



MONTHLY OVER-RIDING CONSTRAINTS REPORT

26 November to 25 December 2024

Document Information Classification: Public

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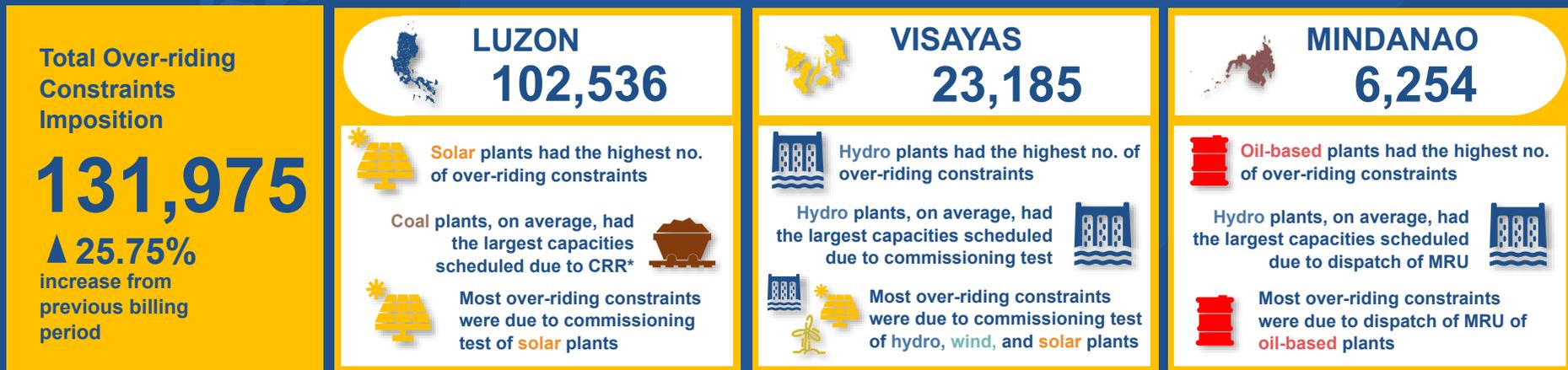
SUMMARY OF OBSERVATIONS

In Luzon, thirteen (13) extensions of Provisional Certificate of Approval to Connect (PCATC) and six (6) additional PCATC submissions were noted for the conduct of commissioning tests. Consequently, there was an increase in the number of impositions in the region, attributable to the commissioning tests mostly of Renewable Energy (RE) plants – 19 out of 22 plants. In the long term, the completion of tests may contribute to the region's supply.

For the Visayas region, the increase in impositions was attributed to the continuous extensions of PCATC issuances for wind and hydro plants for their commissioning tests, as well as additional new PCATC submissions for solar plants. Meanwhile, other plants were intermittently scheduled during the period to conduct various commercial and regulatory requirements, such as ancillary service, emission, and performance tests.

In Mindanao, on most days, oil-based plants were continuously dispatched as Must Run Unit (MRU) to meet the persistent system voltage requirement, accounting to 72% of over-riding constraints during the period. It was also noted that the Battery Energy Storage Systems (BESS) had continuous extensions of PCATCs during this time.

AT A GLANCE

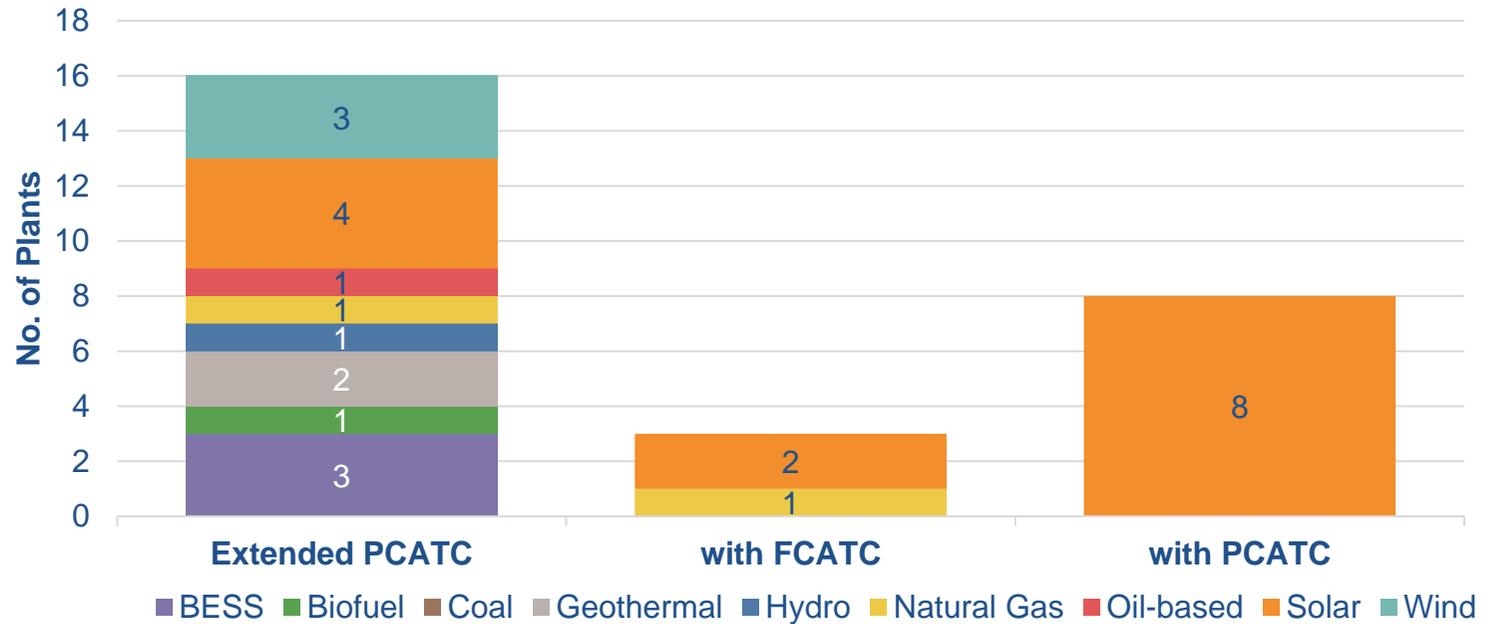


*CRR – Commercial and Regulatory Requirements

STATUS OF PLANTS UNDER COMMISSIONING TEST

No. of Plants Under Commissioning Test

27



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

BESS
240

Biofuel
301

Geo
298

Hydro
105

Nat Gas
194

Oil
139

Solar
65

Wind
407

Noted no. of extensions for commissioning test period

8 – Sangali BESS
7 – Gamu BESS
6 – Lumban BESS

8 - Biogas Power Plant (Phase 1)

11 - Palayan BPP
6 – Tiwi Binary Geothermal BPP

2 – Angat HPP Unit A

7 - Batangas CCPP Unit 1
4 - Batangas CCPP Unit 2

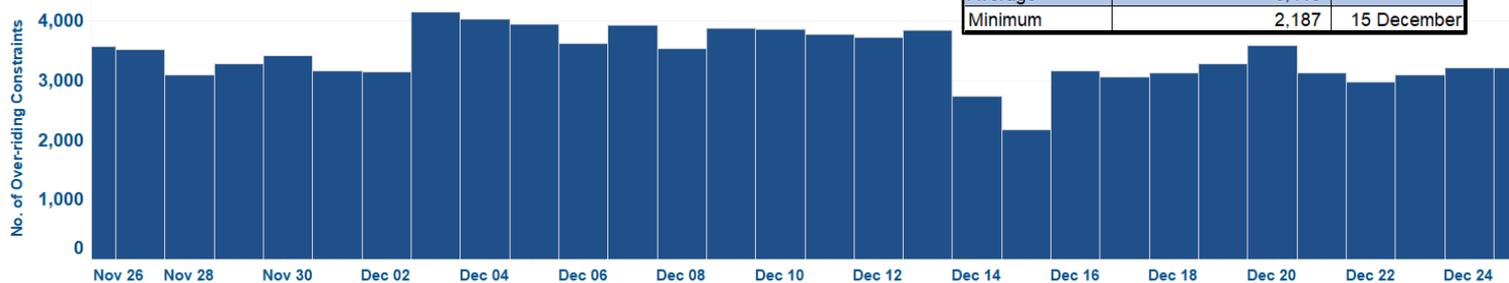
3 – Tarlac Power Corp. Bunker C FDPP

8 - Subic New SPP
2 – Concepcion 1 SPP
1 – Raslag IV Solar & Shizen Solar

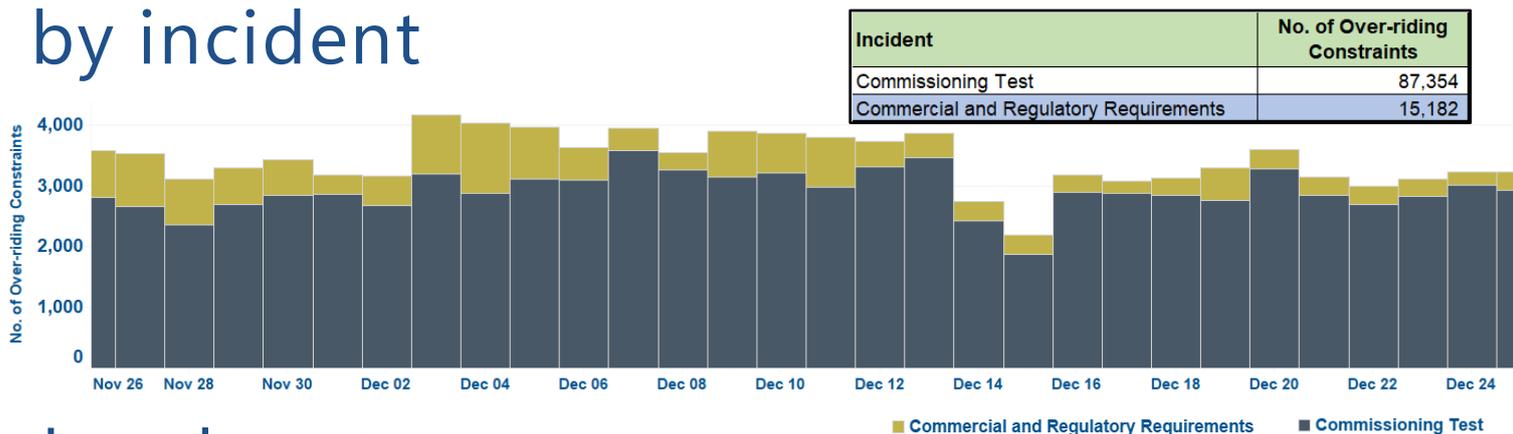
19 – Balaoi Caunayan Wind
8 - Caparispisan Wind
7 - PWEI Nabas Wind

OVER-RIDING CONSTRAINTS

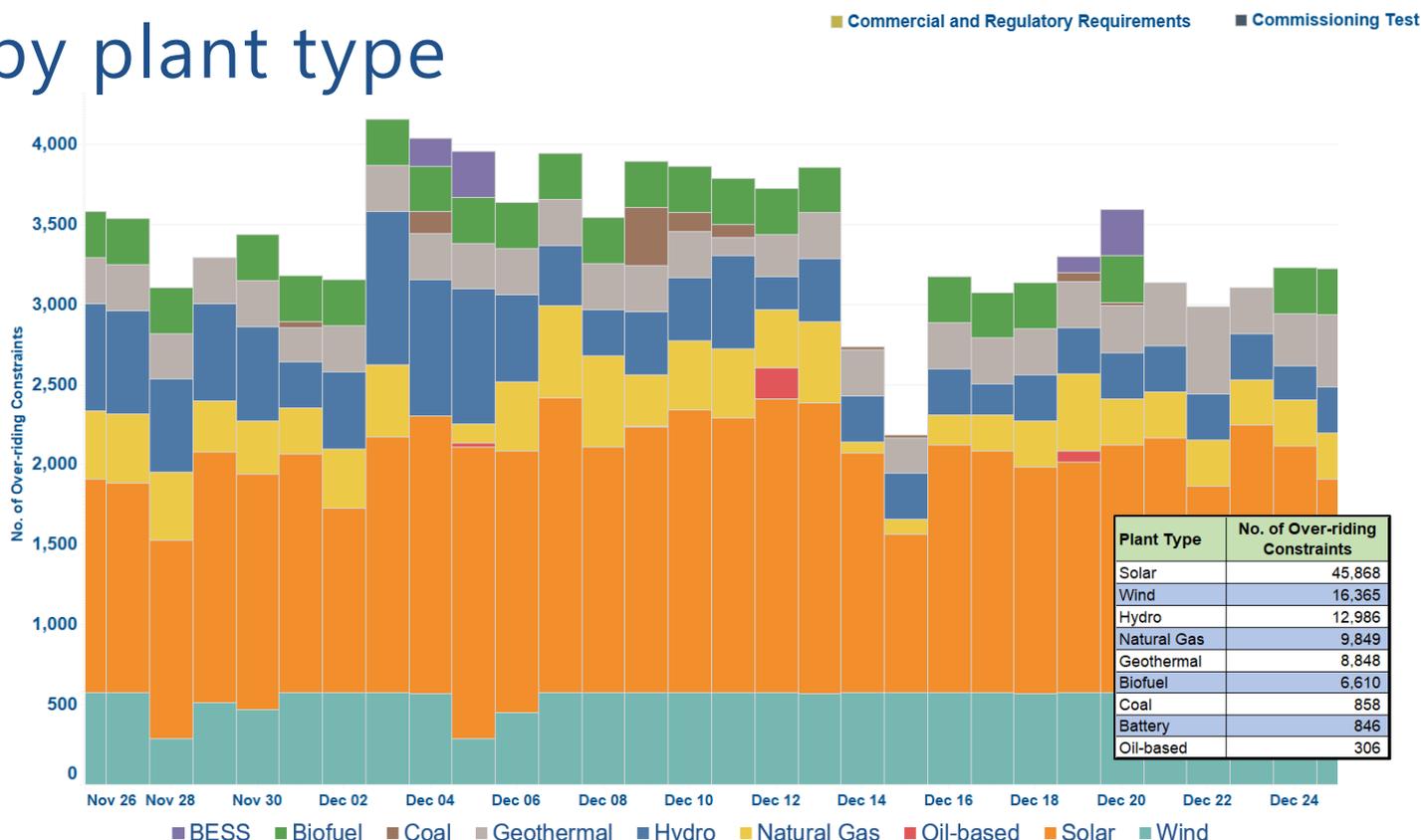
LUZON



by incident



by plant type



Most of the over-riding constraints were due to commissioning tests of RE plants – 19 out of 22 plants were undergoing such tests. During the covered period, three (3) plants were issued with FCATCs, thirteen (13) extensions of PCATCs were granted, and six (6) new solar plants issued with PCATCs to conduct commissioning tests. Despite the imposition of over-riding constraints, the completion of these new and extended PCATCs may contribute to additional supply in the region upon completion of required tests.

The highest imposed over-riding constraints were noted during the first half of December 2024. Meanwhile, oil-based plants were observed to be imposed with over-riding constraints intermittently for its conduct of Dispatchable Reserve (DR) test to be certified as reserve provider. Meanwhile, BESS and coal plants conducted scheduled commissioning and various tests for commercial and regulatory requirements - Automatic Generation Control (AGC), performance, grid compliance, and heat rate tests, respectively.

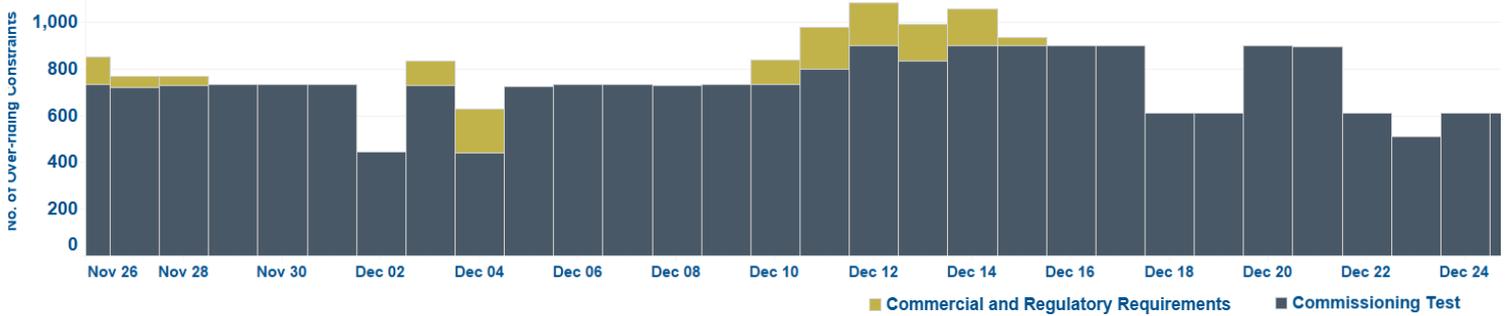
OVER-RIDING CONSTRAINTS VISAYAS

	No. of Over-riding Constraints	Date
Maximum	1,084	12 December
Average	773	
Minimum	444	02 December

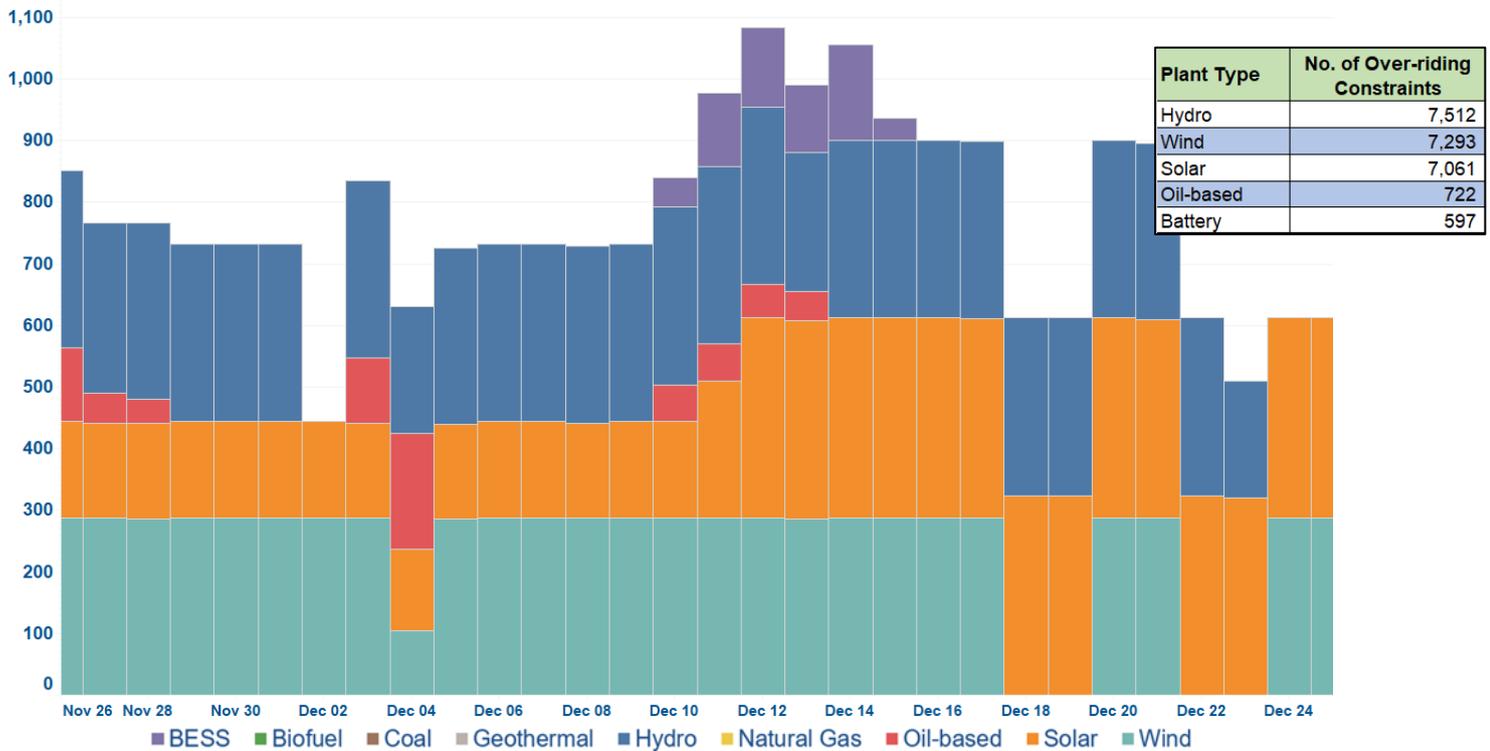


by incident

Incident	No. of Over-riding Constraints
Commissioning Test	21,866
Commercial and Regulatory Requirements	1,319



by plant type



Plant Type	No. of Over-riding Constraints
Hydro	7,512
Wind	7,293
Solar	7,061
Oil-based	722
Battery	597

The conduct of commissioning tests for RE plants, such as wind, solar, and hydro plants, was the primary reason for most of the over-riding constraints in the region.

By the end of the billing period, tropical disturbances were noted affecting the region which may have caused the non-imposition of over-riding constraints for wind and hydro plants.

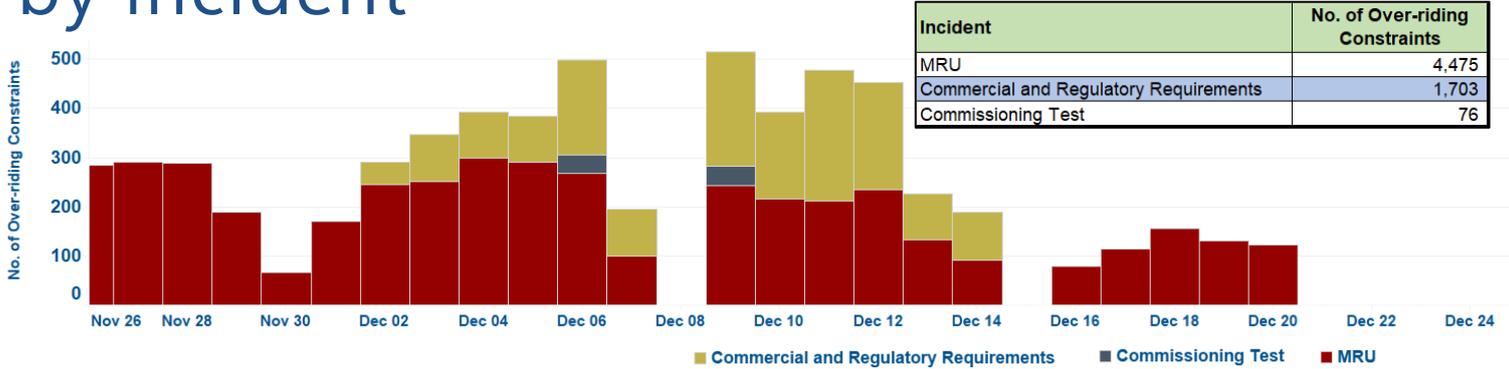
During the period, oil-based plants were intermittently subjected to over-riding constraints due to ancillary service and emission tests. Meanwhile, Kabankalan Battery was observed to have conducted ancillary service and performance tests on scheduled days during the billing period.

OVER-RIDING CONSTRAINTS

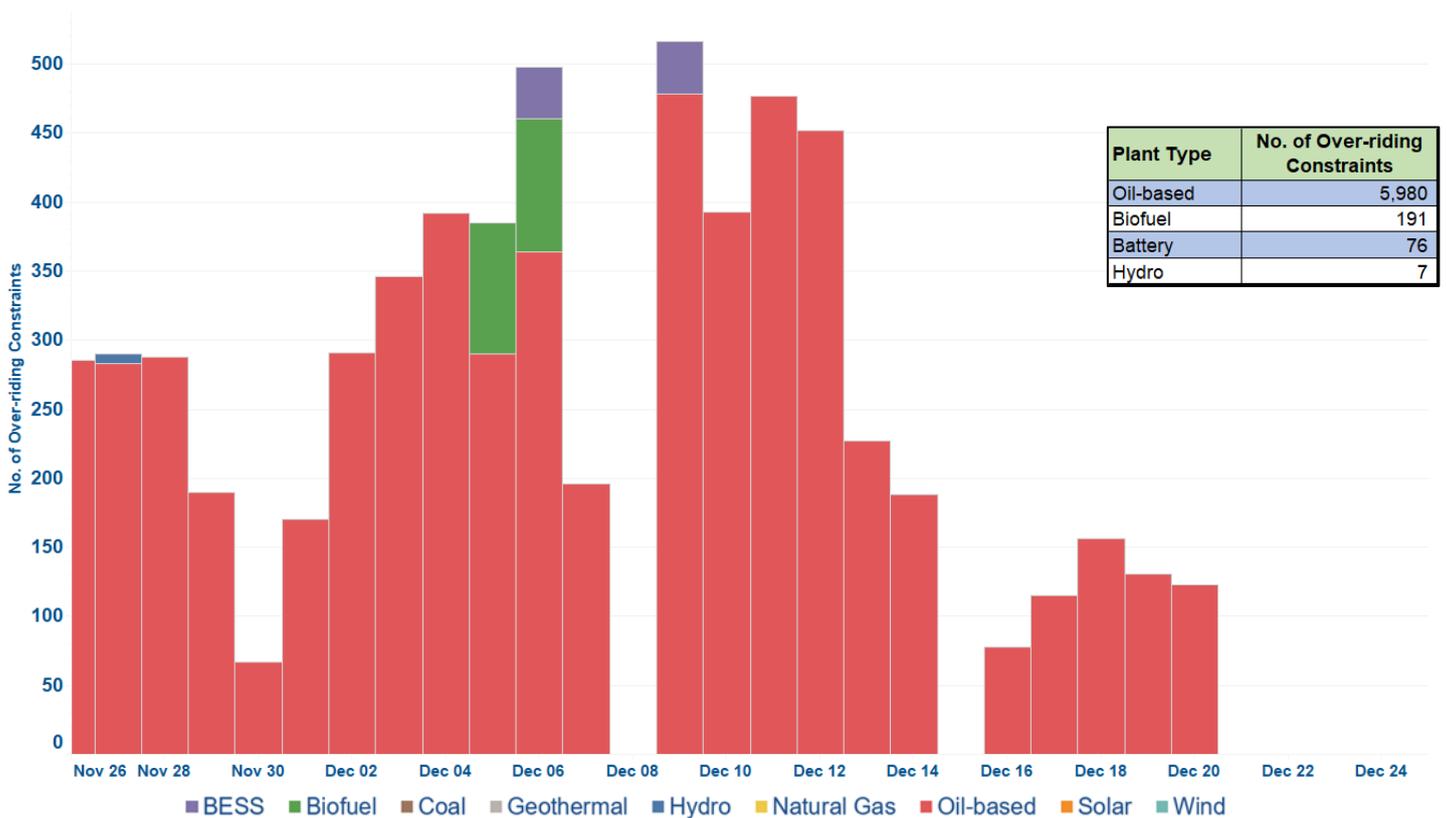
MINDANAO



by incident



by plant type



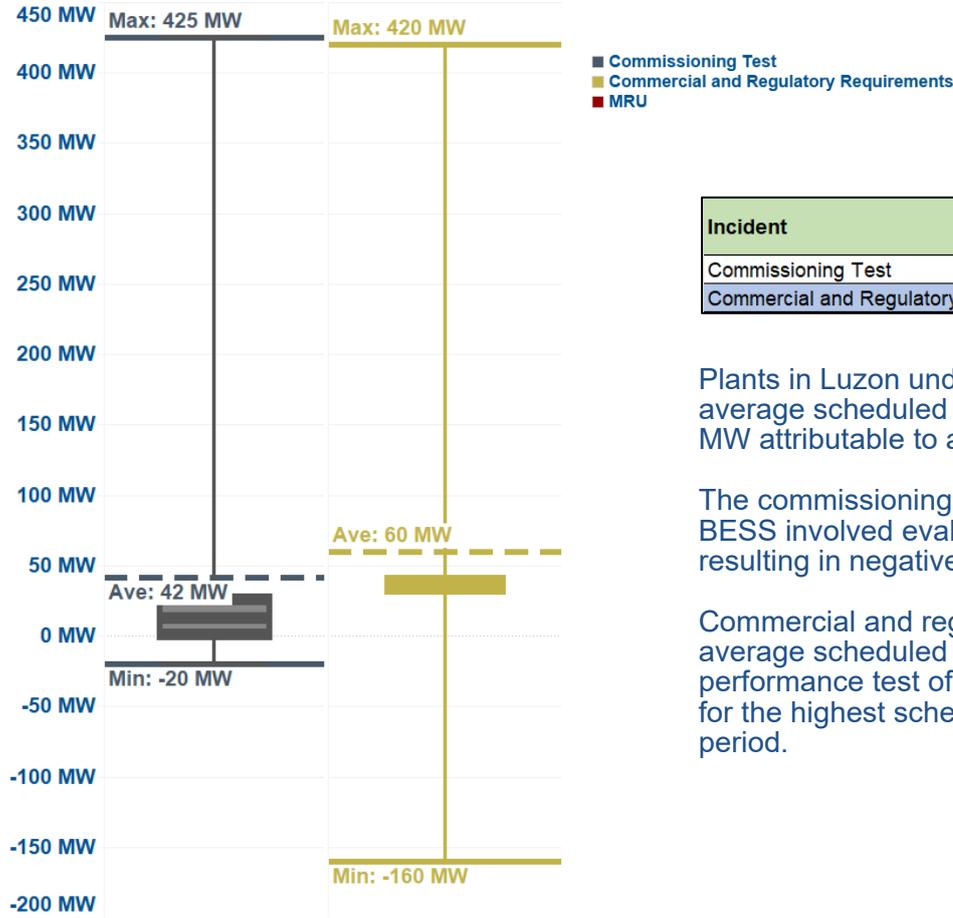
Due to the persistent system voltage requirement in Western Mindanao, the WMPC DCC (an oil-based plant) was dispatched as MRU for 4,468 intervals, accounting for 72% of the over-riding constraints during this billing period to meet the increasing demand.

Aside from the dispatch of MRU, other oil-based plants conducted various tests, such as emission, performance, and capability tests, which contributed to the over-riding constraints in the region. Meanwhile, other plants particularly BESS and biofuel plants, were imposed with security limit during their scheduled commissioning test and capability tests, respectively.

SCHEDULED CAPACITIES

by incident

LUZON



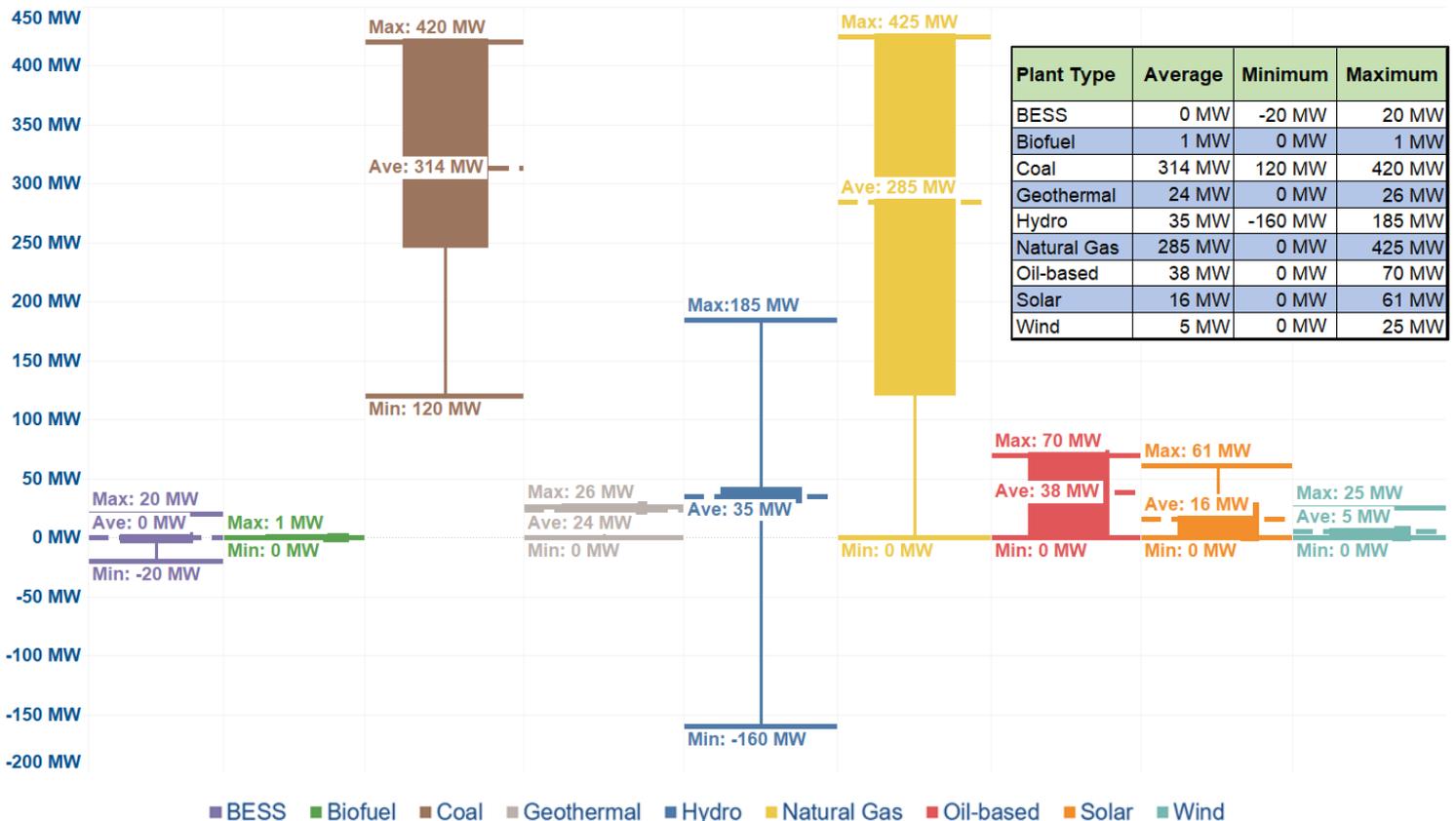
Incident	Average	Minimum	Maximum
Commissioning Test	42 MW	-20 MW	425 MW
Commercial and Regulatory Requirements	60 MW	-160 MW	420 MW

Plants in Luzon undergoing commissioning tests had an average scheduled capacity of 42 MW, with a peak of 425 MW attributable to a natural gas plant.

The commissioning tests for the Gamu and Lumban BESS involved evaluating their charging performance, resulting in negative scheduled capacities.

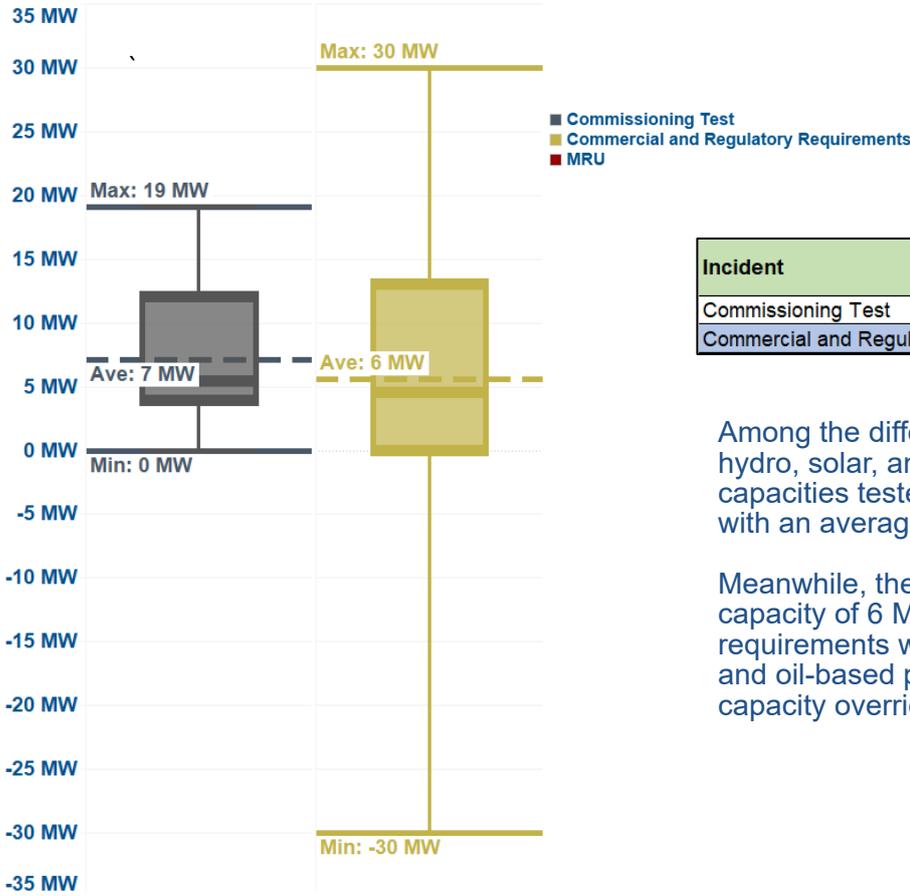
Commercial and regulatory requirements led to an average scheduled capacity of 60 MW. Specifically, the performance test of the Pagbilao 3 coal plant accounted for the highest scheduled capacity during the covered period.

by plant type



SCHEDULED CAPACITIES VISAYAS

by incident

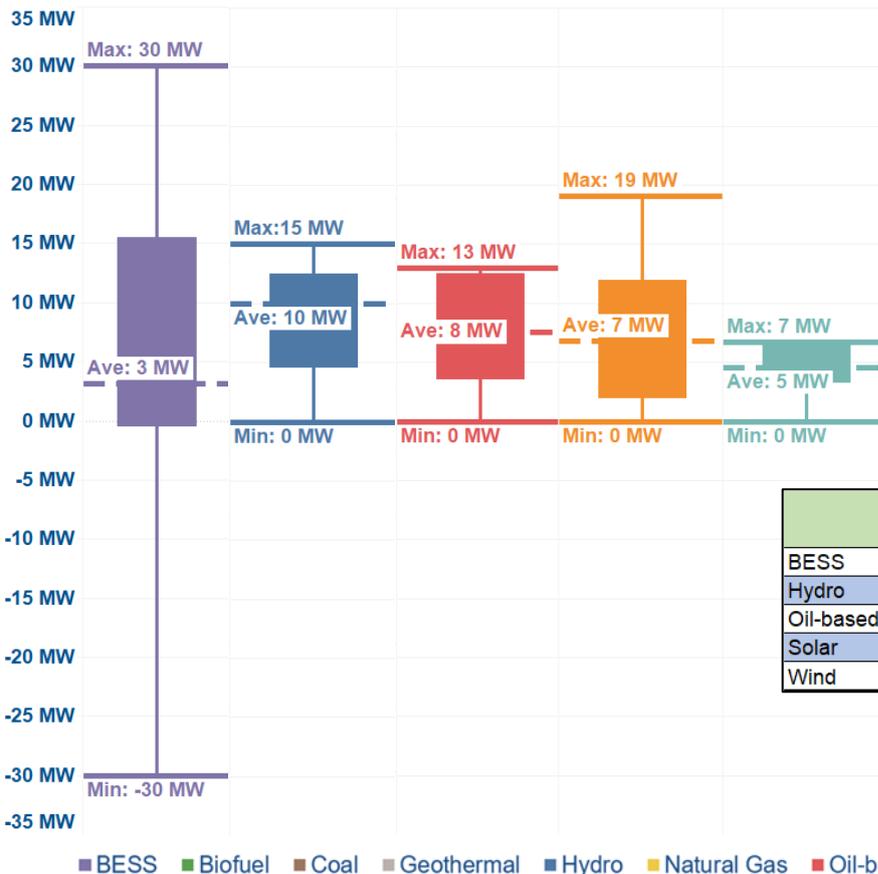


Incident	Average	Minimum	Maximum
Commissioning Test	7 MW	0 MW	19 MW
Commercial and Regulatory Requirements	6 MW	-30 MW	30 MW

Among the different types of resources in Visayas, hydro, solar, and wind plants contributed to the capacities tested under the commissioning phase, with an average scheduled capacity of 7 MW.

Meanwhile, the recorded average scheduled capacity of 6 MW for commercial and regulatory requirements was due to contributions from BESS and oil-based plants, with BESS having the largest capacity overridden due to ancillary service tests.

by plant type



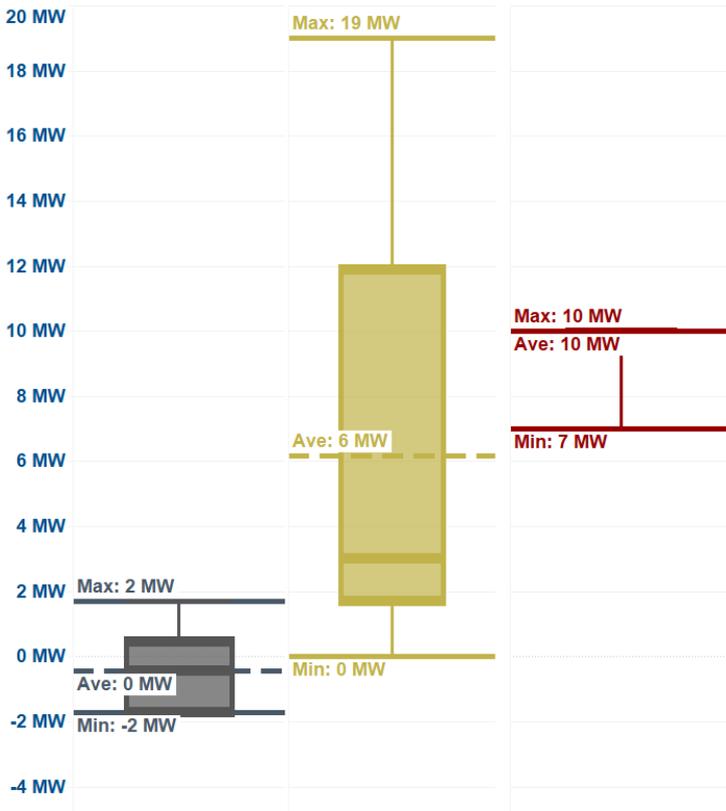
	Average	Minimum	Maximum
BESS	3 MW	-30 MW	30 MW
Hydro	10 MW	0 MW	15 MW
Oil-based	8 MW	0 MW	13 MW
Solar	7 MW	0 MW	19 MW
Wind	5 MW	0 MW	7 MW

■ BESS ■ Biofuel ■ Coal ■ Geothermal ■ Hydro ■ Natural Gas ■ Oil-based ■ Solar ■ Wind

SCHEDULED CAPACITIES

MINDANAO

by incident



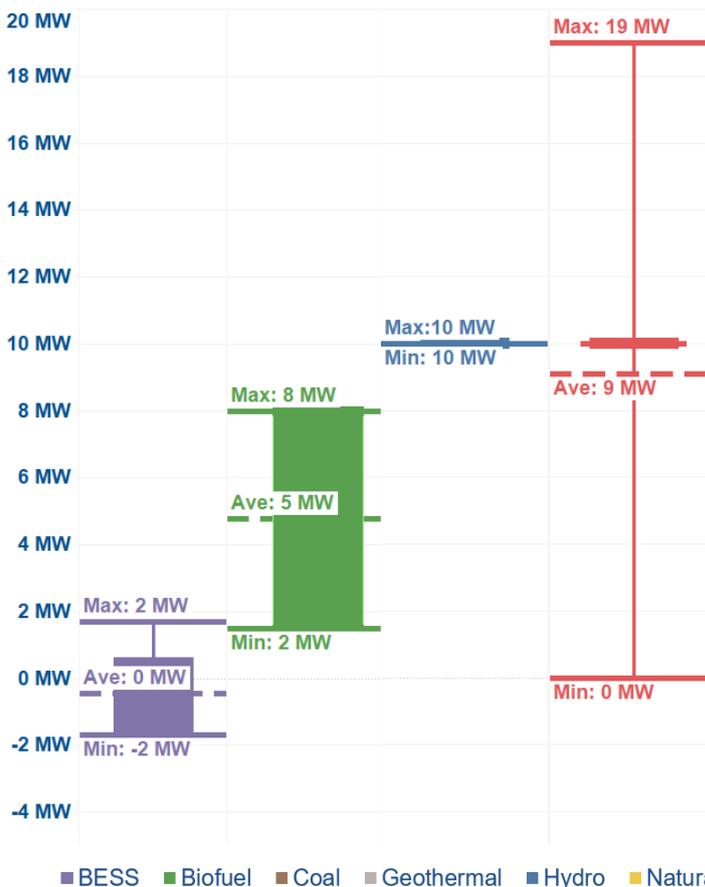
Incident	Average	Minimum	Maximum
Commissioning Test	0 MW	-2 MW	2 MW
Commercial and Regulatory Requirements	6 MW	0 MW	19 MW
MRU	10 MW	7 MW	10 MW

The scheduled capacity of BESS, recorded at 2 MW, was entirely attributed to the Sangali BESS due to its commissioning test.

Under commercial and regulatory requirements, the performance test of ILIGAN DPP peaked at 19 MW, while oil-based and biofuel plants were scheduled for up to 12 MW for their respective emission and capability tests.

Oil-based plants continued to be scheduled as MRU, with the highest capacity at 10 MW, to address the system voltage requirement in the Mindanao region.

by plant type

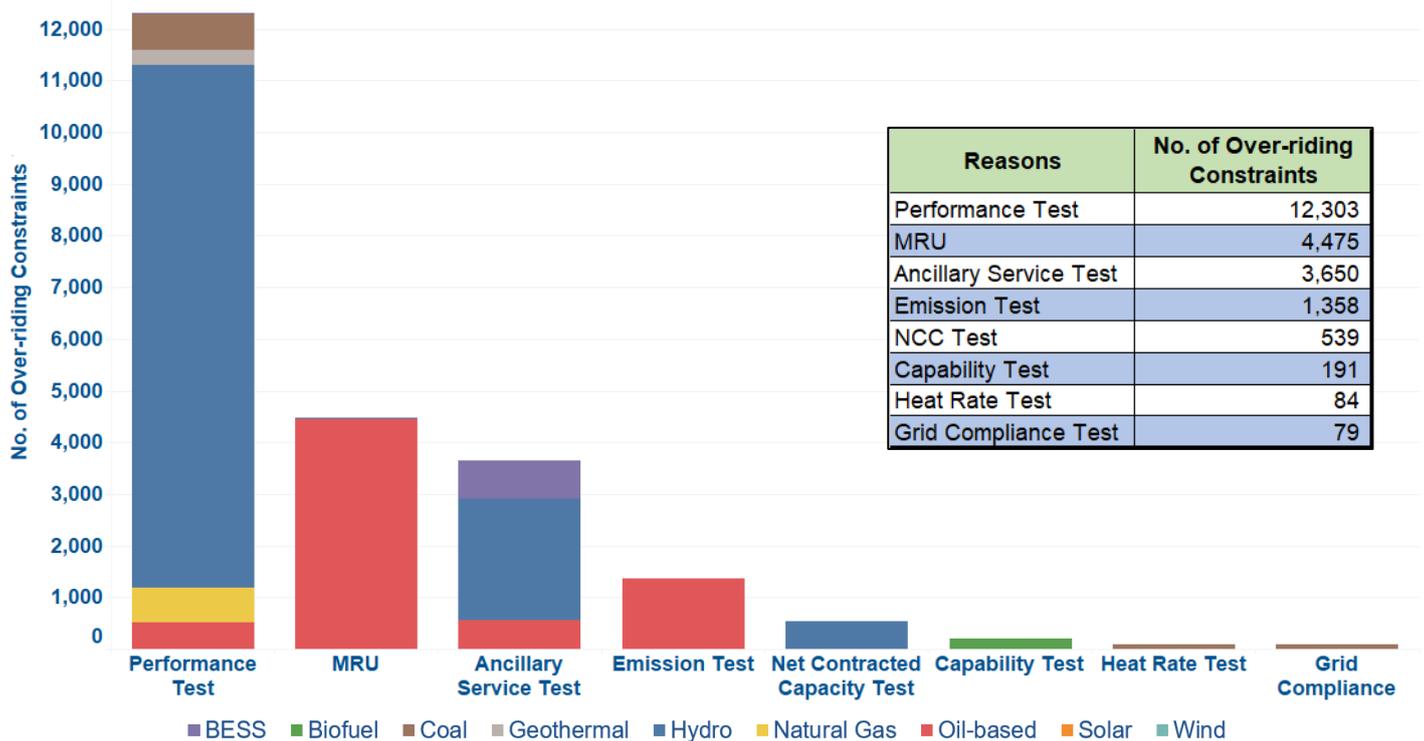


Plant Type	Average	Minimum	Maximum
BESS	0 MW	-2 MW	2 MW
Biofuel	5 MW	2 MW	8 MW
Hydro	10 MW	10 MW	10 MW
Oil-based	9 MW	0 MW	19 MW

OVER-RIDING CONSTRAINTS

by incident

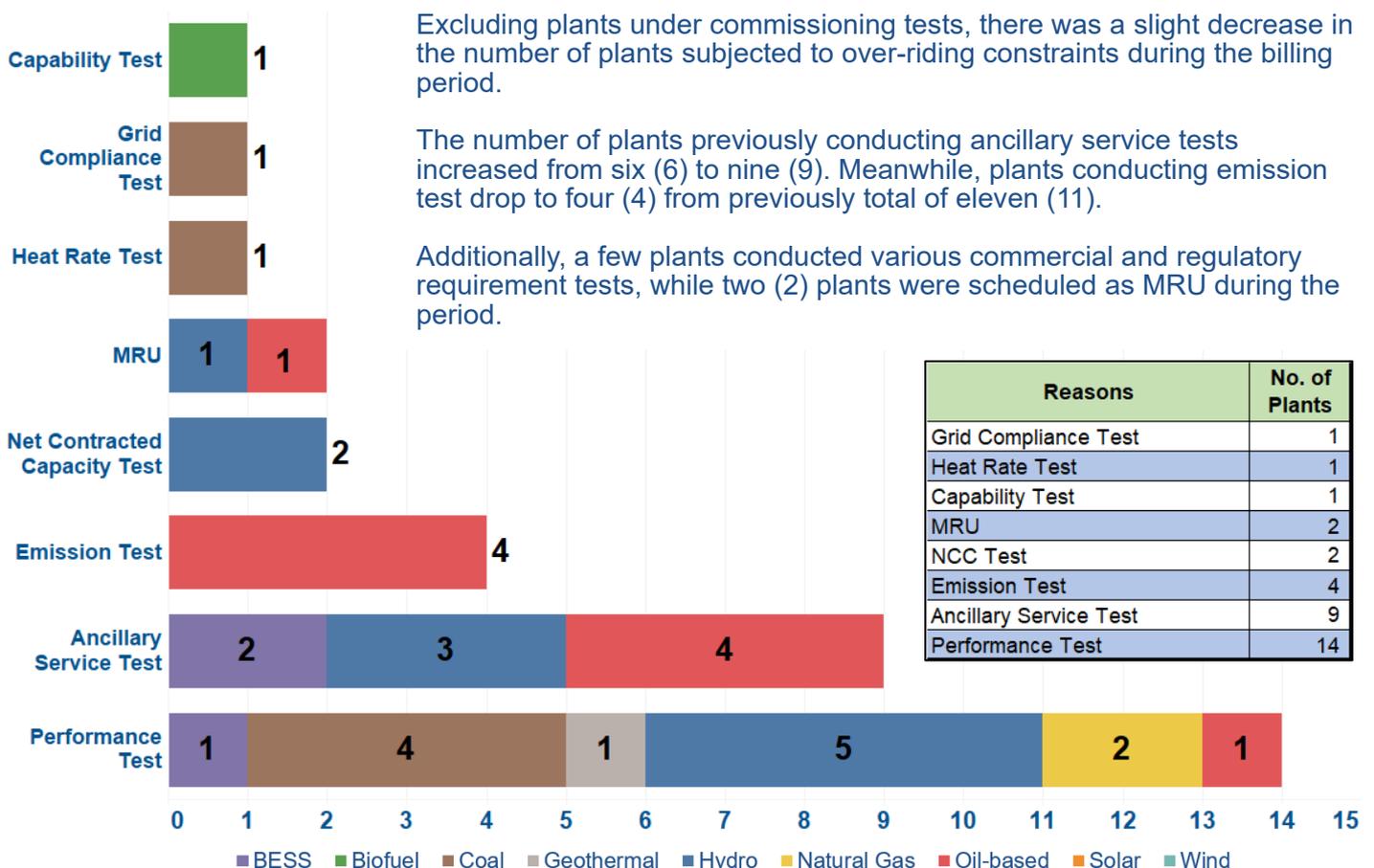
(excluding commissioning test)



The above chart reveals that performance tests for various plants mostly, for hydro plants in Luzon, were the main reasons for the majority of over-riding constraints during the billing period.

NUMBER OF PLANTS

by incident



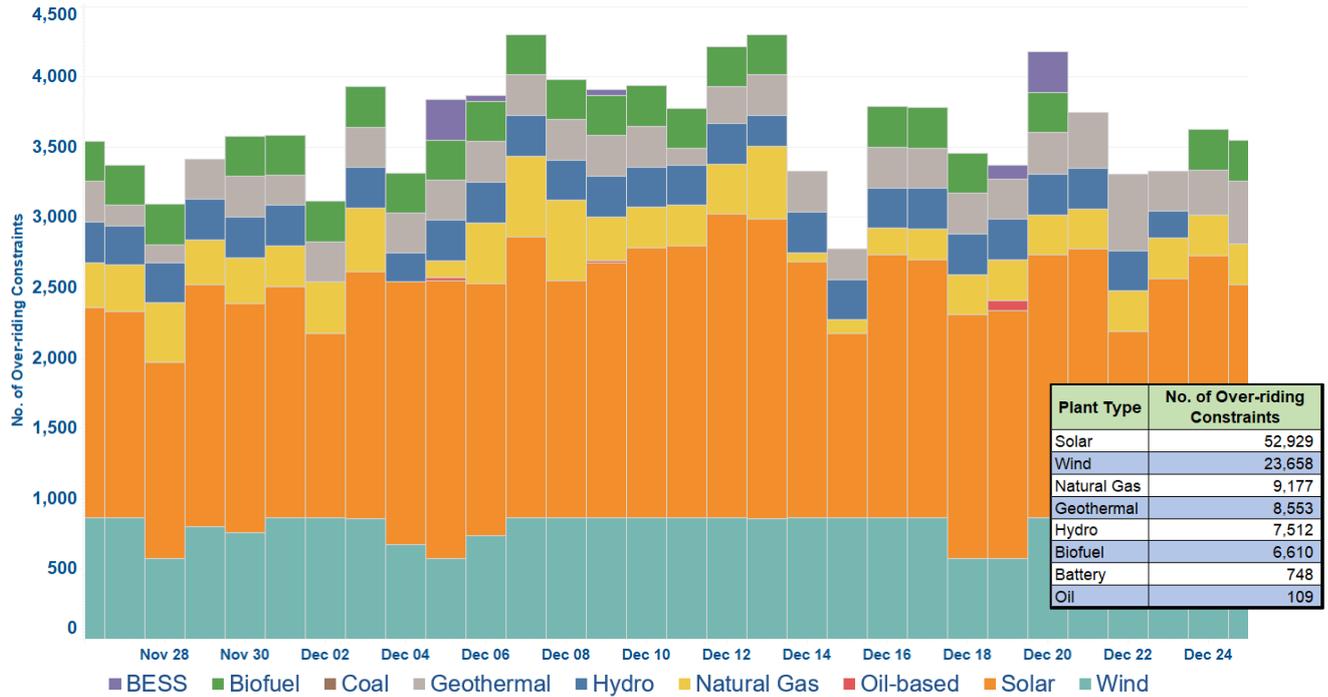
Excluding plants under commissioning tests, there was a slight decrease in the number of plants subjected to over-riding constraints during the billing period.

The number of plants previously conducting ancillary service tests increased from six (6) to nine (9). Meanwhile, plants conducting emission test drop to four (4) from previously total of eleven (11).

Additionally, a few plants conducted various commercial and regulatory requirement tests, while two (2) plants were scheduled as MRU during the period.

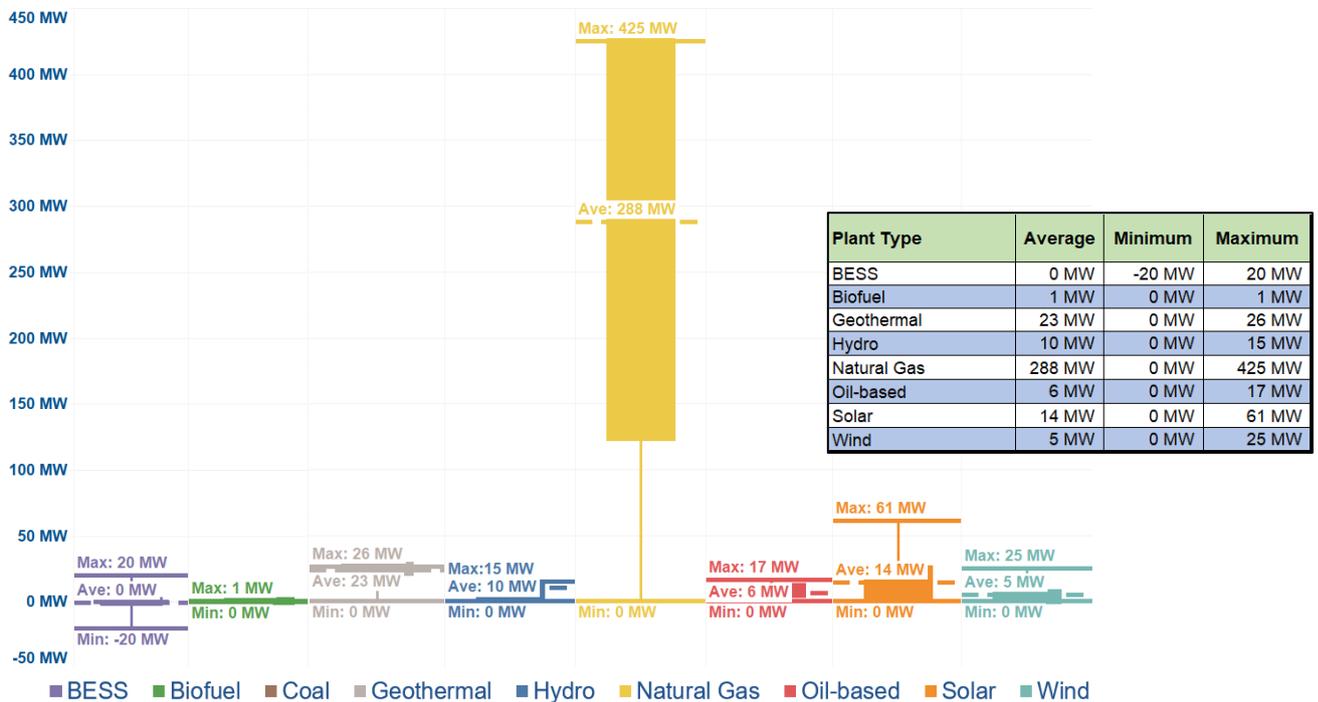
OVER-RIDING CONSTRAINTS

PLANTS UNDER COMMISSIONING TESTS



SCHEDULED CAPACITIES

PLANTS UNDER COMMISSIONING TESTS



RE plants experienced a large number of over-riding constraints related to commissioning tests during the billing period, with 70% of the total impositions attributed to plants, such as solar and wind. In contrast, other plants (natural gas, geothermal, hydro, biofuel, BESS, and oil-based) accounted for 30%.

The continuous extension of PCATC for the Balaoi Canaan Wind plant contributed significantly to the high imposition of over-riding constraints. Additionally, multiple extensions for RE plants were noted in coordination with the System Operator during the billing period. Three (3) plants (solar and natural gas) completed their commissioning tests after receiving multiple extensions to their PCATCs.

Compared to the previous month, there was a significant increase in over-riding constraints for solar plants due to continuous extension of PCATCs and additional new plants under commissioning tests, while a drop for hydro plants as fewer plants conducted commissioning test. Additionally, it was observed that the maximum scheduled capacities for most plants had decreased, except for BESS and oil-based plants, which saw a significant increase in scheduled capacities during the billing period.

ANNEX A

Plants with Over-riding Constraints

Plant/Unit Name	Plant Type	Registered Capacity (MW) ¹
LUZON		
80.000 MW Balaoi and Caunayan Wind Power Project Phase 1	Wind	80
Caparispisan II Wind Power Project	Wind	50
Concepcion 1 Solar Power Project	Solar	76
72.128 MWp Subic New PV Power Plant Project	Solar	62.7
Pagbilao 3 Power Plant	Coal	420
Biogas Power Plant (Phase 1)	Biofuel	1.7
45.758 MWh Gamu Battery Energy Storage System (BESS)	Battery	40
Mariveles Coal Fired Thermal Power Plant Unit 2	Coal	316
Angat Hydroelectric Power Plant Unit A	Hydro	38.7
Magat Hydroelectric Power Plant Unit 2	Hydro	97
Batangas Combined Cycle Power Plant Unit 1	Natural Gas	440
Pagbilao Coal-Fired Power Plant 1	Coal	382
35.700 MW Palayan Binary Power Plant	Geothermal	31
Sta. Rita Natural Gas Power Plant 2	Natural Gas	263
Ambuklao Hydroelectric Power Plant Unit 1	Hydro	37.5
Ambuklao Hydroelectric Power Plant Unit 2	Hydro	37.5
Ambuklao Hydroelectric Power Plant Unit 3	Hydro	37.5
36.646 MWp RASLAG IV Solar Power Project	Solar	26.4
75.214 MWP Palauig Solar Power Project	Solar	49.5
Kalayaan Hydro Electric Power Plant 1	Hydro	181.1
Sta. Rita Natural Gas Power Plant 1	Natural Gas	263
Sta. Rita Natural Gas Power Plant 4	Natural Gas	263
Casecnan Multipurpose Hydroelectric Power Plant (HEPP)	Hydro	168
Sto. Domingo Solar Power Plant (SDSPP)	Solar	46.2
56.578 MWp Gamu Solar Power Project	Solar	46.2
42.900 MWp Bongabon Solar Power Plant	Solar	30.9
Batangas Combined Cycle Power Plant Unit 2	Natural Gas	440
Kalayaan Hydro Electric Power Plant 3	Hydro	181.4
Sta. Rita Natural Gas Power Plant 3	Natural Gas	263
46.658MWP Armenia Solar Power Project (SPP)	Solar	37.8
Buang Diesel Power Plant GS1	Oil-Based	70
Buang Diesel Power Plant GS2	Oil-Based	70
Buang Diesel Power Plant GS3	Oil-Based	70
23.776 MWP Bongabon Solar Power Project	Solar	18.8
Maris Canal HEPP Unit 1	Hydro	4.25
Maris Canal HEPP Unit 2	Hydro	4.25
Mariveles Coal Fired Thermal Power Plant Unit 1	Coal	316
Pantabangan Hydro Electric Power Plant Unit 1	Hydro	60

¹ As of 26 December 2024

Plant/Unit Name	Plant Type	Registered Capacity (MW) ¹
Pantabangan Hydro Electric Power Plant Unit 2	Hydro	60
19.613 MWp San Jose Solar Power Plant (SPP)	SOLar	15.3
18.6 MW Bunker C-Fired Diesel Power Plant	Oil-Based	17.9
Botocan Hydroelectric Power Plant	Hydro	23
Batangas Coal-Fired Thermal Power Plant 1	Coal	240
Caliraya Hydro Electric Power Plant	Hydro	28
Kalayaan Hydro Electric Power Plant 2	Hydro	181
Kalayaan Hydro Electric Power Plant 4	Hydro	185
57.125 MWh Lumban Battery Energy Storage System (BESS)	Battery	50
64.206MWp/48.118MWac Maragondon Solar Power Plant	Solar	48.1
Pagbilao Coal-Fired Power Plant 2	Coal	382
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
64.206MWp/48.118MWac Tanauan Solar Power Plant	Solar	48.1
17MW Tiwi Geothermal Binary Power Plant	Geothermal	16.7
VISAYAS		
13.200 Nabas Wind Power Plant Phase 2 (Nabas-2)	Wind	13.2
14.160MW Upper Taft Hydroelectric Power Plant	Run-of River Hydro	14.2
EAUC Bunker C-Fired Power Plant Unit 2	Oil-Based	11
EAUC Bunker C-Fired Power Plant Unit 3	Oil-Based	11.5
EAUC Bunker C-Fired Power Plant Unit 4	Oil-Based	11.5
33.867 MWhr Kabankalan Battery Energy Storage System	Battery	30
27.121 MWp Dagohoy Solar Power Project	Solar	20.2
Panay Diesel Power Plant 1 (Unit 2)	Oil-Based	5
Panay Diesel Power Plant 1 (Unit 5)	Oil-Based	5
Panay Diesel Power Plant 3 (Unit Charlie)	Oil-Based	12
137.400 MWAC Calatrava Solar Power Project (SPP)	Solar	137.4
Bohol Diesel Power Plant Unit 1	Oil-Based	4
Bohol Diesel Power Plant Unit 2	Oil-Based	4
Bohol Diesel Power Plant Unit 3	Oil-Based	4.2
Bohol Diesel Power Plant Unit 4	Oil-Based	4
Panay Diesel Power Plant 1 (Unit 3)	Oil-Based	5
Panay Diesel Power Plant 3 (Unit Echo)	Oil-Based	12
Panay Diesel Power Plant 3 (Unit Golf)	Oil-Based	13
Panay Diesel Power Plant 3 (Unit Hotel)	Oil-Based	13
MINDANAO		
112 MW Bunker-C Fired Diesel Power Plant Unit 1	Oil-Based	10.2
112 MW Bunker-C Fired Diesel Power Plant Unit 4	Oil-Based	10.2
112 MW Bunker-C Fired Diesel Power Plant Unit 10	Oil-Based	10.2
112 MW Bunker-C Fired Diesel Power Plant Unit 6	Oil-Based	10.2
114.40 MW Iligan Diesel Power Plant (Units 1-19)	Oil-Based	102
112 MW Bunker-C Fired Diesel Power Plant Unit 8	Oil-Based	10.1
14.9MW Biomass Cogeneration Plant	Biofuel	12
22.928 Sangali Battery Energy Storage System (BESS)	Battery	20

Plant/Unit Name	Plant Type	Registered Capacity (MW)¹
112 MW Bunker-C Fired Diesel Power Plant Unit 9	Oil-Based	10.2
Agus I Hydroelectric Power Plant Unit 1	Hydro	35
11.040 Mati Bunker C-Fired Diesel Power Plant	Oil-Based	11
11.90 MW Koronadal Bunker C-Fired Diesel Power Plant	Oil-Based	11.9

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
18.6 MW Bunker C-Fired Diesel Power Plant	Oil-based	18.6	3	139
80.000 MW Balaoi and Caunayan Wind Power Project Phase 1	Wind	80	19	662
Caparispisan II Wind Power Project	Wind	50	8	295
13.200 Nabas Wind Power Plant Phase 2 (Nabas-2)	Wind	13.2	7	265
Concepcion 1 Solar Power Project	Solar	20.7	2	95
72.128 MWp Subic New PV Power Plant Project	Solar	72.1	8	301
36.646 MWp RASLAG IV Solar Power Project	Solar	36.6	1	67
75.214 MWP Palauig Solar Power Project	Solar	75.2	1	79
Sto. Domingo Solar Power Plant (SDSPP)	Solar	59.8	-	41
56.578 MWp Gamu Solar Power Project	Solar	56.6	-	34
42.900 MWp Bongabon Solar Power Plant	Solar	42.9	-	49
27.121 MWp Dagohoy Solar Power Project	Solar	27.1	-	43
46.658MWP Armenia Solar Power Project (SPP)	Solar	46.7	-	25
23.776 MWP Bongabon Solar Power Project	Solar	23.8	-	26
19.613 MWp San Jose Solar Power Plant (SPP)	Solar	19.6	-	4
64.206MWp/48.118MWac Maragondon Solar Power Plant	Solar	64.2	-	55
64.206MWp/48.118MWac Tanauan Solar Power Plant	Solar	64.2	-	71 ³
137.400 MWAC Calatrava Solar Power Project (SPP)	Solar	168.9	-	14
45.758 MWh Gamu Battery Energy Storage System (BESS)	Battery	40	7	246
57.125 MWh Lumban Battery Energy Storage System (BESS)	Battery	57.1	6	210
22.928 Sangali Battery Energy Storage System (BESS)	Battery	21.550	8	263

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

³ Plant completed its test and commissioning during the billing period and with valid FCATC based on IEMOP's monthly summary of WESM LVM TC List as of 25 December 2024

Plant/Unit Name	Plant Type	Registered Capacity (MW)	No. of PCATC Extensions²	No. of Days under Commissioning Tests
14.160MW Upper Taft Hydroelectric Power Plant	Run-of River Hydro	14.2	2	105
Batangas Combined Cycle Power Plant Unit 1	Natural Gas	440	7	228
Batangas Combined Cycle Power Plant Unit 2	Natural Gas	440	4	159
35.700 MW Palayan Binary Power Plant	Geothermal	35.7	11	378
17MW Tiwi Geothermal Binary Power Plant	Geothermal	17	6	217
Biogas Power Plant (Phase 1)	Biofuel	1.7	8	301

ANNEX C

Plants Under Commissioning Tests from Previous Billing Period that was currently no Imposition of Over-riding Constraints

Plant/Unit Name	Plant Type	Registered Capacity (MW)	No. of PCATC Extensions ⁴	No. of Days under Commissioning Tests
72.020 MWp Laoag Solar Power Plant	Solar	130.2	5	199
0.531 MW/1.400 MWh Energy Storage System (ESS)	Battery	0.5	8	505
Angat Hydroelectric Power Plant Unit A	Hydro	38.7	1	86
4.00 MW Colasi Mini Hydroelectric Power Plant (MHEPP)	Hydro	4	-	36
180 MW Agus II Hydroelectric Power Plant Unit 2	Hydro	60	-	1
180 MW Agus II Hydroelectric Power Plant Unit 3	Hydro	60	-	1
Batangas Combined Cycle Power Plant Unit 3	Natural Gas	440	-	60
14.9MW Biomass Cogeneration Plant	Biofuel	12	1	75

⁴ Based on IEMOP's status of plants under commissioning test as of 25 December 2024

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