



MONTHLY MARKET ASSESSMENT HIGHLIGHTS

26 June to 25 July 2024

SEPTEMBER 2024

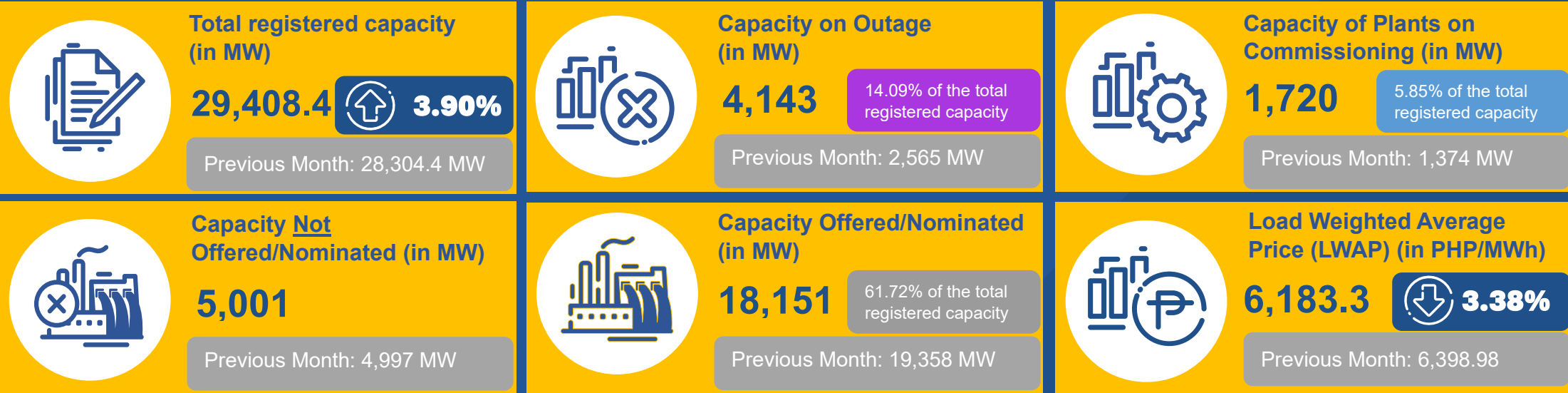
Document Information Classification: Public

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SUMMARY OF OBSERVATIONS

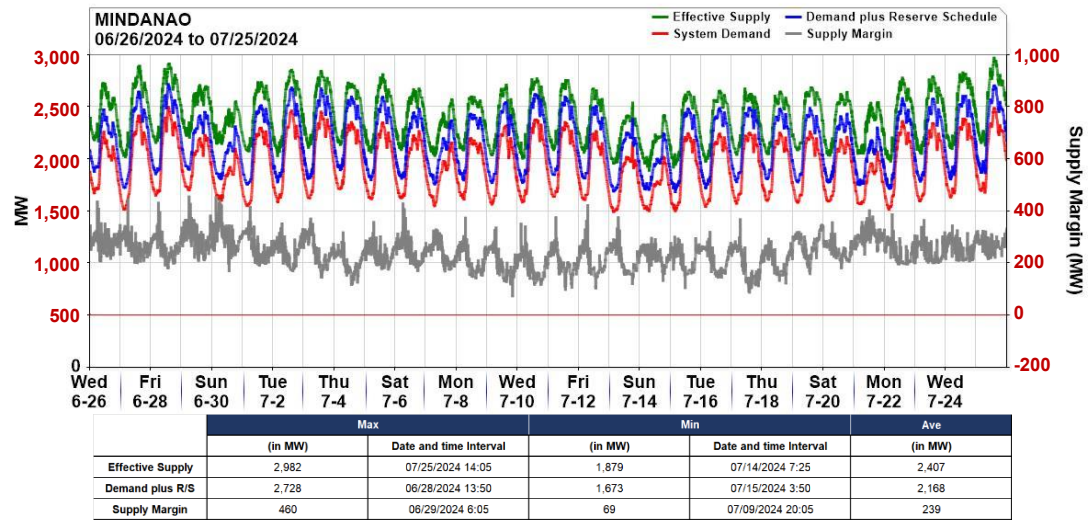
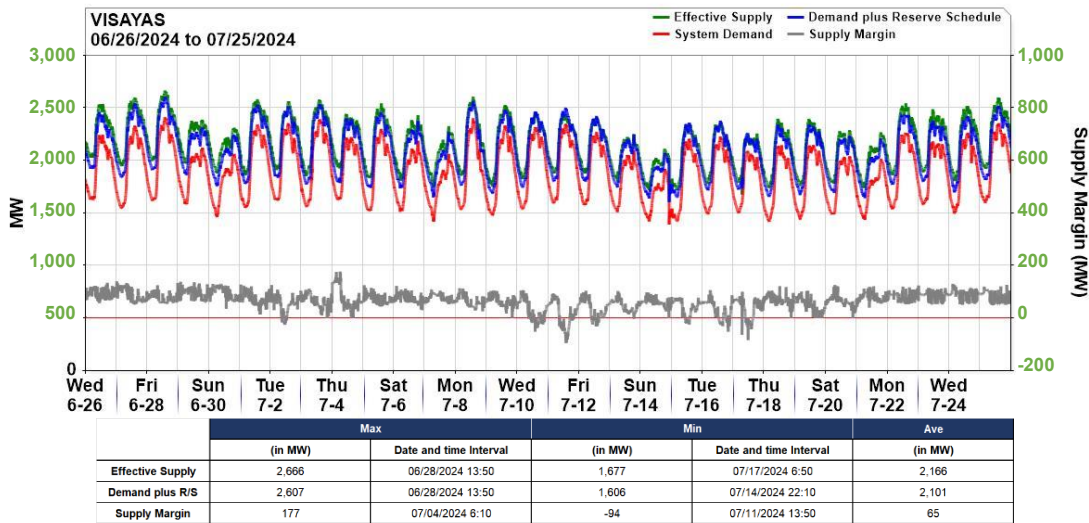
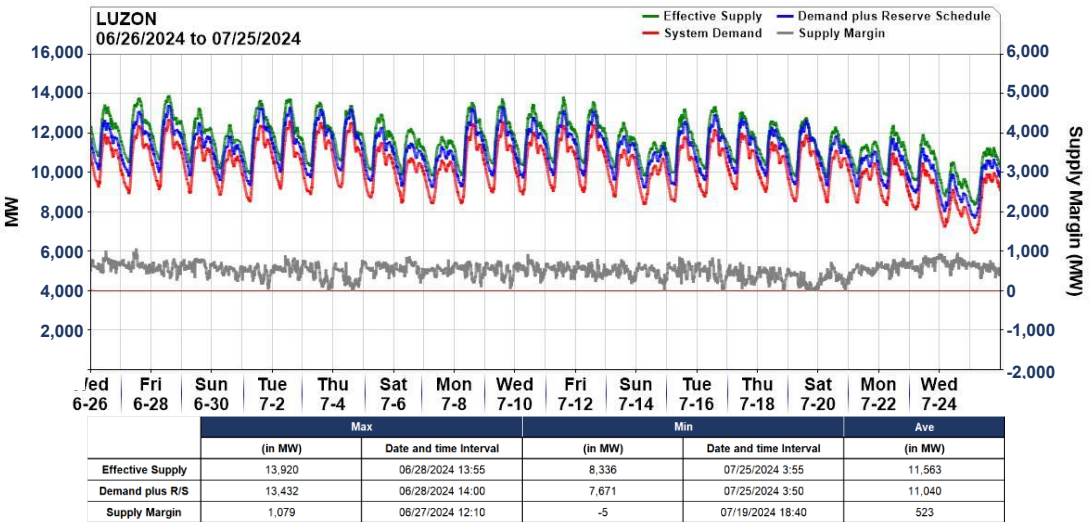
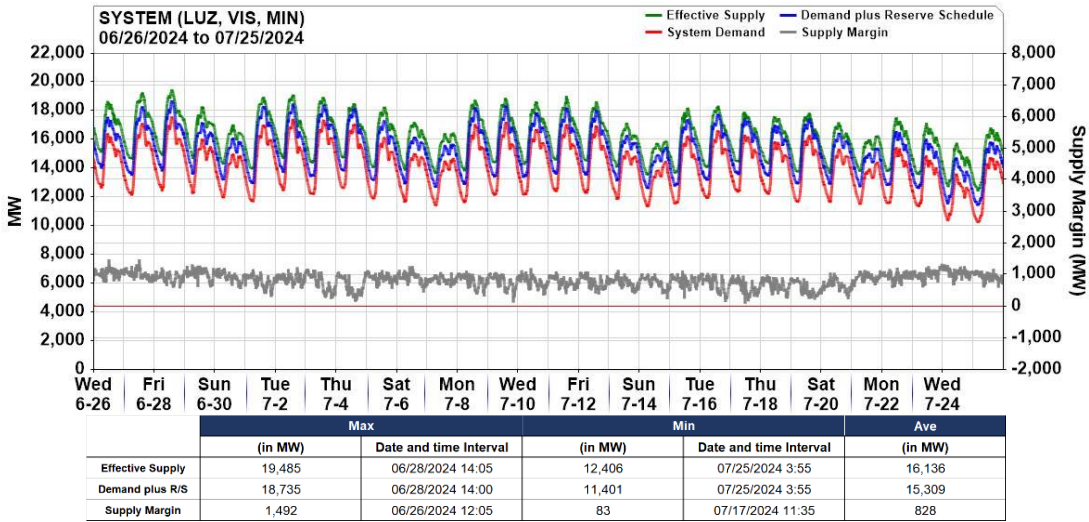
- **Secondary Price Cap impositions:**
 - System-wide: 198 trading intervals; and Luzon: 1 trading interval
- **No Red and Yellow Alert** notice issuances by the System Operator
- **Declaration of Market Intervention events** by:
 - SO in Visayas on 26 July 2024 affecting 22 trading intervals due to Manual Load Dropping (MLD) implementation to prevent the overloading of Ubay-Maasin 138kV Line.
 - MO in the System (Luzon, Visayas, and Mindanao) on 29 June 2024 affecting 6 trading intervals due to no RTD results generated
- **Notable congestions:** Maasin-Ubay line 1 for 2,585 trading intervals (30% of the time); Barotac-Viejo lines 1 and 2 for 1,628 and 1,957 trading intervals (19% and 23% of the time), respectively; and Mexico-Hermosa Line 2 for 124 trading intervals (1.4% of the time).

AT A GLANCE



MARKET OUTCOME

SUPPLY AND DEMAND

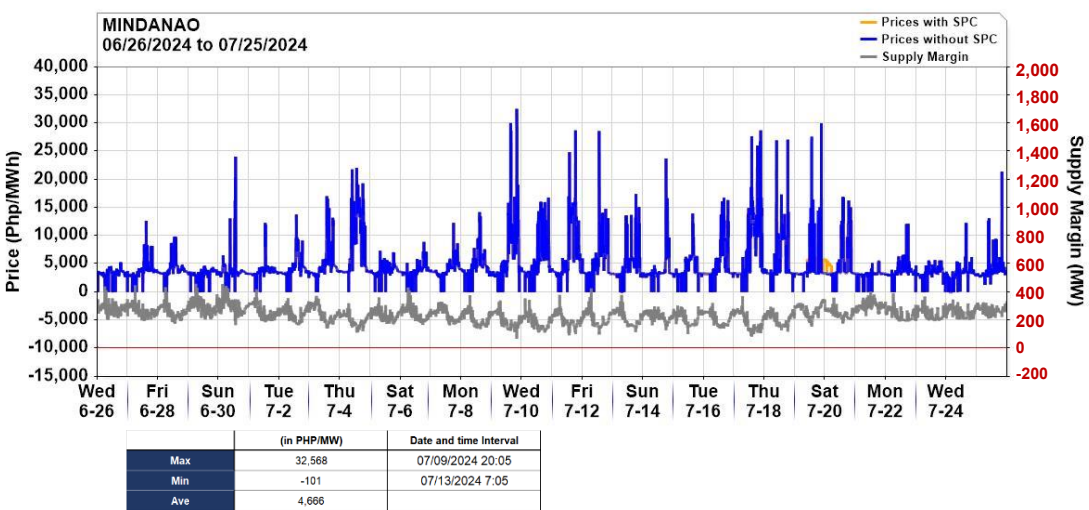
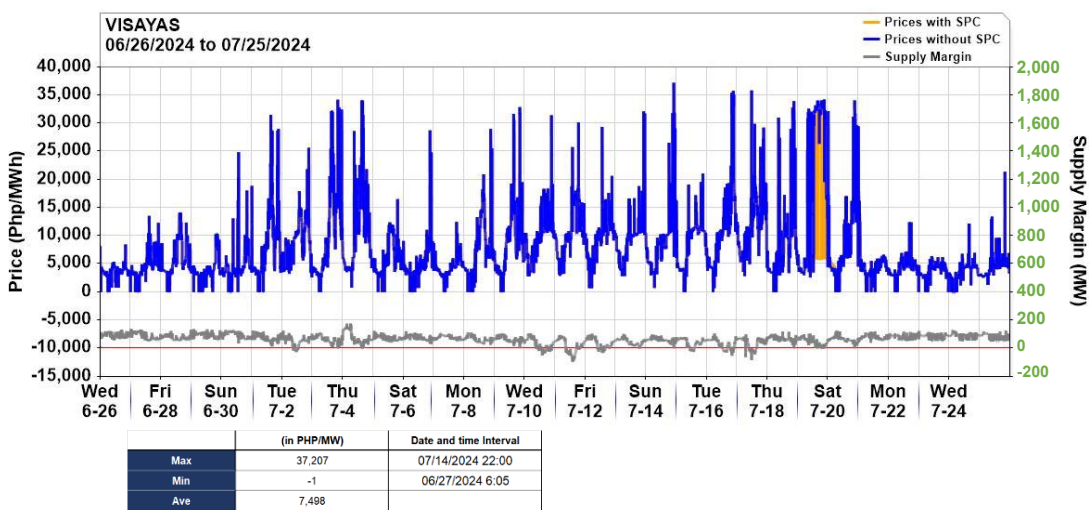
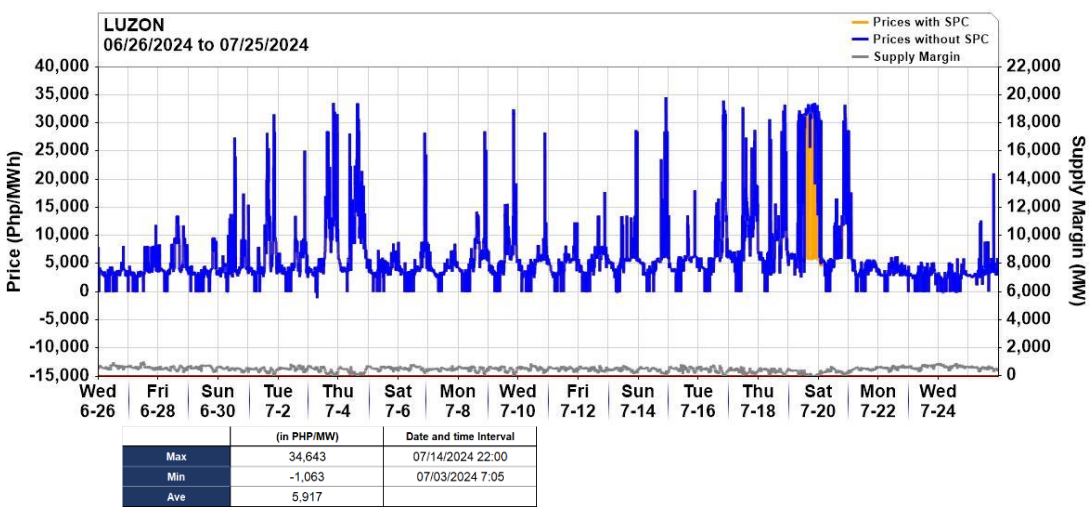
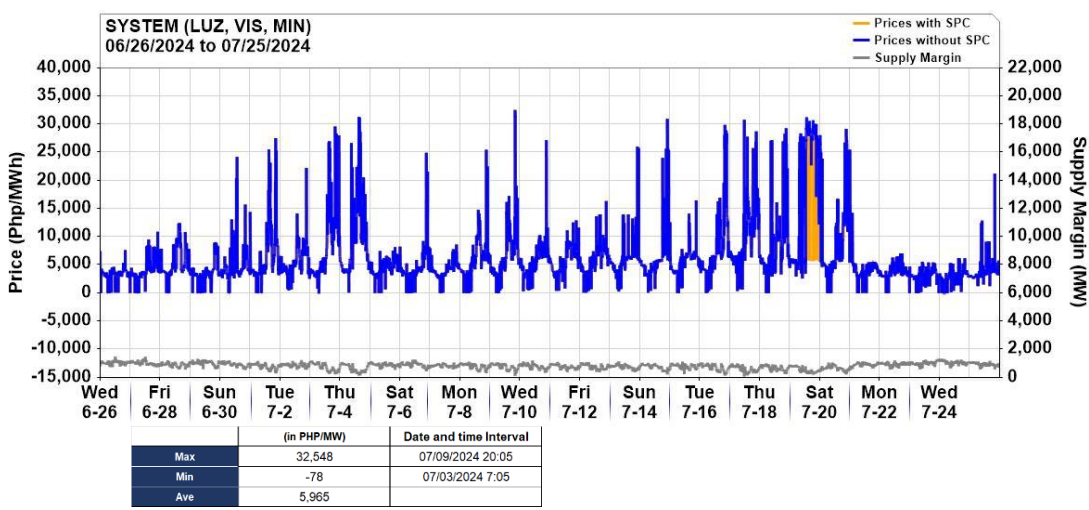


System-wide effective supply fell by 3.76% for the July billing period due to unplanned (forced and maintenance) and planned outages from major coal and natural gas plants. This significantly reduced the supply margin by 9.76%. Meanwhile, the rainy season contributed to a 4.40% decline in electricity demand for the billing month.

Note: Data points with missing values indicate market intervention and/or suspension periods.

MARKET OUTCOME

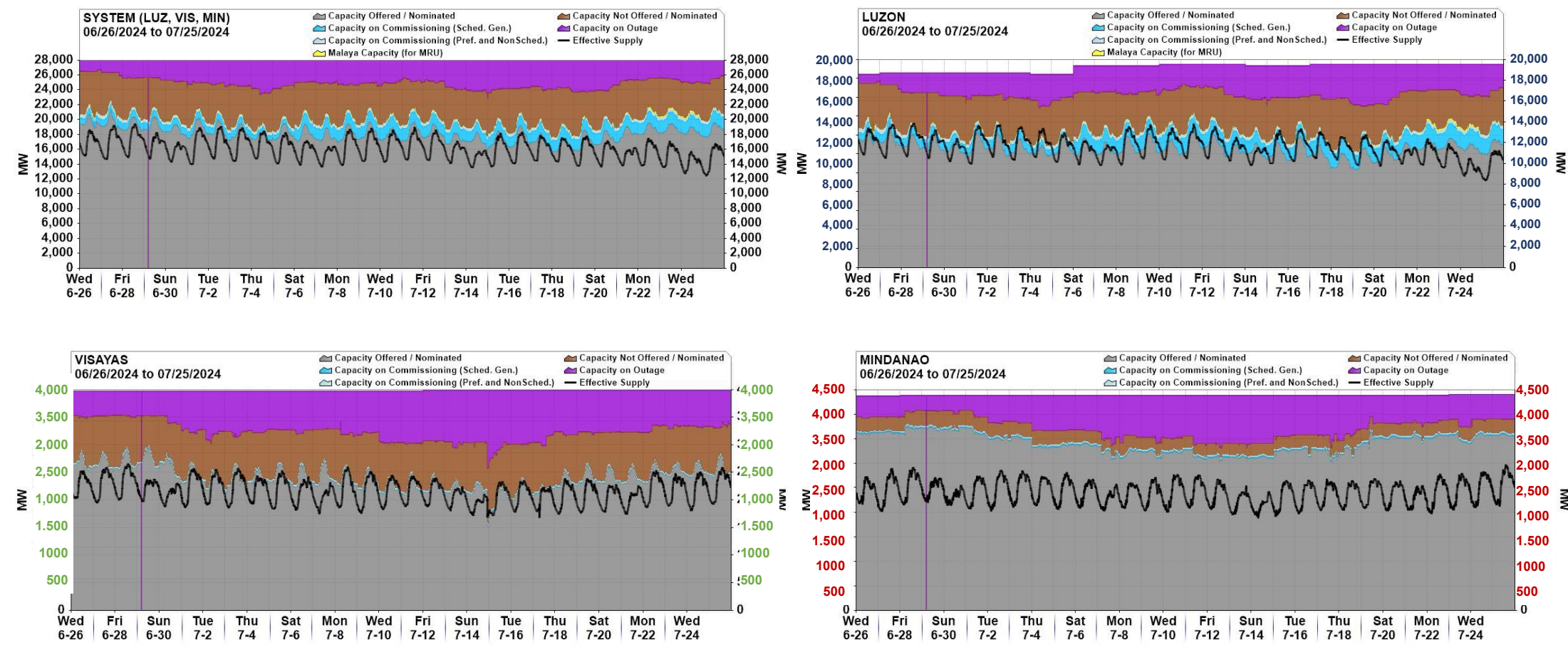
MARKET PRICE



There were instances of price spikes observed in all regions, primarily due to the thin supply margin caused by the unavailability of power plants. Despite the reduction in the system’s supply margin, average prices still managed to decrease by 2.93%. Secondary price caps were imposed in 2.3% of the total trading intervals, which caused reduction in market prices but distorts the economics of the market. Moreover, market prices beyond the offer price floor and cap were driven by the costs of losses and congestions resulting from the current locational marginal pricing design of the system.

MARKET OUTCOME

CAPACITY PROFILE



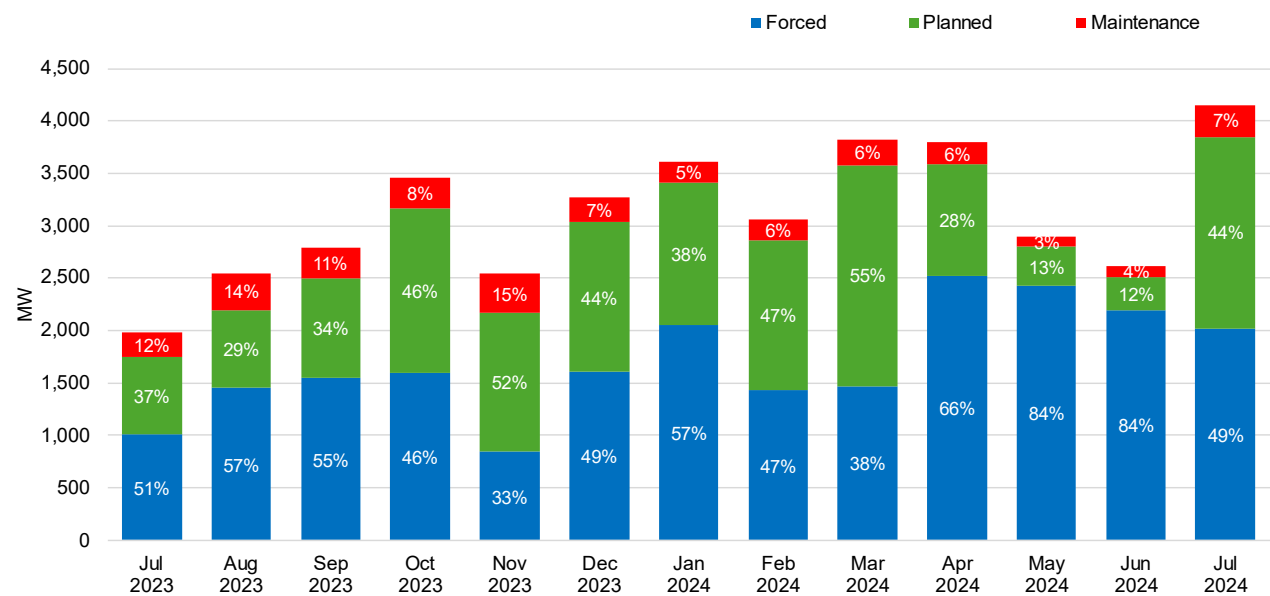
A 3.90% net increase in the total system registered capacity, reaching 29,408.4 MW, was noted during the current billing period. The increase was due to the five (5) newly registered power plants with a total capacity of 1,069.5 MW (2 natural gas, 1 hydro, 1 oil-based, and 1 coal power plant). However, 17.01% of the capacity (5,001 MW) was notably not offered or nominated, mostly due to resource and technical constraints. The Enforcement and Compliance Office (ECO) of PEMC will further investigate these capacities under this category.

Note: Data points with missing values indicate market intervention and/or suspension periods.

MARKET OUTCOME

CAPACITY ON OUTAGE

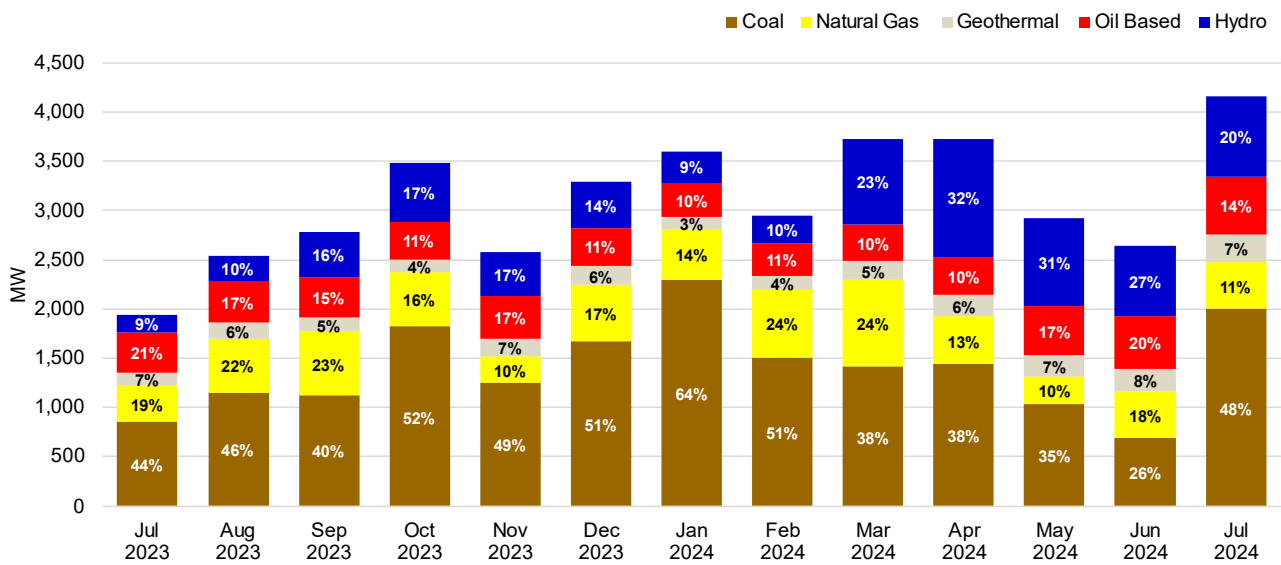
MONTHLY AND BY CATEGORY



An analysis of the past thirteen (13) months indicates that around 55%, on average, outages were categorized as forced outages, while planned outages constituted around 37% of the average outages. A noticeable increase in planned outages can be observed as compared with the previous month which may be brought about by the prohibition of its scheduling during the summer months.

Of all outages in the past 13 months, about 45% were contributed by coal-fired power plants, on average, while hydro and natural gas power plants contributed 18% and 17% average outages, respectively. When analyzing the increase in planned outages by plant type in the previous section, it is evident that coal-fired power plants were the primary contributors to this type of outage.

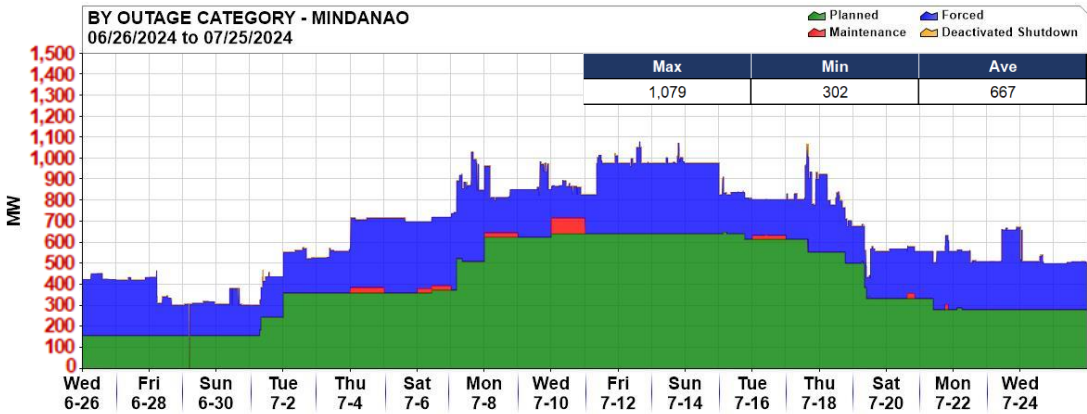
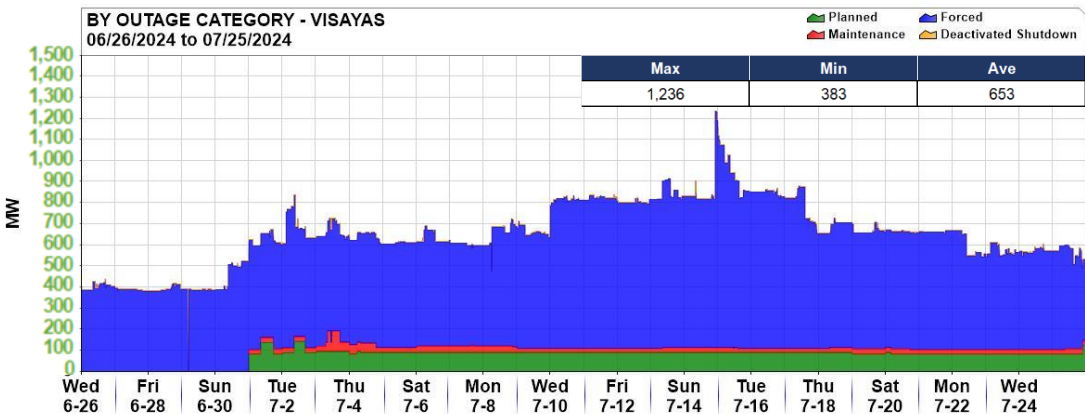
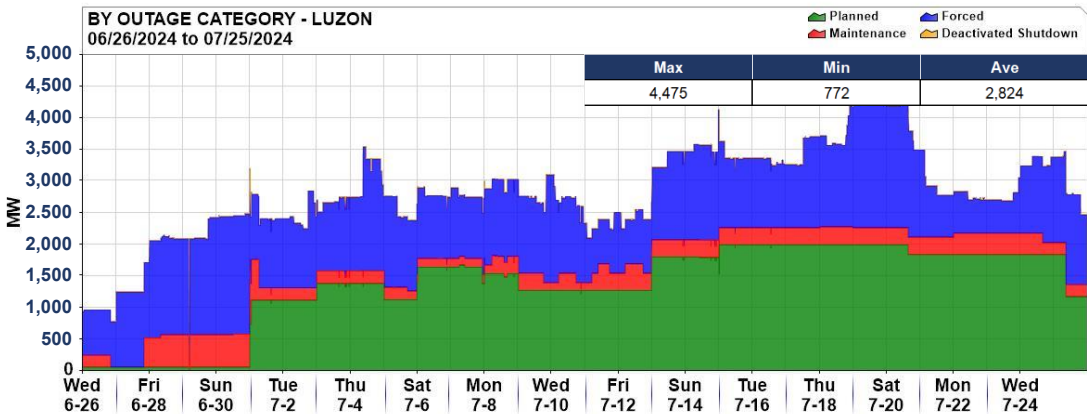
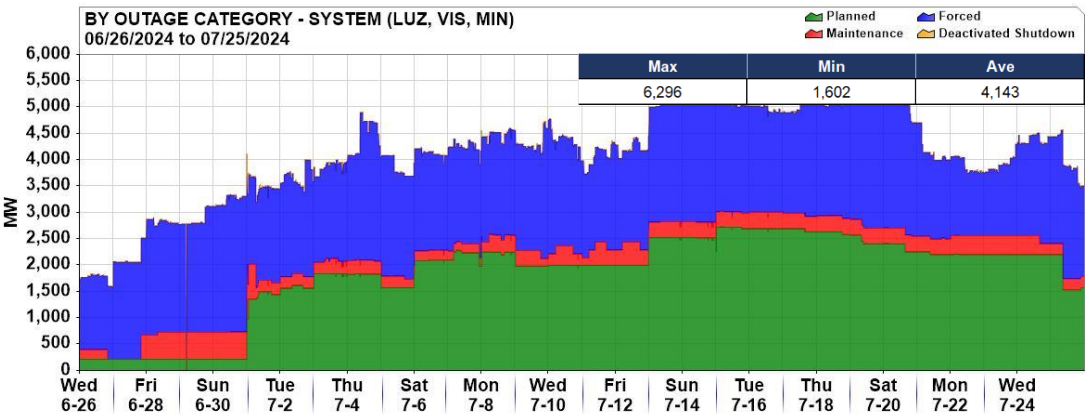
MONTHLY AND BY PLANT TYPE



MARKET OUTCOME

CAPACITY ON OUTAGE

BY CATEGORY



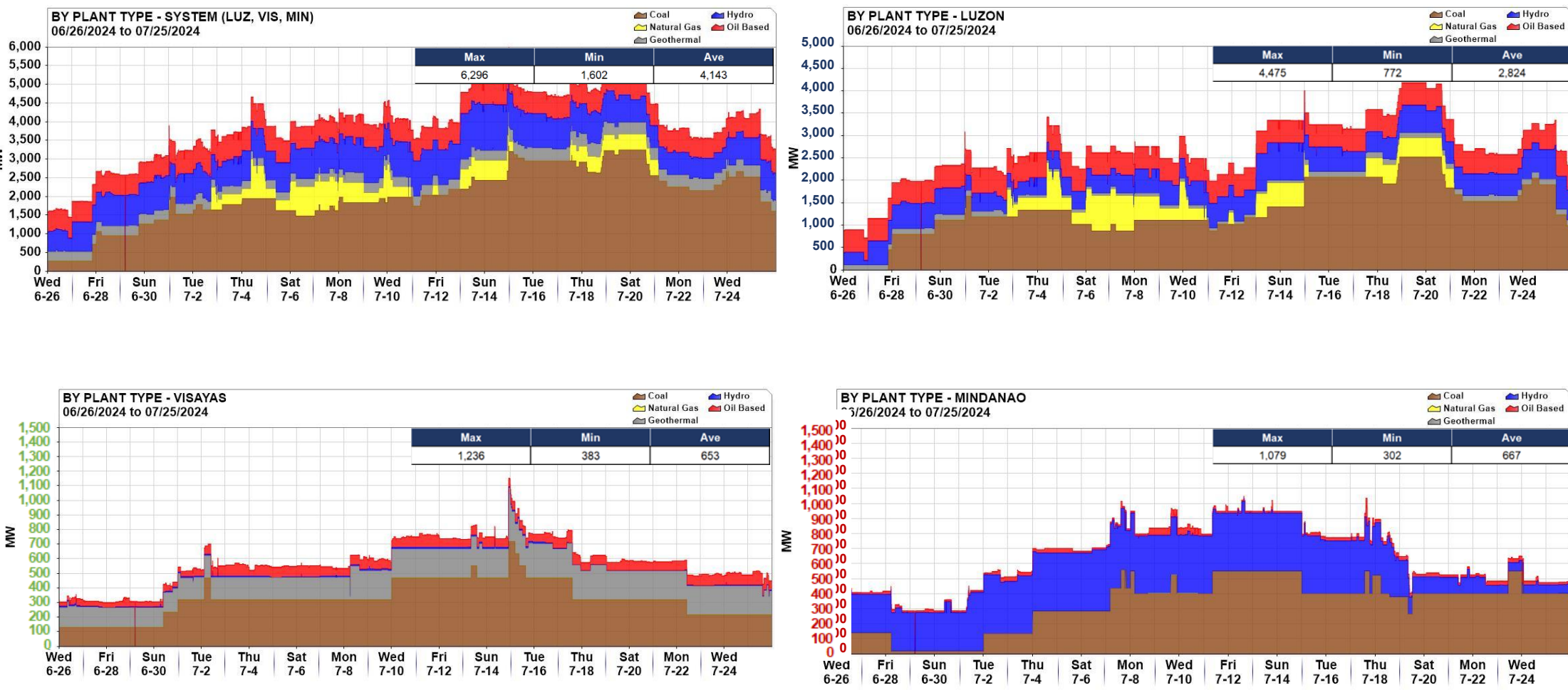
Of the 8,640 total trading intervals, 87.5% or 7,560 intervals experienced outage levels exceeding 3,000 MW, a 459.59% increase in the number of affected intervals from the previous month. These intervals were noted starting 29 June 2024 at 1805h trading interval until the end of the billing period, affecting the average supply margin decreasing to 802 MW, while the average price increased to PHP6,224/MWh. Moreover, during the outage levels below 3,000 MW, the average supply margin was 1,007 MW, and the average price was PHP4,156/MWh. This only shows that the capacities on outage highly affects the resulting market prices.

Note: Data points with missing values indicate market intervention and/or suspension periods.

MARKET OUTCOME

CAPACITY ON OUTAGE

BY PLANT TYPE

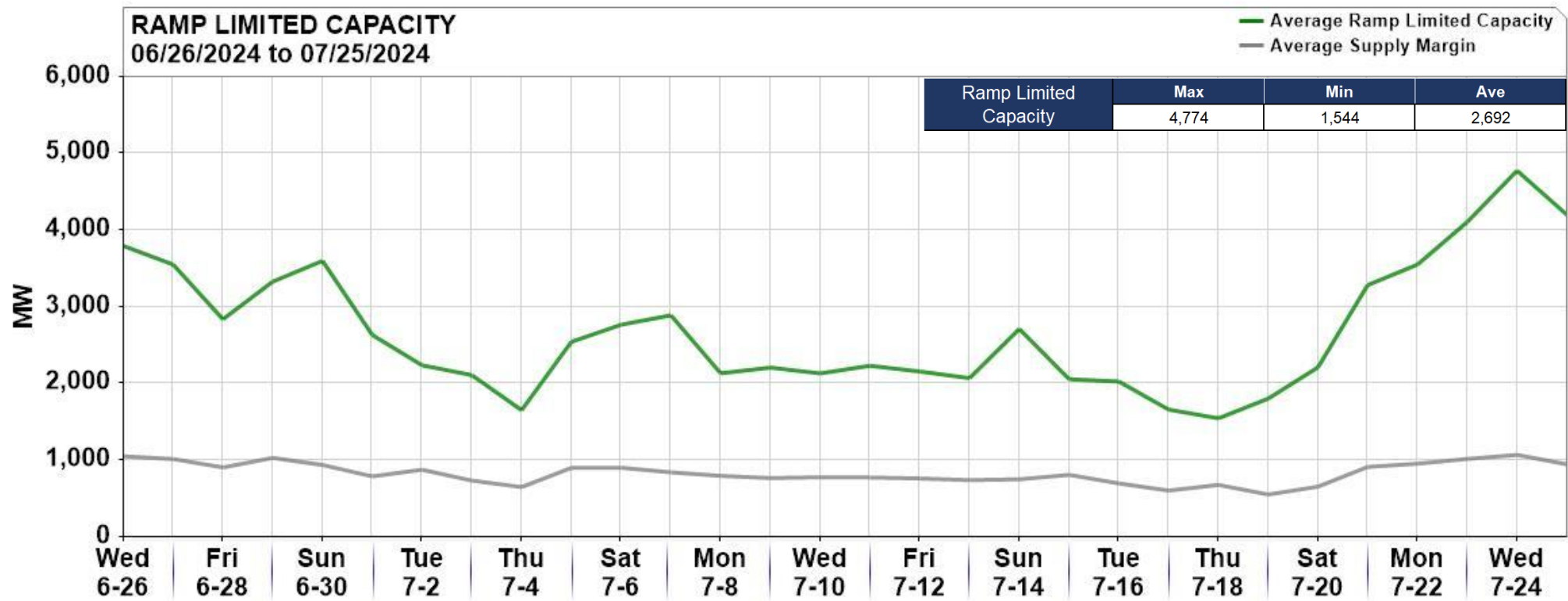


With the onset of the rainy season, coal-fired power plants performed their planned and scheduled maintenance, leading to a significant increase in overall capacity on outage and resulted in a total increase of 61.58% compared to the previous month.

Note: Data points with missing values indicate market intervention and/or suspension periods.

MARKET OUTCOME

RAMP LIMITED CAPACITY

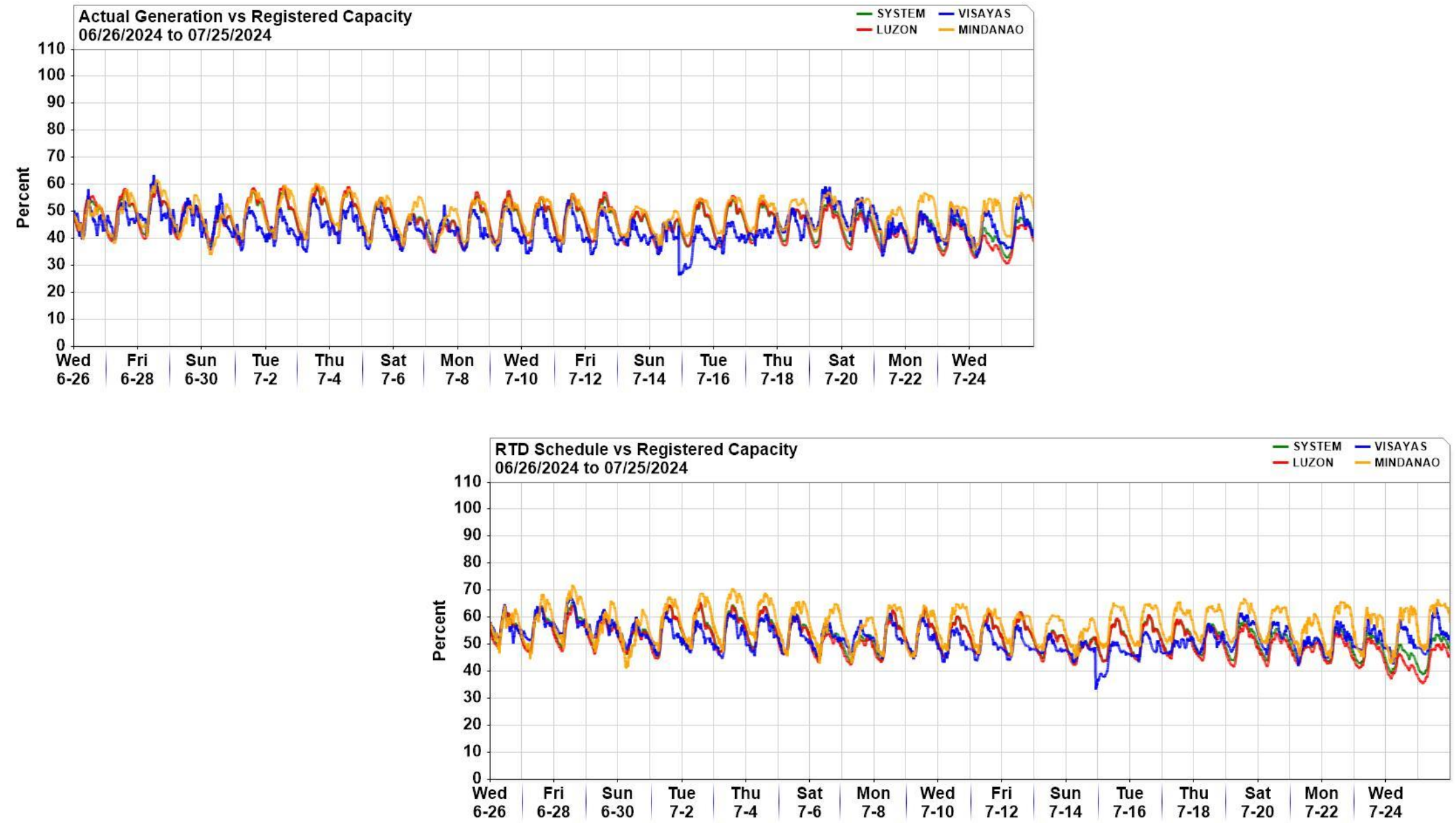


The average Ramp Limited capacity was observed to have increased by an average of 10%, from an average of 3,005 MW last billing period to 2,692 MW which were due to resource and technical limitations.

Note: Data points with missing values indicate market intervention and/or suspension periods.

MARKET OUTCOME

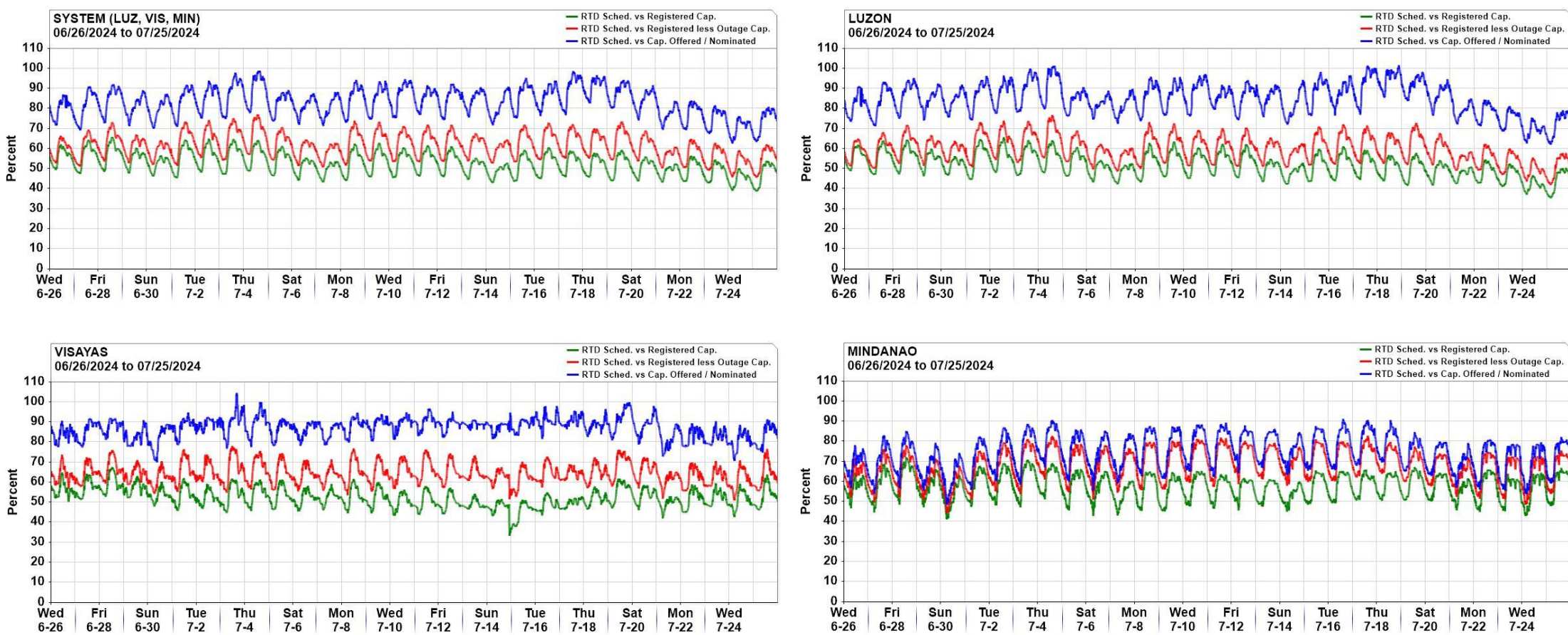
CAPACITY FACTOR



Note: Data points with missing values indicate market intervention and/or suspension periods.

MARKET OUTCOME

CAPACITY FACTOR

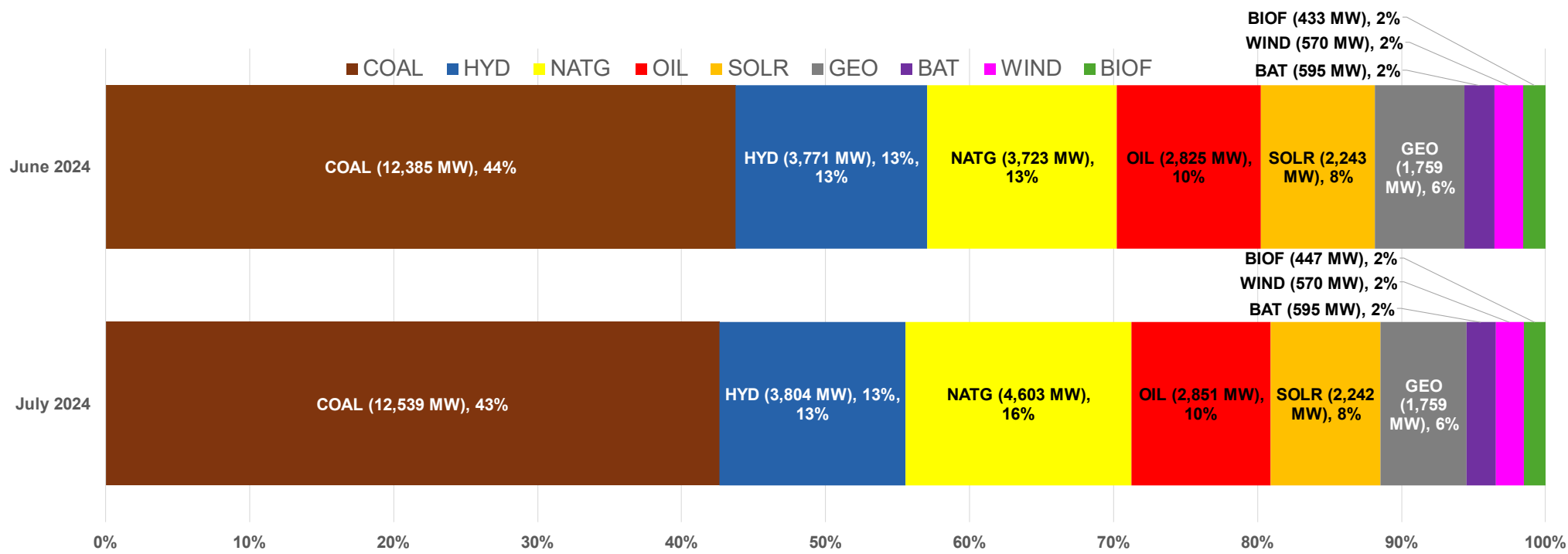


System-wide comparison of RTD schedule vs registered capacity averaged at 52%, while comparing it with registered less capacities on outage averaged at 61%. In terms of the capacities offered / nominated, the comparison with the RTD schedule averaged at 83%. Based on the type of the days, weekdays recorded higher utilization at 84% than weekends at 81%. While there were fluctuations in the capacity factors, overall capacity utilization remained to be high.

Note: Data points with missing values indicate market intervention and/or suspension periods.

MARKET OUTCOME

REGISTERED CAPACITY



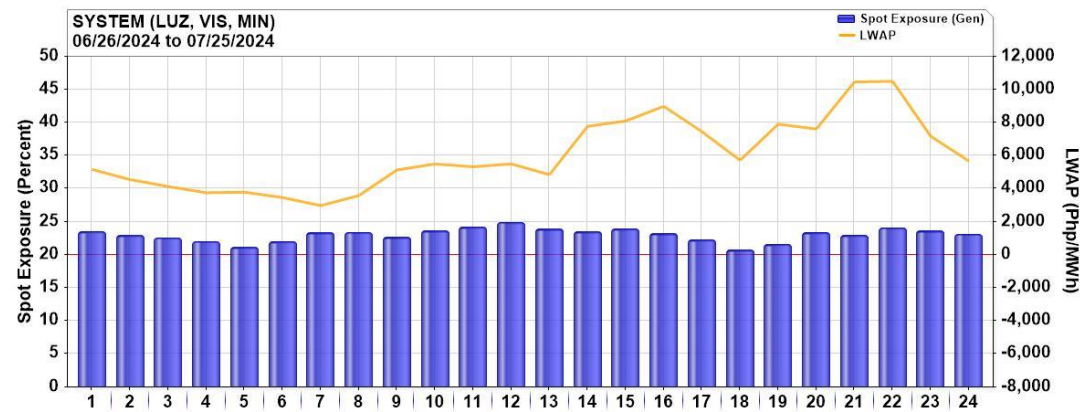
Total registered capacity increased by 1,104 MW in July 2024 billing month, primarily driven by the new registered five (5) power plants as discussed in the Capacity Profile section.

As of the billing period, the system is heavily supplied by coal power plants considering its baseload capabilities in the provision of electricity. This is followed by the hydro and natural gas power plants having almost equal shares in the total registered capacities.

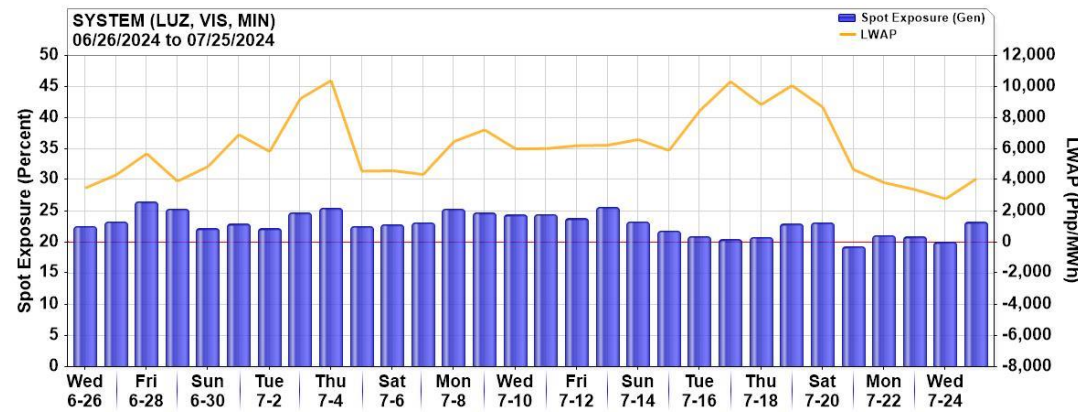
MARKET OUTCOME

SPOT EXPOSURE

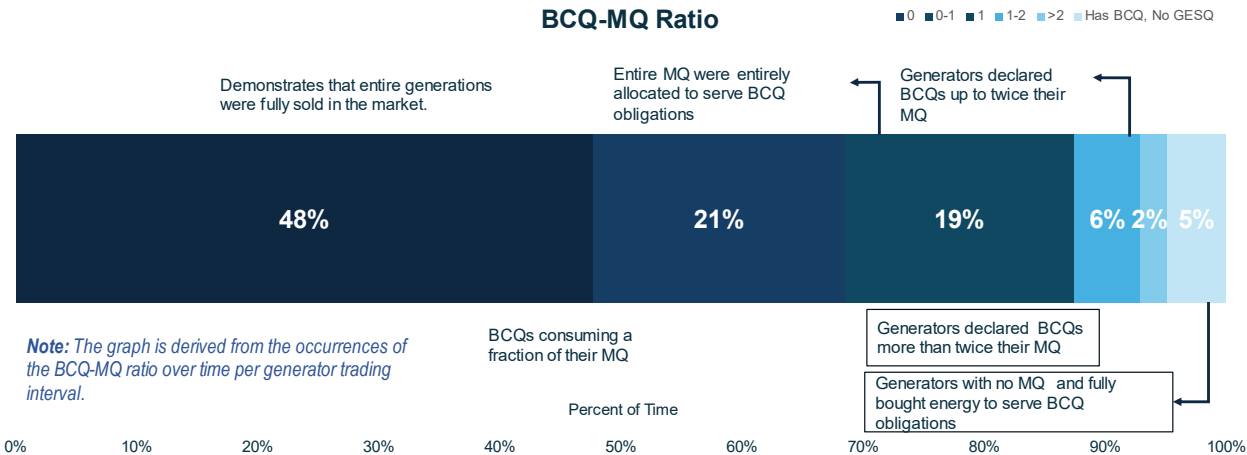
HOURLY SPOT



DAILY SPOT



The average spot quantities of generator participants for the July 2024 billing period amounted to 22.99%, with an accompanying average price of PHP6,134/MWh. Notably, the spot exposure exhibited variations based on the type of day, with weekdays recording an average of 22.95% at an average price of PHP6,367/MWh while weekends registered an average of 23.09% at an average price of PHP5,494/MWh.

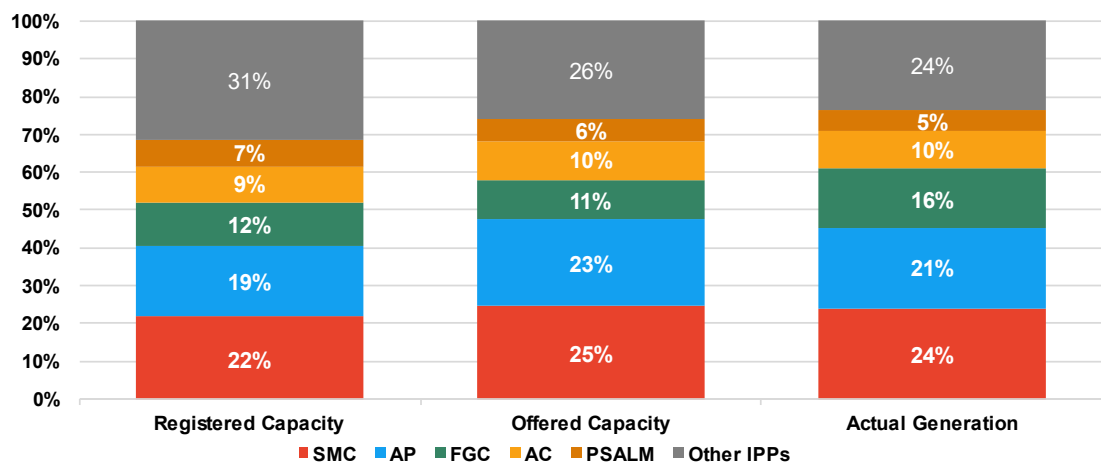


For the July 2024 billing period, majority of the metered quantities which were covered by the BCQ declarations in the market.

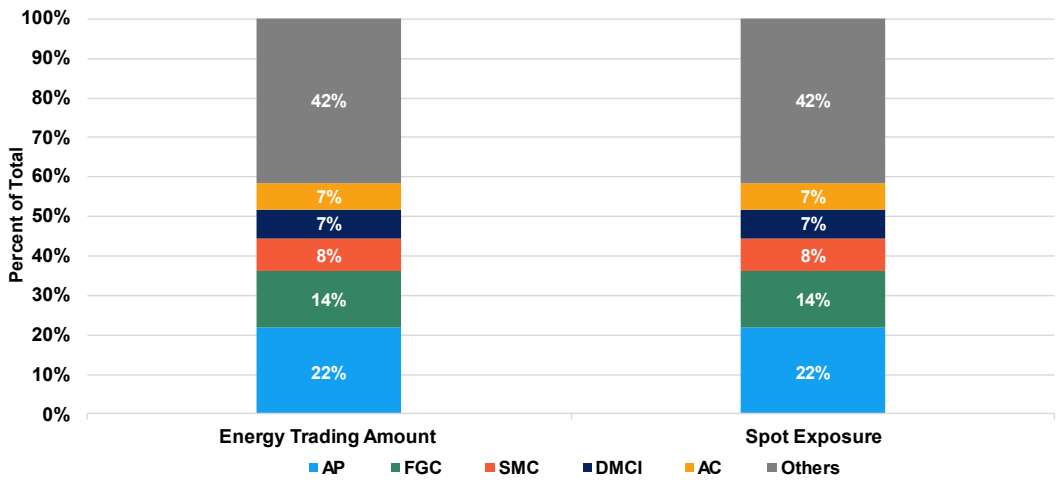
MARKET OUTCOME

STRUCTURAL COMPETITION

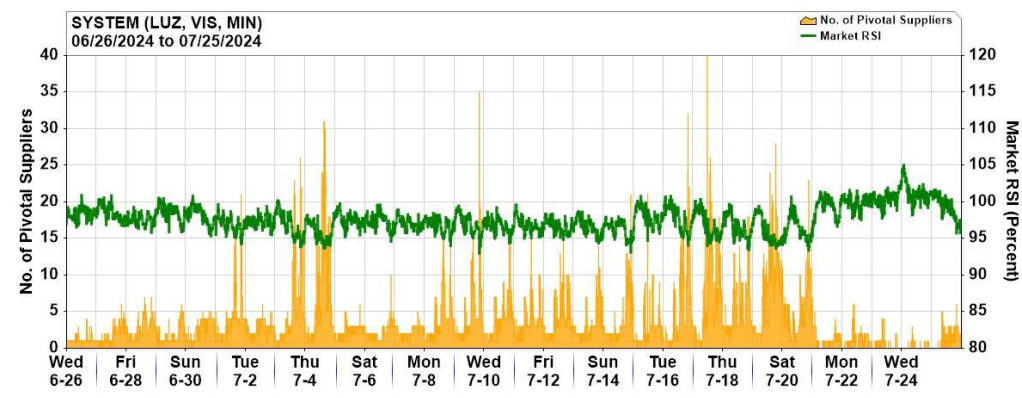
SYSTEM MARKET SHARES



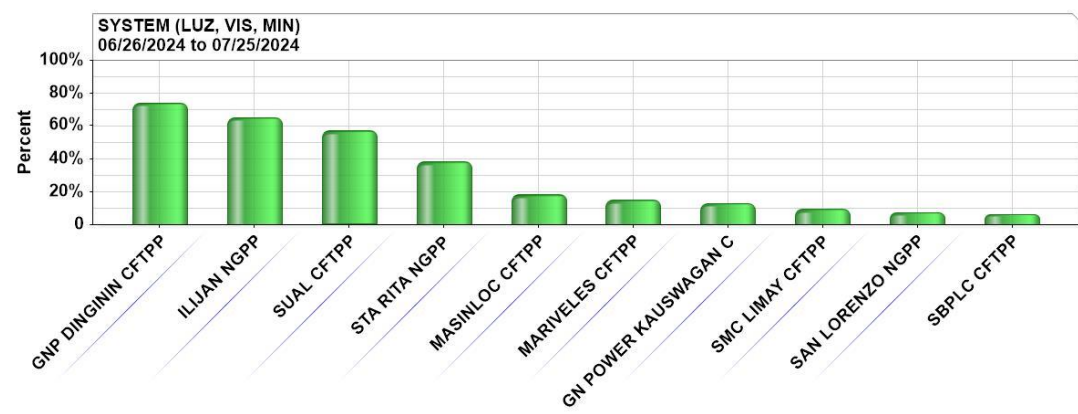
ETA AND SPOT EXPOSURE



SYSTEM RSI



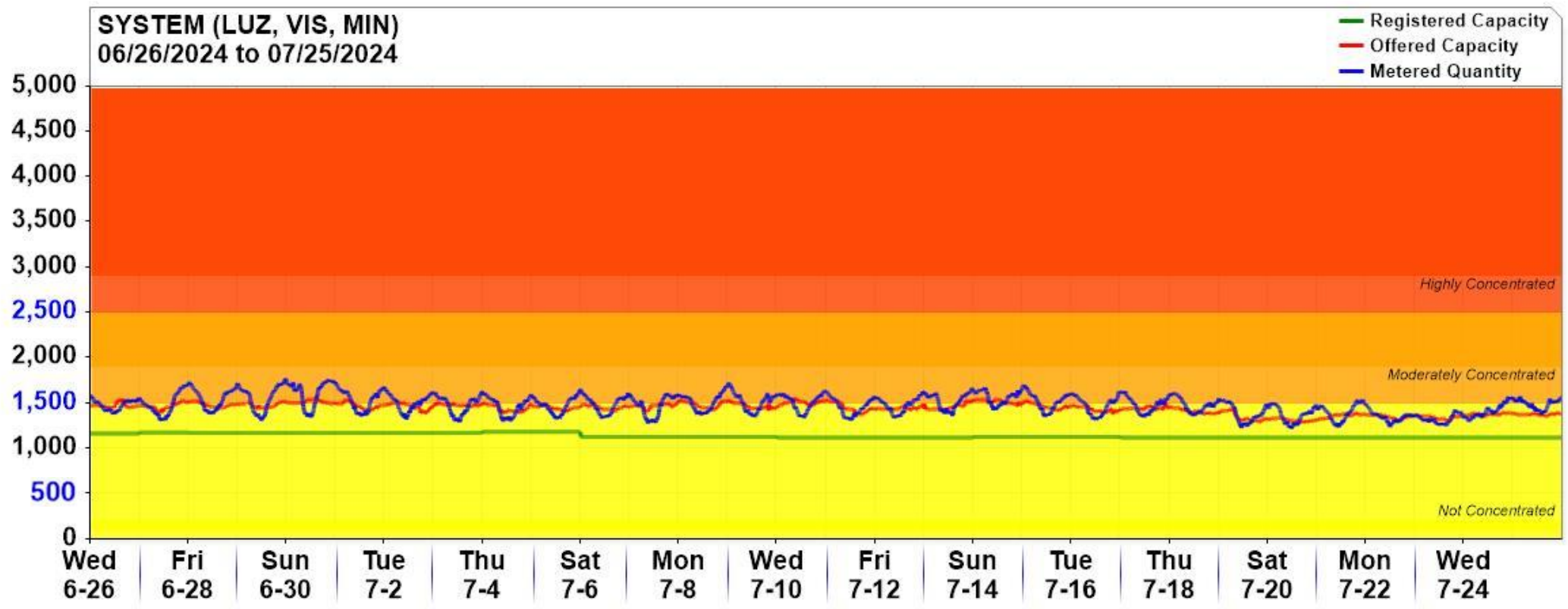
SYSTEM PIVOTAL SUPPLIERS



RSIs below 100 indicate a tight supply situation with presence of market power of market participants. The average price during these instances is significantly high at PHP6,517/MWh. Conversely, when RSI is 100 or above, it suggests a more competitive market with ample supply, with average prices being significantly lower at PHP2,993/MWh.

MARKET OUTCOME

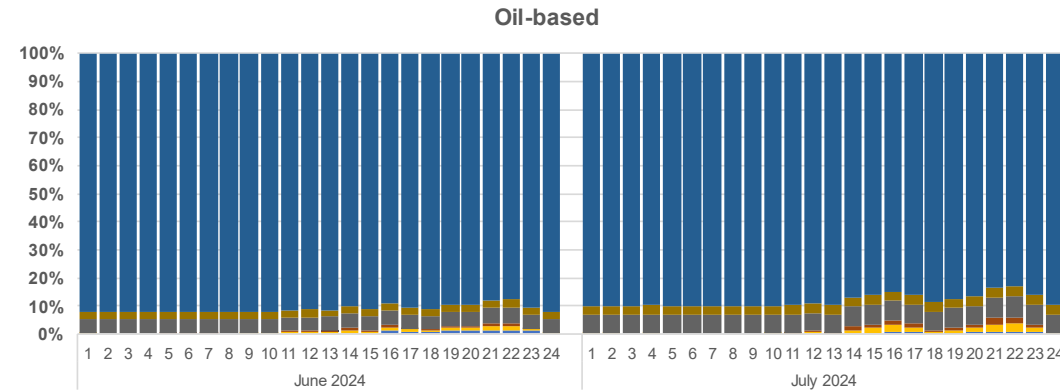
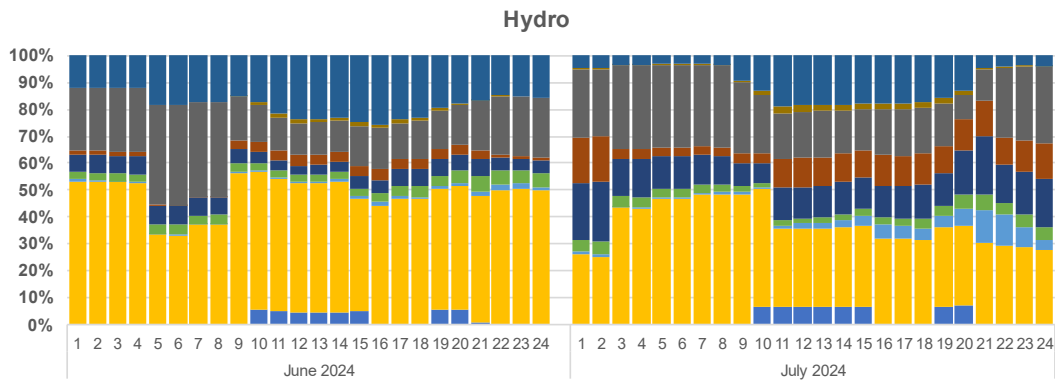
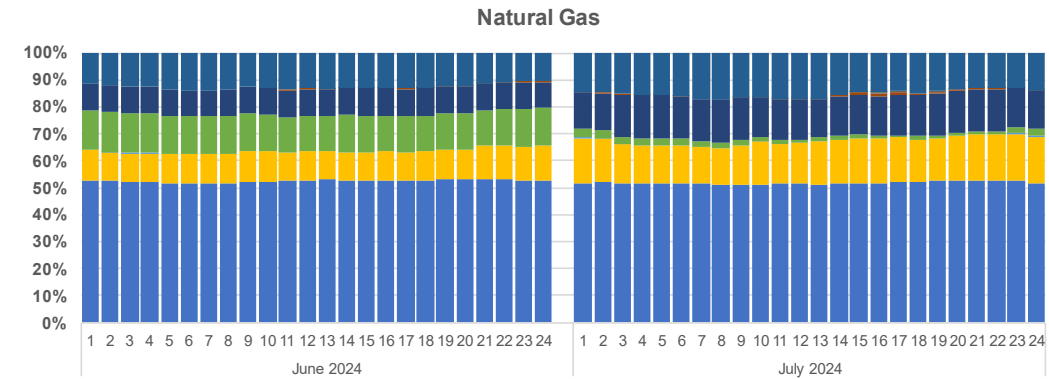
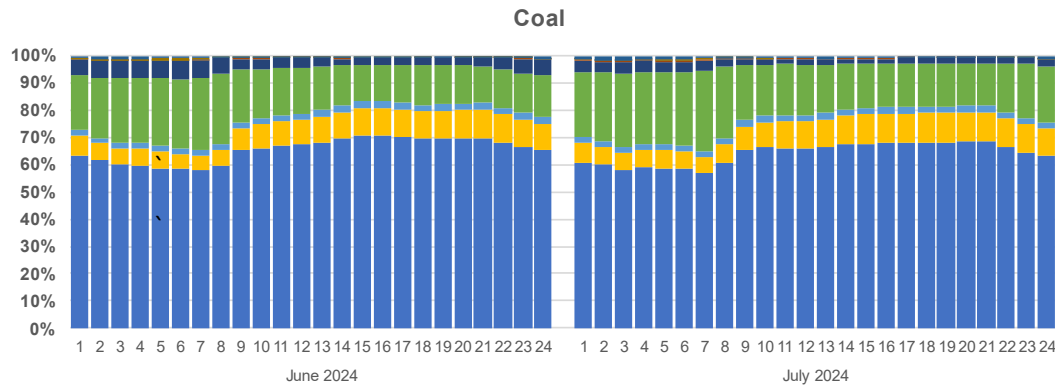
STRUCTURAL INDICES



The **Herfindahl-Hirschman Index (HHI)**, measured in terms of major participant groups as identified by the Energy Regulatory Commission, indicated a variation of a moderately concentrated and not concentrated market across all measures (Registered Capacity, Offered Capacity, and Actual Generation) during the July 2024 billing period. On average, 54% of the metered quantity is within the not concentrated HHI value, suggesting a healthy competition in terms of the actual delivered quantities to the system.

MARKET OUTCOME

STRUCTURAL INDICES



■ -10,000 to -7,500 ■ -7,500 to -5,000 ■ -5,000 to -2,500 ■ -2,500 to 0 ■ 0 to 2,500 ■ 2,500 to 5,000 ■ 5,000 to 7,500 ■ 7,500 to 10,000 ■ 10,000 to 12,500 ■ 12,500 to 15,000 ■ 15,000 above

Coal-fired, hydro, and oil-based power plants decreased their respective offer prices during the billing period. Only natural gas power plants posted an increase in their price offers for all observations. Moreover, with the onset of the rainy season, it can be depicted that hydro power plants had lower offered price as compared to the previous month suggesting ample fuel to deliver electricity at lower costs this billing period.

ANNEX

List of Major Plant Outages

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Luzon							
BAT	ALAMINOS BAT1	20	02/18/2024 9:30			Forced Outage	Unit problem on investigation.
BAT	MAGAPIT B	40	04/21/2023 0:01			Forced Outage	Unbalanced line current.
BIOF	G2REC	10.8	07/24/2024 18:34			Forced Outage	Emergency shutdown due to fuel supply system trouble.
BIOF	IPower 2	10.8	07/19/2024 11:11	07/23/2024 10:16	4	Forced Outage	Affected by the unplanned outage of Cabanatuan-Fatima 69kV line
BIOF	GIFT 2	6	07/13/2024 10:14	07/16/2024 22:51	3	Forced Outage	Unplanned outage due to problem at submerge.
BIOF	BT2020	13	07/01/2024 6:00			Maintenance Outage	Maintenance Outge until July 26 2024.
BIOF	IPower 1	10.8	06/30/2024 12:01	07/08/2024 9:01	8	Maintenance Outage	Maintenance Outage
BIOF	Hypergreen	10	06/14/2024 14:01			Forced Outage	Lack of Fuel
BIOF	GFII	15.8	05/18/2024 20:04			Forced Outage	Insufficient fuel
BIOF	CLEANG 1	10.8	02/13/2024 0:00			Forced Outage	Unplanned shutdown due to insufficient fuel.
COAL	SMC 3	150	07/24/2024 8:10			Forced Outage	Tripped due to high current air heater motor
COAL	Calaca 1	240	07/23/2024 22:19	07/25/2024 18:29	2	Forced Outage	Emergency Shutdown due to Air heater trouble.
COAL	SLTEC 2	124	07/23/2024 18:30			Forced Outage	Tripped due to low condenser vaccum.
COAL	SMC 1	150	07/18/2024 21:17	07/20/2024 19:03	2	Forced Outage	Coal conveying system trouble
COAL	SMC 3	150	07/18/2024 20:16	07/20/2024 18:46	2	Forced Outage	Coal conveying system trouble
COAL	SMC 2	150	07/18/2024 19:18	07/21/2024 12:04	3	Forced Outage	Coal conveying system trouble
COAL	SMC 4	150	07/18/2024 18:26	07/21/2024 3:53	3	Forced Outage	Coal conveying system trouble
COAL	GNP Dinginin 2	668	07/15/2024 0:01	07/25/2024 8:16	10	Planned Outage	Planned outage until July 27 2024.
COAL	GNP Dinginin 2	668	07/14/2024 23:18	07/15/2024 0:00	1	Forced Outage	Tripped due to deviation in temperature on Intercept Control Valve.
COAL	Calaca 1	240	07/13/2024 10:43	07/20/2024 15:30	7	Forced Outage	Reported Boiler tube leak.
COAL	SLPGC 1	150	07/12/2024 11:46	07/18/2024 4:42	6	Forced Outage	Emergency s/d due to reported boiler tube leak.
COAL	MPGC 4	150	07/11/2024 9:16	07/24/2024 15:43	13	Maintenance Outage	On Commissioning Test
COAL	Calaca 1	240	07/07/2024 23:05	07/11/2024 1:05	4	Forced Outage	Emergency shutdown due to trouble at trisector Air Heater - B
COAL	SMC 1	150	07/03/2024 4:03	07/07/2024 5:01	4	Forced Outage	Emergency shutdown due to furnace bed agglomeration.
COAL	Pagbilao 1	382	07/01/2024 0:49			Planned Outage	Planned outage July 1 - September 10 2024
COAL	MPGC U1	150	07/01/2024 0:06	07/20/2024 15:05	19	Planned Outage	Planned Outage until July 22 2024.
COAL	Masinloc 2	344	07/01/2024 0:00			Planned Outage	Planned Outage until July 30 2024.
COAL	GMEC Power 2	316	06/29/2024 17:47	07/05/2024 9:22	6	Forced Outage	Emergency shutdown due to boiler tube leak at lower furnace.
COAL	Masinloc 2	344	06/27/2024 23:40	06/30/2024 23:59	3	Forced Outage	Emergency shutdown due to boiler slagging.
COAL	QPPL	460	06/27/2024 20:00	07/01/2024 6:08	4	Maintenance Outage	To facilitate boiler tube leak repair on reheater section and inspection of boiler penthouse.
GEO	PALAYAN BINARY	31	07/24/2024 6:04			Forced Outage	The unit is under test and commissioning. PCATC is valid until September 7 2024.
GEO	Bacman 3	20	07/17/2024 13:30	07/18/2024 11:19	1	Forced Outage	Tripped by transformer protection.
GEO	Tiwi 2	60	07/15/2024 0:00			Planned Outage	Planned outage until August 8 2024
GEO	Makban Ormat 2	3	07/05/2024 0:12	07/14/2024 9:32	9	Planned Outage	Planned Outage until July 18 2024.
GEO	Makban Ormat 1	3	07/05/2024 0:12	07/14/2024 9:32	9	Planned Outage	Planned Outage until July 18 2024.
GEO	Bacman 3	20	06/29/2024 18:50	06/30/2024 1:45	1	Forced Outage	Tripped due to control valve problem.
GEO	Bacman 1	60	06/23/2024 9:42	07/02/2024 13:57	9	Forced Outage	Exciter Problem.
GEO	Tiwi 1	60	06/18/2024 0:11			Forced Outage	Steam supply diverted to Unit 2.
HYD	Angat M 3	50	07/20/2024 8:10			Forced Outage	No irrigation requirement from NIA.
HYD	Angat M 2	50	07/20/2024 8:10			Forced Outage	No irrigation requirement from NIA.
HYD	Ambuklao 2	37.5	07/18/2024 9:01	07/23/2024 17:00	5	Forced Outage	Low water elevation.
HYD	NMHC	3.9	07/16/2024 15:51	07/22/2024 7:30	6	Forced Outage	Insufficient water supply
HYD	San Roque 2	145	07/13/2024 0:01	07/14/2024 23:59	1	Forced Outage	Declared unavailable due to low dam water elevation.

ANNEX

List of Major Plant Outages

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Luzon							
HYD	San Roque 1	145	07/13/2024 0:01	07/14/2024 23:59	1	Forced Outage	Declared unavailable due to low dam water elevation.
HYD	Angat M 3	50	07/10/2024 7:10	07/16/2024 13:11	6	Forced Outage	No Irrigation Diversion Requirement(IDR) from NIA.
HYD	Angat M 2	50	07/10/2024 7:10	07/16/2024 13:03	6	Forced Outage	No Irrigation Diversion Requirement(IDR) from NIA.
HYD	San Roque 3	145	07/08/2024 0:01			Planned Outage	Planned outage until August 30 2024.
HYD	Angat M 3	50	07/03/2024 15:34	07/09/2024 13:00	6	Forced Outage	No Irrigation Diversion Requirement from NIA.
HYD	Angat M 2	50	07/03/2024 15:34	07/09/2024 13:00	6	Forced Outage	No Irrigation Diversion Requirement from NIA.
HYD	Angat M 3	50	07/01/2024 7:00	07/02/2024 7:21	1	Forced Outage	No irrigation requirement from NIA.
HYD	Angat M 2	50	07/01/2024 7:00	07/02/2024 7:21	1	Forced Outage	No irrigation requirement from NIA.
HYD	Kalayaan 1	183	07/01/2024 0:01			Planned Outage	Planned Outage until September 18 2024.
HYD	Binga 2	35	06/30/2024 20:12	07/01/2024 0:56	1	Forced Outage	Generator problem.
HYD	Ambuklao 3	37.5	06/30/2024 0:57	07/01/2024 5:43	1	Forced Outage	Lubricating oil system problem.
HYD	Angat M 1	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	San Roque 3	145	06/27/2024 0:01	07/01/2024 0:01	4	Forced Outage	Low water elevation
HYD	San Roque 2	145	06/27/2024 0:01	07/01/2024 0:01	4	Forced Outage	Low water elevation
HYD	San Roque 1	145	06/27/2024 0:01	07/01/2024 0:01	4	Forced Outage	Low water elevation
HYD	BINENG 1	19.8	06/26/2024 1:01	06/28/2024 17:23	2	Forced Outage	Insufficient water supply
HYD	MATUNO 1	8.7	06/24/2024 8:05	07/03/2024 11:52	9	Forced Outage	Emergency shutdown to conduct repair of tunnel inlet.
HYD	Kalayaan 3	184.6	06/21/2024 0:00	06/26/2024 19:31	5	Maintenance Outage	Maintenance Outage until June 30 2024.
HYD	TIBAG	5.8	05/26/2024 16:25			Forced Outage	Affected by line tripping during the passage of TS Aghon. The generator is under test and commissioning.
HYD	Masiway	12	05/21/2024 17:01			Forced Outage	No IDR
HYD	Pantabangan 2	60	05/14/2024 0:00			Forced Outage	No IDR.
HYD	Pantabangan 1	60	05/14/2024 0:00			Forced Outage	No IDR.
HYD	BUTAO 1	1.3	03/23/2024 11:17			Forced Outage	Insufficient water supply
HYD	SLANGN 1	2.4	12/11/2023 19:57	07/24/2024 12:45	226	Forced Outage	Unplanned outage due to insufficient water supply.
HYD	Angat A 2	6	11/06/2023 8:01			Planned Outage	Total Plant shutdown (Planned Outage)
HYD	Angat M 4	50	02/14/2022 0:00			Planned Outage	Planned outage.
NATG	San Gabriel	417.4	07/17/2024 11:17	07/21/2024 3:17	4	Forced Outage	The unit tripped due to suspected Instrumentation and Control trouble.
NATG	Sta. Rita 4	264	07/12/2024 23:40	07/14/2024 23:56	2	Planned Outage	Planned outage until July 14 2024.
NATG	Sta. Rita 3	265.5	07/12/2024 23:24	07/14/2024 23:59	2	Planned Outage	Planned outage until July 14 2024.
NATG	Sta. Rita 2	255.7	07/11/2024 0:00	07/12/2024 1:47	1	Forced Outage	Emergency shutdown due to LNG vent valve trouble
NATG	Ilijan A2	190	07/09/2024 19:52	07/10/2024 4:53	1	Forced Outage	Manually tripped due to loss of control on system parameters
NATG	Ilijan A3	220	07/09/2024 19:51	07/10/2024 2:35	1	Forced Outage	Manually tripped due to loss of control on system parameters
NATG	Ilijan A1	190	07/09/2024 19:37	07/10/2024 1:37	1	Forced Outage	Manually tripped due to loss of control on system parameters
NATG	San Lorenzo 1	265	07/07/2024 23:48	07/09/2024 0:12	2	Planned Outage	Planned Outage
NATG	Sta. Rita 2	255.7	07/05/2024 23:56	07/07/2024 22:09	2	Planned Outage	Planned Outage until July 7 2024.
NATG	Sta. Rita 1	257.3	07/05/2024 23:25	07/07/2024 23:59	2	Planned Outage	Planned Outage until July 7 2024.
NATG	San Lorenzo 2	265	07/05/2024 0:00	07/10/2024 20:04	5	Forced Outage	Extended outage
NATG	San Lorenzo 2	265	07/02/2024 23:57	07/04/2024 23:59	2	Planned Outage	Planned Outage until July 4 2024
NATG	Ilijan A2	190	07/02/2024 17:24	07/03/2024 0:27	1	Forced Outage	Tripped due to condenser low vaccum faulty signal cause by lightning
OIL	Malaya 2	130	07/24/2024 21:24			Forced Outage	Tripped due to loss prime of CWP
OIL	TMO Unit 1	63.8	07/22/2024 0:01			Maintenance Outage	Annual PMS of Switchyard.
OIL	Limay 6	60	07/01/2024 0:01	07/05/2024 16:37	4	Maintenance Outage	Maintenance Outage until July 7 2024.
OIL	Limay 7	60	07/01/2024 0:01			Maintenance Outage	Maintenance Outage until September 4 2024
OIL	Limay 7	60	05/28/2024 20:58	07/01/2024 0:00	34	Forced Outage	Tripped due to high vibration alarm.
OIL	Malaya 2	130	04/18/2024 20:00	07/22/2024 10:03	95	Forced Outage	Shutdown due to furnace pressure high.

ANNEX

List of Major Plant Outages

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Luzon							
OIL	Republic 1	5.5	04/04/2024 19:20			Forced Outage	Declared unavailable due to unsual sound and smoke came out at turbocharger side
OIL	Malaya 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
SOLR	BURGOS U2	3.4	07/04/2024 6:33	07/09/2024 17:39	5	Maintenance Outage	Preventive Maintenance.
WIND	Burgos 1	150	07/11/2024 4:51	07/12/2024 17:20	1	Maintenance Outage	Affected by the Annual PMS of EDC Burgos Wind Power on their Burgos Wind Substation and Transmission Line.
WIND	Burgos 1	150	07/08/2024 5:19	07/09/2024 17:58	1	Maintenance Outage	Affected by the maintenance activities on their owned and maintained Laoag-Burgos 115kV line.
Visayas							
BAT	Kabankalan Bat	20	07/03/2024 7:01	07/04/2024 19:01	1	Maintenance Outage	Annual PMS
BIOF	San Carlos Bio	19.5	07/24/2024 10:45			Forced Outage	Shutdown due to insufficient fuel supply.
BIOF	San Carlos Bio	19.5	07/23/2024 20:21	07/24/2024 1:32	1	Forced Outage	Tripped with indication Main steam temperature high high.
BIOF	San Carlos Bio	19.5	07/12/2024 22:40	07/22/2024 6:46	10	Forced Outage	Shutdown due to insufficient fuel supply.
BIOF	San Carlos Bio	19.5	07/03/2024 22:51	07/04/2024 21:17	1	Forced Outage	Tripped due to loss of DCS.
BIOF	San Carlos Bio	19.5	06/14/2024 14:26	07/03/2024 14:42	19	Forced Outage	Offline due to main compressor problem.
BIOF	NTNEGB 1	25	05/22/2024 15:59			Forced Outage	Insufficient fuel supply (bagasse).
BIOF	VMC	2.5	04/21/2024 16:20			Forced Outage	Weekly maintenance.
BIOF	URC 1	30	04/13/2024 4:37			Forced Outage	Offline due to insufficient cane supply.
BIOF	South Negros	25	03/28/2024 10:30			Forced Outage	Emergency cut out due to insufficient fuel supply (bagasse).
BIOF	HPCO 1	2	11/12/2023 20:00			Forced Outage	Defective auxiliary of vibration meter.
BIOF	SCBE	7.4	03/31/2023 10:35			Forced Outage	Plant shutdown
COAL	CEDC 2	83.4	07/14/2024 21:45	07/15/2024 4:13	1	Forced Outage	Under Voltage
COAL	CEDC 1	83.2	07/14/2024 21:45	07/15/2024 14:52	1	Forced Outage	Under Voltage
COAL	CEDC 3	83.1	07/14/2024 21:45	07/15/2024 8:27	1	Forced Outage	Under Voltage
COAL	PEDC 3	150	07/09/2024 23:37	07/17/2024 14:07	8	Forced Outage	low furnace temperature
COAL	PEDC 2	83.7	07/01/2024 0:37			Planned Outage	Preventive maintenance schedule
COAL	Kepco Salcon 2	103	06/30/2024 8:50	07/22/2024 9:47	22	Forced Outage	Emergency shutdown due to suspected boiler tube leak 3rd floor front wall area
COAL	PALM 1	135	03/31/2024 0:00			Forced Outage	Extended maintenance
GEO	Leyte 3	40.2	07/25/2024 21:12			Planned Outage	as per annual GOMP
GEO	Leyte 1	41	07/18/2024 8:31	07/19/2024 0:47	1	Forced Outage	Emergency shutdown to effect repair of steam leak at turbine left hand inlet downstream of the DC motorized valve.
GEO	PGPP1 Unit 3	35.5	07/15/2024 17:54	07/17/2024 1:01	2	Forced Outage	Emergency shutdown due to Lube Oil Leak.
GEO	PGPP2 Unit 2	20	07/14/2024 21:47	07/15/2024 1:24	1	Forced Outage	Tripped due to condenser vacuum high high.
GEO	Mahanagdong B1	5	07/14/2024 21:47	07/15/2024 0:53	1	Forced Outage	Due to activation over voltage relay.
GEO	Mahanagdong A1	5	07/14/2024 21:47	07/15/2024 22:10	1	Forced Outage	Due to activation over voltage relay.
GEO	PGPP2 Unit 1	20	07/14/2024 21:46	07/15/2024 0:31	1	Forced Outage	Tripped due to condenser vacuum low low.
GEO	Malitbog 2	77.5	07/08/2024 5:43			Forced Outage	Due to high vibration
GEO	Upper Mahiao 2	30	07/01/2024 15:20	07/08/2024 15:22	7	Forced Outage	Due to lack of steam.
GEO	PGPP2 Unit 3	19.5	07/01/2024 0:01			Maintenance Outage	Planned maintenance outage.
GEO	Upper Mahiao 4	27.5	06/30/2024 18:31	07/01/2024 14:54	1	Forced Outage	Due to Under & Over (Time) voltage and lock-out relay activation.
GEO	Upper Mahiao 2	30	06/26/2024 16:54	07/01/2024 2:36	5	Forced Outage	Lack of steam
GEO	Mahanagdong B1	5	06/26/2024 15:44	06/27/2024 15:45	1	Forced Outage	EHC (Electro-hydraulic Controller) fault
GEO	Malitbog 3	75.06	06/09/2024 15:48	07/25/2024 14:11	46	Forced Outage	Turbine generator no. 3 high vibration indication
GEO	Upper Mahiao 2	30	05/16/2024 14:03	06/26/2024 9:37	41	Forced Outage	due to lack of steam
GEO	Upper Mahiao 1	26.9	11/25/2022 11:07			Forced Outage	Due to lack of steam
HYD	THC 2	5.1	07/23/2024 13:46			Forced Outage	Affected by the tripping of 69kV Taft feeder.
HYD	SMHC U2	1.25	07/08/2024 17:03	07/09/2024 6:30	1	Forced Outage	Isolated due to tripping of Tagbilaran-Garcia 69kV line.
HYD	THC 1	5	07/06/2024 23:11	07/17/2024 8:25	11	Forced Outage	Low water at forebay.
HYD	THC 3	5.1	07/05/2024 8:35	07/16/2024 11:15	11	Forced Outage	due to lack of water

ANNEX

List of Major Plant Outages

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Visayas							
HYD	THC 3	5.1	06/30/2024 11:20	07/04/2024 20:25	4	Forced Outage	due to a lack of water
HYD	SMHC U1	1.25	06/28/2024 22:21	06/30/2024 9:00	2	Forced Outage	Emergency stop due to power transformer line 2 terminal bushing hotspot 6.6kV side.
HYD	SMHC U2	1.25	06/28/2024 22:21	06/29/2024 7:01	1	Forced Outage	Emergency stop due to power transformer line 2 terminal bushing hotspot 6.6kV side.
HYD	THC 1	5	06/28/2024 8:50	07/04/2024 22:20	6	Forced Outage	Due to lack of water
HYD	TIMBABAN HEP1	18.9	06/25/2024 23:43	06/26/2024 0:06	1	Forced Outage	Affected by line fault
HYD	THC 1	5	06/22/2024 19:26	06/27/2024 19:28	5	Forced Outage	due to activation of collective fault from synchronization device.
HYD	THC 3	5.1	06/22/2024 19:10	06/26/2024 21:05	4	Forced Outage	due to activation of collective fault from synchronization device.
OIL	BDPP Unit 1	4	07/25/2024 8:01			Maintenance Outage	18K PMS TOP OVERHAULING AND SERVICING OF TURBO CHARGER
OIL	PDPP1 Unit 3	5	07/24/2024 13:09	07/25/2024 11:07	1	Forced Outage	Auto-tripped (affected by the system disturbance)
OIL	PDPP1 Unit 2	5	07/24/2024 6:44			Forced Outage	Emergency cut-out due to high bearing temperature at Main Bearing 1.
OIL	PDPP1 Unit 2	5	07/23/2024 23:40	07/24/2024 5:25	1	Forced Outage	Stuck up fuel injection pump cylinder 10
OIL	BDPP Unit 3	4.2	07/23/2024 20:11	07/25/2024 17:18	2	Forced Outage	High temperature of stator winding phase A.
OIL	BDPP Unit 4	4	07/23/2024 11:41	07/24/2024 16:25	1	Forced Outage	Severe gas leak between cylinder head and jacket liner of cylinder no. 4.
OIL	PDPP3 E	12	07/22/2024 22:01	07/23/2024 8:10	1	Forced Outage	High exhaust gas temperature cylinder A2
OIL	PDPP3 G	13	07/21/2024 18:13			Forced Outage	Abnormal sound at TC B bank
OIL	BDPP Unit 1	4	07/20/2024 21:33	07/21/2024 2:15	1	Forced Outage	SEVERE FUEL LEAK AT CYLINDER NO. 8.
OIL	TPVI 6	5.5	07/19/2024 15:45	07/20/2024 20:59	1	Forced Outage	FAILED TO CUT-IN DUE TO SEA WATER PUMP NO. 4 AND 5 PROBLEM
OIL	PB101 Unit 4	6	07/19/2024 14:35			Forced Outage	Frequent surging of turbo charger at both banks
OIL	PDPP1 Unit 2	5	07/18/2024 10:35	07/19/2024 19:20	1	Forced Outage	Abnormal sound at B Bank
OIL	BDPP Unit 4	4	07/18/2024 8:01	07/20/2024 17:10	2	Maintenance Outage	18k running hours minor PMS (Top overhauling and Servicing of Turbocharger Assembly).
OIL	PDPP3 G	13	07/16/2024 20:00	07/17/2024 22:18	1	Forced Outage	emergency out due to due to excessive exhaust gas leak cause by busted bellows cylinder B1 and B2
OIL	PB101 Unit 4	6	07/16/2024 16:30	07/17/2024 0:26	1	Forced Outage	Emergency cutout due to broken fuel injection pump bolts at cylinder 6R
OIL	PDPP3 C	12	07/13/2024 21:35	07/14/2024 8:06	1	Forced Outage	Abnormal sound at lube oil pump motor
OIL	BDPP Unit 2	4	07/13/2024 8:01	07/15/2024 13:32	2	Maintenance Outage	26k running hours minor PMS (Top overhauling)
OIL	PDPP3 H	13	07/12/2024 0:01	07/22/2024 23:53	10	Forced Outage	1. Check-up of main bearing and big end bearing on loaded side.2. Check-up of eccentricity of rotor alignment to T/C gas inlet casing3. Check engine-generator alignment4. Conduct fuel injection re-timing5. Check engine auxiliaries pump-motor alignment
OIL	CENPRI 1	4.5	07/11/2024 22:30	07/12/2024 16:48	1	Forced Outage	Shutdown due excessive gas leak caused by busted cylinder A1 exhaust pipe.
OIL	PDPP3 C	12	07/11/2024 21:06	07/12/2024 0:06	1	Forced Outage	High lube oil differential pressure
OIL	TPC (Carmen) U1	10	07/10/2024 14:29	07/12/2024 0:01	2	Forced Outage	Low rpm (7 000rpm) problem at left bank turbocharger
OIL	PB101 Unit 2	6	07/10/2024 8:54	07/11/2024 22:50	1	Forced Outage	Cut off studbolt at cyl 4r / declared available at 2250H
OIL	PDPP3 H	13	07/10/2024 0:17	07/12/2024 0:00	2	Forced Outage	unable to cut-in due to abnormal sound at turbo charger A-bank
OIL	PDPP1 Unit 5	5	07/09/2024 19:06	07/10/2024 9:08	1	Forced Outage	Emergency cut-out due to high exhaust gas temperature caused by exhaust gas leak at cylinder 9 and 14
OIL	CENPRI 5	6.7	07/08/2024 19:08	07/09/2024 5:33	1	Forced Outage	Isolated due to tripping of 69kV Bacolod-San Enrique Line.
OIL	CENPRI 3	4.5	07/08/2024 19:08	07/09/2024 5:33	1	Forced Outage	Isolated due to tripping of 69kV Bacolod-San Enrique Line.
OIL	CENPRI 2	4.5	07/08/2024 19:08	07/09/2024 5:33	1	Forced Outage	Isolated due to tripping of 69kV Bacolod-San Enrique Line.
OIL	CENPRI 1	4.5	07/08/2024 19:08	07/09/2024 5:33	1	Forced Outage	Isolated due to tripping of 69kV Bacolod-San Enrique Line.
OIL	PDPP3 E	12	07/06/2024 12:32	07/07/2024 12:05	1	Forced Outage	Emergency stop due to abnormal sound
OIL	CPPC 7	6.5	07/06/2024 0:01	07/09/2024 0:01	3	Maintenance Outage	Radiator bundle unit replacement A-bank
OIL	PDPP3 H	13	07/03/2024 21:38	07/08/2024 22:42	5	Forced Outage	High EGT at cyl. A1
OIL	PDPP3 E	12	07/03/2024 9:03	07/06/2024 12:01	3	Forced Outage	Emergency cut-out due to excessive fuel leak fuel at supply pipe
OIL	PDPP3 H	13	07/02/2024 15:50	07/03/2024 20:46	1	Forced Outage	Emergency cut-out due to abnormal sound of turbo charger
OIL	PDPP3 G	13	07/02/2024 2:34	07/03/2024 14:05	1	Forced Outage	water leak at cylinder A2
OIL	PDPP1 Unit 5	5	07/02/2024 0:01	07/04/2024 8:10	2	Planned Outage	10500RH PMS
OIL	BDPP Unit 3	4.2	07/01/2024 8:01	07/08/2024 20:35	7	Maintenance Outage	24k Running hours major PMS/ General overhaul.
OIL	PDPP3 H	13	06/26/2024 17:25	06/27/2024 2:09	1	Forced Outage	High exhaust gas Temperature at Cyl. A3
OIL	CENPRI 4	6.7	06/26/2024 12:46			Forced Outage	Auto-tripped due to high crankcase pressure caused by cylinder no.18 piston/liner seizure.

ANNEX

List of Major Plant Outages

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Visayas							
OIL	TPC (Carmen) U4	10	06/24/2024 19:20			Forced Outage	Auto-tripped due to Piston Scuffing on Cylinder 11
OIL	East Asia 1	11.5	05/13/2024 22:55			Forced Outage	CYLINDER NO. 7 CRANKCASE EXPLOSION
OIL	PB101 Unit 3	6	04/01/2024 16:30			Forced Outage	Starting failure
SOLR	Islasol 2	27.2	07/08/2024 19:08	07/09/2024 6:06	1	Forced Outage	Isolated due to tripping of 69kV Bacolod-San Enrique Line.
Mindanao							
BIOF	14TACUR	6	07/25/2024 9:02			Forced Outage	Plant tripped-Off due to clogged feed stock because of fuel moisture and very low feed stock available.
BIOF	LSK U1	15	07/25/2024 7:00			Forced Outage	Extended GOMP with original GOMP schedule from July 10-25 2024.
BIOF	LSK U1	15	07/10/2024 0:01	07/25/2024 6:55	15	Planned Outage	PMS (GOMP). ETC No ETC.
BIOF	LSK U1	15	07/10/2024 0:01			Planned Outage	PMS (GOMP). ETC July 25 2024.Extended ETC July 30 2024.
BIOF	LSK U1	15	07/07/2024 23:54	07/08/2024 0:09	1	Forced Outage	Tripped affected from 5L11SKU-SMY line fault. Indication 50N Non-Directional Earth Fault (Unplanned Outage outside management control).
BIOF	BFI BIOMASS U1	5.7	06/29/2024 17:00			Forced Outage	Forced Outage. Repair works along feeding system is ongoing. (OMC Outage)
BIOF	LIBPOWR U1	6	05/27/2024 0:00	07/22/2024 15:58	56	Forced Outage	PMS (Non-GOMP). ETC June 12 2024. Extended No ETC.
BIOF	LIBPOWR U1	6	05/27/2024 0:00			Maintenance Outage	PMS (Non-GOMP). ETC June 12 2024. Extended No ETC.
BIOF	14TACUR	6	05/23/2024 0:49	06/30/2024 19:33	38	Forced Outage	No available biomass feedstock. (OMC Outage)
BIOF	CSC U1	3.4	03/11/2024 23:59			Forced Outage	Shutdown from Testing and Commissioning Phase. Forced Outage
COAL	DCPP Unit 2	150	07/23/2024 9:46	07/24/2024 1:04	1	Forced Outage	Circuit fault at Generator Breaker (Unplanned Outage)
COAL	FMP U3	135	07/19/2024 12:18			Forced Outage	Emergency shutdown due to boiler tube leak. (Unplanned Outage)
COAL	SMF1 U1	122	07/17/2024 20:54	07/18/2024 5:46	1	Forced Outage	Indication Induced Draft Fan Trip (Unplanned Outage)
COAL	MALITA 1	149.9	07/11/2024 8:07	07/14/2024 23:53	3	Forced Outage	Emergency shutdown due to boiler tube leak. ETC 16 July 2024 1700H.
COAL	STE U2	116	07/08/2024 0:00			Planned Outage	PMS (GOMP). ETC August 2 2024 at 2359H.
COAL	MALITA 2	150	07/07/2024 3:53			Planned Outage	PMS (GOMP). ETC July 27 2024 at 2359H.
COAL	GNPK U4	151	07/03/2024 23:56	07/08/2024 3:57	5	Forced Outage	PMS(Non-GOMP). ETC July 10 2024
COAL	STE U1	116	07/02/2024 0:00	07/19/2024 7:25	17	Planned Outage	PMS(GOMP).
COAL	STE U1	116	07/02/2024 0:00			Planned Outage	PMS(GOMP). ETC July 20 2024
COAL	SMF1 U1	122	06/25/2024 3:29	06/28/2024 4:59	3	Forced Outage	Tripped. Relay Indication Induced Draft Fan Tripped. Unplanned Outage. ETC June 30 2024 at 0001H.
COAL	PPE U1	20	06/02/2024 2:15	07/18/2024 14:52	46	Forced Outage	PMS (Non-GOMP).
GEO	MTAPO 3	3.6	07/08/2024 16:28	07/10/2024 18:16	2	Forced Outage	Forced outage due to leakages at static mixer.
HYD	Talomo TL1 U2	0.5	07/24/2024 1:24			Forced Outage	Plant shutdown due to IWS(Insufficient Water Supply). (OMC Outage)
HYD	MN1 U3	16.2	07/23/2024 20:48	07/24/2024 0:24	1	Forced Outage	Failure positioning middle 3 nozzle. (Unplanned Outage)
HYD	AG4 U2	52.7	07/21/2024 11:26	07/22/2024 12:06	1	Forced Outage	Tripped. Indication 87T. (Unplanned Outage).
HYD	AG4 U2	52.7	07/21/2024 11:26			Forced Outage	Tripped. Indication 87T.
HYD	APC G01	24.8	07/17/2024 23:18	07/18/2024 7:34	1	Forced Outage	Forced Outage. Root-cause to be determined.
HYD	AG6 U2	31.1	07/17/2024 16:56	07/18/2024 16:16	1	Forced Outage	Indication Main Transformer 2 Oil Thermal Device Trip. (Unplanned Outage)
HYD	EUROHYDRO 1	2.6	07/17/2024 0:15	07/20/2024 15:15	3	Forced Outage	Plant Shutdown due to removal/clearing at intake due to clogging brought by flood and heavy rain
HYD	Talomo TL1 U2	0.5	07/15/2024 21:23	07/16/2024 0:25	1	Forced Outage	Plant shutdown due to clogged intake due to high water inflow. (Forced Outage)
HYD	TU2 U1	8	07/15/2024 2:02	07/22/2024 8:33	7	Forced Outage	Extended PMS (GOMP) with original ETC of July 19 2024.
HYD	Talomo TL1 U2	0.5	07/07/2024 14:46	07/10/2024 21:59	3	Forced Outage	Plant shutdown due to insufficient water supply. (OMC Otage)
HYD	SBL B U2	14	07/06/2024 10:04	07/07/2024 8:38	1	Planned Outage	Plant shutdown (GOMP)
HYD	TU2 U1	8	07/06/2024 10:01	07/07/2024 12:30	1	Forced Outage	Plant shutdown due to insufficient water supply.
HYD	SBL A U1	8.75	07/03/2024 22:52	07/04/2024 3:22	1	Forced Outage	Governor trip. (Forced Outage)
HYD	Talomo TL1 U2	0.5	07/03/2024 11:03	07/04/2024 15:36	1	Forced Outage	Insufficient water supply. (OMC Outage)
HYD	AG6 U5	43.8	07/03/2024 9:01			Forced Outage	PMS(Non-GOMP) ETC August 3 2024
HYD	Talomo TL3 U2	0.93	07/02/2024 23:29	07/03/2024 2:48	1	Forced Outage	Affected due to tripping of Davao-DLP 69kV Line 2. (OMC Outage)
HYD	Talomo TL3 U1	0.93	07/02/2024 23:29	07/03/2024 2:36	1	Forced Outage	Affected due to tripping of Davao-DLP 69kV Line 2. (OMC Outage)
HYD	Talomo TL1 U2	0.5	07/02/2024 23:29	07/03/2024 0:33	1	Forced Outage	Affected due to tripping of Davao-DLP 69kV Line 2. (OMC Outage)

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List of Major Plant Outages

Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Day/s)	Outage Type	Remarks
Mindanao							
HYD	Talomo TL2 A U1	0.44	07/02/2024 23:29	07/03/2024 0:31	1	Forced Outage	Affected due to tripping of Davao-DLP 69kV Line 2. (OMC Outage)
HYD	Talomo TL2 B U1	0.3	07/02/2024 23:29	07/03/2024 0:38	1	Forced Outage	Affected due to tripping of Davao-DLP 69kV Line 2. (OMC Outage)
HYD	Talomo TL2 U3	0.2	07/02/2024 23:29	07/03/2024 1:02	1	Forced Outage	Affected due to tripping of Davao-DLP 69kV Line 2. (OMC Outage)
HYD	Talomo TL2 U2	0.2	07/02/2024 23:29	07/03/2024 1:04	1	Forced Outage	Affected due to tripping of Davao-DLP 69kV Line 2. (OMC Outage)
HYD	Talomo TL2 U1	0.2	07/02/2024 23:29	07/03/2024 1:01	1	Forced Outage	Affected due to tripping of Davao-DLP 69kV Line 2. (OMC Outage)
HYD	Talomo TL2 A U2	0.2	07/02/2024 23:29	07/03/2024 0:34	1	Forced Outage	Affected due to tripping of Davao-DLP 69kV Line 2. (OMC Outage)
HYD	BHP U0	6.6	07/02/2024 19:48	07/03/2024 9:56	1	Forced Outage	Plant tripped due to grid power lost caused by the opening of Cabula Recloser. Attributed by Snake touched on the Cepalco main insulator line.
HYD	Talomo TL3 U2	0.93	07/01/2024 20:51	07/02/2024 15:05	1	Forced Outage	Affected due to tripping of DLPC s Tugbok Recloser. (OMC Outage)
HYD	Talomo TL3 U1	0.93	07/01/2024 20:51	07/02/2024 14:49	1	Forced Outage	Affected due to tripping of DLPC s Tugbok Recloser. (OMC Outage)
HYD	AG6 U3	50	07/01/2024 11:03	07/02/2024 16:16	1	Forced Outage	PMS(Non-GOMP).
HYD	AG6 U3	50	07/01/2024 11:03			Forced Outage	PMS(Non-GOMP). ETC July 03 2024
HYD	AG2 U2	60	07/01/2024 8:11	07/17/2024 15:45	16	Planned Outage	PMS(GOMP).
HYD	AG7 U1	26.1	07/01/2024 7:01	07/15/2024 18:10	14	Planned Outage	PMS(GOMP). ETC July 20 2024
HYD	Talomo TL1 U1	0.5	06/30/2024 17:18	07/01/2024 1:12	1	Forced Outage	Clogged weir intake due to flood (Forced Outage)
HYD	MHP U0	0.5	06/30/2024 10:27			Forced Outage	Plant shutdown due to SOCOTECO I Recloser Trip (OMC Outage).July 2 2024 Plant still unable to synchronize due to their Defective (ACR) Auto Circuit Recloser (Corrective Maintenance on process).
HYD	Talomo TL1 U2	0.5	06/28/2024 0:07	07/01/2024 0:12	3	Forced Outage	IWS (OMC Outage)
HYD	SBL B U1	14	06/24/2024 2:01			Forced Outage	Emergency shutdown due to high temperature of bearing. (Forced Outage)
HYD	AG4 U3	52.7	06/13/2024 8:15	07/21/2024 9:07	38	Planned Outage	PMS (GOMP). ETC August 2 2024.
HYD	AG4 U2	52.7	06/13/2024 8:08	07/18/2024 18:02	35	Planned Outage	PMS (GOMP). ETC August 2 2024.
HYD	AG4 U1	52.7	06/13/2024 8:03	07/19/2024 9:17	36	Planned Outage	PMS (GOMP). ETC August 2 2024.
HYD	ASG U0	8.2	06/12/2024 0:01	07/15/2024 22:16	33	Forced Outage	Insufficient water supply. (OMC Outage)
HYD	PG4 U2	75	06/05/2024 8:02	07/19/2024 9:03	44	Maintenance Outage	PMS (Non-GOMP). ETC July 19 2024.
OIL	WMPC Unit 4	10.2	07/22/2024 13:00	07/24/2024 16:05	2	Forced Outage	Indication Turbocharger B-bank turbine-side shock pulse alarm. (Unplanned Outage)
OIL	EEI U2	4.6	07/18/2024 13:05			Forced Outage	Declared unavailable. Indication High exhaust gas temperature. (Forced Outage)
OIL	WMPC Unit 10	10.2	07/15/2024 8:16	07/19/2024 15:30	4	Forced Outage	Declared forced outage. Cause Generator rubber coupling for replacement (Unplanned Outage)
OIL	SGH U1	34.9	07/08/2024 18:00	07/10/2024 21:08	2	Forced Outage	Siguil Hydro shutdown at 1800H. Test & commissioning.
OIL	WMPC Unit 4	10.2	07/04/2024 11:27	07/05/2024 15:00	1	Forced Outage	Forced outage Indication Starting failure. (Unplanned Outage)
OIL	EEI U2	4.6	07/02/2024 13:25	07/03/2024 11:57	1	Forced Outage	Plant failed to synchronize due to Indication Loss of field.(Class 0 Forced Outage)
OIL	EEI U3	4.6	07/02/2024 13:24	07/03/2024 9:11	1	Forced Outage	Plant failed to synchronize due to Indication Overcurrent.(Class 0 Forced Outage)
OIL	WMPC Unit 7	10	07/02/2024 8:05	07/05/2024 15:00	3	Forced Outage	Declared unavailable due to mechanical cleaning of turbo charger.
OIL	WMPC Unit 4	10.2	06/27/2024 20:40	06/28/2024 13:00	1	Forced Outage	Forced outage. Indication Exhaust Gas leak at B bank bellow.
OIL	KEG U0	10.6	04/15/2024 15:05			Forced Outage	Failed to synchronize due to low SF6 Pressure on PCB. Forced Outage (Unplanned Outage)

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