MONTHLY MARKET ASSESSMENT REPORT

26 September to 25 October 2024

DECEMBER 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

- **High-voltage direct current (HVDC)** line connecting Luzon and Visayas regions was on outage starting on 14 October 2024 at 0806h to 20 October 2024 at 1218h for its annual preventive maintenance schedule (APMS)
- **Secondary Price Cap imposition**
  - **Visayas and Mindanao: 235** out of **236** total trading intervals was during the APMS of Luzon-Visayas HVDC
- **No Red and Yellow Alert** notice issuance by the System Operator
- **Declaration of Market Intervention event** by the Market Operator on 10 October 2024, affecting a total of nine (9) trading intervals due to the shutdown of IEMOP Market systems brought about by failure of the Uninterruptible Power Supply (UPS) to function during a power fluctuation incident in the IEMOP Market Operator Center
- **Cebu-Bohol Interconnection Project (CBIP)** was fully energized on 27 September 2024 with a capacity of 1,200 MW

AT A GLANCE

Total Registered Capacity (in MW)

29,527.1 **0.16%**

Previous Month: 29,481.3 MW

Capacity on Outage (in MW)

4,115 13.94% of the total registered capacity

Previous Month: 3,193 MW

Capacity of Plants on Commissioning (in MW)

1,049 3.55% of the total registered capacity

Previous Month: 1,584 MW

Capacity Not Offered/Nominated (in MW)

4,554 15.42% of the total registered capacity

Previous Month: 4,596 MW

Capacity Offered/Nominated (in MW

19,786 67.01% of the total registered capacity

Previous Month: 20,067 MW

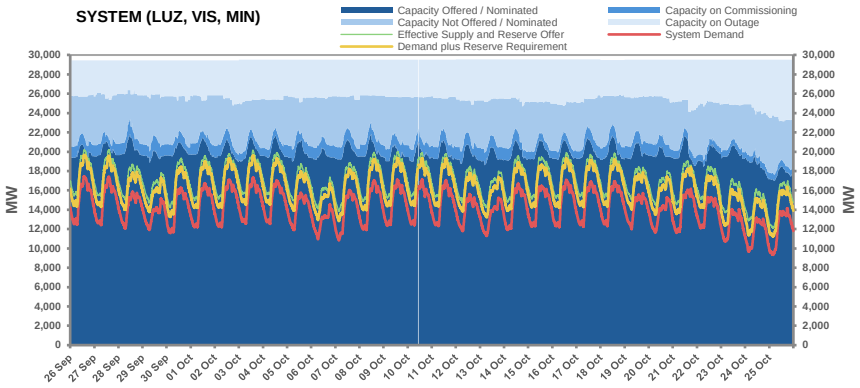
Load Weighted Average Price (LWAP) (in PHP/MWh)

4,613.74 **15.01%**

Previous Month: 4,011.43

Public

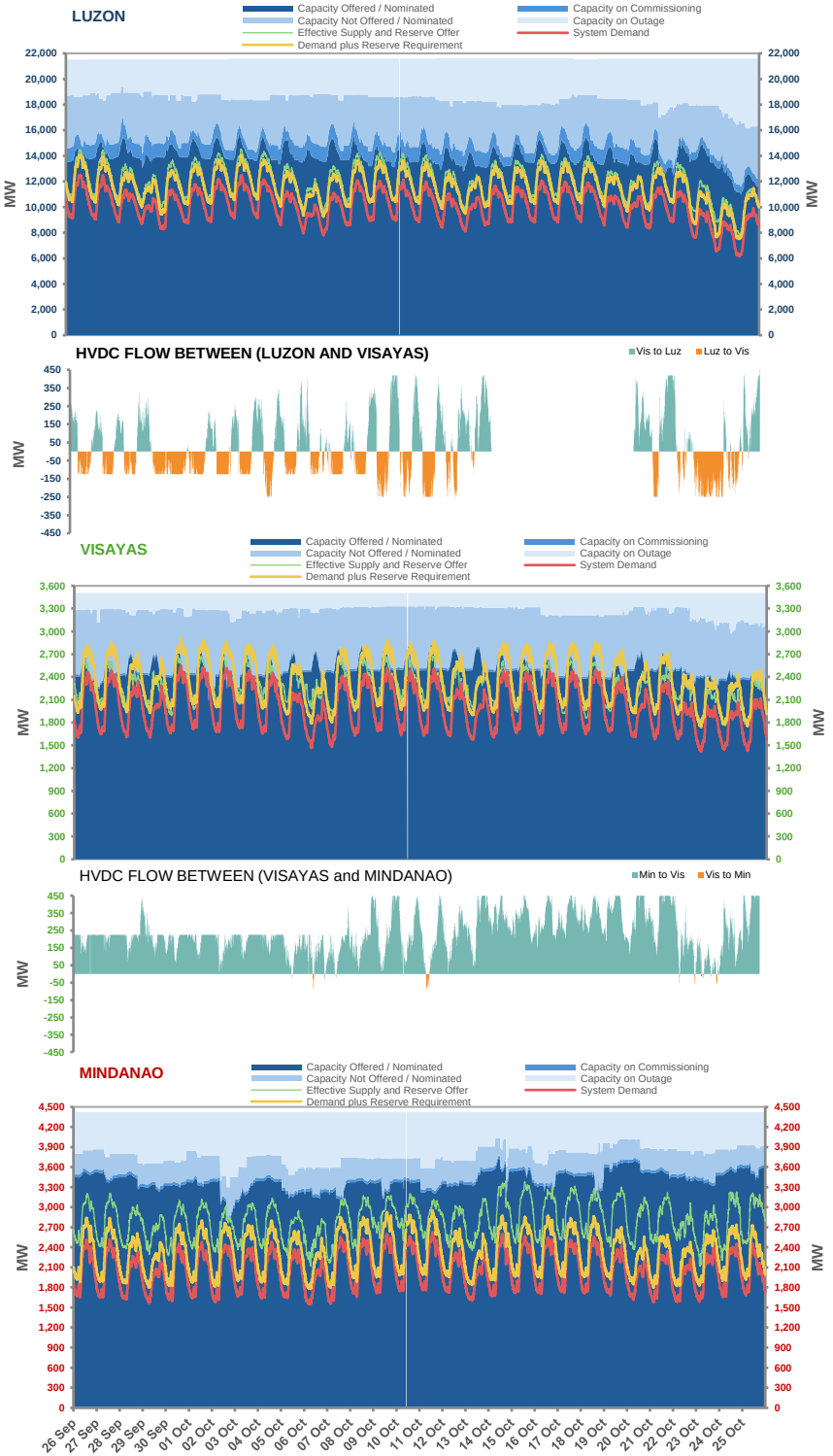
MARKET OUTCOME
CAPACITY PROFILE



Particulars	Min		Max		Ave	% Change
	(in MW)	Date and time Interval	(in MW)	Date and time Interval	(in MW)	
Effective Supply						
System	12,077.66	10/25/2024 4:05	20,214.51	09/26/2024 13:50	17,014.07	1.58%▲
Luzon	7,773.96	10/25/2024 4:05	14,539.02	10/03/2024 14:00	11,957.42	2.26%▲
Visayas	1,759.28	10/24/2024 5:00	2,711.59	10/10/2024 11:10	2,257.96	4.11%▲
Mindanao	2,118.14	10/06/2024 6:50	3,393.45	10/14/2024 17:55	2,798.70	3.11%▼
Demand Plus Reserve Requirement						
System	11,244.05	10/25/2024 4:05	19,684.37	09/26/2024 14:10	16,217.21	2.09%▲
Luzon	7,523.40	10/25/2024 3:00	14,060.10	10/03/2024 14:10	11,549.07	1.88%▲
Visayas	1,738.65	10/23/2024 3:50	2,916.41	09/30/2024 15:00	2,349.07	2.28%▲
Mindanao	1,779.03	10/06/2024 6:30	2,955.97	10/11/2024 13:35	2,319.08	2.93%▲
Outage						
System	3,054.20	09/28/2024 9:05	6,424.75	10/25/2024 14:00	4,114.79	28.84%▲
Luzon	2,179.50	09/28/2024 9:05	5,442.90	10/25/2024 9:40	3,221.14	33.62%▲
Visayas	176.70	10/09/2024 8:40	548.05	10/24/2024 11:50	243.38	28.19%▼
Mindanao	362.10	10/14/2024 6:45	1,133.30	10/02/2024 17:10	650.27	46.68%▲

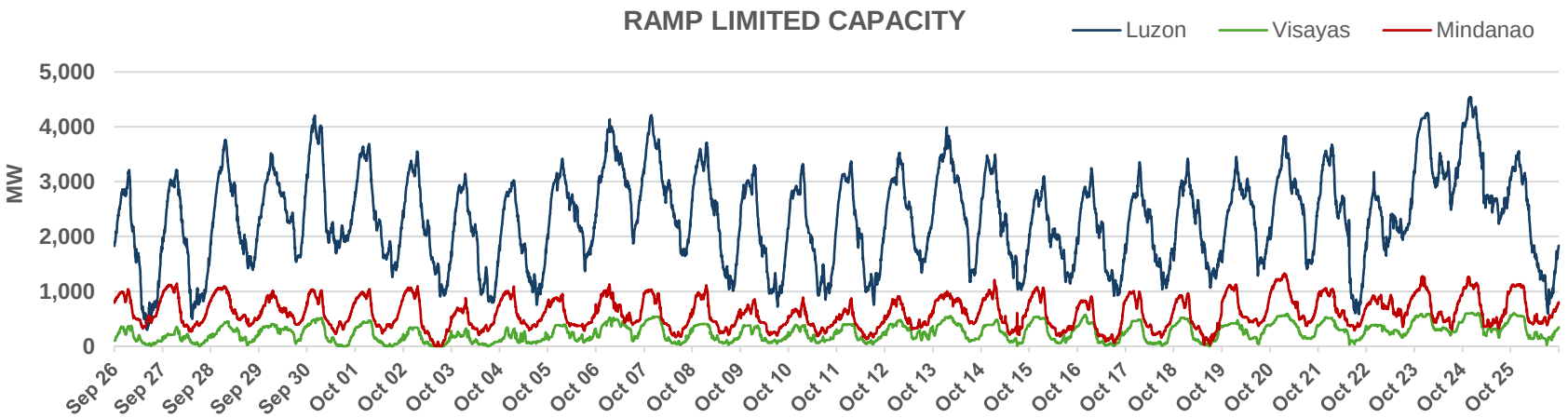
In a system-wide perspective, the effective supply started to increase by an average of 1.58% despite the increase in capacities on outage at 29% for the billing period in review. Moreover, a 2% increase in demand was noted even amidst the suspension of classes and government office operations during the onslaught of Typhoons Julian and Kristine. This suggests increased economic activity in preparation for the holiday season, driven by heightened commercial operations, manufacturing, and household energy use for festive preparations. It highlights the link between energy demand and holiday-driven economic trends.

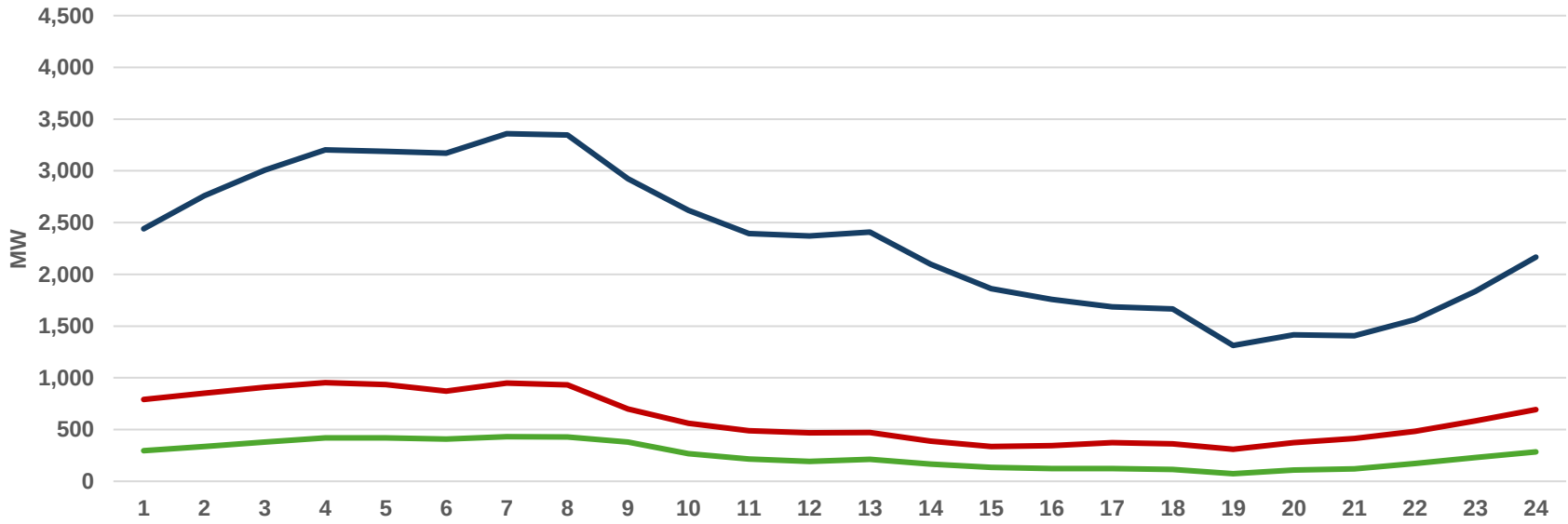
The flow of power from Visayas to Luzon was noted for thirty-seven percent (37%) of the time, with an average transfer of around 185 MW (51% of the total HVDC capacity). Additionally, the Visayas to Luzon HVDC submarine line was noted to be unavaliable for 22% of the time during the billing period in review. Futhermore, the Mindanao to Visayas HVDC was noted to have for 98% of the time, with an average flow of 243 MW (54% of the total HVDC capacity).



Public

MARKET OUTCOME
CAPACITY PROFILE





Particulars	Min		Max		Ave	% Change
	(in MW)	Date and time Interval	(in MW)	Date and time Interval	(in MW)	
Ramp Limited Capacity						
System	-	10/10/2024 10:15	6,375.22	10/24/2024 3:15	3,185.34	12.08%▼
Luzon	297.26	09/26/2024 16:25	4,541.62	10/24/2024 3:50	2,331.37	12.03%▼
Visayas	-	09/27/2024 18:25	608.21	10/24/2024 8:05	251.33	15.69%▲
Mindanao	3.69	10/02/2024 16:25	1,327.27	10/20/2024 7:20	606.05	19.79%▼

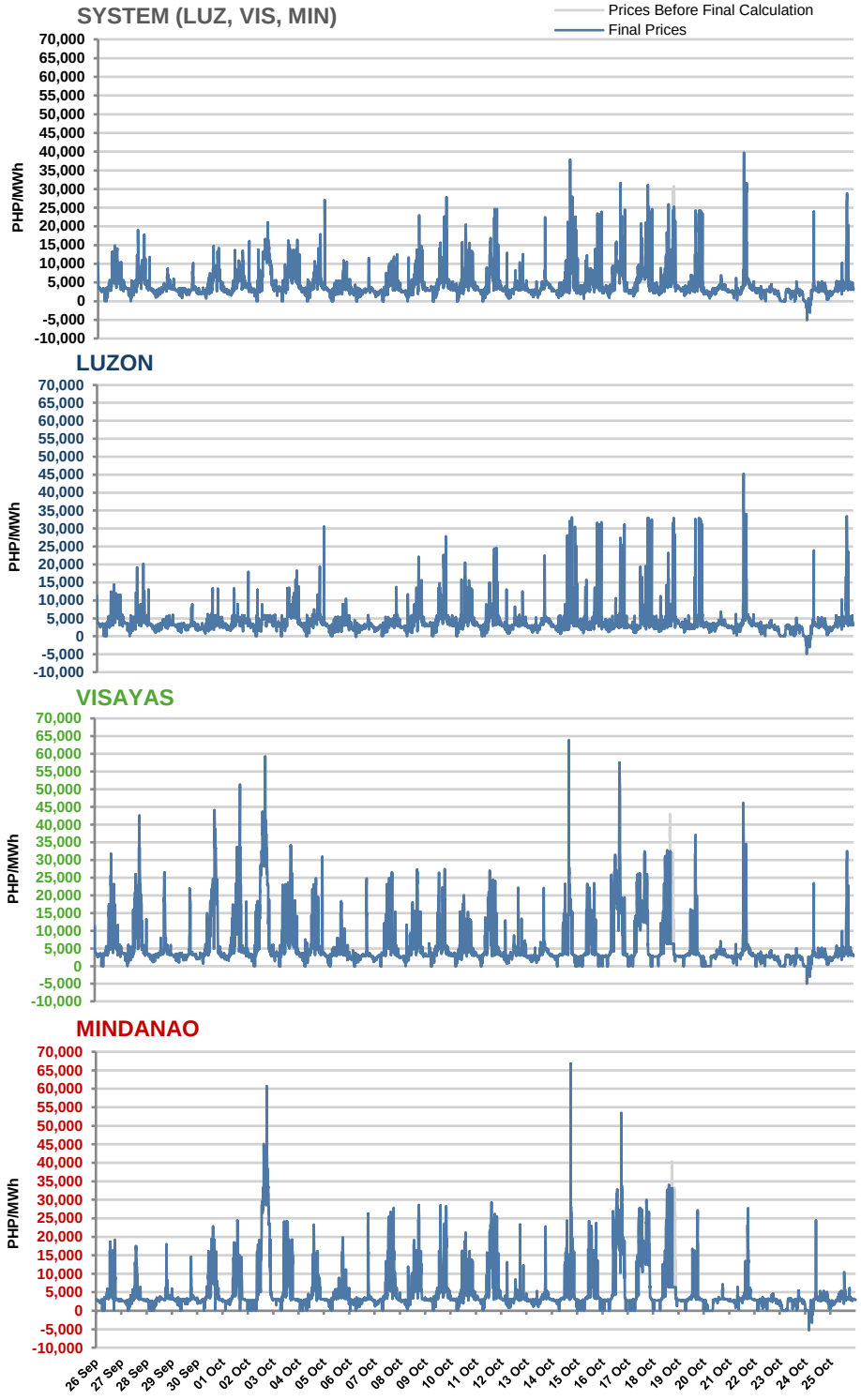
Regional ramp-limited capacites were observed on a per interval basis, with the highest observed average constraints remained to be occurring at the 0800h trading interval across all three regions. These limitations were primarily due to resource and technical factors.

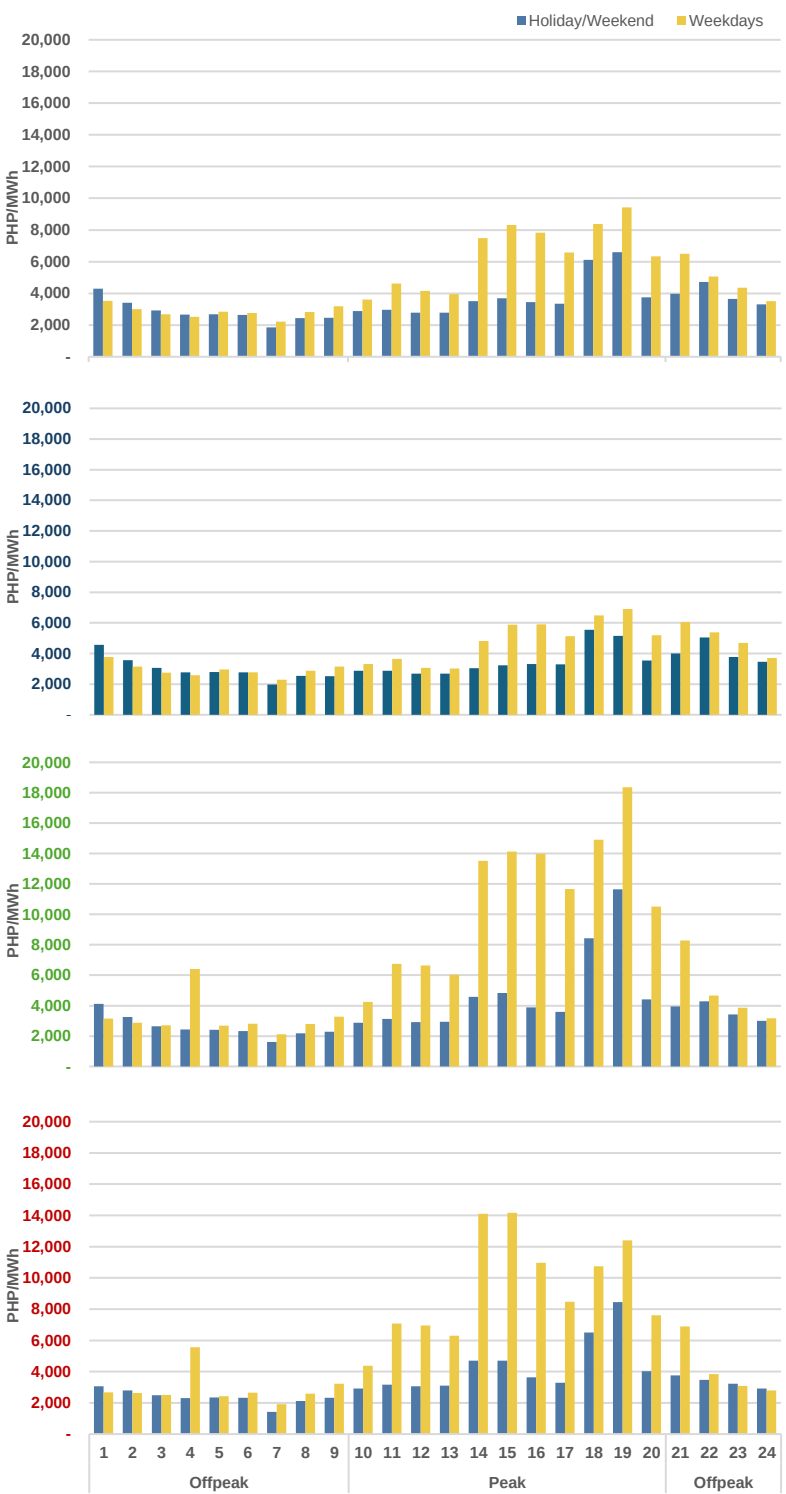
Despite the Visayas grid experiencing a decline in average outage, average lamp-limited capacities still increased. Overall, in a system-wide perspective, ramp-limited capacities declined by 12%. The contributing factor on the decline of ramp-limited capacities for the Luzon and Mindanao is the increase in outage capacity of coal and natural gas by an average of 19 and 35%, respectively.

Public

MARKET OUTCOME

MARKET PRICE

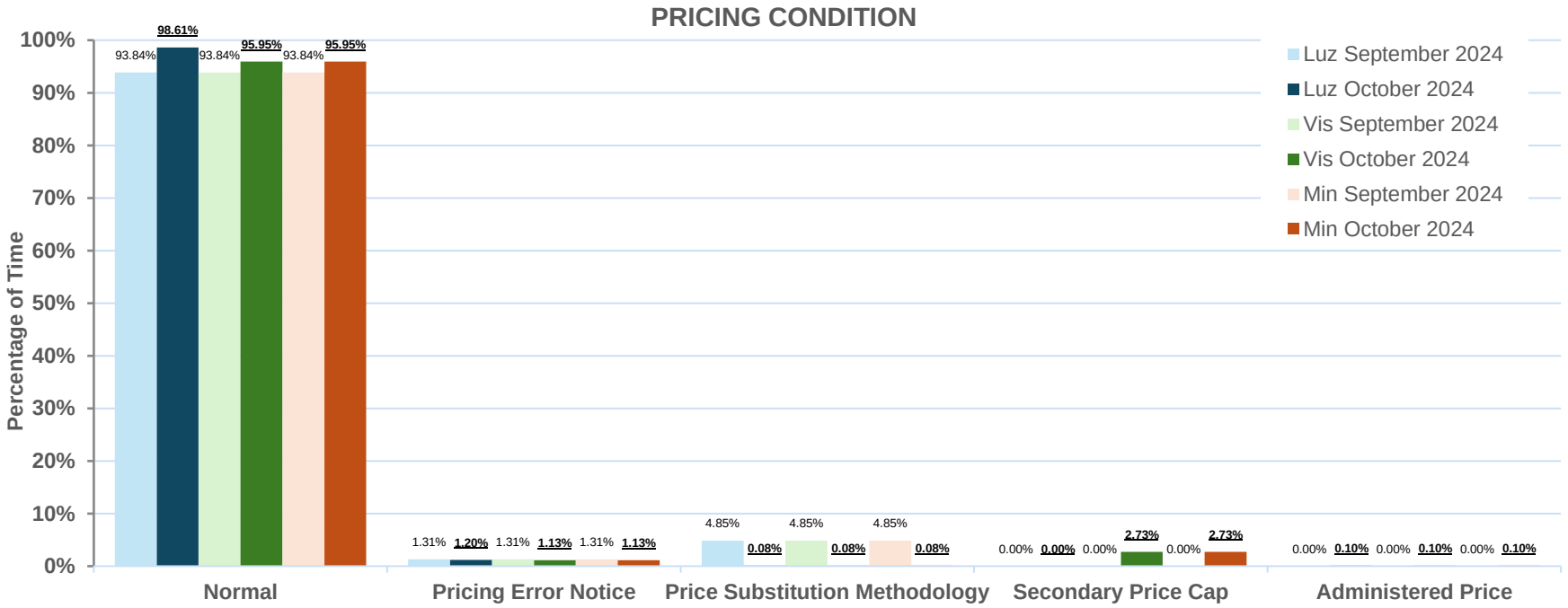




Public

MARKET OUTCOME

MARKET PRICE



Despite instances of high prices during the review period, in a system-wide perspective, more than 92% of trading intervals had prices below PHP 9,000/MWh. Only the Visayas and Mindanao regions have experienced sustained high prices for 72 hours to trigger the secondary price cap (SPC) affecting a total of 236 total trading intervals. Moreover, 235 out of the total 236 trading interval was during the annual preventive maintenance schedule (APMS) of the Luzon-Visayas HVDC interconnection.

Futhermore, comparing the market prices on the type of day, on average, weekdays had higher prices compared to the weekend as the demand for electricity was generally higher during weekdays since regular daily activities such as work, school, and other activities that require electricity are more prevalent. The increasing demand highly affects available supply and the resulting market price outcomes.

In terms of zonal prices, all zones within the region were observed to have prices aligned with the regional average price. The absence of significant transmission congestion likely facilitated the smooth flow of electricity, contributing to price stability and ensuring equitable electricity costs across the region.

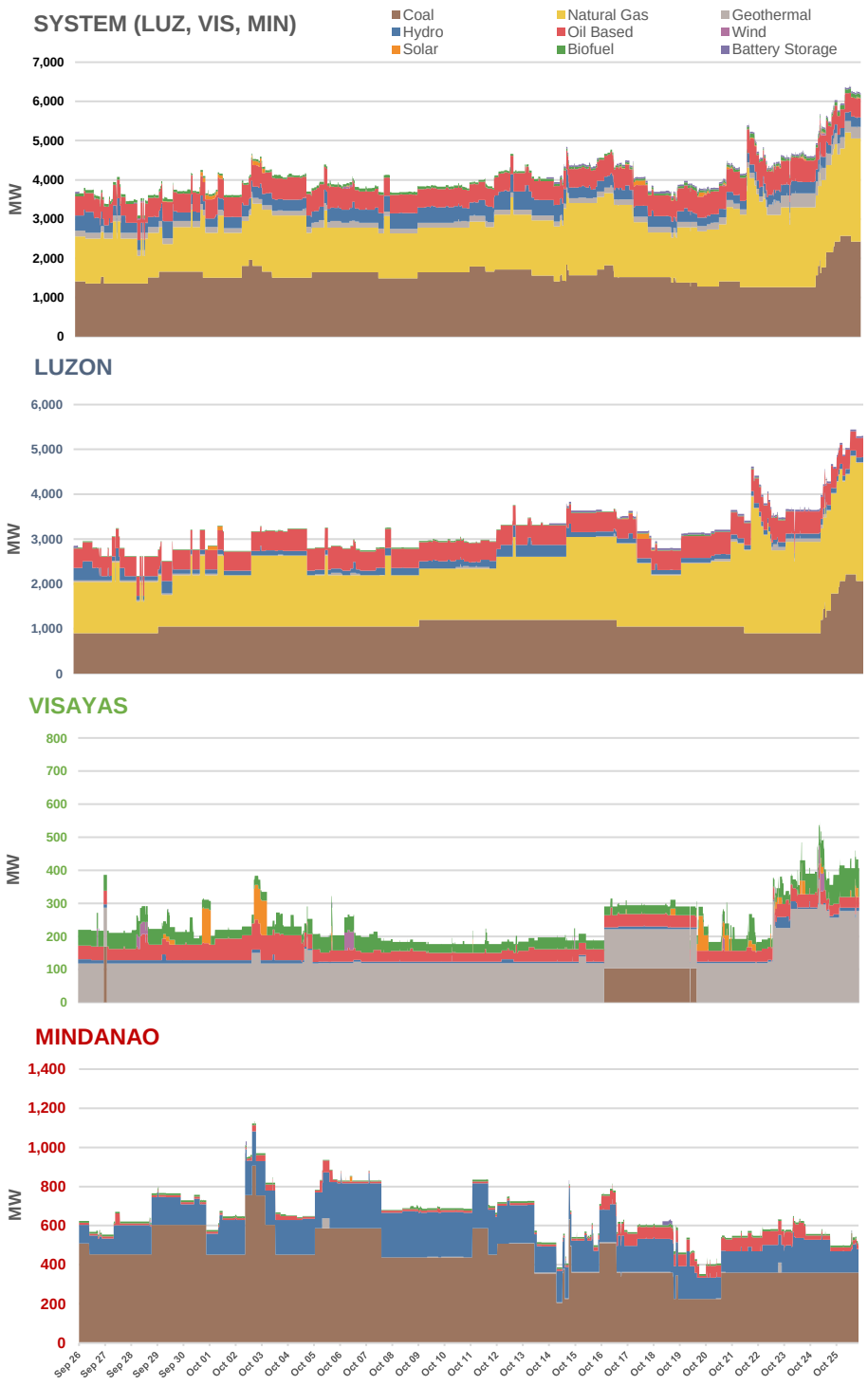
Particulars	Min		Max		Ave	% Change
	(PHP/MWh)	Date and time Interval	(PHP/MWh)	Date and time Interval	(PHP/MWh)	
Load Weighted Average Price (LWAP)						
System	-5,034.02	10/24/2024 3:45	39,754.49	10/21/2024 15:30	4,613.74	15.01%▲
Luzon	-4,995.53	10/24/2024 3:45	45,243.74	10/21/2024 15:35	4,027.32	2.65%▲
Northern Luzon					4,031.60	4.75%▲
Metro Manila					4,104.99	26.64%▼
Southern Luzon					3,991.53	38.30%▼
Visayas	-4,926.16	10/24/2024 3:40	63,935.04	10/14/2024 18:00	6,509.65	34.75%▲
Bohol					7,313.57	29.79%▲
Cebu					6,734.53	21.48%▲
Leyte					6,870.38	18.08%▲
Negros					6,813.10	20.98%▲
Panay					6,973.55	21.84%▲
Mindanao	-5,282.51	10/24/2024 3:45	66,858.58	10/14/2024 18:00	5,641.28	55.00%▲
Lanao					5,160.69	57.17%▲
North Central Mindanao					5,439.76	59.38%▲
North-East Mindanao					6,122.36	58.62%▲
North-West Mindanao					6,151.06	57.87%▲
South-East Mindanao					5,814.38	62.44%▲
South-West Mindanao					5,885.32	61.62%▲

Public

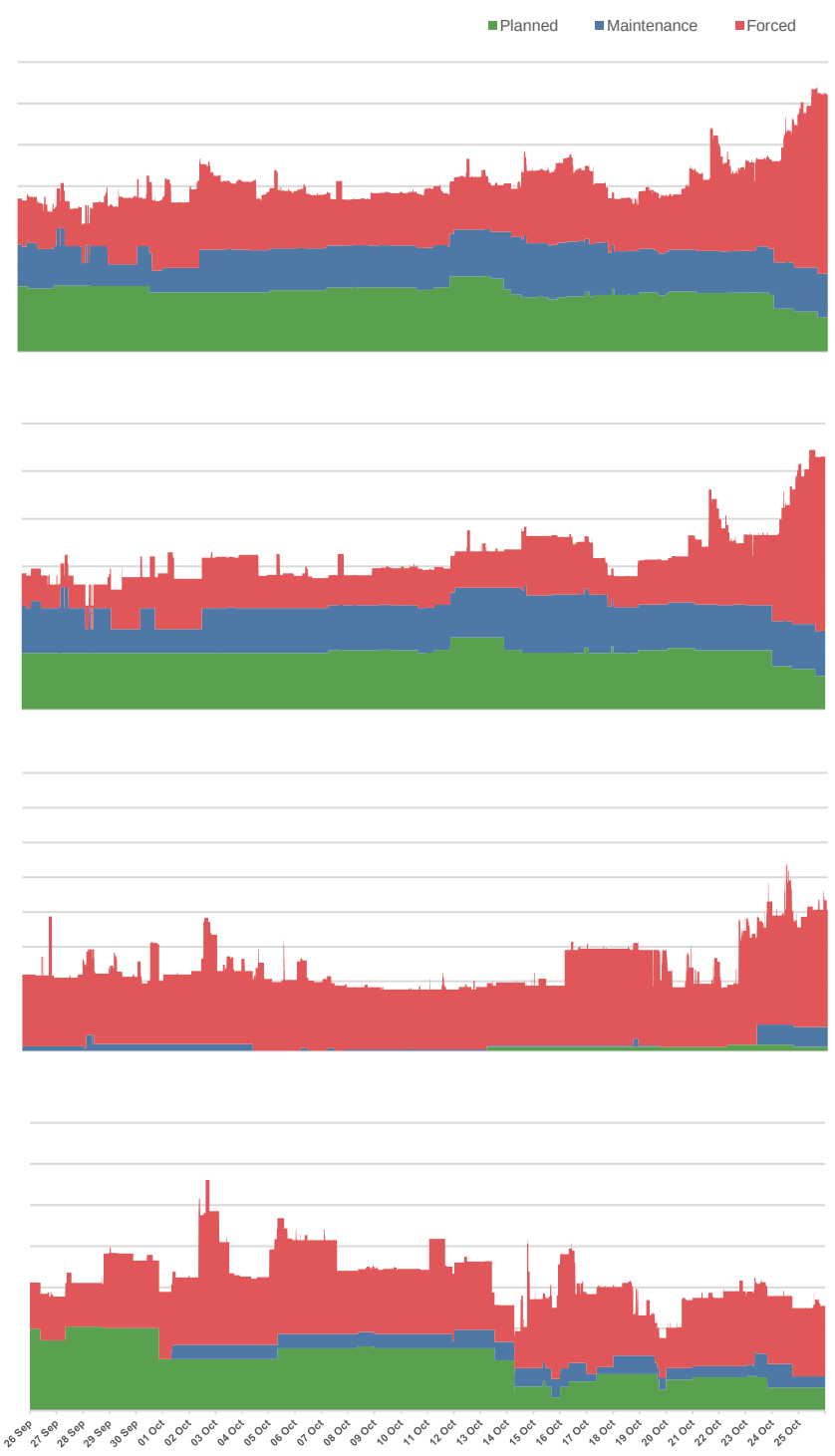
MARKET OUTCOME

CAPACITY ON OUTAGE

PER PLANT TYPE



PER CATEGORY

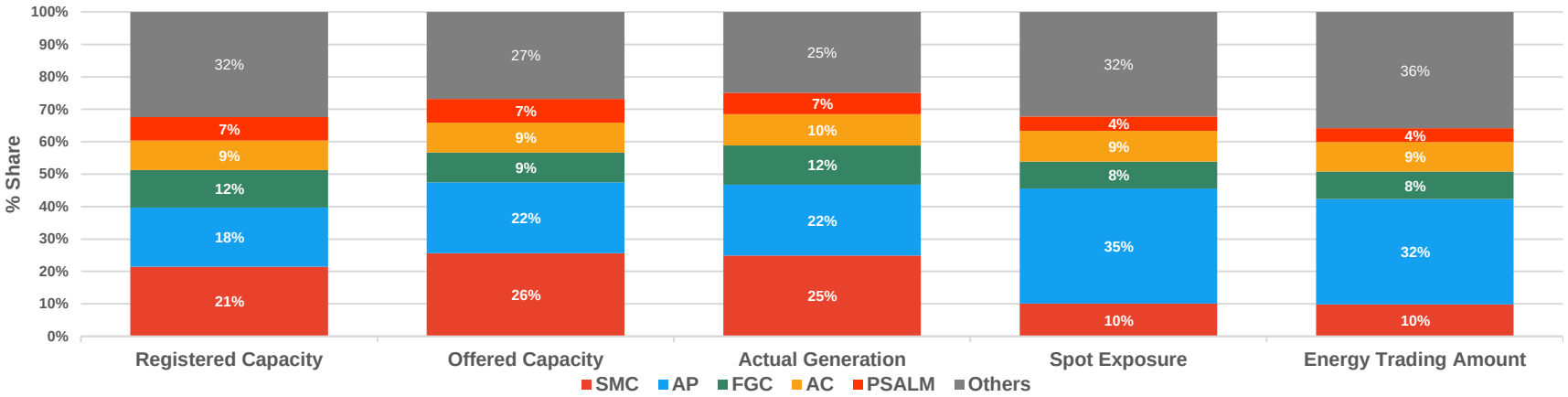


Public

MARKET OUTCOME

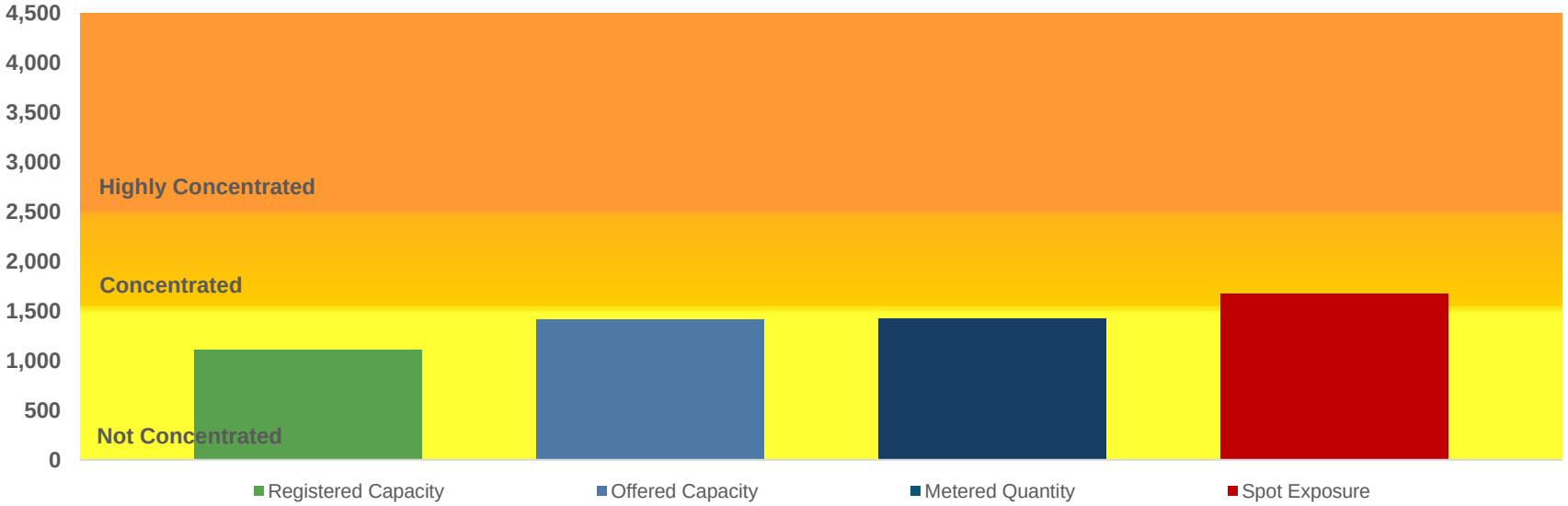
STRUCTURAL COMPETITION

SYSTEM MARKET SHARE



With the slight increase in registered capacity for the October 2024 billing period, San Miguel Corporation (SMC) still had the highest percentage share in the registered and offered capacity. This resulted in SMC to be the group with the highest percentage share in terms of actual generation, suggesting that most of its offered capacity has been dispatched. However, Aboitiz Power (AP) continued to lead in terms of spot exposure in the market which suggests that most of SMC's traded energy was tied to bilateral contracts, with only 16% exposed to the spot market of its total metered quantity, resulting in a 10% of the total spot exposure. The graph also illustrates the disparity between the percentage share per ETA and spot market exposure, due to varying resulting market prices.

Herfindahl–Hirschman Index



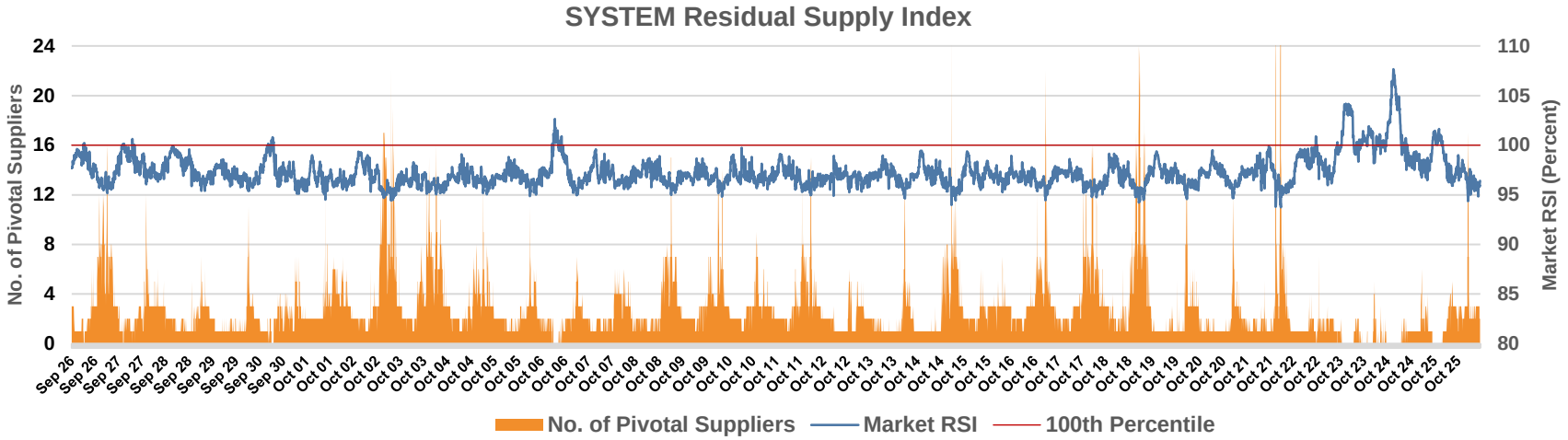
Based on the Herfindahl-Hirschman Index (HHI), the market was not concentrated for registered capacity, offered capacity and the metered quantity for the October 2024 billing period.

Notably, the change in the market concentration for the spot exposure being concetrated for the October billing period was mainly due to the increase in percentage share of AP and the other participants not affiliated with the major groups collectively called as "Others".

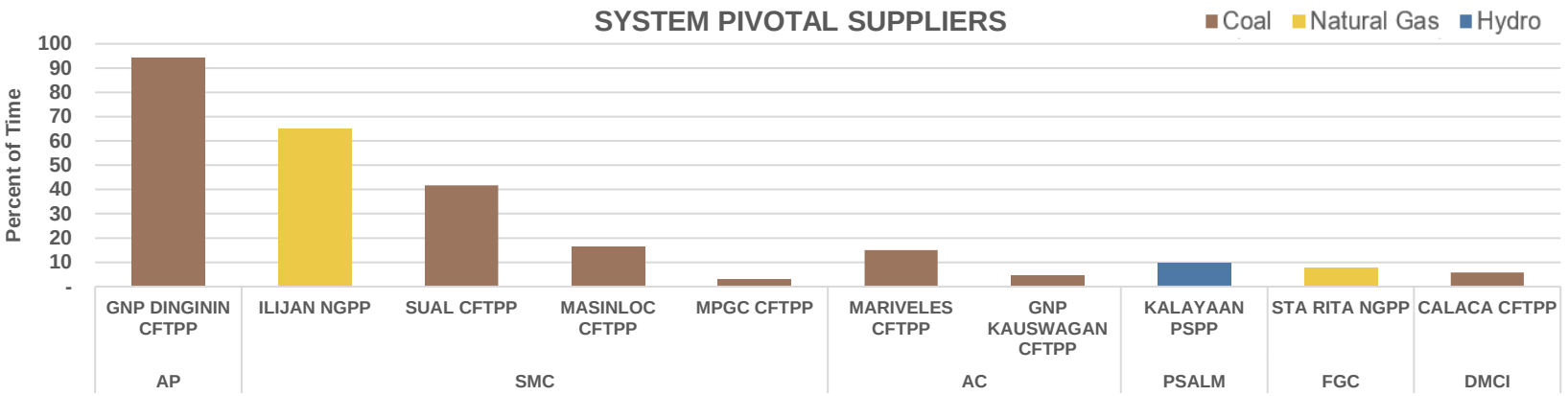
Public

MARKET OUTCOME

STRUCTURAL COMPETITION



Residual Supplier Index (RSI) below 100 indicate a tight supply situation with presence of market power of market participants. For October 2024 billing period, RSIs below 100 was recorded 95% of the time with an average price at PHP 4,761/MWh. Conversely, when RSIs were 100 or above (5% of time), it suggests a more competitive market with ample supply, with average price being significantly lower at PHP 1,183/MWh. With the RSI below 100 the computed load weighted average price (LWAP) increased by 15% compared to the previous month.



The GNP Dinginin Coal-Fired Thermal Power Plant (CFTPP) was a pivotal plant for October billing period with a total of 8,145 trading intervals or 94% of the time for the whole billing period of October. A pivotal plant is one whose capacity is required to meet the demand for a trading interval. Without the contribution of such a supplier, the grid may experience shortages or instability. It is worthy to note that the top pivotal supplier is likewise the top market participant group in terms of spot exposure.

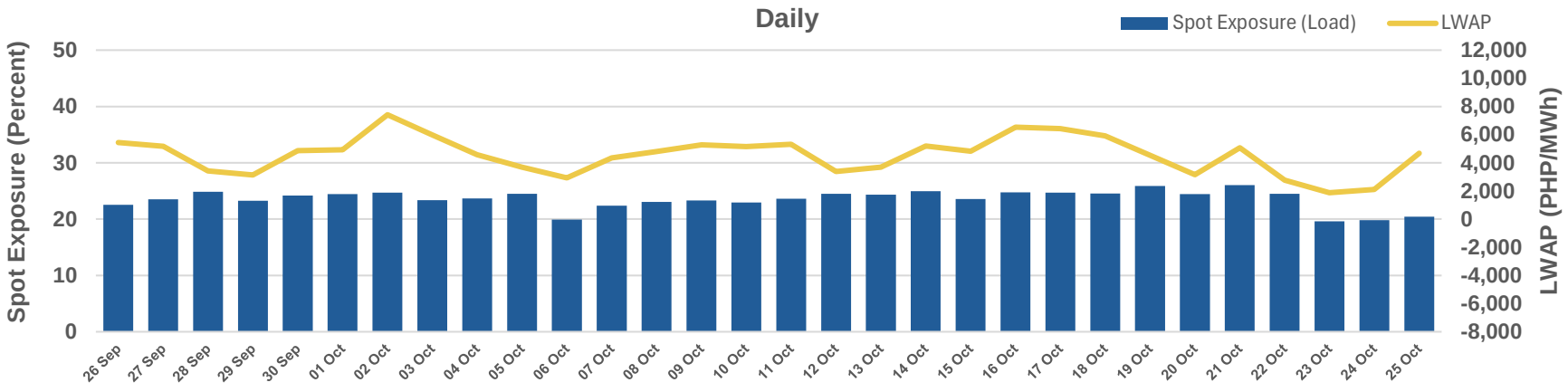
Meanwhile, Ilijan Natural Gas Power Plant (NGPP) which was the top pivotal supplier for the two previous months came second for a total 5,603 trading intervals for the October 2024 billing period or 64.85% of the trading intervals. While Ilijan's role as a pivotal plant had declined a little compared to the previous month, its high level of participation remained critical for the grid stability. Similar to GNP Dinginin, Ilijan is under the top market participant group, SMC.

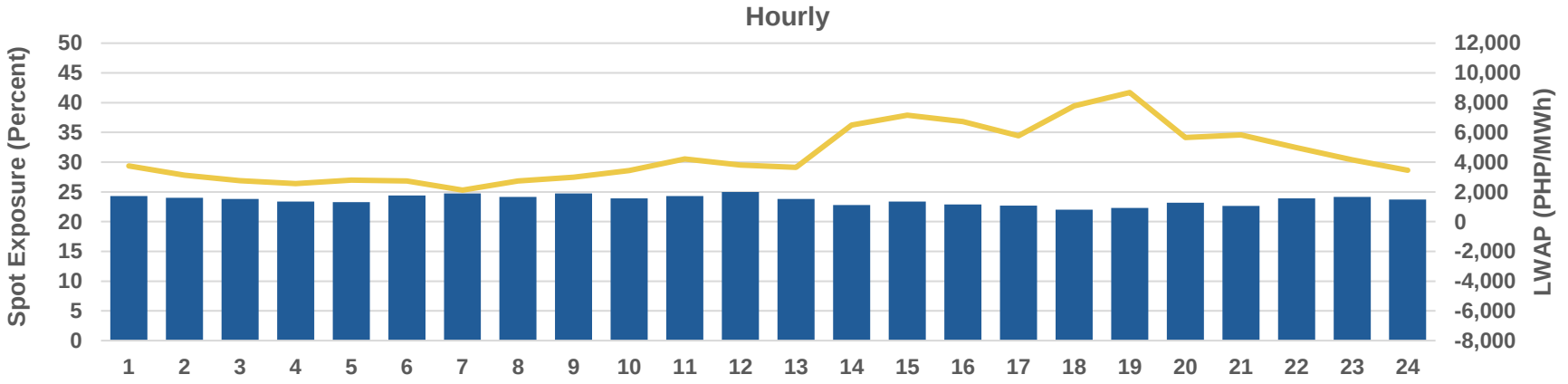
The strong presence of both plants as critical suppliers emphasizes their role in preventing shortfalls and maintaining grid reliability, thus showing their influence in the market. Additionally, it is important to highlight that seven out of ten pivotal suppliers were coal-fired power plants, and two plants were natural gas power plants and one was hydro plant.

Public

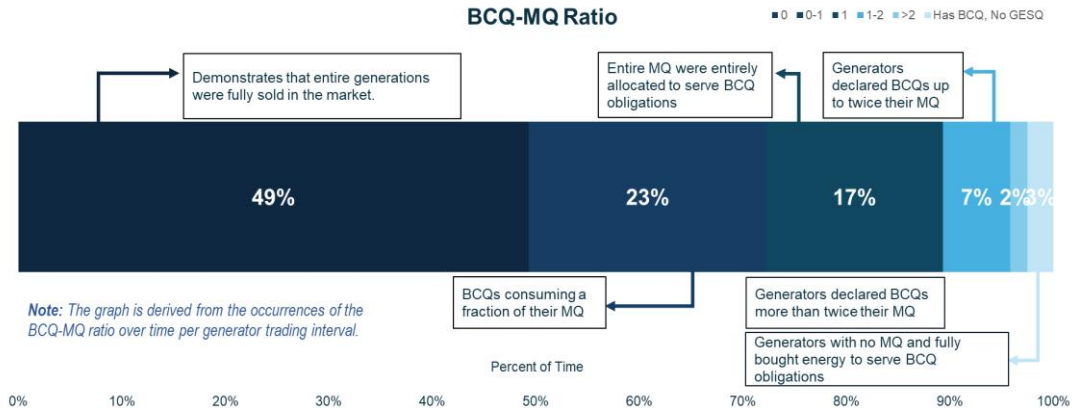
MARKET OUTCOME

SPOT EXPOSURE





The average spot quantities of load participants for the October 2024 billing period was noted at 23.54%, with an accompanying average price of PHP 4,614/MWh. Notably, the spot exposure exhibited variations based on the type of day, with weekdays recording an average of 21.83% at an average price of PHP4,221/MWh while weekends/holidays registered an average of 21.27% at an average price of PHP 3,464/MWh.



For the October 2024 billing period, majority of the metered quantities were still covered by the BCQ declarations of generator-trading participants in the market.

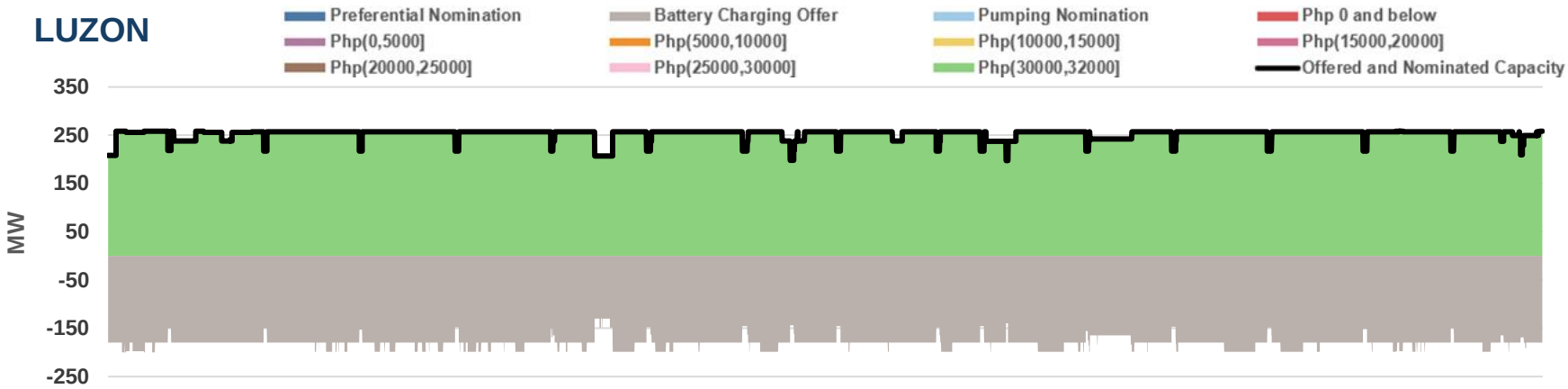
Public

MARKET OUTCOME

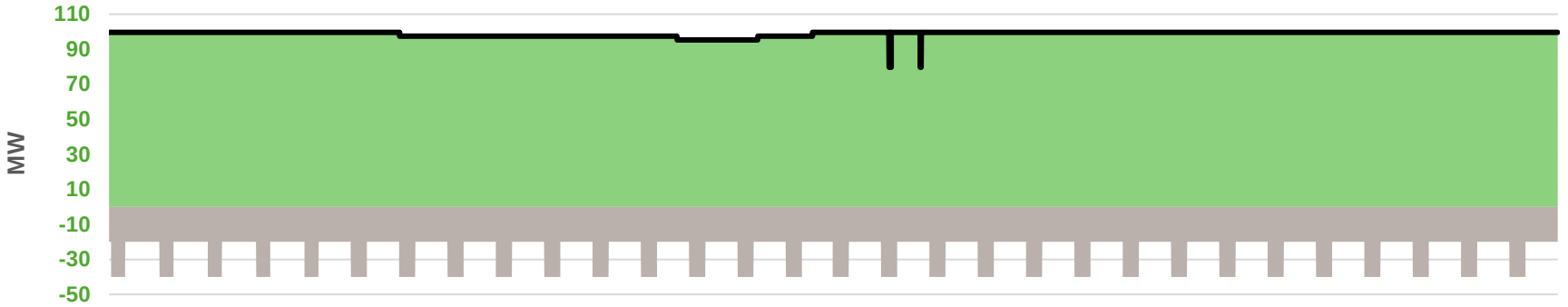
OFFER PATTERN ANALYSIS

BATTERY

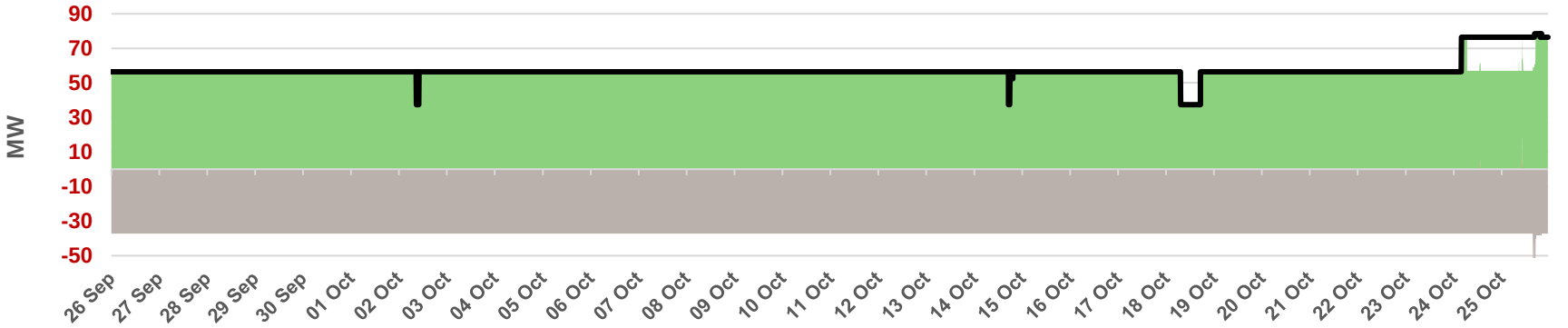
LUZON



VISAYAS



MINDANAO



Battery energy storage system (BESS) offers across all three regions were concentrated in the PHP (30,000, 32,000]/MWh price range during the period under review. High offer likely reflecting the high costs associated with energy storage technology and operation which may include the costs expenses for charging. This highlights the strategic role of battery systems in providing ancillary services or addressing peak demand or during periods when fast-response resources are highly valued and required by the grid.

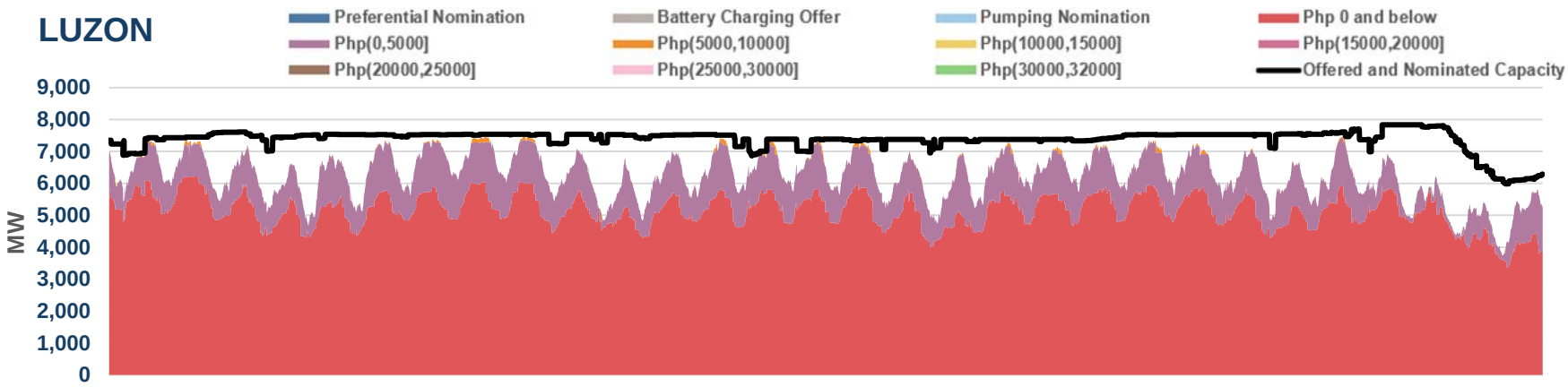
Public

MARKET OUTCOME

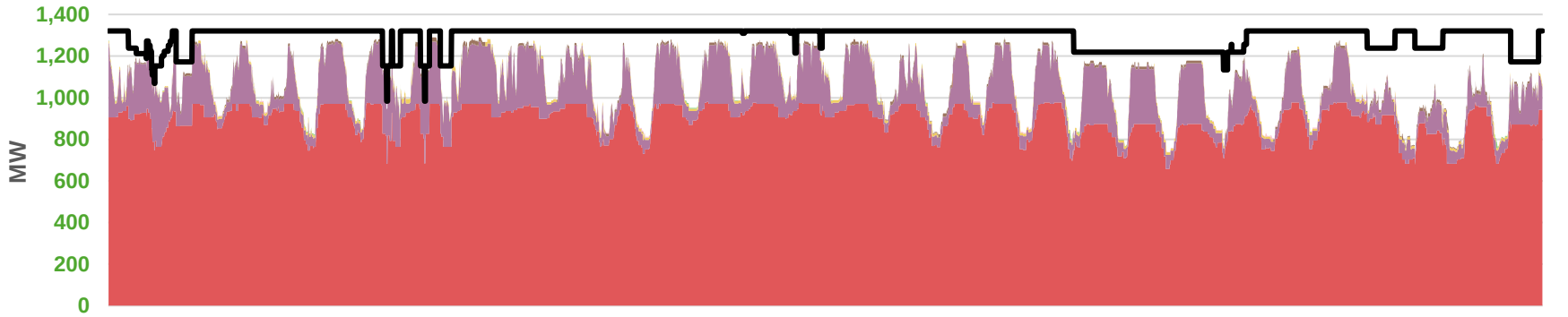
OFFER PATTERN ANALYSIS

COAL

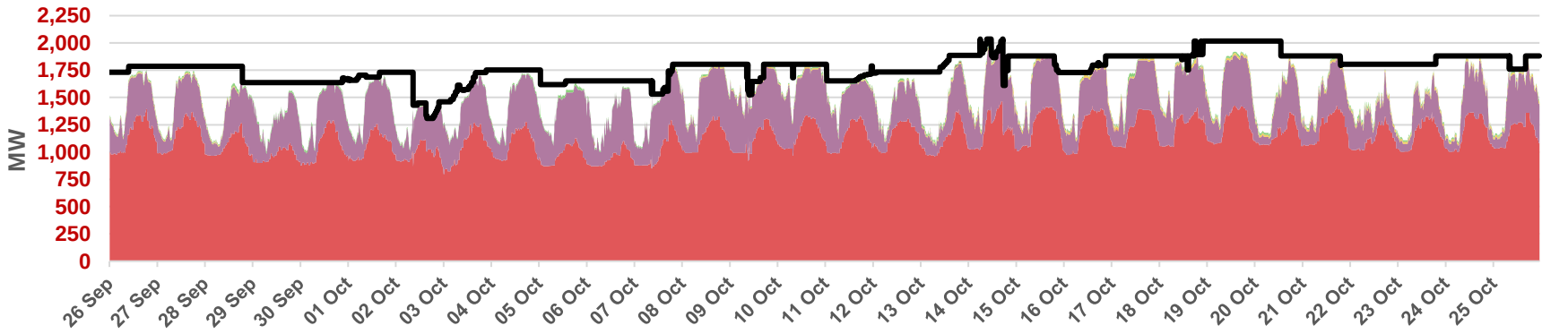
LUZON



VISAYAS



MINDANAO



Coal power plants offers across all three regions were predominantly in the PHP 0 and below price range during the period under review. This offering behavior suggest that a substantial portion of their generation capacity committed to long-term bilateral contracts. As baseload plants, coal power facilities are intended to provide consistent and reliable electricity supply.

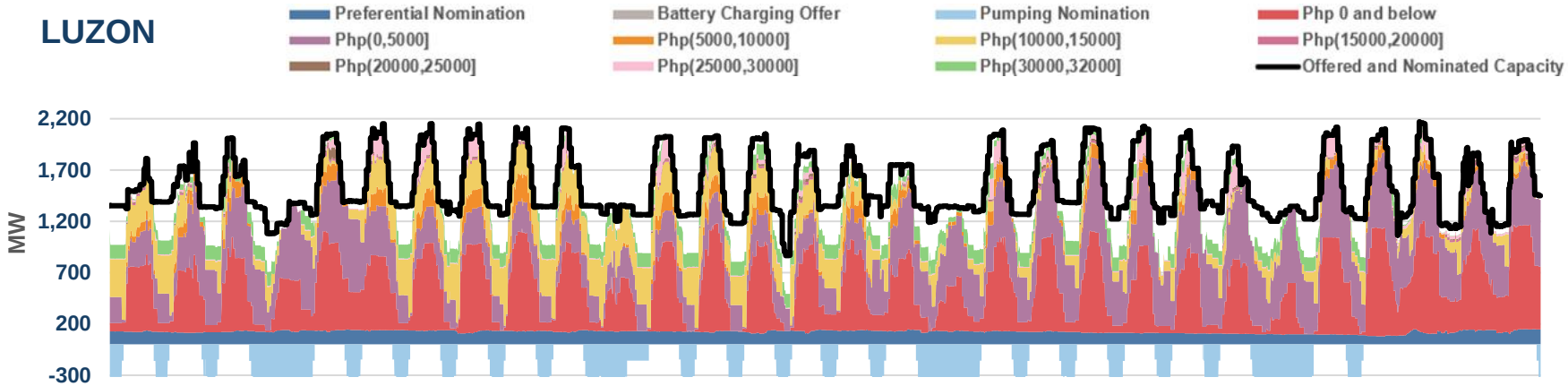
Public

MARKET OUTCOME

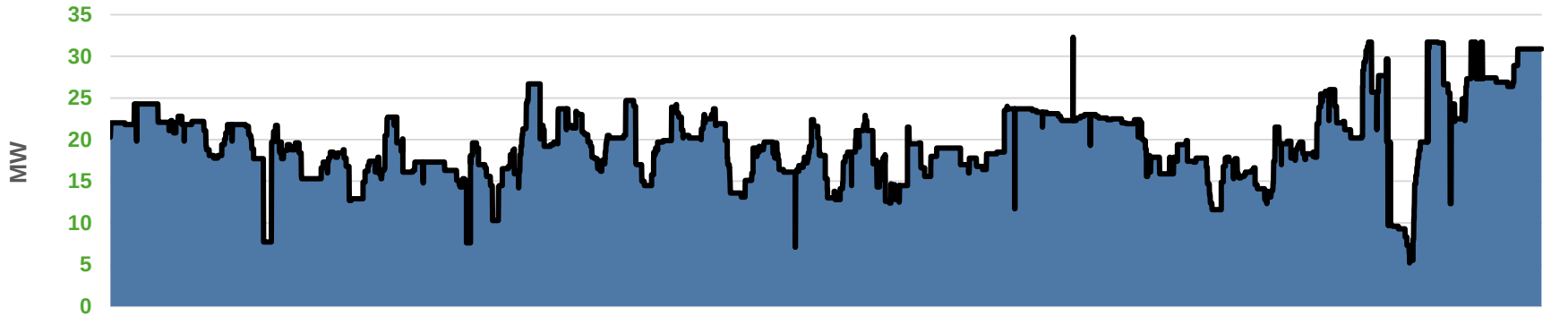
OFFER PATTERN ANALYSIS

HYDRO

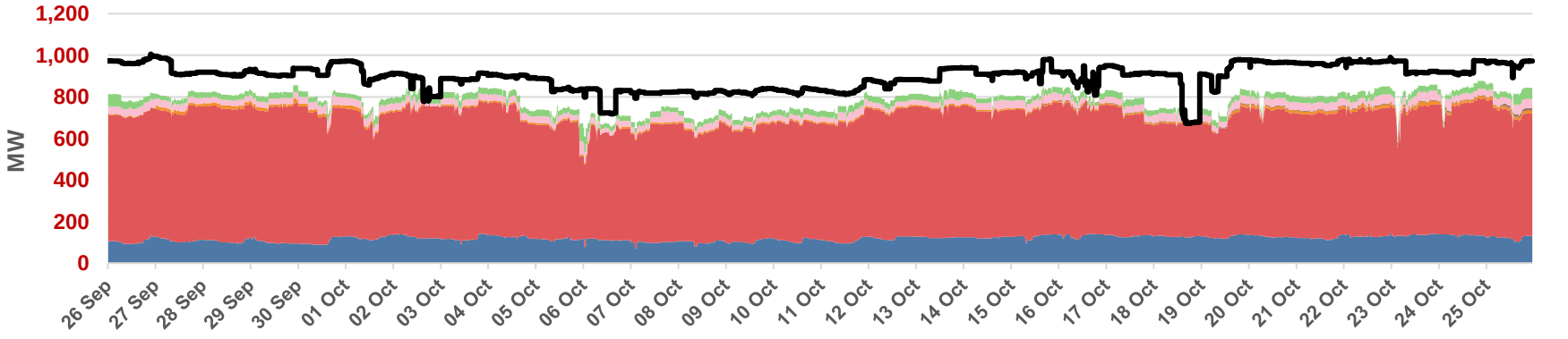
LUZON



VISAYAS



MINDANAO



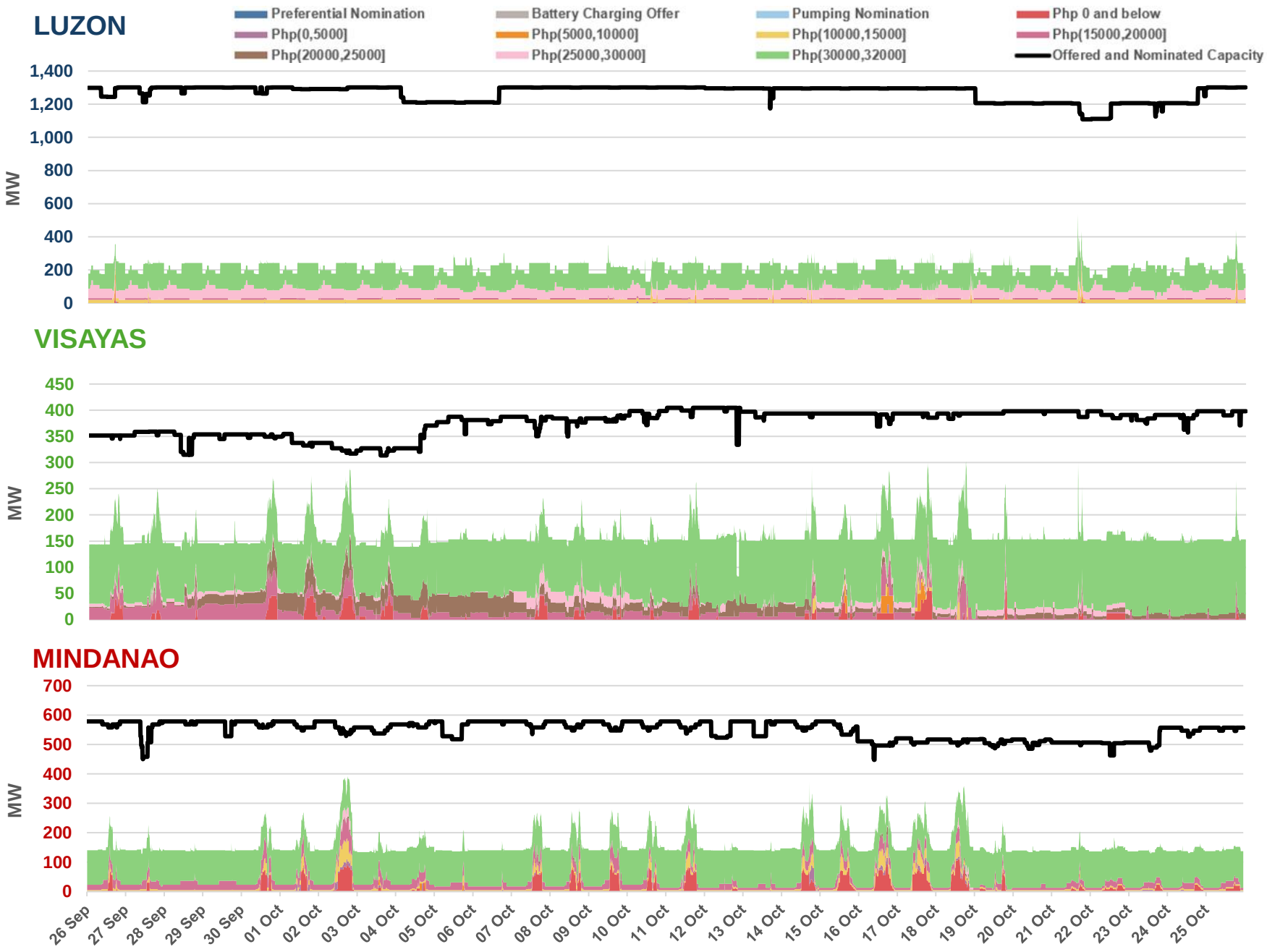
Hydro power plants exhibited a diverse range of offer behaviors across the three regions during the period under review, reflecting their operational flexibility and the varying market dynamics in each region: Luzon hydro power plants displayed a broader variation in their offers; Visayas hydro power plants predominantly positioned their offers in the preferential price range; and Mindanao hydro power plants offers were concentrated in the PHP 0 and below price range.

Public

MARKET OUTCOME

OFFER PATTERN ANALYSIS

OIL

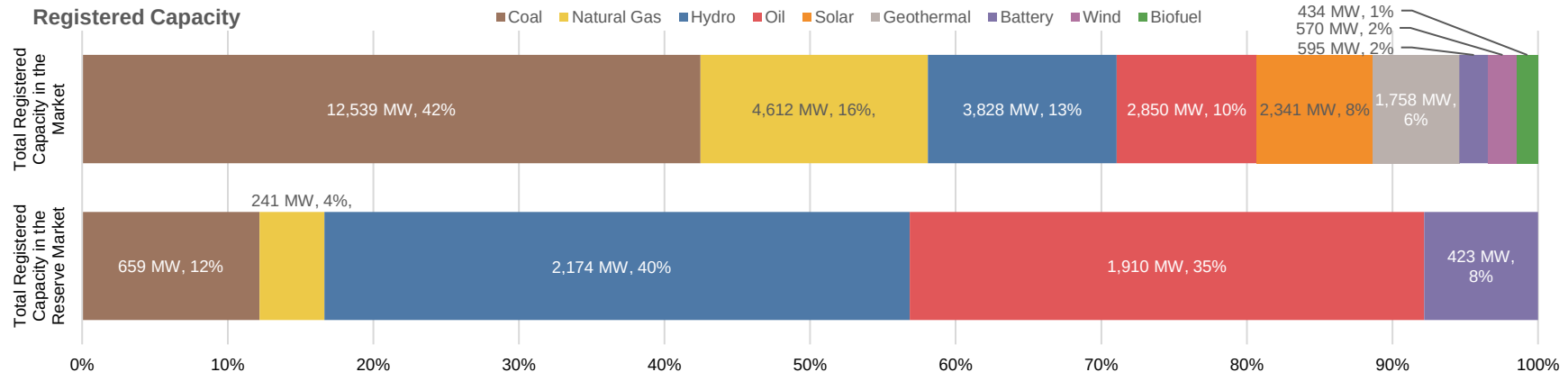


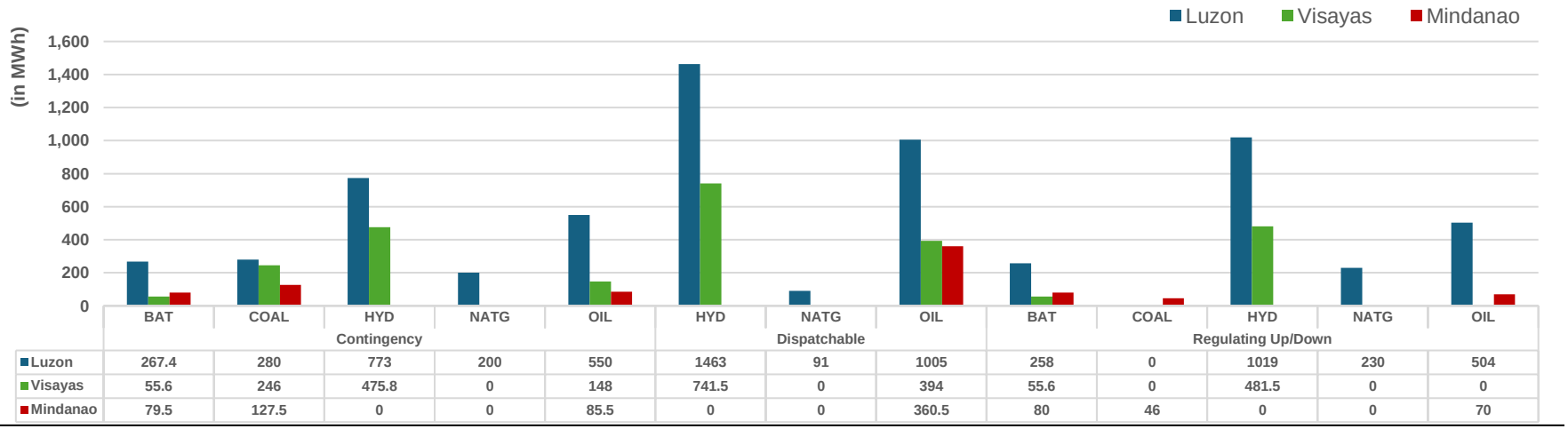
Oil-based power plants offers across all three regions were predominantly in the high price range during the period under review. Similar to battery, pricing strategy aligns with the role these plants play in the energy market, particularly in addressing specific operational and market needs such anciliiary service and peak demand response. Moreover, lower price range offer suggest that they avoid being shutting down their units, a decision likely driven by the higher costs and operational challenges of restarting after a shutdown.

Public

MARKET OUTCOME

RESERVE MARKET





	Contingency					Dispatchable			Regulating Up/Down				
	BAT	COAL	HYD	NATG	OIL	HYD	NATG	OIL	BAT	COAL	HYD	NATG	OIL
Luzon	267.4	280	773	200	550	1463	91	1005	258	0	1019	230	504
Visayas	55.6	246	475.8	0	148	741.5	0	394	55.6	0	481.5	0	0
Mindanao	79.5	127.5	0	0	85.5	0	0	360.5	80	46	0	0	70

Of the total registered capacity of 29,527.1 MW, approximately 18% (5,405 MW) is allocated to the both wholesale electricity market and for the reserve market. This capacity is primarily sourced from coal, natural gas, hydro, oil, and battery power plants, due to specific reserve market requirements.

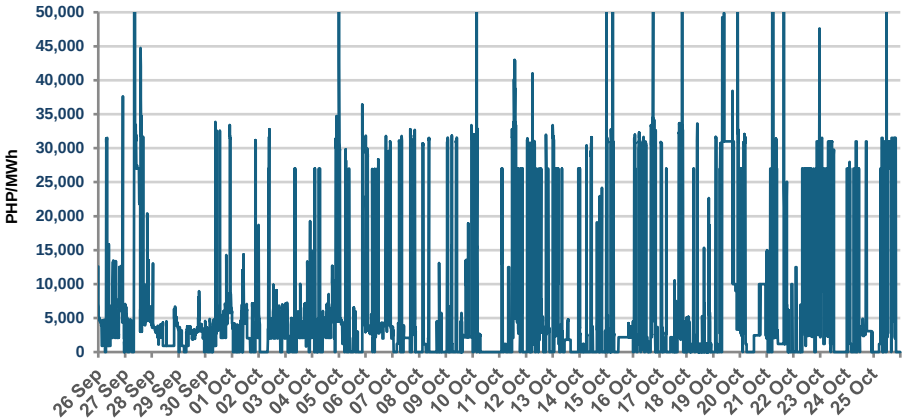
Particulars	Min		Max		Ave	% Change
	(in PHP/MW)	Date and time Interval	(in PHP/MW)	Date and time Interval	(in PHP/MW)	
Regulating Up						
Luzon	0.00	09/26/2024 6:05	191,975.46	10/10/2024 3:40	6,783.35	49.39%▲
Visayas	0.00	10/12/2024 19:25	112,600.19	10/02/2024 18:00	22,162.59	20.78%▼
Mindanao	0.00	09/29/2024 0:05	208,262.45	10/19/2024 10:00	6,695.83	252.00%▲
Regulating Down						
Luzon	0.00	09/27/2024 3:05	160,903.93	10/10/2024 3:40	10,996.93	254.54%▲
Visayas	0.00	10/12/2024 19:25	57,000.01	10/04/2024 8:05	40,035.24	15.46%▼
Mindanao	0.00	09/29/2024 0:05	173,854.49	10/19/2024 10:00	5,414.46	321.39%▲
Contigency						
Luzon	280.00	10/24/2024 2:05	104,116.04	10/21/2024 15:35	2,942.37	10.26%▼
Visayas	2,410.00	09/28/2024 3:05	116,518.27	10/02/2024 16:30	8,370.24	15.99%▲
Mindanao	1.00	10/18/2024 3:35	119,929.27	10/02/2024 18:00	3,782.75	129.31%▲
Dispatchable						
Luzon	30.08	10/03/2024 15:20	77,348.52	10/21/2024 15:35	2,096.38	11.85%▼
Visayas	50.06	10/16/2024 2:15	99,196.25	10/02/2024 16:50	5,006.02	22.93%▼
Mindanao	0.00	09/26/2024 0:05	96,271.14	10/02/2024 16:00	829.95	512.58%▲

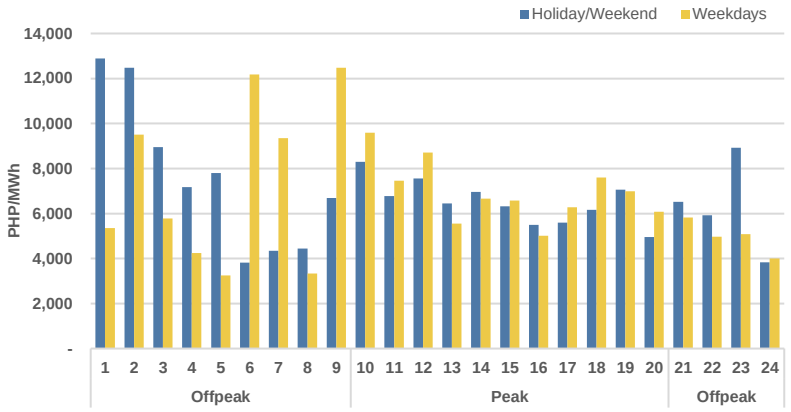
Public

MARKET OUTCOME
RESERVE MARKET

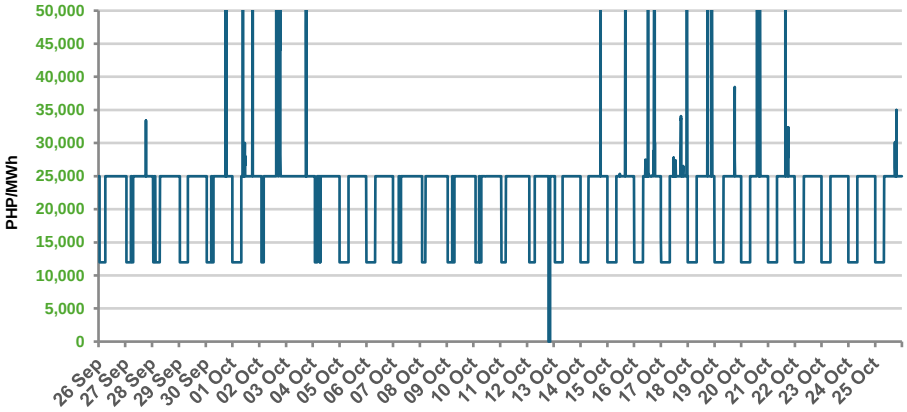
REGULATING UP

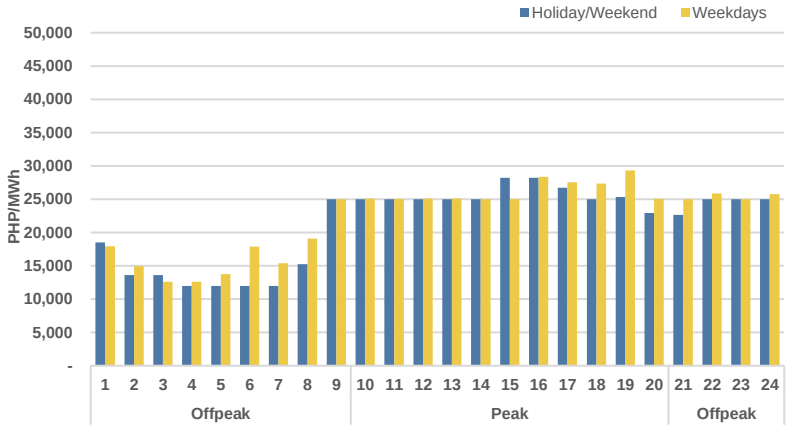
LUZON



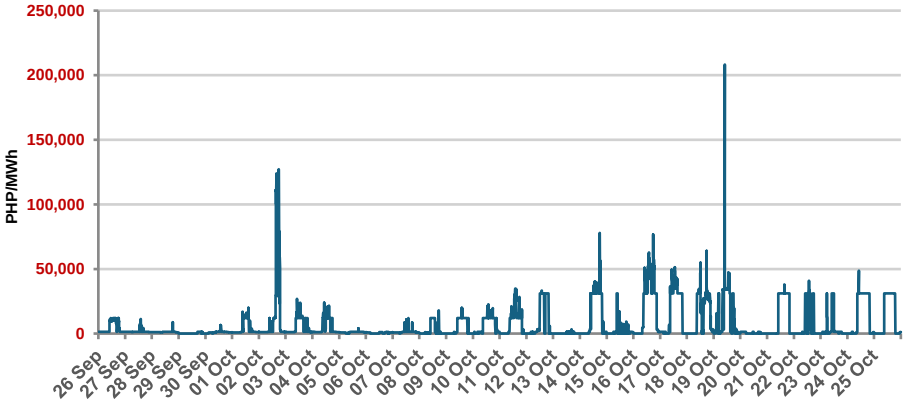


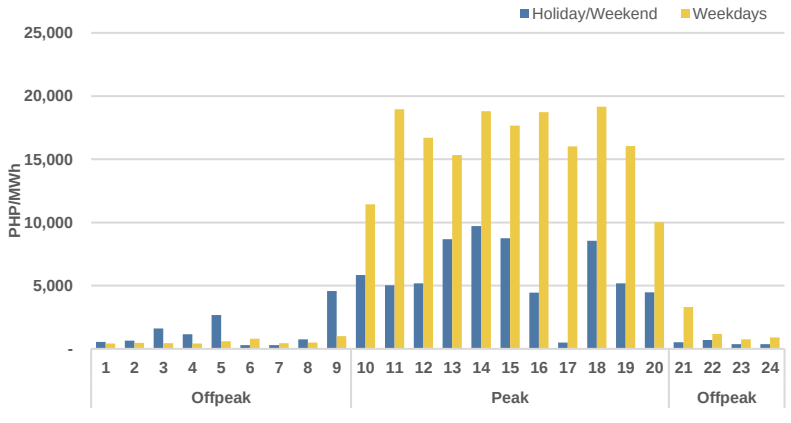
VISAYAS





MINDANAO





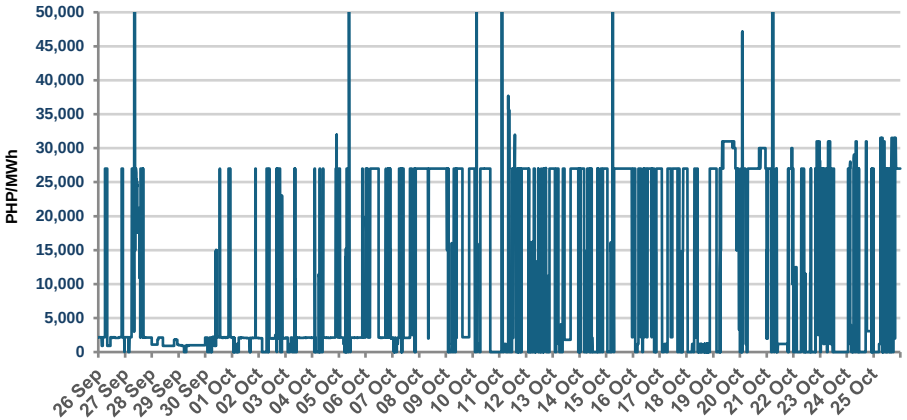
Per ERC NOR - Case No. 2023-002 RC - PDM Section 2.2.1.4 (C) "When the resulting reserve price exceeds the reserve offer cap, then the final reserve price shall be capped at thet reserver offer cap"

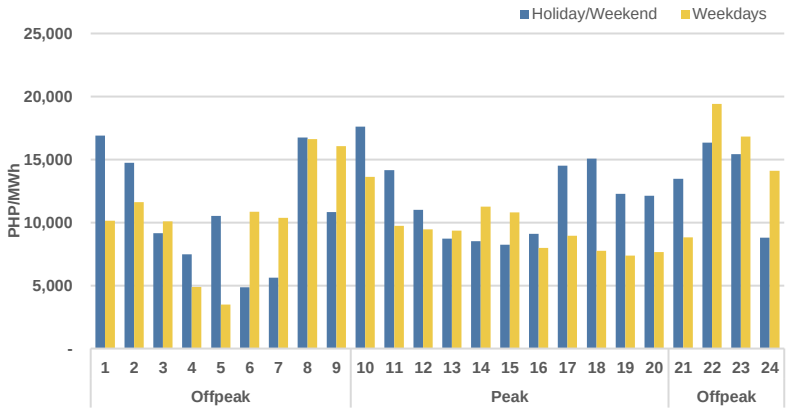
Public

MARKET OUTCOME
RESERVE MARKET

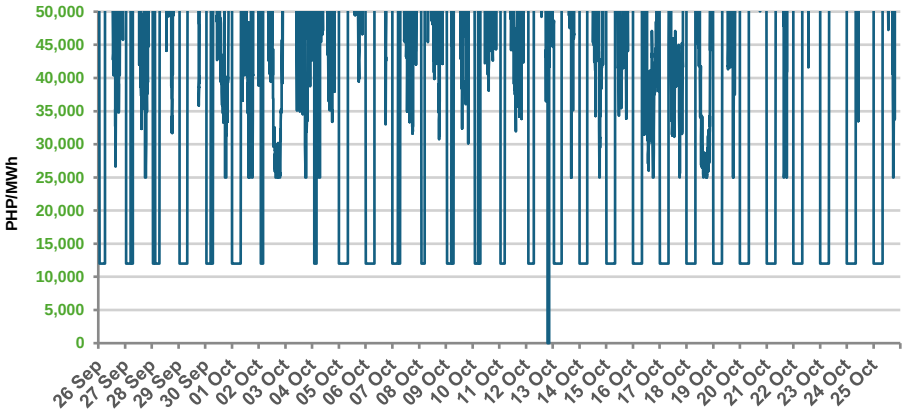
REGULATING DOWN

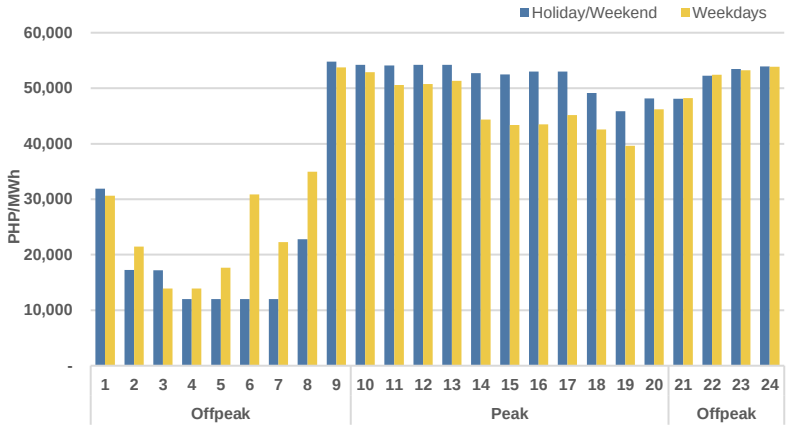
LUZON



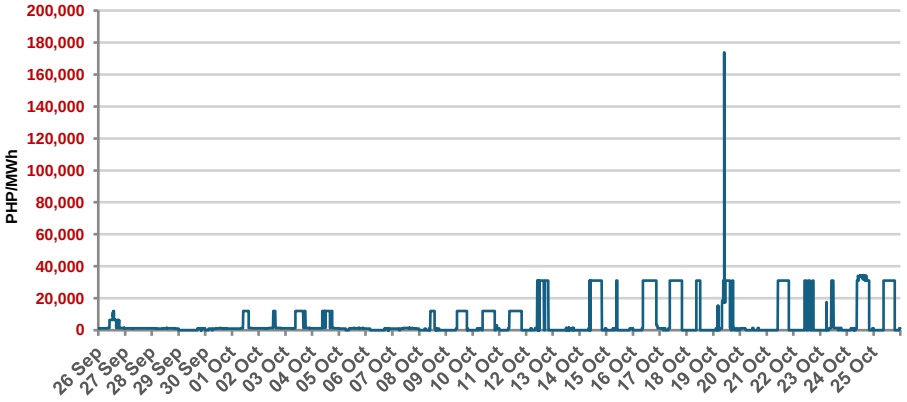


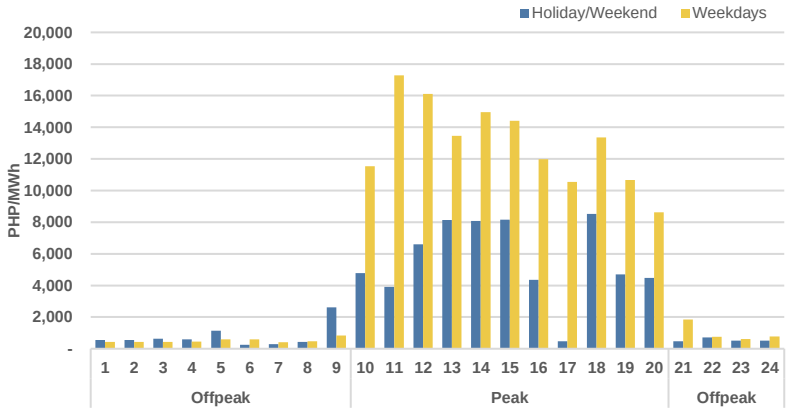
VISAYAS





MINDANAO





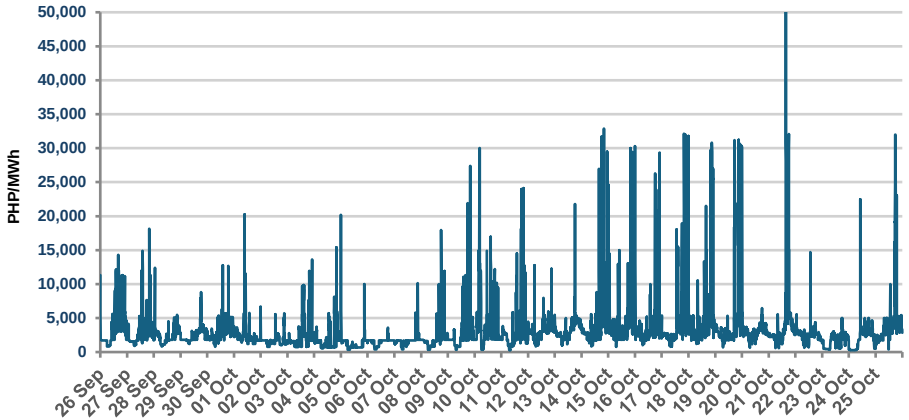
Per ERC NOR - Case No. 2023-002 RC - PDM Section 2.2.1.4 (C) "When the resulting reserve price exceeds the reserve offer cap, then the final reserve price shall be capped at thet reserver offer cap"

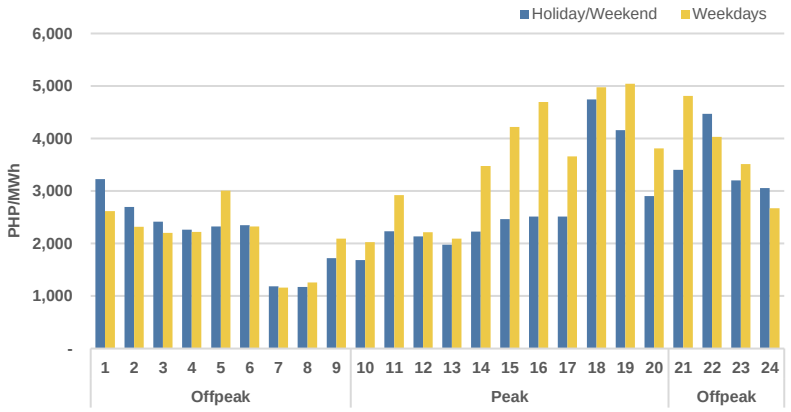
Public

MARKET OUTCOME
RESERVE MARKET

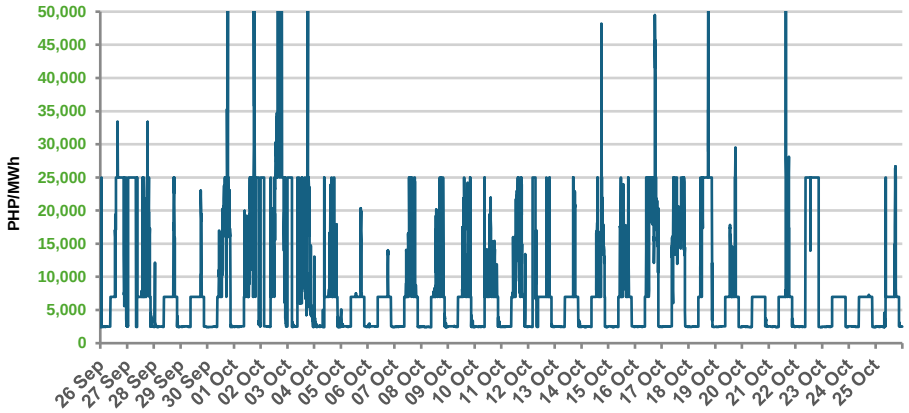
CONTINGENCY

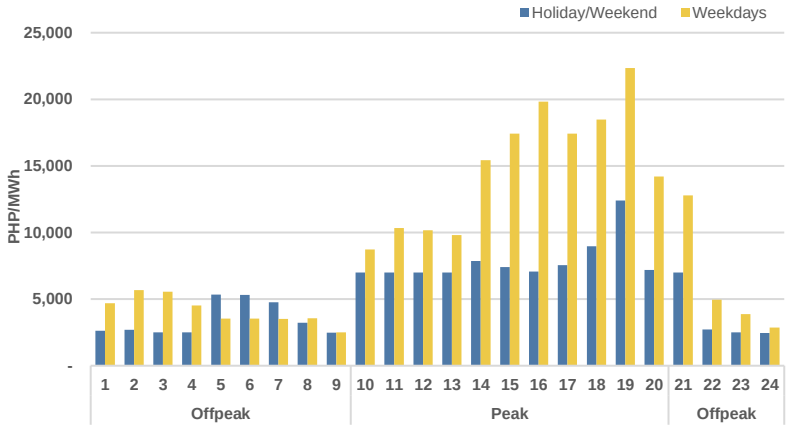
LUZON



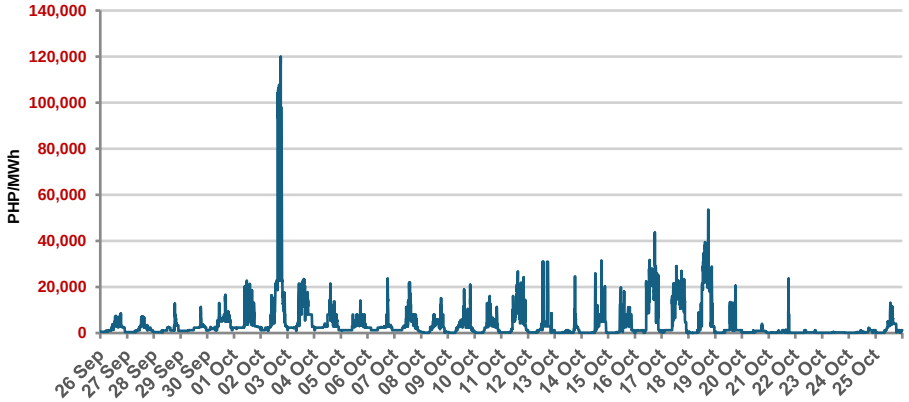


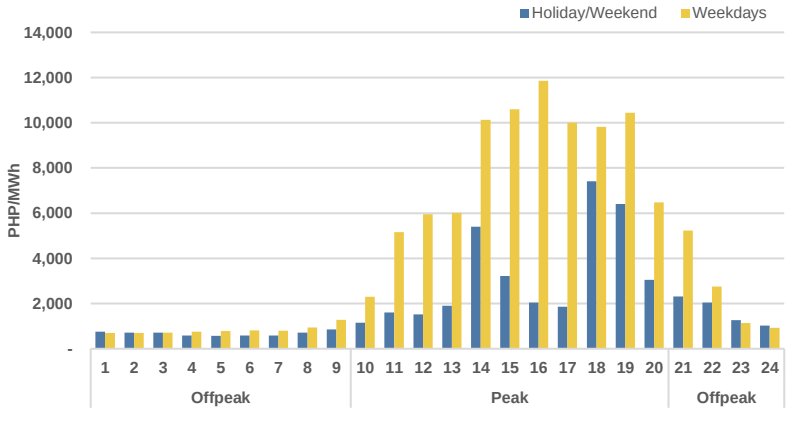
VISAYAS





MINDANAO





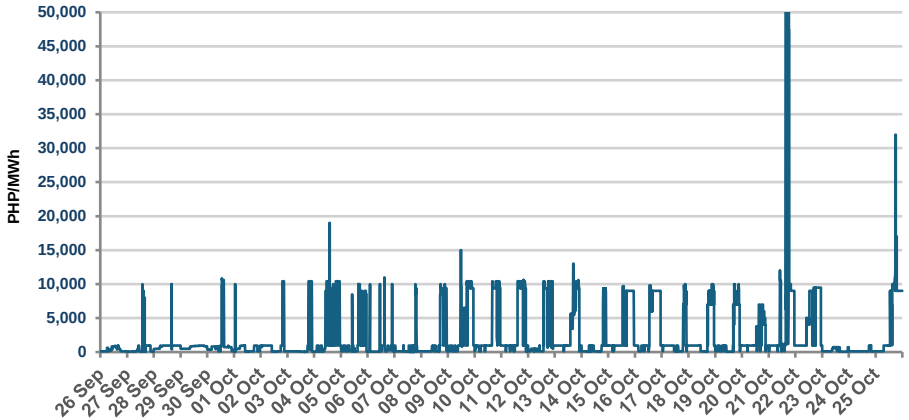
Per ERC NOR - Case No. 2023-002 RC - PDM Section 2.2.1.4 (C) "When the resulting reserve price exceeds the reserve offer cap, then the final reserve price shall be capped at thet reserver offer cap"

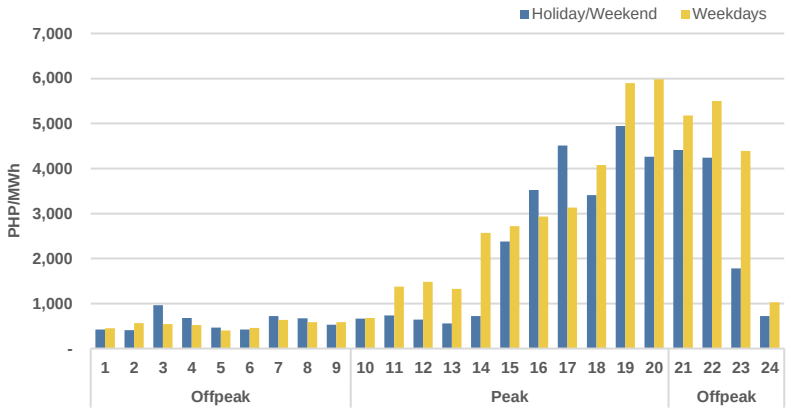
Public

MARKET OUTCOME
RESERVE MARKET

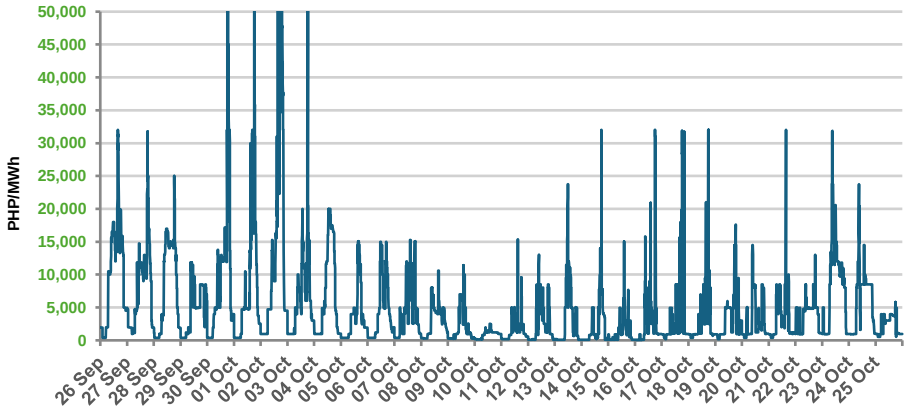
DISPATCHABLE

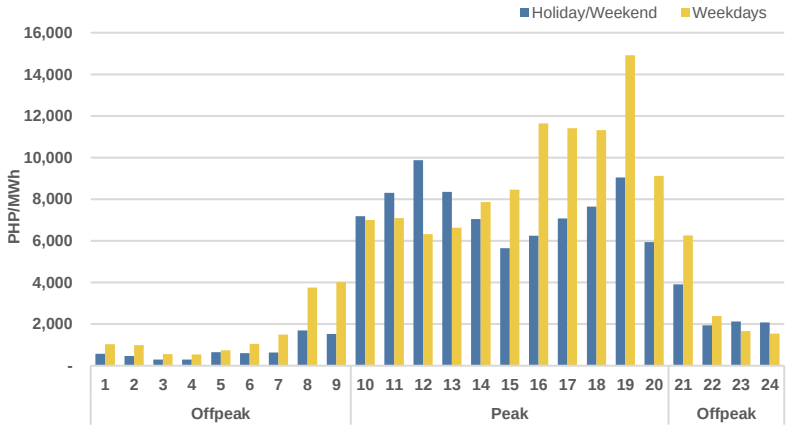
LUZON



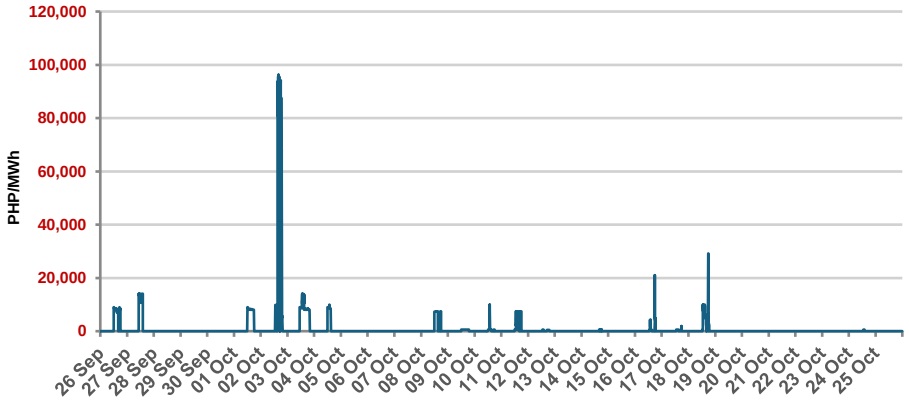


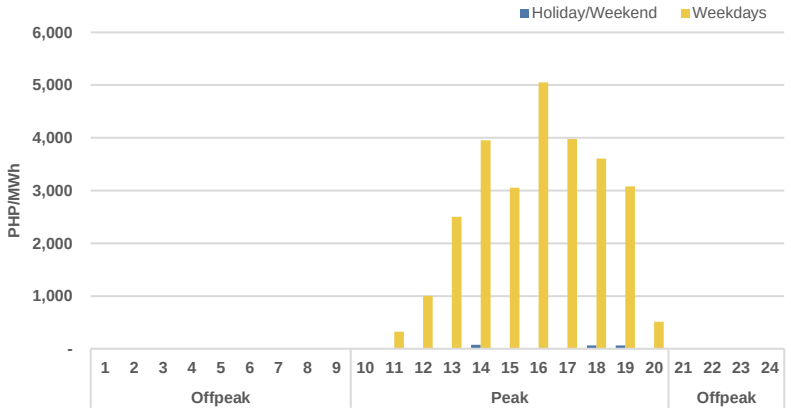
VISAYAS





MINDANAO



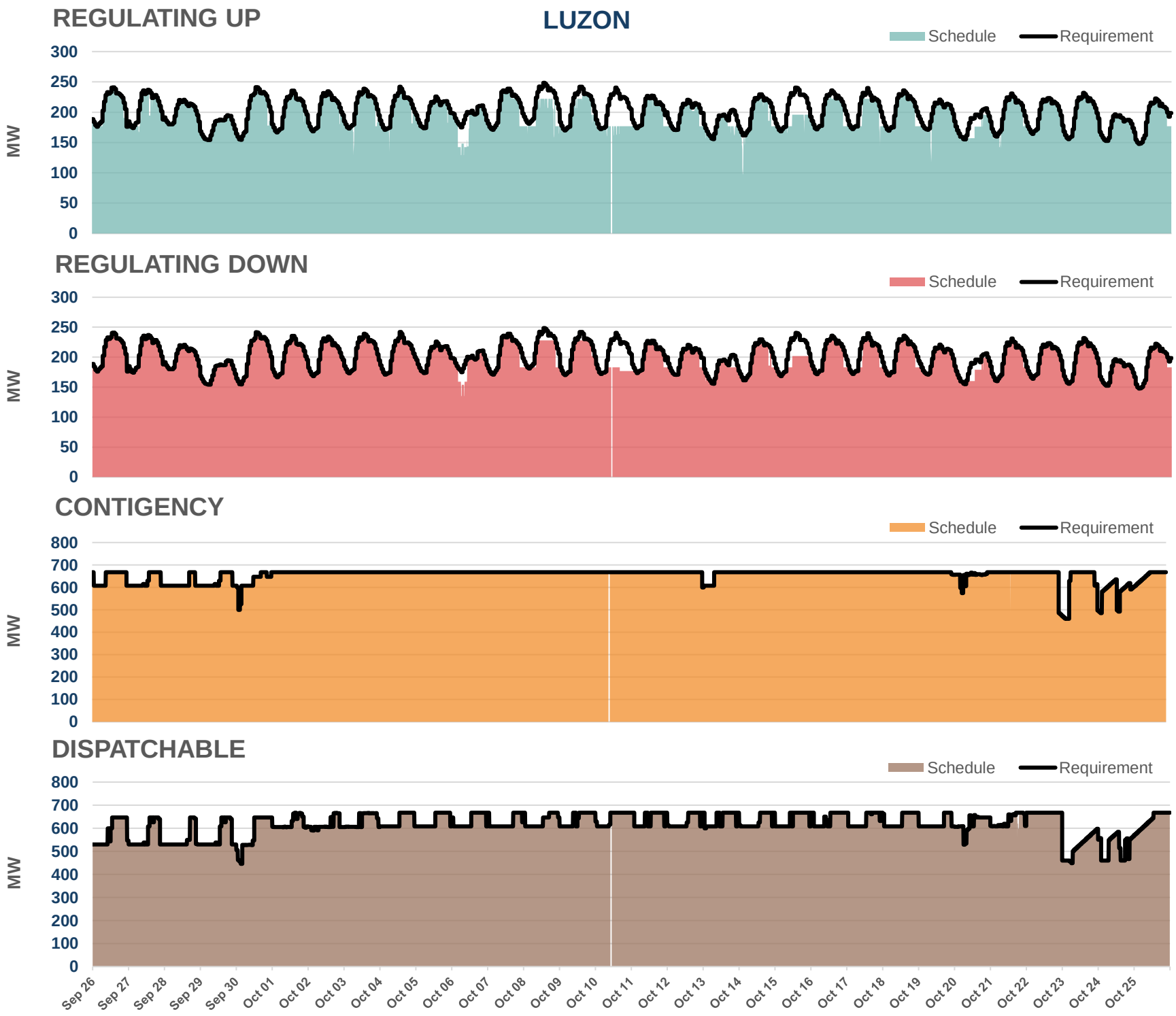


Per ERC NOR - Case No. 2023-002 RC - PDM Section 2.2.1.4 (C) "When the resulting reserve price exceeds the reserve offer cap, then the final reserve price shall be capped at thet reserver offer cap"

Public

MARKET OUTCOME

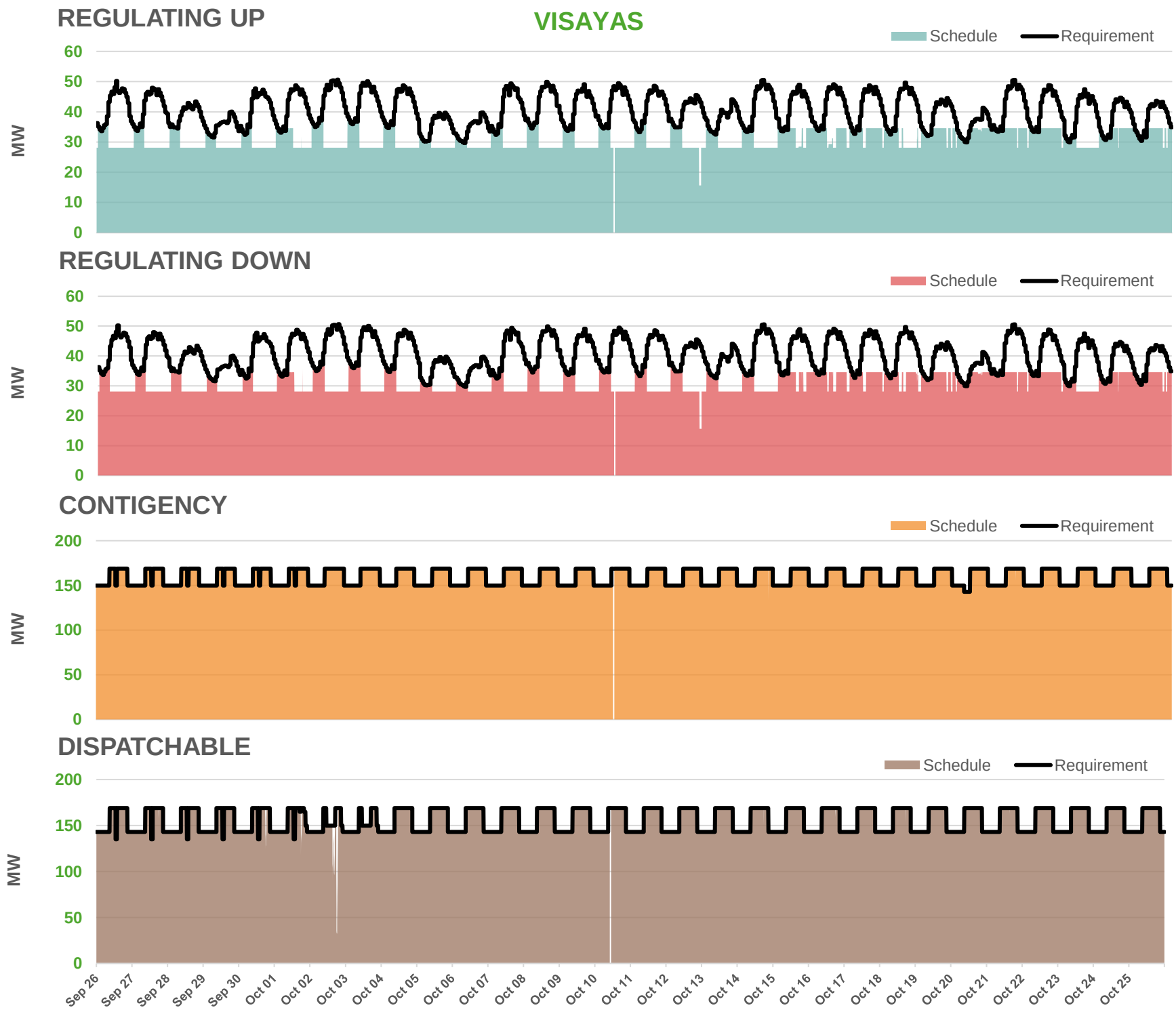
RESERVE MARKET



Public

MARKET OUTCOME

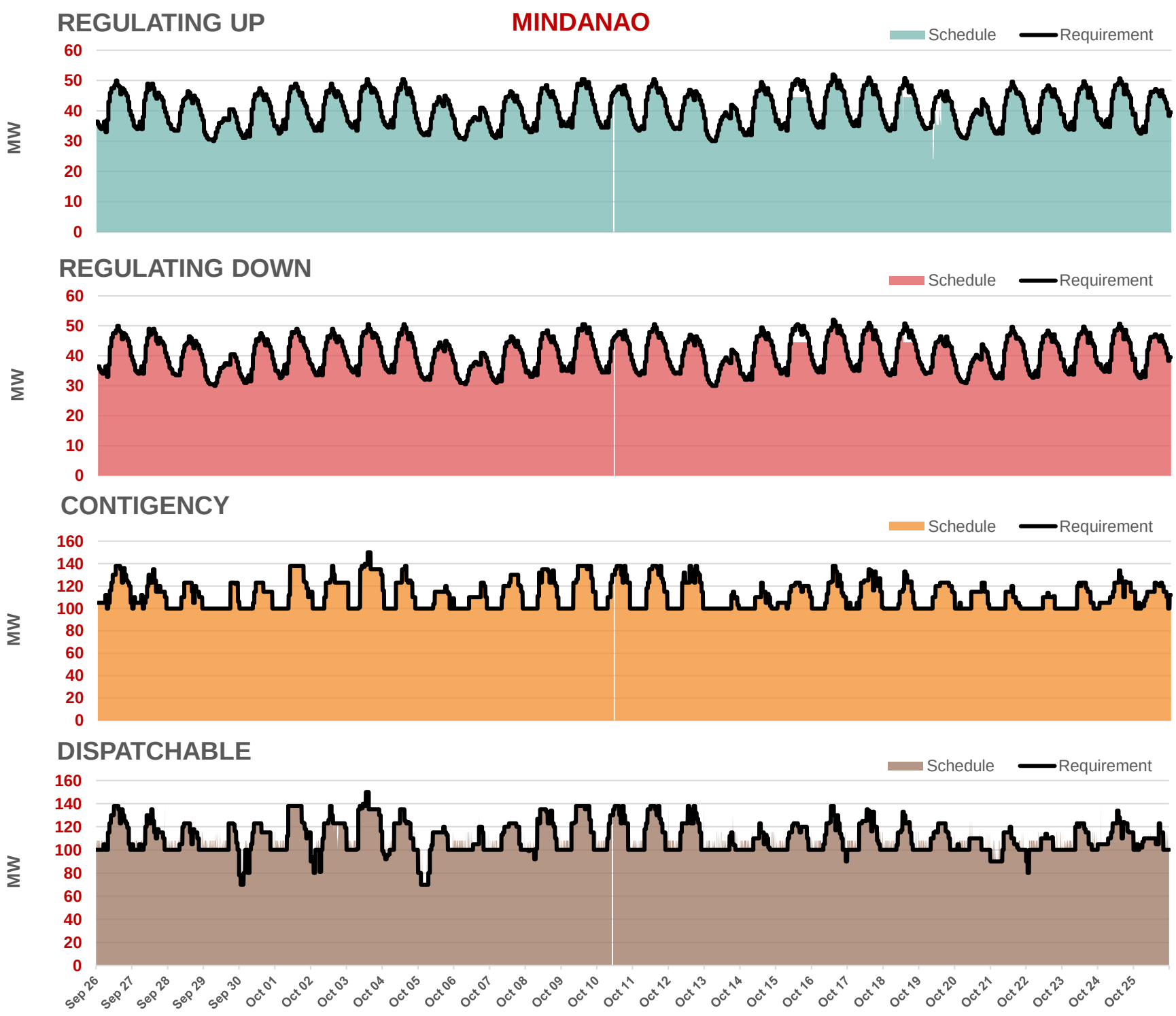
RESERVE MARKET



Public

MARKET OUTCOME

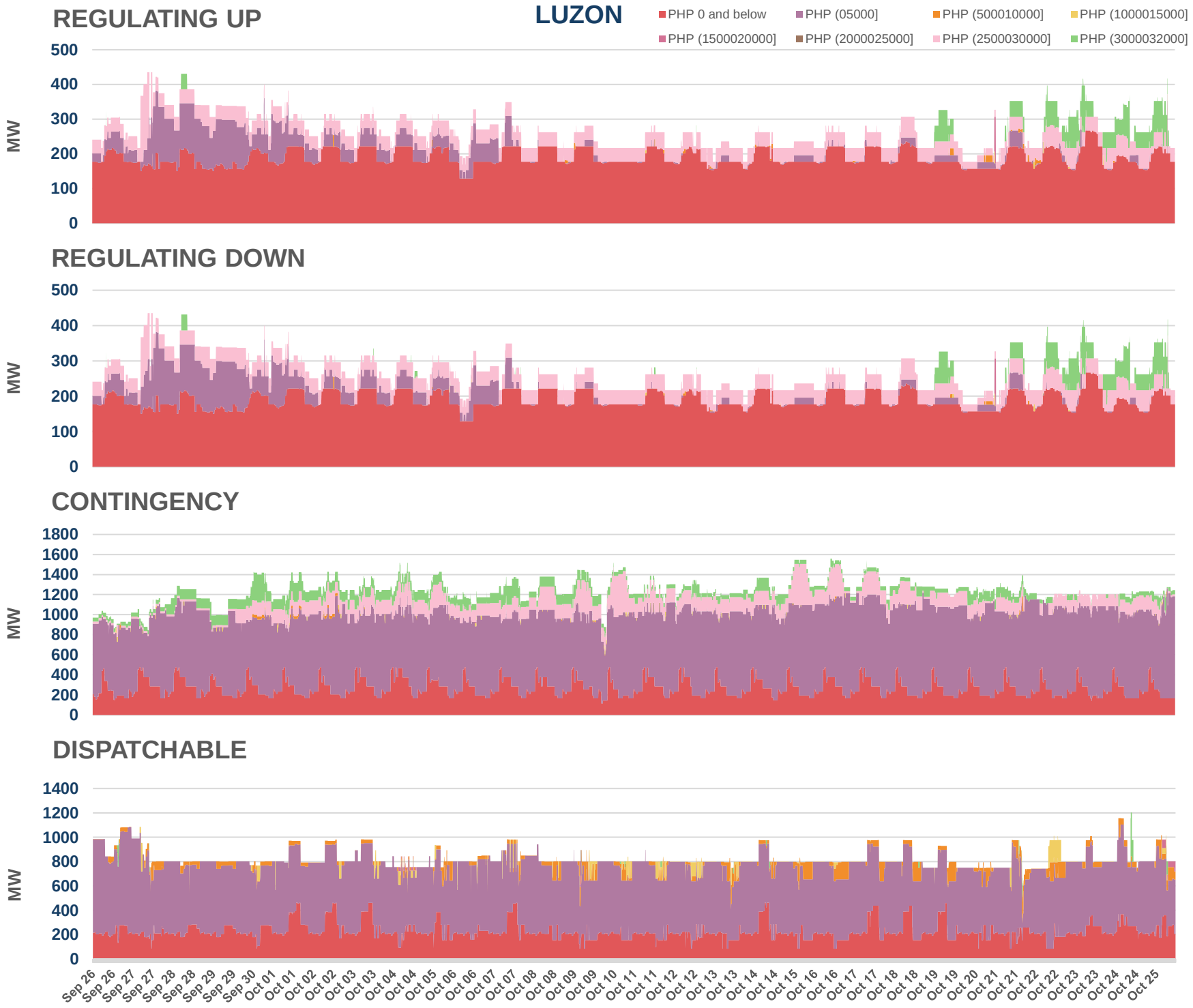
RESERVE MARKET



Public

MARKET OUTCOME

RESERVE MARKET

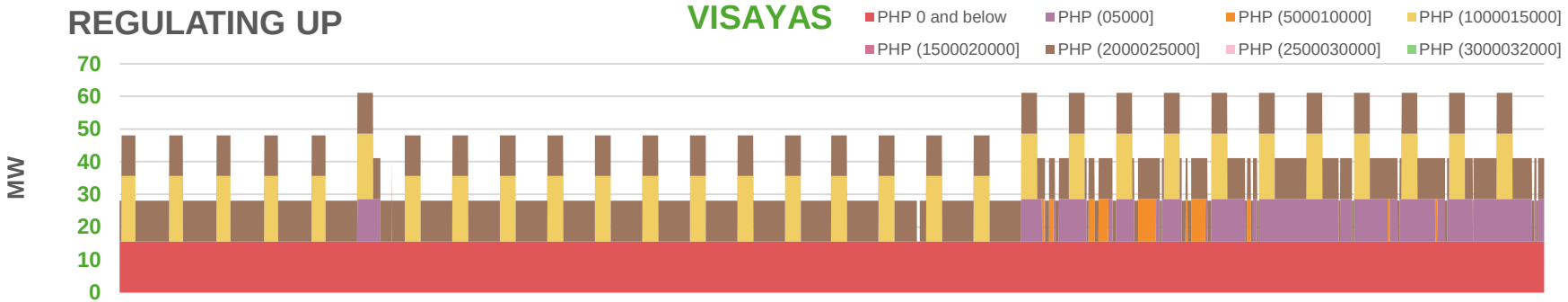


Public

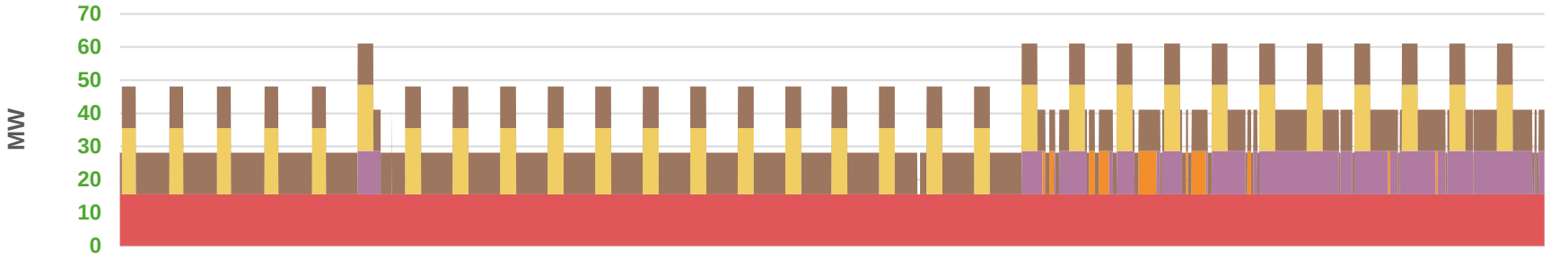
MARKET OUTCOME

RESERVE MARKET

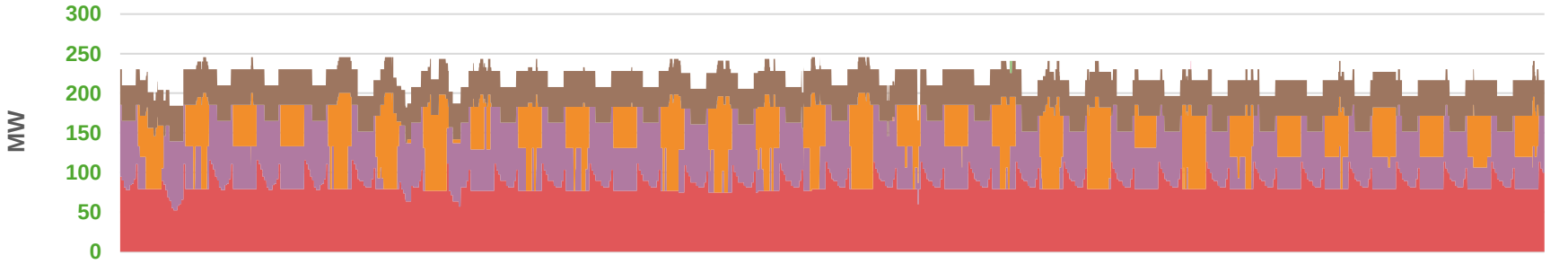
REGULATING UP



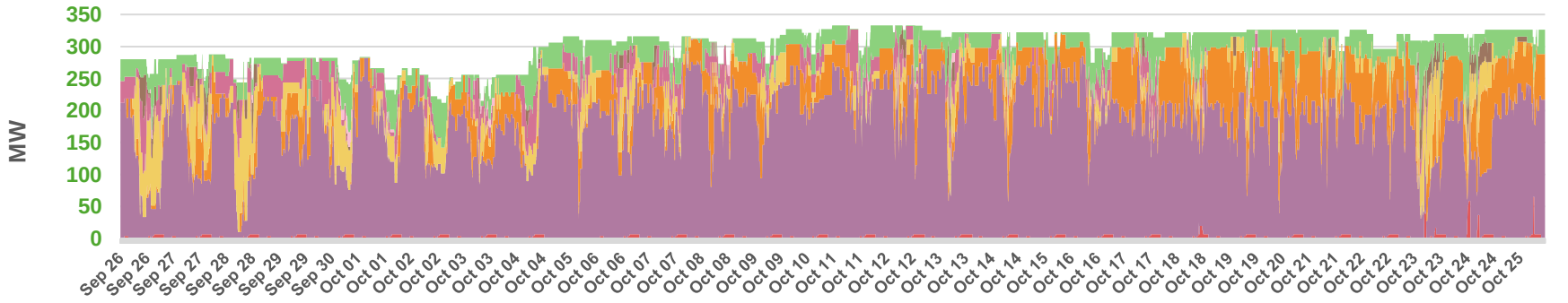
REGULATING DOWN



CONTINGENCY



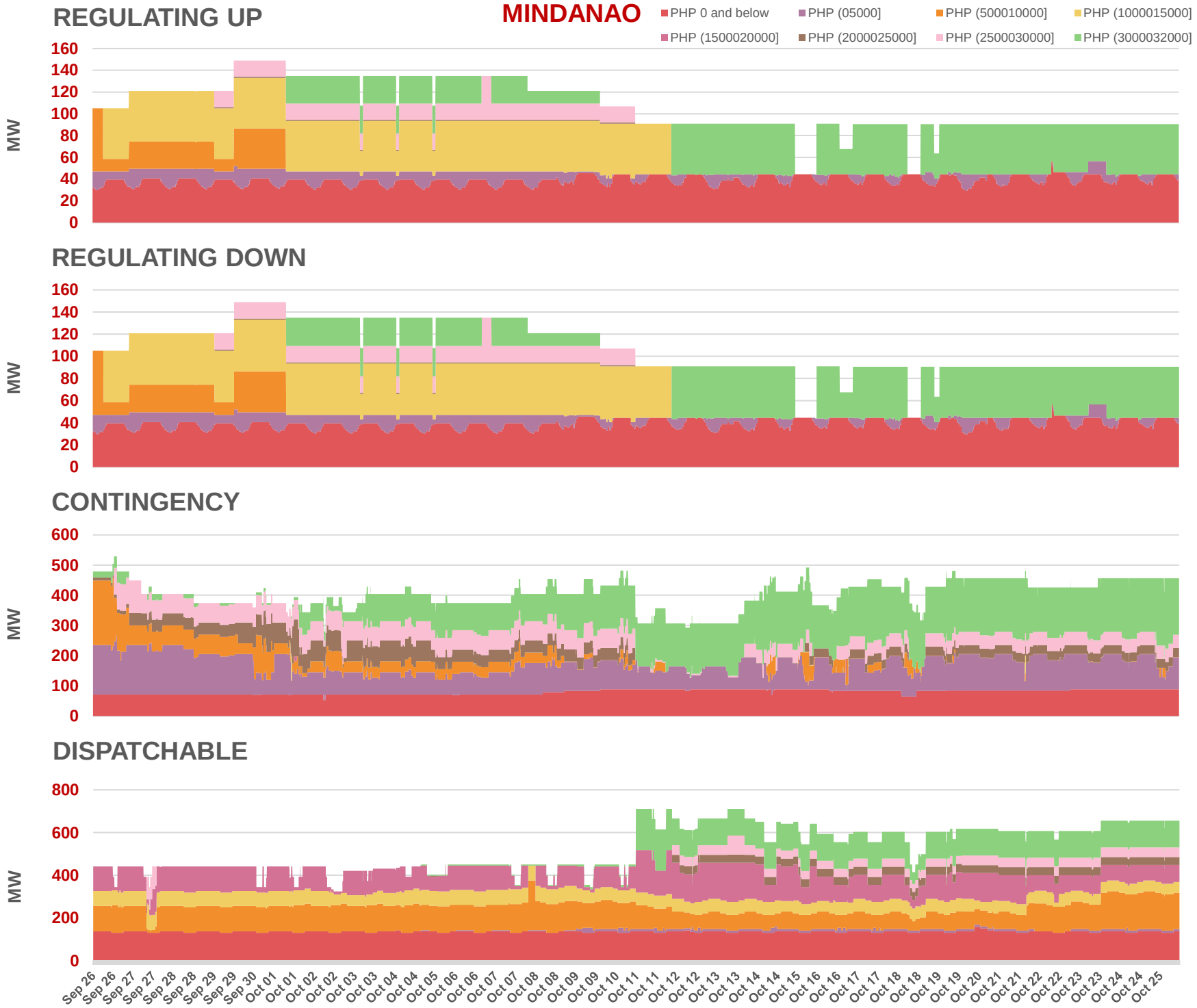
DISPATCHABLE



Public

MARKET OUTCOME

RESERVE MARKET



MARKET OUTCOME ANNEX

Outage Summary

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Luzon							
BAT	CONCEPCION BES	50	09/20/2024 4:01	09/26/2024 4:01	6	Maintenance Outage	Annual PMS of switchyard and BESS
BIOF	GIFTC2	6	09/24/2024 0:02	09/26/2024 0:26	2	Maintenance Outage	Maintenance shutdown.
BIOF	CBEC	13.5	09/26/2024 0:04	10/23/2024 1:34	27	Maintenance Outage	Maintenance Outage
BIOF	BT2020COGEN	13	10/06/2024 15:00	10/10/2024 21:27	4	Forced Outage	Emergency Shutdown due to high turbine vibration.
BIOF	ACN	3.2	10/17/2024 17:08	10/18/2024 8:00	1	Forced Outage	Unplanned outage. Reason to be verified due to communication issue with plant.
BIOF	VSGRIP	5.4	10/19/2024 2:01	10/20/2024 10:03	1	Forced Outage	Unplanned outage to facilitate correction of water wall tube leak.
BIOF	VSGRIP	5.4	10/21/2024 12:01	10/23/2024 7:01	2	Forced Outage	Emergency shutdown due to flyash handling system trouble.
COAL	PETRON 3	35	01/20/2024 17:26			Forced Outage	High furnace pressure and main steam piping rupture.
COAL	SCPC 3	150	09/14/2024 4:06	10/25/2024 14:48	41	Planned Outage	Planned Outage until October 29 2024.
COAL	PBL2	382	09/20/2024 0:35			Planned Outage	Planned Outage until November 30 2024.
COAL	MSLC3	335	09/24/2024 1:56	10/23/2024 23:59	29	Planned Outage	Planned outage until October 23 2024.
COAL	MPGC 2	150	09/29/2024 4:34	10/21/2024 9:07	22	Forced Outage	Tripped due to high furnace pressure.
COAL	SLPGC 1	150	10/09/2024 1:33	10/16/2024 13:13	7	Forced Outage	Boiler furnace water wall tube leak
COAL	CLC2	300	10/24/2024 6:26			Forced Outage	Main fuel trip.
COAL	CLC1	240	10/24/2024 8:32			Forced Outage	Emergency shutdown due to coal silo trouble.
COAL	SLPGC 2	149.6	10/24/2024 10:15			Forced Outage	The unit tripped. Cause of outage is under investigation.
COAL	SLPGC 1	150	10/24/2024 11:42			Forced Outage	Emergency shutdown due to low vacuum on main turbine condenser.
COAL	PBL1	382	10/24/2024 16:00			Forced Outage	Boiler tube leak.
COAL	SCPC 2	150	10/24/2024 22:39			Forced Outage	Gas air heater motor trouble.
COAL	SLTEC 2	124	10/24/2024 23:46			Forced Outage	Tripped due to low condenser vacuum.
COAL	MPGC 1	150	10/25/2024 4:41			Forced Outage	Trip while on emergency shutdown due to Seawater coolng trouble.
GEO	PALAYAN BINARY	31	09/17/2024 13:49	10/01/2024 15:26	14	Forced Outage	Trouble in switchyard.
GEO	BACMAN3	20	10/05/2024 3:09	10/06/2024 2:48	1	Forced Outage	Emergency shutdown to facilitate steam leak correction and lube oil cooling inspection and Transfer of Palayan - Calauan Line from ERS to Steel Tower
GEO	PALAYAN BINARY	31	10/05/2024 17:16	10/06/2024 4:01	1	Forced Outage	Feedpump fault.
GEO	PALAYAN BINARY	31	10/10/2024 11:05	10/11/2024 17:37	1	Forced Outage	Tripped boiler feed pump trouble. On commissioning test.
GEO	TIWI C BINARY	16.7	10/14/2024 18:08			Maintenance Outage	Unit shutdown to the facilitate cleaning of vaporizer and preheater. The unit is under test and commissioning.
GEO	MB E	40	10/20/2024 6:11	10/21/2024 3:16	1	Forced Outage	Affected by planned outage of Bay-Makban E 69kV Line.
GEO	TW 2	60	10/22/2024 8:57	10/24/2024 12:04	2	Forced Outage	Tripped due to actuation of generator motoring
HYD	ANG M U4	50	02/14/2022 0:00			Planned Outage	Planned outage.
HYD	ANG A U2	6	11/06/2023 8:01			Planned Outage	Total Plant shutdown (Planned Outage)
HYD	ANG M U1	50	06/28/2024 8:01			Maintenance Outage	Replacement of Main Unit No.1 in relation to the ongoing AHEPP Modernization and Rehabilitation Project (December 31 2024 2400H).
HYD	KAL 1	183	09/19/2024 0:00	09/27/2024 22:10	8	Forced Outage	Extended Outage until October 2 2024
HYD	PAN 1	60	10/07/2024 10:33	10/10/2024 18:30	3	Planned Outage	Planned outage.
HYD	AMPOHAW	12.5	10/09/2024 7:06	10/10/2024 5:23	1	Planned Outage	Planned outage.
HYD	PAN 2	60	10/11/2024 9:30	10/14/2024 15:50	3	Planned Outage	Planned Outage until October 14 2024.

MARKET OUTCOME
ANNEX

Outage Summary

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Luzon							
HYD	MAG 1	97	10/12/2024 4:04	10/14/2024 19:56	2	Maintenance Outage	Maintenance outage due to excessive leak at transformer 1
HYD	MAJAYJAY	2.19	10/19/2024 17:45	10/20/2024 5:45	1	Forced Outage	Preparation of wire two dredging activity.
HYD	INARIHAN	1.6	10/22/2024 4:29			Forced Outage	Affected by the outage of CASURECO.
HYD	NIA	6	10/22/2024 15:50			Forced Outage	Suspension of IDR due to typhoon KRISTINE.
HYD	TIBAG	5.8	10/24/2024 2:00			Forced Outage	Affected by Transmission line tripping due to passage of TC Kristine.
HYD	L LABAYAT	1.5	10/24/2024 2:00			Forced Outage	Affected by line tripping due to TC Kristine
HYD	BOTCN	0.8	10/24/2024 3:35	10/25/2024 6:02	1	Forced Outage	Affected by the tripping of Lumban - Caliraya 69kV line
NATG	EERI2	440	08/10/2024 12:02			Maintenance Outage	Maintenance outage after steam blowing. The unit is under test and commissioning.
NATG	EERI1	440	09/09/2024 14:47	09/28/2024 15:00	19	Maintenance Outage	Under testing and commissioning.
NATG	ST. RITA 30	263	09/18/2024 0:15			Planned Outage	Planned Outage until November 1 2024.
NATG	EERI1	440	09/28/2024 15:50	09/29/2024 9:20	1	Maintenance Outage	On Testing and Commissioning.
NATG	EERI1	440	09/29/2024 16:23	09/30/2024 11:35	1	Forced Outage	The unit tripped from 91MW load while under test and commissioning.
NATG	EERI1	440	09/30/2024 18:21	10/04/2024 20:00	4	Forced Outage	Oil leak on bearing of GT. On commissioning Test
NATG	EERI3	440	10/02/2024 16:56			Maintenance Outage	Under test and commissioning.
NATG	EERI1	440	10/07/2024 18:30	10/08/2024 0:24	1	Forced Outage	Condenser extraction pump high flow.
NATG	ST. RITA 40	263	10/11/2024 23:58	10/13/2024 23:59	2	Planned Outage	Planned outage October 12 - 13 2024
NATG	ST. RITA 40	263	10/14/2024 0:00	10/17/2024 20:38	3	Maintenance Outage	Maintenance outage from October 14 - 20 2024
NATG	EERI1	440	10/14/2024 15:18	10/17/2024 7:37	3	Forced Outage	Tripped due to cold-reheat inlet and outlet pressure high-high.
NATG	SAN LO 50	265	10/18/2024 23:33	10/21/2024 17:51	3	Forced Outage	Emergency shutdown due to steam leak and transformer cooling system trouble.
NATG	AVION 2	45.8	10/20/2024 3:02	10/21/2024 2:48	1	Planned Outage	Planned outage.
NATG	EERI1	440	10/20/2024 20:43			Forced Outage	Demi water supply shortage. On Commissioning Test
NATG	ILIJAN B3	220	10/21/2024 15:14	10/22/2024 0:32	1	Forced Outage	Lost Problem of power supply in Fuel source
NATG	ILIJAN B1	190	10/21/2024 15:14	10/22/2024 2:34	1	Forced Outage	Lost Problem of power supply in Fuel source
NATG	ILIJAN A3	220	10/21/2024 15:14	10/22/2024 8:43	1	Forced Outage	Lost Problem of power supply in Fuel source
NATG	ILIJAN A2	190	10/21/2024 15:14	10/22/2024 7:08	1	Forced Outage	Lost Problem of power supply in Fuel source
NATG	ILIJAN A1	190	10/21/2024 15:14	10/22/2024 9:55	1	Forced Outage	Lost Problem of power supply in Fuel source.
NATG	ST. RITA 20	263	10/22/2024 6:12			Forced Outage	Tripped due to activation of unit protection
NATG	ILIJAN A1	190	10/22/2024 22:41			Forced Outage	Emergency shutdown due to Gas Supply restriction.
NATG	ILIJAN B1	190	10/24/2024 10:04			Forced Outage	Emergency tripped due to gas supply trouble.
NATG	ST. RITA 40	263	10/24/2024 20:59	10/25/2024 2:19	1	Forced Outage	Boiler trip protection activation.
NATG	ILIJAN B3	220	10/25/2024 9:09			Forced Outage	Emergency shutdown ue to gas supply problem.
NATG	ILIJAN B2	190	10/25/2024 9:27			Forced Outage	Emergency shutdown ue to gas supply problem.
OIL	MAL 1	300	05/03/2019 18:21			Forced Outage	Declared unavailable due to motorization of unit generator caused by the non-opening of phase B of PCB 8-05CB08MAL
OIL	MAL 2	130	07/24/2024 21:24			Forced Outage	Tripped due to loss prime of CWP

MARKET OUTCOME ANNEX

Outage Summary

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Luzon							
OIL	LIMAY-U5	60	10/04/2024 1:55	10/06/2024 15:06	2	Forced Outage	Affected by the tripping of Main Unit Transformer.
OIL	LIMAY-U5	60	10/19/2024 0:01	10/24/2024 17:55	5	Planned Outage	Planned outage until October 25 2024.
OIL	LIMAY-U1	60	10/21/2024 18:05	10/22/2024 11:55	1	Forced Outage	Unavailble due to stuck up fuel nozzle.
SOLR	MARIVELES	16	10/16/2024 18:00	10/17/2024 4:36	1	Maintenance Outage	Mantenance outage until October 17 2024 0600H.
SOLR	MARIVELES	16	10/17/2024 17:48	10/18/2024 2:13	1	Maintenance Outage	Maintenance outage.
Visayas							
BIOF	SCBI U0	7.4	03/31/2023 10:35			Forced Outage	Plant shutdown
BIOF	HPC U1 U0	2	11/12/2023 20:00			Forced Outage	Defective auxiliary of vibration meter.
BIOF	CASA 2 U1	7	04/15/2024 12:44			Forced Outage	Due to internal trouble
BIOF	VMC U0	2.5	04/21/2024 16:20			Forced Outage	Weekly maintenance.
BIOF	NNBP U1	25	05/22/2024 15:59			Forced Outage	Insufficient fuel supply (bagasse).
BIOF	HPC U2 U0	9.5	09/07/2024 16:19	09/29/2024 5:45	22	Forced Outage	Shutdown after plant test run.
BIOF	URC U2	16	09/23/2024 20:12	09/30/2024 16:48	7	Forced Outage	Shutdown end of trial run.
BIOF	CASA U1	8	09/30/2024 15:32			Forced Outage	Factory test run of Cogen plant
BIOF	URC U1	30	10/04/2024 5:27	10/05/2024 2:48	1	Forced Outage	Offline due to boiler problem.
BIOF	SCBP U0	19.5	10/04/2024 18:26	10/07/2024 11:50	3	Forced Outage	Shutdown to conduct repair of primary flow meter and leak at STS body flash tank.
BIOF	FFHC U0	9	10/07/2024 4:08	10/08/2024 1:44	1	Forced Outage	Shutdown due to weekly maintenance.
BIOF	HPC U2 U0	9.5	10/13/2024 15:23	10/14/2024 17:06	1	Forced Outage	Shutdown due to weekly maintenance
BIOF	HPC U2 U0	9.5	10/20/2024 17:35	10/21/2024 17:16	1	Forced Outage	Weekly maintenance.
BIOF	FFHC U0	9	10/21/2024 18:09	10/22/2024 0:03	1	Forced Outage	Isolated due to tripping of Bacolod-Silay 69kV Line.
BIOF	VMC U0I U0	35	10/22/2024 22:43	10/23/2024 2:03	1	Forced Outage	Emergency shutdown due to choke up fuel handling system.
BIOF	VMCI U0	35	10/23/2024 17:14			Forced Outage	VMCI isolate from the grid due to tripping of their 13.8kV Breaker. Generator shutdown at 1726H to conduct plant maintenance.
BIOF	VMC U0I U0	35	10/23/2024 17:14			Forced Outage	VMCI isolate from the grid due to tripping of their 13.8kV Breaker. Generator shutdown at 1726H to conduct plant maintenance.
COAL	TVI U2	169	09/26/2024 23:18	09/27/2024 2:22	1	Forced Outage	Forced outage due to main control valve B controller replacement activity.
COAL	KSKP U0	103	10/16/2024 4:41	10/19/2024 11:41	3	Forced Outage	Emergency shutdown due to possible boiler tube leak
GEO	MALITBOG U2	77.5	07/08/2024 5:43			Forced Outage	Due to high vibration
GEO	PGPP1 U3	35.5	09/12/2024 0:10			Forced Outage	emergency shutdown at 0010H to conduct inspection of the turbine rotor due to high bearing no.1 vibration.
GEO	BAGO BINARY U1	4.7	09/24/2024 19:57			Forced Outage	Turbine tripped under test and commissioning.
GEO	UMPP U3	32	10/02/2024 15:43			Forced Outage	due to steam deficiency
GEO	BILIRAN U1	1	10/05/2024 4:39			Forced Outage	Turbine high vibration trip
GEO	PGPP2 SOG2 U0	20	10/22/2024 16:06	10/24/2024 19:45	2	Forced Outage	Affected by tripping of Amlan-Nasuji 138kV Line 1 and Line 2.
GEO	PGPP2 SOG1 U0	20	10/22/2024 16:06	10/24/2024 17:06	2	Forced Outage	Isolated due to tripping of Amlan-Nasuji 138kV Line 1 and Line 2.
GEO	PGPP2 OKOY U0	19.5	10/22/2024 16:06	10/24/2024 20:06	2	Forced Outage	Affected by tripping of Amlan-Nasuji 138kV Line 1 and Line 2.
GEO	NASULO U0	47.5	10/22/2024 16:06			Forced Outage	Affected by tripping of Amlan-Nasuji 138kV Line 1 and Line 2.

MARKET OUTCOME
ANNEX

Outage Summary

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Visayas							
GEO	UMPP U2	30	10/23/2024 8:21			Maintenance Outage	Emergency repair of air cooled condenser
GEO	UMPP U4	27.5	10/23/2024 8:25			Maintenance Outage	Emergency repair of air cooled condenser
GEO	MALITBOG BCP U0	13.35	10/24/2024 9:30			Forced Outage	Due to activation of low vacuum indication.
GEO	PGPP2 SOG2 U0	20	10/24/2024 19:47	10/25/2024 20:10	1	Forced Outage	Isolate from the grid due to opening of breaker 52SG2.
GEO	PGPP2 SOG1 U0	20	10/24/2024 19:47			Forced Outage	Auto-tripped due to opening of breaker 52SG1.
GEO	PGPP2 SOG2 U0	20	10/25/2024 20:45			Forced Outage	Isolate from the grid due to tripping of 52SGN AND 52OK.
HYD	SMHC U2	1.25	09/25/2024 18:47	09/26/2024 12:03	1	Forced Outage	Affected by the tripping of BOHECO 1 Loay SS Feeder 14.
HYD	SMHC U1	1.25	09/25/2024 18:47	09/26/2024 12:01	1	Forced Outage	Affected by the tripping of BOHECO 1 Loay SS Feeder 14.
HYD	AHEP U2	0.45	10/07/2024 9:43	10/08/2024 15:41	1	Forced Outage	Isolated due to tripping of Amlan-AHEP 34.5kV Line.
HYD	Villasiga U1	3.6	10/16/2024 17:17	10/18/2024 15:05	2	Forced Outage	Affected by the line fault along San Jose - Bugasong - SUWECO 69 kV Line
HYD	TIMBABAN Hydro	18.9	10/22/2024 16:47	10/23/2024 14:30	1	Forced Outage	Auto-tripped (affected by line fault)
HYD	THC U2	5.1	10/22/2024 17:07	10/23/2024 7:25	1	Forced Outage	affected by tripping of 69kV Taft Feeder
HYD	THC U1	5	10/22/2024 17:07	10/23/2024 7:25	1	Forced Outage	affected by tripping of 69kV Taft Feeder
HYD	AHEP U2	0.45	10/22/2024 19:19	10/24/2024 19:24	2	Forced Outage	Tripped due to internal Plant trouble.
HYD	AHEP U1	0.45	10/22/2024 19:19	10/24/2024 19:20	2	Forced Outage	Tripped due to internal Plant trouble.
HYD	THC U1	5	10/23/2024 22:45			Forced Outage	Due to Low water level.
HYD	Villasiga U3	0.9	10/24/2024 14:44			Forced Outage	affected by line fault
HYD	Villasiga U2	3.6	10/24/2024 14:44			Forced Outage	affected by line fault
OIL	EAUC U1	11.5	05/13/2024 22:55			Forced Outage	CYLINDER NO. 7 CRANKCASE EXPLOSION
OIL	TPC (Carmen) U4	10	08/24/2024 0:00			Forced Outage	Detached connecting rods and crank shaft for machining
OIL	CPPC U6	6.5	09/07/2024 0:01	10/04/2024 14:00	27	Maintenance Outage	Maintenance outage (awaiting DOE Rev2 approval as GOMP) affected by Main Transformer 1 replacement to conduct Smoke Stack Repair ECD Oct 1 2024 2359H.
OIL	PB104 U3	7	09/24/2024 17:37	09/27/2024 4:00	3	Forced Outage	Malfunction of turbo charger right side.
OIL	CPPC U9	6.5	09/28/2024 9:01	10/04/2024 14:00	6	Maintenance Outage	Affected by Main Transformer 1 Replacement
OIL	CPPC U8	6.5	09/28/2024 9:01	10/04/2024 14:00	6	Maintenance Outage	Affected by Main Transformer 1 Replacement
OIL	BDPP U3	4.2	09/30/2024 17:39	10/01/2024 0:29	1	Forced Outage	Severe lube oil leak at lube oil pipe flange.
OIL	PB101 U4	6	10/01/2024 5:45	10/04/2024 16:04	3	Forced Outage	Emergency maintenance of 42MVA Main Transformer
OIL	PB101 U3	6	10/01/2024 5:45	10/04/2024 16:04	3	Forced Outage	Emergency maintenance of 42MVA Main Transformer
OIL	PB101 U1	6	10/01/2024 5:45	10/04/2024 16:04	3	Forced Outage	Emergency maintenance of 42MVA Main Transformer
OIL	TPC (Carmen) U3	10	10/02/2024 6:45	10/05/2024 7:02	3	Forced Outage	Unavailable due to corrective action
OIL	BDPP U3	4.2	10/02/2024 15:35	10/03/2024 0:50	1	Forced Outage	Severe water leak at A bank turbocharger cooling.
OIL	PB101 U4	6	10/05/2024 15:10	10/06/2024 10:00	1	Forced Outage	Unable to cut-in due to triggered undervoltage alarm at easygen governor controller
OIL	PB104 U3	7	10/12/2024 21:24	10/13/2024 12:31	1	Forced Outage	Unable to cut in due to hard starting.
OIL	EAUC U2	11	10/13/2024 7:01			Planned Outage	Conduct 5 000 types preventive maintenance
OIL	PB104 U3	7	10/22/2024 6:01	10/24/2024 17:36	2	Planned Outage	Planned outage 10k PMS.

MARKET OUTCOME ANNEX

Outage Summary

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Visayas							
OIL	GTEC U2	5.5	10/22/2024 22:47	10/23/2024 10:24	1	Forced Outage	Affected by emergency shutdown of Calbayog-Bliss 69kV Line
OIL	GTEC U1	5.5	10/22/2024 22:47	10/23/2024 10:24	1	Forced Outage	Affected by emergency shutdown of Calbayog-Bliss 69kV Line
SOLR	HELIOS U0	105	09/30/2024 18:02	10/01/2024 2:06	1	Forced Outage	Isolated due to de-energization of 138KV Cadiz- Helios Line.
SOLR	HELIOS U0	105	10/02/2024 17:43	10/03/2024 6:02	1	Forced Outage	Isolated due to de-energization of Cadiz-Helios 138 kV L
SOLR	SACASUN U0	46.8	10/19/2024 19:09			Forced Outage	Shutdown of 69KV San Carlos -Sacasun Line
SOLR	SACASOL 1CD U0	19.8	10/19/2024 19:40	10/20/2024 0:30	1	Forced Outage	Shutdown of 69KV San Carlos -Sacasol CD Line
SOLR	SACASOL 1AB U0	19.5	10/19/2024 19:40	10/20/2024 0:17	1	Forced Outage	Shutdown of 69KV San Carlos -Sacasol AB Line
SOLR	Silay Solar U0	20	10/21/2024 17:46	10/22/2024 0:30	1	Forced Outage	To conduct preventive maintenance at their switching and substation equipments.
SOLR	Silay Solar U0	20	10/22/2024 17:34	10/23/2024 0:29	1	Forced Outage	To conduct preventive maintenance at their switching and substation equipments.
Mindanao							
BIOF	CSC U1	3.4	03/11/2024 23:59			Forced Outage	Shutdown from Testing and Commissioning Phase. (Forced Outage)
BIOF	BBI U0	12.4	09/26/2024 15:40	09/27/2024 17:26	1	Forced Outage	Affected by tripping of 5LI1TAC-SRB & 5LI1TAC-SRL. (OMC Outage)
BIOF	BBM U0	5.7	10/08/2024 15:56			Forced Outage	Tripped due to SOCOTECO 1 69KV(SRB)line power outage.
BIOF	LPE U1	6	10/08/2024 22:18	10/09/2024 3:14	1	Forced Outage	Tripped with indications reverse power short time trip 86A1 trip 86A2 trip and under over voltage protection trip.
BIOF	BBI U0	12.4	10/25/2024 23:10			Forced Outage	Forced Outage. Fault to be determined by BBI. (OMC Outage)
COAL	MCC U1	55	09/07/2024 0:03	09/26/2024 9:20	19	Planned Outage	PMS (GOMP). ETC September 26 2024
COAL	DCP U1	151.4	09/23/2024 12:15	09/28/2024 23:59	5	Forced Outage	Tripped due to boiler tube leak. (Forced outage)
COAL	DCP U1	151.4	09/29/2024 0:00	10/13/2024 9:41	14	Forced Outage	PMS - Non GOMP. (Forced outage last September 23 2024 due to boiler tube leak. ETC October 22 2024.
COAL	GKP U2	151	10/02/2024 8:29	10/03/2024 12:16	1	Forced Outage	Tripping of breaker of 6kV communal Bus B caused by third party contractor of GNPK undergoing inspection and testing of breaker supply of Unit 2.
COAL	GKP U3	151.3	10/02/2024 14:59	10/03/2024 3:15	1	Forced Outage	Cause Seawater Cooling Pump #5 Trip MCC Fault (Unplanned Outage)
COAL	FMP U3	135	10/05/2024 0:33	10/11/2024 16:02	6	Forced Outage	Emergency S D due to primary Air Preheater (APH) tube leak. (Forced Outage). ETC 10 12 2024
COAL	MCO U2	150	10/11/2024 1:12			Forced Outage	Tripped. Indication Failure of induced draft fan. ETC November 25 2024
COAL	MCO U2	150	10/11/2024 1:12			Forced Outage	Tripped. Indication Induced draft fan. NO ETC yet
COAL	PPE U1	20	10/11/2024 6:34			Forced Outage	Forced Outage. Cause For verification.
COAL	MCC U3	55	10/12/2024 0:10			Forced Outage	PMS(Non-GOMP) ETC Oct. 27 2024 at 0600H
COAL	MCC U3	55	10/12/2024 0:10			Maintenance Outage	PMS(Non-GOMP) ETC Oct. 27 2024 at 0600H
COAL	FMP U2	135	10/14/2024 17:44	10/18/2024 18:13	4	Forced Outage	Tripped. Ind Generator Overcurrent. Emergency shutdown request to facilitate repair of boiler air preheater tube leak (Forced Outage) ETC October 19-20 2024
COAL	GKP U3	151.3	10/15/2024 22:02	10/16/2024 13:46	1	Forced Outage	Emergency shutdown to conduct high and low pressure bypass valve calibration and servicing. (Force Outage)
COAL	GKP U3	151.3	10/15/2024 22:02			Forced Outage	Force Outage. Emergency shutdown to conduct high and low pressure bypass valve calibration and servicing. (ETC 0800H Oct. 16 2024)
COAL	FMP U2	135	10/20/2024 13:57			Forced Outage	Forced outage Suspected furnace bed agglomeration. ETC Oct. 24 2024.
GEO	MA3 U1	3.6	10/09/2024 20:35	10/10/2024 17:11	1	Forced Outage	Forced outage due to High Brine temp.

MARKET OUTCOME ANNEX

Outage Summary

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Mindanao							
GEO	MA3 U1	3.6	10/12/2024 10:49	10/18/2024 15:26	6	Forced Outage	Tripped. Indication for verification. (Unplanned Outage)
GEO	MA2 U1	50	10/23/2024 0:17	10/24/2024 9:56	1	Forced Outage	Emergency shutdown due to cooling tower basin lever very high.
HYD	ALP U0	2.6	07/28/2024 8:05			Forced Outage	Plant on shutdown. Generating Units 1 & 2 were totally damaged by landslide. (Forced Outage)
HYD	AG6 U4	40	09/02/2024 9:02			Planned Outage	(PMS-GOMP). ETC October 31 2024
HYD	NBT U0	3	09/02/2024 10:01			Forced Outage	Plant shutdown due to weir repair. ETC December 02 2024. (Forced outage)
HYD	MHP U0	0.5	09/13/2024 13:20			Forced Outage	Emergency shutdown due to bearing temperature rising. (Forced Outage)
HYD	SBL B U1	14	09/22/2024 16:30	09/26/2024 17:08	4	Forced Outage	Plant on shutdown. Inspection and replacement of drive end bearing. (Forced Outage)
HYD	AG1 U1	35	09/24/2024 8:19	09/27/2024 23:59	3	Forced Outage	PMS (Non-GOMP). ETC September 27 2024
HYD	MN2 U2	6.8	09/27/2024 8:00	09/28/2024 17:00	1	Planned Outage	PMS (GOMP). ETC September 30 2024.
HYD	AG1 U1	35	09/28/2024 0:00	09/29/2024 21:19	1	Forced Outage	Extended PMS (Non-GOMP). Original ETC September 27 2024
HYD	TL3 U2	0.93	09/28/2024 23:10	09/29/2024 9:16	1	Forced Outage	Plant shutdown due to DLPC line maintenance activity. (OMC Outage)
HYD	TL3 U1	0.93	09/28/2024 23:10	09/29/2024 9:13	1	Forced Outage	Plant shutdown due to DLPC line maintenance activity. (OMC Outage)
HYD	TL1 U1	0.5	10/01/2024 21:11	10/02/2024 1:17	1	Forced Outage	Plant isolated due to tripping of DLPC Calinan Feeder 2. (OMC Outage)
HYD	BHP U0	6.6	10/01/2024 23:19	10/02/2024 0:44	1	Forced Outage	Auto-tripped due to grid power loss caused by the opening of the Maasin recloser. (Forced Outage)
HYD	TL1 U1	0.5	10/03/2024 21:12	10/04/2024 1:56	1	Forced Outage	Plant shutdown due to clogged weir intake. (Forced Outage)
HYD	TU1 U1	6.7	10/04/2024 13:15	10/05/2024 21:22	1	Forced Outage	Emergency shutdown due to burnt insulator found at Plant A SS. (Forced Outage)
HYD	AG7 U2	25.3	10/14/2024 7:01	10/19/2024 15:36	5	Planned Outage	PMS(GOMP). ETC October 22 2024
HYD	AG2 U2	60	10/15/2024 20:28	10/16/2024 13:25	1	Forced Outage	For further investigation.
HYD	AG5 U1	27.5	10/16/2024 8:04			Planned Outage	PMS(GOMP). ETC November 1 2024
HYD	AG6 U1	34.5	10/17/2024 9:18			Planned Outage	Planned Outage PMS (ETC Oct. 31 2024 2359H)
HYD	BHP U0	6.6	10/17/2024 23:34	10/18/2024 0:02	1	Forced Outage	Plant tripped due to grid power disturbance caused by tripping of Feeder 3 at Puntod.
HYD	ASG U0	8.2	10/18/2024 23:55	10/19/2024 0:30	1	Forced Outage	Forced outage due to earth fault.
HYD	ASG U0	8.2	10/22/2024 2:59	10/23/2024 0:13	1	Forced Outage	Isolation. Affected by the outage of Butuan-Santiago 69kV STL. (OMC Outage)
HYD	AGC U0	24.8	10/22/2024 2:59	10/23/2024 9:00	1	Forced Outage	Isolation. Affected by the outage of Butuan-Santiago 69kV STL. (OMC Outage)
HYD	AG2 U1	60	10/23/2024 8:59	10/24/2024 17:55	1	Maintenance Outage	Maintenance shutdown for the conduct of final measurement of Unit 1 bus bar. (ETC Oct 25 2024 @ 0005H)
HYD	LPP U1	11.9	10/25/2024 13:13			Forced Outage	Plant shutdown due to tripping of Agus6-Kauswagan 69kV line.
OIL	KEG U0	10.6	04/15/2024 15:05			Forced Outage	Failed to synchronize due to low SF6 Pressure on PCB. (Forced Outage)
OIL	WMP U1	10.2	10/02/2024 13:20	10/03/2024 17:00	1	Forced Outage	Unable to sync. Cause Crack of coupling generator (Unplanned Outage)
OIL	WMP U9	10.2	10/02/2024 14:52	10/04/2024 8:15	2	Forced Outage	Auto-tripped due to HT water temperature high. (Forced Outage)
OIL	WMP U9	10.2	10/02/2024 14:52			Forced Outage	Indication HT water temperature high (Unplanned Outage)
OIL	TM2 U1	50	10/16/2024 0:01	10/19/2024 17:41	3	Planned Outage	Planned Outage PMS GOMP (ETC 2359H Oct. 19 2024)
OIL	TM2 U2	50	10/20/2024 0:20	10/23/2024 19:14	3	Planned Outage	PMS(GOMP) - ETC(October 23 2024)
OIL	WMP U9	10.2	10/21/2024 0:01			Planned Outage	PMS-Non-GOMP. ETC December 05 2024.

Congestion

Equipment Name	Trading Intervals	Percent of Time
7CORELL_TR1	150	2%
5DAAN_4TAB2	22	0.3%
1SUP_TR1	8	0.1%
2QUEZ_2ARA1	7	0.1%
4MAAS_7UBA1	7	0.1%
1SNTGO_TR2	3	0.03%
3MKBNA_TR2	3	0.03%
11JASA_12NAS1	1	0.01%
6PGPP1_TR1	1	0.01%

MARKET OUTCOME
GLOSSARY OF TERMS

CAPACITY ON OUTAGE

Calculated for each 5-min interval as the sum of the capacity of all generating units on outage, which are further distinguished by plant type and category. The generating unit/s on outage and categories of outage are based on the SO's daily operations report. Cited below are the outage categories as defined in ERC Resolution No. 21, Series of 2016.

Deactivated Shutdown	- Refers to a condition where a generating unit is unavailable for service for an extended period of time for reasons not related to equipment and inactive for more than 60 days.
Forced	- An outage that requires immediate removal of a unit from service, another outage state, or a reserve shutdown state.
Maintenance	- An outage that does not require immediate removal from the In-Service state but requires a Unit to be removed from the available state before the next planned outage. This is scheduled at least seven (7) days in advance.
Planned	- The state in which a Unit is unavailable due to inspection, testing, preventive maintenance or overhaul. A Planned Outage is scheduled with a pre-determined duration and is coordinated with the System Operator. The Planned Outage of a Unit shall be reflected in the Grid Operating and Management Program (GOMP).

DEMAND

Calculated for each 5-minute trading interval as the sum of the real time dispatch (RTD) schedule of all load resources plus regional losses.

EFFECTIVE SUPPLY

Calculated for each 5-minute trading interval as the sum of the offered capacity of all scheduled generators considering their offered ramp rates, nominated loading level of nonscheduled generators and projected output of preferential dispatch generators, adjusted for any over-riding constraints imposed by the System Operator (SO), and reserve offers. Output of generators on testing and commissioning were considered based on the over-riding constraints imposed by the SO.

HERFINDAHL-HIRSCHMAN INDEX (HHI)

It is a commonly accepted measure of market concentration that takes into account the relative size and distribution of participants in the market. The HHI is a number between 0 and 10,000, which is calculated as the sum of squares of the participant's market share. The HHI approaches zero when the market has very large number of participants with each having a relatively small market share. In contrary, the HHI increases as the number of participants in the market decreases, and the disparity in the market shares among the participants increases. The following are the widely used HHI screening numbers: (1) less than 1,500 - not concentrated; (2) 1,500 to 2,500 - moderately concentrated; and (3) greater than 2,500 - highly concentrated.

MARKET RESIDUAL SUPPLY INDEX (Market RSI)

The RSI is a dynamic continuous index measured as ratio of the available generation without a generator to the total generation required to supply the demand. The RSI is measured for each generator. The greater the RSI of a generator, the less will be its potential ability to exercise market power and manipulate prices, as there will be sufficient capacity from the other generators. In contrary, the lower the RSI, the greater the market power of a generator (and its potential benefit of exercising market power), as the market is strongly dependent on its availability to be able to fully supply the demand. In particular, a RSI greater than 100% for a generator means that the remaining generators can cover the demand, and in principle that generator cannot manipulate market price. On the other hand, a RSI less than 100% means that the generator is pivotal in supplying the demand.

The RSI for the whole market (Market RSI) is measured as the lowest RSI among all the generators in the market. A Market RSI less than 100% indicates the presence of pivotal generator/s

MARKET SHARE

The fraction of the total capacity or energy that a company or related group owns or controls in the market.

MAJOR PARTICIPANT GROUP

The grouping of generators by ownership or control.

NOMINATED CAPACITY

The available capacity declared by self-scheduled generators.

Public

MARKET OUTCOME
GLOSSARY OF TERMS

OFFERED CAPACITY

The available capacity declared by scheduled generators.

PRICING CONDITIONS

A price imposed by the Market Operator to the Market/Trading Participant in cases:

Administered Price (AP)	- Interval affected by the declaration of market suspension and intervention.
Pricing Error Notice PEN]	- Calculated prices are believed to be inerror due to erroneous, inconsistent, or inappropriate input data.
Price Substitution Methology (PSM)	- Undesirable market pricing situations arising from the effects of network congestion in the power system, particularly during the occurrence of extreme nodal price separation.
Secondary Price Cap (SPC)	- Applied upon breaching the PHP9,000/MWh rolling average price over a seventy-two (72) hours period .

PIVOTAL SUPPLIER INDEX (PSI)

The pivotal supplier index is a binary variable (1 for pivotal and 0 for not pivotal) for each generator. The index identifies whether a generator is pivotal in supplying the demand. The PSI is calculated as the percentage of time that a generator is pivotal in a period (i.e. monthly).

POST MARKET RUN CALCULATION

Price adjustment after consideration of different pricing conditions such as AP, SPC, PSM, and PEN.

REGISTERED CAPACITY

The capacity registered by a generator with WESM.

REGISTERED CAPACITY (NET OF OUTAGE)

The capacity registered by a generator with WESM less capacity on outage.

RESERVE CATEGORIES

Regulating (RU and RD)	- Readily available and dispatchable generating capacity that is allocated exclusively to correct deviations from the acceptable nominal frequency caused by unpredicted variations in demand or generation output.
Contingency (FR)	- Synchronized generation capacity from Qualified Generating Units and Qualified Interruptible Loads allocated to cover the loss or failure of a synchronized generating unit or a transmission element of the power import from a circuit interconnection.
Dispatchable (DR)	- Generating Capacity that are readily available for dispatch in order to replenish the Contingency Reserves whenever a generating unit trips or a loss of a single transmission interconnection occurs.

DISCLAIMER

The information contained in this document is based on the available electricity spot market data. The same information is subject to change as updated figures come in. As such, the PEMC does not make any representation or warranty as to the completeness of this information. The PEMC likewise accepts no responsibility or liability whatsoever for any loss or cost incurred by a reader arising from, or in relation to, any conclusion or assumption derived from the information found herein.