Over-riding Constraints Report for 2nd Quarter of 2025

26 March to 25 June 2025

September 2025

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

EXECUTIVE SUMMARY

This report provides the results of monitoring of over-riding constraints imposed by the System Operator (SO) on generators during the 2nd quarter of 2025. The findings highlight trends and significant changes in the impositions across different regions and plant types in comparison with 2024.

For the 2nd quarter of 2025, the total number of over-riding constraints imposed by the SO saw a significant decline compared to the previous quarter. Despite this reduction, the overall trend remained consistent with previous reports, with non-security limits continuing to dominate the total imposition, with commissioning tests remaining to be the leading cause of non-security limit impositions. A decline in commissioning test-related impositions was recorded compared to the previous quarter, driven by the completion of commissioning tests for various plants.

Unlike the previous quarter wherein a comparison with the same period last year shows a significant increase in impositions related to commissioning tests, the 2nd quarter marked a 35% dipped year-on-year following the reduction of plants under commissioning tests which either cause by the commencement of operations of some plants during the period in review or the decline in the plants undergoing testing periods for certain facilities with extended commissioning test.

Security limit impositions were mostly associated with plants needed to support voltage stability in the Mindanao region, real power balancing and frequency control, thermal limits of lines, and notably, ten (10) plants experienced security limit impositions due to inability to follow real-time dispatch (RTD) schedule below minimum stable load. Overall, security limit impositions significantly declined in the 2nd quarter. The Market Surveillance Committee (MSC) observed the drop in security limit impositions for support of voltage stability in Mindanao with the installation of device by SO to address the issue.

It can be observed that the distribution of over-riding constraints impositions throughout a typical day follows a pattern like the previous quarter. Impositions normally peak during the early morning and extend until early evening, specifically starting at 0500h and gradually declining after 2000h. This trend is largely due to:

- The fact that commissioning tests of solar plants need to be conducted during daylight hours.
- Conduct of commercial and regulatory compliance tests scheduled during peak demand hours.

Additionally, renewable energy plants accounted for the highest number of constraints, with solar, wind, hydro, and geothermal plants experiencing the most impositions.

For the 2nd quarter of 2025, deviations between RTD schedules and actual generation were observed across all plant types with over-riding constraints impositions. The comparison reveals that deviations between RTD schedules and actual generation are still prevalent across all resource types when over-riding constraints are imposed. The highest difference noted for the quarter is related to the Kalayaan Hydro Electric Power Plant 2 at 148 MW during 0200h interval on 22 April 2025.

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1. OVER-RIDING CONSTRAINTS MONITORING

In accordance with Clause 1.6.2 of the WESM Rules and Sections 3.1 and 5.5 of the Market Surveillance Manual (MSM), the Market Surveillance Committee (MSC) shall undertake an assessment and analysis of the over-riding constraints[1] imposed by the System Operator (SO) on generators. Hence, this report is prepared covering the period of the 2nd quarter of 2025 (26 March to 25 June 2025).

1.1. Over-riding Constraints by Category

For the quarter in review, a significant decline of 27.41% (equivalent to 87,452 fewer impositions) was observed in the total number of over-riding constraints imposed by the SO compared to the previous period. Despite this significant reduction, the overall trend remained consistent with the previous quarterly and monthly reports, where non-security limits continued to dominate. As shown in Table 1, majority (96%) of the impositions[2] were categorized as non-security limits.

The remaining 4% of impositions were classified as security limits, most of which were associated with MRUs for oil-based plants. The use of MRUs[3] was mainly to support voltage stability requirements, address the thermal limits of lines or equipment, and existence of real-power balancing and frequency control. Significant decline in the number of impositions related to MRU in May 2025 was observed related to the non-imposition of over-riding constraints to the seven (7) units of the 112 MW Bunker-C Fired Diesel Power Plant owned by the Western Mindanao Power Plant, and the 10.944 MW Diesel Power Plant of the Nickel Asia Corporation, both of which are located in Mindanao.

Another notable observation was the imposition of security limit during the billing period to ten (10) power plants mainly due to the inability to follow real-time dispatch (RTD) schedule below their respective minimum stable load.

Moreover, a significant reduction in over-riding constraints impositions was recorded towards the end of the 2nd quarter, as illustrated in Figure 1. This decline is attributed to various factors, including the decrease in the need for MRU dispatch, completion of commissioning tests, and a decrease in several other testing activities for commercial or regulatory compliance. A more detailed analysis of these drivers is discussed in Section 1.2 of the report.

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[1] WESM Rules Clause 3.5.13.1 states that the SO may require the Market Operator (MO) to impose constraints on the power flow, energy generation of a specific facility in the grid to address system security threat, to mitigate the effects of a system emergency, or to address the need to dispatch generating units to comply with systems, regulatory and commercial tests requirements.

[2] The monitoring of the over-riding constraints on generators is done on a per generator trading node per trading interval. A constraint imposed on a generator trading node on a particular trading interval is considered as one **over-riding constraints**. 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).

[3] Dispatch Protocol Manual Section 17.2 provides the criteria for the System Operator to use the MRU to ensure the reliability and security of the grid.

Table 1. Summary of Over-riding Constraints by Category

By Category	Q1				Q2				Change (Q-on-Q)	
	January	February	March	Total	April	May	June	Total	Diff	% Change
Non-Security Limit	109,768	114,043	83,406	307,217	86,954	70,558	70,311	227,823	▼ - 79,394	▼ -25.84%
Security Limit	3,362	4,288	4,233	11,883	2,944	730	151	3,825	▼ - 8,058	▼ -67.81%
Total	**113,130**	**118,331**	**87,639**	**319,100**	**89,898**	**71,288**	**70,462**	**231,648**	▼ - 87,452	▼ -27.41%

Figure 1. Monthly Comparison of Over-riding Constraints, by Category

As depicted in Figure 2, the significant decline in non-security limit over-riding constraints impositions in the 2nd quarter was mainly attributable to completion of commissioning tests recorded for various plants during the period and a general reduction in testing activities related to commercial and regulatory requirements. Similarly, security limit related impositions decreased as compared with the same period last year.

Furthermore, the slight rise in impositions at the start of the quarter as compared with the last month of the 1st quarter was linked to extended Provisional Certificates of Approval to Connect (PCATCs) for plants which have not completed their conduct of commissioning tests within the prescribed period under the DOE Department Circular (DC)[4]. These extensions may be either due to delays in technical validation, additional testing requirements, or regulatory compliances.

Aside from the significant reduction for the security limit-related impositions (8,058 lesser as compared to last quarter), the observed declining trend in the 2nd quarter was associated with the decline on the need for plants to be dispatched as MRU.

[4] DOE DC Nos. DC2021-06-0013, DC2022-05-115, and DC2024-08-0022

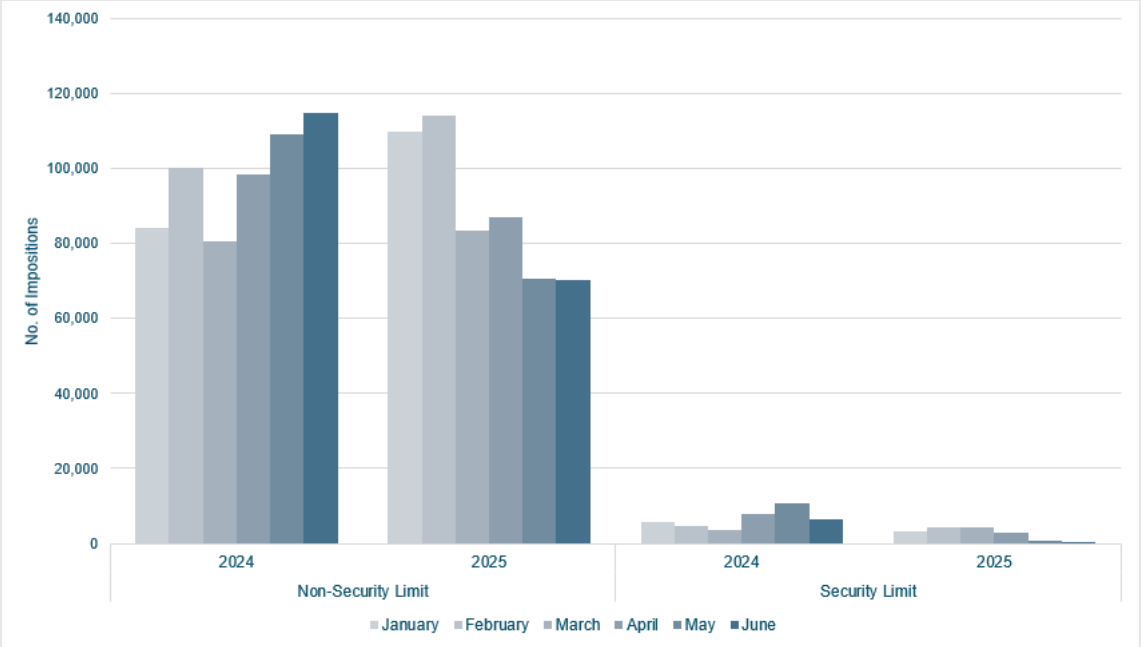


Figure 2. Comparison of Over-riding Constraints by Category, 2024 vs 2025

By region, Luzon still accounted for the largest share of total impositions at 64%, followed by Visayas at 33%, and Mindanao at 3%.

Although a slight increase in impositions was observed in April 2025 when compared on a month-on-month basis with March 2025, a significant 49% decline at the end of the quarter was noted, driven by 1) the completion of commissioning activities, 2) a reduction in other impositions related to commercial and regulatory requirements, and 3) the reduction of the need for various facilities to run as MRU.

Overall, the 2nd quarter of 2025 saw a significant drop in total impositions, with the June billing period recording the lowest number of impositions in the past six months.[5]

Table 2. Summary of Over-riding Constraints by Category per Region

By Category	Q1				Q2				Change (Q-on-Q)	
	January	February	March	Total	April	May	June	Total	Diff	% Change
Luzon	91,579	93,276	57,008	241,863	58,325	47,571	42,500	148,396	▼ - 93,467	▼ -38.64%
Visayas	17,569	20,000	25,888	63,457	28,118	22,660	24,767	75,545	▲ 12,088	▲ 19.05%
Mindanao	3,982	5,055	4,743	13,780	3,455	1,057	3,195	7,707	▼ - 6,073	▼ -44.07%
Total	**113,130**	**118,331**	**87,639**	**319,100**	**89,898**	**71,288**	**70,462**	**231,648**	▼ - **87,452**	▼ **-27.41%**

Notably, unlike last year, Luzon showed a contrasting trend with the reduction in the number of impositions for the 2nd quarter following the completion of plants under commissioning test in which some of those started their commissioning as early as 2023 to 2024, as shown in Figure 3. Similarly, Mindanao experienced a decline in 2025 compared to the previous year. On the other hand, Visayas showed a significant increase in the number impositions in 2025 as compared with 2024. Quarter-on-quarter, Luzon and Mindanao regions experienced a relative decline from last year in the trend of OC impositions. However, among the three regions, Visayas showed an increasing trend in

[5] https://www.wesm.ph/market-outcomes/over-riding-constraints-report/quarterly-over-riding-constraints-report

2025 during the first few months of the year before it declines in May 2025.

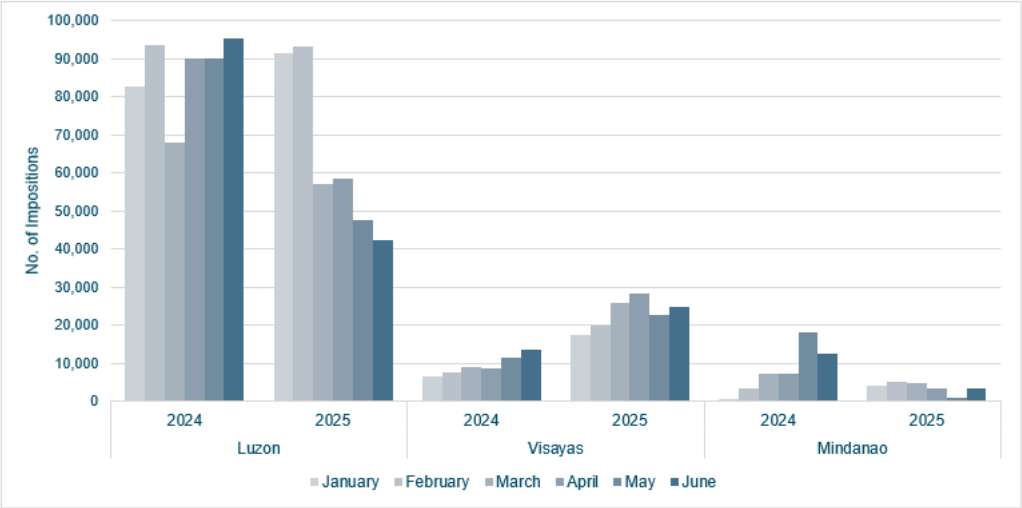


Figure 3. Monthly Comparison of Over-riding Constraints, by Region, for Q2 of 2024 and 2025

1.2. Over-riding Constraints by Incidents

Similar with the previous quarters, a detailed classification of over-riding constraints impositions (as shown in Table 3) reveals that in the 2nd quarter of the year, all security limit incidents were associated with power plants (oil-based, hydro, and coal plants) designated as MRUs. These units were dispatched in accordance with the Dispatch Protocol Manual Section 17.2 with the following reasons 1) to support voltage stability requirements in specific areas of the Mindanao grid, where reactive power and voltage control capabilities may require augmentation, 2) to address the thermal limits of lines or equipment, and 3) to address the need for real-power balancing and frequency control.

In line with the MSC's ongoing oversight function, the Committee coordinated with the SO, through a formal letter, to understand the measures being implemented to manage and potentially reduce the frequency of MRU impositions. In its formal response to the said formal letter, the National Grid Corporation of the Philippines-System Operator (NGCP-SO) apprised the Committee of its installed STATCOM device to address the issue on voltage fluctuation in the Zamboanga peninsula as previously observed. The installation is said to greatly improve the voltage requirement in the Northwestern Mindanao area.

As discussed in Section 1.1 of the report, there were instances where Security Limit due to inability to follow RTD schedule as they were scheduled below their minimum stable load, which are imposed to a total of ten (10) facilities with a total imposition of 298, all imposed on 12 May 2025, from 0900h to 1400h.

For non-security limits, the conduct of commissioning tests remained the primary reason for over-riding constraint impositions. These tests are essential part of the process to ensure that newly registered power plants can deliver electricity safely and reliably to the grid. This includes a series of technical evaluations to verify operational readiness. Additionally, various commercial and

regulatory compliance tests also contributed to the substantial share of over-riding constraints impositions during the period under review.

Table 3. Summary of Over-riding Constraints by Incidents

	Q1				Q2				Change (Q-on-Q)	
Incidents	January	February	March	Total	April	May	June	Total	Diff	% Change
Per Security Limit										
Must Run Units	3,362	4,288	4,233	11,883	2,944	730	151	3,825	- 8,058	-67.81%
Total	***3,362***	***4,288***	***4,233***	14,183	***2,944***	***730***	***151***	3,825		
Per Non-security Limit										
Testing and Commissioning	102,244	106,662	80,196	289,102	80,303	68,076	62,700	211,079	- 78,023	-26.99%
Commercial and Regulatory Requirements	7,524	7,381	3,210	18,115	6,651	2,482	7,611	16,744	- 1,371	-7.57%
Total	***109,768***	***114,043***	***83,406***	333,620	***86,954***	***70,558***	***70,311***	***227,823***		
Grand Total	***113,130***	***118,331***	***87,639***	***347,803***	***89,898***	***71,288***	***70,462***	***231,648***		

A significant decline in commissioning test-related impositions was observed during the quarter in review, following the issuance of FCATCs to several power plants that had completed their required testing. The decline was also partly influenced by the reduction or non-conduct of certain scheduled tests, as shown in Figure 4. Overall, the observed patterns in over-riding constraint impositions reflect the combined impact of system operations requirements, infrastructure readiness, and regulatory requirements.

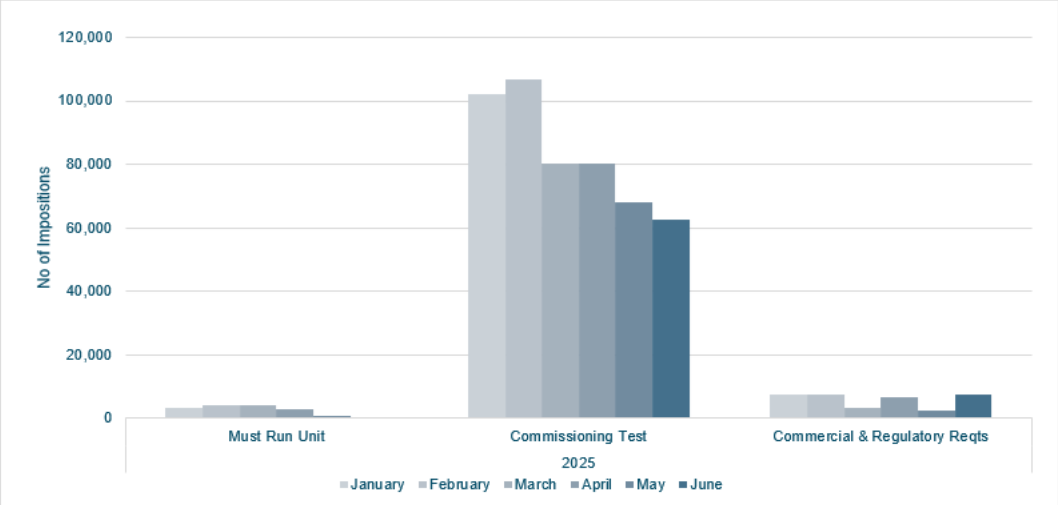


Figure 4. Monthly Comparison of Over-riding Constraints, by Incidents

Unlike the previous quarter wherein a comparison with the same period last year (see Figure 6) shows a significant increase in impositions related to commissioning tests, the 2nd quarter marked a 35% dip year-on-year following the reduction of plants under commissioning tests which was either caused by the commencement of commercial operations of some plants during the period in review or the decline in the plants undergoing testing periods for certain facilities with extended PCATC.

Notably, impositions related to commercial and regulatory compliance requirements registered a significant decline compared to the same period last year, indicating completion of the scheduled regulatory obligations or requirements of participating plants.

Meanwhile, security limit impositions associated mostly with MRUs recorded a significant drop of

approximately 85% from the previous quarter and year. As shown in Table 4 below, the most frequent security limit-related constraints impositions were related to real-power balancing and frequency control, affecting 17 plants with 1,246 impositions, indicating widespread operational challenges. In contrast, issues like thermal limits and voltage requirements are highly concentrated in just a few plants but occur frequently, suggesting persistent localized technical constraints. Meanwhile, there were observed 298 impositions related to the inability of the plants to follow RTD schedule of the plants below minimum stable load across ten (10) plants which occurred from 0900h to 1400h. This action of the SO signifies the importance of these plants to run and provide supply to grid resulting in its imposition to override the original schedule of the plants.

Table 4. Details of the Security Limit Incidents, Q1 vs Q2 2025

Specific Incident	Q1		Q2	
	No. of Impositions	No. of Plants	No. of Impositions	No. of Plants
Real-Power Balancing and Frequency Control	-	-	1,246	17
Thermal Limits of Lines / Equipment	76	1	1,298	4
System Voltage Requirements	11,807	8	983	1
Unable to follow RTD schedule due to below minimum stable load	-	-	298	10

Incidents related to Real-Power Balancing and Frequency Control and Thermal Limits of Lines/Equipment significantly increased compared to the 1st quarter. Meanwhile, System Voltage Requirements saw a sharp decline in both number of impositions and affected plants attributed to the installation of STATCOM device which was commissioned last 16 February 2025, and was replaced by the inability to follow RTD schedules as they were scheduled below their minimum stable load.

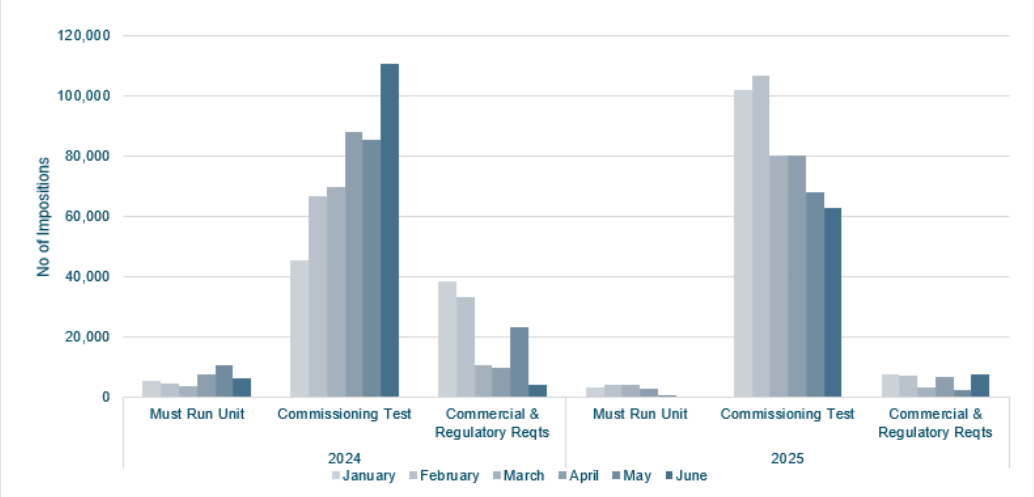


Figure 5. Comparison of Over-riding Constraints by Incidents, 2024 vs 2025

Table 5. Year-on-Year Comparison of Over-riding Constraints per Incidents

Incidents	Year-on-Year Comparison		
	Must Run Unit	Commissioning Test	Commercial & Regulatory Reqts
January	-2,281	56,797	-31,120
February	-273	39,820	-26,065
March	604	10,251	-7,471
April	-4,911	-8,024	-3,281
May	-10,059	-17,557	-20,884
June	-6,264	-47,942	3,341

An analysis of the types of incidents that triggered over-riding constraints impositions in the 1st and 2nd quarters reveals that Commissioning Tests consistently accounted for the highest number of impositions, despite a 27% decline quarter-on-quarter. This drop was due to the successful completion of commissioning tests of several power plants resulting from the issuance of FCATC.

Ancillary Service Tests, which previously ranked second in 1st quarter, saw a dip of 44% decline in the 2nd quarter, with most of the reduction occurring after April and May 2025 before it spiked in June 2025. Performance Tests and Grid Compliance Tests (GCT) also experienced significant reductions—64% and 77% respectively. Meanwhile, no capacity test, net contracted capacity (NCC) test, and heat rate test were noted for the period.

In contrast, Emission Tests rose sharply by 253%, driven by increased regulatory compliance activities or expanded testing coverage in the 2nd quarter.

Overall, the total number of impositions across all test types declined by 28% from 1st to 2nd quarter, indicating a general easing of testing-related constraints across the grid.

Table 6. Quarterly Comparison of Over-riding Constraints per Specific Tests

By Incidents	Q1				Q2				Q-on-Q Comparison
	January	February	March	Total	April	May	June	Total	
Ancillary Service Test	2,350	3,342	988	6,680	654	535	2,529	3,718	-44%
Capacity Test	-	-	36	36	-	-	-	-	-100%
NCC Test	969	-	-	969	-	-	-	-	-100%
Commissioning Test	102,244	106,662	80,196	289,102	80,303	68,076	62,700	211,079	-27%
Emission Test	342	909	867	2,118	4,142	1,563	3,881	9,586	353%
Grid Compliance Test	588	1,742	751	3,081	541	138	36	715	-77%
MRU	3,362	4,288	4,233	11,883	2,944	730	151	3,825	-68%
Performance Test	3,011	860	568	4,439	1,252	244	115	1,611	-64%
Heat Rate Test	264	528	-	792	-	-	-	-	-100%
ERC Audit	-	-	-	-	-	2	-	2	100%
Heavy Metal Test	-	-	-	-	-	-	448	448	100%
Total	**113,130**	**118,331**	**87,639**	**319,100**	**89,898**	**71,288**	**70,014**	**231,200**	**-28%**

As shown in Figure 7, the distribution of over-riding constraints impositions throughout the day follows a pattern like the previous quarter. Impositions are normally experienced during the early morning and extend until early evening, specifically starting at 0500h and gradually declining after 2000h. This trend is largely due to:

- The fact that commissioning tests of solar plants need to be conducted during daylight hours.
- Conduct of commercial and regulatory compliance tests scheduled during peak demand hours.

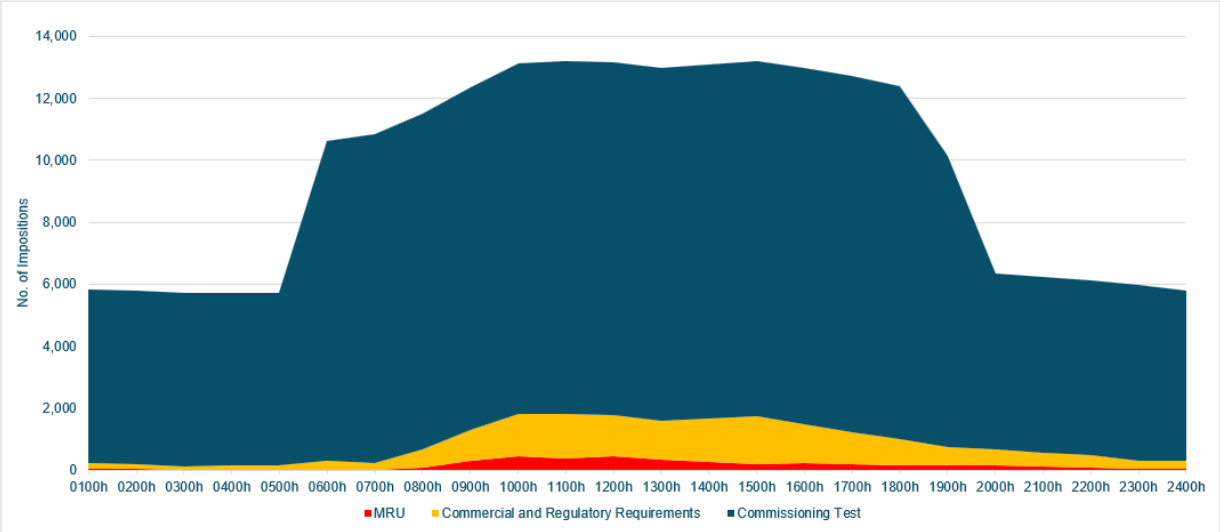


Figure 6. Hourly Profile of Over-riding Constraints Imposition per Incident

1.3. Over-riding Constraints by Plant Type

During the 2nd quarter of 2025, renewable energy (RE) plants continued to account for the highest number of over-riding constraint impositions. Solar plants topped the list, contributing 32% of the total impositions, with an average scheduled capacity of 30.4 MW.[6] This dominance was largely attributable to the extended commissioning tests conducted during the period. Wind, hydro, and geothermal plants followed at 31%, 11%, and 11%, respectively.

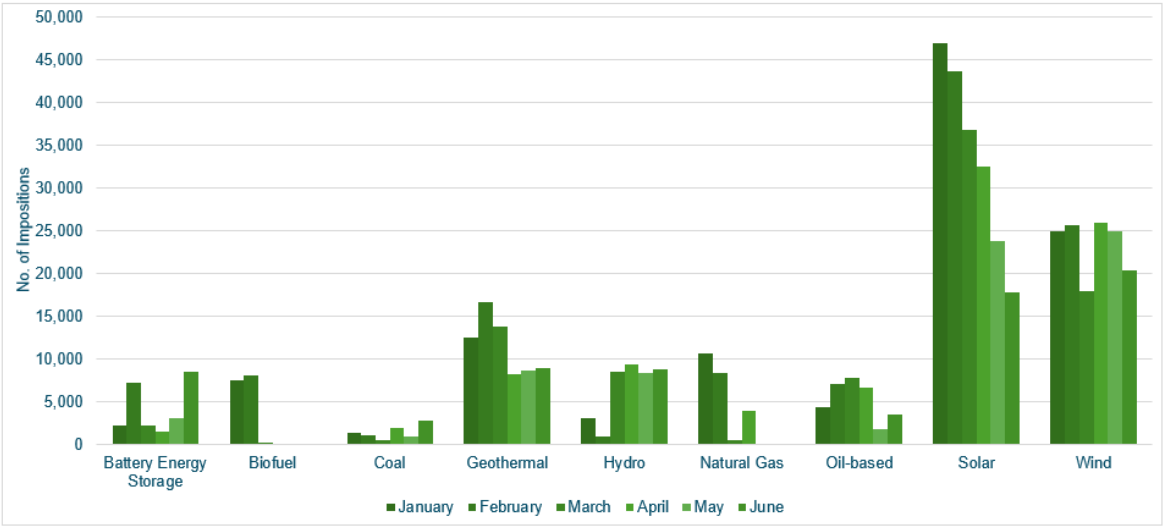


Figure 7. Over-riding Constraints by Plant Type, Q1 to Q2 2025

[6] Further details of scheduled capacities per plant type is attached in the report as Annex B

Table 7. Quarterly Comparison of Over-riding Constraints by Plant Type

Plant type	Q1				Q2				Q-on-Q
	January	February	March	Total	April	May	June	Total	Comparison
Battery Energy Storage	2,195	7,252	2,164	11,611	1,506	2,997	8,421	12,924	11%
Biofuel	7,486	8,060	114	15,660	-	-	-	-	-100%
Coal	1,354	990	404	2,748	1,955	866	2,796	5,617	104%
Geothermal	12,449	16,560	13,719	42,728	8,224	8,640	8,905	25,769	-40%
Hydro	3,036	859	8,400	12,295	9,363	8,344	8,810	26,517	116%
Natural Gas	10,581	8,377	540	19,498	3,887	-	-	3,887	-80%
Oil-based	4,267	7,096	7,712	19,075	6,657	1,753	3,417	11,827	-38%
Solar	46,817	43,533	36,743	127,093	32,483	23,760	17,740	73,983	-42%
Wind	24,945	25,604	17,843	68,392	25,823	24,928	20,373	71,124	4%
Total	**113,130**	**118,331**	**87,639**	**319,100**	**89,898**	**71,288**	**70,462**	**231,648**	**-27%**

Compared to the previous quarter, impositions for solar plants decreased by 42%, largely due to the completion of commissioning tests for several facilities. This reduction reflects the successful expansion of solar generation capacity and the fulfillment of compliance requirements ahead of their transition to full commercial operations.

An analysis of impositions by plant type revealed that Geothermal and Biofuel experienced the most significant decline on quarter-on-quarter comparison, with the former dropping by 40% and the latter ceasing entirely in the 2nd quarter. The sharp decline in geothermal output is attributed to the commercial operation of 35.700 MW Palayan Binary Power Plant and 17MW Tiwi Geothermal Binary Power Plant, and the complete halt in biofuel generation attributable to the completion of commissioning test of Biogas Power Plant (Phase 1) with the issuance of FCATC on 25 February 2025.

On the other hand, BESS saw an 11% increase in output with a total of 10,691 impositions attributable to commissioning tests of three (3) plants and the remaining is due to commercial and regulatory requirements involving seven (7) plants. During the covered period, one (1) power plant, 45.758 MWh Gamu BESS, was issued with FCATC effective on 06 May 2025 and started submitting nominations on 08 May 2025. Similarly, impositions to coal-fired power plants significantly increased by 104% during the period, mostly related to the rise in the conduct of commercial and regulatory requirements involving 20 plants.

Hydro imposition increased by 116% in 2nd quarter compared to 1st quarter, due to the conduct of commissioning test of 14.160MW Upper Taft Hydroelectric Power Plant.

Natural gas plant impositions decreased until it ceased for the last 2 months of the quarter due to the completion of commissioning tests for Batangas Combined Cycle Power Plant Units 2 and 3.

Oil-based plant impositions saw a reduction, driven by a decrease in test activity during the quarter and the decline in MRU-related impositions.

For the billing period in review, the wind plants remained the second-highest resource type in terms of impositions. This was due to the continued commissioning of the below three power plants:

- 80.000 MW Balaoi and Caunayan Wind Power Project Phase 1 which already submitted FCATC to start submitting nominations on 10 June 2025
- Caparispisan II Wind Power Project which already submitted FCATC to start submitting nominations on 13 June 2025
- 13.200 Nabas Wind Power Plant Phase 2 (Nabas-2)

1.4. Plants under Commissioning Test

Similar with the previous quarter, a review at the end of the period revealed that wind power plants had the highest number of multiple extensions. One facility, with a capacity of 13 MW, conducted commissioning tests for up to 13 months. Wind plants undergoing commissioning during the period had scheduled capacities averaging at 5.6 MW with maximum of 35 MW.

At the end of the period, only one (1) Geothermal plant was recorded with four (4) facilities recording extensions to their PCATC, with an average scheduled capacities of 20.8 MW and about 50% of its capacity is being scheduled below 21 MW.

Notably, impositions related to commissioning tests of solar plants observed to significantly decrease during the period. In terms of the number of facilities affected, there were nine (9) solar power plants that conducted commissioning tests for the 2nd quarter. However, as of June 2025, only one (1) solar plant remained with a PCATC extension, which lasted for almost 4 months.

On the other hand, only one (1) BESS and one (1) hydro plant have recorded PCATC extensions at the end of the period, with 2- and 8-months extensions, respectively.

As illustrated in Figure 9, solar power plants continued to represent the largest share of commissioning test-related impositions over the past six (6) months. However, the number of impositions gradually declined toward the end of the 1st half of the year, indicating that a growing number of solar projects have completed their respective commissioning phases. Wind plants similarly exhibited a downward trend by the end of the quarter.

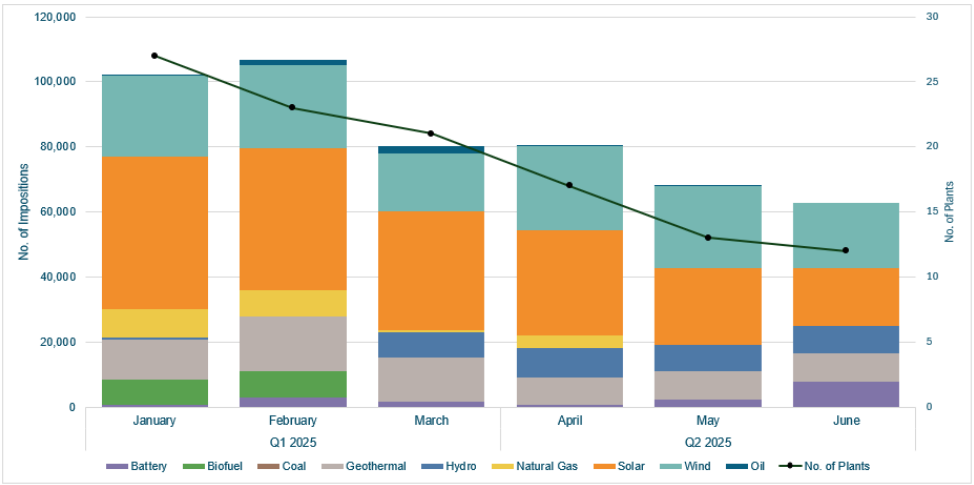


Figure 8. Monthly Comparison of Over-riding Constraints due to Commissioning Test and the Corresponding Number of Power Plants

Figure 10 shows the average scheduled capacity across all regions during the review period for plants under commissioning tests. The negative scheduled capacities recorded in Luzon and Visayas are associated with the testing of BESS charging capabilities. In Luzon, the average schedule of 20.3 MW is noticeably higher than the median of 15 MW, influenced by extreme values ranging from a minimum of -40 MW to a maximum of 430 MW. The median shows the middle value of the data and is not affected as much by extreme highs or lows, so it better reflects where most schedules fall during the covered period in the region. In Visayas, half of its capacities are scheduled at 6 MW and below with an average capacity of 18.5 MW.

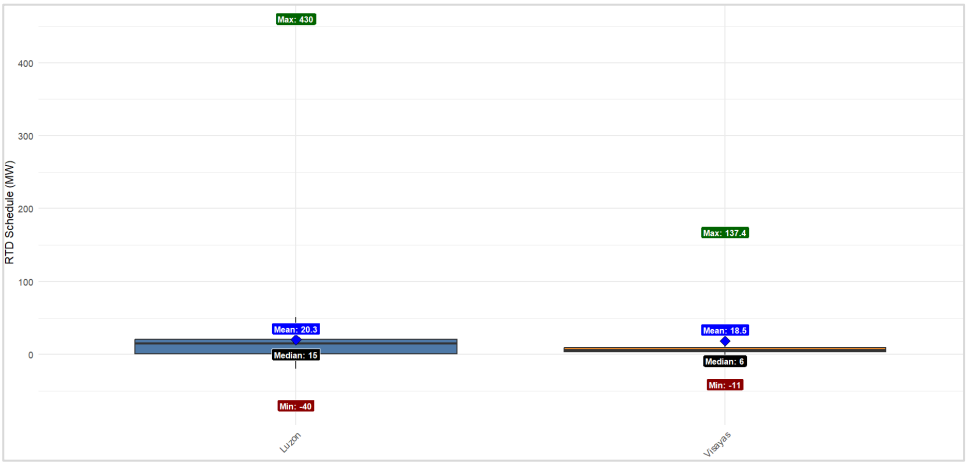


Figure 9. Scheduled Capacities of Over-riding Constraints due to Commissioning Test for Q2 2025, Per Region[7]

In line with the Market Surveillance Manual (MSM), the MSC is mandated to regularly monitor over-riding constraints impositions, particularly those related to power plants undergoing commissioning tests. The Committee also maintains consistent coordination with the Market Operator (MO) and the SO to verify the reasons behind extended testing periods, especially considering the DOE Department Circulars, which generally prescribe a two-month duration for commissioning tests.

While the extension of commissioning tests is permitted under DOE Department Circular No. 2021-06-0013 and related issuances, such extensions are limited to one (1) month after the evaluation of initial test results. These are further contingent on the availability of a testing schedule, as confirmed by the Transmission Network Provider (TNP) or Distribution Utility (DU).

Throughout the quarter under review, there were commissioning tests that concluded and were with corresponding FCATCs issuances. These plants are the following[8]:

Power Plants	Remarks
80.000 MW Balaoi and Caunayan Wind Power Project Phase 1	Submitted FCATC to start submitting nominations on 10 June 2025
Caparispisan II Wind Power Project	Submitted FCATC to start submitting nominations on 13 June 2025
137.400 MWAC Calatrava Solar	Submitted FCATC effective on 24 June 2025 and to start

[7] No plant under Commissioning Test is recorded in Mindanao during the covered period.
[8] As checked with the information gathered from the Market Operator as of 25 June 2025

Power Plants	Remarks
Power Project (SPP)	submitting nominations on 26 June 2025
Batangas Combined Cycle Power Plant Unit 3	Submitted FCATC effective on 30 April 2025 and to start submitting nominations on 06 May 2025
45.758 MWh Gamu BESS	Submitted FCATC effective on 06 May 2025 and to start submitting nominations on 08 May 2025
63.961 MWp Cordon SPP	Submitted FCATC effective on 17 June 2025 and to start submitting nominations on 26 June 2025

While the DOE circulars establish clear timelines for commissioning—including a two-month period with a possible one-month extension—the MSC observed multiple instances of extended testing periods beyond the prescribed limits throughout 2025. These recurring extensions underscore the importance of reassessing the implementation and enforcement of existing regulatory timelines for commissioning.

1.5. Schedule and Actual Generation for Plants under Over-riding Constraints

This section presents a comparison between the RTD schedule and the actual generation (as observed from the snapshot data) for generating units that were subjected to over-riding constraints impositions during the covered billing period.

While these impositions are allowed under the rules and manuals, there might be possible deviations between the scheduled dispatch and actual plant output due to various possible reasons, among others, operational, system, or resource-specific factors which are all not covered by the WESM Rules. Verification and identification of such reasons are not covered in this report.

For the 2nd quarter of 2025, deviations between RTD schedules and actual generation were observed across all plant types with over-riding constraints impositions. Figures 11 to 14 illustrate these hourly differences. Further checking confirmed that the differences between the two data across all plant types are statistically significant[9], which indicate that the differences are unlikely to have happened by chance.

Coal-fired plants showed consistent deviations, with all units registering differences between their RTD schedules and actual generation. The average deviation was 0.96 MW, and the largest was recorded at 184.9 MW attributable to Batangas Coal-Fired Thermal Power Plant 1. In some instances, actual generation exceeded scheduled levels by as much as 81.57 MW, notably by the 150.025 MW Unit 3 Panay Energy Development Corporation (PEDC) Coal-Fired Thermal Power Plant.

Natural gas units similarly recorded deviations, averaging at 0.19 MW, with the most significant deviation reaching 45.5 MW attributed to the Batangas Combined Cycle Power Plant Unit 3. There

[9] This is done using Paired t-test which is a statistical method used to determine whether there is a significant difference between two related sets of values. For this section, it is applied to assess if the difference between the RTD schedule and actual generation (MW snapshot) for the same plant and time interval per plant type is statistically significant. This helps identify whether deviations are likely due to random variation or reflect consistent differences in dispatch and actual output.

were instances when the same plant had over-generation, peaking at 54.6 MW.

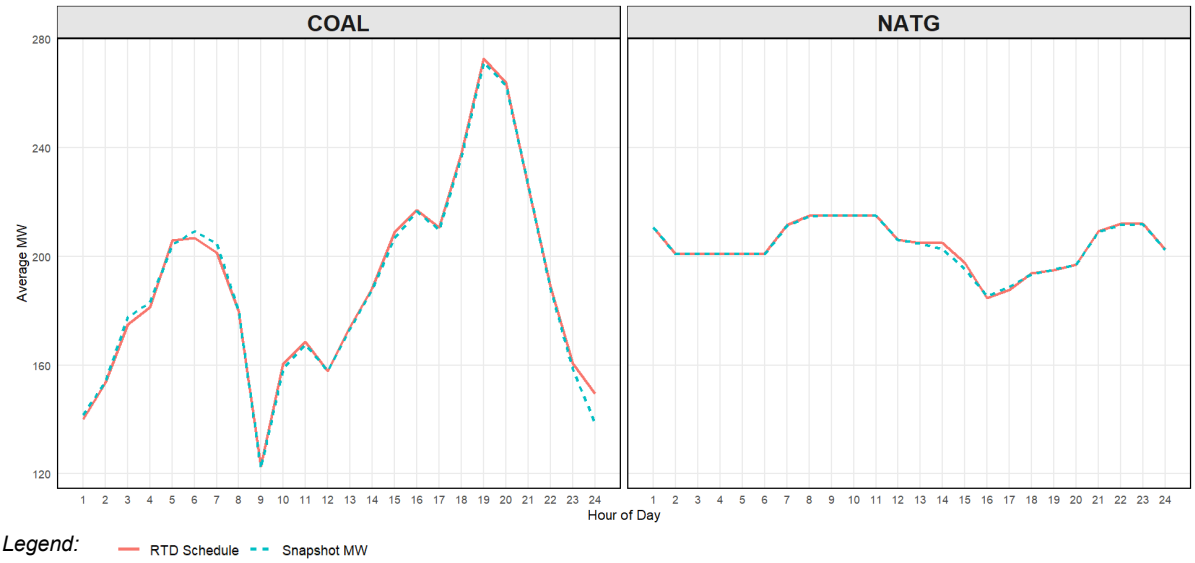


Figure 10. Average Hourly RTD Schedule vs Actual Generation, Per Plant Type (Coal, Natural Gas)

Hydro facilities had an average deviation of 0.86 MW, with the highest difference recorded at 93.8 MW, and the smallest deviation was observed from Kalayaan Hydro Electric Power Plant 2 on 22 April 2025 at 0250h. Similarly, oil-fired units mirrored this behavior, with an average deviation at 0.56 MW and a peak difference of 57 MW, noted from 60.702 MW Bohol In-Island Diesel Power Plant.

Solar plants, following expected daytime patterns, peaked between 0600h and 1800h. Despite this predictable output curve, deviations averaged 3.62 MW, with the highest at 110 MW from 168.953 MWp / 137.400 MWac Calatrava Solar Power Project (SPP). These variances are likely caused by intermittent cloud cover or local irradiance changes not captured in the forecast.

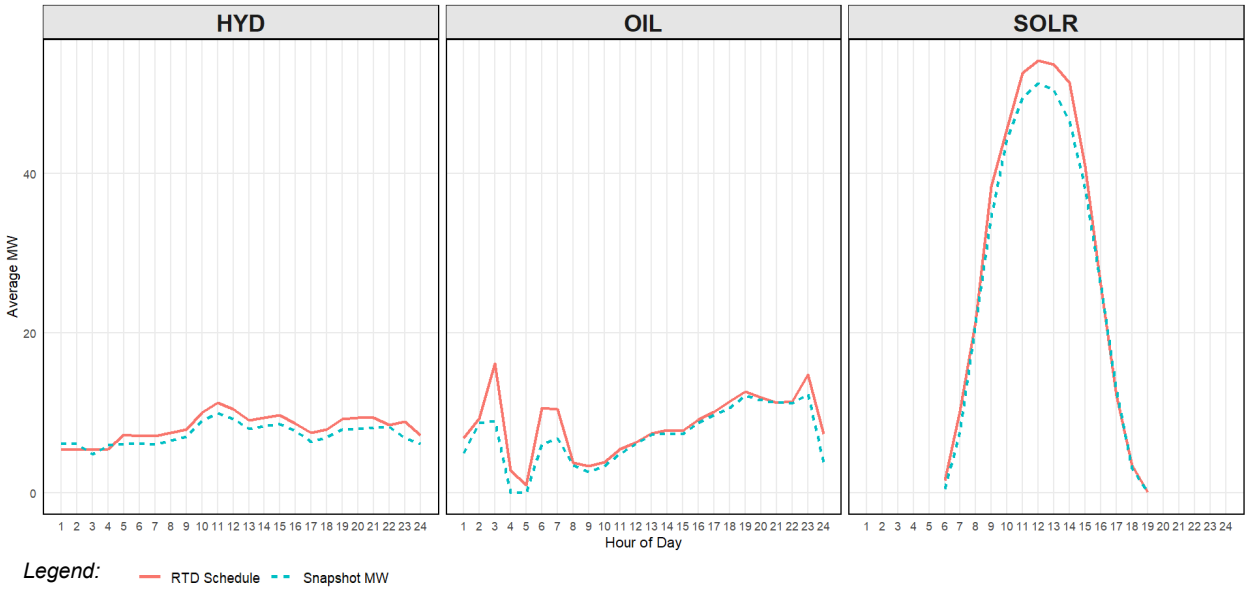


Figure 11. Average Hourly RTD Schedule vs Actual Generation, Per Plant Type (Hydro, Oil, Solar)

Geothermal plants consistently produced less than their scheduled output across all hours, with no instances of full alignment with the schedule. The largest difference was 21 MW from 21.573 MW Tanawon Geothermal Power Plant. In contrast, wind resources occasionally exceeded RTD schedules, particularly in the afternoon, possibly due to improved wind conditions during those hours. At other times, actual generation typically trailed the schedule, with the maximum shortfall recorded at 20 MW.

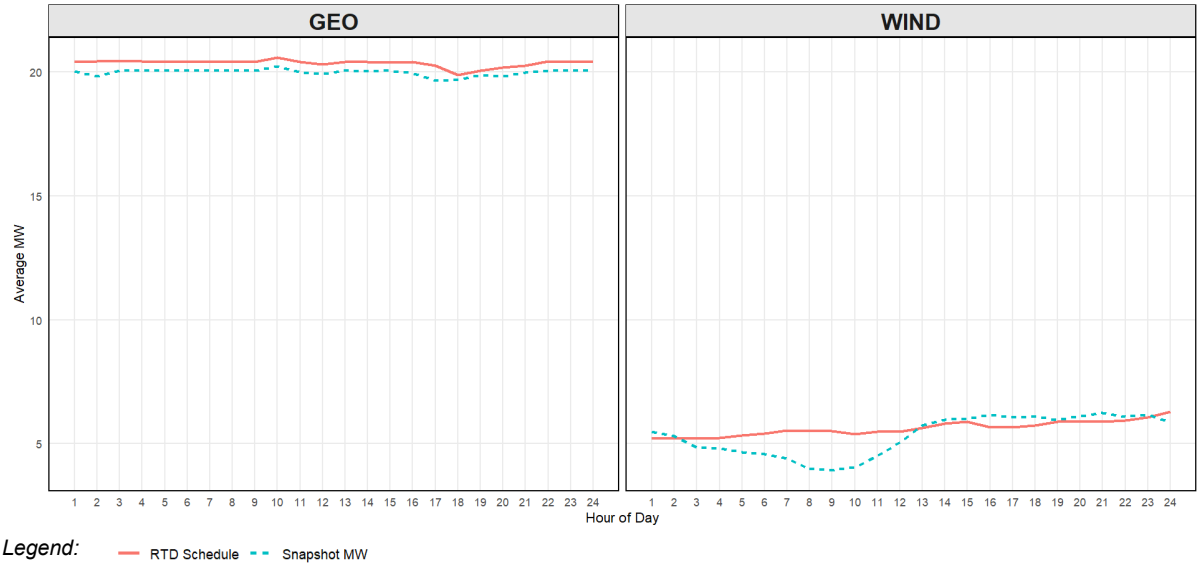


Figure 12. Average Hourly RTD Schedule vs Actual Generation, Per Plant Type (Geothermal, Wind)

Battery energy storage systems, by design, displayed an intermittent deviation pattern due to charging and discharging behavior. On average, they deviated by 0.25 MW, with the largest difference recorded at 52.7 MW. These differences are likely influenced by charging windows.

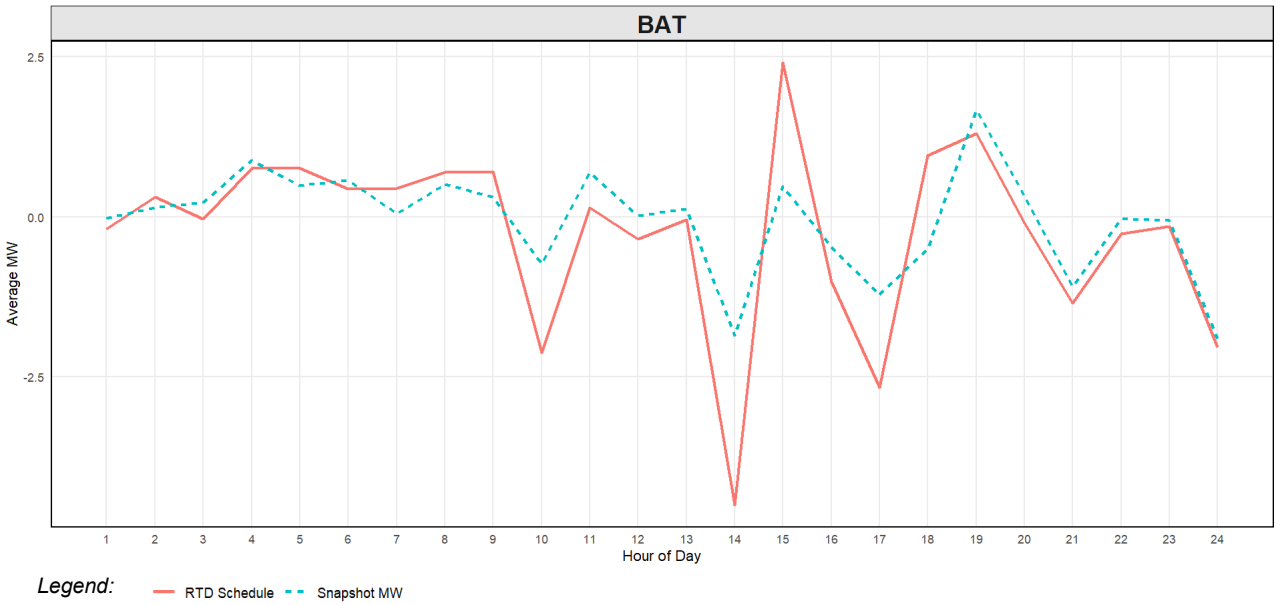
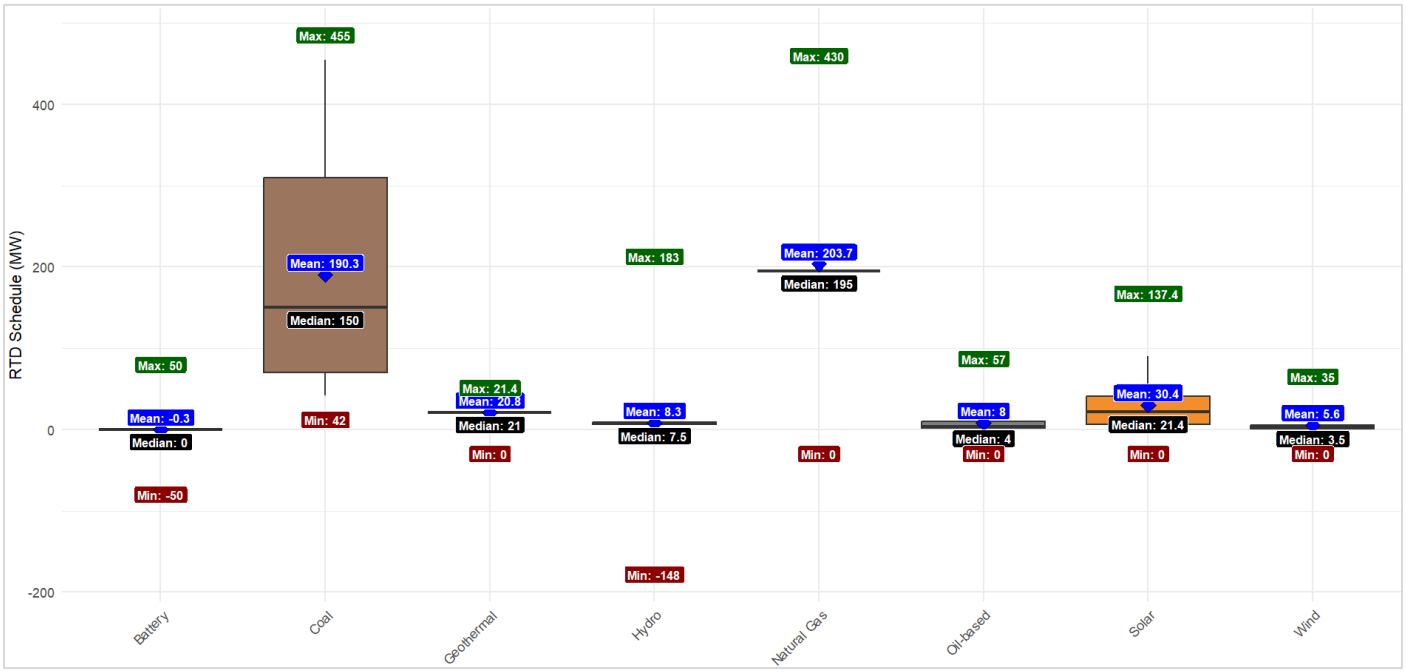


Figure 13. Average Hourly RTD Schedule vs Actual Generation, Per Plant Type (Battery)

ANNEX A. List of Plants with Impositions due to Commissioning Test for Q1 2025

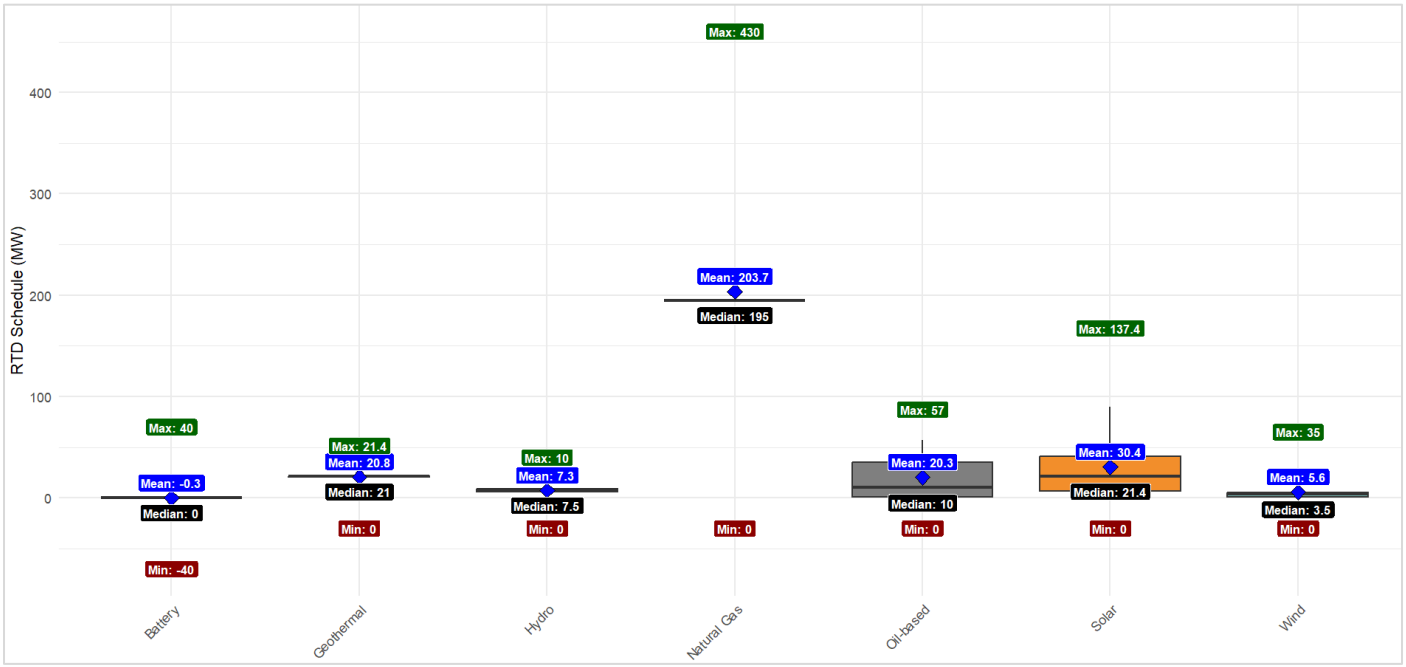
Facility Name	Participant Name	Facility Name	Plant Type	January	February	March	April	May	June
Angat Hydroelectric Power Plant Unit A	Angat Hydropower Corporation	01ANGAT_A	HYD	✓					
Concepcion 1 Solar Power Project	Solar Philippines Tarlac Corporation	01CONSOL_G01	SOLR	✓	✓	✓	✓	✓	✓
80.000 MW Balaoi and Caunayan Wind Power Project Phase 1	Bayog Wind Power Corp.	01BALWIND_G01	WIND	✓	✓	✓	✓	✓	✓
35.700 MW Palayan Binary Power Plant	Bac-Man Geothermal Inc.	03PALAYAN_G01	GEO	✓	✓	✓			
72.128 MWp Subic New PV Power Plant Project	Jobin-SQM Inc.	01SUPSOL_G01	SOLR	✓	✓	✓	✓		
Caparispisan II Wind Power Project	Amihan Renewable Energy Corp.	01CAPRIS_G02	WIND	✓	✓	✓	✓	✓	✓
45.758 MWh Gamu Battery Energy Storage System (BESS)	SMGP BESS Power Inc.	01GAMU_BAT	BAT		✓	✓	✓		
13.200 Nabas Wind Power Plant Phase 2 (Nabas-2)	PetroWind Energy Inc.	08PWIND_G02	WIND	✓	✓	✓	✓	✓	✓
17MW Tiwi Geothermal Binary Power Plant	AP Renewables Inc.	03TGPP_G01	GEO	✓	✓	✓			
57.125 MWh Lumban Battery Energy Storage System (BESS)	SMGP BESS Power Inc.	03LUMBAN_BAT	BAT	✓		✓			
Batangas Combined Cycle Power Plant Unit 1	Excellent Energy Resources Inc.	03EERI_G01	NATG	✓					
Biogas Power Plant (Phase 1)	Trustpower Corporation	01TRUSTBIO_G01	BIO	✓	✓				
Batangas Combined Cycle Power Plant Unit 3	Excellent Energy Resources Inc.	03EERI_G03	NATG	✓	✓	✓	✓		
14.160MW Upper Taft Hydroelectric Power Plant	Iraya Ventures, Inc.	04UTH_G01	HYD			✓	✓	✓	✓
0.531 MW/1.400 MWh Energy Storage System (ESS)	Bataan Solar Energy Inc.	01BTSOLEN_BAT	BAT	✓	✓				
36.646 MWp RASLAG IV Solar Power Project	RASLAG Corp.	01RASLAG_G04	SOLR	✓	✓	✓	✓		
75.214 MWP Palauig Solar Power Project	Shizen Inc.	01SHIZEN_G01	SOLR	✓					
Sto. Domingo Solar Power Plant (SDSPP)	Sinocalan Solar Power Corp.	01DOMSOL_G01	SOLR	✓	✓				
56.578 MWp Gamu Solar Power Project	Megasol Energy 1 Inc.	01MEGASOL_G01	SOLR	✓					
42.900 MWp Bongabon Solar Power Plant	Nuevasol Energy Corp.	01NUEVASOL_G01	SOLR	✓					
Batangas Combined Cycle Power Plant Unit 2	Excellent Energy Resources Inc.	03EERI_G02	NATG	✓	✓				
27.121 MWp Dagohoy Solar Power Project	Dagohoy Green Energy Corporation	07DAGSOL_G01	SOLR	✓	✓	✓	✓		
18.6 MW Bunker C-Fired Diesel Power Plant	Tarlac Power Corporation	01TPCBUNK_G01	OIL	✓	✓				
46.658MWP Armenia Solar Power Project (SPP)	RE Resources, Inc.	01ARESOL_G01	SOLR	✓	✓	✓			
23.776 MWP Bongabon Solar Power Project	Greentech Solar Energy Inc.	01BONGSOL_G01	SOLR	✓	✓	✓	✓	✓	✓
19.613 MWp San Jose Solar Power Plant (SPP)	San Jose Green Energy Corporation	01SJSOL_G01	SOLR	✓	✓	✓	✓		
64.206MWp/48.118MWac Maragondon Solar Power Plant	Prime Solar Solutions Corp.	03MARAGSOL_G01	SOLR	✓					
64.206MWp/48.118MWac Tanauan Solar Power Plant	Prime Solar Solutions Corp.	03TANSOL_G01	SOLR	✓					
137.400 MWAC Calatrava Solar Power Project (SPP)	Aboitiz Solar Power, Inc.	06CALASOL_G01	SOLR	✓	✓	✓	✓	✓	✓
63.961 MWp Cordon Solar Power Project	Greenergy for Global Inc.	01CORDONSOL_G01	SOLAR		✓	✓	✓	✓	✓
21.573 MW Tanawon Geothermal Power Plant	Bac-Man Geothermal, Inc.	03TANAWON_G01	GEOTHERMAL		✓	✓	✓	✓	✓
60.702 MW Bohol In-Island Diesel Power Plant	Conal Holdings Corporation	07BIDPP_G01	OIL-BASED		✓	✓	✓	✓	
Samal Solar Power Project Phase 1	Samal Solar Renewable Energy Corp.	01SAMLSOL_G01	SOLAR			✓	✓	✓	✓
Bac-Man Energy Storage System	Energy Development Corporation (additi	03BACMAN_BAT	Battery					✓	✓
14.535 MWh Southern Negros Battery Energy Storage System	Energy Development Corporation (additi	06SONEG_BAT	Battery					✓	✓

ANNEX B. Scheduled Capacities per Plant Type

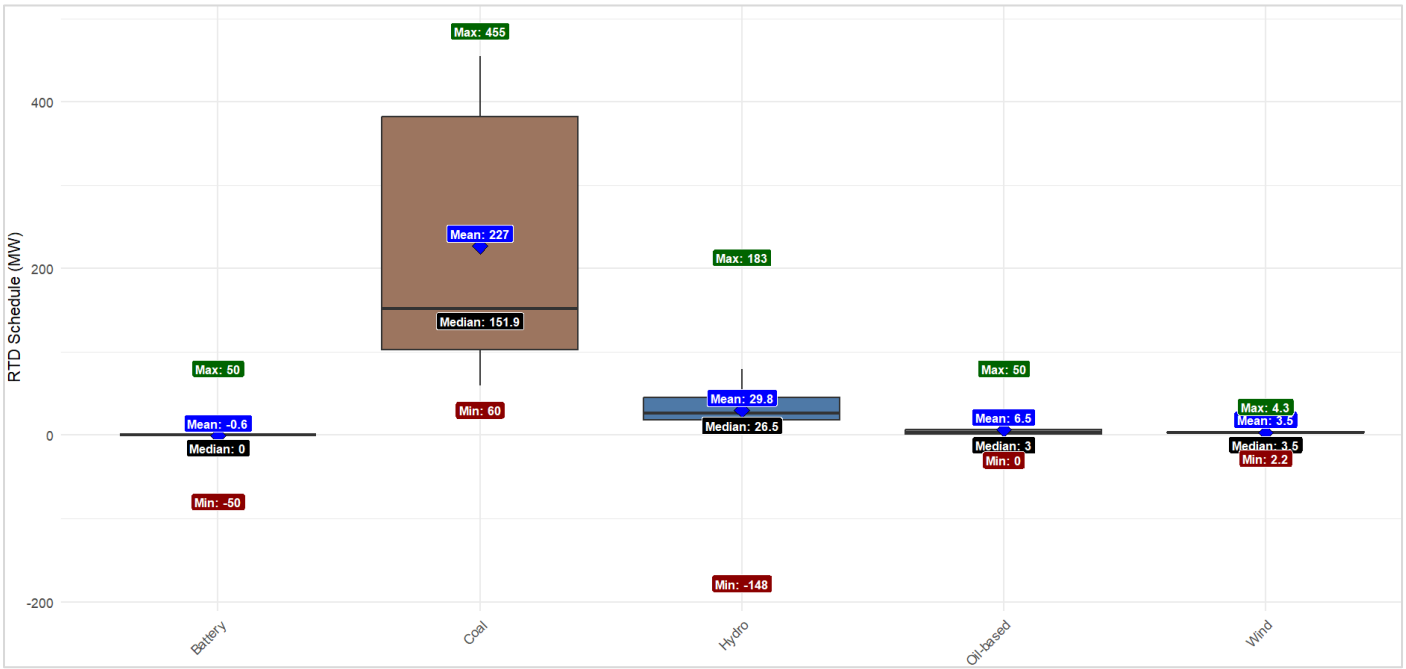


ANNEX C. Scheduled Capacities per Plant Type per Incident

C.1 Commissioning Test



C.2 Commercial and Regulatory Requirements



C.3 Must-Run Units