

PEMC MARKET ASSESSMENT HIGHLIGHTS

- The average demand and the reserve schedule, recorded at 11,794 MW during the week of 29 Jan -04 Feb 2024, was higher than the previous week at 11,617 MW and higher than the same week last year at 10,974 MW.
- The average effective supply during the week was 12,449 MW, higher than the 12,225 MW of the previous week and higher than the 11,638 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.
 - The capacity on outage averaged at 2,283 MW, lower than last week's 2,855 MW. In terms of capacity on outage by plant type, about 40% of the 2,283 MW involved Coal Plants, while in terms of category, about 52% were Forced Outages.
- As a result, an average supply margin of 655 MW was observed during the week, which is higher by about 8% relative to the previous week and lower by about 1.267% in comparison with the same week last year. The thinnest supply margin, based on MMS solution, was 229.59 MW on 30 January 2024 21:05h. The average supply margin was 669.17 MW at peak intervals and 643.79 MW at off-peak intervals.
- Correspondingly, average GWAP was recorded at PHP 3,299/MWh from PHP 3,346/MWh last week. This is lower than the PHP7,024/MWh during the same week last year. Administered Prices were used in all regions during the Market Operator (MO) initiated market intervention at 09:25h on 03 February 2024.
 - No secondary price cap was imposed for this week.
- The top 5 participant groups accounted for about 75% 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. GNP DINGININ CFTPP (about 99.95% of the time)
 2. STA RITA NGPP (about 98.21% of the time)
 3. MASINLOC CFTPP (about 97.72% of the time)
 4. SUAL CFTPP (about 85.22% of the time)
 5. SMC LIMAY CFTPP (about 79.96% of the time)
- Based on the MMS Solution, the top 5 congested equipment during the week were –
 1. San Jose 230kV_Transformer 1 (about 1.6% of the time)
 2. 138kV Samboan-Amlan Line1 (about 1.0% of the time)
 3. 230 kV Tabango_Daan Bantayan (0.3% of the time)
 4. Calmba_Transformer2 (0.25% of the time)
 5. PGGP1_Transformer 3 (0.05% of the time)

OPA ANALYSIS

- Coal Plants increased offered capacities compared to the preceding week, attributed to reduced outages.
- Hydro Plants increased offered capacities compared to the preceding week, due to reduced outages. Notably, from January 30 to February 03, during the afternoon peak hours, there was an observed offered capacity of approximately 183 MW, with prices ranging from Php 25,000/MWh to Php 30,000/MWh.
- Natural Gas (NatGas) experienced a reduction in offered capacity starting February 01 due to the conduct of LNG commissioning tests by San Gabriel and Sta. Rita Plants. However, the said plants were scheduled through the security limits imposed by the NGCP-SO.
- The lowest Solar Plants nomination was recorded on February 01 while the highest was recorded on February 4.
- The lowest nomination for Wind Plants was recorded on February 01 while the highest was on January 29.

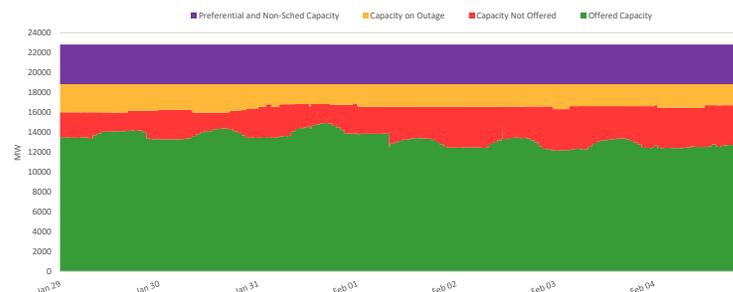
IEMOP MARKET SYSTEMS ADVISORY

- MO initiated Market Intervention for interval 09:25h RTD February 3, 2024 in all regions due to power flow divergence resulted from momentarily open breakers at Agus 6 station.

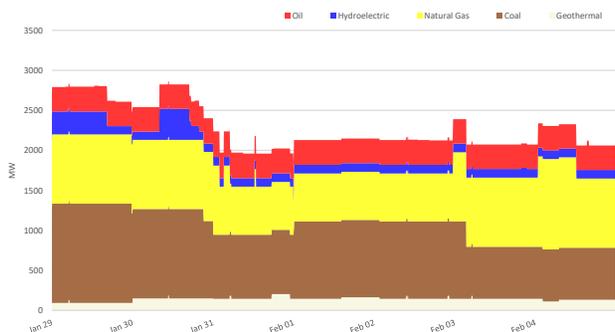
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		29 Jan -04 Feb 2024	Previous Week (22 - 28 Jan 2024)	Same Week, Previous Year (30 Jan - 05 Feb 2023)	Percent Change From	
					Previous Week	Same Week, Prev Year
GWAP (PHP/MWh)	max	28,122.400	30,218.194	30,650.297	-6.936%	-8.248%
	min	-0.011	-993.210	-974.015	99.999%	99.999%
	ave	3,298.720	3,346.389	7,023.714	-1.424%	-53.035%
Effective Supply (MW)	max	14,315.131	14,398.271	13,683.487	-0.577%	4.616%
	min	9,972.350	9,826.570	9,110.108	1.484%	9.465%
	ave	12,448.922	12,225.428	11,637.509	1.828%	6.972%
System Demand (MW)	max	12,322.930	12,819.450	12,158.070	-3.873%	1.356%
	min	7,958.150	8,029.330	7,233.440	-0.886%	10.019%
	ave	10,518.747	10,394.163	9,891.660	1.199%	6.340%
Demand + Reserve Schedule (MW)	max	13,509.770	13,918.370	13,245.950	-2.936%	1.992%
	min	9,363.760	9,081.530	8,340.450	3.108%	12.269%
	ave	11,793.628	11,616.857	10,973.805	1.522%	7.471%
Supply Margin (MW)	max	1,026.743	1,143.967	1,002.248	-10.247%	2.444%
	min	229.585	216.110	135.588	6.235%	69.325%
	ave	655.294	608.571	663.704	7.677%	-1.267%

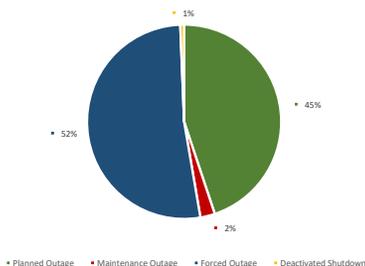
CAPACITY PROFILE



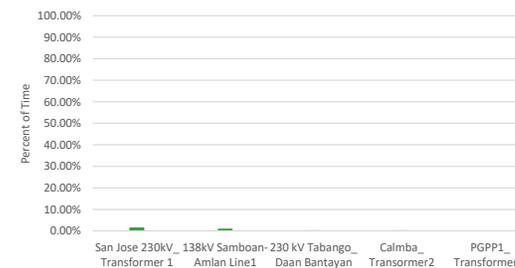
CAPACITY ON OUTAGE BY PLANT TYPE



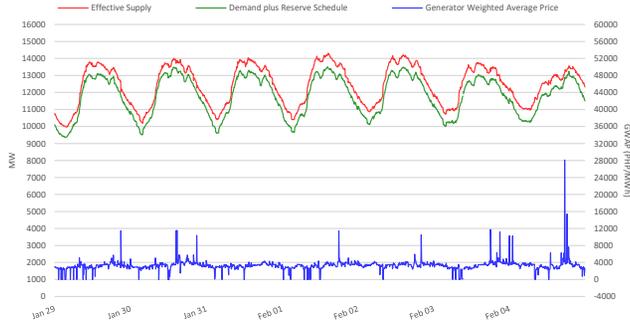
CAPACITY ON OUTAGE BY OUTAGE CATEGORY



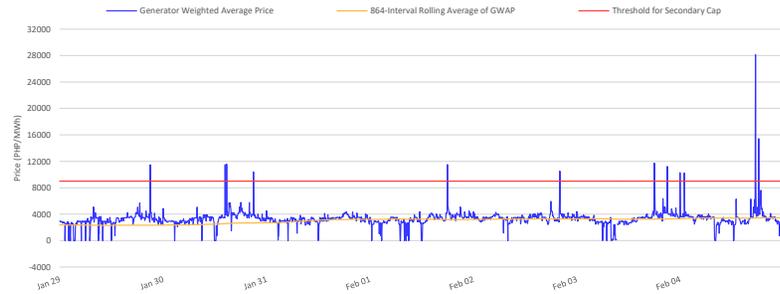
RTD CONGESTION



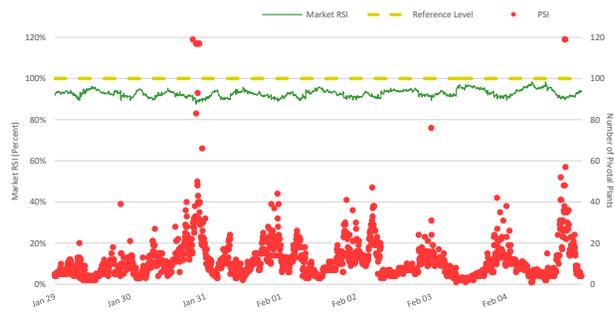
SUPPLY, DEMAND AND PRICE



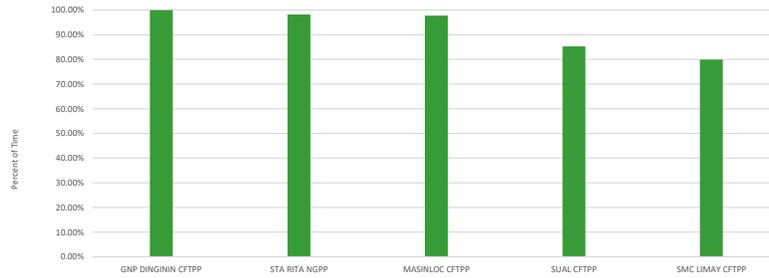
GENERATOR WEIGHTED AVERAGE PRICE



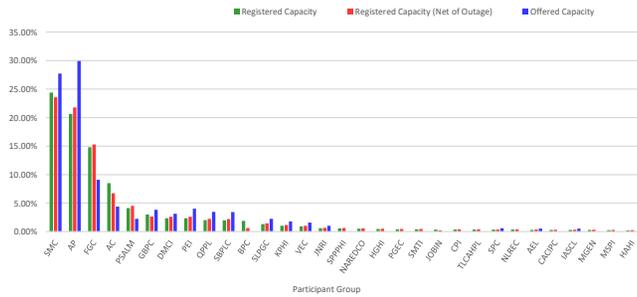
MARKET RSI VS PIVOTAL PLANTS



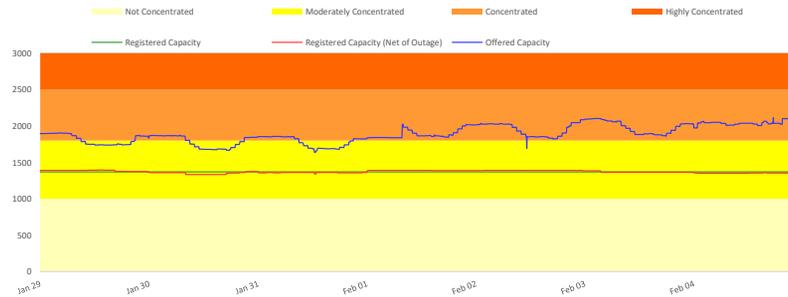
PSI



MARKET SHARE

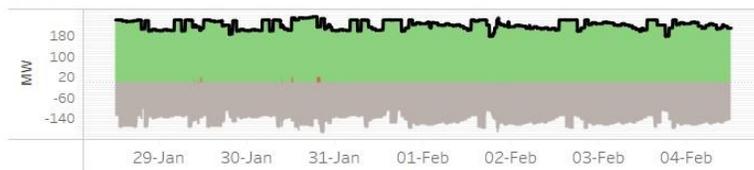


HERFINDAHL-HIRSCHMAN INDEX



OFFER PATTERN ANALYSIS

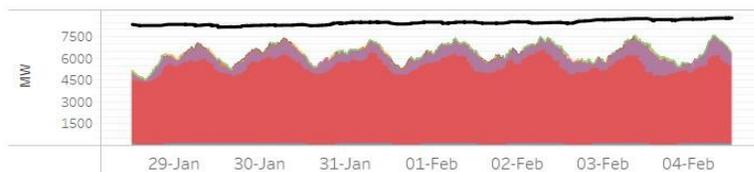
BATTERY



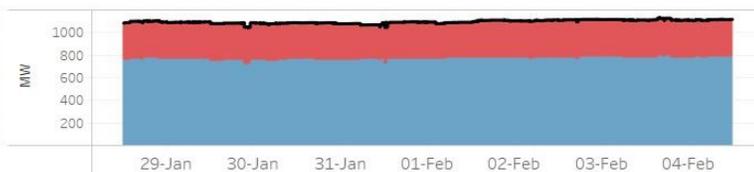
BIOFUEL



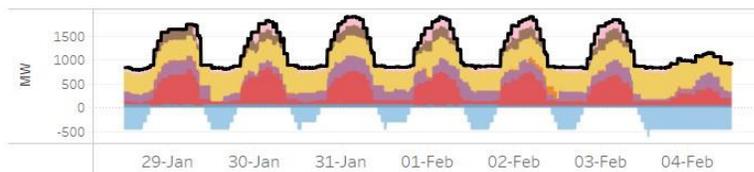
COAL



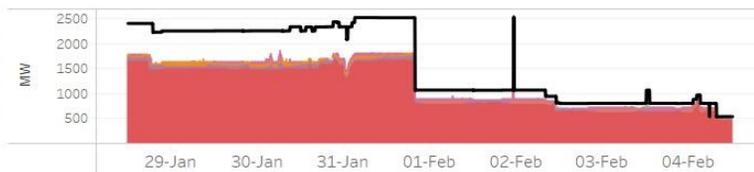
GEOHERMAL



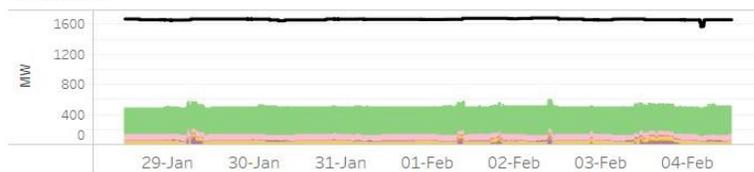
HYDRO



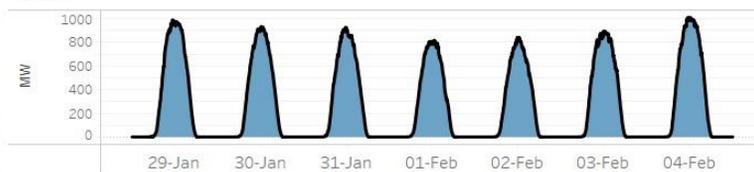
NATURAL GAS



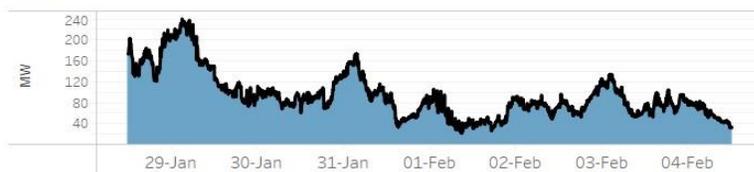
OIL-BASED



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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