

MONTHLY OVER-RIDING CONSTRAINTS HIGHLIGHTS

26 May to 25 June 2024

Document Information Classification: Public

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

A **1.28% net increase** in over-riding constraints during the billing period was observed due to the following reasons:

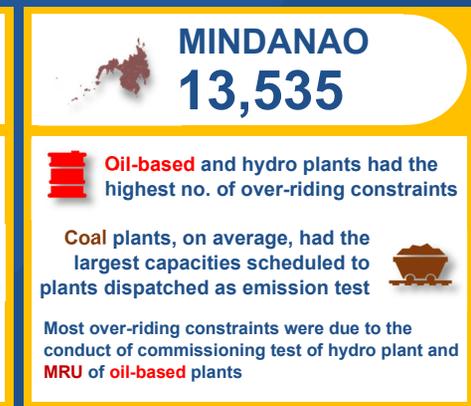
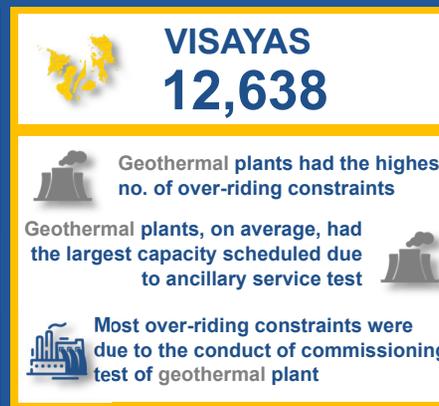
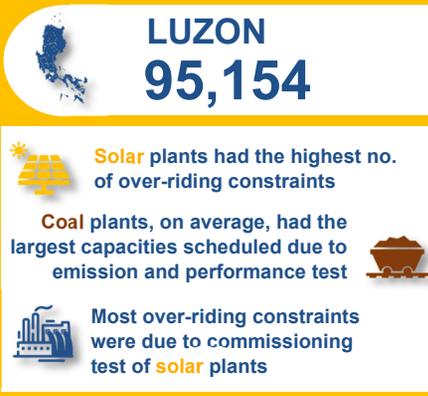
- Over-riding constraints in Luzon increase with the entry of one (1) new Battery Energy System Storage (BESS) and one (1) geothermal plant which commenced their respective commissioning test periods;
- Despite decrease in ancillary service test in Visayas plants, an increase in the overall over-riding constraints was attributable to the commissioning test of geothermal and wind plant during the reviewed billing period.
- Over-riding constraints due to dispatching of plants as Must-Run Units (MRUs) in Mindanao increased to address system voltage requirements in the Zamboanga and Agusan del Norte area.

AT A GLANCE

Total Over-riding
Constraints
Imposition

121,327

▲ **1.28%**
increase from
previous billing
period

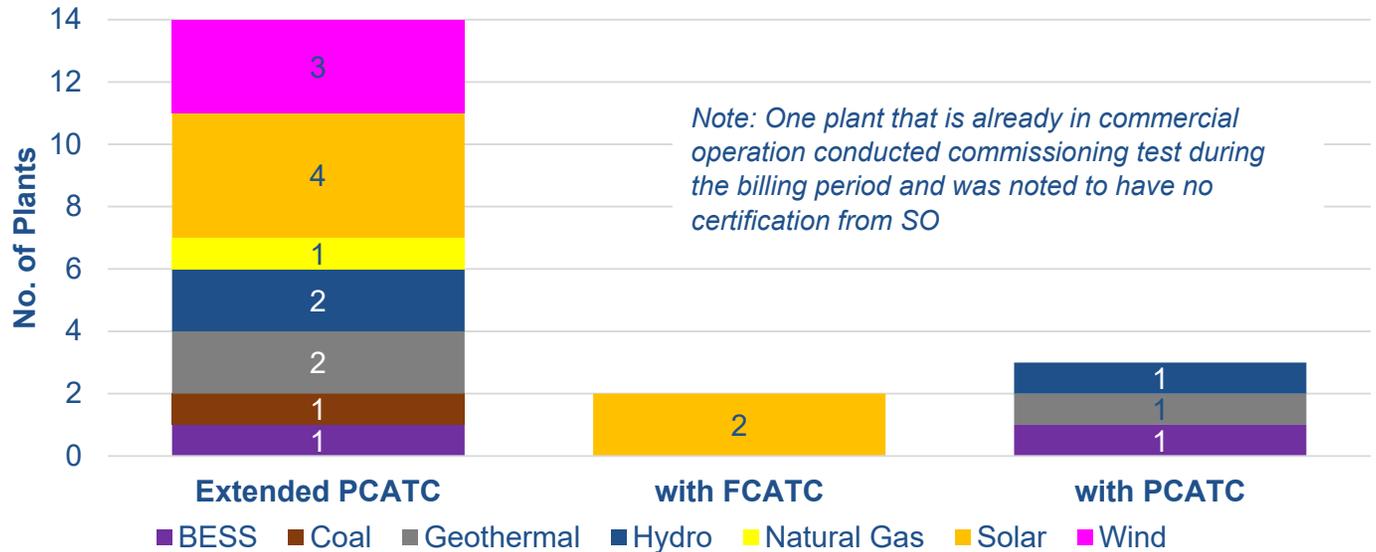


STATUS OF PLANTS UNDER COMMISSIONING TEST

No. of Plants Under Commissioning Test

20

Status of Plants under Commissioning Test



Ave. no. of days under commissioning test per plant type

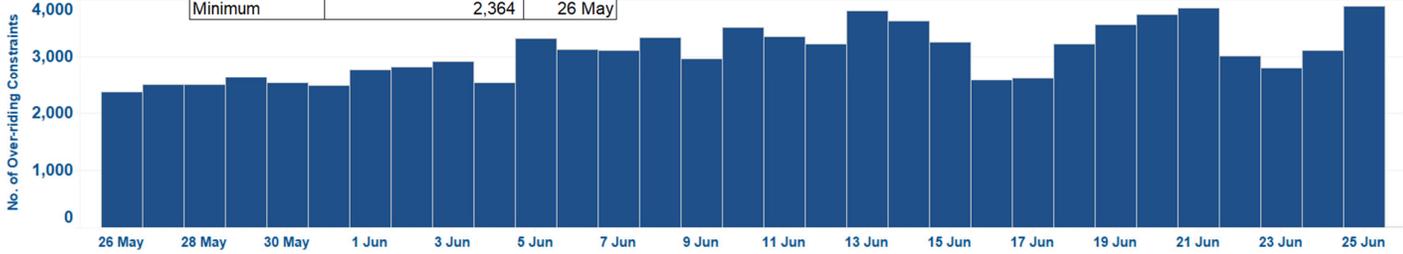
Noted no. of extension of commissioning test period

BESS	Coal	Geo	Hydro	Nat Gas	Solar	Wind
58.5	144	140	122	55	127	222
1 - Gamu BESS	5 - MPGC U3	5 - Palayan Binary PP	7 - Matuno HEP 3 - Ibulao HEP	1 - Batangas CCPP	5 - Cagayan North SPP 3 - Cayanga-Bugallon 1 - Laoag Solar 3 - Pavi Green 2 - Subic PV Solar 1 - Calabanga SPP	11 - Balaoi Caunayan WPP 2 - Caparispisan WPP 2 - PWEI Nabas WPP

OVER-RIDING CONSTRAINTS

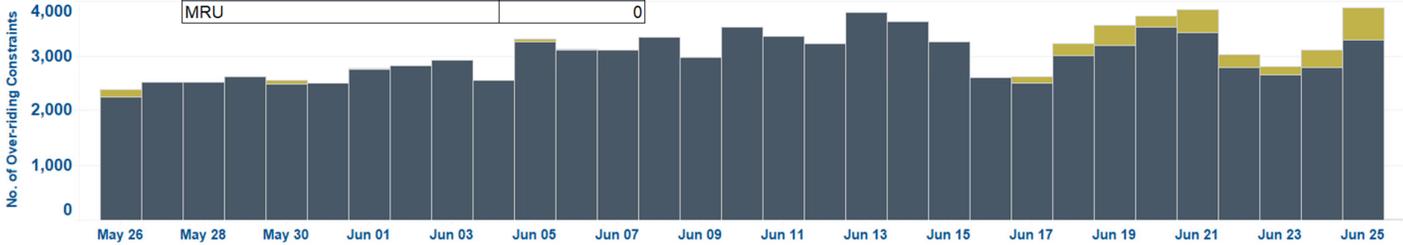
LUZON

	No. of Over-riding Constraints	Date
Maximum	3,888	25 June
Average	3,081	
Minimum	2,364	26 May



Incident	No. of Over-riding Constraints
Commissioning Test	92,208
Commercial and Regulatory Requirements	2,946
MRU	0

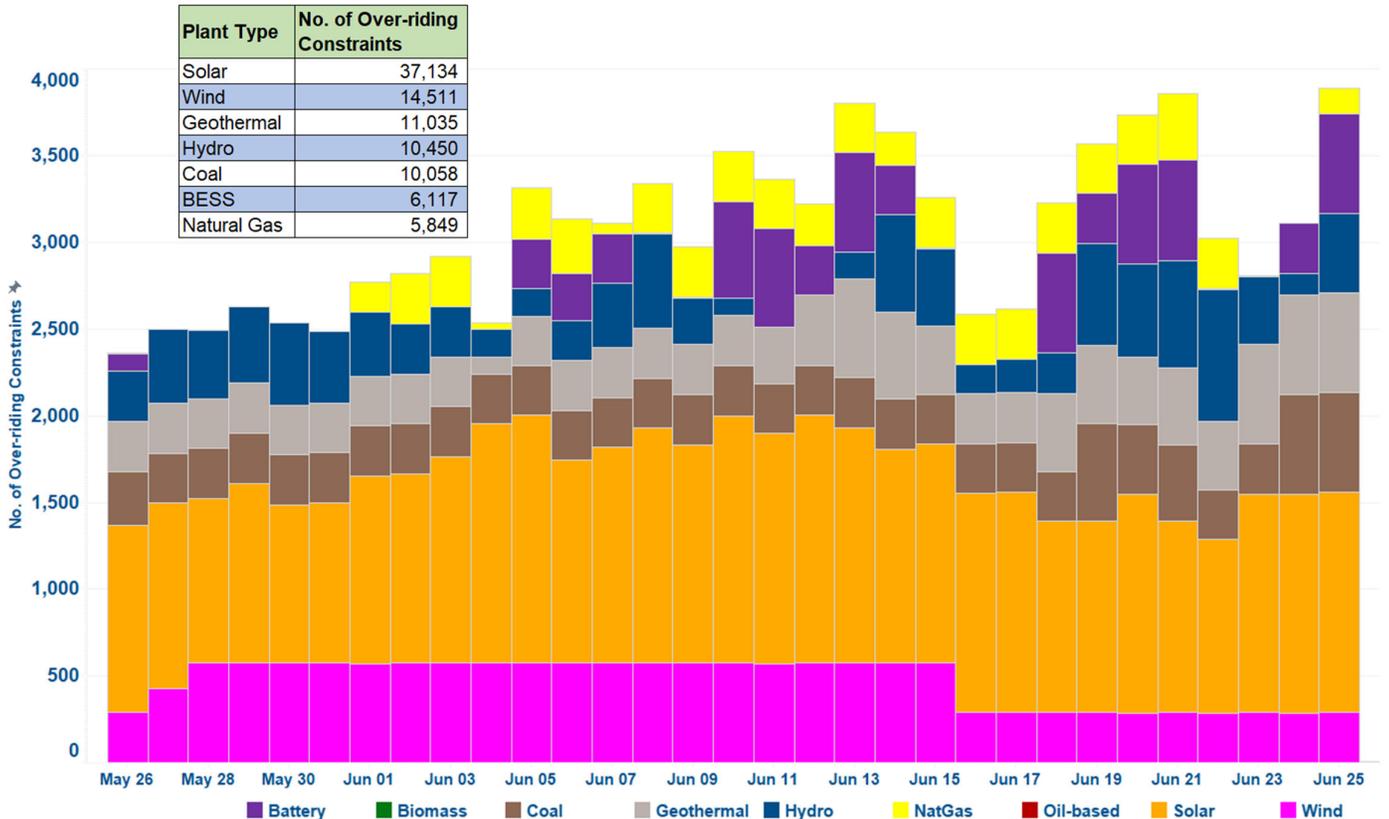
by incident



by plant type

Plant Type	No. of Over-riding Constraints
Solar	37,134
Wind	14,511
Geothermal	11,035
Hydro	10,450
Coal	10,058
BESS	6,117
Natural Gas	5,849

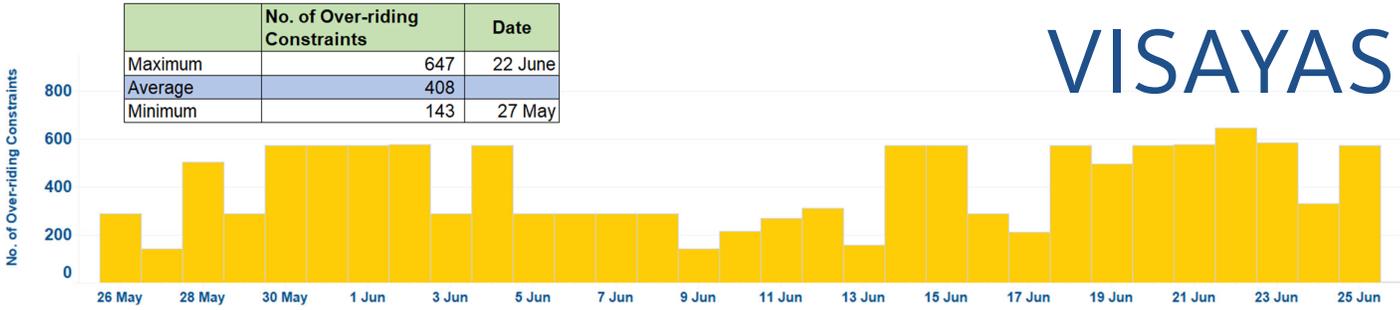
- Commissioning Test
- Commercial and Regulatory Requirements
- MRU



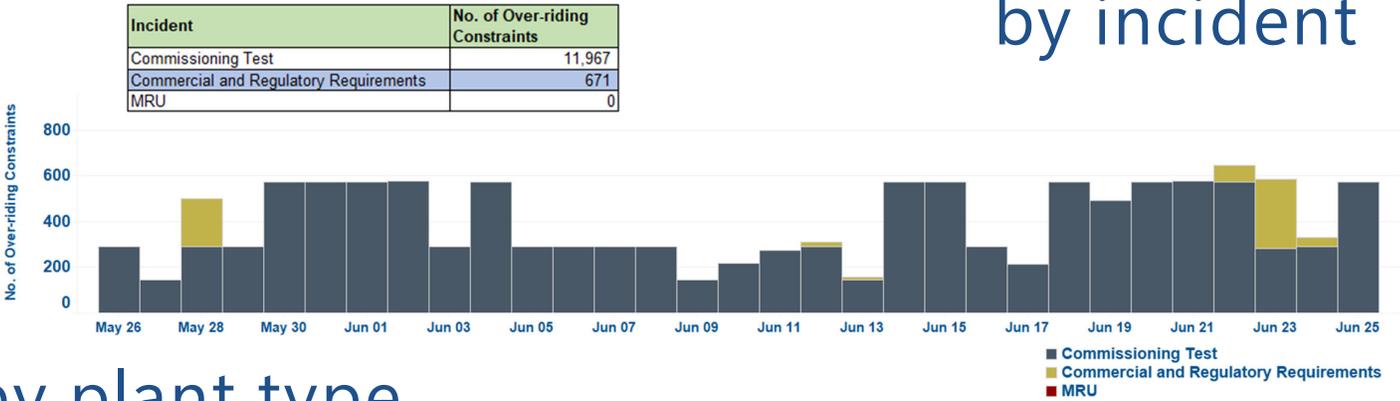
Most of the over-riding constraints in Luzon plants were due to the conduct of commissioning tests of solar, wind, coal, geothermal, hydro, and coal plants during the billing period. Caparispisan Wind stopped conducting commissioning test on 16 June despite having a valid PCATC.

OVER-RIDING CONSTRAINTS

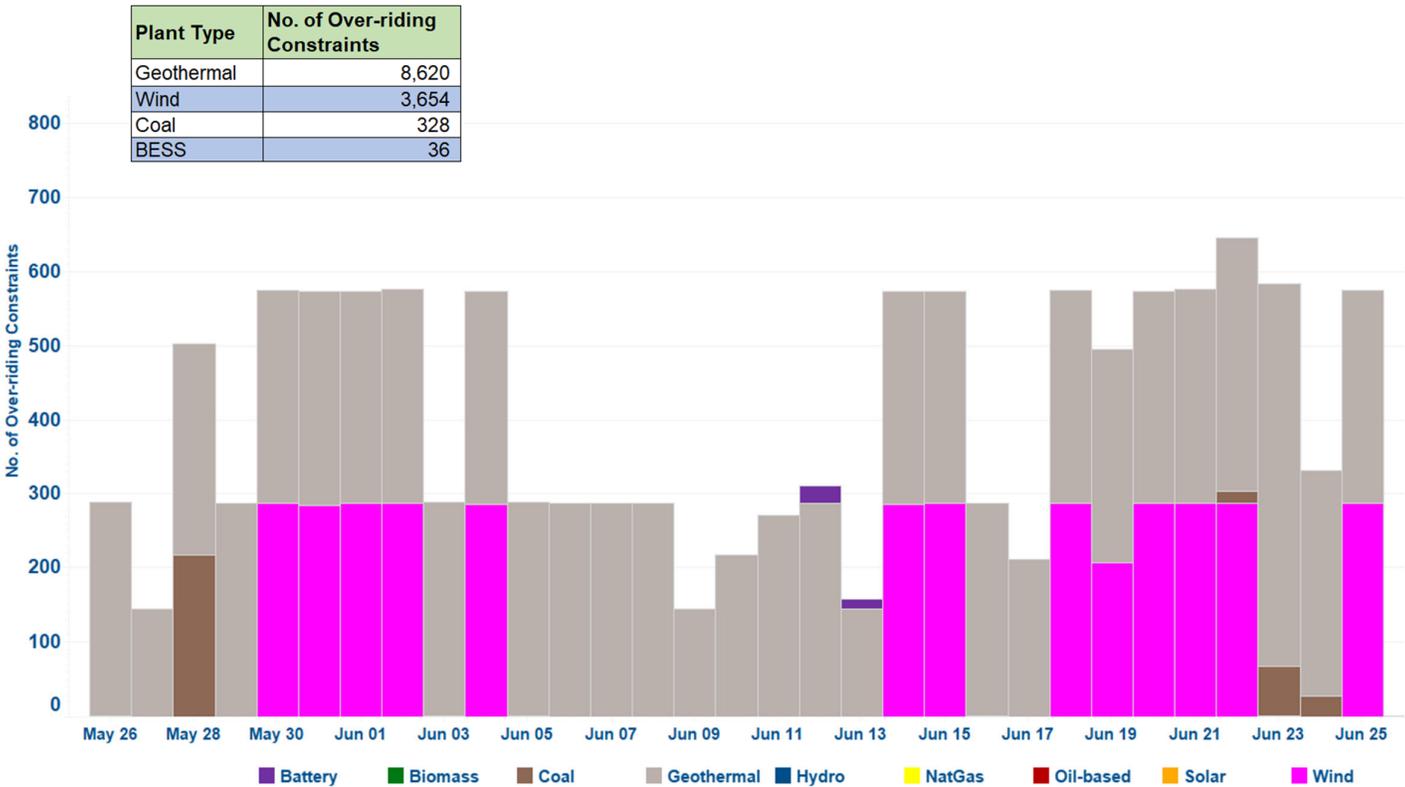
VISAYAS



by incident



by plant type



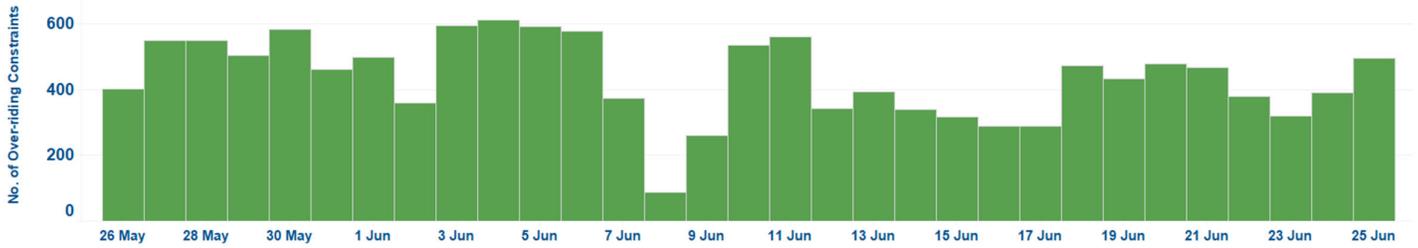
In Visayas, commissioning tests of geothermal and wind plants were the primary reason for most of the over-riding constraints in the region. The conduct of commissioning test of wind plant was scheduled intermittently during the billing period.

Emission test of KSPC CFTPP on 28 May was observed while ancillary service test of Kabankalan BESS (12 – 13 June) and PEDC CFTPP (22 – 24 June) contributed a small share of over-riding constraints.

OVER-RIDING CONSTRAINTS

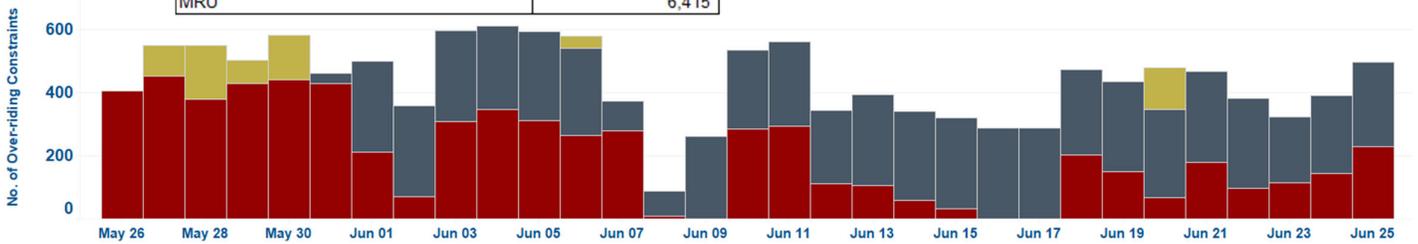
MINDANAO

	No. of Over-riding Constraints	Date
Maximum	612	04 June
Average	437	
Minimum	89	08 June



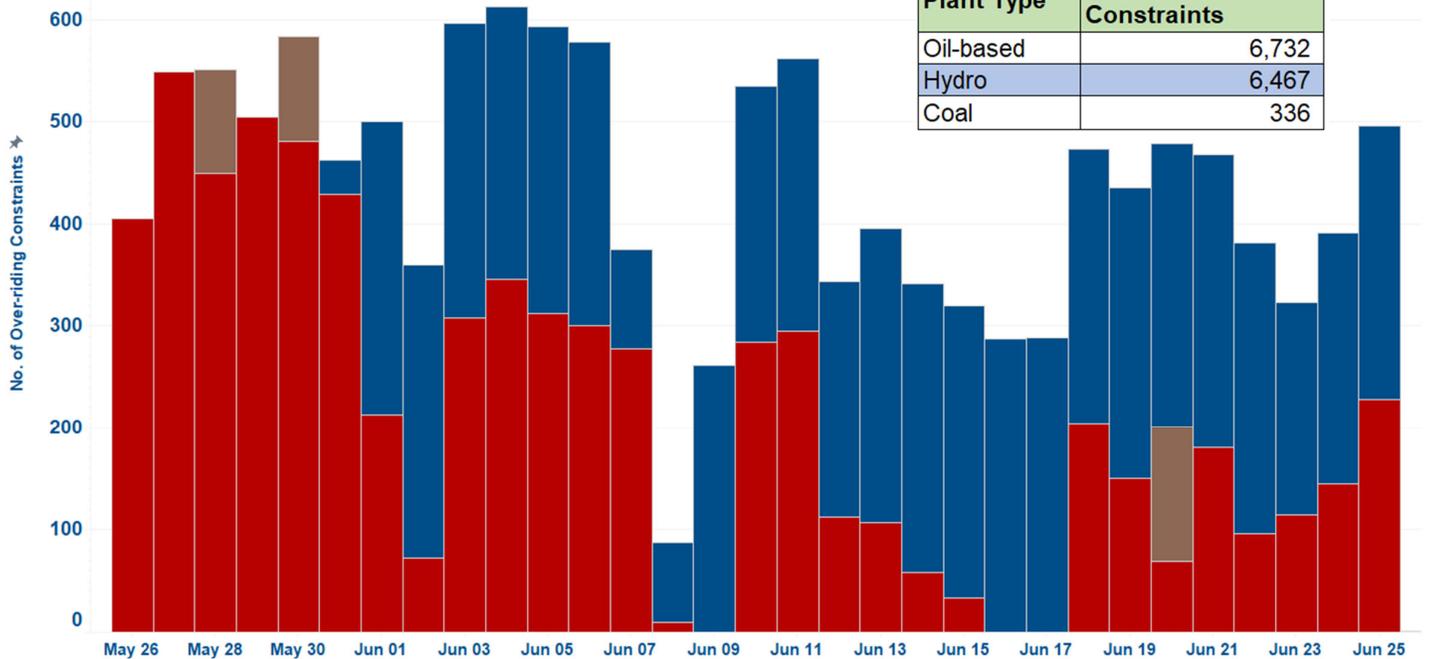
Incident	No. of Over-riding Constraints
Commissioning Test	6,467
Commercial and Regulatory Requirements	653
MRU	6,415

by incident



by plant type

Plant Type	No. of Over-riding Constraints
Oil-based	6,732
Hydro	6,467
Coal	336



■ Battery
 ■ Biomass
 ■ Coal
 ■ Geothermal
 ■ Hydro
 ■ NatGas
 ■ Oil-based
 ■ Solar
 ■ Wind

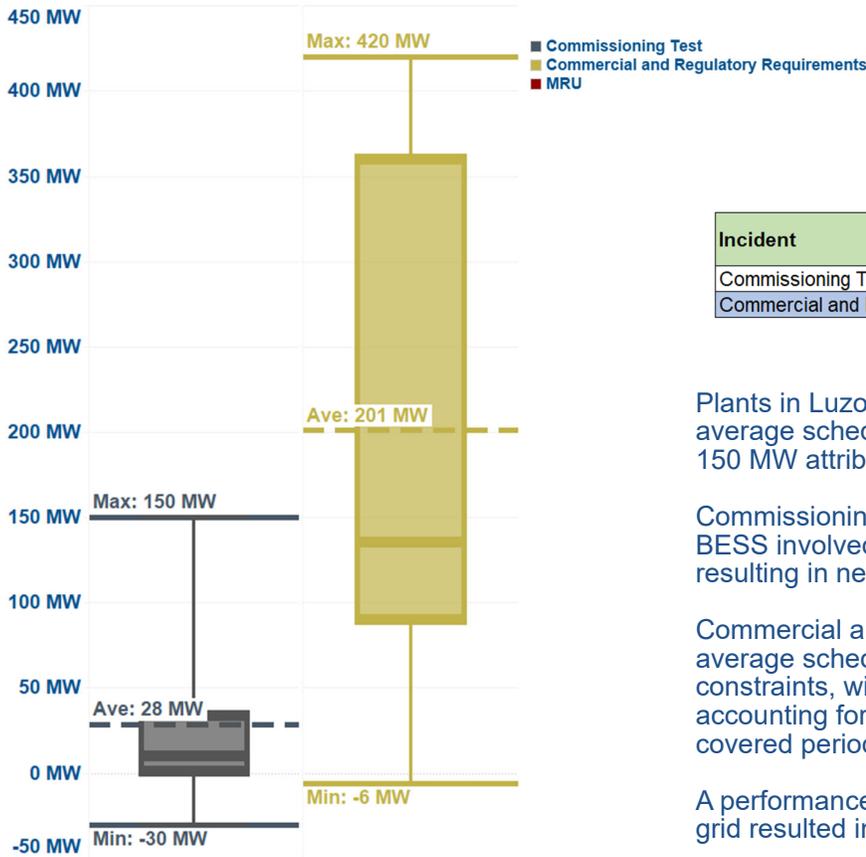
Similar to the previous billing periods, oil-based plants dispatched as MRU in Mindanao were primarily responsible for majority of over-riding constraints during the billing period to address the system voltage requirements in the Zamboanga and Agusan del Norte areas.

Commissioning tests for Siguil Hydro Power Plant (HPP) began in early June, contributing to the increase in over-riding constraints in the region.

SCHEDULED CAPACITIES

LUZON

by incident



Incident	Average	Minimum	Maximum
Commissioning Test	28 MW	-30 MW	150 MW
Commercial and Regulatory Requirements	201 MW	-6 MW	420 MW

Plants in Luzon undergoing commissioning tests had an average scheduled capacity of 28 MW, with a peak of 150 MW attributable to a coal plant.

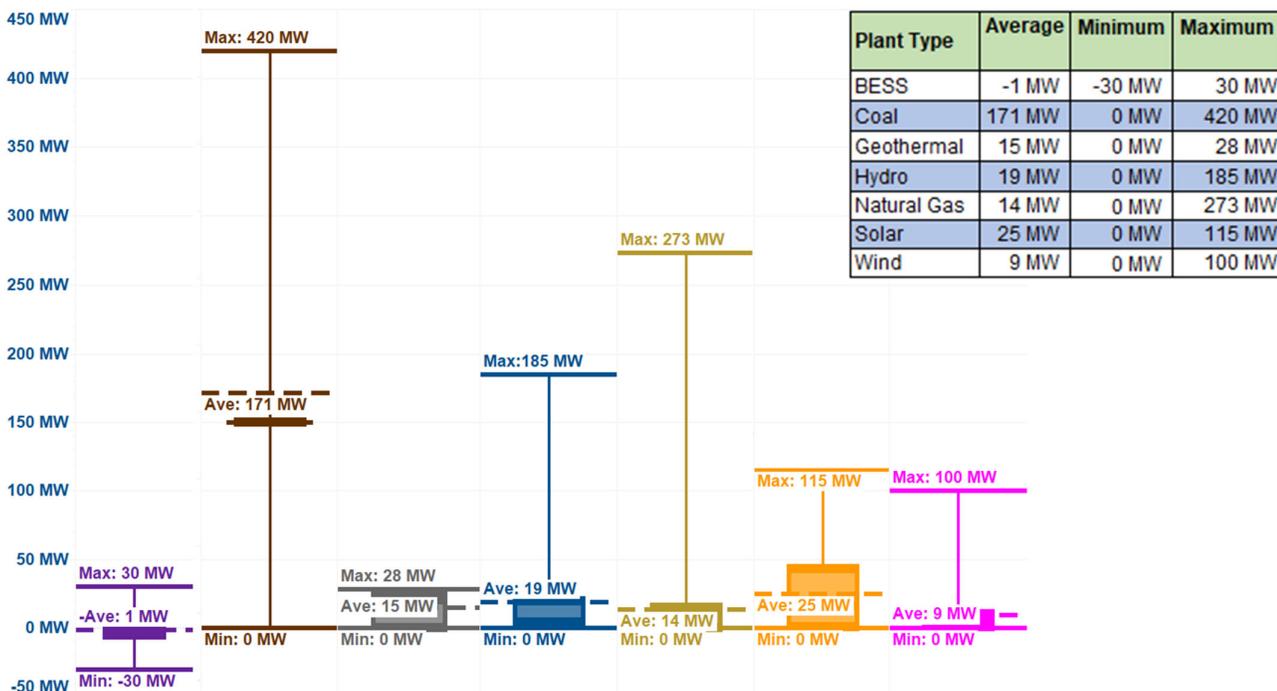
Commissioning tests for Gamu BESS and Lumban BESS involved testing their charging capabilities, resulting in negative scheduled capacity.

Commercial and regulatory requirements led to an average scheduled capacity of 201 MW for over-riding constraints, with emission tests for coal plants accounting for the highest scheduled capacity during the covered period.

A performance test of Magat BESS to charge from the grid resulted in a negative scheduled capacity of -6 MW.

by plant type

- Battery
- Biomass
- Coal
- Geothermal
- Hydro
- NatGas
- Oil-based
- Solar
- Wind

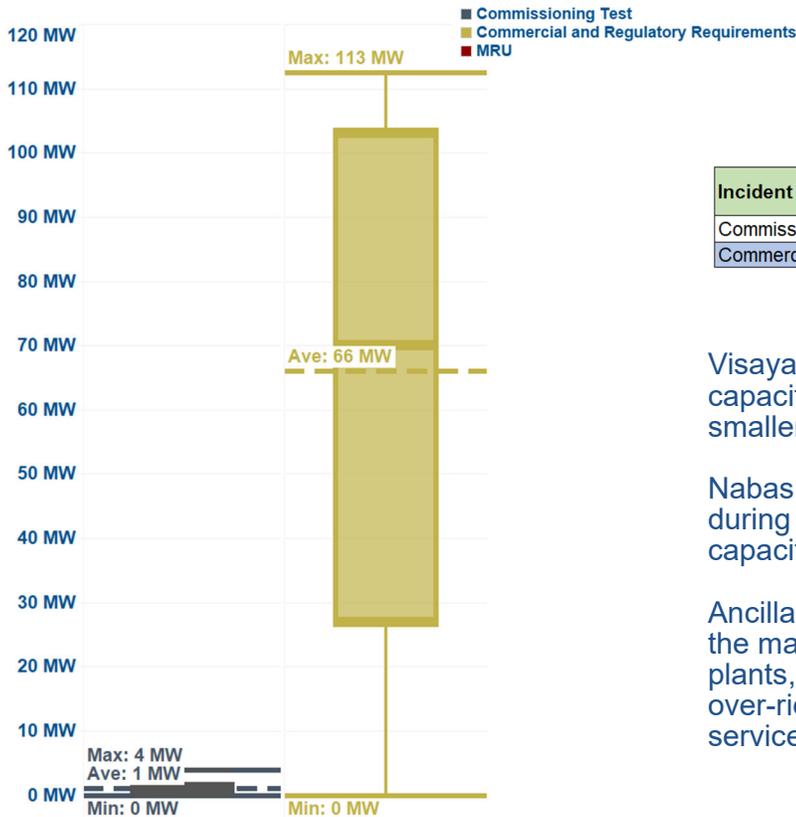


Plant Type	Average	Minimum	Maximum
BESS	-1 MW	-30 MW	30 MW
Coal	171 MW	0 MW	420 MW
Geothermal	15 MW	0 MW	28 MW
Hydro	19 MW	0 MW	185 MW
Natural Gas	14 MW	0 MW	273 MW
Solar	25 MW	0 MW	115 MW
Wind	9 MW	0 MW	100 MW

SCHEDULED CAPACITIES

VISAYAS

by incident



Incident	Average	Minimum	Maximum
Commissioning Test	1 MW	0 MW	4 MW
Commercial and Regulatory Requirements	66 MW	0 MW	113 MW

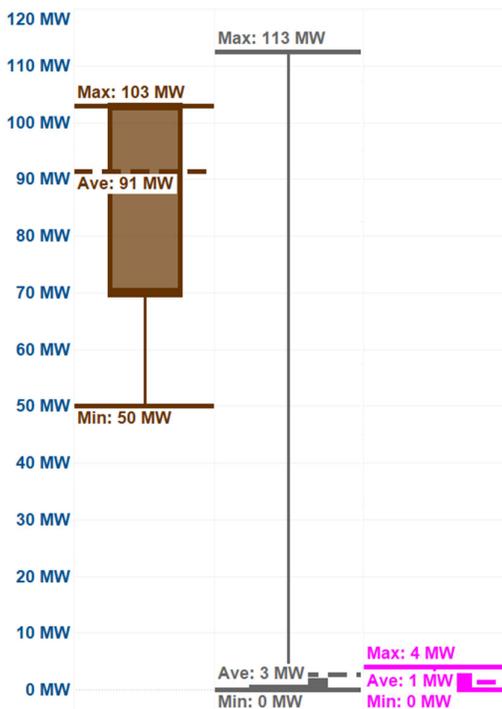
Visayas region plants had lower scheduled capacities compared to Luzon plants due to smaller plants with over-riding constraints.

Nabas U2 continued its commissioning test during the period, with an average scheduled capacity of 1 MW.

Ancillary service tests of Palinpinon GPP had the maximum scheduled capacity, while coal plants, on average, had the largest capacity over-ridden due to emission and ancillary service tests.

by plant type

- Battery
- Biomass
- Coal
- Geothermal
- Hydro
- NatGas
- Oil-based
- Solar
- Wind

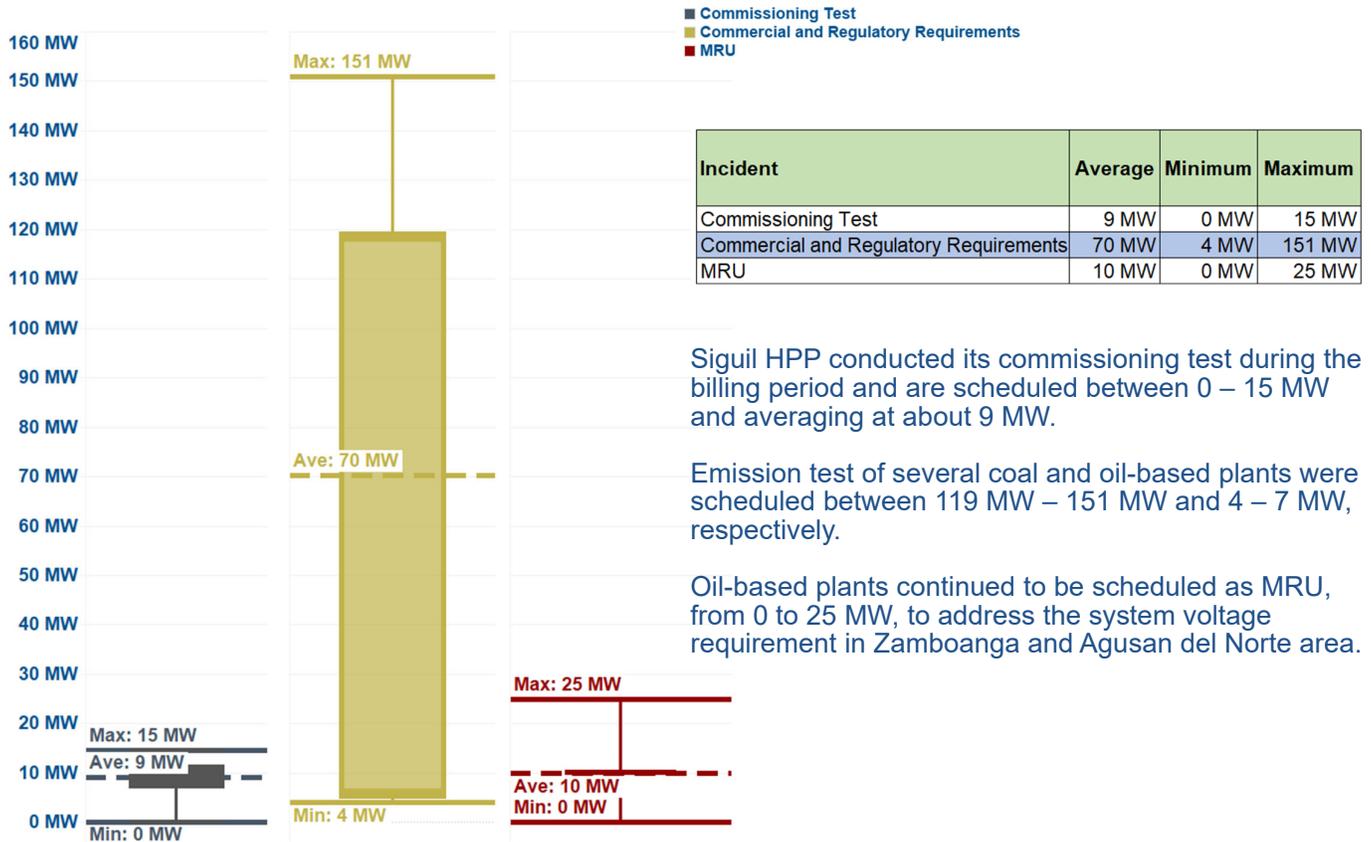


Plant Type	Average	Minimum	Maximum
Coal	91 MW	50 MW	103 MW
Geothermal	3 MW	0 MW	113 MW
Wind	1 MW	0 MW	4 MW

SCHEDULED CAPACITIES

MINDANAO

by incident

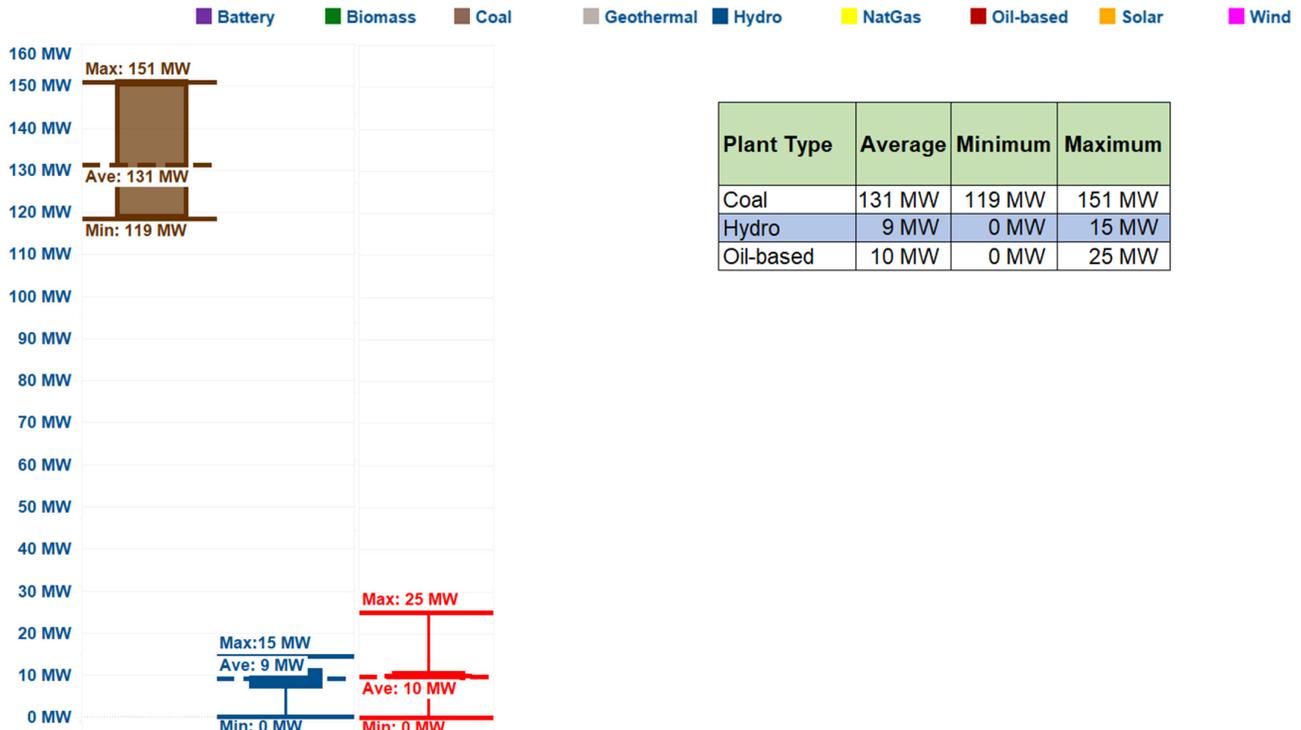


Siigul HPP conducted its commissioning test during the billing period and are scheduled between 0 – 15 MW and averaging at about 9 MW.

Emission test of several coal and oil-based plants were scheduled between 119 MW – 151 MW and 4 – 7 MW, respectively.

Oil-based plants continued to be scheduled as MRU, from 0 to 25 MW, to address the system voltage requirement in Zamboanga and Agusan del Norte area.

by plant type

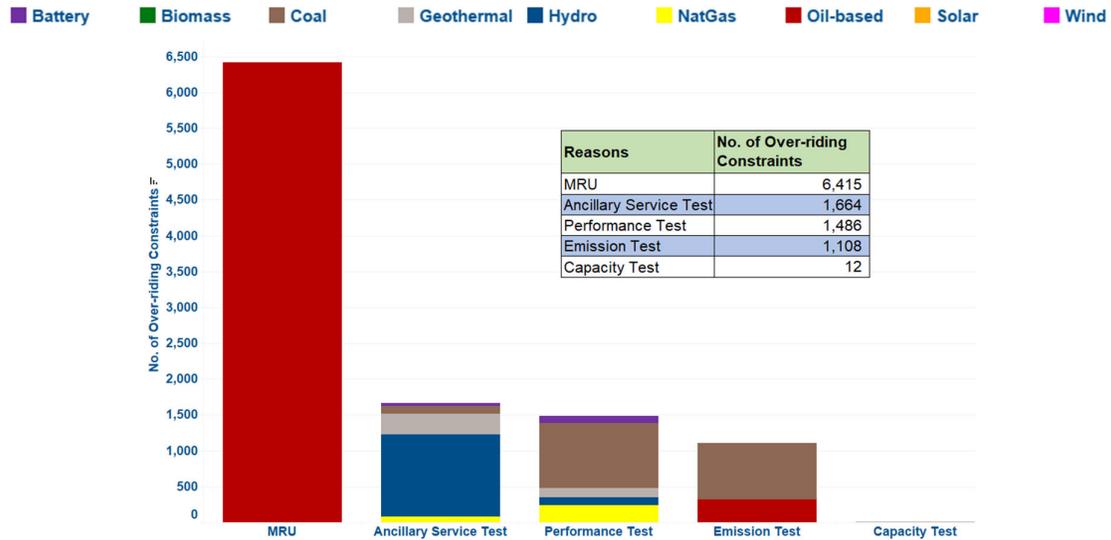


Plant Type	Average	Minimum	Maximum
Coal	131 MW	119 MW	151 MW
Hydro	9 MW	0 MW	15 MW
Oil-based	10 MW	0 MW	25 MW

OVER-RIDING CONSTRAINTS

by incident

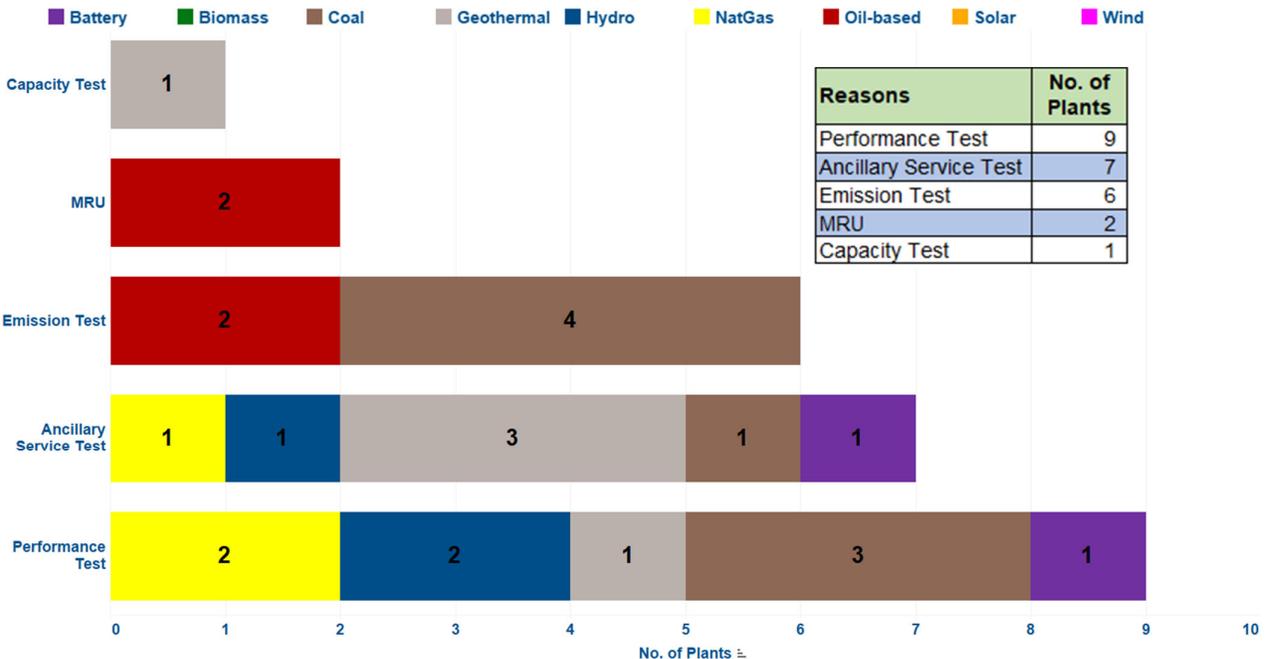
(excluding commissioning test)



The above chart reveals that MRUs (oil-based plants), ancillary service tests (BESS, coal, hydro, geothermal, and natural gas plants), performance tests (BESS, coal, geothermal, hydro, and natural plants), and emission test (coal and oil-based plants) were the main reasons for the majority of over-riding constraints during the billing period.

NUMBER OF PLANTS

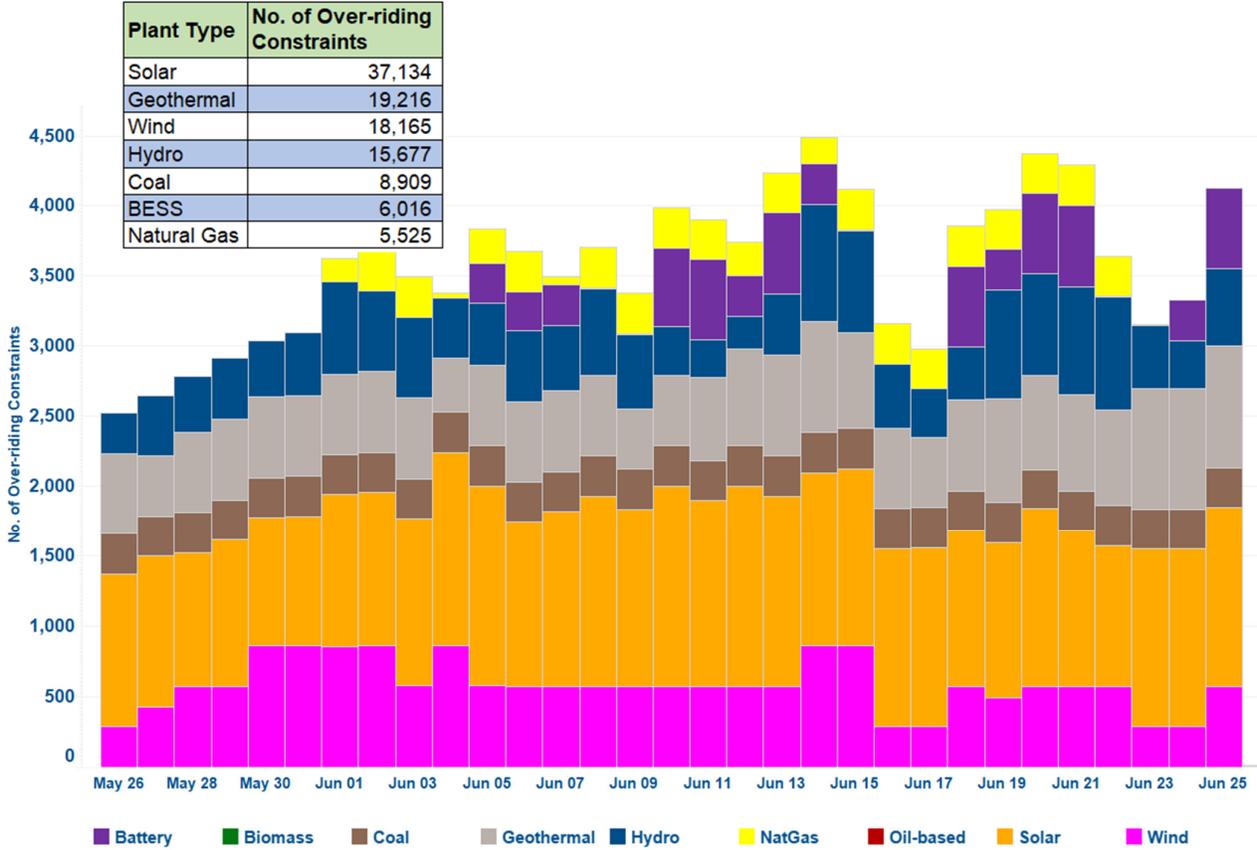
by incident



Emission test and some performance test, specifically heavy metal testing, were done during the billing period as part of the requirements of regulating agencies involving environmental and health standards. Ancillary service test was likewise conducted to determine the services a plant can commit in terms of adequacy, accuracy, timeliness, and other operational requirement. Meanwhile, MRUs are plants that are scheduled or dispatched to address threat to system security.

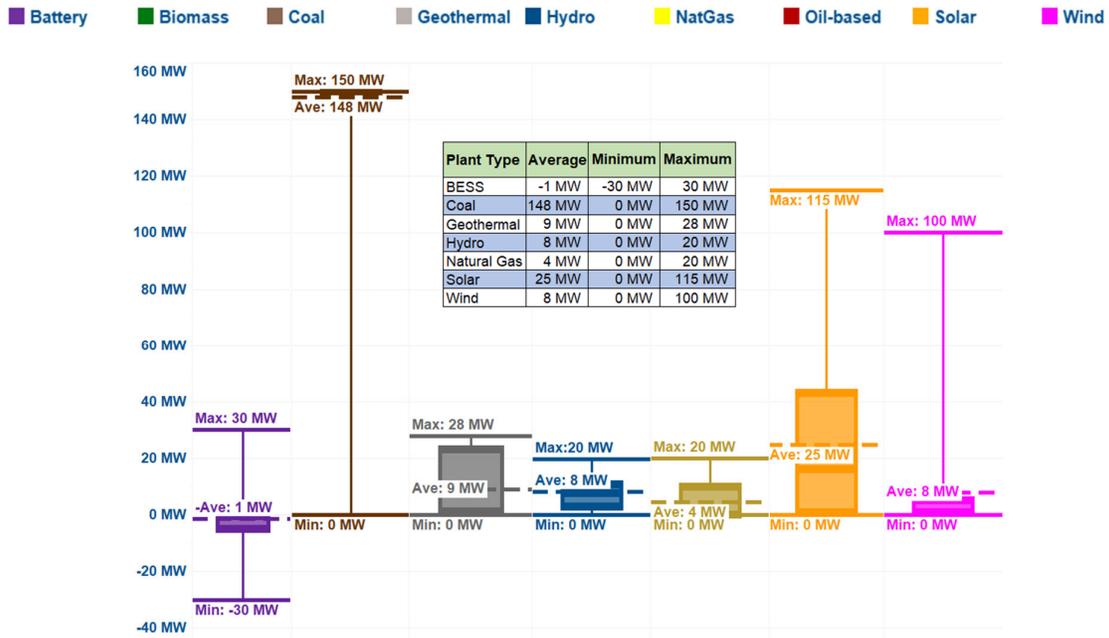
OVER-RIDING CONSTRAINTS

PLANTS UNDER COMMISSIONING TESTS



SCHEDULED CAPACITIES

PLANTS UNDER COMMISSIONING TESTS



Renewable plants such as solar, geothermal, hydro, and wind plants experienced frequent over-riding constraints imposition related to commissioning tests during the billing period, accounting for seventy-four percent (74%) of the total impositions, while conventional plants accounted for twelve (12%), and system storage, specifically battery, accounted for five percent (5%).

ANNEX A

Plants with Over-riding Constraints

Plant/Unit Name	Plant Type	Registered Capacity ¹
LUZON		
Ambuklao Hydroelectric Power Plant Unit 2	Hydro	37.5
Angat Hydroelectric Power Plant Unit A	Hydro	38.7
Balaoi and Caunayan Wind Power Project Phase 1	Wind	80
Cagayan North Solar Power Plant	Solar	115
Caparispisan II Wind Power Project	Wind	50
Cayanga-Bugallon Solar Power Plant	Solar	73.9
Concepcion 1 Solar Power Project	Solar	76
Gamu Battery Energy Storage System (BESS)	Battery	40
Ibulao Hydroelectric Power Project	Hydro	6
Laoag Solar Power Plant	Solar	58.6
Magat Battery Energy Storage System	Battery	24
Mariveles Coal Fired Thermal Power Plant Unit 1	Coal	316
Matuno River Hydroelectric Power Plant	Hydro	8.7
Mariveles Coal-fired Thermal Power Plant Unit 3	Coal	150
20.397 MWp Orion Solar Power Plant	Solar	16.2
Subic New PV Power Plant Project	Solar	62.7
Pinugay Solar Power Plant	Solar	71.6
San Gabriel Avion Natural Gas-Fired Power Plant Unit 1	Natural Gas	47.2
San Gabriel Avion Natural Gas-Fired Power Plant Unit 2	Natural Gas	45.8
Calabanga Solar Power Project	Solar	59.8
Batangas Combined Cycle Power Plant Unit 1	Natural Gas	440
Kalayaan Hydro Electric Power Plant 1	Hydro	183
Kalayaan Hydro Electric Power Plant 2	Hydro	183
Kalayaan Hydro Electric Power Plant 3	Hydro	184.6
Kalayaan Hydro Electric Power Plant 4	Hydro	185
Lumban Battery Energy Storage System (BESS)	Battery	50
Pagbilao Coal-Fired Power Plant 2	Coal	382
Pagbilao 3 Power Plant	Coal	420
Palayan Binary Power Plant	Geothermal	31
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 3	Natural Gas	265.5
Sta. Rita Natural Gas Power Plant 4	Natural Gas	264

¹ As of 25 July 2024

Plant/Unit Name	Plant Type	Registered Capacity ¹
San Lorenzo Combined-Cycle Gas Turbine Power Plant Unit 50	Natural Gas	265
San Lorenzo Combined-Cycle Gas Turbine Power Plant Unit 60 (San Lorenzo CCGTPP)	Natural Gas	265
Tiwi Geothermal Binary Power Plant	Geothermal	16.7
VISAYAS		
Biliran Geothermal Power Plant Project Phase 1	Geothermal	2
Cebu Coal-Fired Thermal Power Plant (Cebu CFTPP) Unit 1	Coal	103
Cebu Coal-Fired Thermal Power Plant (Cebu CFTPP) Unit 2	Coal	103
Kabankalan Battery Energy Storage System	Battery	20
Nasulo Geothermal Power Plant	Geothermal	47.5
Palinpinon Geothermal Power Plant I	Geothermal	110.5
Palinpinon Geothermal Power Plant II Unit 3	Geothermal	19.5
PEDC Coal-Fired Thermal Power Plant Unit 1	Coal	83.7
PEDC Coal-Fired Thermal Power Plant Unit 2	Coal	83.7
Nabas Wind Power Plant Phase 2	Wind	13.2
Biliran Geothermal Power Plant Project Phase 1	Geothermal	2
MINDANAO		
Bunker-C Fired Diesel Power Plant Unit 1	Geothermal	2
Bunker-C Fired Diesel Power Plant Unit 3	Coal	103
Bunker-C Fired Diesel Power Plant Unit 4	Coal	103
Bunker-C Fired Diesel Power Plant Unit 5	Battery	20
Bunker-C Fired Diesel Power Plant Unit 8	Geothermal	47.5
Bunker-C Fired Diesel Power Plant Unit 10	Geothermal	110.5
GNPK's Coal Fired Power Plant Unit 3	Geothermal	19.5
GNPK's Coal Fired Power Plant Unit 4	Coal	83.7
Iligan Diesel Power Plant (Units 1-19)	Coal	83.7
Surigao Del Sur Power Plant	Wind	13.2
Mobile 2 Bunker C-Fired Power Plant Unit 1	Geothermal	2
Phase 1 Coal-Fired Thermal Power Plant	Coal	103
Phase 2 Coal-Fired Power Plant	Coal	103
Siguil Hydroelectric Power Project	Battery	20

ANNEX B

Plants Under Commissioning Tests

Plant/Unit Name	Plant Type	Registered Capacity (MW)	No. of PCATC Extensions ²	No. of Days under Commissioning Tests
Gamu Battery Energy Storage System (BESS)	Battery	40	4	84
Lumban Battery Energy Storage System (BESS)	Battery	50		33
Mariveles Coal-fired Thermal Power Plant Unit 3	Coal	150	5	144
Palayan Binary Power Plant	Geothermal	31	5	196
Geothermal Binary Power Plant	Geothermal	16.7		35
(Phase 1) Biliran Geothermal Power Plant Project	Geothermal	2	1	189
Angat Hydroelectric Power Plant Unit A	Hydro	38.7		9
Ibulao Hydroelectric Power Project	Hydro	6	3	100
Matuno River Hydroelectric Power Plant	Hydro	8.7	7	341
Siguil Hydroelectric Power Project	Hydro	15.3		37
Batangas Combined Cycle Power Plant Unit 1	Natural Gas	440	1	55
Cagayan North Solar Power Plant	Solar	115	5	234
Cayanga-Bugallon Solar Power Plant	Solar	73.9	3	235
Concepcion 1 Solar Power Project	Solar	76		30
Laoag Solar Power Plant	Solar	58.6	1	84
20.397 MWp Orion Solar Power Plant	Solar	16.2	3	221
Subic New PV Power Plant Project	Solar	62.7	2	119
Calabanga Solar Power Project	Solar	59.8	1	72
Pinugay Solar Power Plant	Solar	71.6		21
Balaoi and Caunayan Wind Power Project Phase 1	Wind	80	11	480
Caparispisan II Wind Power Project	Wind	50	2	103
Wind Power Plant Phase 2 (Nabas-2)	Wind	13.2	2	83

² Based on IEMOP's status of plants under commissioning test as of 25 June 2024

Connect with PEMC

✉ pemc_info@wesm.ph

☎ +63 2 8631 8734

📍 18F Robinson Equitable Tower,
ADB Avenue Ortigas Center,
Pasig City 1600, Philippines

 [pemcinfo](#)

 [pemcinfo](#)

 [PEMC_Info](#)

 [PEMC Info](#)