



# Monthly Monitoring Report on Over-riding Constraints for July 2022 Billing Month

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26 June to 25 July 2022

## December 2022

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

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# 1 OVER-RIDING CONSTRAINTS MONITORING

By Category and Region

By Hour Type

By Plant Type

# 3 PLANTS ON COMMISSIONING TEST

# 4 MARKET PRICE IMPACT

On Supply

On Market Clearing Price

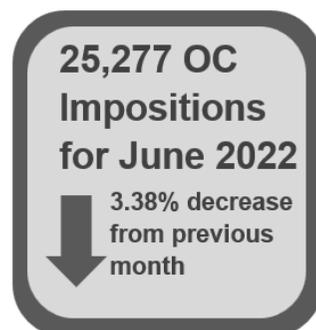
# CONTENTS OF THE REPORT

# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

## IMPOSITIONS BY CATEGORY AND REGION

# 24,421 Total Impositions

All which are **non-security** limits

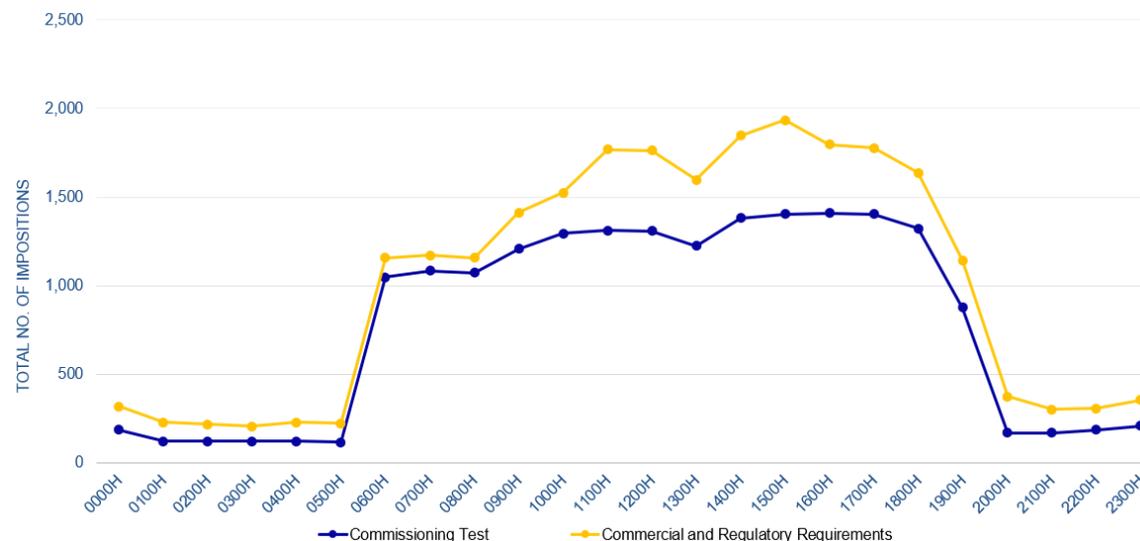


The July 2022 billing month recorded over-riding constraint impositions with a minimal decrease of **3.38%** involving **33 Luzon** and **8 Visayas generators** as affected by the absence of impositions for scheduled Must-Run-Unit (MRU) and the conduct of Variable Renewable Energy (VRE). Despite the aforementioned absences in impositions, the noted decrease was minimal, due to the start of commissioning test of Solar and Hydro plants and the conduct of emission test, net-dependable capacity test, and grid compliance test of several power plants.

**Note:** Under the Dispatch Protocol Manual Issue 16.0, impositions of over-riding constraints may be categorized into: 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, and 2) commercial and regulatory tests

The monitoring of the over-riding constraints is based on the data and information provided by the 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



Keeping with the trend of the previous month, majority of over-riding constraints imposed over a 24-hour period were caused by the conduct of commissioning tests for an average of **70 percent of the time**, which is primarily attributed to the **commissioning tests of Battery, Coal, Hydro, and Solar plants**, with a **total capacity of 1,046 MW** imposed during **peak** and **1,026 MW** during **off-peak hours**

Increase in **net dependable capacity test, emission test, and grid compliance test** of natural-gas, oil-based, and coal plants were the reasons for the increase in **commercial & regulatory requirements** for the month of July 2022. The decrease in the over-riding constraints impositions to hydro plants was the reason for the dip in impositions during 1300H.

**Commercial & regulatory requirements** saw a total of **2,654 MW capacity** scheduled during **peak hours** and **2,850 MW capacity** during **off-peak hours**.

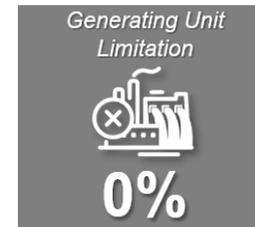
The difference between the peak and during off-peak hours was due to plants with larger capacities imposed mostly during off-peak hours when most of commercial and regulatory tests were undertaken.

# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

## IMPOSITIONS BY INCIDENTS



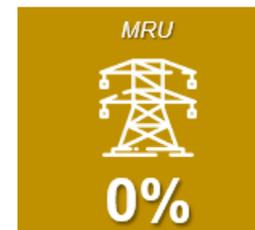
A **10% decrease** from the previous month's impositions was noted due to expiration of commissioning test period of a battery plant



No **over-riding constraint** events related to **Generating Unit limitation** was noted.



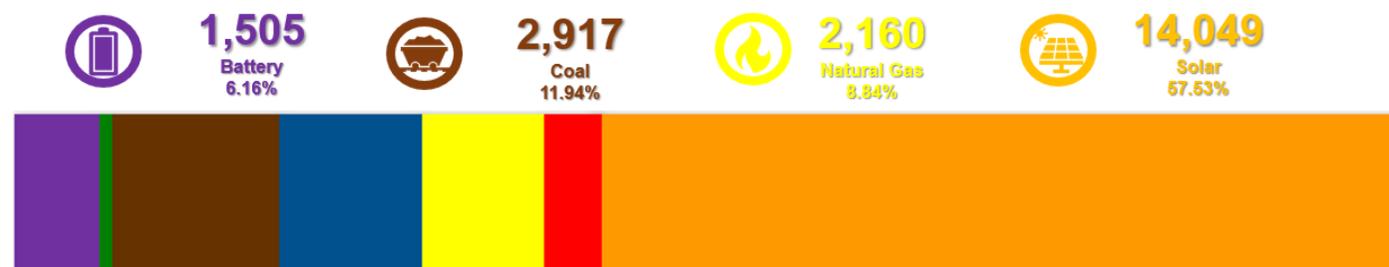
**96.65% increase** was observed from the previous month and was attributed to the execution of various tests such as Ancillary test, Emission test, Grid Compliance Test, Heat Rate Test, Net Dependable Capacity Test, and Performance test.



No **MRU** was scheduled during the July 2022 billing month compared to 1,488 impositions in the previous month.

## IMPOSITIONS BY PLANT TYPE

**Emission test of Oil-based plant and net dependable capacity test of Natural Gas plant** offset the decrease in over-riding constraint impositions to a Battery plant due to expiration of its commissioning test period. Also, the start of commissioning test from 2 hydro plants contributed to the total over-riding constraints impositions for the July 2022 billing month.

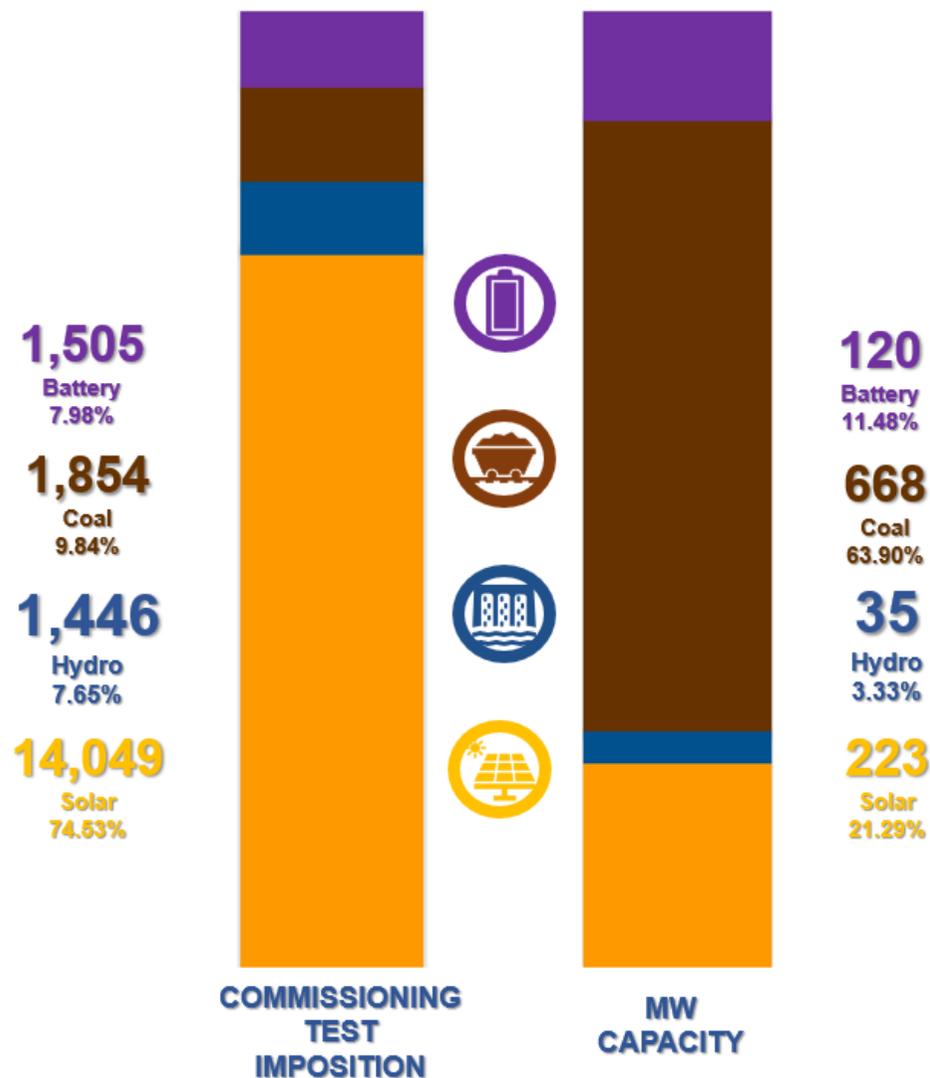


The over-riding constraints imposed to solar plants were purely for commissioning tests as there were no VRE Generating Facility tests conducted for July 2022.



# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

## PLANTS ON COMMISSIONING TEST



The July 2022 billing month saw a **decrease in impositions of over-riding constraints under commissioning tests** when compared to the previous month. Expiration of **Provisional Certificate of Approval to Connect (PCATC)** for Battery plants prohibits them to continue being imposed with over-riding constraints. A total of **1,046 MW of capacity was imposed with over-riding constraints** due to commissioning test.

This month, most impositions for commissioning tests were attributable to Solar, followed by Battery, Coal, and Hydro plants.

Based on the updates provided by the Independent Electricity Market Operator of the Philippines (IEMOP), the following were some of the updates on the **status of power plants under extended commissioning test** during the July billing month:

- **1 Coal, 2 Hydro, and 1 Solar plant** were given extensions to their respective PCATCs to conduct commissioning tests
- **1 BESS plant** had **expired** commissioning test periods in July 2022 and was yet to be issued with Final Certificate of Approval to Connect (FCATC) / Provisional Authority to Operate (PAO), or was yet to be given an extension for PCATC

Furthermore, **1 Solar and 2 Hydro plants have just begun their respective commissioning test periods** during the July 2022 billing month.

*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:*

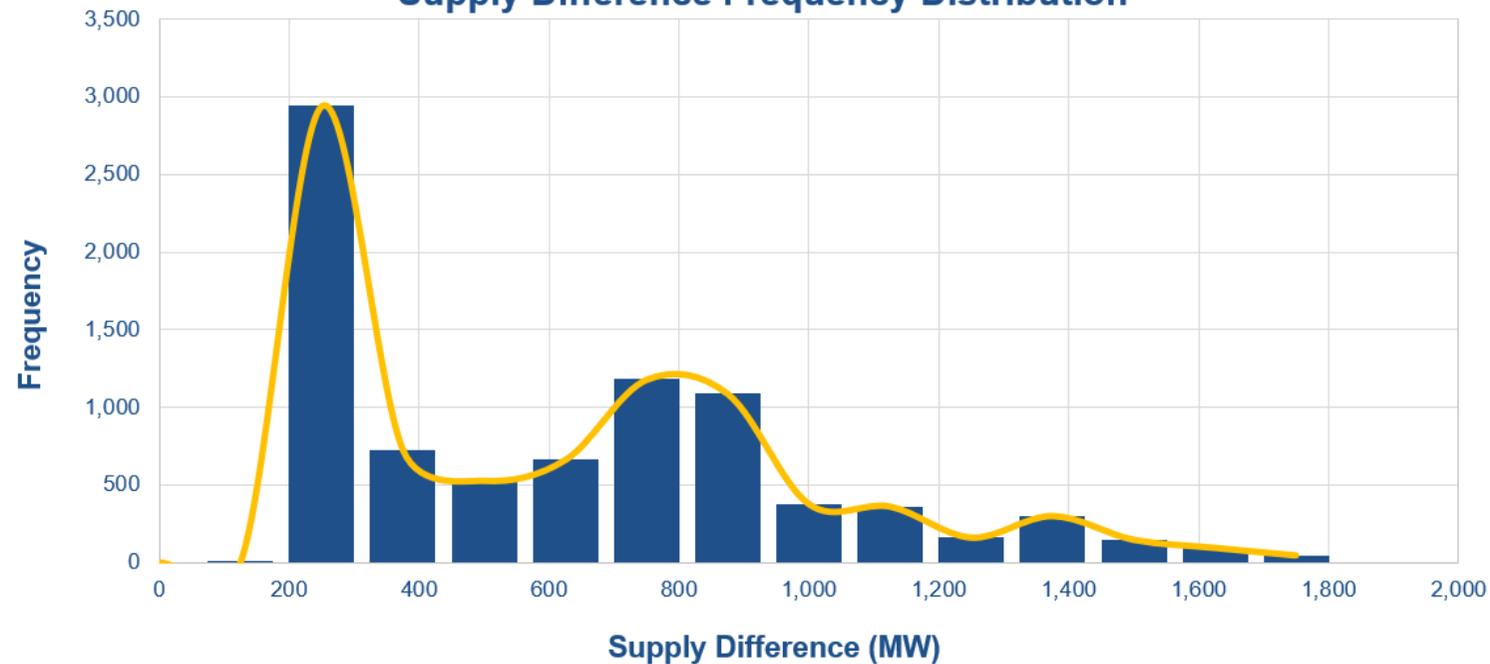
- *Allows generation companies that are already on T&C, upon effectivity of the circular (especially those plants on prolonged commissioning test), to continue to conduct commissioning test for a maximum of two (2) months after the effectivity date.*

*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

## MARKET PRICE ANALYSIS ON SUPPLY

### Supply Difference Frequency Distribution



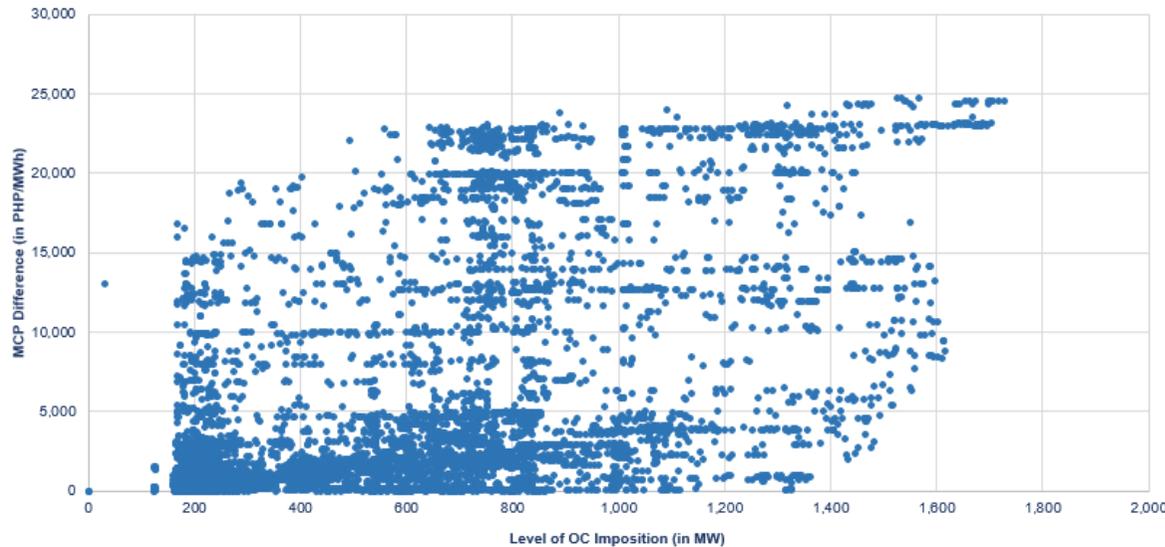
When comparing a market run without any over-riding constraints in the system through a simulation, it revealed that the over-riding constraints imposed on generators throughout the July billing month accounted for an **average difference of 567 MW** in supply. Most of the time, over-riding constraints impositions account for **150 MW to 300 MW** capacity considered as price takers, resulting in lower market clearing prices.

During **peak hours**, higher capacities were dispatched under over-riding constraint impositions, an average market effect of **702 MW** and an average of **454 MW during off-peak hours**.

# MONTHLY REPORT ON OVER-RIDING CONSTRAINTS

## ON MARKET CLEARING PRICE

### MCP Difference vs Supply Difference



The supply difference generated via over-riding constraint impositions, with an average of **567 MW**, resulted in a **decrease of market pricing by PhP 5,218/MWh, on average.**

It is clear that the higher the level of over-riding constraint imposed, the greater the decrease in market clearing price.

Commercial and regulatory tests conducted by large capacity plants such as Coal, Natural gas, and Oil-based plants with a total capacity of 762 MW significantly contributed to the supply difference contributed by the over-riding constraint impositions.

Among others, outages, especially of huge capacities from various plants, contributed to the movement of optimization resulting in higher prices clearing the market.

Further examination of the impact on over-riding constraint impositions on market clearing prices, in terms of its percentage distribution, revealed that the MCP difference is less than **PHP 10,307/MWh for 70% of the time.**

### MCP Difference Time Distribution

