

**PEMC MARKET ASSESSMENT HIGHLIGHTS**

- The average demand and the reserve schedule, recorded at 2,653 MW during the week of 03 - 09 Jun 2024, was lower than the previous week at 2,813 MW.
- The average effective supply during the week was 2,869 MW which is lower compared to the 3,009 MW of the previous week. Ramping limitations were considered in the calculation of the effective supply.
  - The capacity on outage averaged at 205 MW, higher than last week's 155 MW. All outages were categorized as Forced Outages, while in terms of capacity on outage by plant type, about 74% of the 205 MW involved Hydroelectric Plants
- As a result, an average supply margin of 216 MW was observed during the week, which is higher by about 10% relative to the previous week. The thinnest supply margin based on MMS solution was 61.96 MW which was observed on 03 June 2024 at interval 14:25h. The average supply margin was 178.18 MW at peak intervals and 246.12 MW at off-peak intervals.
- Correspondingly, average GWAP was recorded at PHP 4,146/MWh from PHP 6,048/MWh last week.
  - No secondary price cap was imposed for this week
- The top 5 participant groups accounted for about 75% of the offered capacity. The Herfindahl-Hirschman Index (HHI) by participant group indicated moderately concentrated market based on the offered and registered capacities.
- The top 5 pivotal plants during the week were –
  - FDC MISAMIS CFTPP (about 98.71% of the time)
  - GN POWER KAUSWAGAN CFTPP (about 97.97% of the time)
  - MALITA CFTPP (about 72.67% of the time)
  - THERMA SOUTH CFTPP (about 56.7% of the time)
  - SARANGANI CFTPP (about 42.76% of the time)
- Based on the MMS Solution, the top congested equipment during the week was Placer\_Transformer 2 (about 6.2% of the time)
- OFFER PATTERN ANALYSIS
  - The offered capacity of coal plants was lower on June 4, 5, and 9 due to an increase in capacity on outage.
  - The offered capacity of hydro plants was affected by outages and intermittent testing throughout the whole week. Additionally, around 30 MW were being offered at prices ranging from Php 30,000/MWh to Php 32,000/MWh for the first half of the week.
  - The offered capacity of geothermal plants was consistent and the offered price was only Php 0 or below for the entire week.
  - The lowest solar plant nomination was recorded on June 04, while the highest was recorded on June 08.

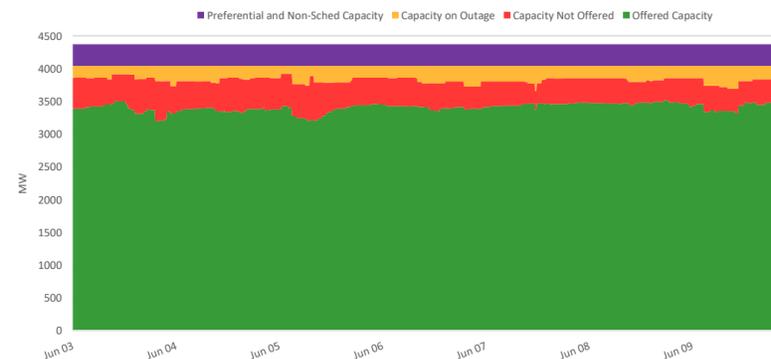
**IEMOP MARKET SYSTEMS ADVISORY**

- Market Intervention was initiated by Visayas System Operator due to manual load dropping implementation to prevent overloading of Ubay-Maasin 138kV Line for the following intervals:
  - Forty-seven (47) intervals from 15:20h to 19:10h on June 3
  - Thirty-nine (39) intervals from 13:20h to 16:30h on June 6
  - Thirty (30) intervals from 14:10h to 16:35h on June 7

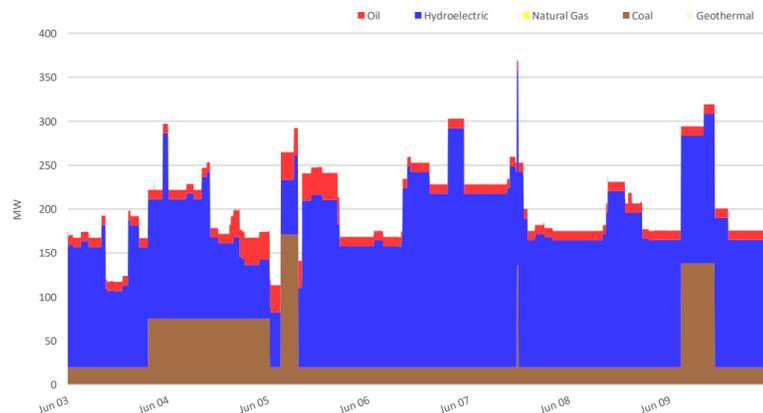
**SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)**

Particulars		03 - 09 Jun 2024	Previous Week (27 May - 02 Jun 2024)	Percent Change
GWAP (PHP/MWh)	max	30,289.123	30,285.894	0.011%
	min	-1.036	-0.002	-51K%
	ave	4,146.362	6,047.890	-31.441%
Effective Supply (MW)	max	3,398.270	3,439.430	-1.197%
	min	2,191.700	2,374.003	-7.679%
	ave	2,869.073	3,009.317	-4.660%
System Demand (MW)	max	2,632.930	2,673.980	-1.535%
	min	1,493.310	1,617.880	-7.700%
	ave	2,083.342	2,160.654	-3.578%
Demand + Reserve Schedule (MW)	max	3,297.420	3,339.080	-1.248%
	min	1,883.020	2,108.270	-10.684%
	ave	2,652.772	2,813.219	-5.703%
Supply Margin (MW)	max	400.150	435.131	-8.039%
	min	61.961	53.599	15.601%
	ave	216.301	196.098	10.303%

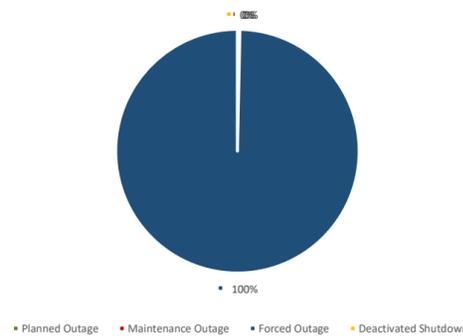
**CAPACITY PROFILE**



**CAPACITY ON OUTAGE BY PLANT TYPE**



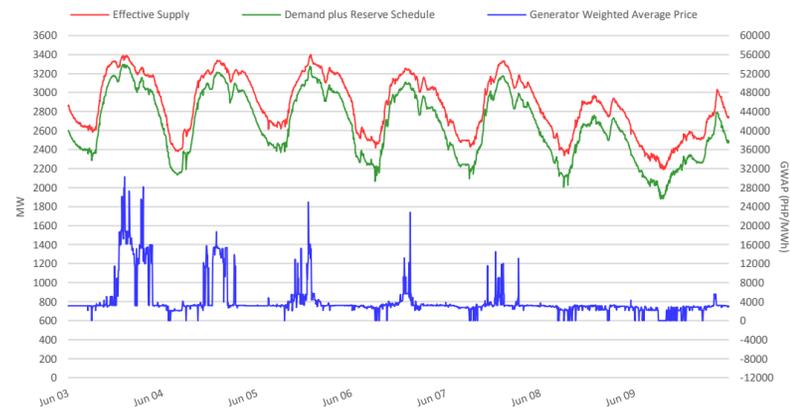
**CAPACITY ON OUTAGE BY OUTAGE CATEGORY**



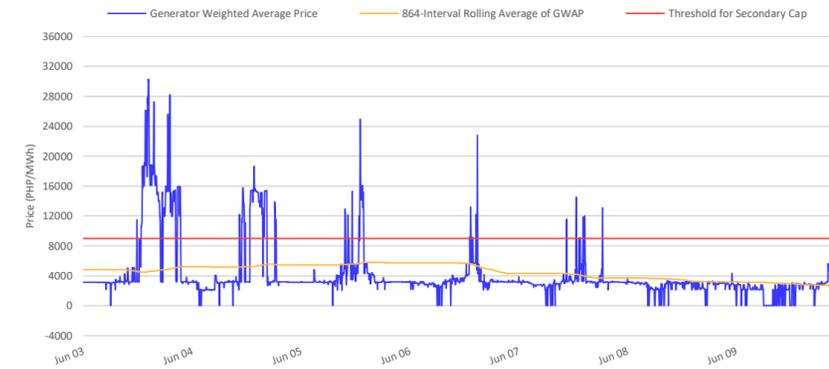
**RTD CONGESTION**



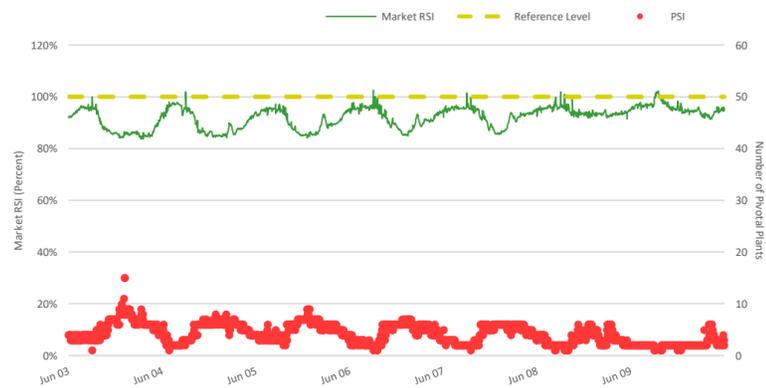
**SUPPLY, DEMAND AND PRICE**



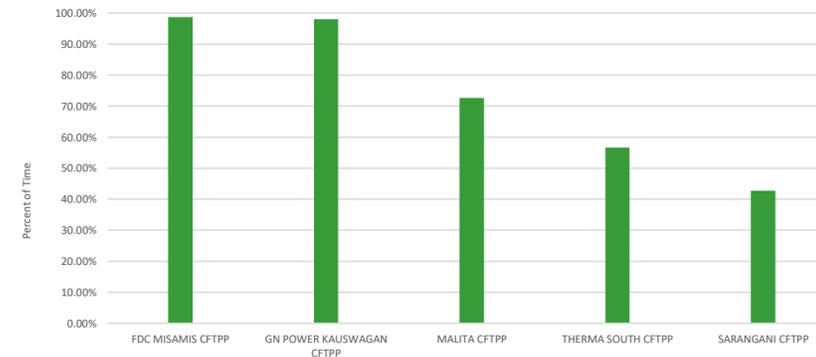
**GENERATOR WEIGHTED AVERAGE PRICE**



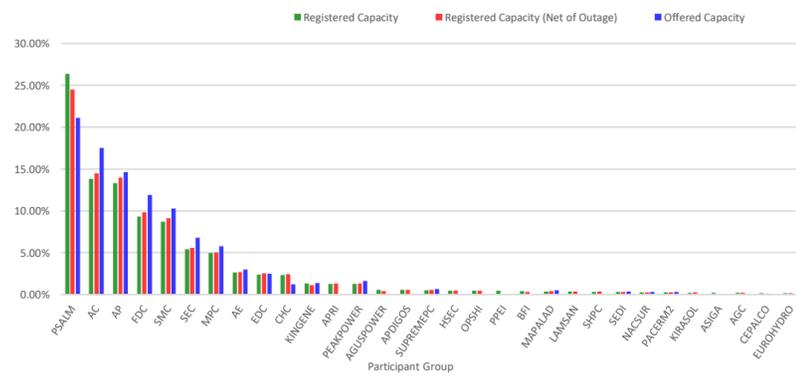
**MARKET RSI VS PIVOTAL PLANTS**



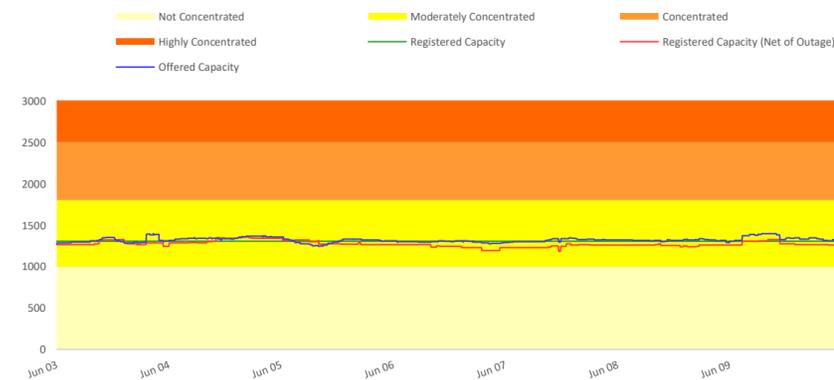
**PSI**



**MARKET SHARE**

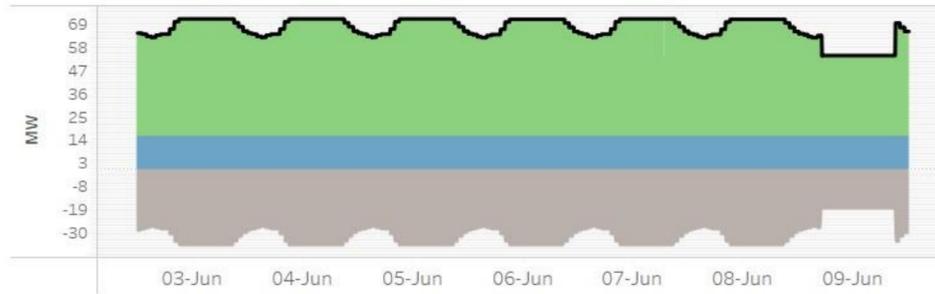


**HERFINDAHL-HIRSCHMAN INDEX**

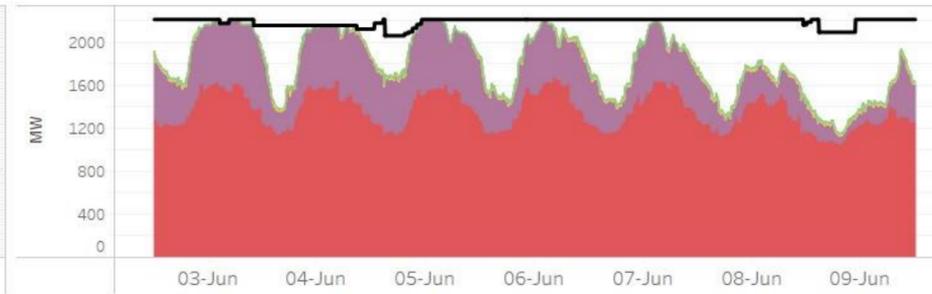


**OFFER PATTERN ANALYSIS**

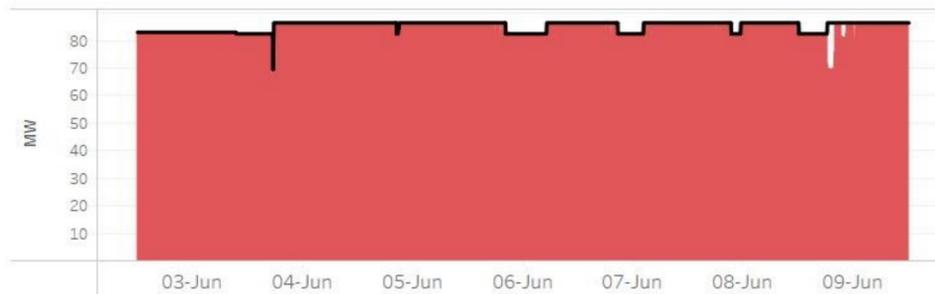
**BATTERY AND BIOFUEL**



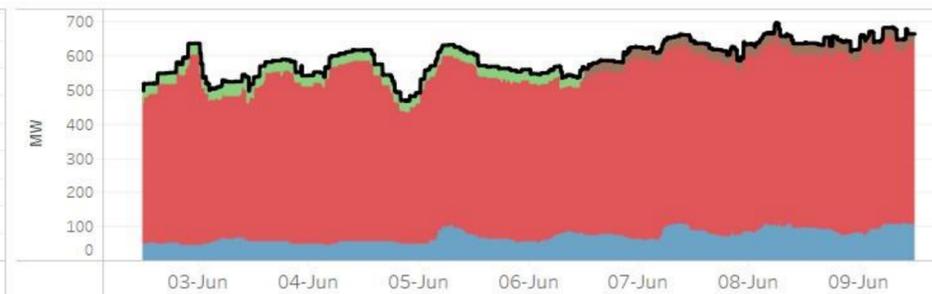
**COAL**



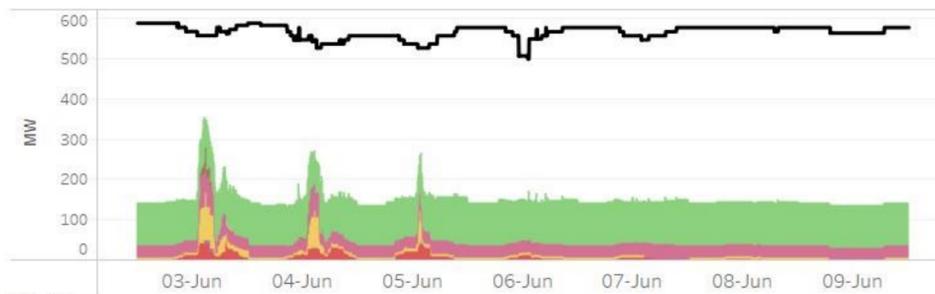
**GEOHERMAL**



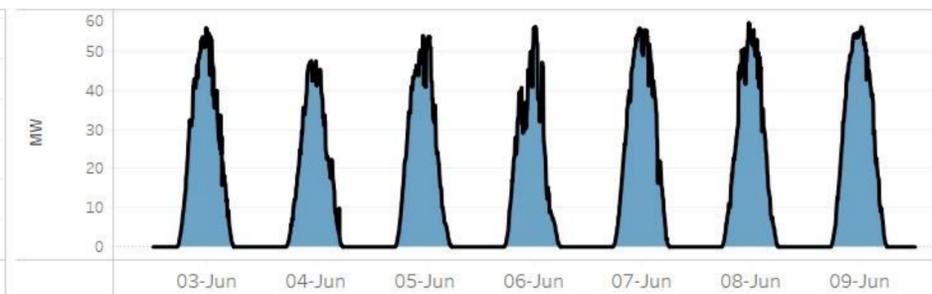
**HYDRO**



**OIL-BASED**



**SOLAR**



Notes:  
 1. In Php (X, Y], it includes offer price greater than Php X but less than or equal to Php Y.  
 2. Reflected capacity includes offered capacity of all scheduled generators, nominated loading level of nonscheduled generators and projected output of preferential dispatch generators, adjusted based on submitted ramp rate limitations.

**GLOSSARY OF TERMS**

**EFFECTIVE SUPPLY** - The effective supply is equal to the offered capacity of all scheduled generator resources, nominated loading level of non-scheduled generating units and projected output of preferential dispatch generating units, adjusted for any security limit provided by the System Operator and other constraints considered during MMS simulation such as generator offered ramp rates. Scheduled output of plants on testing and commissioning through the imposition of security limit by SO and scheduled output of Malaya plant when it is called to run as Must Run Unit (MRU) are likewise accounted for in the effective supply.

**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.

**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).

**HERFINDAHL-HIRSCHMAN INDEX (HHI)** - 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 1,000 - not concentrated; (2) 1,000 to 1,800 - moderately concentrated; (3) greater than 1,800 - concentrated; and (4) greater than 2,500 - highly concentrated.

**REGISTERED CAPACITY** - The capacity registered by a generator with WESM.

**REGISTERED CAPACITY (NET OF OUTAGE)** - The capacity registered by a generator to WESM less capacity on outage.

**OFFERED CAPACITY** - The offer to supply electricity submitted by a generator.

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