

PEMC MARKET ASSESSMENT HIGHLIGHTS

- The average demand and the reserve schedule, recorded at 12,530 MW during the week of 19 - 25 Feb 2024, was higher than the previous week at 11,942 MW and higher than the same week last year at 11,200 MW.
- The average effective supply during the week was 13,007 MW, higher than the 12,588 MW of the previous week and higher than the 11,783 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.
 - The capacity on outage averaged at 3,237 MW, higher than last week's 2,387 MW. In terms of capacity on outage by plant type, about 56% of the 3,237 MW involved Coal Plants, while in terms of category, about 58% were Planned Outages.
- As a result, an average supply margin of 477 MW was observed during the week, which is lower by about 26.085% relative to the previous week and lower by about 18.131% in comparison with the same week last year. The supply deficit based on MMS solution was 0.86 MW on 22 February 2024 21:15h. The average supply margin was 458.12 MW at peak intervals and 492 MW at off-peak intervals.
- Correspondingly, average GWAP was recorded at PHP 6,199/MWh from PHP 4,084/MWh last week. This is lower than the PHP6,576/MWh during the same week last year.
 - The secondary price cap was imposed during 26 intervals out of the 2,016 intervals of the week (about 1% of the time).
- The top 5 participant groups accounted for about 77% of the offered capacity. The Herfindahl-Hirschman Index (HHI) by participant group indicated mostly concentrated and moderately concentrated market based on the offered and registered capacities, respectively.
- The top 5 pivotal plants during the week were –
 1. ILIJAN NGPP (100 % of the time)
 2. MASINLOC CFTPP (about 99.9% of the time)
 3. GNP DINGININ CFTPP (about 99.9% of the time)
 4. STA RITA NGPP (about 99.85% of the time)
 5. SUAL CFTPP (about 99.5% of the time)
- Based on the MMS Solution, the top 5 congested equipment during the week were
 1. 138kV Samboan-Amlan Line1 (about 11.7% of the time)
 2. 230kV Bauang-Latrinidad Line2 (about 3.2% of the time)
 3. 230kV Bauang-Latrinidad Line1 (about 3.1% of the time)
 4. 230kV Bauang-BPPC Line1 (about 0.84% of the time)
 5. 230kV Sta.Rosa-Calaca Line1(about 0.1% of the time)

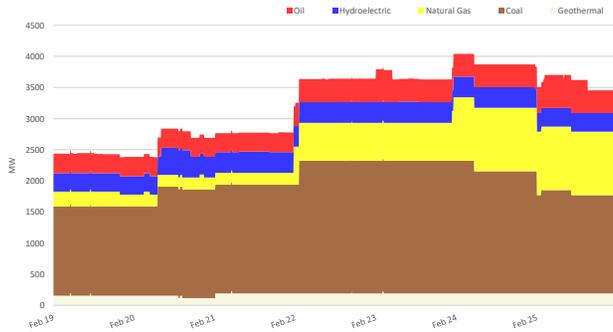
OPA_ANALYSIS

- The offered capacities of coal plants were lower than the previous week due to the increase in capacity outages. It was also observed that there was an intermittent decrease in offered capacity for the whole week due to simultaneous testing of coal plants for their Plant Performance Test, which was scheduled thru security limits imposed by the NGCP-SO
- The capacity offered by the hydro plants was lower than the previous week due to increased outages. Notably, on February 22, 23, and 25, the observed capacity ranged from 269 to 400 MW and was offered at prices ranging from Php 30,000/MWh to Php 32,000/MWh.
- Natural Gas Plants experienced a decrease in offered capacity due to higher outages compared to the previous week. The observed lower offered capacity for the first four days was due to the testing of Natural Gas Plants for their Plant Performance Test, which was scheduled thru the security limits imposed by the NGCP-SO
- The lowest Solar Plants nomination was recorded on February 25, while the highest was recorded on February 24.
- The lowest nomination for Wind Plants was recorded on February 23, while the highest was on February 25.

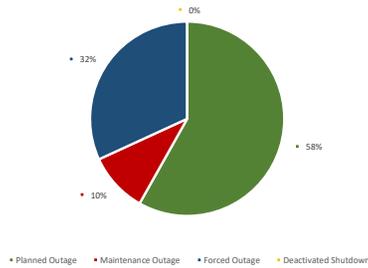
IEMOP MARKET SYSTEMS ADVISORY

- No IT-related issue was advised in IEMOP's market systems from 19 - 25 Feb 2024.

CAPACITY ON OUTAGE BY PLANT TYPE



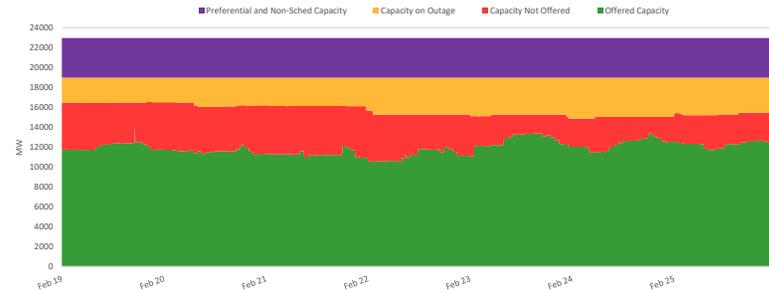
CAPACITY ON OUTAGE BY OUTAGE CATEGORY



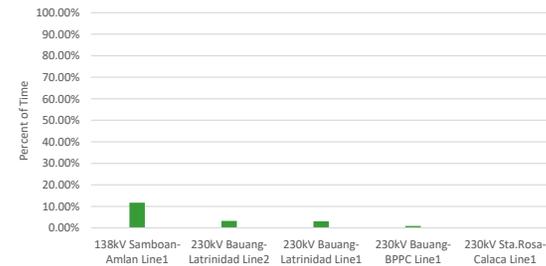
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars	19 - 25 Feb 2024	Previous Week (12 - 18 Feb 2024)	Same Week, Previous Year (20 - 26 Feb 2023)	Percent Change From		
				Previous Week	Same Week, Prev Year	
GWAP (PHP/MWh)	max	39,544.233	15,267.443	27,481.123	159.01%	43.90%
	min	-0.982	-797.737	-1,033.947	99.88%	99.91%
	ave	6,198.944	4,084.379	6,576.078	51.77%	-5.73%
Effective Supply (MW)	max	15,230.334	14,902.522	13,836.286	2.20%	10.08%
	min	10,690.477	10,111.598	9,142.743	5.72%	16.93%
	ave	13,007.491	12,587.902	11,782.792	3.33%	10.39%
System Demand (MW)	max	13,474.910	13,011.010	12,187.600	3.57%	10.56%
	min	9,110.970	8,490.830	7,734.960	7.30%	17.79%
	ave	11,387.807	10,872.512	10,216.812	4.74%	11.46%
Demand + Reserve Schedule (MW)	max	14,860.220	14,330.350	13,289.910	3.70%	11.82%
	min	10,033.790	9,319.990	8,453.960	7.66%	18.69%
	ave	12,530.417	11,942.467	11,200.066	4.92%	11.88%
Supply Margin (MW)	max	815.409	1,074.112	975.305	-24.09%	-16.39%
	min	-0.860	262.863	150.011	-100.33%	-100.57%
	ave	477.074	645.435	582.726	-26.08%	-18.13%

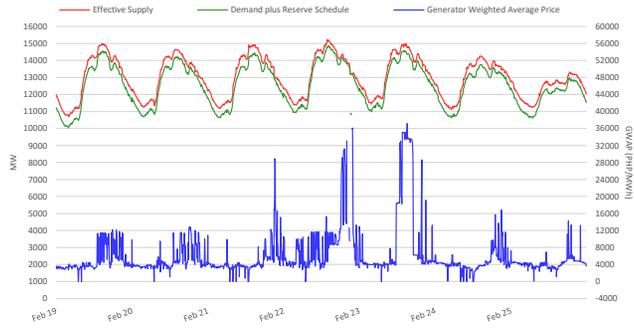
CAPACITY PROFILE



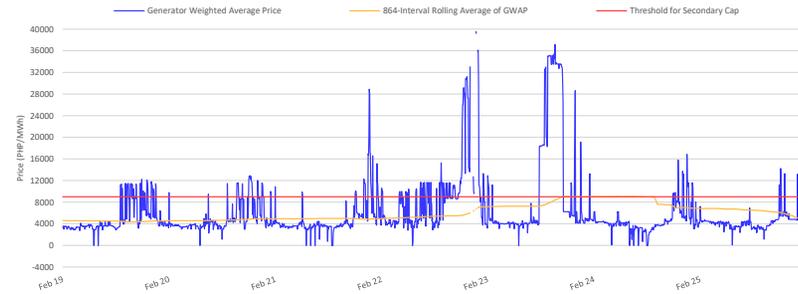
RTD CONGESTION



SUPPLY, DEMAND AND PRICE



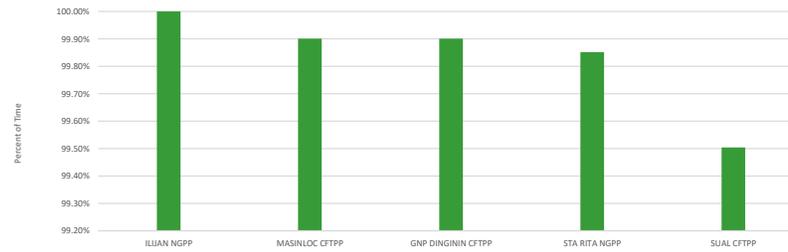
GENERATOR WEIGHTED AVERAGE PRICE



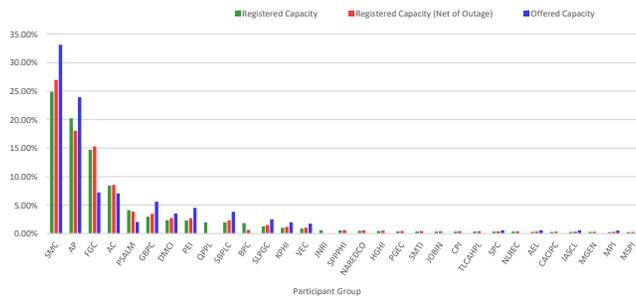
MARKET RSI VS PIVOTAL PLANTS



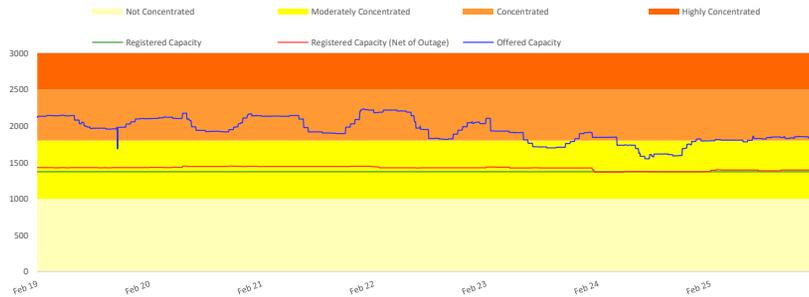
PSI



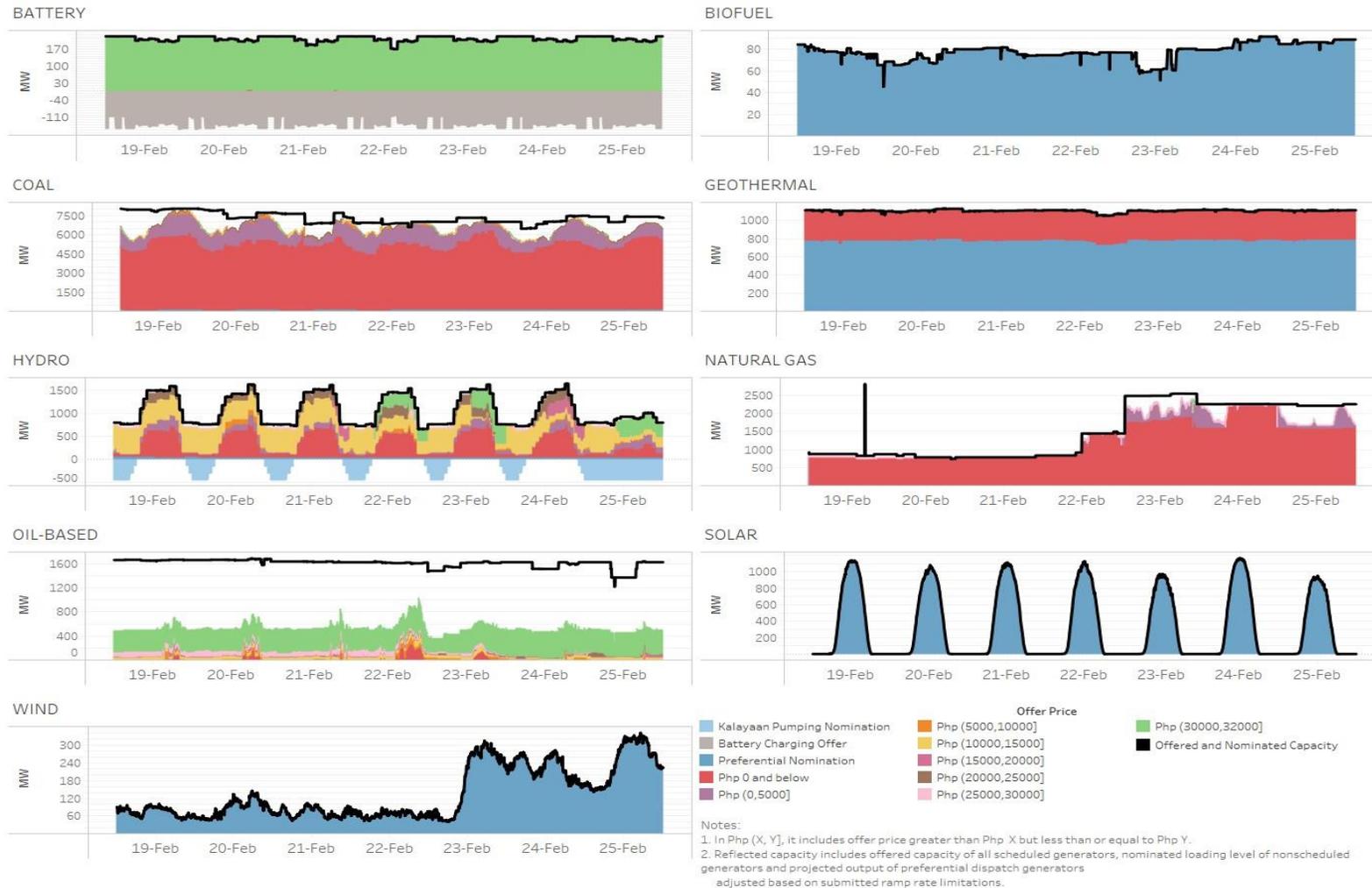
MARKET SHARE



HERFINDAHL-HIRSCHMAN INDEX



OFFER PATTERN ANALYSIS



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.

DISCLAIMER: The information contained in this document is based on the available electricity spot market data. The same information is subject to change as updated figures come in. As such, the PEMC does not make any representation or warranty as to the completeness of this information. The PEMC likewise accepts no responsibility or liability whatsoever for any loss or cost incurred by a reader arising from, or in relation to, any conclusion or assumption derived from the information found herein.