

PEMC MARKET ASSESSMENT HIGHLIGHTS

- The average demand and the reserve schedule, recorded at 12,145 MW during the week of 02 - 08 Oct 2023, was lower than the previous week at 12,202 MW and higher than the same week last year at 12,044 MW.
- The average effective supply during the week was 12,730 MW, lower than the 12,841 MW of the previous week and higher than the 12,457 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.
 - The capacity on outage averaged at 3,247 MW, higher than last week's 2,711 MW. About 53% of the 3,247 MW involved Coal plants, while in terms of category, about 57% were Forced Outages.
- As a result, an average supply margin of 585 MW was observed during the week, which is lower by about 8.448% relative to the previous week and higher by about 42% in comparison with the same week last year. The supply deficit based on MMS solution was 48.36 MW on 06 October 2023 18:10. The average supply margin was 511.38 MW at peak intervals and 642.66 MW at off-peak intervals.
- Correspondingly, average GWAP was recorded at PHP 8,210/MWh from PHP 6,457/MWh last week. This is lower than the PHP9,311/MWh during the same week last year.
 - The secondary price cap was imposed during 149 intervals out of the 2,016 intervals of the week (about 7% 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 –
 - SUAL CFTPP (about 80.41% of the time)
 - STA RITA NGPP (about 76.88% of the time)
 - MASINLOC CFTPP (about 73.36% of the time)
 - ILIJAN NGPP (about 67.31% of the time)
 - PAGBILAO CFTPP (about 56.94% of the time)
- Based on the MMS Solution, the congested equipment during the week were –
 - 138kV Maasin-Ubay Line 1 (about 35.3% of the time)
 - PGPP1_Transformer 3 (0.4% of the time)
 - Compostela_Transformer 4 (0.2% of the time)
 - Quiot_Transformer 1 (0.05% of the time)

OPA_ANALYSIS

- Coal plants had lower offered capacity on October 2 and 8 due to plant outage.
- Hydro plants had observed lower offered capacity but with higher price range at PHP30,000/MWh to PHP32,000/MWh on October 8 due to plant outage.
- Natural gas plants had lower offered capacity between October 6 and 7 due to plant outage.
- Solar plants' lowest nomination was recorded on October 5 and highest peak on October 8.
- Wind plants' highest nomination was recorded on October 5 and lowest on October 08.

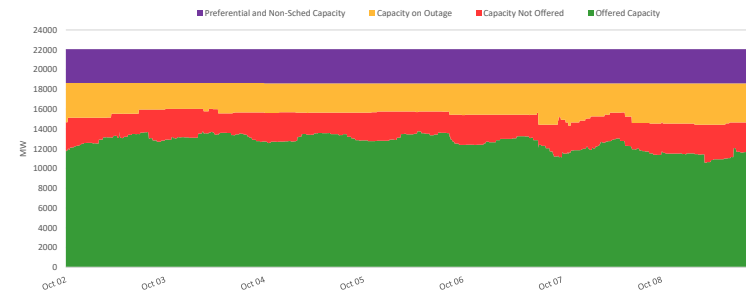
IEMOP MARKET SYSTEMS ADVISORY

- No IT-related issue was advised in IEMOP's market systems from 02 - 08 Oct 2023.

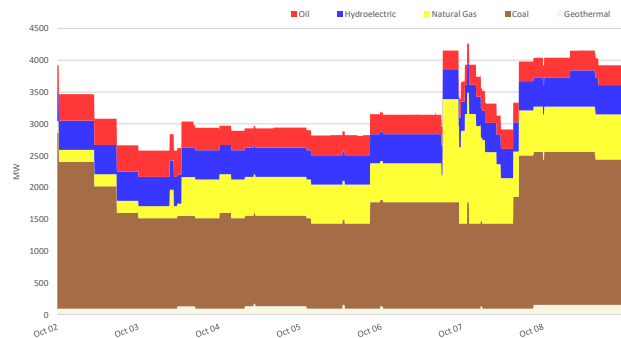
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		02 - 08 Oct 2023	Previous Week (25 Sep - 01 Oct 2023)	Same Week, Previous Year (03 - 09 Oct 2022)	Percent Change From	
					Previous Week	Same Week, Prev Year
GWAP (PHP/MWh)	max	33,364.153	34,063.075	33,619.615	-2.052%	-0.760%
	min	0.000	2,696.181	-982.920	-100.000%	100.000%
	ave	8,210.222	6,457.137	9,310.848	27.150%	-11.821%
Effective Supply (MW)	max	14,832.044	14,966.500	14,652.193	-0.898%	1.227%
	min	10,368.354	10,827.031	10,440.653	-4.236%	-0.692%
	ave	12,729.530	12,840.694	12,456.722	-0.866%	2.190%
System Demand (MW)	max	13,638.000	13,970.240	13,237.000	-2.378%	3.029%
	min	9,076.140	9,462.500	8,987.040	-4.083%	0.991%
	ave	11,574.644	11,665.962	11,063.972	-0.783%	4.616%
Demand + Reserve Schedule (MW)	max	14,447.482	14,608.599	14,508.805	-1.103%	-0.423%
	min	9,694.320	9,972.020	9,976.120	-2.785%	-2.825%
	ave	12,144.696	12,201.894	12,044.176	-0.469%	0.835%
Supply Margin (MW)	max	1,124.696	1,133.146	1,140.724	-0.746%	-1.405%
	min	-48.356	-647.158	-92.069	92.528%	47.479%
	ave	584.834	638.800	412.341	-8.448%	41.833%

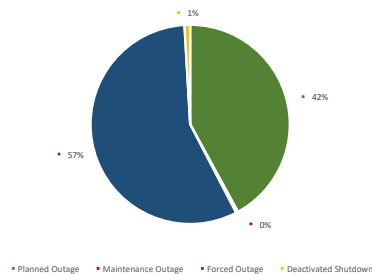
CAPACITY PROFILE



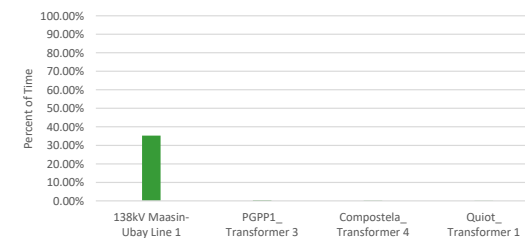
CAPACITY ON OUTAGE BY PLANT TYPE



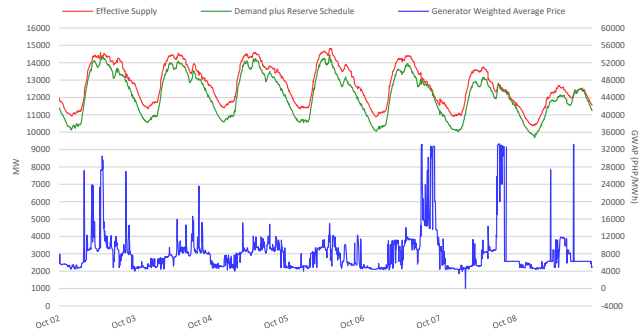
CAPACITY ON OUTAGE BY OUTAGE CATEGORY



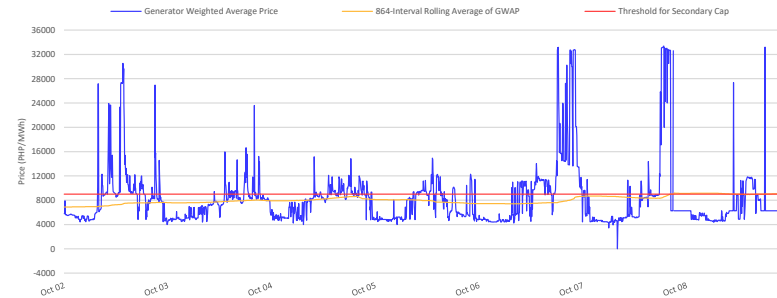
RTD CONGESTION



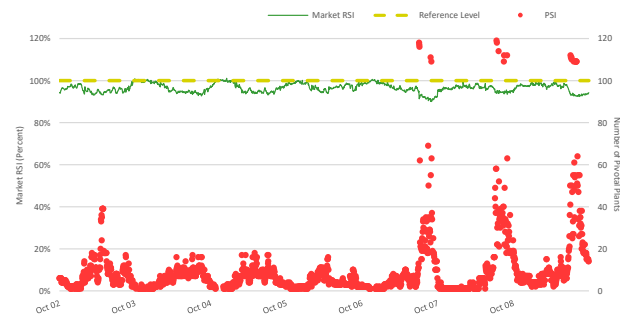
SUPPLY, DEMAND AND PRICE



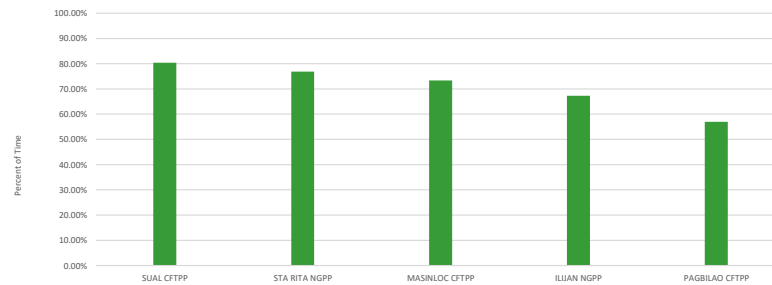
GENERATOR WEIGHTED AVERAGE PRICE



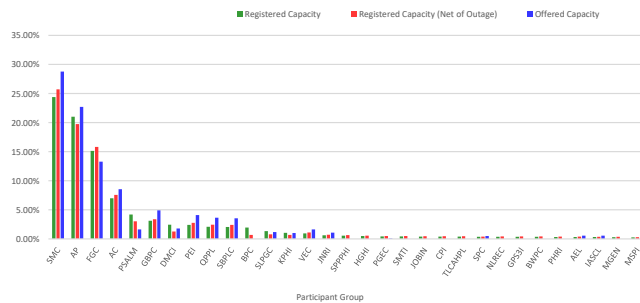
MARKET RSI VS PIVOTAL PLANTS



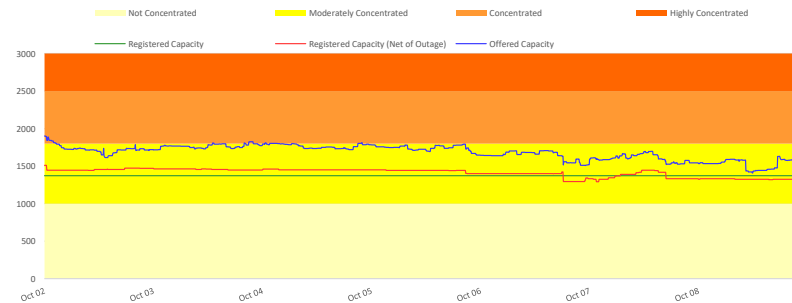
PSI



MARKET SHARE

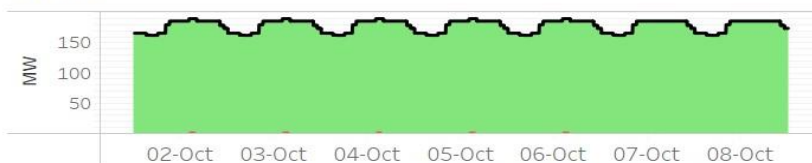


HERFINDAHL-HIRSCHMAN INDEX

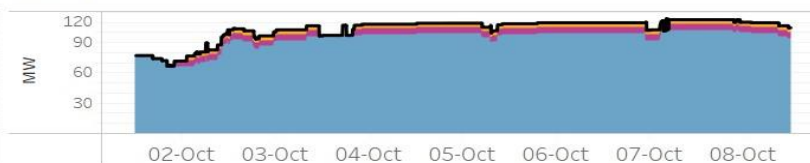


OFFER PATTERN ANALYSIS

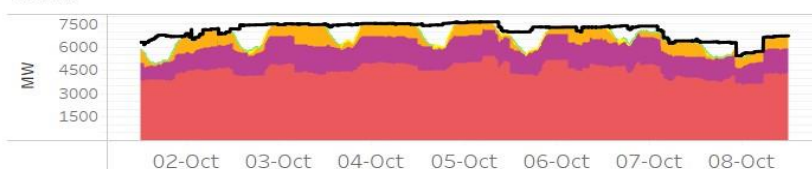
BATTERY



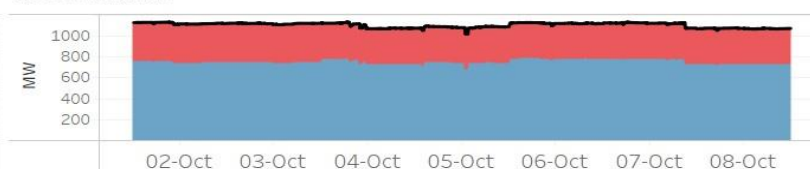
BIOFUEL



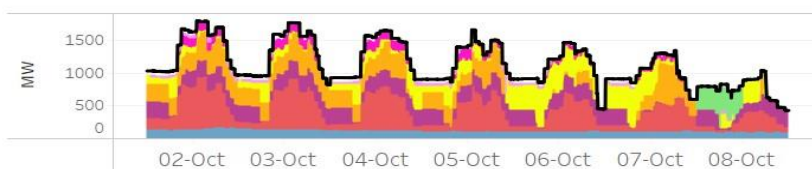
COAL



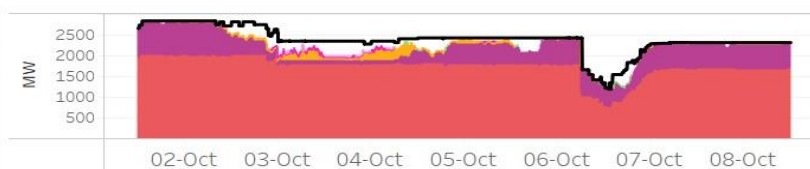
GEOTHERMAL



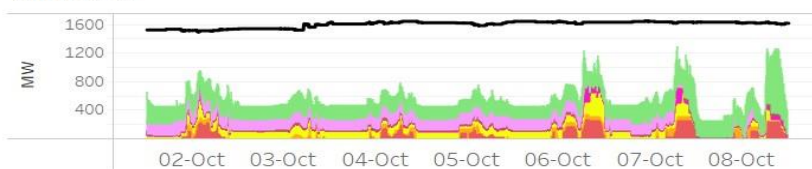
HYDRO



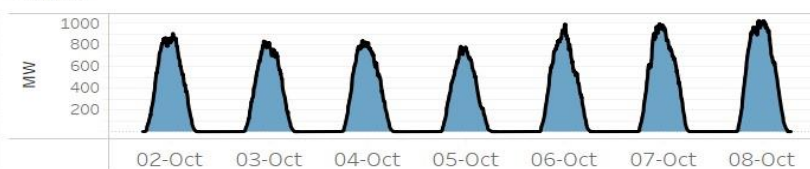
NATURAL GAS



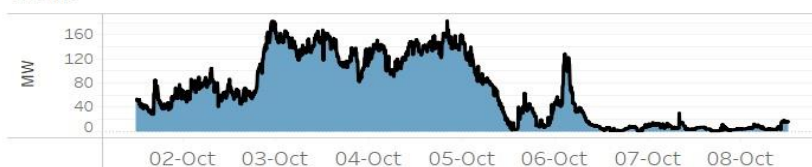
OIL-BASED



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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