Philippine Electricity Market Corporation

WEEKLY MARKET WATCH- LUZON-VISAYAS

26 Jun -02 Jul 2023

PEMC MARKET ASSESSMENT HIGHLIGHTS

· The average demand and the reserve schedule, recorded at 11,907 MW during the week of 26 Jun -02 Jul 2023, was lower than the previous week at 12,658 MW and lower than the same week last year at 12,029 MW.

· The average effective supply during the week was 12,845 MW, lower than the 13,511 MW of the previous week and higher than the 12,569 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.

· The capacity on outage averaged at 1,424 MW, higher than last week's 1,074 MW. About 26% of the 1,424 MW involved Oil plants, while in terms of category, about 63% were Forced Outages.

· As a result, an average supply margin of 938 MW was observed during the week, which is higher by about 10% relative to the previous week and higher by about 74% in comparison with the same week last year. The minimum supply margin based on MMS solution was 415.71 MW on 30 June 2023 23:05 . The average supply margin was 897.48 MW at peak intervals and 969.17 MW at off-peak intervals.

· Correspondingly, average GWAP was recorded at PHP 4,175/MWh from PHP 5,181/MWh last week. This is lower than the PHP8,242/MWh during the same week last year.

·No secondary price cap was imposed for this week

· The top 5 participant groups accounted for about 78% 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 –

1. GNP DINGININ CFTPP (about 98.61% of the time)
2. SUAL CFTPP (about 60.17% of the time)
3. MASINLOC CFTPP (about 31.85% of the time)
4. STA RITA NGPP (about 24.95% of the time)
5. KALAYAAN PSPP (about 1.98% of the time)

· Based on the MMS Solution, the top 5 congested equipment during the week were –

1. 138kV Maasin_Ubay (about 52.4% of the time)
2. 230kV Mexico-Hermosa Line2 (about 8.% of the time)
3. Hermosa-Duhat Line 1 (about 5.8% of the time)
4. 230kV Mexico-Hermosa Line1 (about 1.5% of the time)
5. San Jose 230kV_Transformer 2 (about 1.2% of the time)

· Hydro plants recorded lower offered capacity following the outage of San Roque HEP Unit 2 as well as lower offer prices. Meanwhile, natural gas and oil-based plants were observed to have no significant change in offered capacity but offer prices deviate at the middle part of the offer pattern curve, higher offered price for natural gas and lower offered price for oil-based . Lastly, battery energy facilities' offers were noted this report week, biofuel plants had less offered capacity while coal and geothermal plants had no significant changes in their respective offer behavior.

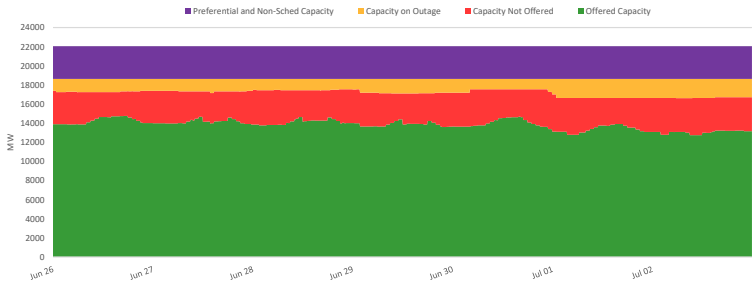
IEMOP MARKET SYSTEMS ADVISORY

· No IT-related issue was advised in IEMOP's market systems from 26 Jun -02 Jul 2023.

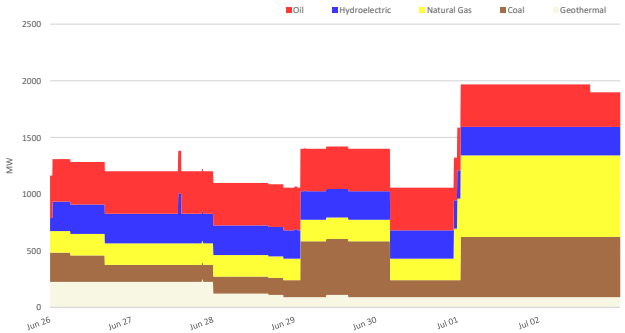
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		26 Jun -02 Jul 2023	Previous Week (19 - 25 Jun 2023)	Same Week, Previous Year (27 Jun -03 Jul 2022)	Percent Change From	
					Previous Week	Same Week, Prev Year
GWAP (PHP/MWh)	max	19,105.91	27,870.28	33,432.00	-31.45%	-42.85%
	min	-1,014.77	-7,274.45	0.00	86.05%	-
	ave	4,174.80	5,181.33	8,241.82	-19.43%	-49.35%
Effective Supply (MW)	max	14,937.99	15,869.89	14,424.97	-5.87%	3.56%
	min	10,864.90	11,043.38	3,323.83	-1.62%	226.88%
	ave	12,844.62	13,511.43	12,569.12	-4.94%	2.19%
System Demand (MW)	max	13,478.28	14,558.57	12,694.46	-7.42%	6.17%
	min	9,356.86	9,393.67	8,735.34	-0.39%	7.12%
	ave	11,433.40	12,009.21	10,889.86	-4.79%	4.99%
Demand + Reserve Schedule (MW)	max	14,174.34	15,448.78	13,843.75	-8.25%	2.39%
	min	9,696.26	9,933.67	9,844.84	-2.39%	-1.51%
	ave	11,907.03	12,657.95	12,029.16	-5.93%	-1.02%
Supply Margin (MW)	max	1,421.47	1,335.28	928.89	6.45%	53.03%
	min	415.71	208.90	-6,779.21	99.01%	106.13%
	ave	937.59	853.47	539.69	9.86%	73.73%

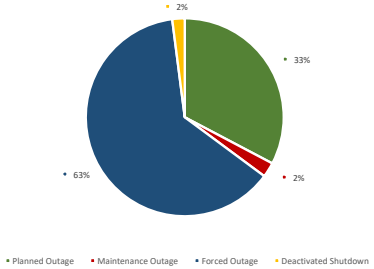
CAPACITY PROFILE



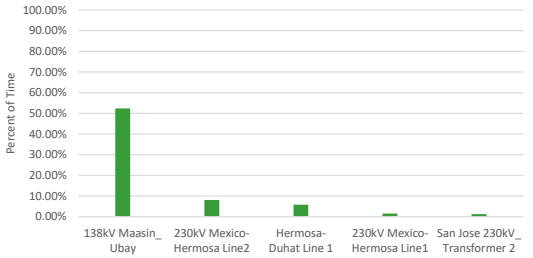
CAPACITY ON OUTAGE BY PLANT TYPE



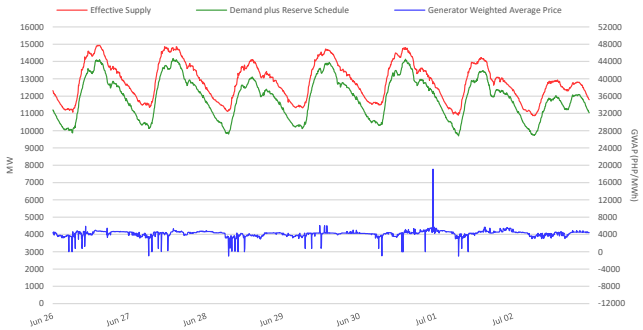
CAPACITY ON OUTAGE BY OUTAGE CATEGORY



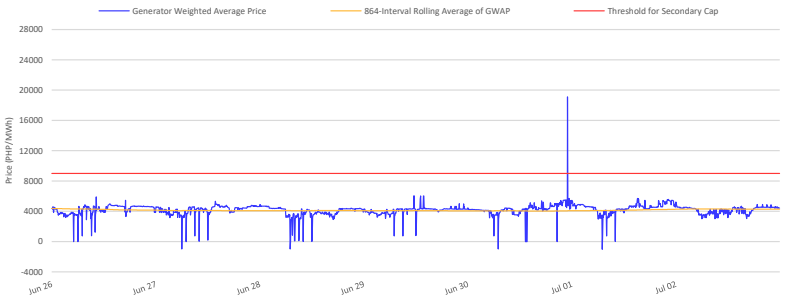
RTD CONGESTION



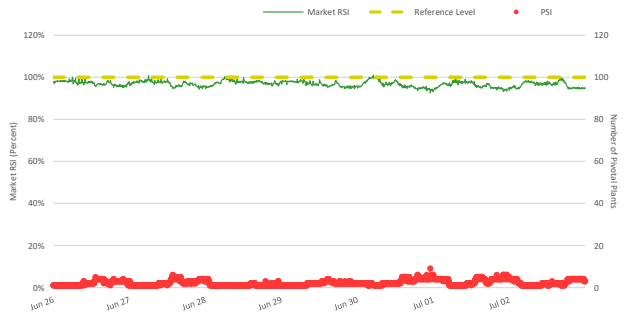
SUPPLY, DEMAND AND PRICE



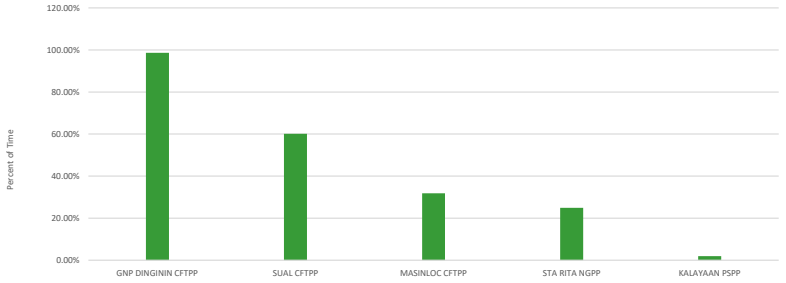
GENERATOR WEIGHTED AVERAGE PRICE



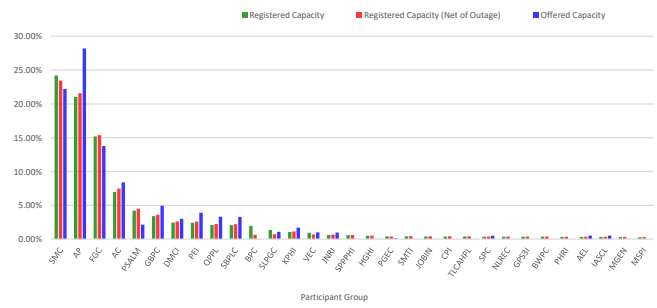
MARKET RSI VS PIVOTAL PLANTS



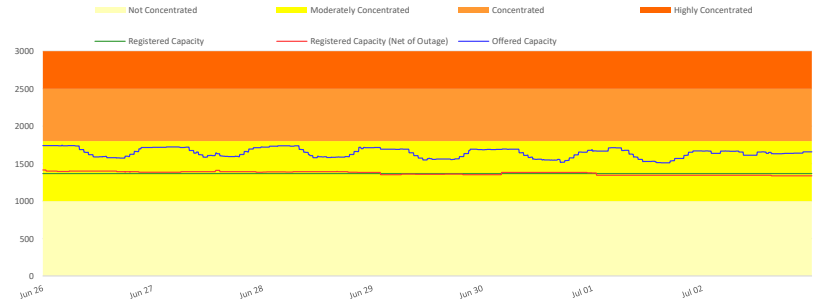
PSI



MARKET SHARE



HERFINDAHL-HIRSCHMAN INDEX

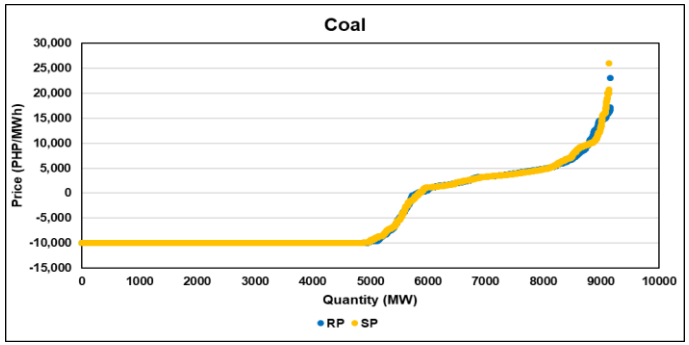


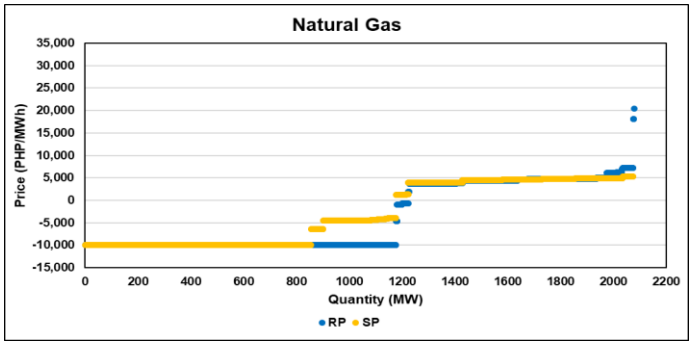
OFFER PATTERN ANALYSIS

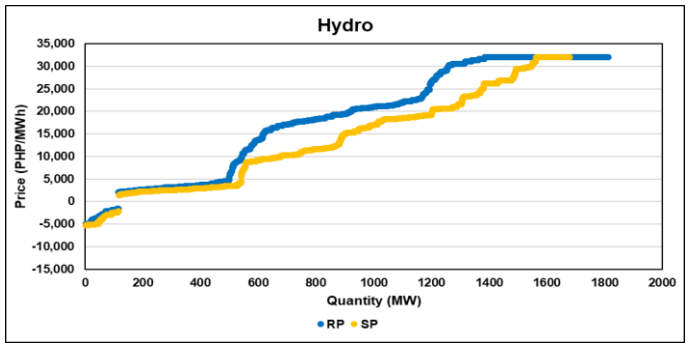
Legend

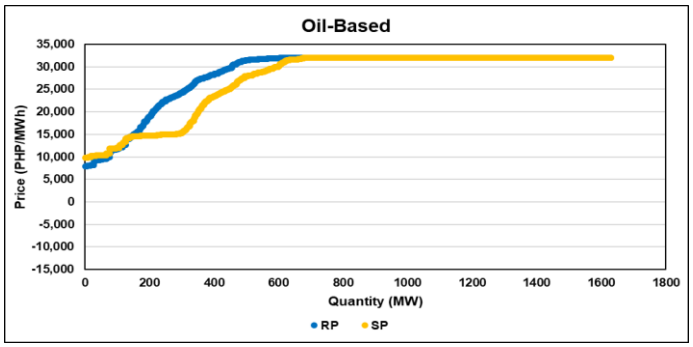
RP: Reference Offer Price – the week of 19-25 Jun 2023 was used as a control for the comparison with the subject price

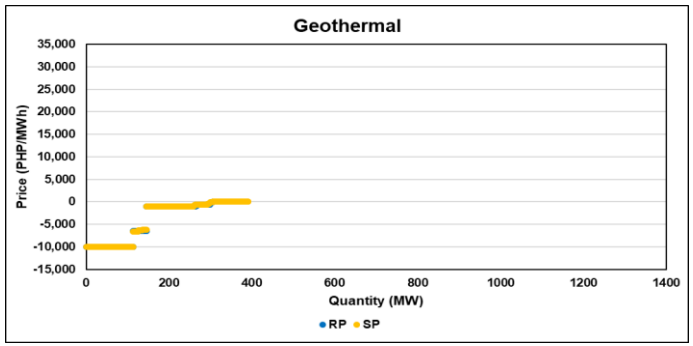
SP: Subject Offer Price – the week of 26 Jun-02 Jul 2023

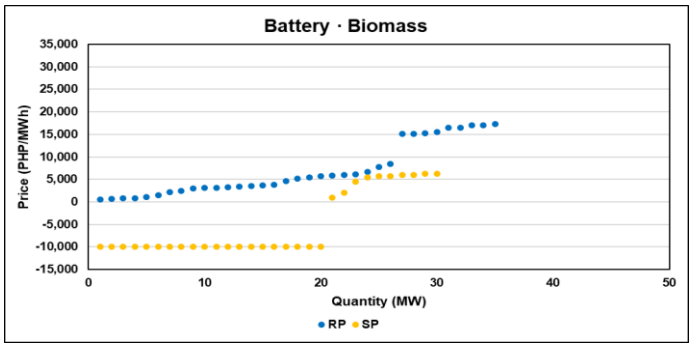












GLOSSARY OF TERMS

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.