



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

26 December 2021 to 25 January 2022

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

15,734 events

All of the events were categorized as non-security limit

83%

**12,987 events involving
Luzon plants**

17%

**2,747 events
involving Visayas
plants**

The January 2022 billing month recorded over-riding constraints impositions with a **20.37% decrease** involving **24 Luzon** and **3 Visayas generators**. The decrease in OC events is a result of continuing market suspension imposition from 16 December 2021 to 10 February 2022¹

- Similar with the previous months, all events 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).

¹ Market suspension was lifted on 17 January 2022 for Visayas excluding Bohol, while Bohol continued to be on market suspension until 10 February 2022

BY HOUR TYPE

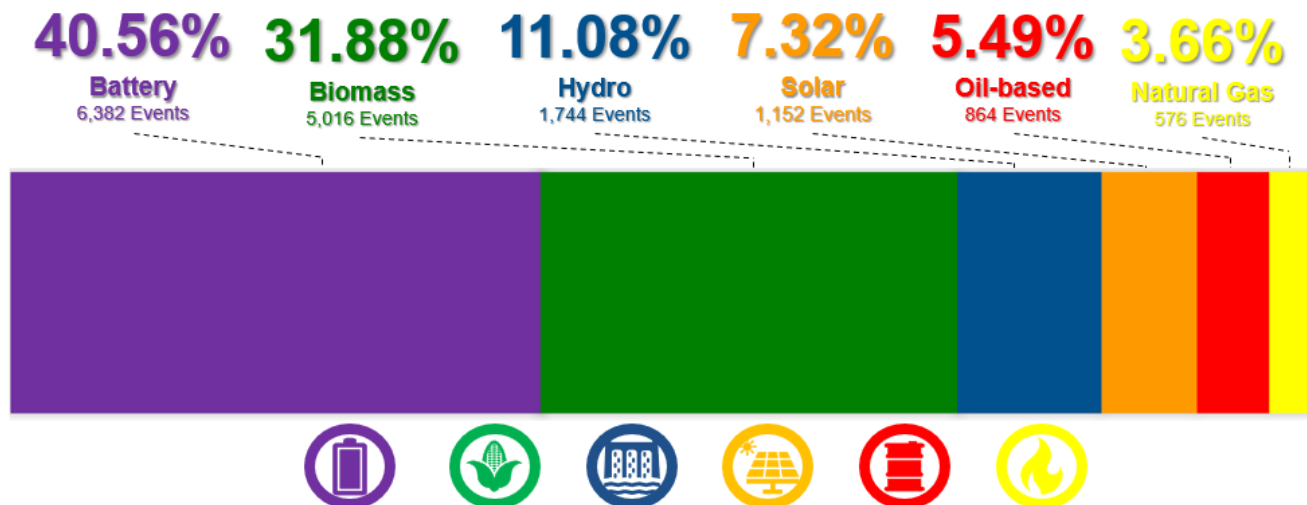
Most of the occurrences of over-riding constraints imposition over a 24-hour period was due to the **conduct of plants' T&C** all throughout the period ranging from **73 to 97 percent of the time** which are mostly accounted to the conduct of commissioning tests of **Battery Energy Storage System (BESS)** plants.

The impositions observed during the **whole 24-hour cycle** varied between **T&C** (for battery, biomass, and solar), and **Commercial & Regulatory Requirements** (for hydro, oil-based, and natural gas) with **lesser T&C impositions occurring during peak hours** accounting to 73 to 79 percent of the total over-riding impositions during peak hours compared to 82 to 97 percent of T&C impositions during off-peak

T&C impositions have higher occurrence than commercial and regulatory requirements from **0500H to 1000H** due to observance of **lesser conduct Commercial and Regulatory Requirements**, particularly the absence of Ancillary Tests. Furthermore, the **start of T&C period of a solar plant increased the T&C impositions during the day**.

OVER-RIDING CONSTRAINTS MONITORING

BY PLANT TYPE



- For this billing month, **almost half of the** of the over-riding constraints impositions were **attributable to BESS** for the **conduct of T&C** of **4 BESS plants** with one of them starting its T&C period within the month of January 2022
- Increase** in over-riding constraints impositions was noted for **Biomass and Solar** plants which was a result of the **resumption of T&C period** due to issuance of clearance to extend the T&C period for 1 Biomass and 1 Solar plant. In addition, there had been an increase in the conduct of various performance tests in Hydro plants for the month of January 2022.
- No imposition was noted for Coal plant brought about by the **start of commercial operations** of 1 Coal plant.

BY INCIDENTS

NON-SECURITY LIMITS



- Majority of the non-security limit events recorded for the January 2022 billing month were due to the conduct of **T&C** involving **8 plants**

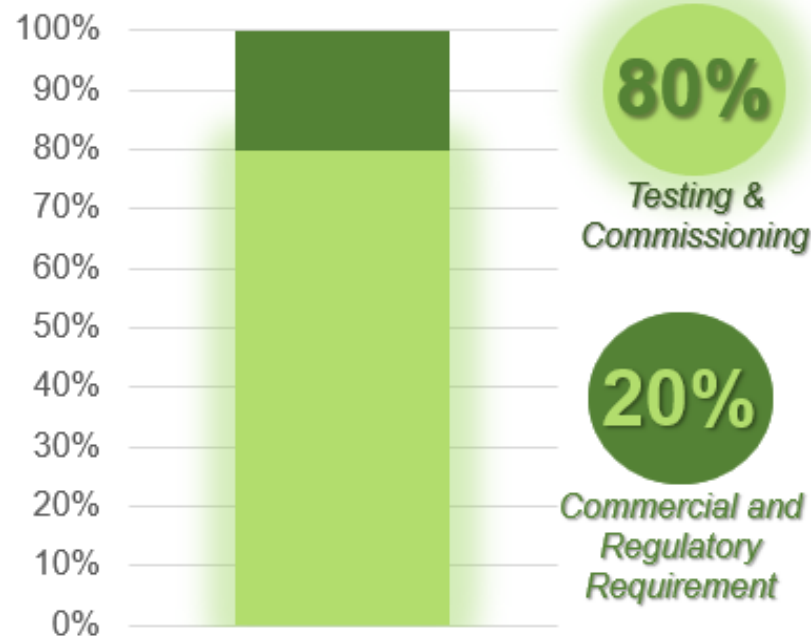


- Incidents related to **Commercial and Regulatory Requirements** are attributable to the conduct of various tests such as Ancillary test, Heat Rate Test, Performance test, Grid Compliance test Net Dependable Capacity Test and Net Contracted Capacity Test.



- No over-riding constraints events related to Generating Unit limitation was 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 UNDER 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
Lamao Battery Energy Storage System (BESS)	01LAMA_O_BAT	20	December 11, 2021	July 17, 2021	1,995
Limay Battery Energy Storage System (BESS)	01LIMAY_BAT	40	August 26, 2021	August 01, 2021	1,224
San Manuel Battery Energy Storage System (BESS)	01SNMAN_BAT	60	January 21, 2022	January 14, 2022	907
Alaminos Battery Energy Storage System	03ALMNOS_BAT	20	November 24, 2021	October 29, 2021	2,220
Sub-Total (Battery)		140			6,346
HyperGreen Energy Biomass	01HYPGRN_G01	12	August 26, 2021	July 24, 2021	2,305
NNBP Biomass Power Plant	06NTNEGB_G01	25	January 18, 2022	July 17, 2021	2,064
SNBP Biomass Power Plant	06STNEGB_G01	25	January 19, 2022	July 17, 2021	647
Sub-Total (Biomass)		62			5,016
Bataan Solar Power Plant	01BTSOLEN_G01	3.7	November 27, 2021	October 29, 2021	1,152
Sub-Total (Solar)		3.7			1,152
Grand Total		205.7			12,514

The January 2022 billing month showed an **increase in impositions of over-riding constraints under T&C** compared to the previous month as most of the plants under prolonged T&C have **extended their Provisional Certificate of Approval to Connect (PCATC)**, while other plants have just **started conducting T&C**.

For the covered billing month, most of the plant on T&C were attributable to BESS, followed by Biomass and Solar and with a small percentage coming from Oil-based 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 T&C** during the January billing month:

- **5 plants** were given an extension on its PCATC to conduct T&C
- **1 plant** start its commercial operation on 26 January 2022

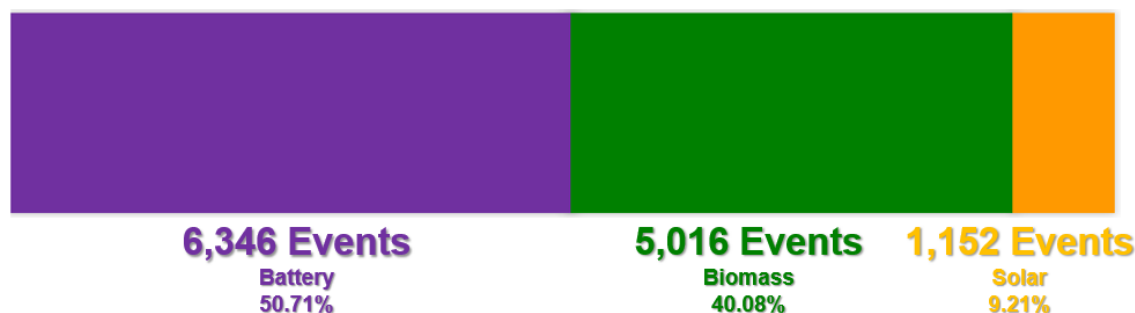
Furthermore, **two plants have just begun their T&C period** during the January 2022 billing month.

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).

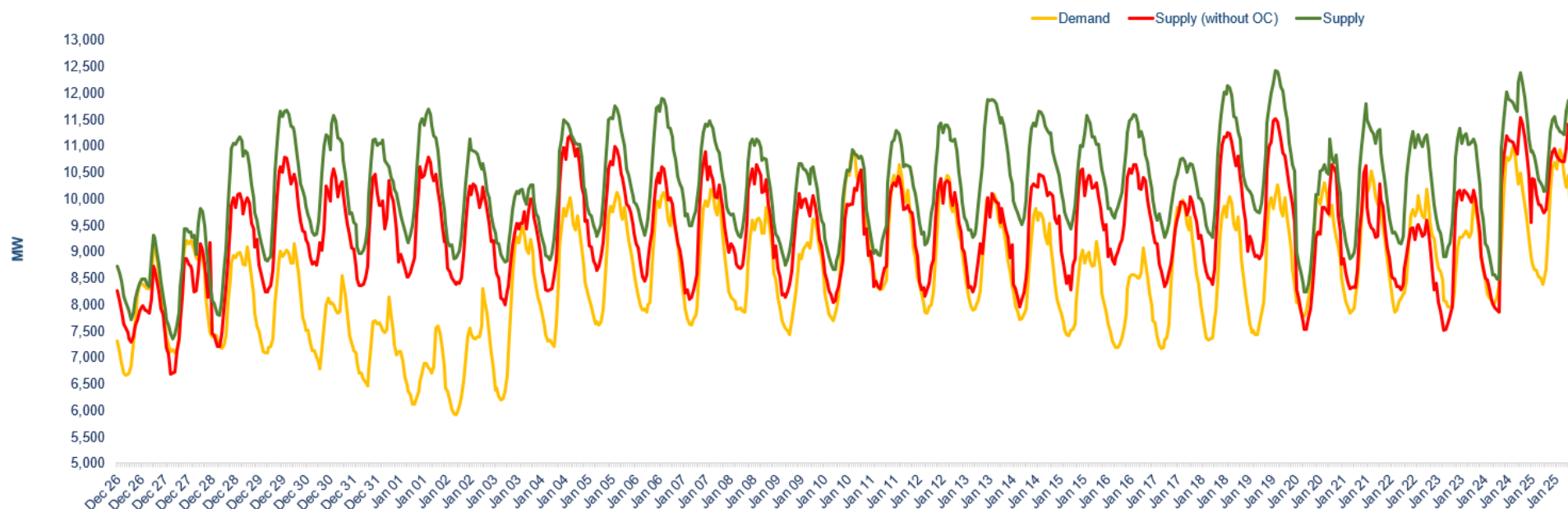
NUMBER OF EVENTS WITH T&C



CAPACITY OF PLANTS WITH T&C



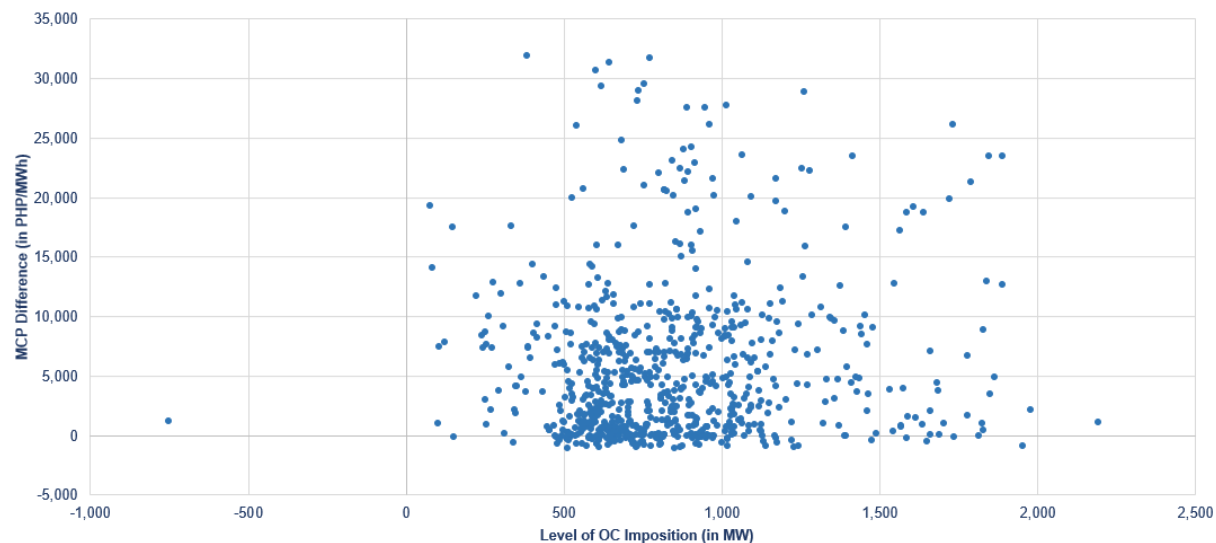
MARKET IMPACT ON SUPPLY



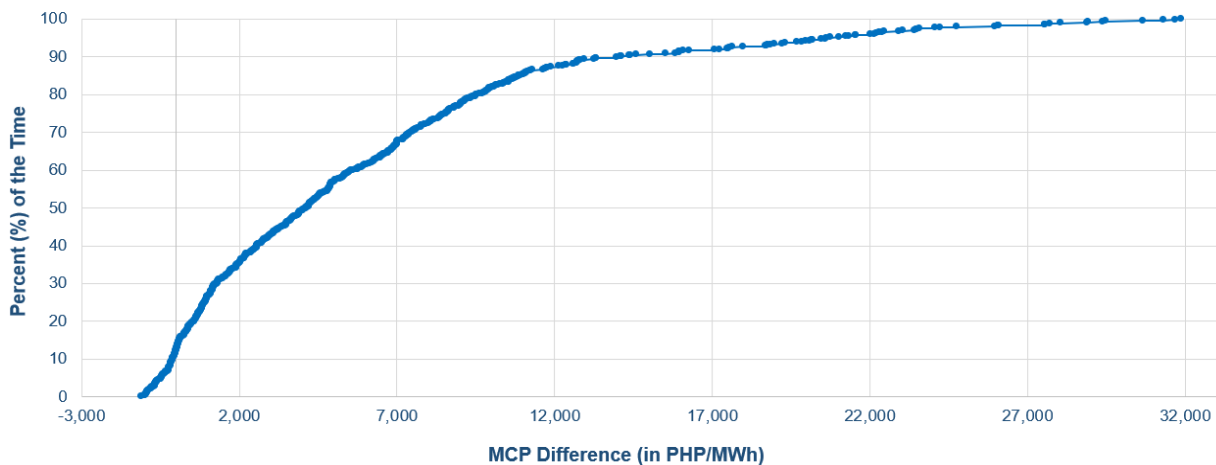
- Demand varied from 5,916 MW to 10,981 MW in January 2022, with a minimum and maximum supply of 7,357 MW and 12,426 MW, respectively. Without the OC, the supply level falls to 6,682 MW at a minimum and 11,528 MW at a maximum, resulting to an average of 6.5% reduction in supply and a 13.69% rise in price
- Similar to the previous month's trend, OC impositions contributed to the increase in the supply, at most, by 2,193 MW in January 2022, with an average increase of 884 MW during peak hours and 792 MW during off-peak hours.
- The additional capacity improvements by the OC impositions helped the supply situation. However, it is observed that this may have a price distortionary effect by arbitrarily lowering the true cost of generation, which, in the long run, may be detrimental to the market's ability to remain sustainable.

MARKET IMPACT

ON MARKET CLEARING PRICE



- The additional MW generated by over-riding constraint impositions generally resulted to a decrease in market price. This decrease reached up to a monthly maximum of PhP 31,874 /MWh.
- The additional MW supply caused by the OC impositions resulted into a decrease in the MCP by an average of PhP 5,613 /MWh



- Looking on the impact of OC to the market price in terms of its percentage distribution, it showed that for 70 percent of the time, the MCP difference is less than PHP 7,000 /MWh when imposed with OC
- Prices have increased by PhP 1,110/MWh at maximum and by PhP 421 /MWh on average, less than 12% of the time