

PEMC MARKET ASSESSMENT HIGHLIGHTS

- The average demand and the reserve schedule, recorded at 13,001 MW during the week of 01 - 07 Jul 2024, was lower than the previous week at 13,347 MW and higher than the same week last year at 12,718 MW.
- The average effective supply during the week was 13,583 MW, lower than the 14,032 MW of the previous week and higher than the 13,468 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.
 - The capacity on outage averaged at 2,553 MW, higher than last week's 1,759 MW. In terms of capacity on outage by plant type, about 37% of the 2,553 MW involved Coal Plants, while in terms of category, about 58% were Forced Outages.
- As a result, an average supply margin of 582 MW was observed during the week, which is lower by about 15.102% relative to the previous week and lower by about 22.316% in comparison with the same week last year. The supply deficit based on MMS solution was 0.99 MW on 03 July 2024 at 20:05h. The average supply margin was 541.24 MW at peak intervals and 613.98 MW at off-peak intervals.
- Correspondingly, average GWAP was recorded at PHP 6,220/MWh from PHP 4,171/MWh last week. This is lower than the PHP7,219/MWh during the same week last year.
 - No secondary price cap was imposed for this week.
- The top 5 participant groups accounted for about 79% of the offered capacity. The Herfindahl-Hirschman Index (HHI) by participant group indicated mostly concentrated and moderately concentrated market based on the offered and registered capacities, respectively.
- The top 5 pivotal plants during the week were –
 1. GNP DINGININ CFTPP (100% of the time)
 2. ILJAN NGPP (about 99.9% of the time)
 3. MASINLOC CFTPP (about 98.21% of the time)
 4. SUAL CFTPP (about 97.77% of the time)
 5. CALACA CFTPP (about 94.05% of the time)
- Based on the MMS Solution, the congested equipment during the week were –
 1. 138kV Maasin-Ubay Line 1 (about 28.4% of the time)
 2. 138kV Barotac-Dingle Line 1 (about 22.3% of the time)
 3. 138kV Barotac-Dingle Line 2 (about 20.9% of the time)

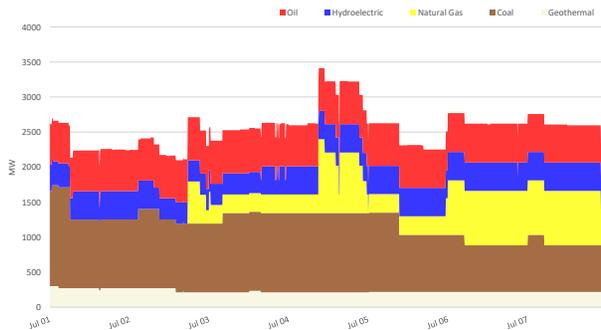
OFFER PATTERN ANALYSIS

- The offered capacity of the coal plant was lower than the previous week due to an increase in capacity on outage. Additionally, the multiple short drops throughout the week were caused by plant testing, scheduled through security limits imposed by the SO.
- The offered capacity of the geothermal plants was slightly higher than the previous week due to the resumption of plants; however, the first three (3) days of the week were lower due to testing of plants, scheduled through security limits imposed by the SO.
- The offered capacity of the hydro plants was lower during the peak hours on July 2, 3, and 4 due to plant testing.
- The offered capacity of natural gas was significantly lower than the previous week, including multiple short drops, due to a huge increase in capacity on outage.
- The lowest solar plant nomination was recorded on July 5, while the highest was recorded on July 3.
- The lowest nomination by wind plants was recorded on July 1, while the highest was on July 4.

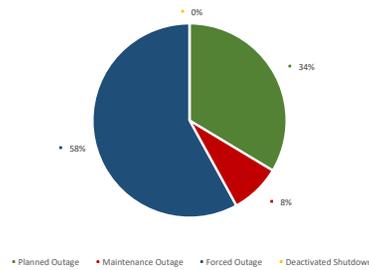
IEMOP MARKET SYSTEMS ADVISORY

- No IT-related issue was advised in IEMOP's market systems from 01 - 07 Jul 2024.

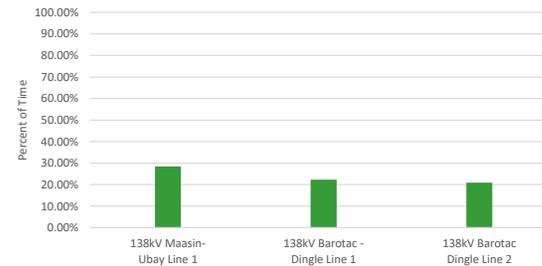
CAPACITY ON OUTAGE BY PLANT TYPE



CAPACITY ON OUTAGE BY OUTAGE CATEGORY



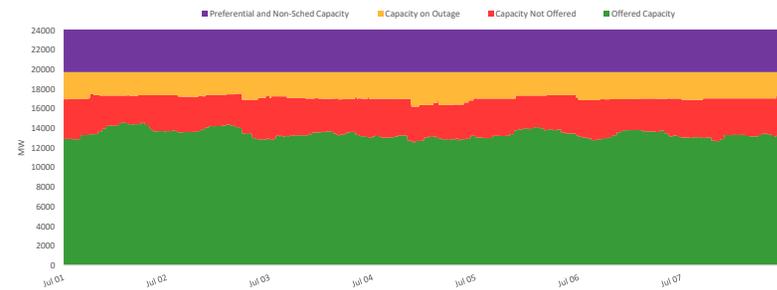
RTD CONGESTION



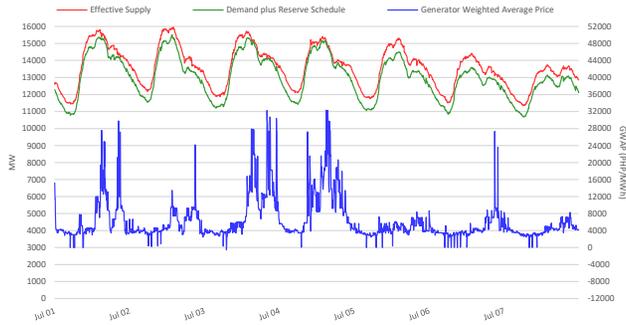
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		01 - 07 Jul 2024	Previous Week (24 - 30 Jun 2024)	Same Week, Previous Year (03 - 09 Jul 2023)	Percent Change From	
					Previous Week	Same Week, Prev Year
GWAP (PHP/MWh)	max	32,324.329	28,354.893	33,538.002	13.999%	-3.619%
	min	-543.195	-1.004	-1.023	-54%	-52%
	ave	6,220.325	4,170.874	7,218.574	49.137%	-13.829%
Effective Supply (MW)	max	15,958.587	16,352.960	15,701.458	-2.412%	1.638%
	min	11,348.266	11,946.887	10,978.572	-5.011%	3.367%
	ave	13,582.577	14,032.327	13,467.518	-3.205%	0.854%
System Demand (MW)	max	15,009.940	15,113.240	14,821.890	-0.684%	1.269%
	min	9,850.450	10,219.420	9,400.490	-3.610%	4.787%
	ave	12,419.710	12,657.312	12,263.960	-1.877%	1.270%
Demand + Reserve Schedule (MW)	max	15,504.000	15,727.300	15,435.680	-1.420%	0.443%
	min	10,678.670	11,234.700	9,744.090	-4.949%	9.591%
	ave	13,000.636	13,346.865	12,718.406	-2.594%	2.219%
Supply Margin (MW)	max	968.312	1,168.033	1,360.065	-17.099%	-28.804%
	min	-0.989	302.427	15.140	-100.327%	-106.532%
	ave	581.941	685.462	749.112	-15.102%	-22.316%

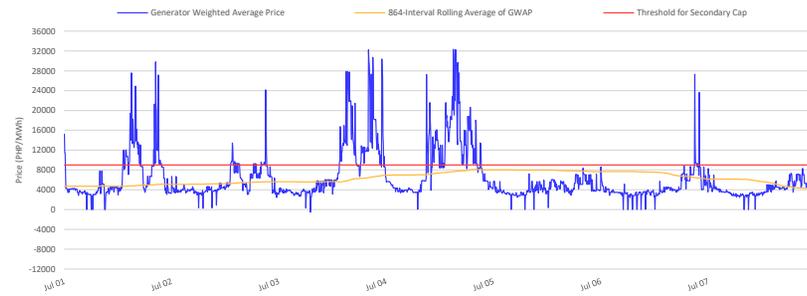
CAPACITY PROFILE



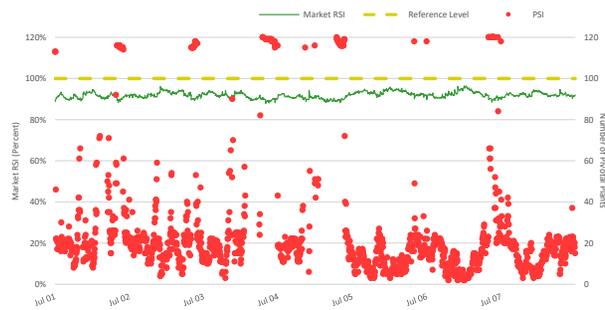
SUPPLY, DEMAND AND PRICE



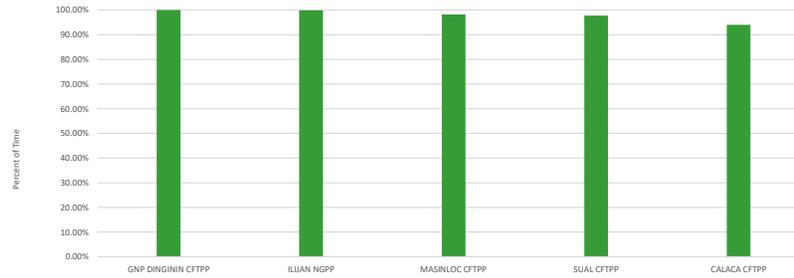
GENERATOR WEIGHTED AVERAGE PRICE



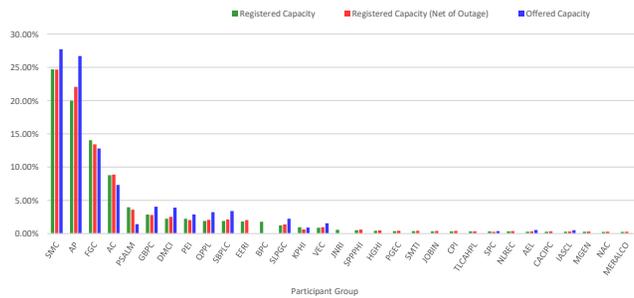
MARKET RSI VS PIVOTAL PLANTS



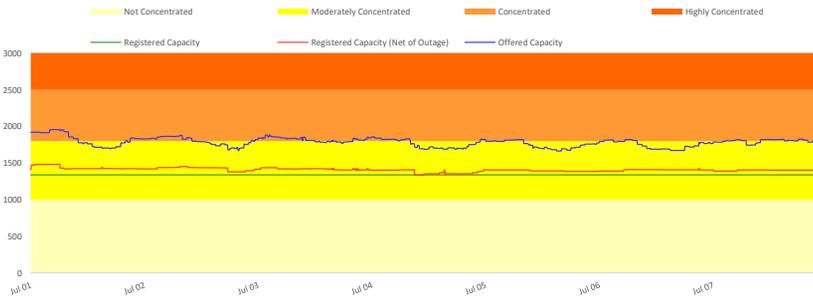
PSI



MARKET SHARE

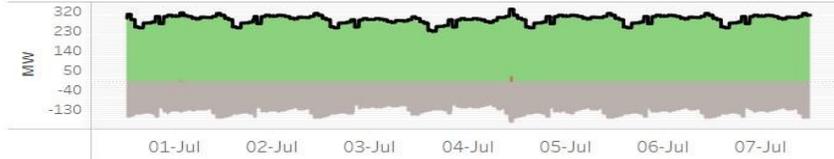


HERFINDAHL-HIRSCHMAN INDEX



OFFER PATTERN ANALYSIS

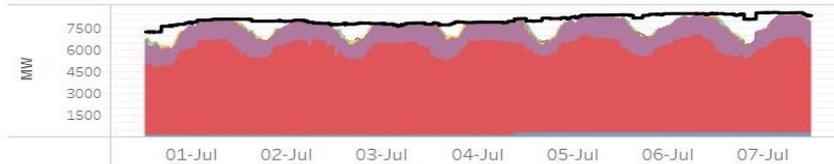
BATTERY



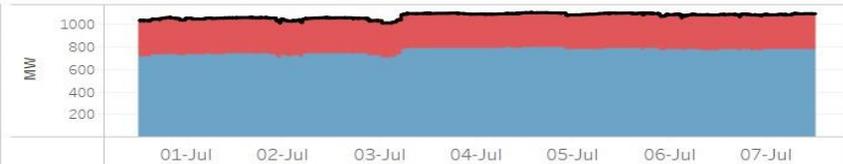
BIOFUEL



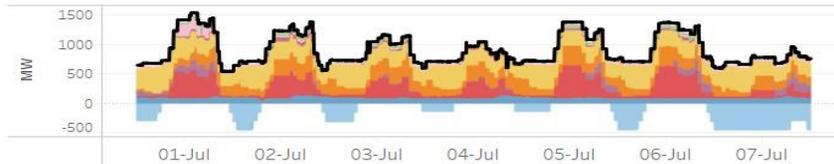
COAL



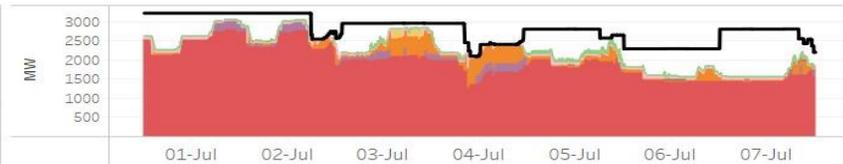
GEOHERMAL



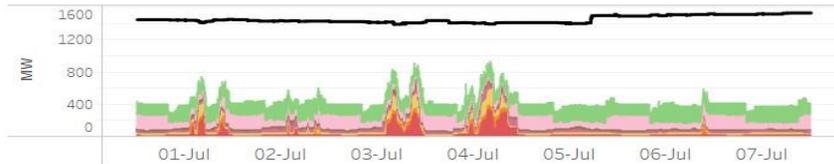
HYDRO



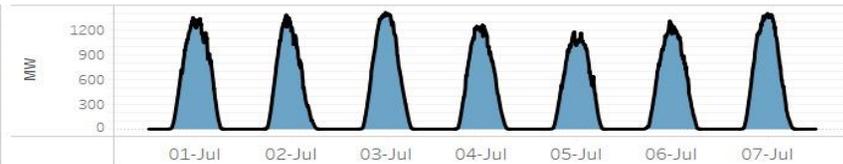
NATURAL GAS



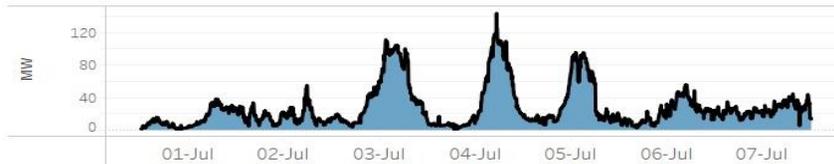
OIL-BASED



SOLAR



WIND



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 with WESM less capacity on outage.

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

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