

# Market Surveillance Committee Monthly Over-riding Constraints Report

26 September to 25 October 2022

**February 2023**

This Report is prepared by the  
Philippine Electricity Market Corporation –  
Market Assessment Group for the  
Market Surveillance Committee

The Philippine Electricity Market Corporation reserves all rights to this document and the information contained herein. Printing/photocopying of this document is subject to the Document and Records Management Policy. Copies downloaded from the document management system or obtained by other means shall be considered Uncontrolled.

# 1 OVER-RIDING CONSTRAINTS MONITORING

By Category and Region .....	Pg. 1
By Hour Type .....	Pg. 1
By Incident .....	Pg. 2
By Plant Type .....	Pg. 3

# 4 IMPOSITIONS TO SYSTEM EQUIPMENT

# 5 PLANTS ON COMMISSIONING TEST

# 6 ANNEX A

# CONTENTS OF THE REPORT

# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

## IMPOSITIONS BY CATEGORY AND REGION

**19,488 Total Impositions**

All of which are **non-security** limits.



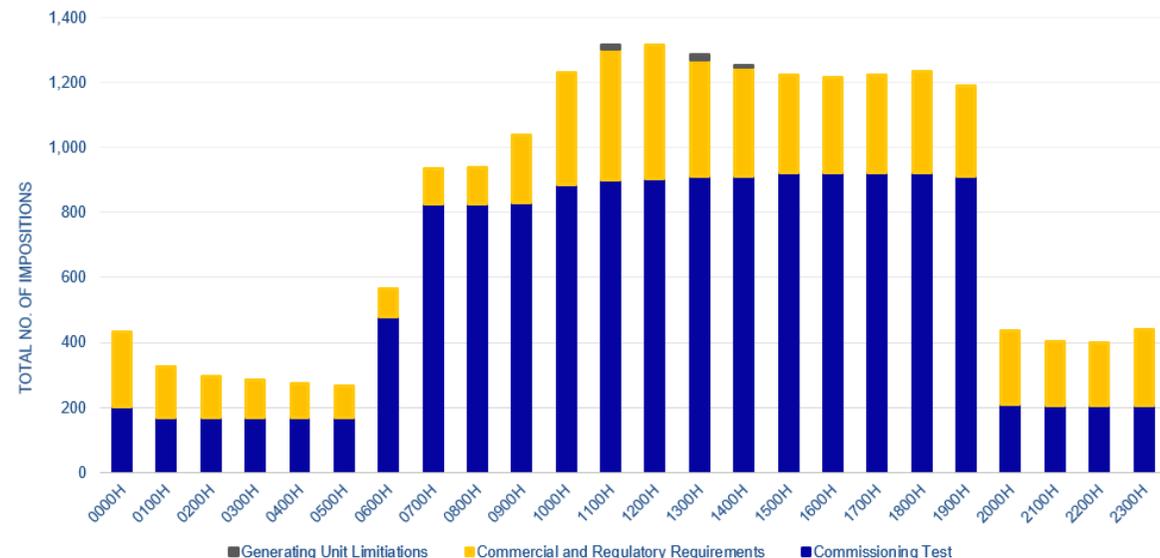
A **decrease of 4.8%** on Over-riding Constraints (OC) impositions was observed during the October 2022 billing month due to the decline in the impositions related to commissioning test and commercial and regulatory requirements involving **24 Luzon** and **21 Visayas** plants.

**No security limit** impositions were noted during the October 2022 billing month.

*Note: Under the Dispatch Protocol Manual Issue 16.0, imposition of over-riding constraints falls into 2 categories – 1) security limit i.e., MRU and other types as may be recommended by SO and 2) non-security limit. Security limit is imposed to address possible threats in system security while non-security limit is related to 1) generating unit limitations, 2) commercial and regulatory tests, and lastly, 3) conduct of commissioning test of plants.*

*The monitoring of the over-riding constraints is based on the data and information provided by MO (i.e., real time market results and MMS-input files on security limits) and SO (i.e., SO Data for Market Monitoring).*

## IMPOSITIONS BY HOUR



Similar with the hourly trend from the previous month, majority of over-riding constraints imposed over a 24-hour period were caused by the conduct of commissioning tests which constituted **67 percent of the total impositions**.

Majority of impositions were scheduled during peak hours for both commissioning tests and commercial and regulatory requirements. In addition, impositions attributable to generating unit limitations were observed during 1100H, 1300H, and 1400H due to capability lagging test wherein the ramping capabilities of the generators are further tested.

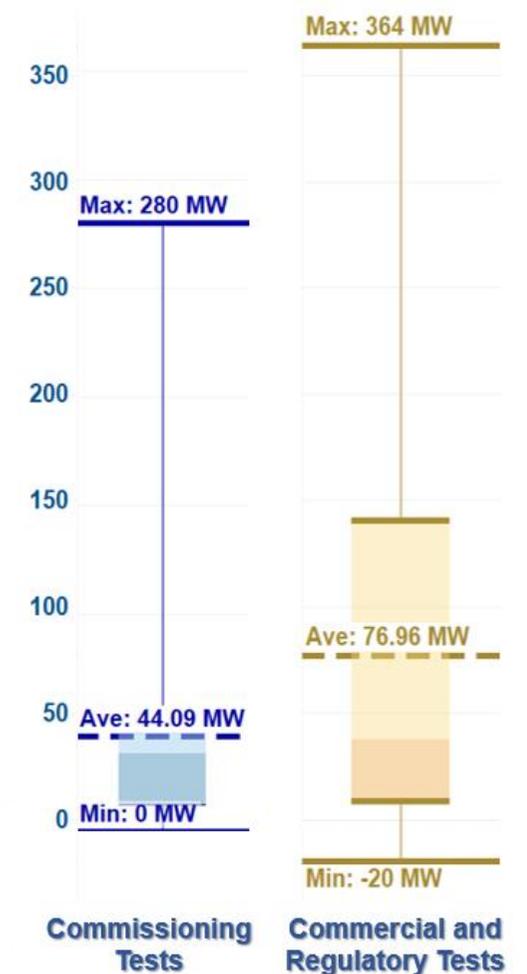
# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

## IMPOSITIONS BY INCIDENTS

Despite the expiration of commissioning period of some plants, one (1) plant started its commissioning test resulting in the minimal change on the overall impositions during the billing month.

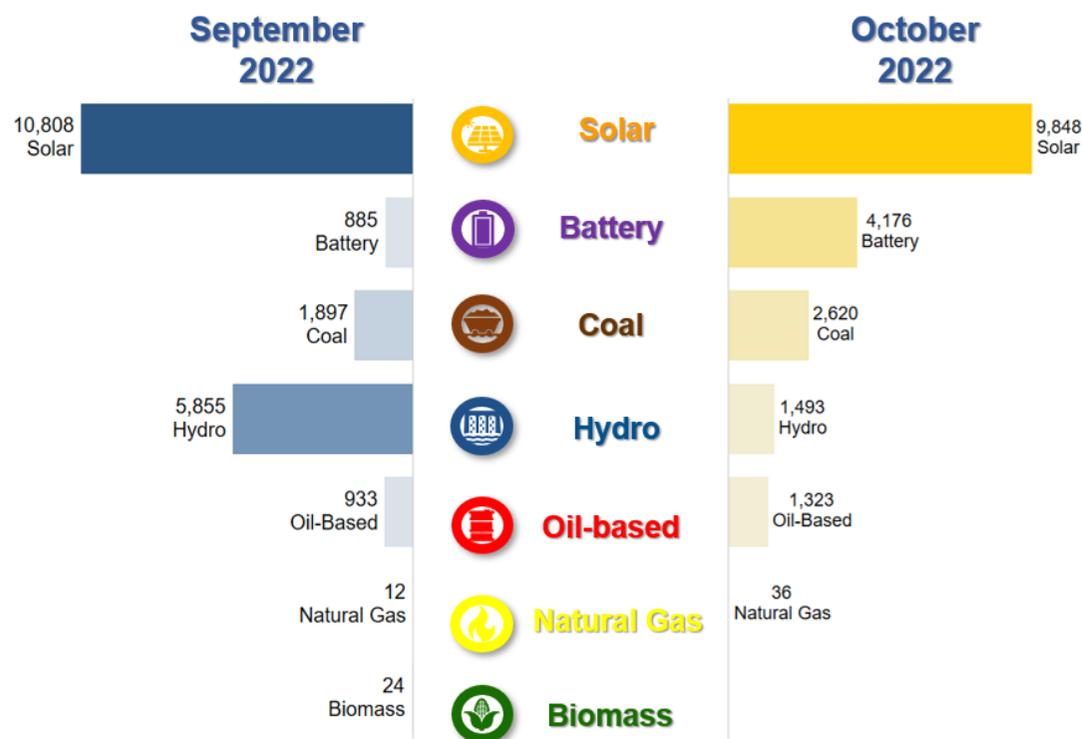
Commercial and regulatory requirements imposed to plants with large capacities has had more impact on the market than those plants under commissioning test which are mostly renewable energy plants that have relatively lower capacities, as presented in the scheduled capacities corresponding to the impositions.

## SCHEDULED CAPACITIES (MW)



# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

## IMPOSITIONS BY PLANT TYPE



Overall, over-riding constraints impositions for the covered billing month increased for all types of plants, except for biomass, hydro and solar, due to the following

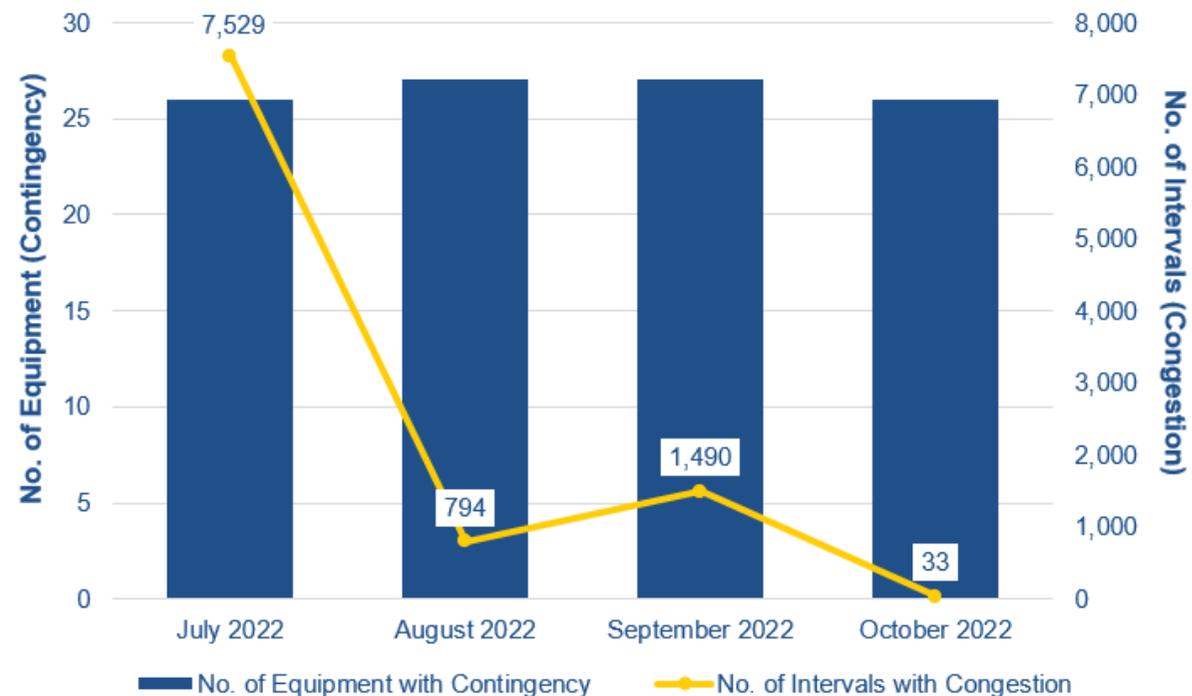
- Increase in the number of over-riding constraints impositions for **battery** plants were attributable to commissioning tests.
- A-decrease in the commissioning test was a result of the expiration of testing period of **solar** and **hydro** plants.
- The increase noted for **coal** plants was due to the conduct of performance tests (i.e., Pmax, Electrostatic Precipitator, Ramp Rate, and Reactive Power test) resulting in the increase for the overall impositions during the month of October, while the commercial and regulatory requirement tests for **coal** plants remained the same from the previous months.
- Increase in ancillary and emission tests by **oil-based** plants caused the increase in overall imposition for this resource type.

# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

## IMPOSITIONS TO SYSTEM EQUIPMENT

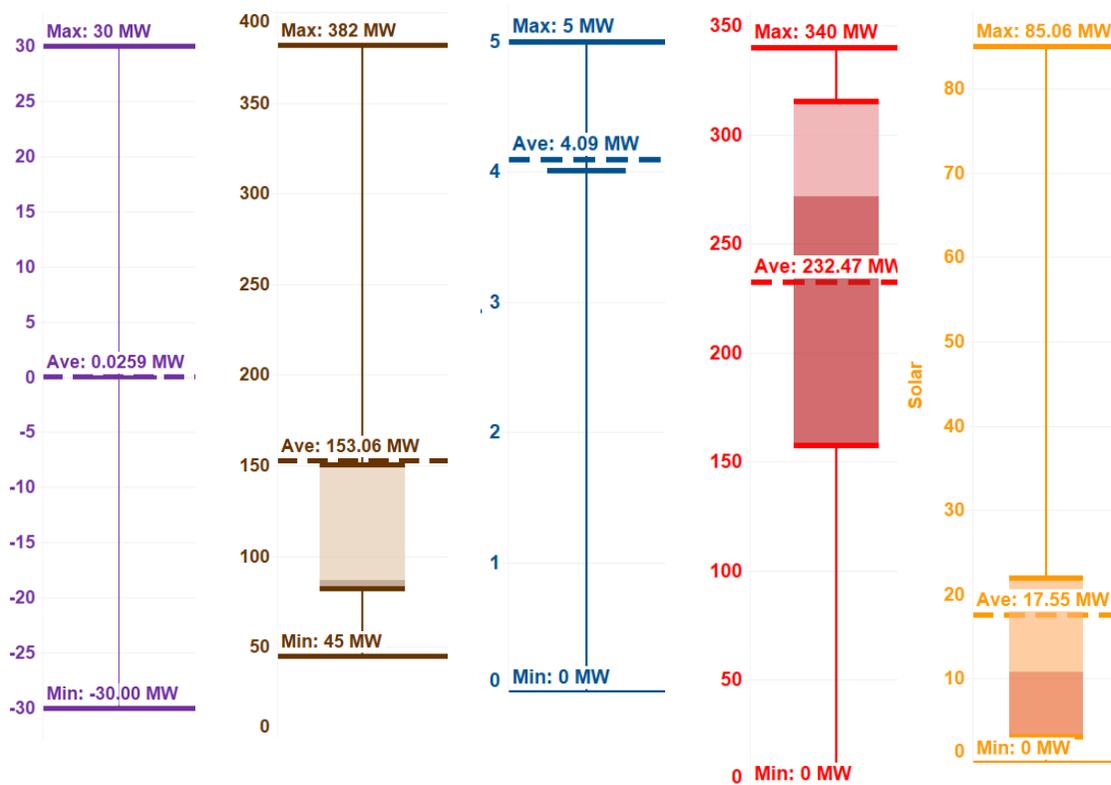
During the October 2022 billing month, **26 equipment** were observed to have been imposed with N-1 contingency which may have contributed in the congestions for only **33 intervals** this month, which is a **97.8% decrease** from the previous month. These impositions may have likewise contributed in the implementation of the **price substitution methodology (PSM)** for **19 intervals**. It should however be noted that there are intervals when the PSM would have been present but were over-ridden by the impositions of the secondary price cap due to continuous presence of high market prices.

Equipment imposed with N-1 Contingency
230kV Bauang-Latrinidad Line 1
230kV Bauang-Latrinidad Line 2
230kV Binga-Latrinidad Line 1
230kV Binga-Latrinidad Line 2
230kV Concepcion-Mexico Line 1
230kV Concepcion-Mexico Line 2
Nagsaag_EHV Transformer 1
Nagsaag_EHV Transformer 2
Kadampat_EHV Transformer 1
Kadampat_EHV Transformer 2
Kadampat_EHV Transformer 3
Kadampat_EHV Transformer 4
230kV San Manuel-Concepcion Line 1
230kV San Manuel-Concepcion Line 2
230kV Sucat-Binan Line 1
230kV Sucat-Binan Line 2
230kV Sucat-Binan Line 3
230kV Sucat-Binan Line 4
230kV Binan-Dasmarinas Line 1
230kV Binan-Dasmarinas Line 2
230kV Calamba-Binan Line 1
230kV Calamba-Binan Line 2
230kV Makban-Calamba Line 1
230kV Makban-Calamba Line 2
230kV Makban-Lumban Line 1
230kV Makban-Lumban Line 2



# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

## PLANTS ON COMMISSIONING TEST



There was an observed decrease in the **impositions of over-riding constraints** related to **commissioning tests**, when compared to the previous month, logging a total of **13,949 impositions** and with an average scheduled capacity of **16.4 MW**.

During the covered billing month, majority of impositions related to commissioning tests were attributable to solar plants, followed by battery energy storage facility, hydro, coal, and oil-based plants.

Based on the updates provided by the Independent Electricity Market Operator of the Philippines (IEMOP) and the SO, the following were the updates on the **status of power plants under commissioning tests**:

- **1 Battery plant** conducted commissioning tests following its increase in capacity
- **1 Hydro plant and 1 Solar plant** had **expired** commissioning test periods in September 2022 and were yet to be issued with either Final Certificate of Approval to Connect (FCATC), or an extension of PCATC (Provisional Certificate of Approval to Connect)

Due to their capacity, larger plants such as coal and oil-based were scheduled at a higher level of MW as compared with Hydro and Solar plants.

On the other hand, scheduled capacities for the battery plants were in the same level in terms of maximum and minimum levels considering their charging and discharging capabilities.

*Note: The Department of Energy (DOE) department circular no. DC2021-06-0013 (Adopting a General Framework Governing the Test and Commissioning of Generation Facilities for Ensuring Readiness to Deliver Energy to the Grid or Distribution Network) provides a transitory provision that:*

- *Allows generation companies that are already on T&C, upon effectivity of the circular (especially those plants on prolonged commissioning test), to continue to conduct commissioning test for a maximum of two (2) months after the effectivity date.*

*This will be in consideration in the MSC's monitoring of plants on prolonged testing commissioning test (beyond the maximum two-month period allowed also under the ERC Resolution No. 16, Series of 2014).*

# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

## ANNEX A. LIST OF PLANTS WITH OVER-RIDING CONSTRAINTS<sup>1</sup>

Plant/Unit Name	Plant Type	Registered Capacity (MW)
<b>LUZON</b>		
Binga Hydroelectric Power Plant - Unit 1	Hydro	35
Binga Hydroelectric Power Plant - Unit 2	Hydro	35
Binga Hydroelectric Power Plant - Unit 3	Hydro	35
Binga Hydroelectric Power Plant - Unit 4	Hydro	35
Concepcion 1 Solar Power Project	Solar	76
GNPower Dinginin Coal Plant - Unit 1	Coal	668
Magat Hydroelectric Power Plant Unit 1	Hydro	97
Magat Hydroelectric Power Plant Unit 2	Hydro	97
Magat Hydroelectric Power Plant Unit 3	Hydro	97
Magat Hydroelectric Power Plant Unit 4	Hydro	97
Mariveles Coal-Fired Power Plant 1	Coal	316
AES Masinloc Advancion Energy Storage Array	Battery	10
Pasuquin Solar Power Plant	Solar	96
RASLAG III Solar PV Plant	Solar	15
Mobile 3 Bunker C-Fired Diesel Power Plant	Oil-Based	63.8
Mobile 5 Bunker C-Fired Diesel Power Plant	Oil-Based	53.4
Subplant 2 Alaminos Battery Energy Storage System	Battery	20
Calaca Coal-Fired Thermal Power Plant 2	Coal	300
Malaya Thermal Power Plant Unit 2	Oil-Based	130

<sup>1</sup> In accordance with the Market Operator Information Disclosure and Confidentiality (MO IDC) Manual Issue 7.0

# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

Plant/Unit Name	Plant Type	Registered Capacity (MW)
Pagbilao Coal-Fired Power Plant 1	Coal	382
Pagbilao Coal-Fired Power Plant 2	Coal	382
Sta. Rita Natural Gas Power Plant 1	Natural Gas	257.3
Sta. Rita Natural Gas Power Plant 2	Natural Gas	255.7
Sta. Rita Natural Gas Power Plant 4	Natural Gas	264
<b>VISAYAS</b>		
Tubig Hydroelectric Power Plant	Hydro	15.9
CEDC Coal-Fired Thermal Power Plant Unit 3	Coal	82
EAUC Bunker C-Fired Power Plant Unit 1	Oil-Based	11.5
EAUC Bunker C-Fired Power Plant Unit 2	Oil-Based	11
EAUC Bunker C-Fired Power Plant Unit 3	Oil-Based	11.5
EAUC Bunker C-Fired Power Plant Unit 4	Oil-Based	11.5
TPC Carmen Diesel Power Plant	Oil-Based	40
Sangi Coal Fired Power Plant	Coal	142.7
Naga Oil-Fired Power Plant Unit 1	Oil-Based	6.7
Naga Oil-Fired Power Plant Unit 4	Oil-Based	6.8
Power Barge 101- Unit 1	Oil-Based	6
Power Barge 101- Unit 2	Oil-Based	6
Power Barge 101- Unit 3	Oil-Based	6
Power Barge 101- Unit 4	Oil-Based	6
Nabas Diesel Power Plant	Oil-Based	6.4
Circulating Fluidized Bed (CFB) Coal-Fired Power Plant (CFPP)	Coal	135
PEDC Coal-Fired Thermal Power Plant Unit 1	Coal	83.7