

# **Monthly Monitoring Report on Over-riding Constraints for September 2021 Billing Month**

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**26 August to 25 September 2021**

**August 2022**

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

## OVER-RIDING CONSTRAINTS MONITORING

### BY CATEGORY AND REGION

**55,701 events**

All of the events were categorized as non-security limit



**92%**

51,190 events involving  
Luzon plants

**8%**

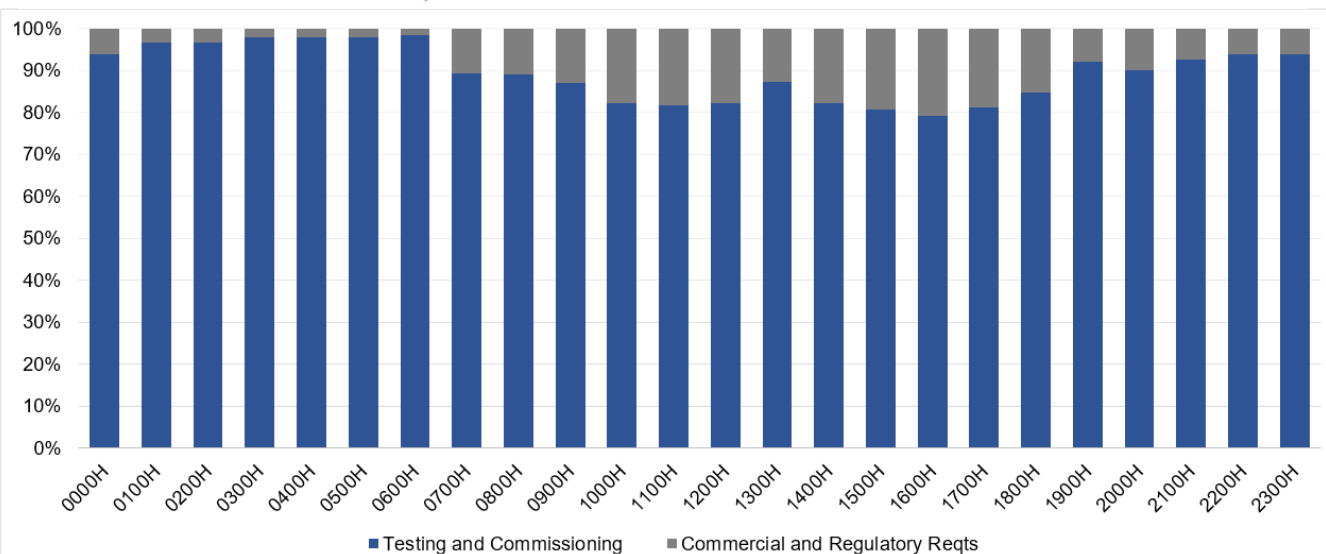
4,511 events involving  
Visayas plants

- The September 2021 billing month recorded a total of 55,701 over-riding (OC) events involving 31 Luzon generators and 8 Visayas generators. This is a 20.37 percent decrease from the previous month.
- Similar with the previous months, all events this September 2021 were categorized under non-security limit mainly related to the conduct of testing and commissioning (T&C).

**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 testing and commissioning 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).

### BY HOUR



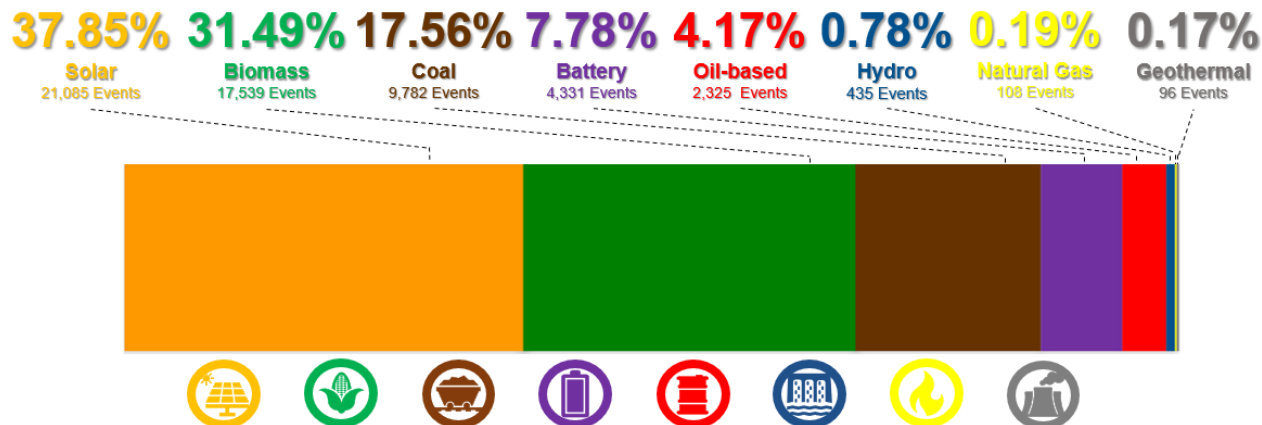
Majority of the occurrences of OC impositions over a 24-hour cycle was due to the conduct of plants' T&C, often during off-peak period accounting for 90 to 98 percent of the time which were still mainly on account of the conduct of T&C of Biomass plants.

Meanwhile, the impositions observed during the peak period were mainly attributable to the conduct of T&C of solar plants.

There were no generating unit limitations imposed for this billing month as compared to the previous month.

## OVER-RIDING CONSTRAINTS MONITORING

### BY PLANT TYPE



- Similar with the past months, majority of over-riding constraints were imposed on Solar plants (37.85%) following the T&C of six (6) Solar plants, two of which started their T&C back in 2015-2016. OC impositions in September were lower following the start of commercial operations of 2 solar plants under T&C.
- This is followed by Biomass plants attributing majority of its events to plants under T&C. There had been lower impositions in September following the completion of various commercial & regulatory test and issuance of COC for some plants under T&C.
- Increase in the impositions of OC events to coal plant were mainly due to T&C of 668 MW coal plant, as well as the increase brought about by additional commercial and regulatory tests of Pagbilao plants.
- Increase in the impositions of OC events to Battery plants were attributable to the recently registered two new plants undergoing T&C.
- Decrease in the impositions to hydro plants were due to the start of commercial operations of Bineng HEP which started its T&C in 2019.

### BY INCIDENTS

#### NON-SECURITY LIMITS



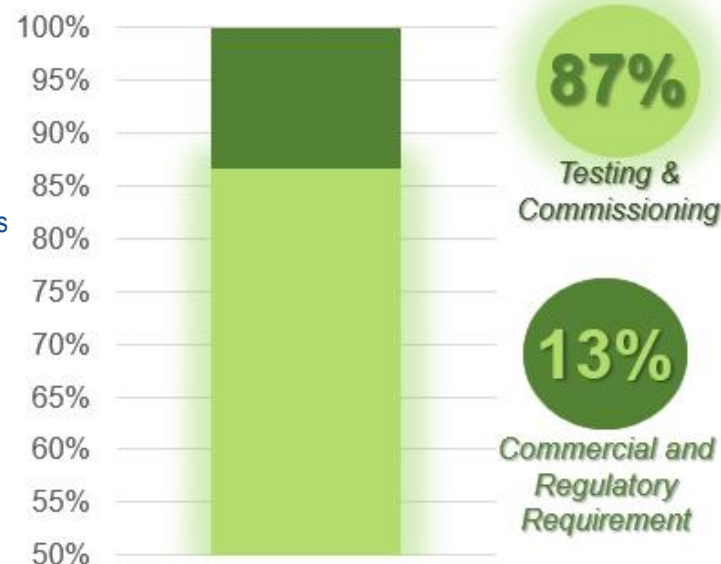
Majority of the non-security limit events recorded for the September billing month were due to the conduct of **T&C** involving 16 plants and with 2 plants that started T&C in 2015-2016, 5 plants that started in 2019, and the remaining plants which started their respective T&Cs in 2020-2021.



Incidents related to **Commercial and Regulatory Requirements** were due to the execution of various tests, including Emission tests, Ancillary tests, Performance tests, Grid Compliance tests, Fuel Validation tests, and Capacity / Capability tests.

No over-riding constraints events related to Generating Unit limitation noted during the billing month

**Note:** No security limit event noted during the covered period. The last imposition was in January 2020 on Malaya TPP as a designated MRU during the supply shortfall.



## OVER-RIDING CONSTRAINTS MONITORING

### PLANTS ON COMMISSIONING TEST

#### SUMMARY OF PLANTS WITH T&C

Plant Name	Node ID	Registered Capacity	Start Date of Over-Riding Events	Start of T&C (per DOE DC2021-06-0013)	No. of Over-Riding Events
BCCPP Battery Energy Storage System (BESS)	01LIMAY_BAT	40	August 26, 2021	August 01, 2021	3,551
Toledo Battery Energy Storage System	05TOLEDO_BAT	20	September 21, 2021	September 24, 2021	396
<b>Sub-Total (Battery)</b>		<b>60</b>			<b>3,947</b>
Biomass Power Plant Phase 2	01GIFT_G02	6	December 13, 2019	July 17, 2021	6,334
Grassgold Biomass Power Plant	01GRGOLD_G01	10.8	November 18, 2019	July 17, 2021	3,167
Hypergreen Biomass Power Plant	01HYPGRN_G01	12	August 26, 2021	July 24, 2021	1,632
VS Gripal Biomass Power Plant	01VSGRIP_G01	10.8	December 14, 2019	July 17, 2021	5,758
HPCO-Cogeneration Biomass Power Plant Unit 2	06HPCO_G02	18.6	September 23, 2020	July 17, 2021	288
VMC Biomass Power Plant	06VMC_G01	2.5	October 22, 2019	July 17, 2021	360
<b>Sub-Total (Biomass)</b>		<b>61</b>			<b>17,539</b>
Nabas Diesel Power Plant	08GLOBAL_G01	6.4	August 26, 2021	July 17, 2021	60
<b>Sub-Total (Oil-based)</b>		<b>6.4</b>			<b>60</b>
GNPower Dinginin Coal Plant - Unit 1	01GNPD_U01	668	February 06, 2021	July 17, 2021	8,853
<b>Sub-Total (Coal)</b>		<b>668</b>			<b>8,853</b>
Concepcion 1 Solar Power Project	01PETSOL_G02	16.5	April 25, 2019	July 17, 2021	3,443
Tarlac Solar Power Plant	01TERASU_G01	40	July 31, 2021	August 01, 2021	3,906
Sta. Rita Solar Power Plant	02ECOTAGA_G01	14.7	May 09, 2021	July 17, 2021	3,311
Terasu Sta. Rosa Solar Power Plant	03MEC_G01	32.9	March 9, 2015	July 17, 2021	2,243
Tagalag Solar Power Plant	03SOLACE_G01	89.4	June 19, 2021	July 17, 2021	2,148
Majestics Energy Solar PV Plant	08COSMO_G01	5.67	June 16, 2016	July 17, 2021	2,771
<b>Sub-Total (Solar)</b>		<b>199.2</b>			<b>17,822</b>
<b>Grand Total</b>		<b>994.3</b>			<b>48,221</b>

The majority of the plants on T&C were due to impositions on Renewable Energy Plants such as Solar and Biomass Plants, followed by Coal Plants, and finally two (2) recently registered battery energy storage facilities.

In the list provided by the Independent Electricity Market Operator of the Philippines (IEMOP), the following were the updates of power plants under T&C during the September billing month:

- 7 plants started their commercial operations
- 4 plants with expired T&C status with the following updates:
  - 1 plant was request by IEMOP to submit an ERC certification allowing to operate commercially, in and outside the WESM
  - 1 plant was issued by NGCP with an extended Provisional Certificate of Approval to Connect (PCATC) submitted to IEMOP on 06 Oct 2021 with validity until 22 Oct 2021
  - 1 plant's Certificate of Compliance (COC) application was denied
  - 1 plant has not complied with all the requirements for the grant of COC per the ERC
- 4 plants were given an extension of its PCATC to conduct T&C
- 1 plant conducting T&C in one of its units

#### NUMBER OF EVENTS WITH T&C



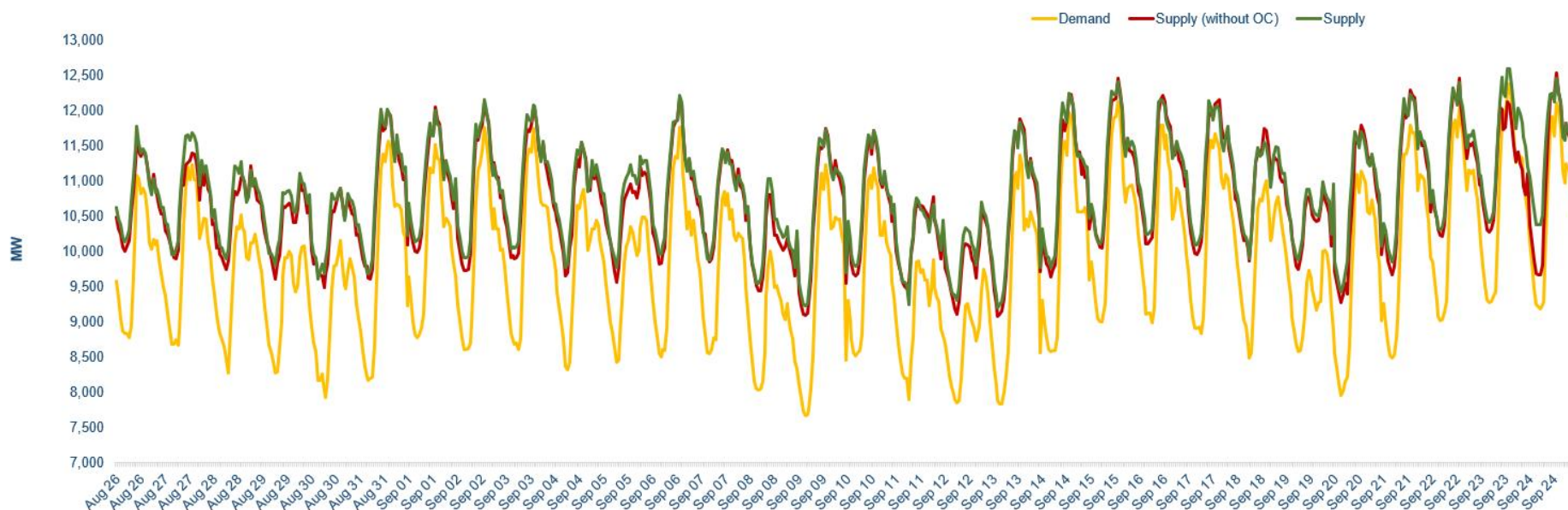
Note: The Department of Energy (DOE) department circular no. DC2021-06-0013 (Adopting a General Framework Governing the Test and Commissioning of Generation Facilities for Ensuring Readiness to Deliver Energy to the Grid or Distribution Network) provides a transitory provision that:

- 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).

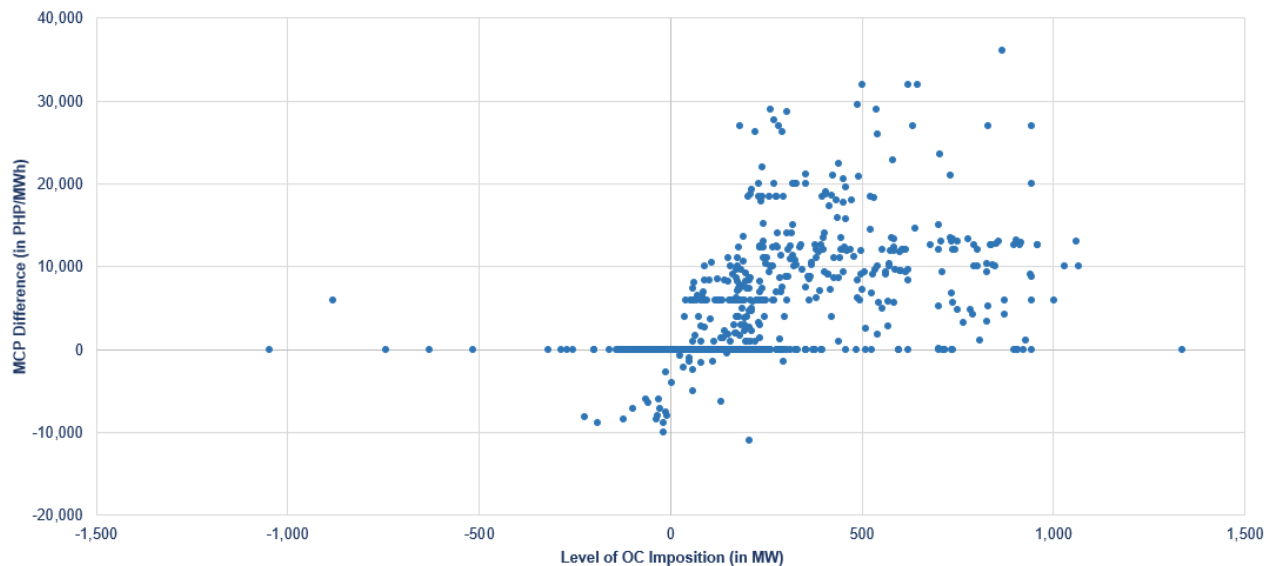


## MARKET IMPACT ON SUPPLY

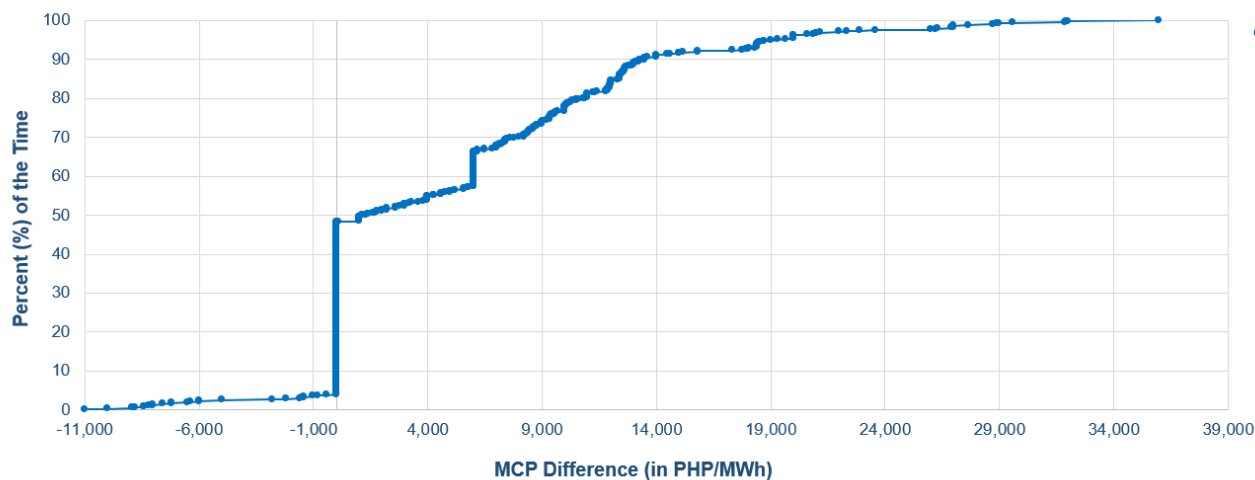


- In September 2021, the minimum and maximum demand are 7,676 MW and 12,807MW, respectively. The supply level varied from 9,378 MW to 12,951 MW. When the OC is removed, the supply ranges from 9,329 MW to 12,850 MW.
- OCs imposed on generators throughout the September 2021 billing month posed an additional 95 MW in supply on average during peak and 181 MW during off-peak hours.
- Although the additional MW provided by the OC impositions unquestionably improved the supply situation – because there have been times when the demand cannot be met without the imposition of the OC – it is noted that this may have a price distortionary effect by arbitrarily lowering the true cost of generation, which, in the long run, may be harmful to the market's ability to remain sustainable.

## MARKET IMPACT ON MARKET CLEARING PRICE



- The OC impositions generally resulted in a reduction in market price. Such reduction reached up to a maximum of PHP 36,000/MWh for the month.
- It is important to note that the price decreased on average at about PHP 4,880.30/MWh when there are additional MW capacities involved



- Looking on the impact of OC imposition to the market price in terms of its percentage distribution, it showed that for 90 percent of the time, the MCP difference is less than PHP 14,000/MWh when imposed with OC