



PEMC MARKET ASSESSMENT HIGHLIGHTS

- The average demand and the reserve schedule, recorded at 12,535 MW during the week of 06 - 12 Nov 2023, was higher than the previous week at 11,193 MW and higher than the same week last year at 11,689 MW.

- The average effective supply during the week was 13,175 MW, higher than the 12,019 MW of the previous week and higher than the 12,037 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.

- The capacity on outage averaged at 2,439 MW, higher than last week's 2,430 MW. About 48% of the 2,439 MW involved Coal plants, while in terms of category, about 52% were Planned Outages.

- As a result, an average supply margin of 640 MW was observed during the week, which is lower by about 22.50% relative to the previous week and higher by about 84% in comparison with the same week last year. The supply deficit based on MMS solution was 1.98 MW on 09 November 2023 21:05. The average supply margin was 573.36 MW at peak intervals and 692.43 MW at off-peak intervals.

- Correspondingly, average GWAP was recorded at PHP 5,495/MWh from PHP 3,577/MWh last week. This is lower than the PHP8,883/MWh during the same week last year.

- No secondary price cap was imposed for this week

- The top 5 participant groups accounted for about 80% 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 CFTPP (about 100% of the time)
2. ILIJAN NGPP (about 93.06% of the time)
3. STA RITA NGPP (about 91.37% of the time)
4. MARIVELES CFTPP (about 86.16% of the time)
5. MASINLOC CFTPP (about 85.86% of the time)

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

1. 138kV Samboan-Amlan Line1 (about 20.8% of the time)
2. 138kV Maasin-Ubay Line 1 (about 15.9% of the time)
3. Labrador_Transformer 2 (0.45% of the time)
4. MAKBAN-B_Transformer 4 (0.4% of the time)
5. Calbayog_Transformer 1 (0.3% of the time)

- OPA_ANALYSIS

- Coal plants offered higher capacity compared to previous week due to lower outages.
- Natural gas plants had higher offered capacity relative to previous week due to lower outages.
- Solar plants' lowest nomination was recorded on November 8 and highest on November 12.
- Wind plants' highest on November 7 and lowest nomination was recorded on November 10.

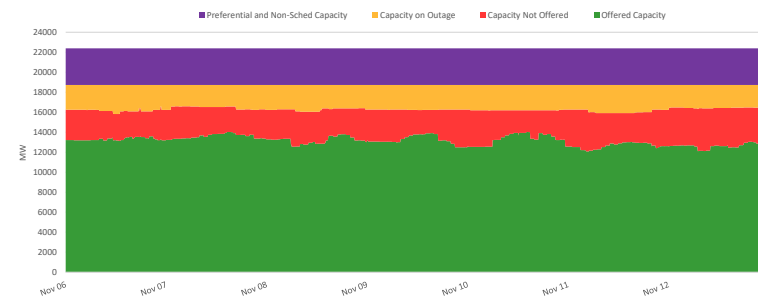
ITEMOP MARKET SYSTEMS ADVISORY

- No IT-related issue was advised in ITEMOP's market systems from 06 - 12 Nov 2023.

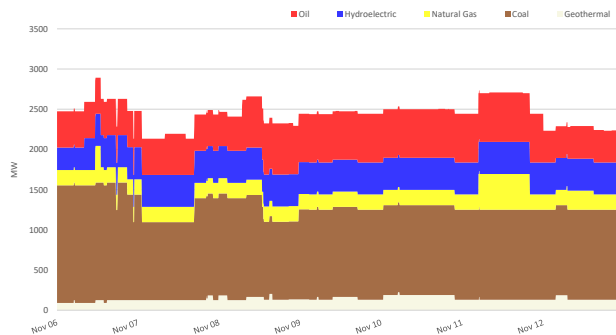
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		06 - 12 Nov 2023	Previous Week (30 Oct - 05 Nov 2023)	Same Week, Previous Year (07 - 13 Nov 2022)	Percent Change From	
					Previous Week	Same Week, Prev Year
GWAP (PHP/MWh)	max	32,291.318	32,028.409	33,159.437	0.82%	-2.62%
	min	-0.010	-4,943.843	0.000	100.00%	-
	ave	5,495.370	3,576.925	8,883.001	53.63%	-38.14%
Effective Supply (MW)	max	15,364.722	15,032.185	13,959.384	2.21%	10.07%
	min	10,925.124	9,622.770	9,855.871	13.53%	10.85%
	ave	13,174.643	12,018.963	12,036.731	9.62%	9.45%
System Demand (MW)	max	14,167.340	13,397.140	12,813.960	5.75%	10.56%
	min	9,305.620	7,793.920	8,516.460	19.40%	9.27%
	ave	11,777.433	10,432.386	10,848.904	12.89%	8.56%
Demand + Reserve Schedule (MW)	max	14,901.580	14,248.660	13,684.050	4.58%	8.90%
	min	10,145.150	8,676.260	9,389.760	16.93%	8.04%
	ave	12,534.661	11,193.139	11,689.073	11.99%	7.23%
Supply Margin (MW)	max	1,074.925	1,566.862	751.359	-31.40%	43.06%
	min	-1.982	89.996	-169.197	-102.20%	98.83%
	ave	639.982	825.824	347.657	-22.50%	84.08%

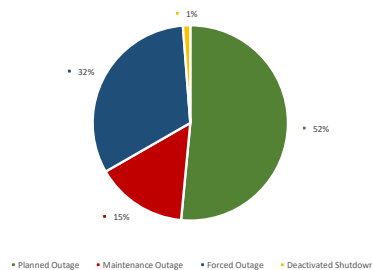
CAPACITY PROFILE



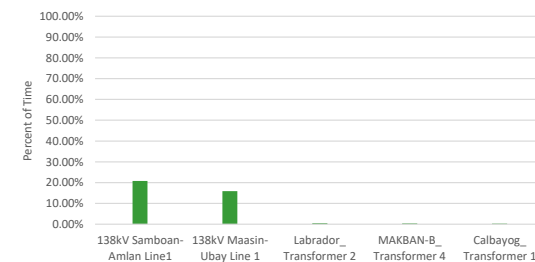
CAPACITY ON OUTAGE BY PLANT TYPE



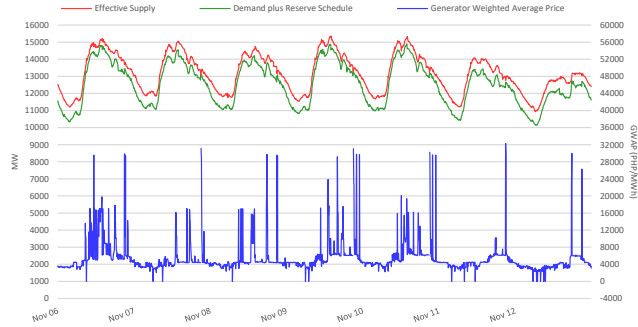
CAPACITY ON OUTAGE BY OUTAGE CATEGORY



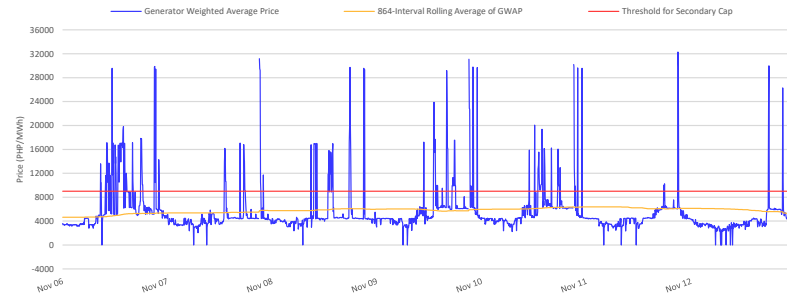
RTD CONGESTION



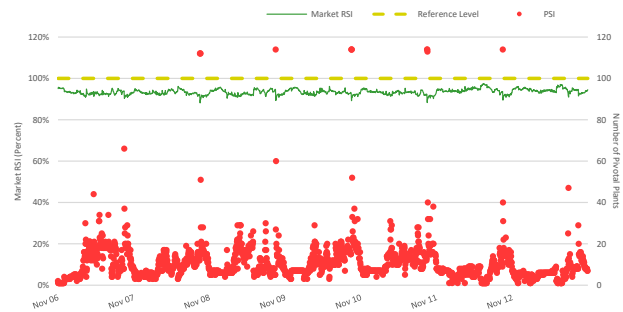
SUPPLY, DEMAND AND PRICE



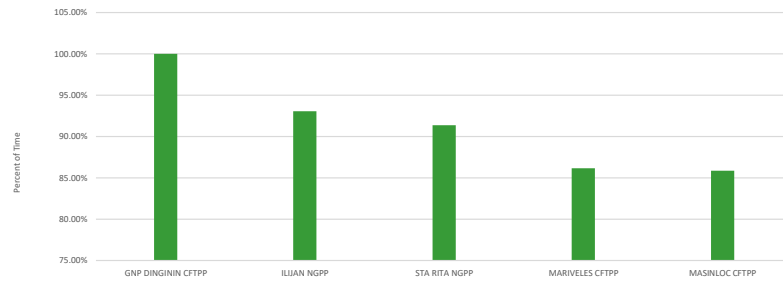
GENERATOR WEIGHTED AVERAGE PRICE



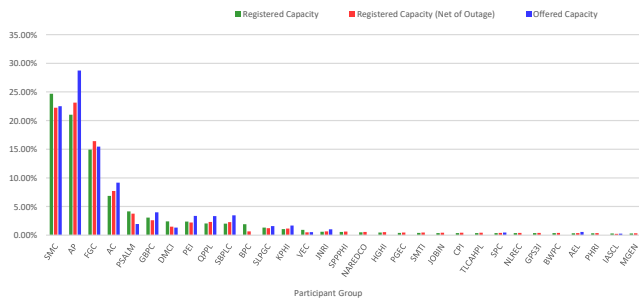
MARKET RSI VS PIVOTAL PLANTS



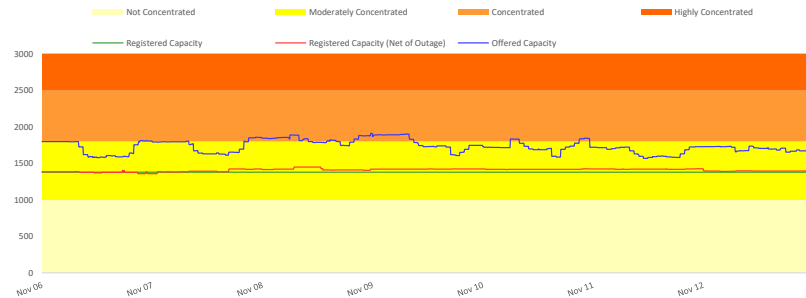
PSI



MARKET SHARE

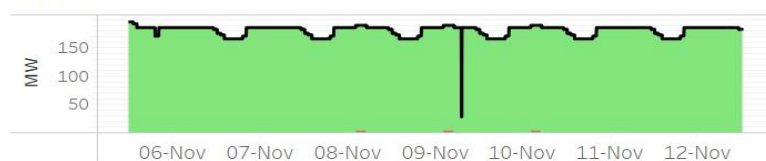


HERFINDAHL-HIRSCHMAN INDEX

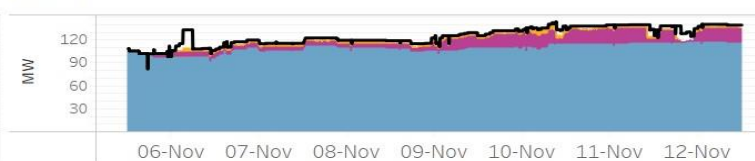


OFFER PATTERN ANALYSIS

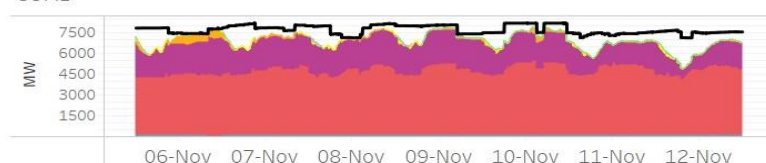
BATTERY



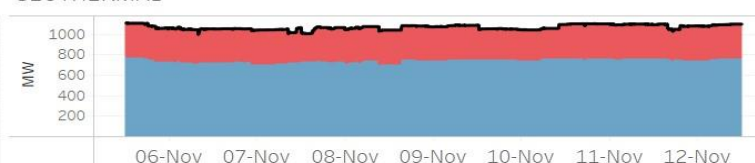
BIOFUEL



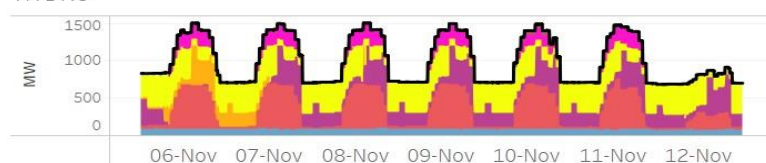
COAL



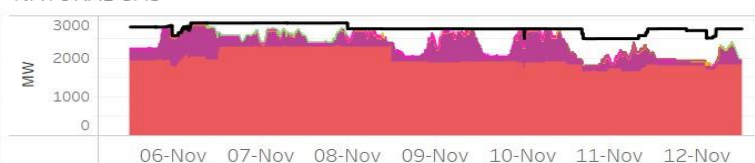
GEOHERMAL



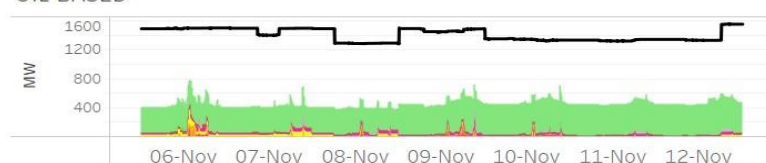
HYDRO



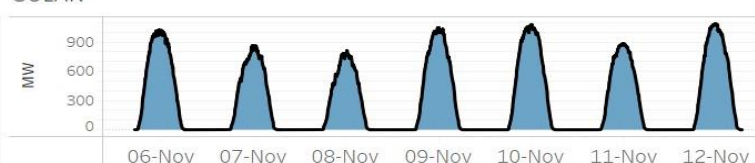
NATURAL GAS



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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