Philippine Electricity Market Corporation

WEEKLY MARKET WATCH- LUZON-VISAYAS

09 - 15 Oct 2023

PEMC MARKET ASSESSMENT HIGHLIGHTS

· The average demand and the reserve schedule, recorded at 12,247 MW during the week of 09 - 15 Oct 2023, was higher than the previous week at 12,145 MW and higher than the same week last year at 12,136 MW.

· The average effective supply during the week was 12,950 MW, higher than the 12,730 MW of the previous week and higher than the 12,437 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.

· The capacity on outage averaged 3,000 MW, lower than last week's 3,247 MW. About 40% of the 3,000 MW involved Coal plants, while in terms of category, about 53% were Planned Outages.

· As a result, an average supply margin of 703 MW was observed during the week, which is higher by about 20% relative to the previous week and higher by about 134% in comparison with the same week last year. The supply deficit based on MMS solution was 2.95 MW on 14 October 2023 21:05 . The average supply margin was 568.96 MW at peak intervals and 809.12 MW at off-peak intervals.

· Correspondingly, lower average GWAP was recorded at PHP 7,225/MWh from PHP 8,210/MWh last week. This is lower than the PHP8,997/MWh during the same week last year.

·The secondary price cap was imposed during 258 intervals out of the 2,016 intervals of the week (about 13% 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 moderately concentrated market based on the offered and registered capacities.

· The top 5 pivotal plants during the week were –

1. MASINLOC CFTPP (about 68.2% of the time)
2. SUAL CFTPP (about 55.7% of the time)
3. PAGBILAO CFTPP (about 43.7% of the time)
4. MARIVELES CFTPP (about 34.38% of the time)
5. ILIJAN NGPP (about 34.13% of the time)

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

1. 138kV Maasin-Ubay Line 1 (about 10.3% of the time)
2. 230kV Bauang-BPPC Line1 (about 1.8% of the time)
3. 230kV Bauang-La Trinidad Line1 (about 1.1% of the time)
4. 230kV Bauang-La Trinidad Line2 (0.89% of the time)
5. 138kV Samboan-Amlan Line1 (0.35% of the time)

· OPA_ANALYSIS
- Coal plants had lower offered capacity on October 9 and 14-15 due to plant outage.
- Hydro plants offered around 600 MW of its effective capacity at price range Php30,000/MWh to Php 32,000/MWh between October 9 and 10.
- Natural gas plants had lower offered capacity on October 11 and 15 due to plant outage.
- Solar plants' highest nomination was recorded on October 9 and lowest peak on October 11.
- Wind plants' highest nomination was recorded on October 12 and lowest on October 15.

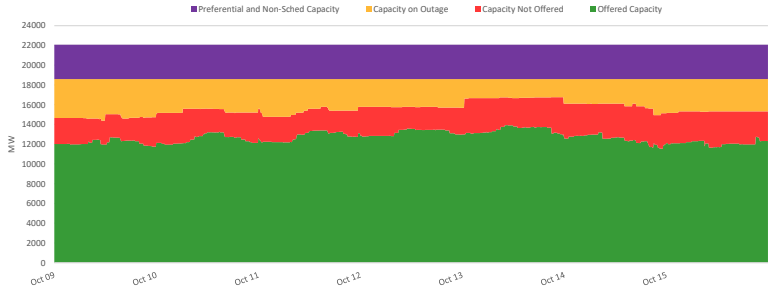
IEMOP MARKET SYSTEMS ADVISORY

· No IT-related issue was advised in IEMOP's market systems from 09 - 15 Oct 2023.

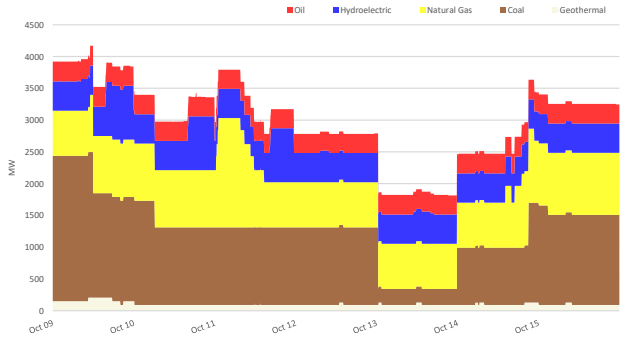
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		09 - 15 Oct 2023	Previous Week (02 - 08 Oct 2023)	Same Week, Previous Year (10 - 16 Oct 2022)	Percent Change From	
					Previous Week	Same Week, Prev Year
GWAP (PHP/MWh)	max	33,435.013	33,364.153	36,515.791	0.21%	-8.44%
	min	-0.999	0.000	0.000	-	-
	ave	7,224.814	8,210.222	8,996.966	-12.00%	-19.70%
Effective Supply (MW)	max	14,908.830	14,832.044	14,144.320	0.52%	5.41%
	min	10,676.299	10,368.354	10,343.476	2.97%	3.22%
	ave	12,950.133	12,729.530	12,436.955	1.73%	4.13%
System Demand (MW)	max	13,902.730	13,638.000	13,375.240	1.94%	3.94%
	min	9,169.120	9,076.140	8,971.240	1.02%	2.21%
	ave	11,695.307	11,574.644	11,310.732	1.04%	3.40%
Demand + Reserve Schedule (MW)	max	14,426.920	14,447.482	14,042.719	-0.14%	2.74%
	min	9,965.880	9,694.320	9,775.370	2.80%	1.95%
	ave	12,246.799	12,144.696	12,135.838	0.84%	0.91%
Supply Margin (MW)	max	1,230.440	1,124.696	867.935	9.40%	41.77%
	min	-2.950	-48.356	-83.745	93.90%	96.48%
	ave	703.335	584.834	301.117	20.26%	133.58%

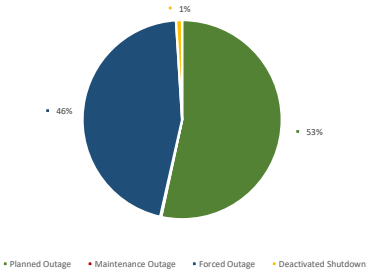
CAPACITY PROFILE



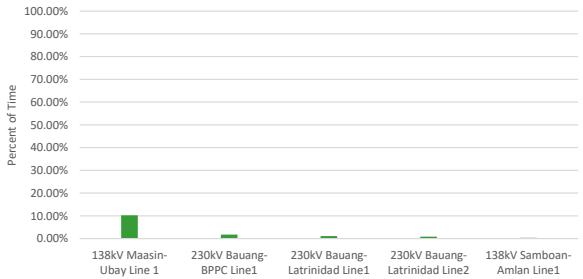
CAPACITY ON OUTAGE BY PLANT TYPE



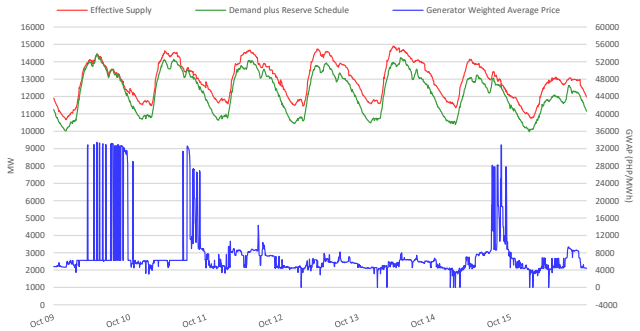
CAPACITY ON OUTAGE BY OUTAGE CATEGORY



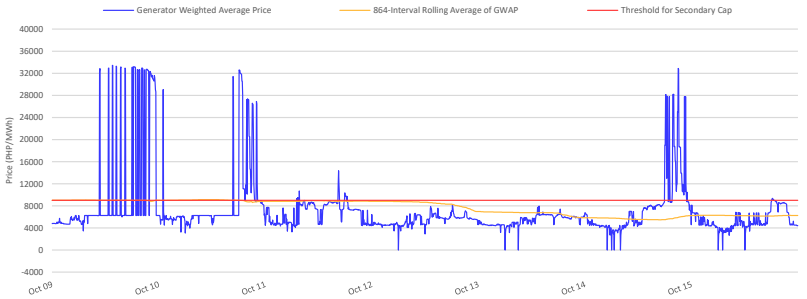
RTD CONGESTION



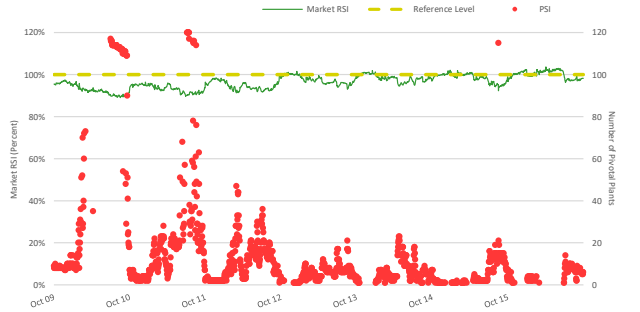
SUPPLY, DEMAND AND PRICE



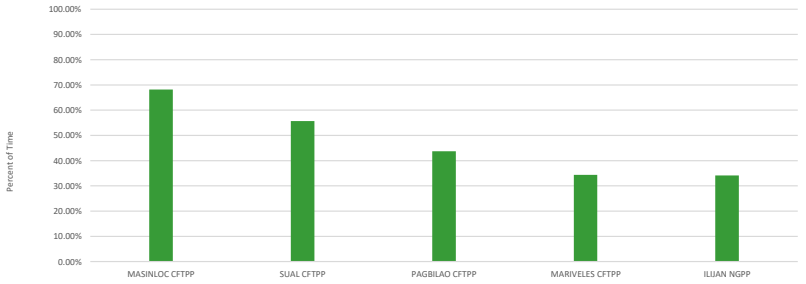
GENERATOR WEIGHTED AVERAGE PRICE



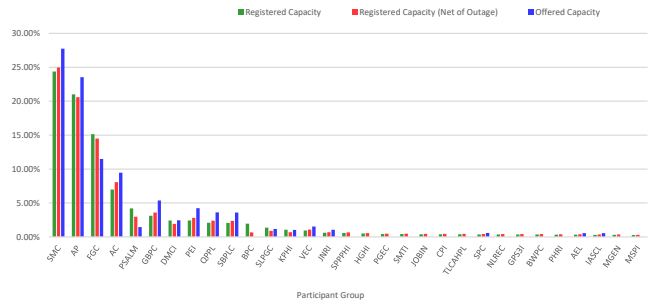
MARKET RSI VS PIVOTAL PLANTS



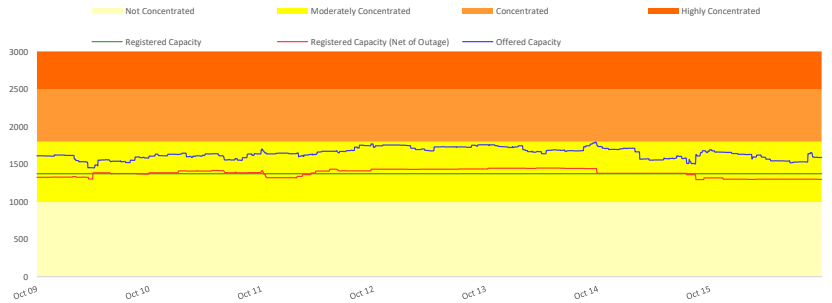
PSI



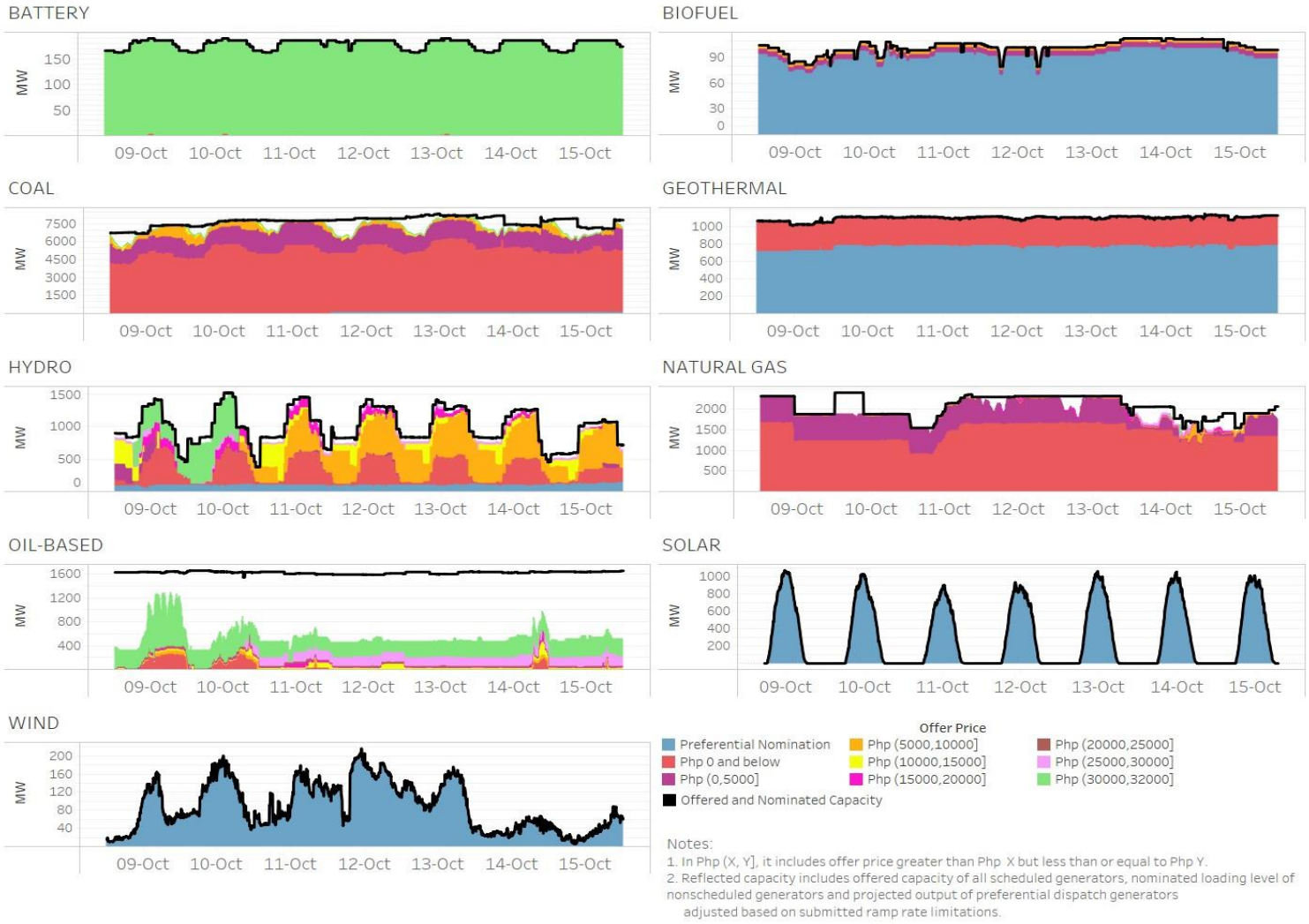
MARKET SHARE



HERFINDAHL-HIRSCHMAN INDEX



OFFER PATTERN ANALYSIS



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.