Philippine Electricity Market Corporation

WEEKLY MARKET WATCH- LUZON-VISAYAS

31 Jul -06 Aug 2023

PEMC MARKET ASSESSMENT HIGHLIGHTS

· The average demand and the reserve schedule, recorded at 11,448 MW during the week of 31 Jul -06 Aug 2023, was higher than the previous week at 11,043 MW and lower than the same week last year at 11,630 MW.

· The average effective supply during the week was 12,261 MW, higher than the 11,918 MW of the previous week and lower than the 12,307 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.

· The capacity on outage averaged at 2,131 MW, higher than last week's 1,606 MW. About 40% of the 2,131 MW involved Coal plants, while in terms of category, about 77% were Forced Outages.

· As a result, an average supply margin of 755 MW was observed during the week, which is lower by about 13.752% relative to the previous week and higher by about 11% in comparison with the same week last year. The thinnest supply margin based on MMS solution was 4.91 MW on 31 July 2023 17:40 . The average supply margin was 619.9 MW at peak intervals and 853.92 MW at off-peak intervals.

· Correspondingly, average GWAP was recorded at PHP 4,185/MWh from PHP 3,270/MWh last week. This is lower than the PHP5,467/MWh during the same week last year. Administered Prices were used in the Market Operator - initiated market intervention on 4 August 2023 16:05-16:45 for all regions.

·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 95.29% of the time)
2. STA RITA NGPP (about 65.13% of the time)
3. SUAL CFTPP (about 36.71% of the time)
4. MARIVELES CFTPP (about 31.75% of the time)
5. MASINLOC CFTPP (about 19.15% of the time)

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

1. 138kV Maasin_Ubay (about 51.14% of the time)
2. Batangas_Transformer 1 (about 0.79% of the time)
3. MakBan-B_Transformer 4 (about 0.2% of the time)

· OPA_ANALYSIS

- Biofuel and battery plants have highest capacity of 85.3MW recorded on July 31.
- Coal plants' offered capacity had decreased starting August 4 but have recorded higher effective supply starting the said date.
- Geothermal plants recorded lower capacity towards the end of the week due to power plants'deration.
- Aside from August 6 (Sunday), hydro plants recorded lowest nominated and offered capacity on August 1. Furthermore, offer prices on Sunday morning varied from the other days.
- Natural gas plants recorded lower offered capacity starting August 4 due to outage of Ilijan NGPP's 2 blocks.
- Oil-based plants recorded highest capacity and lower offer prices on July 31 and has lower offered capacity starting August 5.
- Solar plants recorded highest nominated capacity on August 5 and lowest nominated capacity on August 1.
- Wind plants recorded lowest nomination on July 31 then increased its nominated capacity towards the mid of the week.

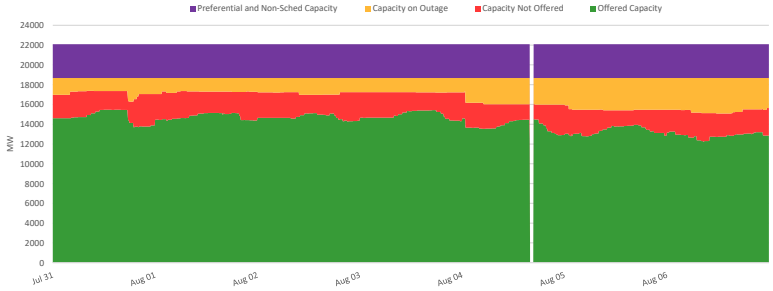
IEMOP MARKET SYSTEMS ADVISORY

· The Market Operator initiated Market Intervention for Luzon, Visayas and Mindanao on 4 August 2023 16:05-16:45 due to database publication failure.

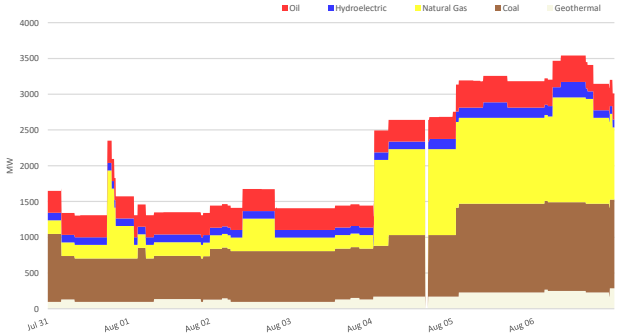
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		31 Jul -06 Aug 2023	Previous Week (24 - 30 Jul 2023)	Same Week, Previous Year (01 - 07 Aug 2022)	Percent Change From	
					Previous Week	Same Week, Prev Year
GWAP (PHP/MWh)	max	31,324.711	27,673.559	25,086.074	13.19%	24.87%
	min	0.000	-997.034	-934.813	100.00%	100.00%
	ave	4,185.182	3,270.010	5,467.368	27.99%	-23.45%
Effective Supply (MW)	max	14,215.680	14,421.683	14,773.478	-1.43%	-3.78%
	min	10,065.449	9,897.590	10,005.985	1.70%	0.59%
	ave	12,261.159	11,918.234	12,306.824	2.88%	-0.37%
System Demand (MW)	max	13,124.860	12,958.070	12,964.850	1.29%	1.23%
	min	8,542.210	8,408.290	8,411.500	1.59%	1.55%
	ave	11,048.973	10,595.280	10,560.700	4.28%	4.62%
Demand + Reserve Schedule (MW)	max	13,612.370	13,594.901	14,164.375	0.13%	-3.90%
	min	8,901.730	8,792.290	9,358.080	1.24%	-4.88%
	ave	11,447.561	11,043.334	11,630.062	3.66%	-1.57%
Supply Margin (MW)	max	1,344.310	1,439.900	1,088.349	-6.64%	23.52%
	min	4.911	169.922	76.344	-97.11%	-93.57%
	ave	754.584	874.899	676.762	-13.75%	11.50%

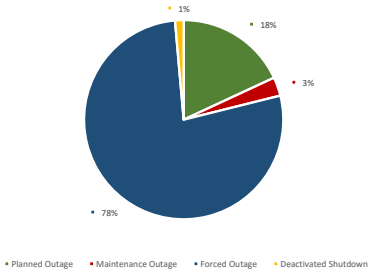
CAPACITY PROFILE



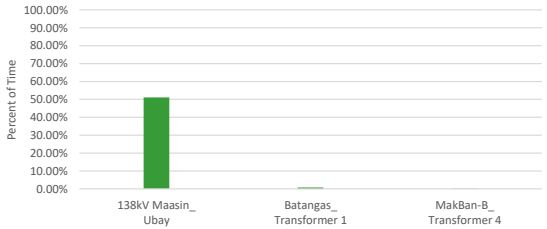
CAPACITY ON OUTAGE BY PLANT TYPE



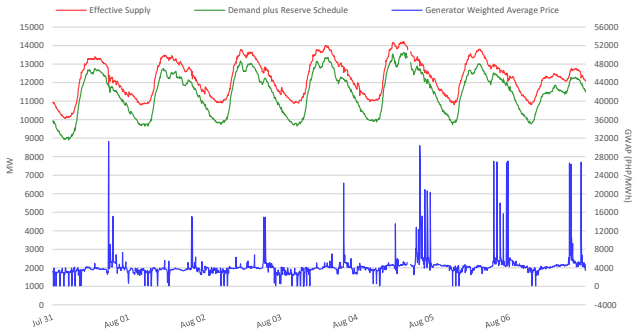
CAPACITY ON OUTAGE BY OUTAGE CATEGORY



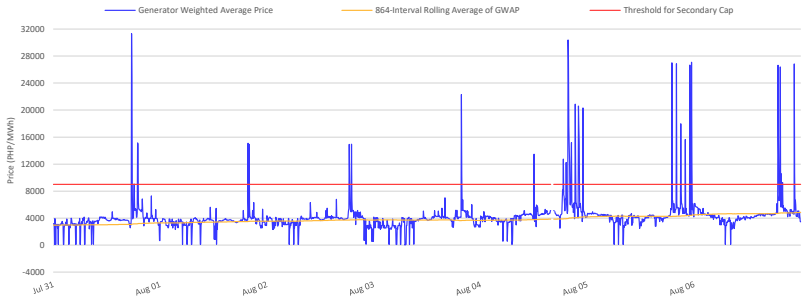
RTD CONGESTION



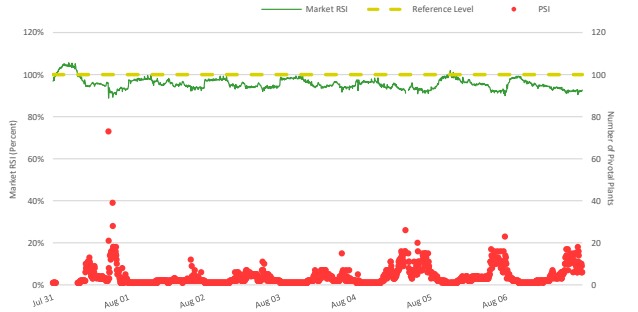
SUPPLY, DEMAND AND PRICE



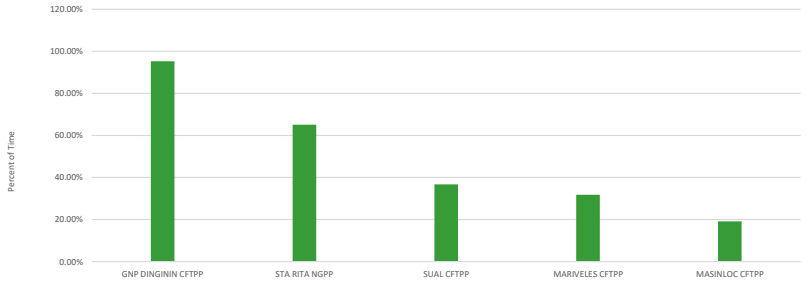
GENERATOR WEIGHTED AVERAGE PRICE



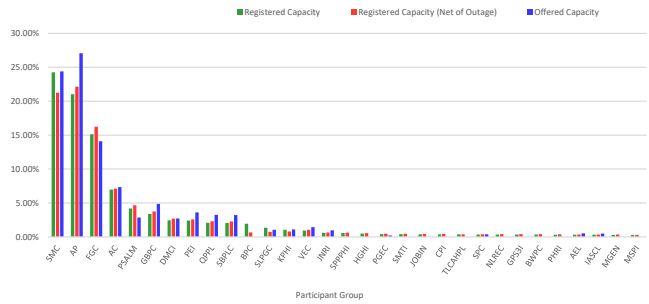
MARKET RSI VS PIVOTAL PLANTS



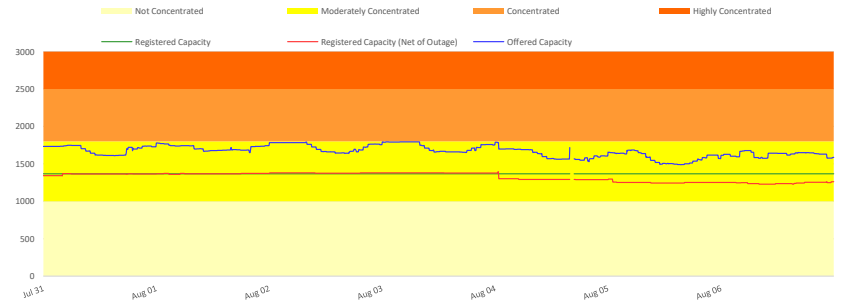
PSI



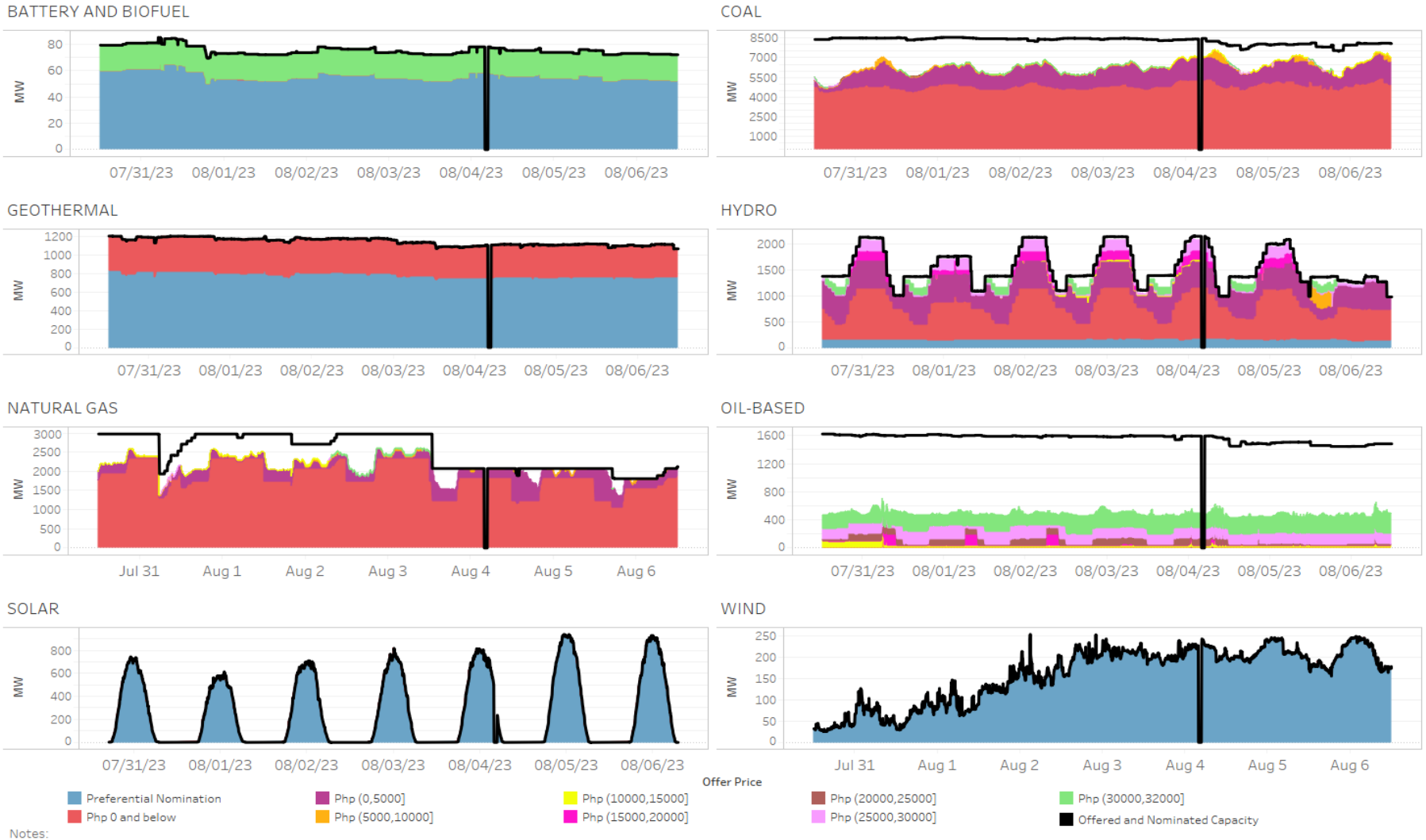
MARKET SHARE



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.