



MONTHLY OVER-RIDING CONSTRAINTS HIGHLIGHTS

26 September to 25 October 2023

The information contained in this document is based on data that are subject to continuous verification by the Philippine Electricity Market Corporation (PEMC). The same information is subject to change as updated figures come in.

SUMMARY OF OBSERVATIONS

- Decrease in over-riding constraint (OC) impositions related to commissioning tests following the 1) issuance of Final Certificates of Approval to Connect (FCATCs) to two (2) plants indication of completion of their commissioning test period, and 2) expiration of Provisional Certificate of Approval to Connect (PCATC) of one (1) plant.
- Oil-based plant in Luzon was dispatched as MRU during the billing period to address the real power balancing and frequency control in the region.
- OC impositions in Mindanao were mostly attributable to the designation of Oil-based plants as Must-Run Units (MRUs) to address system voltage requirement of the region, followed by the observed conduct of ancillary service test during the billing period.

AT A GLANCE

Total Over-riding
Constraints
Imposition

41,984

▼ **5.7%**

decrease from
previous billing
period



LUZON
34,208



COAL plants have the
HIGHEST # of OC imposition

COAL plants, on average, had the
LARGEST MW scheduled due to
ANCILLARY SERVICE TEST



MOST impositions were due to
COMMISSIONING TESTS of
WIND PLANTS



VISAYAS
1,895



OIL-BASED plants have the
HIGHEST # of OC imposition

COAL plants, on average, had the
LARGEST MW scheduled due to
ANCILLARY SERVICE TEST



MOST impositions were due to conduct
of **EMISSION TEST** of **OIL-BASED**
PLANTS



MINDANAO
5,881



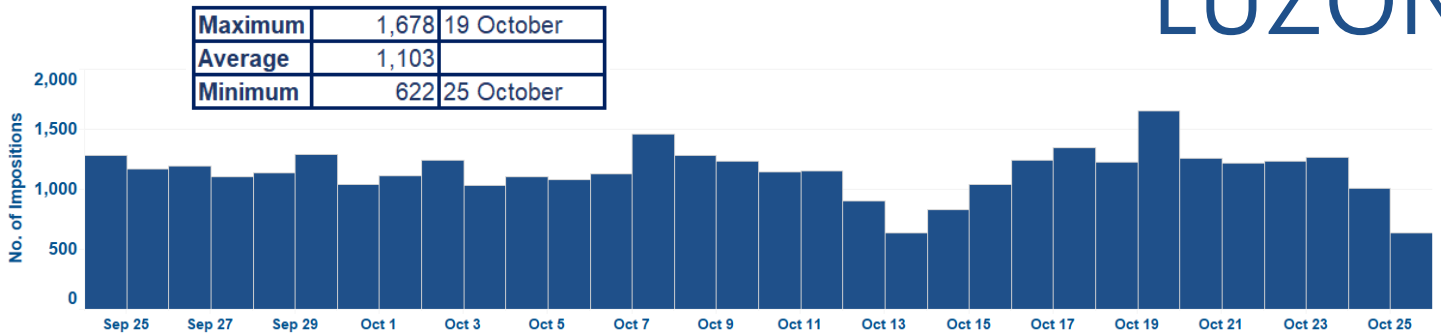
OIL-BASED plants have the
HIGHEST # of OC imposition



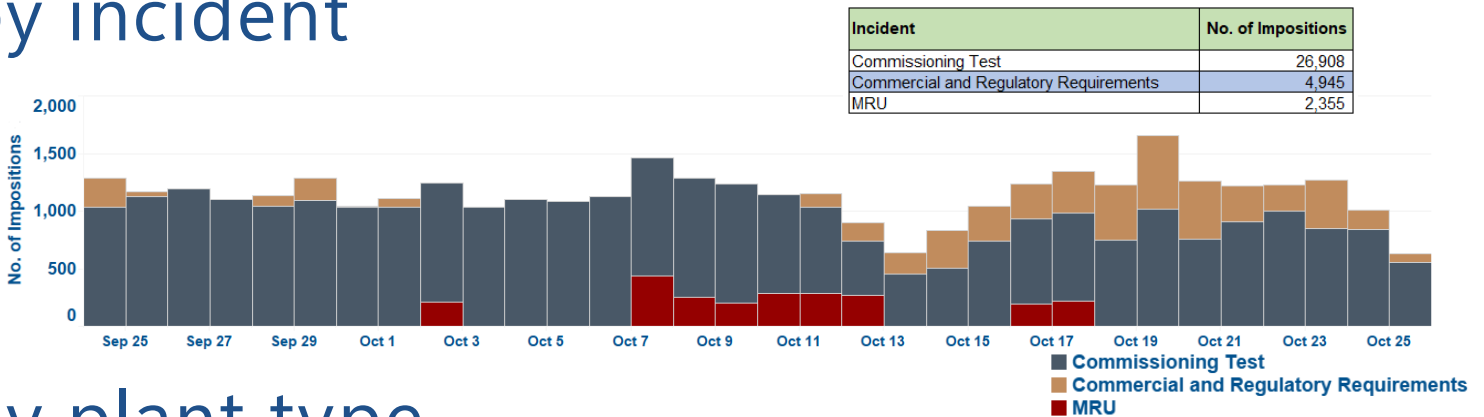
MOST impositions are due to **MUST-RUN UNIT**

OC IMPOSITIONS

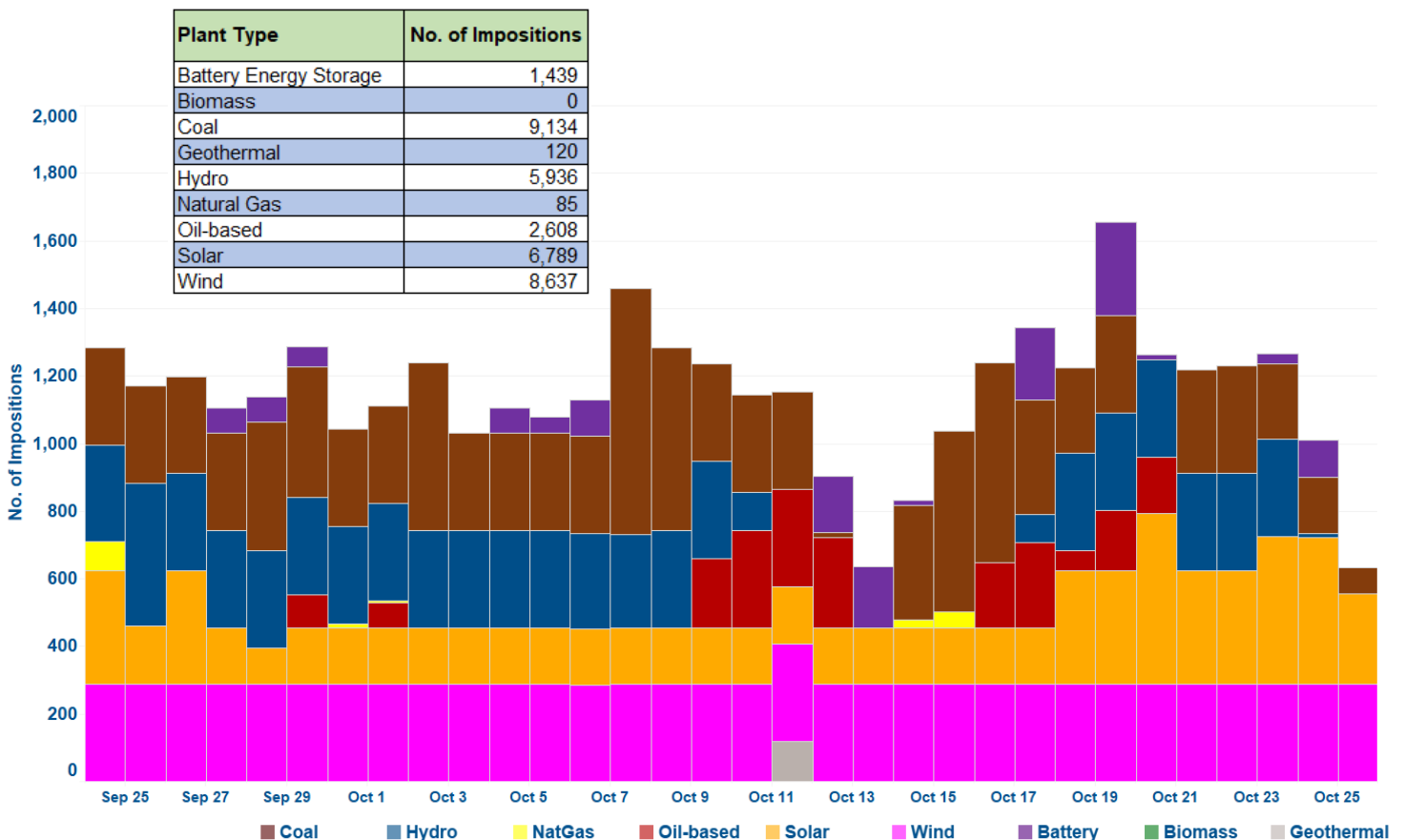
LUZON



by incident



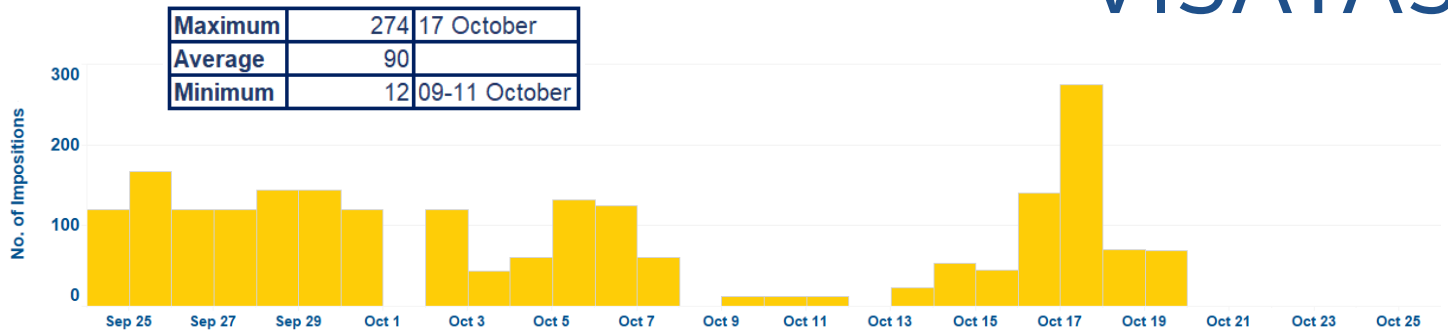
by plant type



The majority of OC impositions were attributed to Luzon grid plants due to **commissioning tests of coal plants**. The **wind plant consistently imposed with an average 300 impositions per day**. Additionally, an **oil-based plant was dispatched as MRU** during the third week of the billing period to address real power balancing and frequency control in the grid.

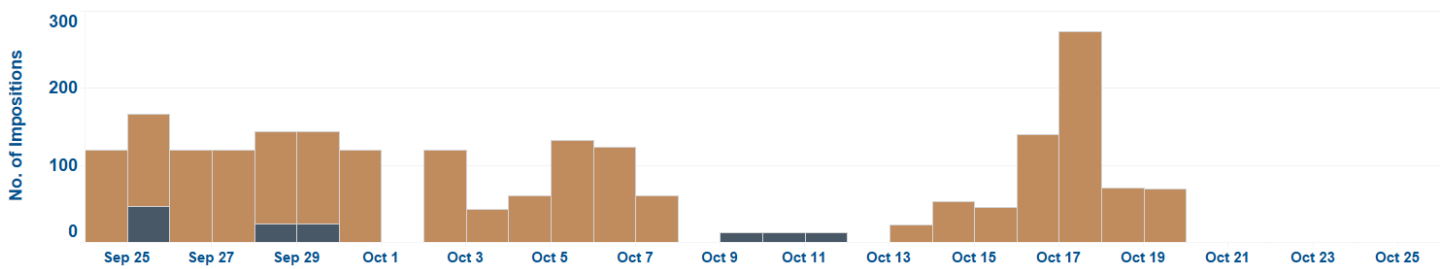
OC IMPOSITIONS

VISAYAS



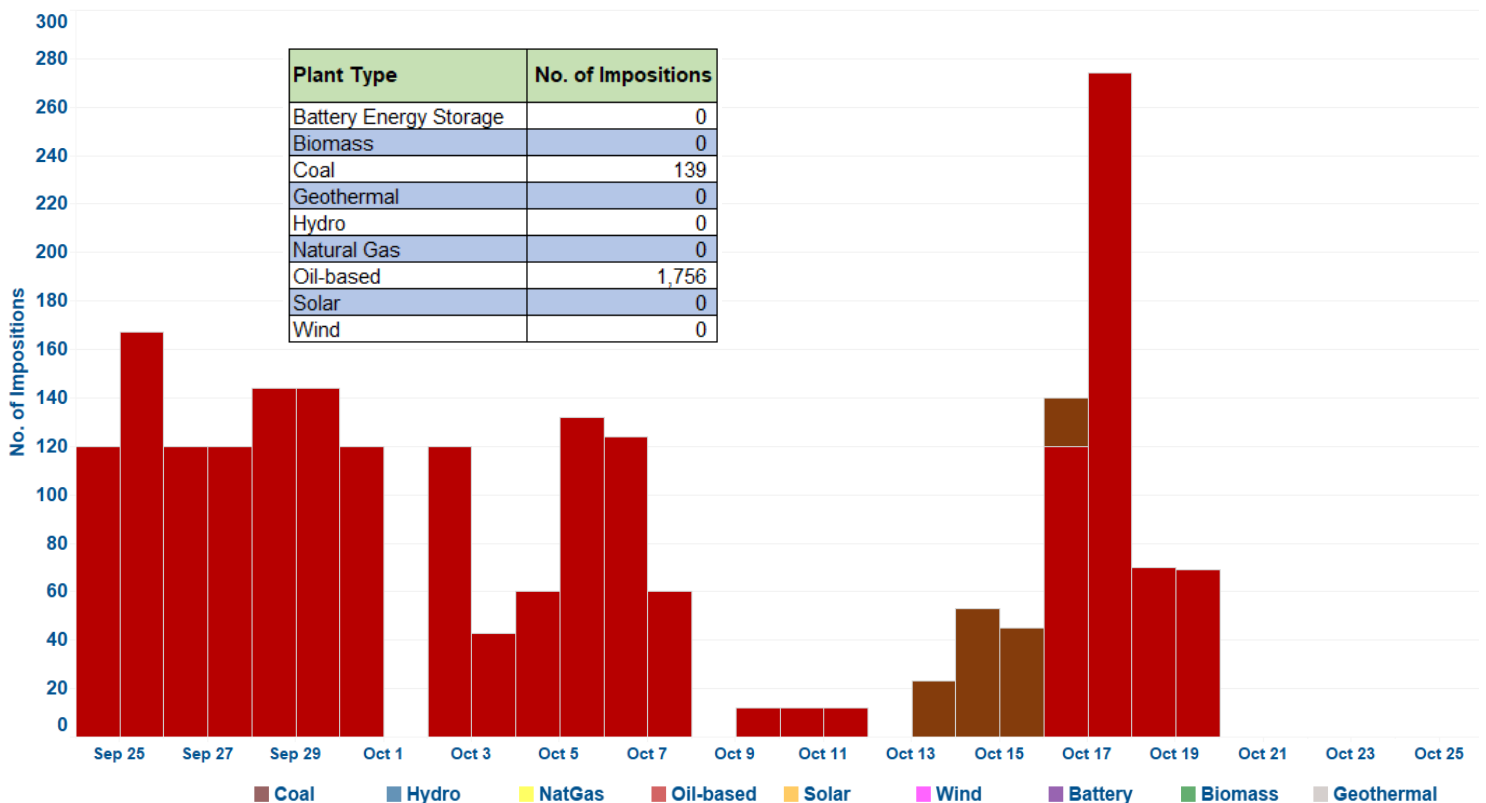
by incident

Incident	No. of Impositions
Commissioning Test	84
Commercial and Regulatory Requirements	1,811
MRU	0



by plant type

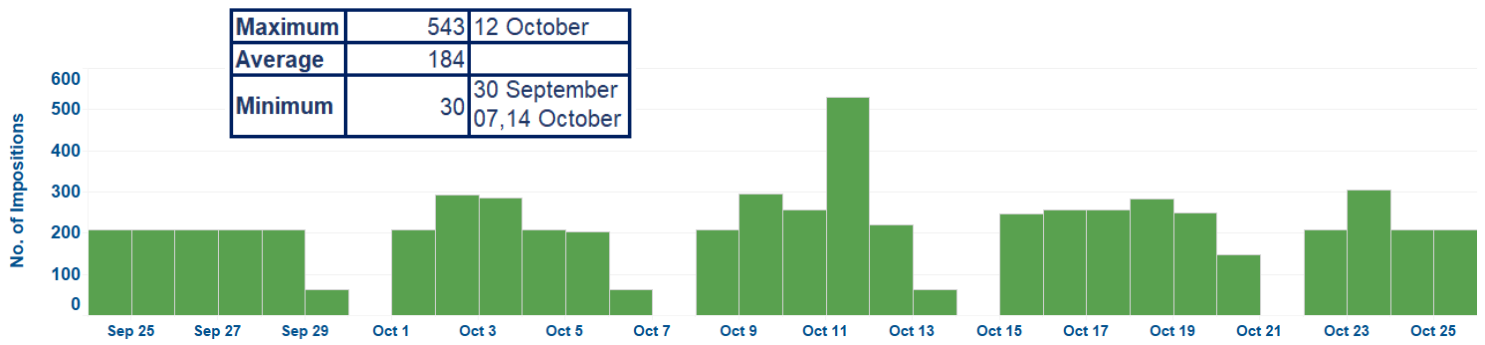
■ Commissioning Test
■ Commercial and Regulatory Requirements
■ MRU



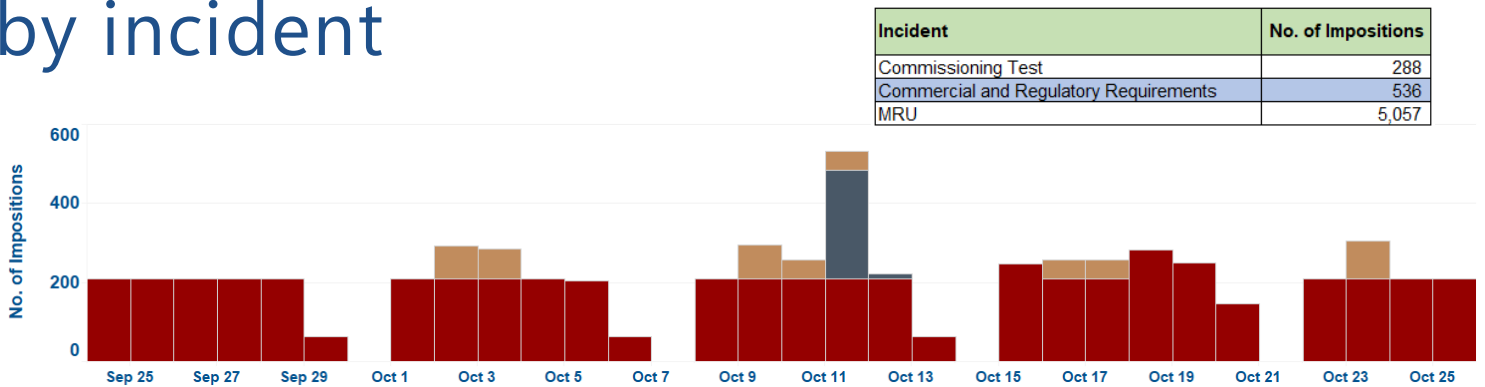
Small shares of OC impositions were observed to be imposed in the Visayas region. Most of which were related to oil-based plants due to the conduct of emission and ancillary service tests.

There was an observed ancillary service test conducted by One (1) coal plant during third week of the billing period.

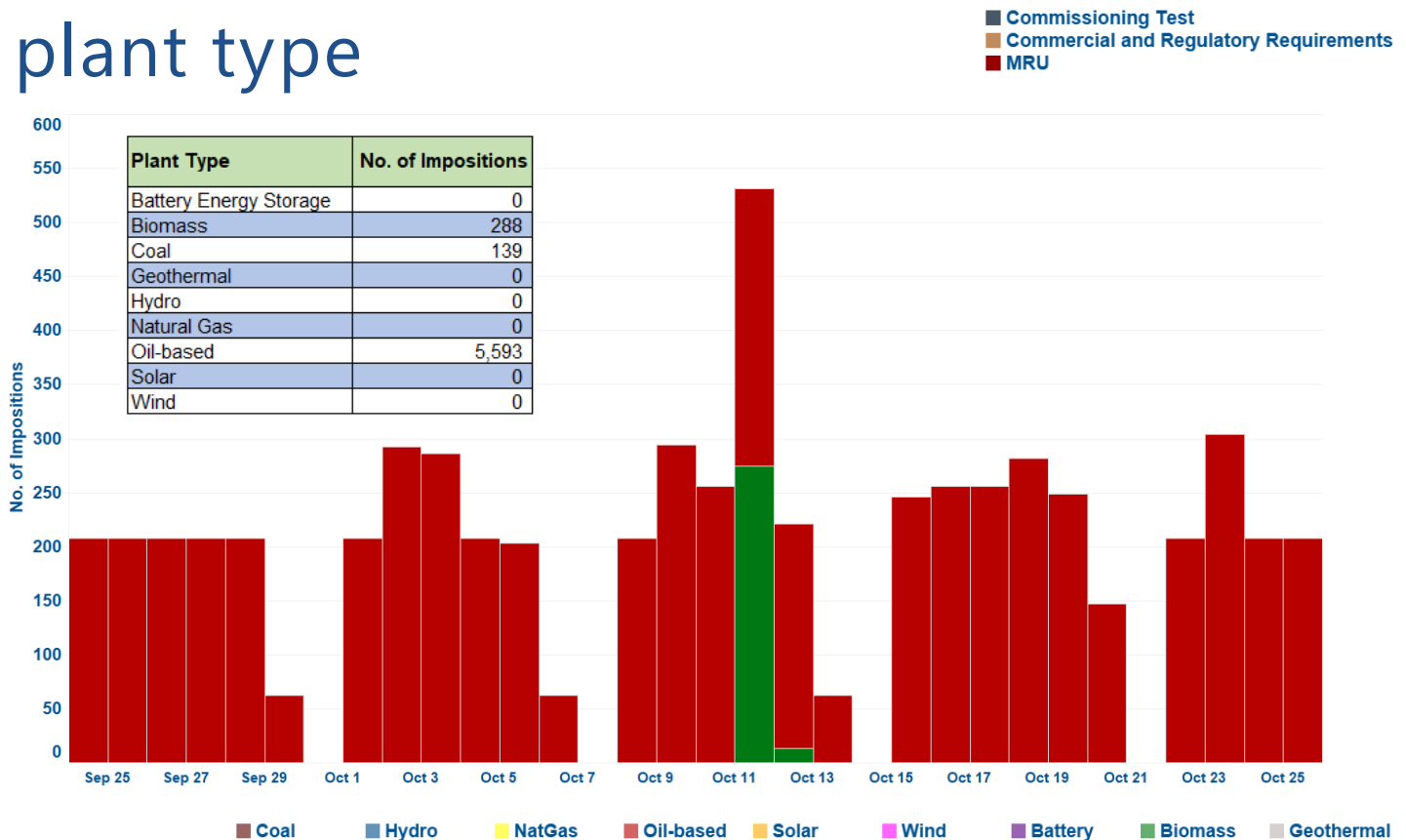
OC IMPOSITIONS MINDANAO



by incident



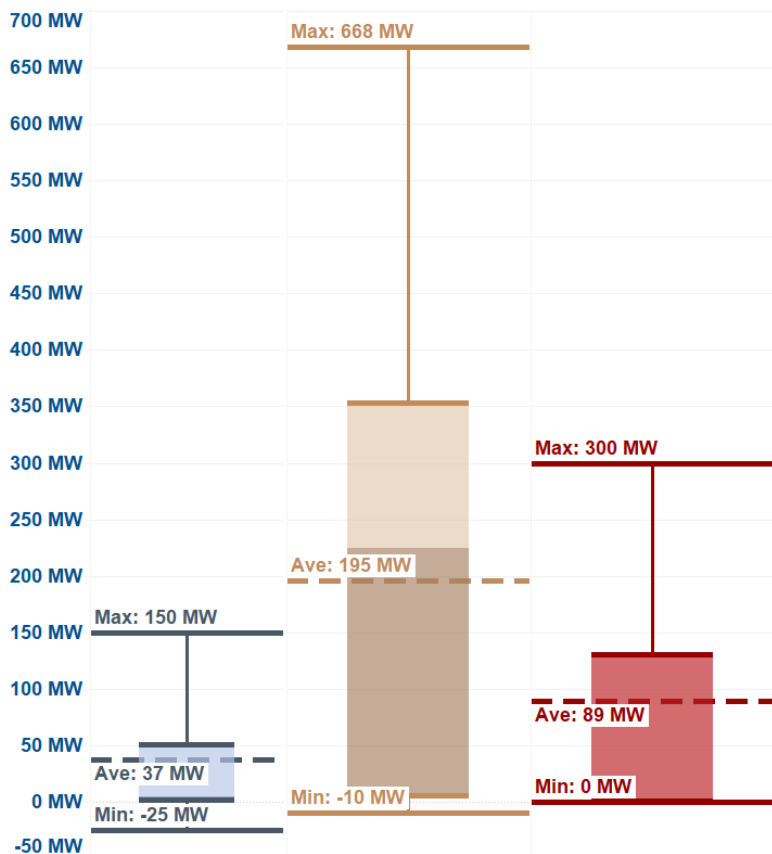
by plant type



In Mindanao, **one (1) oil-based** plant was dispatched **most of the time as MRU** during the October 2023 billing period to address system voltage requirement of the region. It was likewise observed that OC impositions decreased during weekends and holidays.

An observed conduct of **commissioning test** by **one (1) biomass** plant was noted during the middle of the week of the billing period.

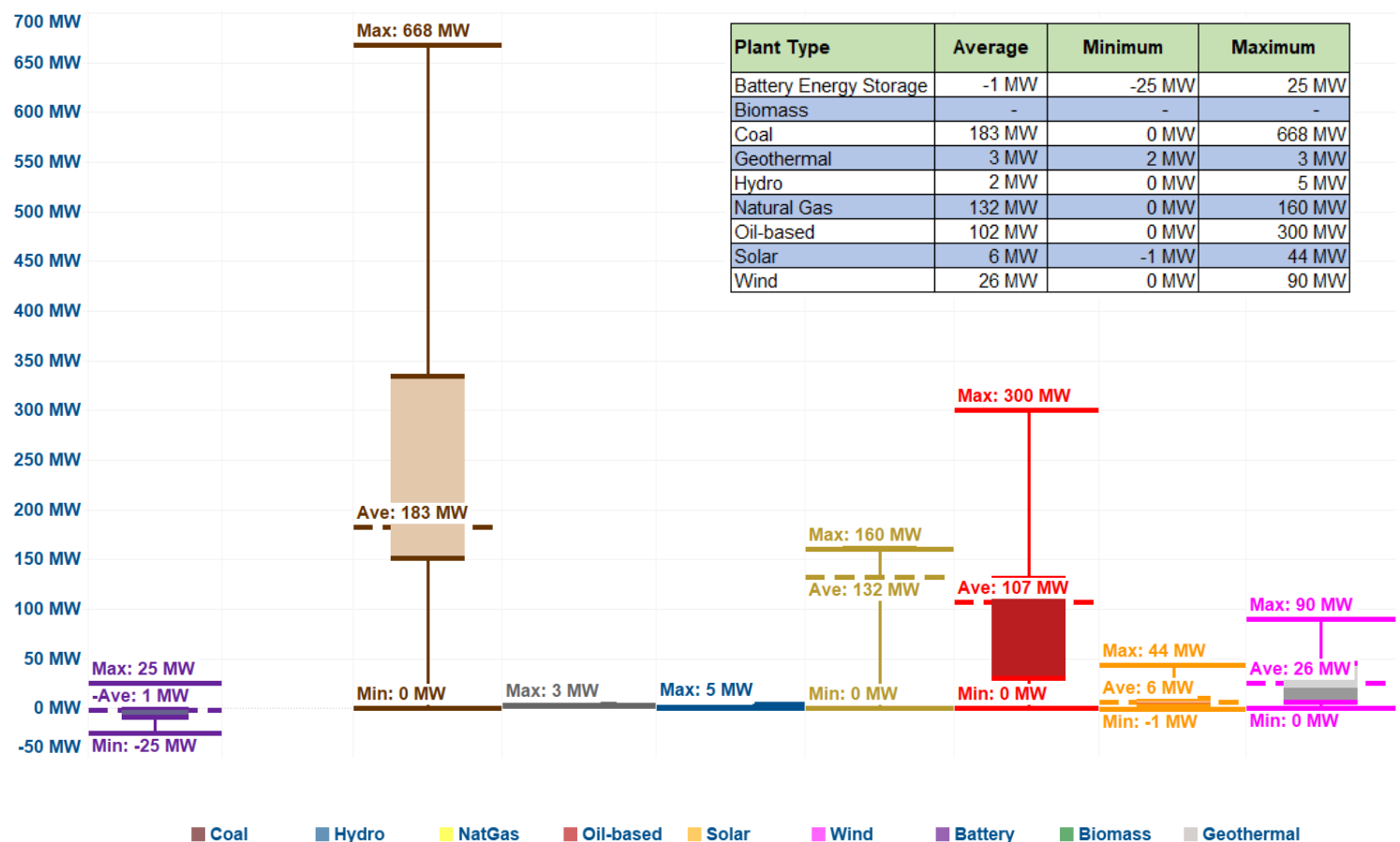
by incident



Incident	Average	Minimum	Maximum
Commissioning Test	37 MW	-25 MW	150 MW
Commercial and Regulatory Requirements	195 MW	-10 MW	668 MW
MRU	89 MW	0 MW	300 MW

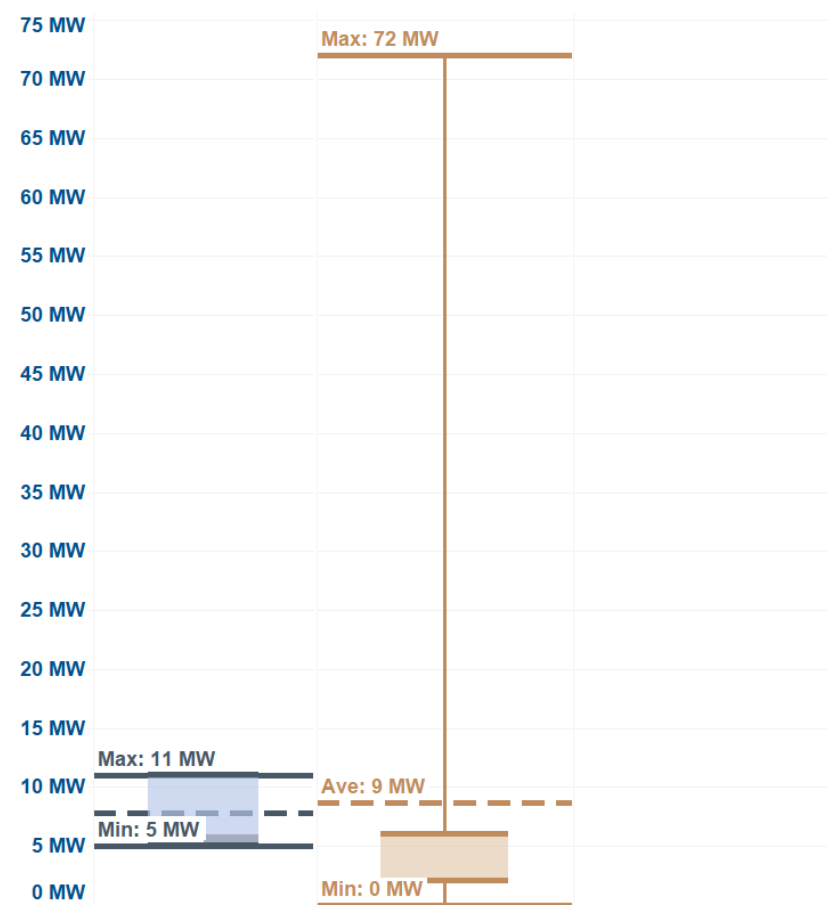
The highest MW scheduled in Luzon on average was at 195 MW due to conduct of commercial and regulatory requirement of coal plants.

by plant type



Plant Type	Average	Minimum	Maximum
Battery Energy Storage	-1 MW	-25 MW	25 MW
Biomass	-	-	-
Coal	183 MW	0 MW	668 MW
Geothermal	3 MW	2 MW	3 MW
Hydro	2 MW	0 MW	5 MW
Natural Gas	132 MW	0 MW	160 MW
Oil-based	102 MW	0 MW	300 MW
Solar	6 MW	-1 MW	44 MW
Wind	26 MW	0 MW	90 MW

by incident

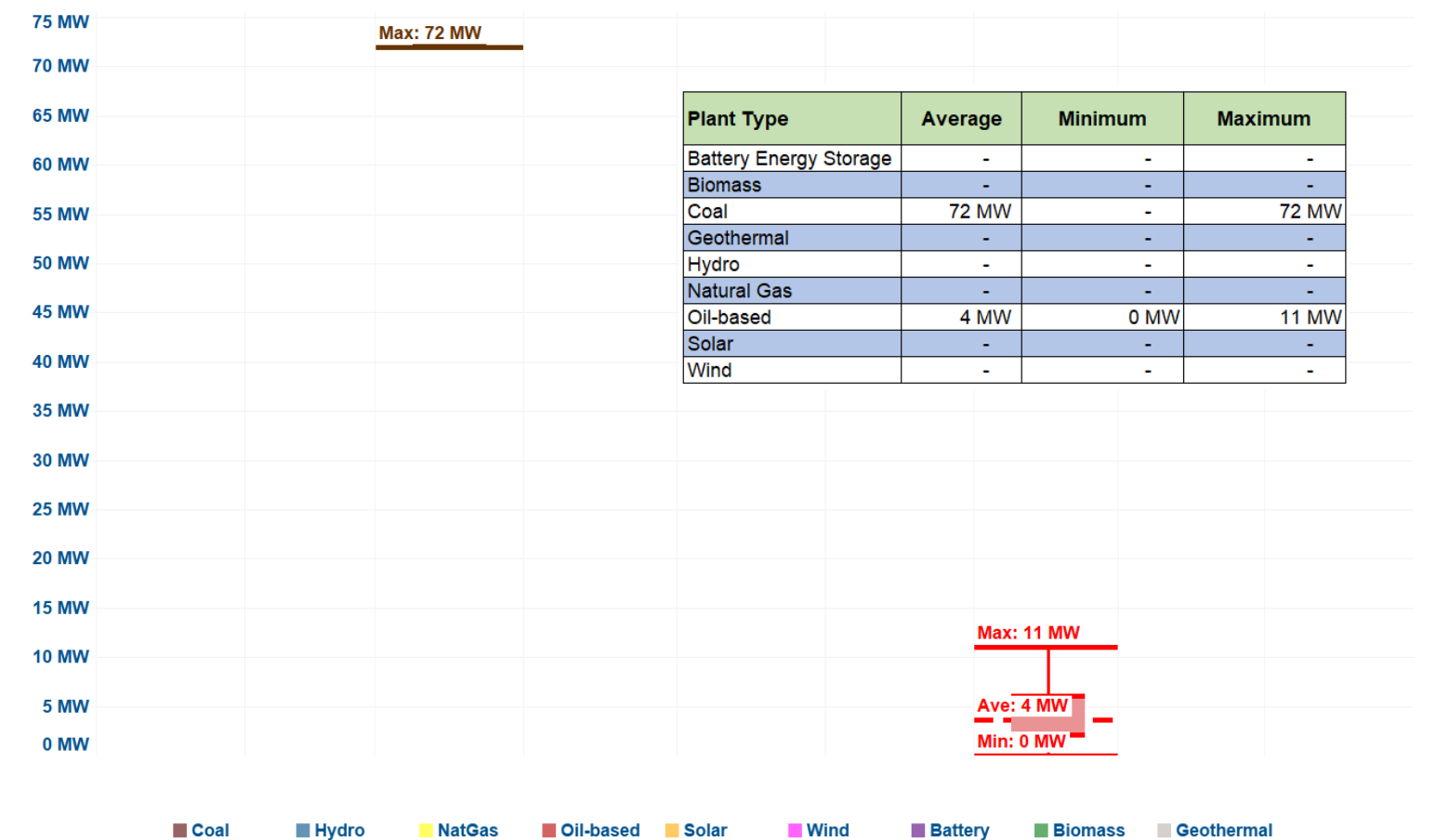


Incident	Average	Minimum	Maximum
Commissioning Test	4 MW	0 MW	5 MW
Commercial and Regulatory Requirements	13 MW	0 MW	50 MW
MRU	8 MW	0 MW	9 MW

Majority of the MW scheduled in Visayas was attributable to the conduct of emission test by oil-based plants.

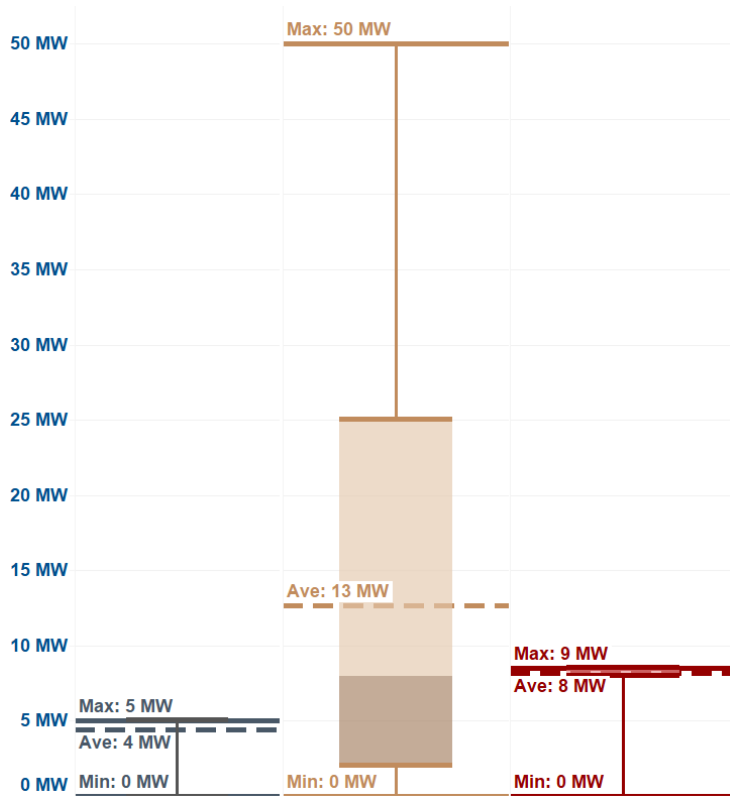
The maximum MW scheduled observed in the region was because of the conduct of ancillary service test of one (1) coal plant.

by plant type



MW SCHEDULES MINDANAO

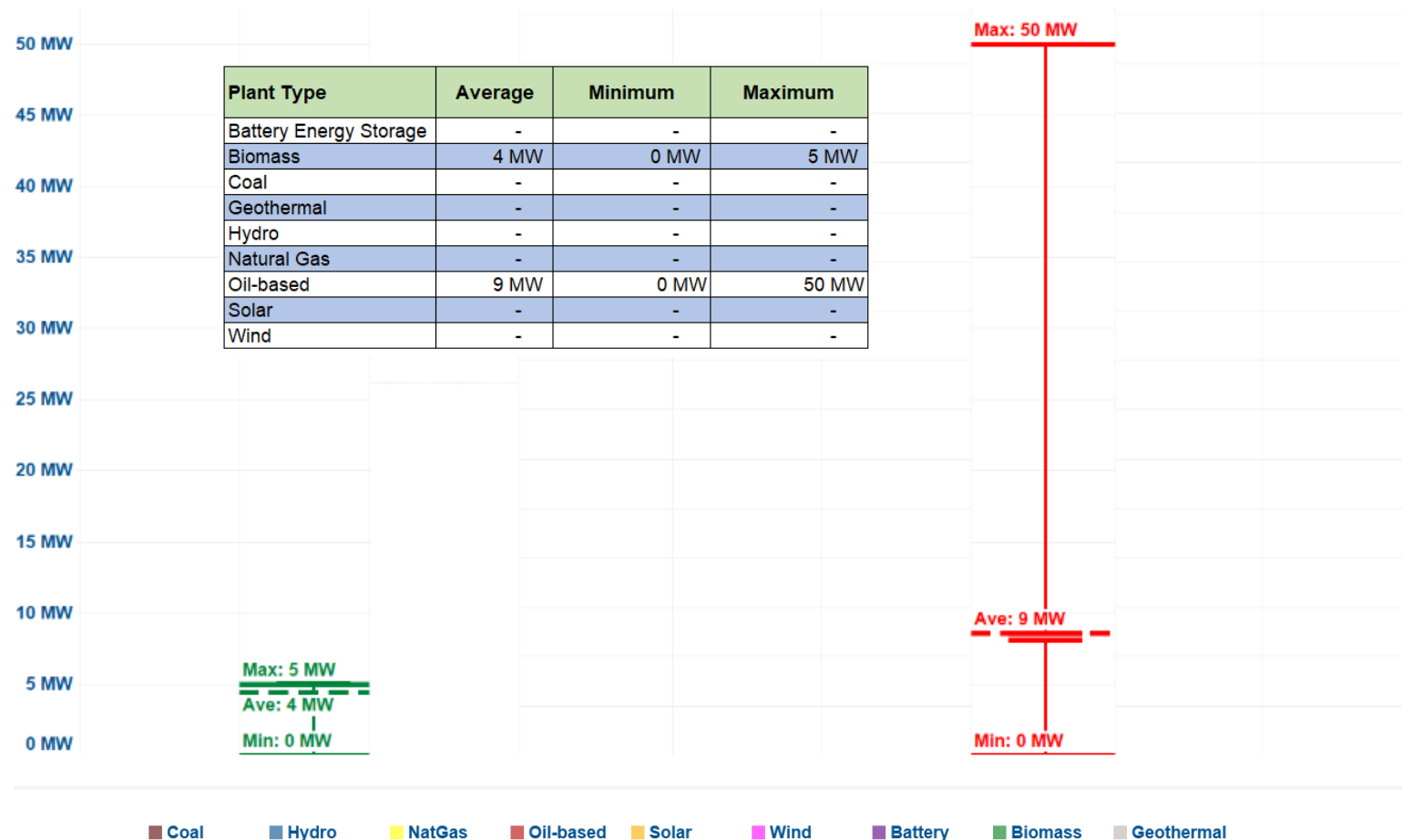
by incident



Incident	Average	Minimum	Maximum
Commissioning Test	4 MW	0 MW	5 MW
Commercial and Regulatory Requirements	13 MW	0 MW	50 MW
MRU	8 MW	0 MW	9 MW

While majority of the imposition in Mindanao was due to oil-based plants dispatched as MRU to address the system voltage requirement in the grid, the highest scheduled MW on average was attributable to the conduct of ancillary service test.

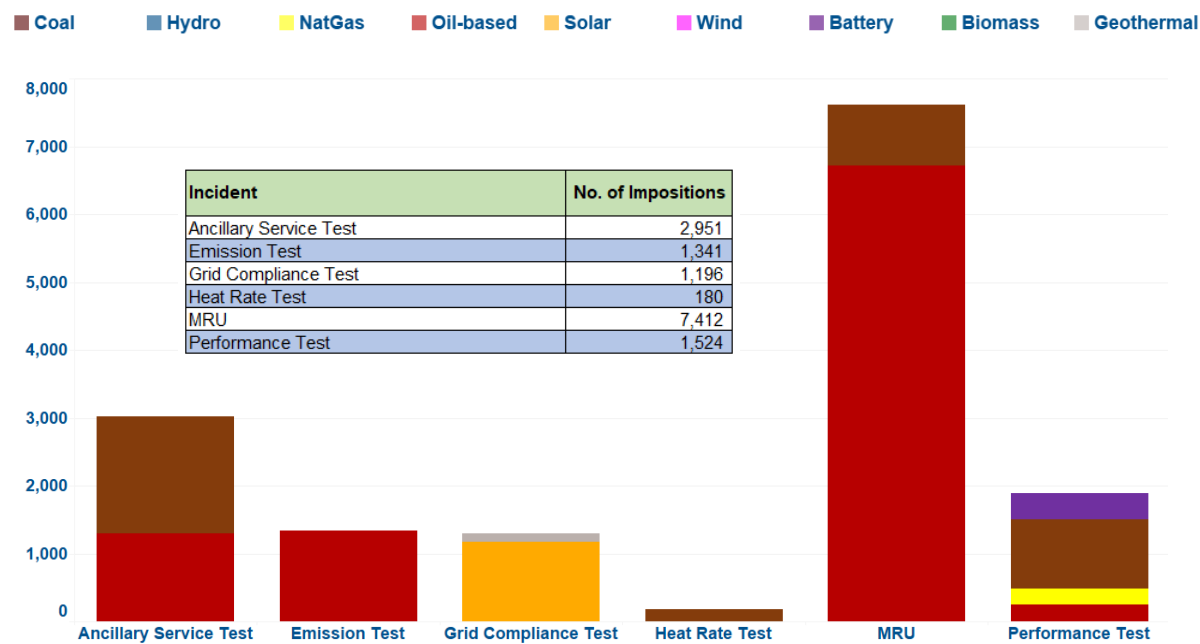
by plant type



OC IMPOSITIONS

by incident

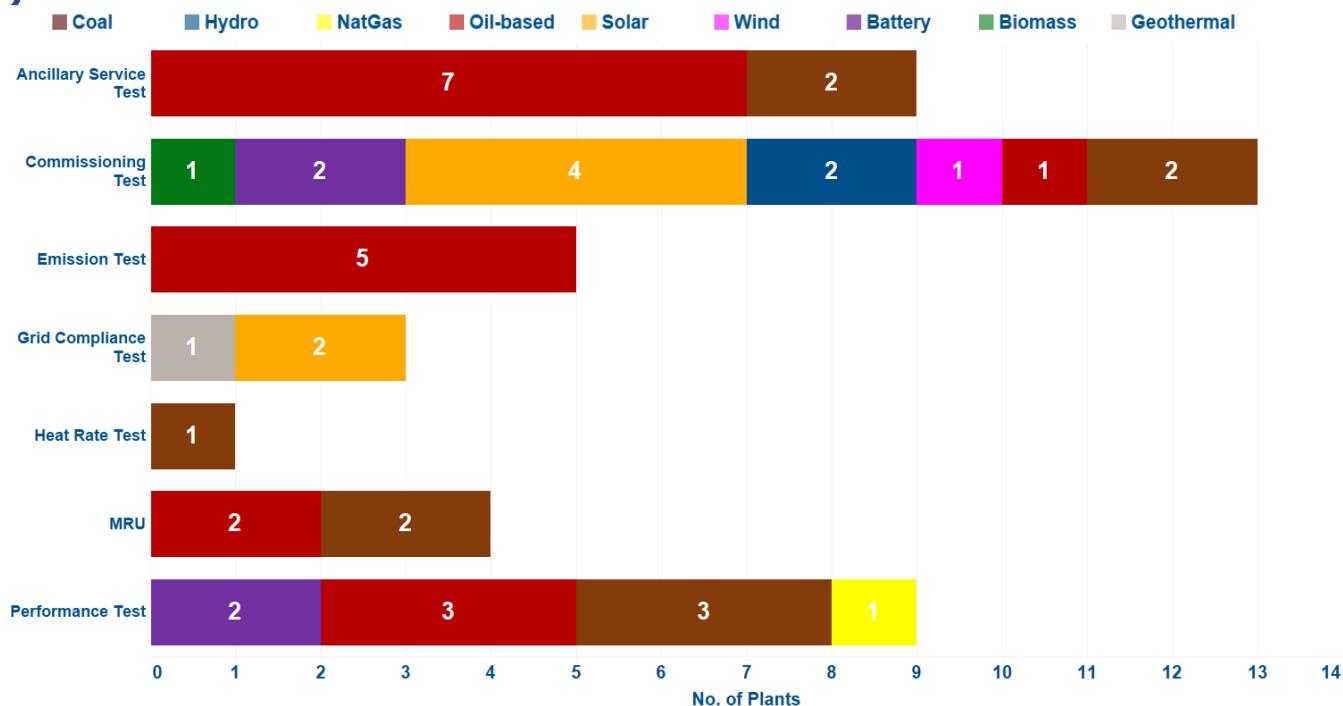
(excluding commissioning test)



Looking further on the specific tests conducted by plants, excluding commissioning tests, majority of impositions were imposed to oil-based plants which were dispatched as MRU. This was followed by the of conduct ancillary service tests to coal and oil-based plants.

NUMBER OF PLANTS

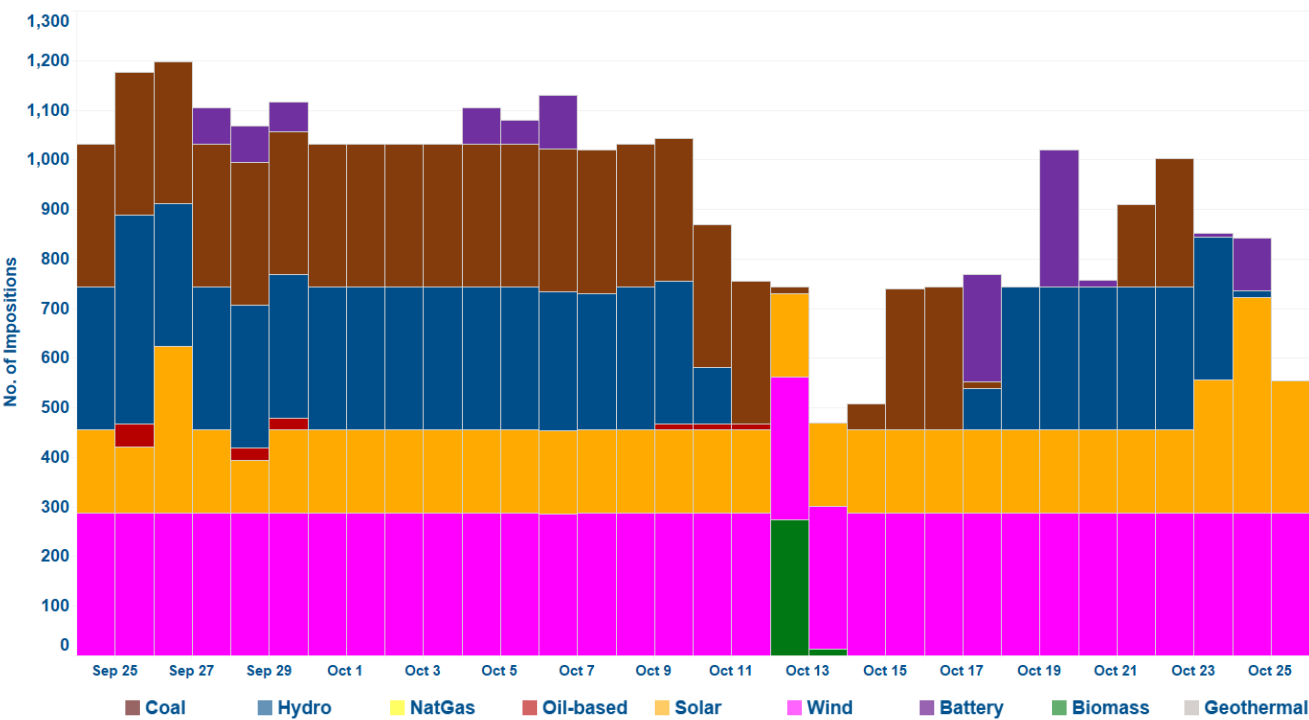
by incident



A total of forty (40) plants was imposed with over-riding constraints during the billing month, thirteen (13) of which were due to commissioning tests, followed by ancillary service test and performance test imposed to nine (9) plants each. One (1) coal plant was imposed with OC to conduct heat rate test.

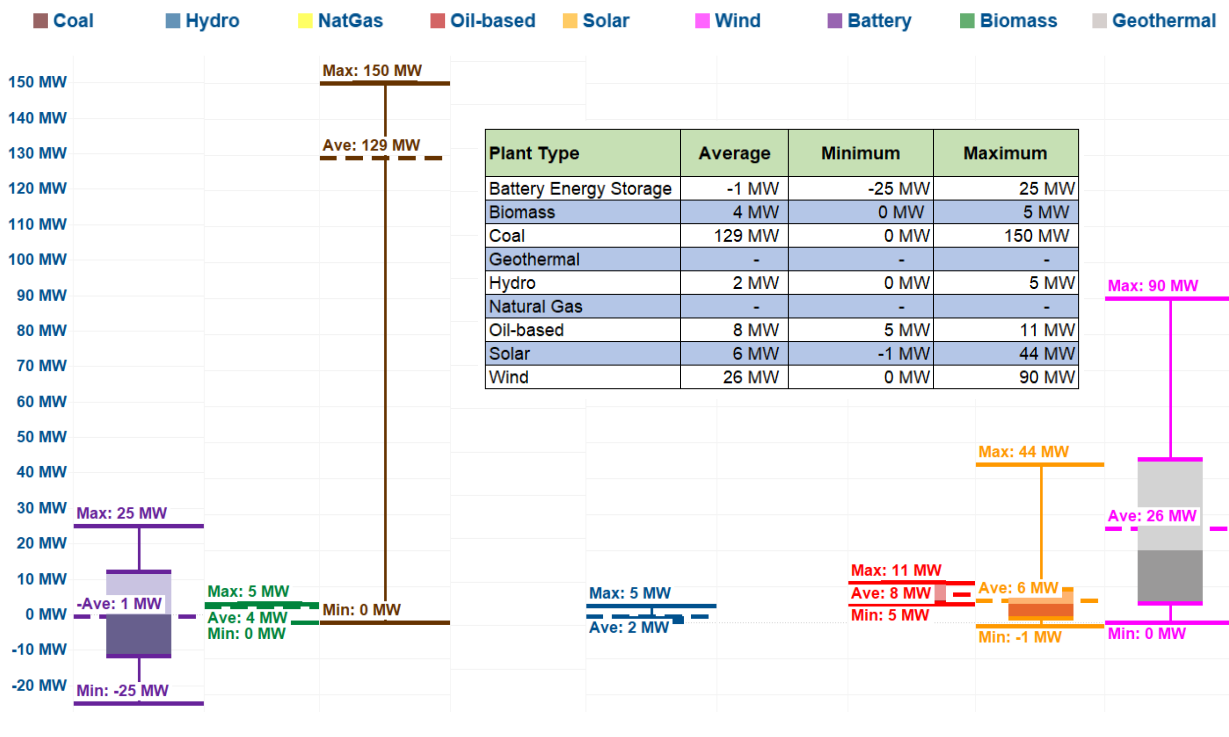
OC IMPOSITIONS

PLANTS UNDER COMMISSIONING TESTS



MW SCHEDULE

PLANTS UNDER COMMISSIONING TESTS



In terms of the number of impositions, coal, hydro, and wind plants had the greatest number of impositions related to commissioning test during the billing period accounting to 65% of the total impositions.

The highest MW scheduled was attributable to a coal plant with a large capacity. Meanwhile, wind and solar plants' MW schedules varied throughout the billing period.

ANNEX

Plants with Over-riding Constraints

Plant/Unit Name	Plant Type	Registered Capacity (MW) ¹
LUZON		
Arayat-Mexico Solar Power Plant Project Phase 2	Solar	30.8
Balaoi and Caunayan Wind Power Project Phase 1	Wind	80
Cayanga-Bugallon Solar Power Plant	Solar	75.1
Bunker C-Fired Diesel Power Plant	Oil-Based	20
Concepcion Battery Energy Storage System	Battery	60
GNPower Dinginin Coal Plant - Unit 1	Coal	668
Bataan Combined Cycle Power Plant Unit 3	Oil-Based	60
Bataan Combined Cycle Power Plant Unit 5	Oil-Based	60
Bataan Combined Cycle Power Plant Unit 6	Oil-Based	60
Bataan Combined Cycle Power Plant Unit 7	Oil-Based	60
Magat Battery Energy Storage System	Battery	24
Mariveles Solar Power Plant	Solar	16
Mariveles Coal-fired Thermal Power Plant- Phase 1	Coal	150
Mariveles Coal-fired Thermal Power Plant Unit 2	Coal	150
Masinloc Coal-Fired Thermal Power Plant Unit 1	Coal	344
Masinloc Coal-Fired Thermal Power Plant Unit 2	Coal	344
Masinloc Coal-Fired Thermal Power Plant Unit 3	Coal	335
Refinery Solid Fuel-Fired Boiler Power Plant	Coal	140
Sual Coal-Fired Power Plant 1	Coal	647
Sual Coal-Fired Power Plant 2	Coal	647
Trust Solar Power Plant	Solar	15.4
Lower Labayat Hydroelectric Power Plant	Hydro	1.5
Malaya Thermal Power Plant Unit 2	Oil-Based	130
Majestics Energy Solar PV Plant	Solar	32.9
Makban-Binary 1 Geothermal Power Plant	Geothermal	6
Pagbilao Coal-Fired Power Plant 1	Coal	382
Pagbilao Coal-Fired Power Plant 2	Coal	382
Pagbilao 3 Power Plant	Coal	420
Sta. Rita Natural Gas Power Plant 2	Natural Gas	255.7
Sta. Rita Natural Gas Power Plant 3	Natural Gas	265.5
San Lorenzo Combined-Cycle Gas Turbine Power Plant Unit 50	Natural Gas	265
Tibag Hydroelectric Power Plant	Hydro	5.8
CEDC Coal-Fired Thermal Power Plant Unit 3	Coal	82

¹ As of 13 November 2023

Plant/Unit Name	Plant Type	Registered Capacity (MW) ¹
VISAYAS		
Calbayog Bunker C-Fired Diesel Power Plant	Oil-Based	11.2
Isabel Modular Diesel Power Plant Sector 3	Oil-Based	15.1
Isabel Modular Diesel Power Plant Sector 5	Oil-Based	15.1
Isabel Modular Diesel Power Plant Sector 6	Oil-Based	10.2
CEDC Coal-Fired Thermal Power Plant Unit 2	Coal	82
CEDC Coal-Fired Thermal Power Plant Unit 3	Coal	82
Unit 1 Calumangan Bunker C-Fired Diesel Power Plant	Oil-Based	4.5
Unit 2 Calumangan Bunker C-Fired Diesel Power Plant	Oil-Based	4.5
Unit 3 Calumangan Bunker C-Fired Diesel Power Plant	Oil-Based	4.5
Unit 4 Calumangan Bunker C-Fired Diesel Power Plant	Oil-Based	6.7
Unit 5 Calumangan Diesel Power Plant	Oil-Based	6.7
Power Barge 104 Unit 1	Oil-Based	7
Power Barge 104 Unit 2	Oil-Based	7
Power Barge 104 Unit 3	Oil-Based	7
Power Barge 101- Unit 1	Oil-Based	6
Power Barge 101- Unit 2	Oil-Based	6
Power Barge 101- Unit 4	Oil-Based	6
MINDANAO		
Biomass Power Plant	Oil-based	15.5
Misamis Occidental Bunker C-Fired Power Plant 2 Unit 1	Biomass	6
Misamis Occidental Bunker C-Fired Power Plant 2 Unit 2	Oil-based	7.8
Bunker-C Fired Diesel Power Plant Unit 1	Oil-based	7.8
Bunker-C Fired Diesel Power Plant Unit 2	Oil-based	10.2
Bunker-C Fired Diesel Power Plant Unit 4	Oil-based	10.2
Bunker-C Fired Diesel Power Plant Unit 5	Oil-based	10.2
Bunker-C Fired Diesel Power Plant Unit 6	Oil-based	10.2
Bunker-C Fired Diesel Power Plant Unit 7	Oil-based	10.2
Bunker-C Fired Diesel Power Plant Unit 8	Oil-based	10
Bunker-C Fired Diesel Power Plant Unit 9	Oil-based	10.1
Bunker-C Fired Diesel Power Plant Unit 10	Oil-based	10.2
NBPC 6 Bunker C Fired Diesel Power Plant	Oil-based	10.2
Surigao Del Sur Power Plant	Oil-based	5
Mobile 2 Bunker C-Fired Power Plant Unit 1	Oil-based	7.8
Mobile 2 Bunker C-Fired Power Plant Unit 2	Oil-based	50

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