PROPOSED REVISIONS TO THE PHILIPPINE GRID CODE (PGC)

Provision	Grid Code Provision	Proposed Revisions
PGC 1.1.2 Scope and Application	This Chapter applies to all Grid Users including: (a) The Grid Owner; (b) The System Operator; (c) The Market Operator; (d) Generators; (e) Distributors; (f) Suppliers; and (g) Any other entity with a user System connected to the Grid.	Include Metering Services Provider under the enumeration and use the term Metering Services Provider instead of Meter Operator. This Chapter applies to all Grid Users including: (a) The Grid Owner; (b) The System Operator; (c) The Market Operator; (d) Generators; (e) Distributors; (f) Suppliers; (g) Meter Service Provider; and (h) Any other entity with a user System connected to the Grid.
PGC 1.6 Definition	Central Dispatch. The process of issuing direct instructions to the electric power industry participants by the System Operator to achieve economic operation while maintaining Power Quality, Stability, and the Reliability and Security of the Grid	Central Dispatch. The process of scheduling by the Market Operator and issuing direct instructions to electric power industry participants by the System Operator to achieve economic operation of the transmission system while maintaining its quality, stability, and the reliability and security
PGC 1.6 Definition	Customer. Any person/entity supplied with electric service under a contract with a Distributor or Supplier	Customer. A person who engages in the activity of purchasing electricity supplied through a transmission or distribution system other than where all that person's electricity requirements are purchased from a Supplier
PGC 1.6 Definition	Demand. The Active Power and/or Reactive Power at a given instant or averaged over a specified interval of time, that is actually delivered or is expected to be delivered by an electrical Equipment or supply System. It is expressed in Watts	Demand. The Active Power and/or Reactive Power integrated over a specified period of time that is actually delivered or is expected to be delivered to a load

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	(W) and or VARs or multiples thereof.	
PGC 1.6 Definition	Demand Bid	Insert definition of Demand Bid which is defined as follows: Demand Bid. A standing bid, or market bid to buy electricity submitted or revised, by a Customer in accordance with the WESM Rules.
PGC 1.6 Definition	Financial Year. The same as calendar year.	Financial Year. A period commencing on 01 January and terminating on 31 December of the year
PGC 1.6 Definition	Generation Schedule. Refers to the schedule that indicates the hourly output of the Scheduled Generating Units that will provide Ancillary Services for the next Schedule Day	Replace definition of Generation schedule with Dispatch Schedule, which is defined as follows: Dispatch Schedule. The target loading levels in MW for each scheduled generating unit or scheduled load and for each reserve facility at the end of that trading interval determined by the Market Operator through the use of a market dispatch optimization model
PGC 1.6 Definition	Grid. The high voltage backbone system of interconnected transmission lines, substations, and related facilities for the purpose of conveyance of bulk power. Also known as the Transmission System.	Grid. The high voltage backbone system of interconnected transmission lines, substations and related facilities, located in each of Luzon, Visayas and Mindanao, or as may be determined by the ERC in accordance with Section 45 of the Act
PGC 1.6 Definition	Load. An entity or an electrical Equipment that consumes electrical Energy.	Load. The electrical energy demand of an electrical equipment over a given period of time
PGC 1.6 Definition	Market Bid	Insert definition of Market Bid, which is defined as follows: Market Bid. A Demand for a particular trading interval of a particular trading day in the current market horizon
PGC 1.6 Definition	Market Operator. An independent group, with equitable representation from the electric power industry participants, whose tasks includes the operation and administration of the Wholesale Electricity	Market Operator. The entity responsible for the operation of the spot market governed by the Philippine Electricity Market (PEM) Board in accordance with Clause 1.4 of the WESM Rules which, for the avoidance of doubt, is the autonomous group market operator (AGMO) for a period of twelve months from the spot

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	Spot Market in accordance with the Market Rules	market commencement date as declared by the Department of Energy (DOE) and thereafter the entity to which the functions
PGC 1.6 Definition	Non-Scheduled Generating Unit	Insert definition of Non-Scheduled Generating Unit, which is defined as follows: Non-Scheduled Generating Unit. A Generating unit offered by Generation Company not subject to Central Dispatch
PGC 1.6 Definition	Operating Margin. The margin of generation over the total Demand plus losses that is necessary for ensuring Power Quality and the Security of the Grid. Operating Margin is the sum of the Frequency regulating Reserve and the Contingency Reserve	Operating Margin. The margin of generation over the total demand plus losses that is necessary for ensuring power quality and the security of the grid. Operating margin is the sum of the load following and frequency regulating reserve and the contingency reserve
PGC 1.6 Definition	Reliability. The probability that a System or Component will perform a required task or mission for a specified time in a specified environment. It is the ability of a power System to continuously provide service to its Customers.	Reliability. The performance of the elements of the bulk electric system that results in electricity being delivered to customers within accepted standards and in the amount desired. Reliability may be measured by the frequency, duration, and magnitude of adverse effects on the electric supply
PGC 1.6 Definition	Scheduled Generating Plant. A Generating Plant whose Generating Units are subject to Central Dispatch by the System Operator.	Delete
PGC 1.6 Definition	Scheduled Generating Unit. A Generating Unit within a Scheduled Generating Plant.	Scheduled Generating Unit. A generating unit within the generating plant offered by Generation Company for Central Dispatch.
PGC 1.6 Definition	Significant Incident: An event on the Grid, a Distribution System, or the System of any User that has a serious or widespread effect on the Grid, The Distribution System, and/or the User	Significant Incident: An event that threatens the integrity of the system or affects the security of the Grid.

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	System.	
PGC 1.6 Definition	Supplier. Any person or entity authorized by the ERC to sell, broker, market, or aggregate electricity to end-users.	Supplier. Any person or entity licensed by the ERC to sell, broker, market or aggregate electricity to End Users.
PGC 1.6 Definition	System. Refers to the Grid or Distribution System or any User System. Also a group of Components connected or associated in a fixed configuration to perform a specified function.	Delete this definition and instead use "Power System", which is defined as follows: Power System. The integrated system of transmission, distribution network and generating plant for the supply of electricity
PGC 1.6 Definition	System Operator. The party responsible for generation Dispatch, the provision for ancillary services, and operation and control to ensure safety, Power Quality, Stability, Reliability, and Security of the Grid	System Operator. The party identified as the System Operator pursuant to the Grid Code which is the party responsible for generation dispatch, the provision of ancillary services, and operation to ensure safety, power quality, stability and reliability and security of the grid
PGC 1.6 Definition	User. A person or entity that uses the Grid or Distribution System and related facilities. Also, a person or entity to whom the Grid Code or Distribution Code applies.	User: A person or entity that uses the Grid or Distribution System and related facilities to which the Grid Code or Distribution Code applies.
PGC 1.6 Definition	Voltage Control. The strategy used by the System Operator, Distributors, or User to maintain the voltage of the Grid, Distribution System, or the User System within the limits prescribed by the Grid Code or the Distribution Code.	Voltage Control. Control of transmission voltages through adjustments in generator reactive output and transformer taps and by switching capacitor and reactors on the transmission and distribution systems
PGC 2.2.3.1	All members of the GMC shall have a	Except for the initial members of the GMC whose term have been

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	term of three (3) years and shall be allowed only one re-appointment.	specified in their respective appointments, all subsequent members of the GMC shall have a term of three (3) years and shall not be eligible for re-appointment. However, the initial members of the GMC whose specific appointments are less than three (3) years term shall be available for re-appointment, but only once.
PGC 2.5.1.1	Any party who has evidence that any other has violated or is violating any provision of the Grid Code may file a compliant to the GMC who shall initiate an enforcement process. The GMC may initiate the enforcement process even if no complaint has been filed but it has information on possible Grid Code violations. The ERC may also direct the GMC to begin the enforcement process.	Any party who has evidence that any other party has violated or is violating provisions of the Grid Code, may file a complaint with the ERC who shall initiate an enforcement process or may direct the GMC to initiate the enforcement process. ERC may likewise direct the GMC to commence the process even if no compliant has been filed upon information on possible violations to the Grid Code.
PGC 2.5.3.1	If an emergency situation arises which the provisions of the Grid Code have not foreseen, the System Operator shall, to the extent reasonably practicable, consult promptly all affected Users in an effort to reach agreement as to what should be done.	If an emergency situation arises which the provisions of the Grid Code have not foreseen, the System Operator shall, to the extent reasonably practicable, consult promptly all affected Users in an effort to reach an agreement as to the appropriate action to be taken. The System Operator shall accordingly inform the ERC of the existence of emergency situations not foreseen by the provisions of the Grid Code and shall provide the ERC with a final report.
PGC 2.6 PGC 2.6.1	Grid Management reports Quarterly and Annual reports Significant Incident reports	Inclusion of the following provisions: 2.6 SIGNIFICANT INCIDENT REPORTS 2.6.1 The following are considered Significant Incidents: 2.6.1.1 Multiple Transmission Line tripping. (more than one

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		Transmission Line Outage) 2.6.1.2 Generator tripping resulting in Automatic Load Dropping 2.6.1.3 Yellow or Red alerts status 2.6.1.4 Loss of large load resulting in frequency higher than 61 hertz 2.6.1.5 Islanding operation 2.6.1.6 Grid/Sub-Grid blackout 2.6.1.7 Other events considered to be Significant Incidents by the GMC
PGC 2.6.2 PGC 2.6.2.1	Significant Incident Reports Within one (1) week following a Significant Incident in the Grid or a User System, the System Operator shall submit to the GMC and the ERC a report detailing the sequence of events and other relevant information pertaining to the incident. The report shall describe the cause of the Significant Incident and the amount and duration of the resulting power interruption	2.6.2 Submission of Significant Incident Reports 2.6.2.1 Within one (1) week following the Significant Incident in the Grid, the System Operator shall submit to the GMC and ERC a report detailing the sequence of events and other relevant information pertaining to the incident. The final report shall describe the cause of the Significant Incident and the extent and duration of the resulting power interruptions.
PGC 2.6.2.2	Within one (1) month following the submission by SO of the Significant Incident report, the GMC shall validate such reports and make recommendations to the ERC. In cases where any Industry Participants has violated any provisions of the Grid Code, the GMC may recommend to the ERC appropriate sanctions as part of its report validation.	2.6.2.2 Regular report as required for specific events shall continue to be submitted until the resolution of the incident.
		Inserting new provision:

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		2.6.2.3 Within one (1) month following the submission by the System Operator of the Significant Incident report, the GMC shall validate such report and make recommendations as may be necessary, to the ERC. In the event any Industry Participant has, in the opinion of the GMC, appeared to have violated any provision of the Grid Code, the GMC may recommend appropriate sanctions to the ERC as part of its report validation.
		2.6.2.4 A monthly summary of all Significant Incident reports shall be prepared by the System Operator for submission to the GMC and ERC, which includes information on the following: the quantified unserved energy resulting from all incidents in a month, the immediate action(s) undertaken to alleviate the situation and a plan of action to prevent recurrence of same or similar events.
PGC 2.6.3	Special Reports	2.7. GRID MANAGEMENT REPORTS. 2.7.1 Quarterly and Annual reports. 2.7.1.1 The GMC shall submit to the ERC four (4) Quarterly reports before the end of the month immediately following the quarter. 2.7.1.2 The GMC shall submit to the ERC an Annual report of the previous year by the end of March of the current year. 2.7.2 Special reports The GMC shall prepare Special reports as ordered by the ERC or any appropriate government agency, or at the request of any User or as it may deem necessary. Any costs incurred for the

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		preparation of Special reports at the request of any User shall be borne by the said User.
PGC 3.2.2.2	The control of the System frequency shall be the responsibility of the Systems Operator. The System Operator shall maintain the fundamental frequency within the limits of 59.7 Hz and 60.3 Hz during normal conditions.	The control of System frequency shall be the responsibility of the System Operator. The System Operator shall maintain the fundamental frequency within the limits of 59.4 Hz and 60.6 Hz during normal conditions.
PGC 3.3.3.2 (b)	Outages due to generation deficit.	Outages due to load shedding as a result of generation deficit.
PGC 3.3.3.2 (d)	Outages that are initiated by the System Operator or Market Operator during the occurrence of Significant Incidents or the failure of their facilities.	Outages that are initiated by the System Operator during the occurrence of Significant Incidents or the failure of their facilities.
PGC 3.3.3.2 (e)	Outages caused by adverse Weather or Major Storm Disasters, which result in the declaration by the government of a state of calamity.	Outages caused by any natural or manmade calamities.
PGC 5.5.1.2	The Connection Point shall be controlled by a circuit breaker that is capable of interrupting the maximum short circuit current at the point of connection.	Connection Points to Sub-transmission Lines shall, as a minimum, be provided with disconnect switches but all substations connected thereto shall be provided with circuit breaker(s). Connection Points to Transmission Lines shall require circuit breaker(s) using the appropriate configuration so as not to compromise Grid Security. The circuit breaker(s) shall be capable of interrupting the maximum short circuit current at the point of installation.
PGC 7.2.1.1 (d)	The loading levels of all transmission	The loading levels of all transmission lines and substation

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	lines and substation Equipment are below 90% of their continuous ratings; and	Equipment shall be 100% of the maximum continuous ratings of phase conductors and transformers based on the manufacturers' equipment nameplate rating and material test reports. Deviations may only be acceptable as recommended by the GMC and as finally approved by the ERC.
PGC 7.9.2.1	If the Grid Owner (or a User) wishes to undertake a System Test on the Grid (or the User System), it shall submit to the System Operator a System Test Request that contains the following: The purpose and nature of the proposed System Test The extent and condition of the Equipment involved; and A proposed System Test Procedure specifying the switching sequence and the timing of the switching sequence.	If the Grid Owner (or a User) wishes to undertake a System Test on the Grid (or the User System), it shall submit to the System Operator a System Test Request that contains the following: - The purpose and nature of the proposed System Test; - The extent and condition of the Equipment involved; and - A proposed System Test Procedure specifying the switching sequence and the timing of the switching sequence. The System Operator shall be responsible for informing and coordinating with the Market Operator on the System Tests, Scheduling, implementation, and evaluation.
PGC 8.2.1.1 Responsibilities of the Market Operator	The Market Operator shall be responsible for the preparation of the Generation Schedule, in accordance with the Market Rules and the procedure described in Article 8.4	Revise as follows: The Market Operator shall be responsible for the preparation and issuance of the Dispatch Schedule in accordance with the WESM Rules and the procedure described in Article 8.4
PGC 8.2.1.2 Responsibilities of the Market Operator	The Market Operator shall be responsible for the final issuance of the final Generation Schedule.	Delete
PGC 8.2.2 Responsibilities of the System Operator		Insert this provision: 8.2.2.4 The System Operator shall be responsible for providing all operational data under Section 3.5.3 of the WESM Rules and from the Energy Management System (EMS) which are required for the operation of the WESM.

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PGC 8.2.2.1 Responsibilities of the System Operator	The System Operator shall be responsible in providing Central Dispatch for the Generating Scheduled Units, following the procedures specified in Article 8.5, and the Generation Schedule prepared by the Market Operator.	The System Operator shall be responsible for Central Dispatch of all the Scheduled Generating Units, following procedures specified in Article 8.5 and the Dispatch Schedule prepared by the Market Operator.
PGC 8.2.2.2 Responsibilities of the System Operator	The System Operator is responsible for ensuring that the number of strategically located Generating Units are available for Ancillary Services, including the provision of Frequency Regulating Reserve and Contingency Reserve.	The System Operator is responsible for ensuring that a number of Generating Units are available for Ancillary Services.
PGC 8.2.2.3 Responsibilities of the System Operator	The System Operator shall be responsible in issuing Dispatch Instructions for the Scheduled Generating Units and the Generating Units providing Ancillary Service.	Retain with correction: The System Operator shall be responsible for issuing Dispatch Instructions to the Scheduled Generating Units and the Generating Units providing Ancillary Service.
PGC 8.2.2.4 Responsibilities Of the System Operator		Insert this provision: 8.2.2.4 The System Operator shall be responsible for providing all operational data from the Energy Management System which are required for the operation of the WESM.
PGC 8.2.4.1 Responsibilities of Generators	The Generator is responsible for submitting the Capability and Availability Declaration, Generation Scheduling and Dispatch parameters, and other data for its Scheduled Generating Unit.	The Generator is responsible for submitting the Capability and Availability Declaration, Generation Scheduling and Dispatch Parameters, and other data for its Scheduled Generating Units to the System Operator.
PGC 8.2.4.2 Responsibilities of Generators		Insert this provision: The Generator with Scheduled Generating Units shall submit

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		Generation Offers for Energy and Operating Reserve to the Market Operator in accordance with Section 3.5 of the WESM Rules and consistent with the information submitted to the Market Operator under Article 8.2.4.1.
PGC 8.2.4.2 Responsibilities of Generators	The Generator with a Scheduled Generating Unit shall be responsible for ensuring that all Dispatch Instructions from the System Operator are implemented.	Renumber as 8.2.4.3 and revise as: The Generator with Scheduled Generating Unit shall be responsible for ensuring that all Dispatch instructions from the System Operator are implemented within the dispatch tolerance.
PGC 8.2.4.3 Responsibilities of Generator	The Generator providing Ancillary Services shall be responsible in ensuring that its Generating Units can provide the necessary support when instructed by the System Operator to do so.	Renumber as 8.2.4.4 and revise as: The Generator contracting/offering Ancillary Services shall be responsible for ensuring that its Generating Units can provide the necessary services when scheduled or instructed by the System Operator to do so.
PGC 8.2.5.1 Responsibilities of Distributors and Other Users	Distributors and other Users are responsible for submitting their Demand data for the Grid Operating Program to be used in Scheduling and Dispatch.	Revise: Distributors and other Users are responsible for submitting their Demand data to be used in Scheduling and Dispatch by the Market Operator.
PGC 8.2.5.2 Responsibilities of Distributors and Other Users		Insert this provision: The Distributors and other Users may submit Demand Bids in accordance with Section 3.5 of the WESM Rules.
PGC 8.2.5.2 Responsibilities of Distributors and Other Users	Distributors and other Users are responsible for implementing all Dispatch Instructions pertaining to Demand Control during an emergency situation.	8.2.5.3 replaces 8.2.5.2 (Retain original text)
PGC 8.3.1.1 Grid Operating Margin	The Operating Margin of the Grid shall include the generating capacity for the Frequency Regulating Reserve, which is	The Operating Margin of the Grid shall include the generating capacity for operating reserves which comply with the Grid Operating criteria specified in Section 7.2.2

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	required to respond to changes in Demand during normal conditions and the Contingency Reserve needed to respond to a sudden reduction in generation during emergency conditions, in accordance with the Grid operating criteria specified in Section 7.2.2	
PGC 8.3.1.2 Grid Operating Margin	The System Operator shall allocate the Frequency Regulating Reserve to strategically located generating Plants in order to achieve the required levels of Primary Response and Secondary Response to Frequency changes in the Grid.	The System Operator shall develop procedures for determination and allocation of reserve requirements and define the appropriate control requirements to comply with the Grid operating criteria specified in Section 7.2.2.
PGC 8.3.1.3 Grid Operating Margin	The System Operator shall allocate the Contingency Reserve to strategically located Generating Plant availability.	The Market Operator shall co-optimize the allocation of operating reserves in the Scheduling and Dispatching through competitive reserve offers described in Section 3.5 of the WESM Rules.
PGC 8.3.2.2 Scheduling and Dispatch Criteria	The Market operator shall take into account the following factors in preparing the Generation Schedule: The registered parameters of the Scheduled Generating Units; The requirements for voltage control and Reactive Power; The need to provide an Operating margin for Frequency Control; Availability of Ancillary Services; and, Bilateral contracts between Generators and Users.	The Market Operator shall take into account the following factors in preparing the Dispatch Schedule: a. The Demand and Reserve requirement of the Grid; b. The physical constraints of the Generating Units, Load Substations and the Transmission Network; c. The Generation Offers and Demand Bids of the Market Participants; d. Additional constraints and contingency limitations imposed by the System Operator on the Grid; e. Other requirements imposed by the WESM Rules
	All the bids to buy Energy and offers to	All the bids to buy Energy and offers to sell Energy for each hour

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PGC 8.3.3.1 Scheduling and Dispatch Data	supply Energy for each hour of the trading day shall be submitted to the Market Operator one day ahead of trading day.	of the trading day shall be submitted to the Market Operator in accordance with Section 3.5 of the WESM Rules.
PGC 8.4.1.1	The System Operator shall prepare a cohesive forecast of hourly Grid Demand, which shall include the System Loss in the Grid.	The preparation of Generation Schedules shall be through real-time competitive offers for energy and reserve, as well as through demand bids as described in Chapter 3 of the WESM Rules.
PGC 8.4.1.2; 8.4.1.3; 8.4.1.4;8.4.2.1; 8.4.2.2; 8.4.2.3;8.4.3.1; 8.4.5.2; 8.4.5.3; 8		Delete.
PGC 8.4.6.1 Issuance of Generation Schedule	The Generation Schedule for the next Schedule Day shall be issued by the Market Operator within the period prescribed by the Market Rules. However, if a Significant Incident occurred while the Generation Schedule is being prepared, the Market Operator may extend the deadline for the issuance of the final Generation Schedule.	The Generation Schedule shall be issued by the Market Operator within the timetable prescribed by the WESM Rules.
PGC 8.4.6.2 Issuance of Generation Schedule	The final Generation Schedule shall indicate the hourly output of each Scheduled Generating Unit for the following Scheduled Day. It shall also indicate the Generating Units that are providing specific Ancillary Services.	The final Generation Schedule shall indicate the hourly output of each Scheduled Generating Unit for each Trading Interval including the allocation of reserves.
PGC 8.5.1.4 Dispatch Instruction	The System Operator shall issue the Dispatch Instruction to all Generators regarding their day-ahead hourly Generation Schedule through an appropriate means of communication.	The System Operator shall issue the Dispatch Instruction to all Generator's regarding their hourly Generation Schedule through an appropriate means of communication.

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PGC 8.5.3.1 Dispatch Instruction for Ancillary Services	The Dispatch Instructions for Frequency Regulating Reserves shall specify whether the Generating Unit will provide Primary Response or Secondary Response.	The Dispatch Instructions to be issued by the System Operator for operating reserves shall be based on the Generating Schedules provided by the Market Operator.
PGC 8.5.4.3 Scheduled Generating Unit's Response To Dispatch Instructions	Generating Units providing Frequency Regulating Reserves and Contingency for the Grid shall respond to the Dispatch Instructions of the System Operator according to the required capability of the Generating Units as specified in Article 5.4	Generating Units providing Frequency Regulating Reserve and Contingency Reserve for the Grid shall respond to the Dispatch Instruction of the System Operator and through automatic means (i.e., primary and secondary frequency controls) according to the required capability of the Generating Units as specified in Article 5.4.
PGC 9.2.2.1-2 Metering Responsibility	The Metering Services Provider shall supply, install, connect, test, adjust, place in service, operate, check, and maintain the primary revenue metering System. Consistent with Market Rules, all primary revenue meters shall be owned and maintained by the Meter Operator.	Delete second sentence
PGC 9.2.2.2 Metering Responsibility		Delete
PGC 9.5.1.1 Integrating Pulse Metering Data		Delete
PGC 9.5.7.1-3 Billing and Settlement Procedure		Delete
PGC 9.5.8.1-2 Validation and Substitution of Metering Data		Delete

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PGC 9.5.9.1-4 Storage and availability of Metering Data		Delete
PGC 9.6.1-4 Settlement and Audit Procedure		Delete