing for developing the Three Month Ahead Dispatch Schedule.

9.1.2 The purpose of the Three Month Ahead Dispatch Schedule is to provide information to Generators to assist their fuel planning and purchase decisions. For the avoidance of doubt, the Three Month Ahead Dispatch Schedule is merely indicative without any binding effect.

9.2 Key procedural requirements

9.2.1 The Single Buyer shall abide by the following procedural requirements in preparing the Three Month Ahead Dispatch Schedule:

- a) the Single Buyer shall use the Least Cost Dispatch Scheduling Methodology to prepare and finalise the Three Month Ahead Dispatch schedule;
- b) in preparing and finalising the Three Month Ahead Dispatch Schedule the Single Buyer shall ensure that Operating Reserve requirements, transmission constraints (as advised by the Grid System Operator and the Grid Owner), generation constraints and fuel availability and any other factors that could affect the security and reliability of the system as specified by the Grid Code For Peninsular Malaysia or Grid System Operator are adequately taken into consideration and that the resulting dispatch schedule does not compromise the security and reliability of supply;
- c) the Single Buyer shall specify the form and content of Participants' submissions of inputs to the Single Buyer; and
- d) the Single Buyer shall perform its functions in a transparent manner.

9.3 Three Month Ahead Dispatch Period

9.3.1 The Three Month Ahead Dispatch Period is three calendar months.

9.4 Three Month Ahead Load Forecast

9.4.1 The Single Buyer shall prepare the Three Month Ahead Load Forecast before 10:00 am on the third day of the Month before the commencement of the Three Month Ahead Dispatch Period.

9.5 Generating Unit Operating Data

9.5.1 The Single Buyer shall ensure that the Dispatch Scheduling Model is updated with the relevant Generating Unit Operating Data by 10:00 am on the sixth day of the Month preceding the commencement of the Three Month Ahead Dispatch Period.

9.6 Three Month Ahead Generation Outage Plan

9.6.1 The Grid System Operator shall submit the Three Month Ahead Generation Outage Plan to the Single Buyer by 10:00 am on the third day of the month preceding the commencement of the Three Month Ahead Dispatch Period.

9.7 Three Month Ahead Transmission Outage Plan

9.7.1 The Grid System Operator shall submit the Three Month Ahead Transmission Outage Plan to the Single Buyer by 10:00 am on the third day of the month preceding the commencement of the Three Month Ahead Dispatch Period.

9.8 Other Dispatch Scheduling Model inputs

9.8.1 The Single Buyer shall update the Dispatch Scheduling Model by 10:00 am on the sixth day of the month preceding the commencement of the Three Month Ahead Dispatch Period for the following inputs applicable for the Three Month Ahead Dispatch period:

- a) the relevant three month ahead dispatch of all Hydro Plant based on the Hydro Plant Management Plan;
- b) the relevant three month ahead dispatch of all Cogeneration Plant based on the Cogeneration Usage Plan;
- c) the relevant three month ahead electricity imported or exported to any jurisdiction or region (including, but not limited to, countries such as Singapore and Thailand) connected to the Transmission Network based on the Export and Import Plan;
- d) the applicable gas price to be used for electricity generation in Peninsular Malaysia as per the Power Sector Gas Price;
- e) the applicable coal price to be used for electricity generation in Peninsular Malaysia as per the relevant Applicable Coal Price; and
- f) the applicable Stand-by Fuel price to be used for electricity generation in Peninsular Malaysia as per the relevant Stand-by Fuel Monthly Price.

9.9 Three Month Ahead Dispatch Schedule

9.9.1 The Single Buyer shall prepare and finalise the Three Month Ahead Dispatch Schedule by 5:00 pm on the seventh day of the month preceding the commencement of the Three Month Ahead Dispatch Period.

9.9.2 The Single Buyer shall by 5:00 pm on the eighth day of the month preceding the commencement of the Three Month Ahead Dispatch Period:

- a) send each coal Generator their respective Three Month Ahead Dispatch Schedule for the Three Month Ahead Dispatch Period;
- b) send each Generator, as applicable, their respective Stand-by Fuel consumption in tonnes; and
- c) update the Single Buyer Website with the Aggregate Three Month Ahead Dispatch Schedule.

10 Week Ahead Dispatch Schedule

10.1 Purpose

10.1.1 This Chapter sets out the procedures and processes which the Single Buyer shall follow to prepare and finalise the Week Ahead Dispatch Schedule, including key principles, inputs and timing for developing the Week Ahead Dispatch Schedule.

10.1.2 The purpose of the Week Ahead Dispatch Schedule is to assist the Single Buyer in optimising weekly scheduling and fuel mix and providing forecast scheduling information to Generators.

10.2 Key procedural requirements

10.2.1 The Single Buyer shall abide by the following procedural requirements in preparing the Week Ahead Dispatch Schedule:

- a) the Single Buyer shall use the Least Cost Dispatch Scheduling Methodology to prepare and finalise the Week Ahead Dispatch schedule;
- b) in preparing and finalising the Week Ahead Dispatch Schedule the Single Buyer shall ensure that Operating Reserve requirements, transmission constraints (as advised by the Grid System Operator and the Grid Owner), generation constraints and fuel availability and any other factors that could affect the security and reliability of the system as specified by the Grid Code For Peninsular Malaysia or Grid System Operator are adequately taken into consideration and that the resulting dispatch schedule does not compromise the security and reliability of supply;
- c) the Single Buyer shall specify the form and content of Participants' submissions of inputs to the Single Buyer; and
- d) the Single Buyer shall perform its functions in a transparent manner.

10.3 Weekly Dispatch Scheduling Model Update Date

10.3.1 The Weekly Dispatch Scheduling Model Update Date is every Wednesday.

10.3.2 If the Dispatch Scheduling Model Update Date falls on a Non-Working Day, then the Weekly Dispatch Scheduling Model Update Date is the earliest preceding Working Day, which can include up to three (3) consecutive Working Days prior to Wednesday.

10.3.3 If there are more than three (3) consecutive Working Days as Non-Working Days preceding the Weekly Dispatch Scheduling Model Update Date, then the Weekly Dispatch Scheduling Model Update Date is the Thursday preceding the Weekly Dispatch Scheduling Model Update.

10.4 Week Ahead Load Forecast

10.4.1 The Single Buyer shall prepare the Week Ahead Load Forecast before 3:00 pm on the day of the Weekly Dispatch Scheduling Model Update Date.

10.5 Week Ahead Generation Outage Plan

10.5.1 The Grid System Operator shall submit the Week Ahead Generation Outage Plan to the Single Buyer before 10:00 am on the day after the Weekly Dispatch Scheduling Model Update Date and the Single Buyer shall use the most updated Week Ahead Generation Outage Plan made available to it at that particular time in preparing the Week Ahead Dispatch Schedule.

10.6 Week Ahead Transmission Outage Plan

10.6.1 The Grid System Operator shall submit the Week Ahead Transmission Outage Plan to the Single Buyer before 10:00 am on the day after the Weekly Dispatch Scheduling Model Update Date and the Single Buyer shall use the most updated Week Ahead Transmission Outage Plan made available to it at that particular time in preparing the Week Ahead Dispatch Schedule.

10.7 Other Dispatch Scheduling Model inputs

10.7.1 The Single Buyer shall update the Dispatch Scheduling Model for the following inputs by 3:00 pm on the day of the Weekly Dispatch Scheduling Model Update Date:

- a) the relevant Generating Unit Operating Data;
- b) the relevant weekly dispatch of all Hydro Plant based on the Hydro Plant Management Plan;
- c) the relevant weekly dispatch of all Cogeneration Plant based on the Cogeneration Usage Plan;
- d) the relevant weekly electricity imported or exported to any jurisdiction or region (including, but not limited to, countries such as Singapore and Thailand) connected to the Transmission Network based on the Export and Import Plan;
- e) the applicable gas price to be used for electricity generation in Peninsular Malaysia as per the Power Sector Gas Price;
- f) the applicable coal price to be used for electricity generation in Peninsular Malaysia as per the relevant Applicable Coal Price; and
- g) the applicable Stand-by Fuel price to be used for electricity generation in Peninsular Malaysia as per the relevant Stand-by Fuel Monthly Price.

10.8 Week Ahead Dispatch Schedule

10.8.1 The Single Buyer shall prepare and finalise the Week Ahead Dispatch Schedule by 5:00 pm the day after the Weekly Dispatch Scheduling Model Update Date.

10.8.2 The Single Buyer shall send the finalised Week Ahead Dispatch Schedule to the Grid System Operator by 10:00 am the day after the finalisation on the Week Ahead Dispatch Schedule.

10.8.3 The Single Buyer shall update the Single Buyer Website with the Week Ahead Load Forecast for the following week by 5.00 pm on the last Working Day of each Week.

11 Day Ahead Dispatch Schedule

11.1 Purpose

11.1.1 This Chapter sets out the procedures and processes which the Single Buyer shall follow to prepare and finalise the Day Ahead Dispatch Schedule, including key principles, inputs and timing for developing the Day Ahead Dispatch Schedule.

11.2 Key procedural requirements

11.2.1 The Single Buyer shall abide by the following procedural requirements in preparing the Day Ahead Dispatch Schedule:

- a) the Single Buyer shall use the Least Cost Dispatch Scheduling Methodology to prepare and finalise the Day Ahead Dispatch schedule;
- b) in preparing and finalising the Day Ahead Dispatch Schedule the Single Buyer shall ensure that Operating Reserve requirements, transmission constraints (as advised by the Grid System Operator and the Grid Owner), generation constraints and fuel availability and any other factors that could affect the security and reliability of the system as specified by the Grid Code For Peninsular Malaysia or Grid System Operator are adequately taken into consideration and that the resulting dispatch schedule does not compromise the security and reliability of supply;
- c) the Single Buyer shall specify the form and content of Participants' submissions of inputs to the Single Buyer; and
- d) the Single Buyer shall perform its functions in a transparent manner.

11.3 Day Ahead Dispatch Period

11.3.1 The Day Ahead Dispatch Period for the Day Ahead Dispatch Schedule shall be the next Working Day.

11.3.2 If the next day is a Non-Working Day, then the Day Ahead Dispatch Period is defined as the period between the current Working Day and until (and including) the next Working Day restricted to a maximum of four (4) consecutive days, which can include up to four consecutive Non-Working Days.

11.3.3 If there are more than four (4) consecutive Non-Working Days, then the Single Buyer shall prepare a Day Ahead Dispatch for the sixth Day on the fifth consecutive Non-Working Day.

11.4 Day Ahead Load Forecast

11.4.1 The Single Buyer shall prepare the Day Ahead Load Forecast by 10:00 am on the day preceding the commencement of the Day Ahead Dispatch Period.

11.5 Daily Availability Declaration

- 11.5.1 Each Generator shall submit its Daily Availability Declaration to the Single Buyer by 10:00 am on the day preceding the commencement of the Day Ahead Dispatch Period.
- 11.5.2 Each Bidding NEDA Participant wishing to submit a Daily Heat Rate and Variable Operating Rate Bid or a Daily Price Bid shall do so in accordance with the NEDA Rules.
- 11.5.3 The Single Buyer shall ensure that the Dispatch Scheduling Model is updated by 10:30 am on the day preceding the commencement of the Day Ahead Dispatch Period with the relevant Generating Unit Operating Data for each Generator based on the Daily Availability Declarations, Daily Heat Rate and Variable Operating Rate Bids and Daily Price Bids.

11.6 Day Ahead Transmission Outage Plan

- 11.6.1 The Grid System Operator shall submit the Day Ahead Transmission Outage Plan to the Single Buyer by 10:00 am on the day preceding the commencement of the Day Ahead Dispatch Period.
- 11.6.2 The Single Buyer shall ensure that the Dispatch Scheduling Model is updated by 10:30 am on the day preceding the commencement of the Day Ahead Dispatch Period with the relevant Day Ahead Transmission Outage Plan.

11.7 Other Dispatch Scheduling Model inputs

- 11.7.1 The Single Buyer shall update the Dispatch Scheduling Model by 11:00 am on the day preceding the commencement of the Day Ahead Dispatch Period, the following inputs for the Day Ahead Dispatch period:
 - a) the relevant daily dispatch of all Hydro Plant based on the Hydro Plant Management Plan;
 - b) the relevant daily dispatch of all Cogeneration Plant based on the Cogeneration Usage Plan;
 - c) the relevant daily electricity imported or exported to any jurisdiction or region (including, but not limited to, countries such as Singapore and Thailand) connected to the Transmission Network based on the Export and Import Plan;
 - d) the applicable daily gas price to be used for electricity generation in Peninsular Malaysia as per the Power Sector Gas Price;
 - e) the applicable coal price to be used for electricity generation in Peninsular Malaysia as per the relevant Applicable Coal Price;
 - f) the applicable daily Stand-by Fuel price to be used for electricity generation in Peninsular Malaysia as per the relevant Stand-by Fuel Monthly Price;
 - g) the applicable Daily Heat Rate and Variable Operating Rate Bid for each PPA/SLA Generator or an Ex-PPA/SLA Generator where a Daily Heat Rate and Variable Operating Rate Bid has been submitted;
 - h) the applicable Daily Price Bid for each Large Merchant Generator where a Daily Price Bid has been submitted; and
 - i) the applicable Planned Generation Schedule for Price Takers.

11.8 Day Ahead Dispatch Schedule

- 11.8.1 Subject to the Daily Availability Declaration, and the Day Ahead Transmission Outage Plan being submitted to the Single Buyer in accordance with the provisions of Rules 11.5 and 11.6, the Single Buyer shall prepare and finalise the Draft Day Ahead Dispatch Schedule by 12:00 pm on the day preceding the commencement of the Day Ahead Dispatch Period and submit to the Grid System Operator to conduct system reliability checks.
- 11.8.2 The Grid System Operator shall provide its feedback to the Single Buyer on the Draft Day Ahead Dispatch Schedule by 3:00 pm on the day preceding the commencement of the Day Ahead Dispatch Period.
- 11.8.3 If the Grid System Operator fails to provide its feedback by 3:00 pm on the Draft Day Ahead Dispatch Schedule, the Single Buyer shall immediately contact the Grid System Operator and request for immediate feedback. If no feedback is received from the Grid System Operator by 3:30 pm, then the Single Buyer shall proceed to finalise the Draft Day Ahead Dispatch Schedule and inform the Energy Commission.
- 11.8.4 The Single Buyer shall finalise the Day Ahead Dispatch Schedule by 5:00 pm on the day preceding the Day Ahead Dispatch Period and submit the Day Ahead Dispatch Schedule to the Grid System Operator.
- 11.8.5 The Single Buyer shall send to the Nominated Gas Supplier the daily gas requirement based on the Day Ahead Dispatch Schedule by 12:00pm on the day preceding the Day Ahead Dispatch Period.
- 11.8.6 The Single Buyer shall by 5:00 pm on the day preceding the commencement of the Day Ahead Dispatch Period send each Generator their respective Day Ahead Dispatch Schedule. For the avoidance of doubt, the Day Ahead Dispatch Schedule is merely indicative without any binding effect.
- 11.8.7 The Single Buyer shall update the Single Buyer Website with the Day Ahead Load Forecast used for the Day Ahead Dispatch Schedule by 5:00 pm on the day preceding the Day Ahead Dispatch Period.

11.9 Revised Day Ahead Dispatch Schedule

- 11.9.1 The Grid System Operator shall submit to the Single Buyer the Daily Operations Review Report by 8:00 am on the day of the commencement of the Day Ahead Dispatch Period. The Daily Operations Review Report must take the following factors into consideration:
- a) the transmission and generation outages for the day prior to the commencement of the Day Ahead Dispatch period;
 - b) the actual delivery of gas for the prior Day Ahead Dispatch Period;
 - c) any expected variations on Hydro Generation for the prior Day Ahead Dispatch Period.
- 11.9.2 The Single Buyer shall prepare the Revised Day Ahead Load Forecast by 8:30 am on the day of the commencement of the Day Ahead Dispatch Period. Subject to the Daily Availability Declaration, the Day Ahead Transmission Outage Plan, and the Daily Operations Review Report being submitted to the Single Buyer in accordance with the provisions of Rules 11.5, 11.6, 11.7 and 11.9.1, the Single Buyer shall finalise and send the Revised Day Ahead Dispatch Schedule by 10:00 am on the day of the commencement of the Day Ahead Dispatch Period to the Grid System Operator.

11.10 Review of Revised Day Ahead Load Forecast

11.10.1 The Grid System Operator shall submit a Daily Load Variance Report to the Single Buyer which compares the actual daily load to the Revised Day Ahead Load Forecast and must explain in detail any variances in excess of 2% between actual load and the Revised Day Ahead Load Forecast.

11.10.2 The Daily Load Variance Report must be submitted to the Single Buyer and the Energy Commission by 12:00 pm on the day which is two Working Days after the expiration of the Day Ahead Dispatch Period.

11.11 Review of Revised Day Ahead Dispatch Schedule

11.11.1 The Grid System Operator shall prepare and submit a Daily Dispatch Variance Report to the Single Buyer which compares the actual daily dispatch for each Generating Unit to the forecast daily dispatch based on the Revised Day Ahead Dispatch Schedule and must explain in detail any variances in excess of 5% between actual daily dispatch and forecast daily dispatch based on the Revised Day Ahead Dispatch Schedule.

11.11.2 The Daily Dispatch Variance Report must be submitted to the Single Buyer and the Energy Commission by 12:00 pm on the day which is three Working Days after the expiration of the Day Ahead Dispatch Period.

11.12 Review of System Marginal Price

11.12.1 The Single Buyer shall prepare a report which compares the forecast System Marginal Price to the actual System Marginal Price for each Day Ahead Dispatch Interval and must explain in detail any variances in excess of 5% between forecast and actual System Marginal Prices.

12 Supply Capacity Adequacy Assessment

12.1 Purpose

12.1.1 This Chapter sets out the procedures and processes which the Single Buyer shall follow with respect to the preparation of:

- a) the Dispatch Schedules if there is a projected shortfall in generation capacity; and
- b) the One Year Demand and Supply Outlook to project the generation mix and fuel requirement for the coming year.

12.2 Short-term supply adequacy assessment

The Single Buyer shall immediately notify the Energy Commission and take appropriate actions in accordance with the Short Term Supply Adequacy Plan if there is any short-term and/or medium-term supply constraints resulting in a projected shortfall in generation capacity.

12.3 Short-Term Supply Adequacy Plan

12.3.1 The Single Buyer shall develop a Short-Term Supply Adequacy Plan for addressing any constraints with respect to the Single Buyer's development of the Day Ahead Dispatch Schedules and Three Month Ahead Dispatch Schedules.

12.3.2 The Short-Term Supply Adequacy Plan must outline the steps to be taken by the Single Buyer which should include the assessment of:

- a) rescheduling any planned transmission or generator maintenance in discussion with the Grid System Operator and the Generators; and
- b) reducing Customer demand based on the Demand Control Plan as defined hereinafter.

12.4 Demand Control Plan

12.4.1 The Grid System Operator shall develop a Demand Control Plan for demand side response by large Customers. The Demand Control Plan must:

- a) be based on the Demand Control procedures set out in Operating Code No. 4 of the Grid Code For Peninsular Malaysia;
- b) identify persons registered with the Grid System Operator as having capacity to participate in demand side response actions;
- c) set out the procedures that the Grid System Operator shall follow in calling for participants in demand side response actions;
- d) set out the approach to determining any compensation available for participants in demand side response actions;
- e) be reviewed and updated as required at least once every six months;
- f) be approved by the Energy Commission; and
- g) be published on the Single Buyer Website.

12.5 One Year Demand and Supply Outlook

- 12.5.1 The Single Buyer shall prepare a One Year Demand and Supply Outlook and submit to the Energy Commission by the end of January every calendar year.
- 12.5.2 In preparing and finalising the One Year Demand and Supply Outlook, the Single Buyer shall ensure that it consults adequately with the Grid System Operator and the Dispatch Scheduling Working Group.
- 12.5.3 In preparing the One Year Demand and Supply Outlook, the Single Buyer shall use the Least Cost Dispatch Scheduling Methodology and the Dispatch Scheduling Model as specified in Chapter 8, updated for the following key inputs, which the Single Buyer shall source from the relevant Participants as required:
- a) one year of Generating Unit Operating Data for each Generator based on the submissions received from the Generators and the Generator Contracts;
 - b) the dispatch of all Hydro Plant based on the Hydro Plant Management Plan;
 - c) the dispatch of all Cogeneration Plant based on the Cogeneration Usage Plan;
 - d) the electricity imported or exported to any jurisdiction or region (including, but not limited to, countries such as Singapore and Thailand) connected to the Transmission Network in Peninsular Malaysia) if required;
 - e) the most recent applicable gas price to be used for electricity generation in Peninsular Malaysia;
 - f) the most recent applicable coal price; and
 - g) the most recent applicable Stand by Fuel price.
- 12.5.4 The One Year Demand and Supply Outlook shall consist of:
- a) the generation mix based on the one year ahead load forecast and dispatch schedule; and
 - b) the fuel requirements to meet the one year ahead load forecast and dispatch schedule.
- 12.5.5 The Single Buyer shall notify and discuss with the Energy Commission if there is any expected shortfall in generation capacity and/or fuel supply to meet the forecast demand based on the One Year Demand and Supply Outlook.

13 Fuel Management

13.1 Purpose

13.1.1 This Chapter sets out the procedures and processes which the Single Buyer shall follow to monitor the adequacy of gas and coal supply and hydro levels to meet the Week Ahead Dispatch Schedule, the Three Month Ahead Dispatch Schedule and respond to and monitor any unplanned curtailment or disruption to the planned supply and delivery of forecast quantities of gas and coal.

13.2 Gas Supply Committee

13.2.1 The Energy Commission shall establish a Gas Supply Committee to review and assess the adequacy of gas supply for electricity generation in Peninsular Malaysia.

13.2.2 The membership of the Gas Supply Committee shall consist of suitable representatives from the following organisations:

- a) Economic Planning Unit, Prime Minister's Department;
- b) Ministry of Energy, Green Technology and Water;
- c) Energy Commission;
- d) Nominated Gas Supplier;
- e) representatives from gas Generators;
- f) Grid Owner;
- g) Grid System Operator;
- h) Single Buyer.

13.2.3 The Energy Commission shall be the chair of the Gas Supply Committee and shall invite representatives from other organisations to attend the committee meetings as required.

13.2.4 Any conclusions, decisions or recommendations made by the Gas Supply Committee shall be endorsed by the Energy Commission before being finalised. The Energy Commission shall consult with the members of the Gas Supply Committee concerning any conclusion, decision or recommendation.

13.2.5 The Energy Commission shall provide secretariat support to the Gas Supply Committee.

13.2.6 The Gas Supply Committee shall meet at least once every six months to review the adequacy of gas supply based on the relevant Three Month Ahead Dispatch Schedule and the Power Sector Gas Allocation.

13.2.7 At each Gas Supply Committee meeting:

- a) the Single Buyer shall present the requirements for gas supply for electricity generation in Peninsular Malaysia for the next twelve months;
- b) the Nominated Gas Supplier shall provide an update on gas supply availability and reliability for the next six months and identify any risk to future gas supply;
- c) the Gas Supply Committee shall discuss the adequacy of long term gas supply to meet demand; and
- d) any other relevant matter shall be covered as decided by the Energy Commission.

13.2.8 If, pursuant to Rule 13.2.7 based on the Nominated Gas Supplier's update the Gas Supply Committee concludes that the projected gas supply is at risk, then the Energy Commission shall commence the Urgent Gas Procedures.

13.2.9 If the Nominated Gas Supplier becomes aware of any issues which may adversely impact the supply and reliability of gas for electricity generation in Peninsular Malaysia then it shall immediately inform the Energy Commission who shall immediately convene a meeting of the Gas Supply Committee.

13.3 Urgent Gas Procedures

13.3.1 The objectives of the Urgent Gas Procedures are to mitigate and manage the impact of any disruption to planned and expected gas supply.

13.3.2 The Energy Commission shall undertake the followings actions as per the Urgent Gas Procedures which are listed below:

- a) convene meetings of the Gas Supply Committee as required to discuss the impact of the gas supply disruption and present mitigation strategies;
- b) convene the National Gas Task Force to monitor daily gas supply situations and impacts during gas supply disruptions;
- c) require a mitigation plan from the Nominated Gas Supplier to restore the required supply of gas and request the Nominated Gas Supplier to provide regular updates at the Gas Supply Committee meetings;
- d) require the Single Buyer to develop a plan to use Hydro Plants, coal based generation, Stand-by Fuel and electricity imports to make up for the loss of gas based generation, which includes liaising with Hydro Plant Generators, liquid fuel suppliers, coal based Generators, the Nominated Coal Supplier and external jurisdictions connected to the Transmission Network;
- e) require the Single Buyer to calculate the impact on the total cost of generation and the impact on Customer electricity prices;
- f) direct the Single Buyer to take any actions considered necessary in relation to the plan specified in Rule 13.3.2(d); and
- g) any other actions which might result in facilitating resolution or mitigating the impact of the gas supply disruption.

13.4 Coal Supply Committee

13.4.1 The Energy Commission shall establish a Coal Supply Committee to:

- a) monitor and to report on the supply of coal specifically for the electricity generation sector, ensuring sufficiency and at fair pricing;
- b) monitor and to report on the global coal supply and pricing trends as well as to develop an early warning system to ensure no interruption to coal-based electricity generation;
- c) identify issues, including environmental, affecting the use of coal for electricity generation in-line with the objectives of the National Energy Policy;
- d) monitor the coal procurement cost of the Nominated Coal Supplier through coal supply contracts, spot purchases and from other avenues, so as to reflect cost-efficient and effective procurement; and
- e) update the Applicable Coal Price that is set every calendar year quarter and declared to each coal Generator for the coal delivered for the purpose of electricity generation in Peninsular Malaysia.

- 13.4.2 The membership of the Coal Supply Committee shall consist of suitable representatives from the following organisations:
- a) Economic Planning Unit, Prime Minister's Department;
 - b) Ministry of Energy, Green Technology and Water;
 - c) Energy Commission;
 - d) Nominated Coal Supplier;
 - e) representatives from coal Generators;
 - f) Grid Owner;
 - g) Grid System Operator;
 - h) Single Buyer.
- 13.4.3 The Energy Commission shall be the chair of the Coal Supply Committee and shall invite representatives from other organisations to attend the committee meetings as required.
- 13.4.4 Any conclusions, decisions or recommendations made by the Coal Supply Committee shall be endorsed by the Energy Commission before being finalised. The Energy Commission shall consult with the members of the Coal Supply Committee concerning any conclusion, decision or recommendation.
- 13.4.5 The Energy Commission shall provide secretariat support to the Coal Supply Committee.
- 13.4.6 The Coal Supply Committee shall meet at least once every three months but no later than thirty-one (31) days prior to the commencement of each new calendar year quarter.
- 13.4.7 At each Coal Supply Committee meeting:
- a) the Single Buyer shall present the requirements for coal supply for electricity generation in Peninsular Malaysia for the next twelve months based on the relevant Three Month Ahead Dispatch Schedule;
 - b) the Nominated Coal Supplier shall provide an update on coal supply availability and reliability for the next six months and identify any risk to future coal supply;
 - c) the Coal Supply Committee shall discuss the adequacy of long term coal supply to meet demand;
 - d) the Nominated Coal Supplier shall present an overview of its coal procurement activities and demonstrate the efficiency and effectiveness of its coal procurement policy and procedures;
 - e) the Coal Supply Committee shall discuss and propose solutions for any issues concerning procurement presented by the Nominated Coal Supplier;
 - f) the Coal Supply Committee shall discuss any issues and propose solutions concerning coal procurement costs and the coal price setting mechanism; and
 - g) any other relevant matter shall be covered as decided by the Energy Commission.
- 13.4.8 If any conflict of interest is identified in relation to participation of any member in any discussions or actions under Rule 13.4.7, then that member shall not be allowed to participate or undertake in the discussions or actions.
- 13.4.9 If, pursuant to Rule 13.4.7, based on the Nominated Coal Supplier's update the Coal Supply Committee concludes that the projected coal supply is at risk, then the Energy Commission shall commence its Urgent Coal Procedures.
- 13.4.10 If the Nominated Coal Supplier becomes aware of any issues which may adversely impact the supply and reliability of coal for electricity generation in Peninsular

Malaysia then it shall immediately inform the Energy Commission who shall immediately convene a meeting of the Coal Supply Committee.

13.5 Urgent Coal Procedures

13.5.1 The objectives of the Urgent Coal Procedures are to mitigate and manage the impact of any disruption to planned and expected coal supply.

13.5.2 The Energy Commission shall undertake the followings actions as per the Urgent Coal Procedures which are listed below:

- a) convene meetings of the Coal Supply Committee as required to discuss the impact of the coal supply disruption and present mitigation strategies;
- b) require a mitigation plan from the Nominated Coal Supplier to restore the required supply of coal and request the Nominated Coal Supplier to provide regular updates at the Coal Supply Committee meetings;
- c) require the Single Buyer to develop a plan to use Hydro Plants, gas based generation, Stand-by Fuel and electricity imports to make up for the loss of coal based generation, which includes liaising with Hydro Plant Generators, gas based Generators, the Nominated Gas Supplier and external jurisdictions connected to the Transmission Network;
- d) require the Single Buyer to calculate the impact on the total cost of generation and the impact to Customer electricity prices;
- e) direct the Single Buyer to take any actions considered necessary in relation to the plan specified in Rule 13.5.2(c); and
- f) any other actions which might result in facilitating resolution or mitigating the impact of the coal supply disruption.

13.6 Hydro generation

13.6.1 The Single Buyer shall prepare a Hydro Plant Management Plan once every twelve (12) months to forecast hydro generation for storage-based schemes based on hydro generation capacity, lake levels and other relevant assumptions.

13.6.2 The Single Buyer shall update the Hydro Plant Management Plan as required and shall update the Energy Commission with the most recent and up to date Hydro Plant Management Plan.

13.6.3 All Participants shall ensure that they provide the inputs, data and documents as requested by the Single Buyer to prepare and finalise the Hydro Plant Management Plan.

14 Single Buyer Tariff

14.1 Purpose

- 14.1.1 This Chapter sets out principles and mechanism for determining the Single Buyer Tariff. The provisions of this Chapter are designed to enable the Single Buyer to make payments to Generators in accordance with the Generator Contracts and other agreements for the sale and/or purchase of electricity from its own ring-fenced accounts. The Single Buyer shall also be enabled to cover its own operating costs in accordance with the ring-fencing arrangements set out in Chapter 6.
- 14.1.2 The revenue required to enable the Single Buyer to meet the obligations of the Generator Contracts and other agreements for the sale and/or purchase of electricity and the Single Buyer's operating costs shall be recovered via the Single Buyer Tariff in accordance with the Regulatory Implementation Guidelines. The two components of the Single Buyer Tariff, the Single Buyer Generation Tariff and the Single Buyer Operations Tariff, operate to enable the Energy Commission to apply separate price control mechanisms to each tariff component. The arrangements provide for a pass-through of fuel and other generation specific costs, with more frequent adjustments to the Single Buyer Generation Tariff to account for the relatively greater level of volatility for fuel related costs.
- 14.1.3 Under the Energy Commission's regulatory framework, the relevant party as prescribed in the Regulatory Implementation Guidelines shall collect the revenue required to meet Single Buyer Tariff payments as part of the Electricity Tariff charged to Customers.

14.2 Single Buyer Tariff setting arrangements

- 14.2.1 The costs of the Single Buyer shall be recovered in accordance with the Regulatory Implementation Guidelines.
- 14.2.2 The Energy Commission shall establish Single Buyer Tariff arrangements that enable the Single Buyer to recover its costs.
- 14.2.3 The Single Buyer Tariff shall be designed to recover all of the costs of the Single Buyer and shall be comprised of the following components:
- a) a Single Buyer Generation Tariff component calculated in accordance with Rule 14.3, and comprising all costs to the Single Buyer in purchasing electricity including:
 - (i) energy payments, available capacity payments, fuel and any other payments from the Single Buyer to the Generators, or from the Generators to the Single Buyer, provided for in the Generator Contracts and other agreements for the sale and/or purchase of electricity; and
 - (ii) costs of importing electricity from other jurisdictions.

- b) a Single Buyer Operations Tariff component calculated in accordance with Rule 14.4, comprising all of the operational costs incurred by the Single Buyer in undertaking its roles and performing its functions, including:
 - (i) forecasts of efficient operating costs, excluding any costs incurred or revenues received as part of the Single Buyer Generation Tariff component;
 - (ii) a return on the Single Buyer's regulatory asset base reflecting an efficient market based cost of capital;
 - (iii) forecasts of efficient depreciation;
 - (iv) forecast tax payments; and
 - (v) an allowance for efficiency carryover amounts.

14.3 Single Buyer Generation Tariff

- 14.3.1 The Single Buyer Generation Tariff component shall be set by the Energy Commission for the first Regulatory Period and each Regulatory Period thereafter.
- 14.3.2 In setting the Single Buyer Generation Tariff component the Energy Commission shall have regard to:
 - a) any proposal by the Single Buyer concerning forecasts of the elements listed in Rule 14.2.3(a), including, but not limited to:
 - (i) the current prices of gas and coal;
 - (ii) expectations of the demand and supply for gas and coal over the Regulatory Period;
 - (iii) expectations of electricity demand and supply;
 - (iv) the terms and conditions of the Generator Contracts and other agreements for the sale and/or purchase of electricity; and
 - b) any other issues identified by the Energy Commission in its regulatory framework and considered necessary for undertaking its role in regulating the Electricity Industry.
- 14.3.3 The Energy Commission shall establish a cost pass through mechanism to enable the Single Buyer to recover its costs incurred in purchasing electricity as specified in Rule 14.2.3(a).
- 14.3.4 The Single Buyer shall publish the cost pass through regulatory guidelines issued by the Energy Commission on the Single Buyer Website.

14.4 Single Buyer Operations Tariff

- 14.4.1 The Single Buyer Operations Tariff component shall be set by the Energy Commission for the first Regulatory Period and each Regulatory Period thereafter.
- 14.4.2 The Single Buyer Operations Tariff shall be based on the methodology consistent with the regulatory framework and rules established by the Energy Commission and will recover all operating costs of the Single Buyer (excluding those already recovered by the Single Buyer Generation Tariff component) including an estimate of working capital requirements.

14.5 Settlement

- 14.5.1 The Single Buyer shall process invoices from Generators for TNB's settlement based on the terms and conditions of the respective Generator Contracts, NEDA Rules and other agreements for the sale and/or purchase of electricity.
- 14.5.2 The Single Buyer shall recover from the relevant party as prescribed in the Regulatory Implementation Guidelines the actual payments made to the Generators consistent with the Regulatory Implementation Rules.
- 14.5.3 The Single Buyer may at its discretion arrange for an audit of the payments made to the Generators.

15 Long-term Supply and Demand

15.1 Purpose

- 15.1.1 This Chapter sets out the procedures and processes that the Single Buyer shall follow to monitor and assess long-term supply and demand. In meeting its obligations under this Chapter the Single Buyer shall prepare and publish a Ten Year Demand and Supply Forecast Report and if required, prepare and submit to the Energy Commission a Ten Year Generation Planning Report.
- 15.1.2 The Ten Year Demand and Supply Forecast Report are designed to ensure that the Energy Commission, key Government agencies, Participants, the Nominated Gas Supplier and potential investors are informed about the timing of future investments in new generation capacity and the quantities of gas and coal required for electricity generation in the long-term.

15.2 Ten Year Demand and Supply Forecast Report

- 15.2.1 The Single Buyer shall prepare a Ten Year Demand and Supply Forecast Report by the end of May every calendar year, which shall comprise:
- a) a Ten Year Ahead Load Forecast Report prepared in accordance with Rule 15.2.2 and Rule 15.2.3; and
 - b) a Ten Year Ahead Generation Capacity Report prepared in accordance with Rule 15.2.4.
- 15.2.2 The Ten Year Ahead Load Forecast Report should build comprise:
- a) the Ten Year Ahead Load Forecasts; and
 - b) a clear description of all key assumptions used in preparing the load forecasts such as:
 - (i) economic growth;
 - (ii) population and dwelling growth;
 - (iii) major industrial and commercial developments; and
 - (iv) all other economic, social, Government policy or commercial factors which could impact electricity consumption growth in Peninsular Malaysia.
- 15.2.3 In preparing and finalising the Ten Year Ahead Load Forecast Report, the Single Buyer shall ensure that it consults adequately with the Grid Owner and the Long-Term Demand and Supply Working Group.
- 15.2.4 In preparing the Ten Year Ahead Generation Capacity Report, the Single Buyer shall:
- a) use the existing and available generation capacity of all Generators connected to the Transmission Network and Distribution Network;
 - b) incorporate any new generation capacity based on committed generation investments;
 - c) incorporate any new generation capacity based on generation investments that are planned but not yet committed;
 - d) cater for Operating Reserve requirements;
 - e) incorporate all other factors which could affect the security and reliability of supply such as transmission constraints (as advised by the Grid System Operator and the Grid Owner), generation constraints, fuel availability and any other factors that could affect the security and reliability of the system

- as specified by the Grid Code For Peninsular Malaysia or Grid System Operator;
- f) ensure that there is sufficient consultation with the Long-Term Demand and Supply Working Group; and
 - g) consider any other issues concerning security of supply as directed by the Energy Commission.
- 15.2.5 Based on the Ten Year Ahead Load Forecast Report and Ten Year Ahead Generation Capacity Report, the Single Buyer shall prepare and finalise the Ten Year Demand and Supply Forecast Report and submit it to the Energy Commission by the end of May of every calendar year.
- 15.2.6 In preparing the Ten Year Demand and Supply Forecast Report the Single Buyer shall undertake an assessment of the adequacy of long term projections of generation capacity to meet demand and any requirements for new capacity. If in any ten year forecast period there is expected to be a shortfall in generation capacity to meet the Ten Year Ahead Load Forecast, then the Single Buyer shall:
- a) notify and discuss the issue with the Energy Commission
 - b) prepare and submit a Ten Year Generation Planning Report to the Energy Commission by the end of January that shall specify the additional generation capacity required. The Ten Year Generation Planning Report shall specify the type of new generation capacity required (base load, mid merit or peaking), preferred fuel arrangements for the new generation capacity, the preferred location and timing of new generation capacity, the augmentation required to the Transmission Network and any other factors which are considered relevant for investment in new generation capacity; and
 - c) undertake any other actions as directed by the Energy Commission to facilitate security of supply.
- 15.2.7 By the end of June in each calendar year, the Energy Commission shall review and approve the Ten Year Demand and Supply Forecast Report, subject to any amendments that it may request that the Single Buyer make to ensure consistency with the Single Buyer Market Rules.
- 15.2.8 Following approval of the Ten Year Demand and Supply Forecast Report by the Energy Commission, the Energy Commission shall publish the Ten Year Demand and Supply Report on its website.

16 Contracting for New Capacity

16.1 Purpose

16.1.1 This Chapter sets out the roles and responsibilities of the Energy Commission, the relevant Participants, and the Government in contracting for new generation capacity, including initiating the process for tendering, developing requests for tender, assessing tenders, selecting a preferred tender and finalising contracts.

16.2 Role of the Energy Commission

16.2.1 The Energy Commission shall undertake the following functions in relation to contracting for new capacity:

- a) assess any shortfall in generation capacity identified by the Single Buyer to meet the Ten Year Ahead Load Forecast as per the Ten Year Generation Planning report under Rule 15.2.5;
- b) where it considers that new generation capacity is required to meet a projected shortfall, develop requests for tender for new generation capacity, and direct the Single Buyer to assist with developing draft Generator Contracts;
- c) assess tenders for new generation capacity;
- d) select preferred tenders for new generation capacity; and
- e) moderate between parties in the event of any disputes concerning the finalisation of contract terms.

16.2.2 The Energy Commission shall invite representatives from other organisations to assist it in undertaking the functions specified in Rule 16.2.1 as required.

16.3 Initiation of Process for Contracting for New Capacity

16.3.1 When notified by the Single Buyer of any shortfall in generation capacity to meet the Ten Year Ahead Load forecast as per the Ten Year Generation Planning Report under Rule 15.2.5, the Energy Commission shall:

- a) consider the requirement for new generation capacity and either:
 - (i) decide that there is a need to tender for additional capacity, and commence the development of a tender for new capacity required to meet any shortfall in generation capacity; or
 - (ii) decide that there is not presently a need to tender for additional capacity;
- b) develop a plan to meet any shortfall in generation capacity pursuant to Rule 16.3.1.

16.4 Development of Tenders for New Capacity

- 16.4.1 Pursuant to Rule 16.3.1, following a decision that there is a need to tender for new capacity, the Energy Commission shall develop a draft request for tender for new generation capacity, setting out the following key parameters:
- a) the amount of generation capacity required to meet any forecast shortfall in generation capacity;
 - b) generation type, such as peaking or baseload;
 - c) fuel type considerations;
 - d) location;
 - e) requirements for ancillary services;
 - f) draft terms and conditions for the Generator Contract as provided by the Single Buyer; and
 - g) any other factors considered relevant by the Energy Commission.
- 16.4.2 After developing the draft request for tender under Rule 16.4.1, the Energy Commission shall consult with and request input from the Single Buyer, any other relevant Participants or other parties that it considers appropriate to enable it to undertake its functions and meet its objectives.
- 16.4.3 Following the development of a draft request for tender under Rule 16.4.1, the Energy Commission shall develop a final request for tender comprising the conditions of tendering and an exhaustive list of criteria governing the selection of tenders and awarding of the contract, which may include:
- a) the key parameters for the requirement for new generation as developed under Rule 16.4.1;
 - b) requisite characteristics of the tenderers, such as technical, economic and financial capabilities;
 - c) relevant occupational health and safety, environmental, and employment standards that the tenderers must comply with;
 - d) the key selection criteria by which the Energy Commission will shortlist and select a preferred tenderer;
 - e) procedures and timeframes for the tender process; and
 - f) any other factors considered relevant by the Energy Commission.
- 16.4.4 In developing the final request for tender under Rule 16.4.3, the Energy Commission shall consult with the Single Buyer. The Energy Commission may also consult with and request input from the other relevant Participants or other parties that it considers appropriate to enable it to undertake its functions and meet its objectives.
- 16.4.5 Requests for tender for new generation capacity and the tendering criteria under Rule 16.4.3 shall be made publicly available on the Energy Commission's website.

16.5 Assessment of Tenders for New Capacity

- 16.5.1 The Energy Commission shall assess tenders in accordance with the procedures, timeframes and selection criteria developed under Rule 16.4.3 and identify and recommend a preferred tenderer to the Government for endorsement.

16.6 Finalisation

- 16.6.1 After endorsement of a preferred tenderer by the Government under Rule 16.5.1 the Single Buyer shall negotiate the final terms and conditions of the Generator Contract with the winning tenderer.
- 16.6.2 In negotiating the final terms and conditions of the Generator Contract with the winning tenderer, the Single Buyer shall have regard to its objectives under Rule 4.2.
- 16.6.3 The final terms and conditions of the Generator Contract as provided by the Single Buyer may be reviewed by the Energy Commission prior to the parties to the Generator Contract entering into the contract, to ensure that the terms and conditions of the Generator Contract are fair and reasonable, and do not unreasonably discriminate against any party as specified in Rule 6.2.
- 16.6.4 In the event that a tenderer considers that the terms and conditions of any proposed Generator Contract are not fair and reasonable, it may notify the Energy Commission.
- 16.6.5 In the event of a notification under Rule 16.6.4, the Energy Commission may attempt to mediate any disputes between the parties.

17 Dispute Resolution

17.1 Purpose

- 17.1.1 This Chapter sets out the procedures for raising and resolving disputes concerning the compliance of Participants with the Single Buyer Market Rules. The Energy Commission may decide to hear and determine a dispute itself or refer the dispute to the Kuala Lumpur Regional Centre for Arbitration (KLRC) for mediation or arbitration.
- 17.1.2 This Chapter also sets out the processes for the Energy Commission to hear and determine disputes between Participants.
- 17.1.3 Each mediation and arbitration shall be conducted in accordance with the KLRC Mediation Rules and KLRC Arbitration Rules respectively in hearing and determining disputes.

17.2 Application of Dispute Resolution Process

- 17.2.1 The dispute resolution process set out in this Chapter does not apply to disputes between Participants concerning the performance of obligations under the Generator Contracts.
- 17.2.2 Subject to Rule 17.2.1, the dispute resolution process set out in this Chapter relates to disputes that may arise between Participants concerning:
- a) the application or interpretation of the Single Buyer Market Rules;
 - b) a Participant's view that the Single Buyer has performed its functions or otherwise acted in a manner that is inconsistent with its objectives under Rule 4.2;
 - c) the Single Buyer's view that a Participant has acted in a manner that unreasonably prevents the Single Buyer from achieving its objectives under Rule 4.2; or
 - d) a Participant's view that the Single Buyer has performed its functions or otherwise acted in manner that unreasonably discriminates against a Participant as specified in Rule 6.2.
- 17.2.3 It is intended that the dispute resolution process set out in this Chapter or implemented in compliance with the Single Buyer Market Rules 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 Energy Commission, formal legal representation or reliance on legal procedures.

17.3 Raising a Dispute

- 17.3.1 Subject to Rule 17.2.1 and Rule 17.3.2, a dispute relating to any of the matters set out in Rule 17.2.2 may be raised with the Energy Commission by a Participant by serving a statement to the Energy 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 Rule 17.2.2; 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 Energy Commission.
- 17.3.2 Prior to raising a dispute with the Energy Commission under Rule 17.3.1, a party to a dispute shall ensure that:
- a) it has raised the dispute with the other Participant or 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 Energy Commission.
- 17.3.3 Subject to Rule 17.3.4, where a dispute is raised with it under Rule 17.3.1, the Energy Commission shall within ten (10) Working Days elect to:
- a) hear and determine a dispute itself; or
 - b) refer the dispute for mediation or arbitration by KLRCA.
- 17.3.4 The Energy 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.

17.4 Disputes Referred to KLRCA

- 17.4.1 If the Energy Commission refers the dispute to KLRCA for mediation or arbitration, the Energy Commission shall serve a written notice on the parties to the dispute to that effect and the KLRCA Mediation Rules and KLRCA Arbitration Rules shall apply respectively.
- 17.4.2 Any mediation or arbitration conducted in accordance with Rule 17.4.1 shall be conducted in Kuala Lumpur, in English, by a single mediator or arbitrator in accordance with the laws of Malaysia.

17.5 Disputes heard and determined by the Energy Commission

- 17.5.1 In hearing and determining a dispute raised under Rule 17.3.1 itself, the Energy 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.
- 17.5.2 A determination on a dispute may be made by the Energy Commission after consideration of the issues raised under Rule 17.3.1, or any other matters considered relevant by the Energy Commission.

- 17.5.3 A determination on a dispute by the Energy 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.
- 17.5.4 Each party to a dispute that is required by a determination of the Energy 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 Energy Commission as soon as practicable after doing so.
- 17.5.5 Where a dispute is heard by the Energy 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 Energy Commission. In deciding to allocate costs against one or more parties to a dispute, the Energy 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.

18 Change to Single Buyer Market Rules

18.1 Purpose

18.1.1 This Chapter sets out the Rule Change process to be followed in relation to submitting and deciding on Rule Change Proposals.

18.1.2 Any person may submit a Rule Change Proposal, which shall be assessed by either the Energy Commission (in the case of minor or urgent amendments to the Single Buyer Market Rules) or a standing Rule Change Panel (for all other Rule Change Proposals).

18.2 Role of the Energy Commission

18.2.1 The Energy Commission is responsible for the administration and maintenance of the Single Buyer Market Rules.

18.2.2 Subject to Rule 18.2.3, the Energy Commission may amend the Single Buyer Market Rules via a Rule Change.

18.2.3 The Energy Commission may only make a Rule Change:

- a) if a Rule Change Panel has provided a Final Rule Change Recommendation to the Energy Commission in which it declares that it considers that the Rule Change would better facilitate the objectives of the Single Buyer as specified in Rule 4.2; or
- b) under the Minor Rule Change Procedures specified under Rule 18.9; or
- c) under the Urgent Rule Change Procedures specified under Rule 18.10.

18.2.4 The Energy Commission may appoint experts as required to assist it in coming to a decision on whether or not to make a Rule Change.

18.3 Rule Change Panel

18.3.1 The Energy Commission shall convene a standing Rule Change Panel to assess and make recommendations on Rule Change Proposals.

18.3.2 The members of the Rule Change Panel shall be appointed by the Energy Commission and shall comprise an independent chair and additional members from the following organisations:

- a) Single Buyer (one representative);
- b) Generators (one representative from TNB Generation and one representative from Independent Power Producers);
- c) Grid Owner (one representative);
- d) Grid System Operator (one representative); and
- e) any other independent expert or experts as deemed appropriate by the Energy Commission.

18.3.3 In order to be eligible to sit on the Rule Change Panel, a person shall have an understanding of the Electricity Industry or the capacity to readily acquire such an understanding.

18.3.4 The Rule Change Panel may request that the Energy 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.

- 18.3.5 The Energy Commission shall provide secretariat support to the Rule Change Panel.
- 18.3.6 Any costs incurred by the Rule Change Panel in assessing a Rule Change Proposal are to be borne by the Energy Commission.

18.4 Submission of Rule Change Proposal

- 18.4.1 Any person can submit a Rule Change Proposal.
- 18.4.2 All Rule Change Proposals must be submitted in writing to the Energy Commission for review and assessment.
- 18.4.3 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 Rule 4.2;
 - c) propose detailed drafting suggestions for the relevant chapters and rules of the Single Buyer Market Rules 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.

18.5 Initial Assessment of a Rule Change Proposal

- 18.5.1 The Energy Commission shall by the end of five (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 the Single Buyer shall publish the decision of the Energy Commission on the Single Buyer Website.
- 18.5.2 Pursuant to Rule 18.5.1, if the Energy Commission decides that a Rule Change Proposal should be rejected, then the Energy Commission shall provide a written response to the Proposer outlining its reasons for rejecting the Rule Change Proposal.
- 18.5.3 Pursuant to Rule 18.5.1, if the Energy Commission decides that the Rule Change Proposal has merit and should be considered for further assessment, then the Energy Commission shall:
 - a) take any additional steps required to convene a Rule Change Panel in accordance with Rule 18.3 to hear and decide upon the Rule Change;
 - b) cause the Single Buyer to 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.

18.6 Draft Rule Change Recommendation

- 18.6.1 After consideration of the Rule Change Proposal, the Rule Change Panel shall, by the end of twenty (20) Working Days, provide a Draft Rule Change Recommendation to the Energy Commission.
- 18.6.2 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 Single Buyer Market Rules, 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 Rule 4.2;
 - 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 as specified in Rule 4.2; and
 - e) any other matters the Rule Change Panel considers relevant.
- 18.6.3 The Draft Rule Change Recommendation shall be published on the Single Buyer Website, 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 fifteen (15) Working Days from the circulation of the Draft Rule Change Recommendation.

18.7 Final Rule Change Recommendation

- 18.7.1 After consideration of any submissions on the Draft Rule Change Recommendation, the Rule Change Panel shall, by the end of fifteen (15) Working Days, provide a Final Rule Change Recommendation to the Energy Commission.
- 18.7.2 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 Single Buyer Market Rules, 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 Rule 4.2;
 - 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 Rule 4.2;
 - e) proposed drafting to amend the Single Buyer Market Rules in accordance with the Final Rule Change Recommendation; and
 - f) any other matters the Rule Change Panel considers relevant.
- 18.7.3 The Final Rule Change Recommendation must be provided to the Energy Commission and published on the Single Buyer Website.

18.8 Final Rule Change Decision

- 18.8.1 After receipt of the Rule Change Panel's Final Rule Change Recommendation, the Energy Commission shall, within ten (10) Working Days:
- a) produce a Final Rule Change Decision; or
 - b) refer the Final Rule Change Recommendation to the Government.
- 18.8.2 In the event that the Energy Commission decides to refer a Final Rule Change Recommendation to the Government, the Government may direct the Energy Commission to make a Final Rule Change Decision.
- 18.8.3 A Final Rule Change Decision by the Energy Commission under Rule 18.8.1 or 18.8.2 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 Energy Commission, which either:
 - (i) rejects the Rule Change Recommendation; or
 - (ii) 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 Rule 4.2;
 - d) in the event that the Energy Commission decides to reject the Rule Change Recommendation, a statement of reasons setting out how the Energy Commission considers that the Rule Change Recommendation would not better facilitate the achievement of the objectives as specified in Rule 4.2;
 - e) in the event that the Energy Commission has decided to accept the Draft Rule Change:
 - (i) a statement of reasons setting out how the Energy Commission considers that the Rule Change Recommendation would better facilitate the achievement of the objectives as specified in Rule 4.2; and
 - (ii) a revised draft of the Single Buyer Market Rules, amended in accordance with its Final Rule Change Decision.

18.9 Minor Rule Change Procedures

- 18.9.1 Where the Energy Commission is of the view that a Rule Change or Rule Change Proposal will not materially impact or disadvantage any Participant, it may commence Minor Rule Change Procedures to amend the Single Buyer Market Rules to address the issue identified.
- 18.9.2 Under Minor Rule Change Procedures, the Energy Commission may unilaterally amend the Single Buyer Market Rules without calling for submissions or referring the Rule Change to the Rule Change Panel or Government.
- 18.9.3 Any Rule Change via the Minor 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 Energy Commission considers that the Rule Change would address the issue identified; and
 - b) a revised draft of the Single Buyer Market Rules.

18.10 Urgent Rule Change Procedures

18.10.1 In the event that the Energy Commission becomes aware of a material error in the Single Buyer Market Rules, or an event occurs which:

- a) threatens security of supply;
 - b) threatens the viability of the Electricity Industry or a Participant; or
 - c) would otherwise materially jeopardise the achievement of the Energy Commission's objectives as set out in the Energy Supply Act 1990,
- the Energy Commission may commence Urgent Rule Change Procedures to amend the Single Buyer Market Rules to address the issue identified.

18.10.2 Under Urgent Rule Change Procedures, the Energy Commission may, upon consultation with the Single Buyer, amend the Single Buyer Market Rules without calling for submissions or referring the Rule Change to the Rule Change Panel or Government.

18.10.3 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 Energy Commission considers that the Rule Change would address the issue identified under Rule 18.10.1; and
- b) a revised draft of the Single Buyer Market Rules.

19 Single Buyer Website and Publications

19.1 Purpose

19.1.1 This Chapter sets out the requirements for the maintenance of a Single Buyer Website including the key reports, data sets and forecasts that shall be published on the Single Buyer Website.

19.2 Single Buyer Website

19.2.1 The Single Buyer shall develop a Single Buyer Website to promote transparency in performing its functions under the Single Buyer Market Rules.

19.2.2 The Single Buyer Website shall be owned, operated and maintained by the Single Buyer.

19.2.3 The Single Buyer shall ensure that the Single Buyer Website:

- a) is accessible by the general public on the World Wide Web and secure from cyber threat and/or attacks;
- b) presents data and information clearly;
- c) is updated regularly for new reports, market information and data; and
- d) provides a link to the websites of and the Energy Commission and the Ministry of Energy, Green Technology and Water.

19.3 Publications

19.3.1 The Single Buyer shall publish the following key reports, data sets and forecasts on the Single Buyer Website:

- a) the current version of the Single Buyer Market Rules, including all Rule Changes;
- b) the organisational structure of the Single Buyer;
- c) the Terms of Reference and membership of each Single Buyer Working Group;
- d) a schematic and description of the Dispatch Scheduling Model;
- e) the current and historical versions of the Aggregate Three Month Ahead Dispatch Schedules;
- f) the current and historical versions of the Aggregate Week Ahead Dispatch Schedules;
- g) the Demand Control Plan;
- h) the Aggregate Power Sector Gas Volume;
- i) the current and historical Single Buyer Generation Tariff and Single Buyer Operations Tariff;
- j) any other data, reports or information as required by a Rule Change or at the direction of the Energy Commission; and
- k) the Ten-Year System Outlook.

19.4 Confidentiality Obligations

- 19.4.1 The Single Buyer shall at all times comply with its confidentiality obligations in publishing any information on the Single Buyer Website, including confidentiality obligations under the Generators Contracts and requirements of the Energy Commission.
- 19.4.2 The Single Buyer may, subject to the approval of the Energy Commission, limit accessibility to certain information available on the Single Buyer Website, which are published in accordance with the requirement of the Single Buyer Market Rules or as necessary for the transparent and efficient operations of the Single Buyer market to registered Participants only.

20 Appendices

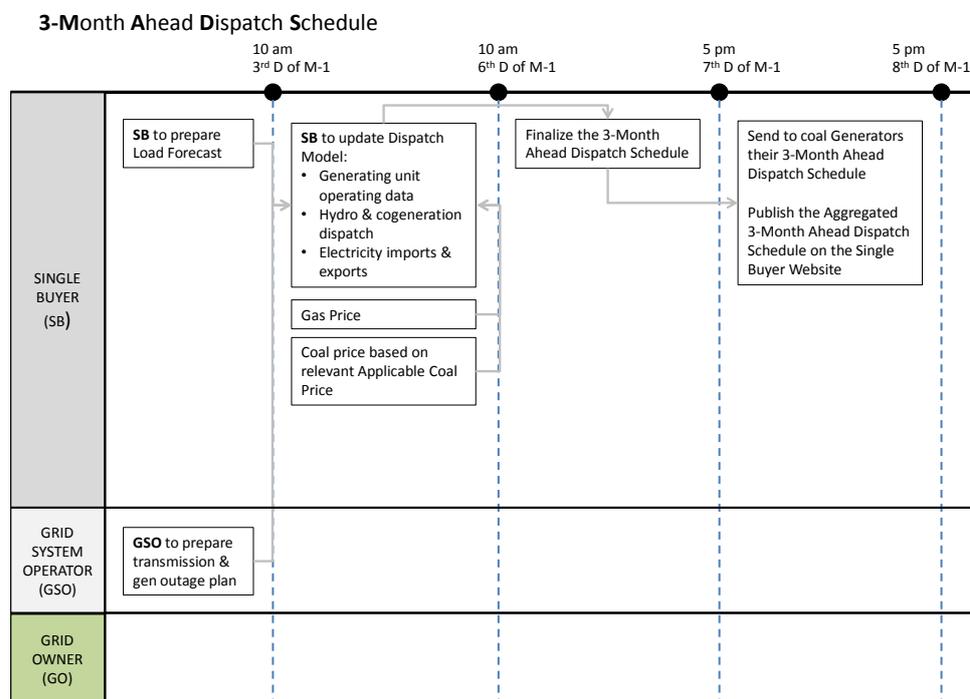
20.1 Purpose

20.1.1 This Chapter presents the flow charts outlining the key steps in the preparation and finalisation of the Dispatch Schedules.

20.1.2 This Chapter is for illustration only and is not part of the Single Buyer Market Rules.

20.2 Flow chart of the Three Month Ahead Dispatch Schedule

20.2.1 The flow chart is presented below.

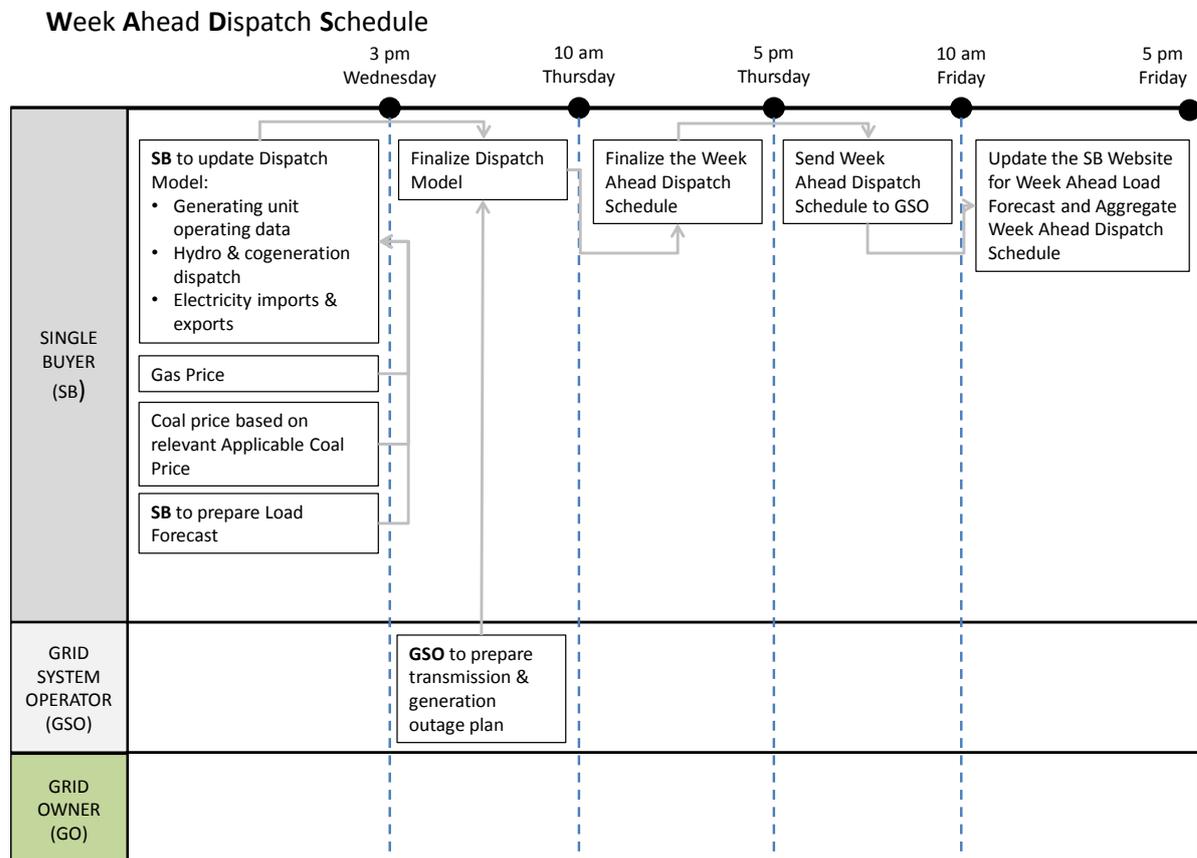


PM = Prior Month

20.3 Flow chart of the Week Ahead Dispatch Schedule

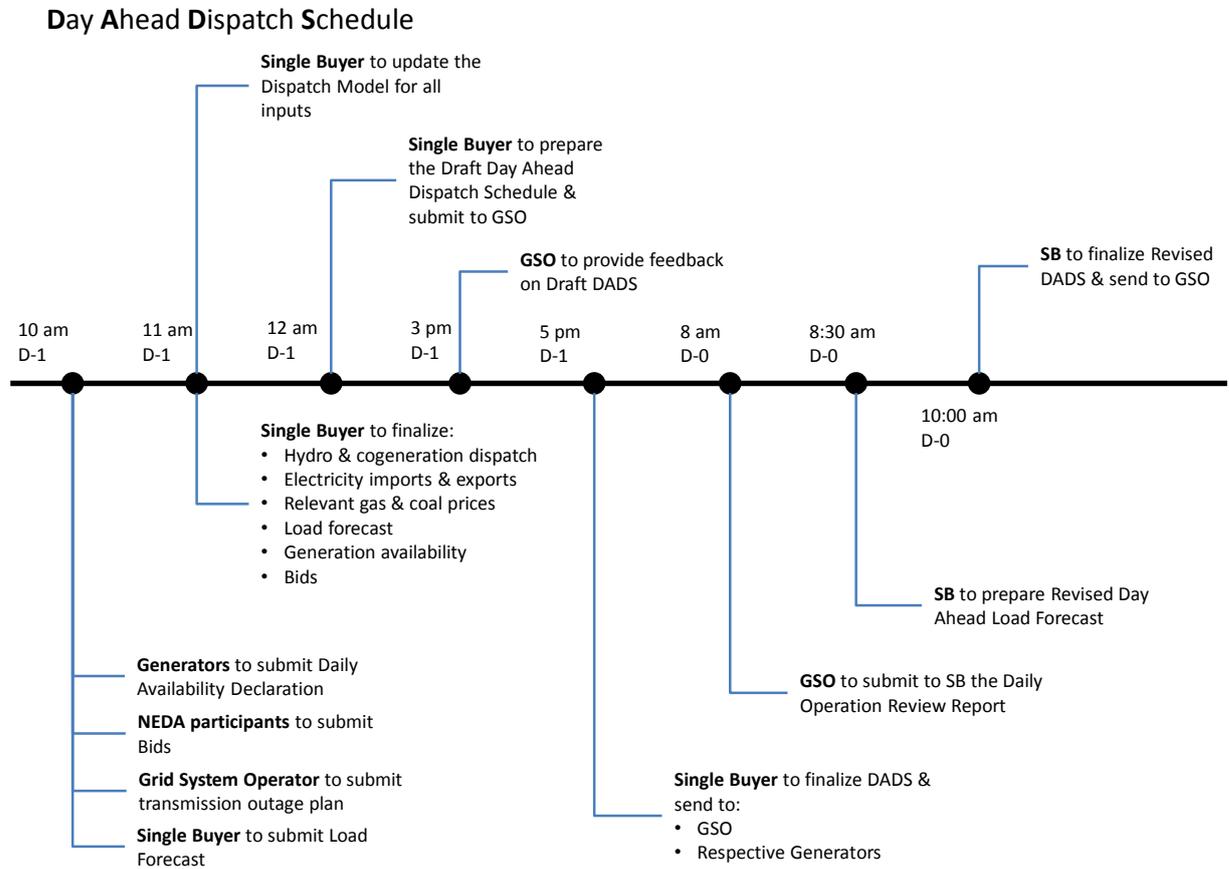
20.3.1 The flow chart is presented below.

20.3.2 It is assumed in the flow chart that Wednesday is a Working Day.



20.4 Flow chart of the Day Ahead Dispatch Schedule

20.4.1 The flow chart is presented below.



**ANNEX 2:
RING-FENCING PRACTICES AND PROCEDURES
FOR SINGLE BUYER**

Contents

1	INTRODUCTION	84
1.1	Background	84
2	TERMS AND DEFINITIONS	86
2.1	Definitions	86
2.2	Conventions	86
3	GOVERNANCE AND ORGANISATIONAL STRUCTURE	87
3.1	Head of Single Buyer	87
3.2	Organisational Structure	87
4	SEPARATION FROM TNB	89
4.1	Physical Separation	89
4.2	Corporate Identity	89
5	SINGLE BUYER OPERATIONS	90
5.1	Uniform and Transparent Operations	90
5.2	Sharing of Information	90
5.3	Highly Sensitive Confidential Information	90
6	FINANCE & ACCOUNTS	91
6.1	Finance Functions	91
6.2	Reporting	91
7	HUMAN RESOURCE MANAGEMENT	92
7.1	Human Resource Functions	92
7.2	Contract of Employment	92
7.3	Transfer of Employees between the Single Buyer and TNB	92
8	INFORMATION TECHNOLOGY	93
8.1	Information and Communications Technology Functions	93
8.2	Information and Communications Technology Operations	93
9	COMPLIANCE	94
9.1	Compliance Officer	94
9.2	Consultation and Escalation	94

1 INTRODUCTION

1.1 Background

1.1.1 The Single Buyer is authorised by the Minister in accordance with Section 22B of the Act to be the “Single Buyer” responsible for the management of procurement of electricity and related services, which includes planning, scheduling, procuring and settlement, in Peninsular Malaysia.

1.1.2 The Energy Commission has pursuant to the Act issued the Single Buyer Market Rules to govern the operation of the Single Buyer Market which includes a statutory duty to ring-fence its operations to ensure the Single Buyer is able to purchase electricity and perform its functions as the Single Buyer in a fair and non-discriminatory manner while promoting competition in the energy generation sector and enhance public confidence in the Electricity Industry.

1.1.3 The Single Buyer Market Rules require the Single Buyer to:

- (a) ensure no decisions or act are made in a manner that unreasonably discriminates against or favouring any Participant;
- (b) identify and implement appropriate procedures where interactions with other divisions and units of TNB and other Participants may give rise to potential conflicts of interests, reduces competition or provide competitive advantage to any Participant;
- (c) maintain a separate set of Single Buyer Accounts relating to the performance of its functions as the Single Buyer and ensure any costs shared between the Single Buyer and any other divisions and units of TNB are allocated fairly and consistently; and
- (d) limit access to any information about other Participants in the possession of the Single Buyer that may give rise to potential conflicts of interests, reduces competition or provide any competitive advantage to any Participant.

1.1.4 The purpose of this document is to set out the operating practices and procedures in the operations of the Single Buyer to ensure compliance with the general ring-fencing obligations and principles as laid down by the Act and the Single Buyer Market Rules and to promote transparency in the operations of the Single Buyer.

- 1.1.5 This document shall apply without derogating from the generality of the ring-fencing obligations and principles as laid down by the Act and the Single Buyer Market Rules. In the event of any inconsistency or conflict, the general principles shall apply.

2 TERMS AND DEFINITIONS

2.1 Definitions

2.1.1 Unless otherwise specified herein, any capitalized items in this document shall have the meanings set out against them in the Single Buyer Market Rules.

2.2 Conventions

2.2.1 In this document, unless the contrary intention appears:

- (a) any reference to a statutory provision includes any modification, consolidation or re-enactment thereof for the time being in force;
- (b) words denoting one gender include all other genders and words denoting the singular includes the plural and vice versa;
- (c) headings are used for convenience only and do not affect the interpretation of this document;
- (d) a reference to a person includes an individual, company, trust, partnership, joint venture, association, corporation or other body corporate and any government agency;
- (e) a reference to a thing includes the whole and any part of it;
- (f) a reference to a rule, chapter or appendix is a reference to a rule, chapter or appendix in the Ring-Fencing Practices and Procedures for Single Buyer;
- (g) “function” includes a function, power, duty, responsibility and authority; and
- (h) the word “include” or “including” serves only to illustrate or emphasise the provision and is not to be construed as limiting the words to which the illustration or emphasis relates.

3 GOVERNANCE AND ORGANISATIONAL STRUCTURE

3.1 Head of Single Buyer

3.1.1 The Head of Single Buyer shall oversee the day-to-day operations of the Single Buyer.

3.1.2 In performing the functions of the Head of Single Buyer, the Head of Single Buyer shall have regards to and take steps to avoid conflicts of interest which may have an effect of reducing competition or provide competitive advantage to any Participant (including any division or unit of TNB).

3.1.3 The Head of Single Buyer shall have the ultimate responsibility for ensuring compliance with the ring-fencing obligations in accordance with the Single Buyer Market Rules and this document. In the event of any ambiguity, the Head of Single Buyer shall report to the Single Buyer Oversight Panel for guidance and implement any recommendations as may be made by the Single Buyer Oversight Panel.

3.1.4 The Head of Single Buyer shall be accountable to the Single Buyer Oversight Panel for compliance with the Single Buyer Market Rules.

3.2 Organisational Structure

3.2.1 The Single Buyer shall be ring-fenced from TNB such that the management of the Single Buyer is capable of acting independently from other activities of TNB. In particular, the Single Buyer shall:

- (a) procure electricity through scheduling dispatch on a least cost basis without discriminating or favouring any Participant and carry out load forecasts and capacity planning separately and independently from similar functions within TNB and other Participants to ensure no conflicts of interests;
- (b) negotiate and administer Generator Contracts in a fair and balanced manner without discriminating or favouring any Participant;
- (c) provide expertise, guidance and advice to facilitate the development of the Malaysian electricity supply industry and promote confidence in the generation sector as a whole; and

- (d) publish key information with regard to the performance of the Single Buyer to promote transparency in accordance with the reporting requirements under the Single Buyer Market Rules and Incentive Based Regulations.
- 3.2.2 Subject to Rules 3.2.3, an employees of the Single Buyer shall ultimately only report to the Head of Single Buyer and shall not simultaneously hold any position in any other Participant (including in any other division or unit of TNB).
- 3.2.3 Employees of the Single Buyer may participate in committees, working groups, cross functional activities and meetings involving other Participants (including other divisions and units of TNB) relevant to the performance of its function as the Single Buyer provided such committees, workings groups, cross functional activities and meetings will not give rise to potential conflicts of interests, have an effect of reducing competition or provide competitive advantage to any Participant.
- 3.2.4 Examples of situations which may give rise to potential conflicts of interests include committees, working groups and meetings concerning tendering for new generation capacities, internal meetings and strategic developments of any Participant (including other division or units of TNB).

4 SEPARATION FROM TNB

4.1 Physical Separation

- 4.1.1 The Single Buyer shall be physically separated from other Participants (including other divisions and units of TNB).
- 4.1.2 The Single Buyer shall have separate works areas in different buildings or different floors with access controls that prevent personnel other than employees of the Single Buyer from accessing work areas of the Single Buyer.
- 4.1.3 Members of any other Participant (including any other division or unit of TNB) visiting the Single Buyer shall be considered as external visitors and may only enter into work areas of the Single Buyer when accompanied by employees of the Single Buyer.

4.2 Corporate Identity

- 4.2.1 The Single Buyer shall use corporate identity and branding, including logo, corporate colours, uniforms, letterheads, business cards and website, which is distinguishable from that of any other Participant (including TNB).
- 4.2.2 The Single Buyer shall ensure that its name, logo, website, letterheads, e-mail and any other materials where its name and logo appear provide that the Single Buyer is a “ring-fenced entity pursuant to the Electricity Supply Act 1990”.

5 SINGLE BUYER OPERATIONS

5.1 Uniform and Transparent Operations

5.1.1 The Single Buyer shall practice standard operating procedures for its various functions including dispatch scheduling, contract management, invoice processing, fuel management and long term planning processes which shall be applied uniformly to ensure no Generator shall be favoured over other Generators.

5.1.2 The relevant standard operating procedures which are applicable and mandatory for all Generators to follow shall be made available on the Single Buyer Website to promote transparency in the operations of the Single Buyer.

5.2 Sharing of Information

5.2.1 The Single Buyer shall practice standard protocols for requesting of information from other Participants (including other divisions and units of TNB).

5.2.2 Requests of information from other Participants (including any other divisions and units of TNB) shall be made in writing to the Head of Single Buyer. The Head of the Single Buyer shall evaluate the written request of information for any potential conflict of interest or effect of reducing competition or competitive advantage to any Participant. Only information which will not give rise to any conflict of interest or have an effect of reducing competition or provide competitive advantage to any Generator or other Participant may be released.

5.2.3 The Single Buyer may also release a prescribed and approved set of information periodically to all or relevant Generators.

5.2.4 The Single Buyer is encouraged to share information with all Generators and other Participants through the Single Buyer Website to promote equal accessibility.

5.3 Confidential Information

5.3.1 The Single Buyer shall practice additional security protocols over any confidential information originating from or relating to the functions of the Single Buyer.

6 FINANCE & ACCOUNTS

6.1 Finance Functions

- 6.1.1 Back office finance functions of the Single Buyer may be outsourced to TNB. In the event that the Single Buyer outsources its back office functions, the Single Buyer shall take all reasonable steps to ensure that the confidentiality of its financial affairs is maintained.

6.2 Reporting

- 6.2.1 The Single Buyer Accounts shall be prepared in accordance with the Incentive Based Regulation and Regulatory Implementation Guideline.

7 HUMAN RESOURCE MANAGEMENT

7.1 Human Resource Functions

7.1.1 Human resource functions of the Single Buyer= may be outsourced to TNB.

7.2 Contract of Employment

7.2.1 So long as the Single Buyer is a unit, division, or subsidiary of TNB, then existing employees for the Single Buyer shall remain as employees of TNB.

7.3 Transfer of Employees between the Single Buyer and TNB

7.3.1 Transfer of any employee between the Single Buyer and any other division or unit of TNB shall be subject to a conflict of interest evaluation. All transferring employees shall be required to sign a declaration of confidentiality as well as be required to return all information obtained or held through the original position.

8 INFORMATION TECHNOLOGY

8.1 Information and Communications Technology Functions

- 8.1.1 Information technology functions of the Single Buyer may be outsourced to TNB.
- 8.1.2 In the event that the Single Buyer outsources its information technology functions, the Single Buyer shall take all reasonable steps to ensure that the confidentiality of its affairs is maintained.
- 8.1.3 The Single Buyer may engage external service providers for any information and communication technology requirements in addition to TNB. The contract of engagement in any such engagement shall include confidentiality undertakings to maintain confidentiality over the affairs of the Single Buyer.

8.2 Information and Communications Technology Operations

- 8.2.1 The Single Buyer may share the same information technology systems with other divisions and units of TNB however there must be firewalls and access controls in place to prevent members of other divisions and units of TNB from accessing information and systems of the Single Buyer.
- 8.2.2 No person other than the Head of Single Buyer may authorize TNB to share any information in the systems, servers and exchange of the Single Buyer with any other divisions and units of TNB.

9 COMPLIANCE

9.1 Compliance Officer

- 9.1.1 The Single Buyer shall designate an employee of the Single Buyer as the Compliance Officer responsible for monitoring and managing the compliance of the Single Buyer with the Single Buyer Market Rules and this document.
- 9.1.2 The Compliance Officer shall be in charge of implementing standard operating procedures, codes of conducts and other processes as may be recommended to ensure compliance of the Single Buyer with the ring-fencing obligations.
- 9.1.3 The Compliance Officer shall periodically conduct training and workshops with employees and new joiners on the ring-fencing obligations, the Single Buyer Market Rules and this document. The Compliance Officer shall brief and periodically remind other divisions and units of TNB the ring-fencing obligations under the Single Buyer Market Rules and this document.

9.2 Consultation and Escalation

- 9.2.1 The Compliance Officer shall consult the Head of Single Buyer on any concerns over potential conflict of interest that may have an effect of reducing competition or provide competitive advantage to any Participant (including any division or unit of TNB) as a result of any non-compliance with this document.
- 9.2.2 The Head of Single Buyer may escalate material concerns to the Single Buyer Oversight Panel for determination and guidance where necessary.



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