

PEMC MARKET ASSESSMENT HIGHLIGHTS

- The average demand and the reserve schedule, recorded at 12,653 MW during the week of 15 - 21 Jul 2024, was lower than the previous week at 13,033 MW and higher than the same week last year at 11,653 MW.
- The average effective supply during the week was 13,116 MW, lower than the 13,593 MW of the previous week and higher than the 12,485 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.
 - The capacity on outage averaged at 3,823 MW, higher than last week's 3,133 MW. In terms of capacity on outage by plant type, about 58% of the 3,823 MW involved Coal Plants, while in terms of category, about 49% were Planned Outages and 47% were Forced Outages.
- As a result, an average supply margin of 463 MW was observed during the week, which is lower by about 17.273% relative to the previous week and lower by about 44.289% in comparison with the same week last year. Based on the MMS solution, a supply deficit of 52.18 MW was observed on 16 July 2024 at interval 20:05h. The average supply margin was 407.96 MW at peak intervals and 506.48 MW at off-peak intervals.
- Correspondingly, average GWAP was recorded at PHP 7,711/MWh from PHP 5,835/MWh last week. This is higher than the PHP4,706/MWh during the same week last year.
 - The secondary price cap was imposed during 160 intervals out of the 2,016 intervals of the week (about 8% of the time).
- The top 5 participant groups accounted for about 78% of the offered capacity. The Herfindahl-Hirschman Index (HHI) by participant group indicated partially 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 CF TPP (about 99.95% of the time)
 2. MARIVELES CF TPP (about 99.95% of the time)
 3. STA RITA NGPP (about 99.95% of the time)
 4. ILJAN NGPP (about 99.95% of the time)
 5. MASINLOC CF TPP (about 99.9% of the time)
- Based on the MMS Solution, the top 5 congested equipment during the week were –
 1. 138kV Maasin-Ubay Line 1 (about 20.1% of the time)
 2. 138kV Barotac-Dingle Line 2 (about 18.4% of the time)
 3. 138kV Barotac-Dingle Line 1 (about 12.% of the time)
 4. Calbayog_Transformer 1 (about 1.9% of the time)
 5. 138kV Cebu-Mandaue Line 2 (0.64% of the time)

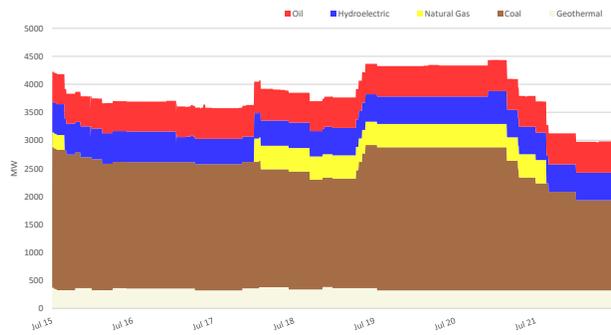
OFFER PATTERN ANALYSIS

- 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 offered capacity on July 15 and 16 were caused by plant testing, scheduled through security limits imposed by the SO. The increase in offered capacity at the end of the week was due to the resumption of plants.
- The offered capacity of the geothermal plants was lower compared to the previous week due to a minimal increase in outages and testing of plants.
- The offered capacity of the hydro plants was higher than the previous week due to the resumption of plants. In addition, the offered capacity of around 90 MW to 300 MW was offered from Php 30,000 to 32,000 during peak hours on July 18 to 20.
- The offered capacity of natural gas was significantly lower on July 15, 17, and 18 due to plant testing and increase in outages.
- The lowest peak in solar plant nomination was recorded on July 18, while the highest was recorded on July 16.
- The lowest nomination by wind plants was recorded on July 17, while the highest was on July 19.

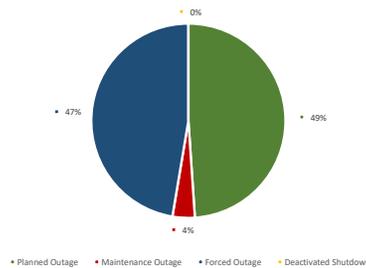
IEMOP MARKET SYSTEMS ADVISORY

- No IT-related issue was advised in IEMOP's market systems from 15 - 21 Jul 2024.

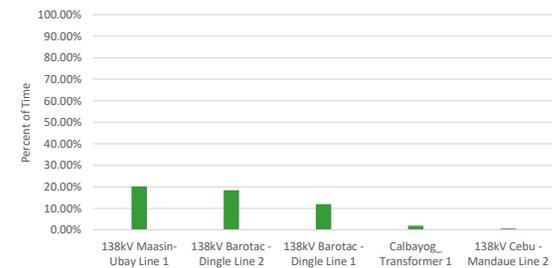
CAPACITY ON OUTAGE BY PLANT TYPE



CAPACITY ON OUTAGE BY OUTAGE CATEGORY



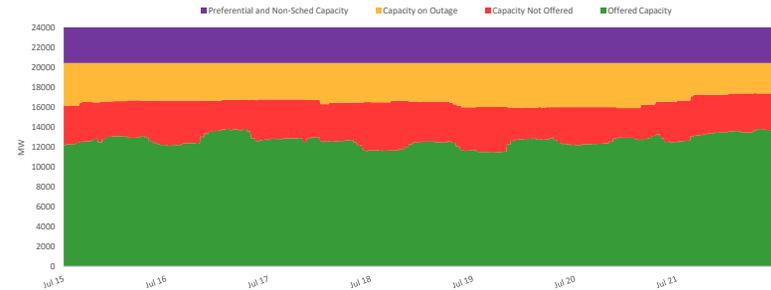
RTD CONGESTION



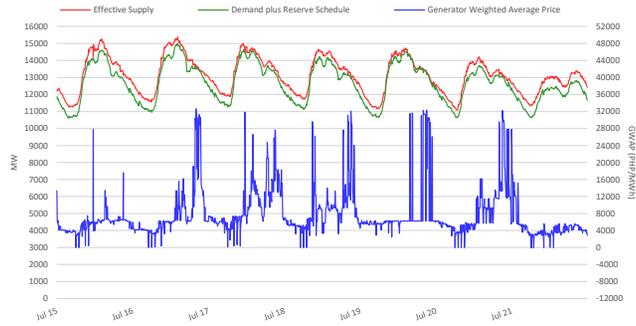
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		15 - 21 Jul 2024	Previous Week (08 - 14 Jul 2024)	Same Week, Previous Year (17 - 23 Jul 2023)	Percent Change From	
					Previous Week	Same Week, Prev Year
GWAP (PHP/MWh)	max	32,642.949	33,555.294	30,233.889	-2.719%	7.968%
	min	-1.001	-0.972	-998.500	-2.984%	99.900%
	ave	7,711.028	5,834.722	4,705.781	32.158%	63.863%
Effective Supply (MW)	max	15,375.873	16,131.662	14,465.466	-4.685%	6.294%
	min	11,073.190	11,215.395	10,058.886	-1.268%	10.084%
	ave	13,116.199	13,593.035	12,484.520	-3.508%	5.060%
System Demand (MW)	max	14,406.710	14,937.760	13,867.450	-3.555%	3.889%
	min	9,891.240	9,811.080	8,666.950	0.817%	14.126%
	ave	12,127.119	12,431.465	11,344.991	-2.448%	6.894%
Demand + Reserve Schedule (MW)	max	14,994.460	15,568.500	14,086.890	-3.687%	6.443%
	min	10,608.040	10,542.680	8,953.100	0.620%	18.485%
	ave	12,652.885	13,032.980	11,652.881	-2.916%	8.582%
Supply Margin (MW)	max	898.764	958.653	1,384.483	-6.247%	-35.083%
	min	-52.179	7.471	210.506	-798.421%	-124.787%
	ave	463.314	560.055	831.639	-17.273%	-44.289%

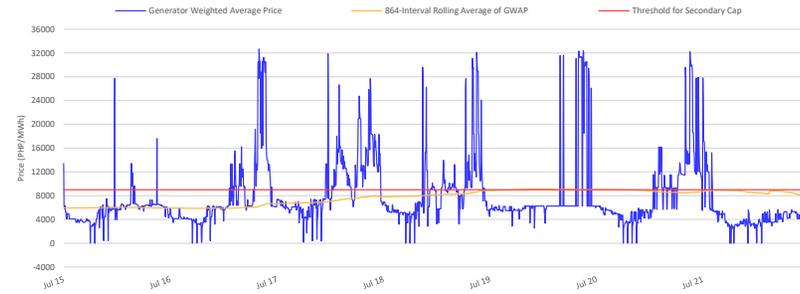
CAPACITY PROFILE



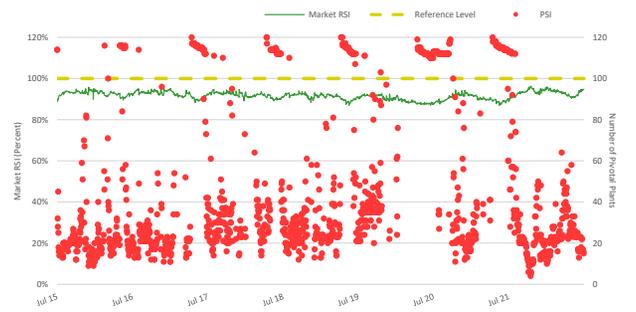
SUPPLY, DEMAND AND PRICE



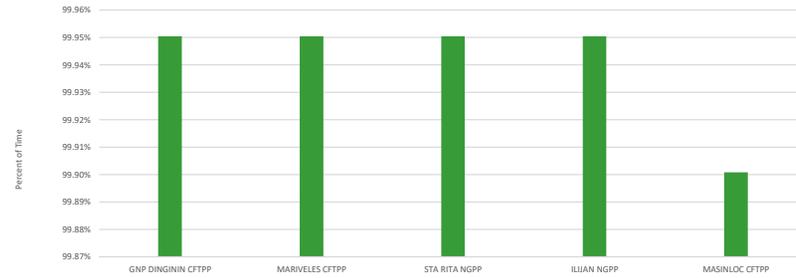
GENERATOR WEIGHTED AVERAGE PRICE



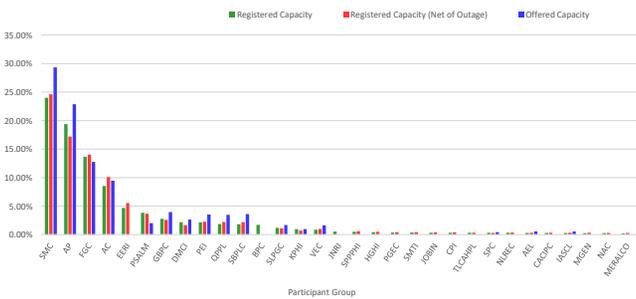
MARKET RSI VS PIVOTAL PLANTS



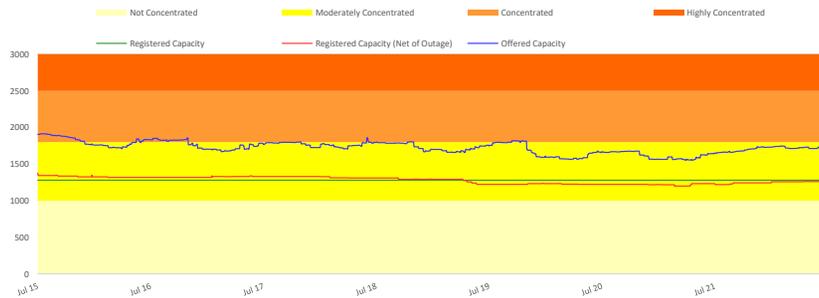
PSI



MARKET SHARE

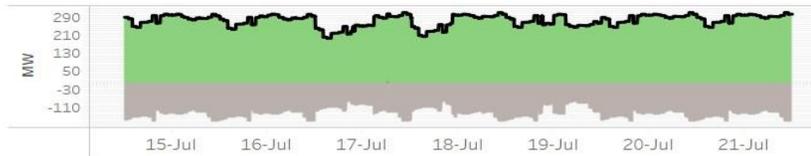


HERFINDAHL-HIRSCHMAN INDEX



OFFER PATTERN ANALYSIS

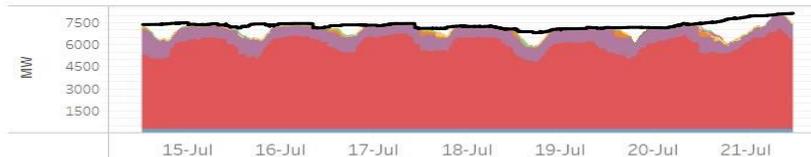
BATTERY



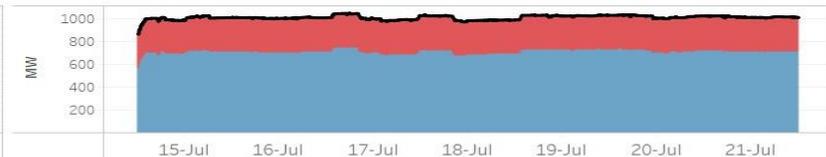
BIOFUEL



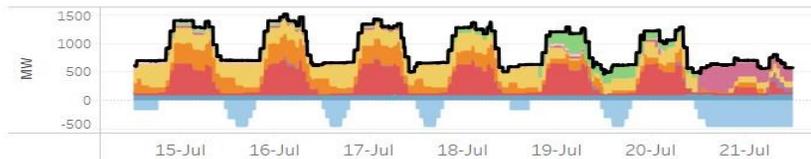
COAL



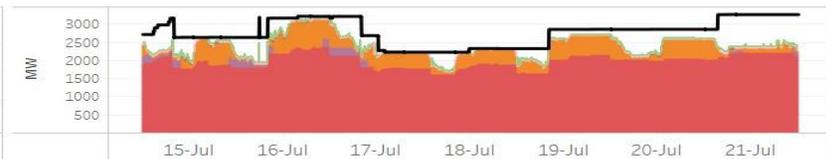
GEOHERMAL



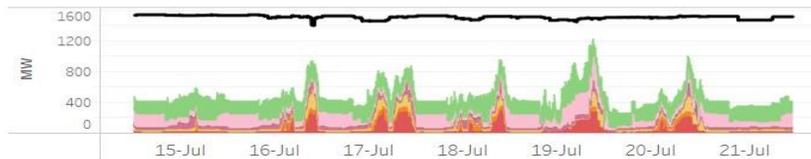
HYDRO



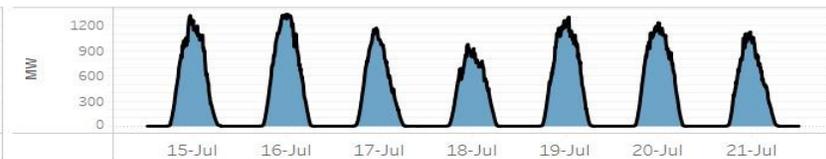
NATURAL GAS



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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