

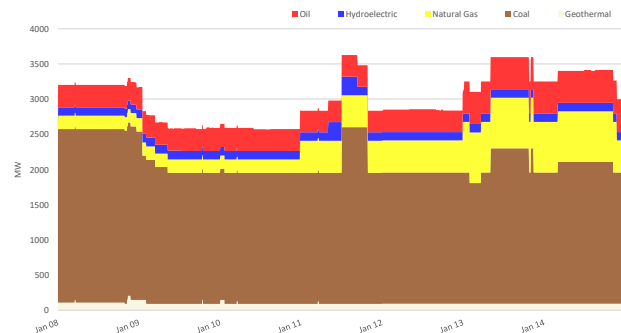
PEMC MARKET ASSESSMENT HIGHLIGHTS

- The average demand and the reserve schedule, recorded at 11,949 MW during the week of 08 - 14 Jan 2024, was higher than the previous week at 11,507 MW and higher than the same week last year at 10,673 MW.
- The average effective supply during the week was 12,518 MW, higher than the 12,141 MW of the previous week and higher than the 11,270 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.
- The capacity on outage averaged at 3,019 MW, lower than last week's 3,227 MW. In terms of capacity on outage by plant type, about 67% of the 3,019 MW involved Coal Plants, while in terms of category, about 54% were Planned Outages.
- As a result, an average supply margin of 570 MW was observed during the week, which is lower by about 10.062% relative to the previous week and lower by about 3.715% in comparison with the same week last year. The minimum supply margin based on MMS solution was 119.92 MW on 13 January 2024 21:05h. The average supply margin was 536.57 MW at peak intervals and 595.88 MW at off-peak intervals.
- Correspondingly, average GWAP was recorded at PHP 4,591/MWh from PHP 5,226/MWh last week. This is lower than the PHP5,750/MWh during the same week last year.
 - 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 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 (100% of the time)
 2. ILIJAN NGPP (about 99.9% of the time)
 3. MASINLOC CFTPP (about 88.29% of the time)
 4. STA RITA NGPP (about 85.17% of the time)
 5. PAGBILAO CFTPP (about 83.78% of the time)
- Based on the MMS Solution, the top 5 congested equipment during the week were –
 1. 138kV Mandaue-Lapu Lapu Line1 (about 50.5% of the time)
 2. 138kV Samboan-Amlan Line1 (about 13.6% of the time)
 3. 230 kV Tabango_Daan Bantayan (about 4.4% of the time)
 4. Mandaue_Transformer 1 (about 2.9% of the time)
 5. 138kV Kabankalan-Mabinay Line 1 (about 0.84% of the time)
- OPA_ANALYSIS
 - The capacity offered by coal plants was slightly higher than that of the previous week due to lower outages.
 - The capacity offered by hydro plants was lower than that of the previous week. It was also observed that a capacity of around 185MW during peak hours on January 12 and January 13 was offered at price range of Php 25,000/MWh to Php 30,000/MWh.
 - NatGas had a lower offered capacity for most of the week due to the conduct of performance tests by Sta. Rita Plants. However, the said plants were scheduled through the security limits imposed by the NGCP-SO.
 - The lowest solar plant nomination was recorded on January 9 while the highest was recorded on January 11.
 - The lowest nomination for wind plants was recorded on January 10, and the highest was on January 13.

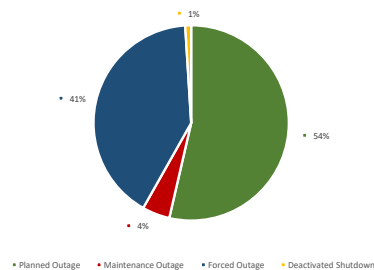
IEMOP MARKET SYSTEMS ADVISORY

- No IT-related issue was advised in IEMOP's market systems from 08 - 14 Jan 2024.

CAPACITY ON OUTAGE BY PLANT TYPE



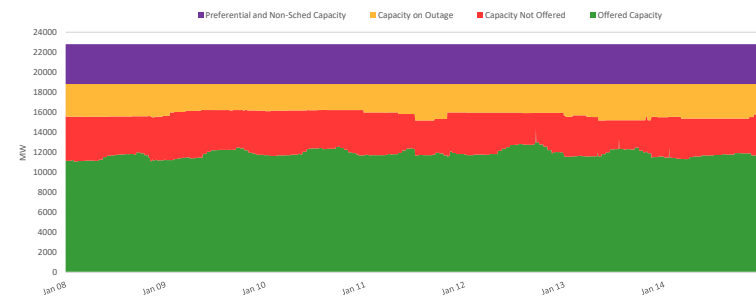
CAPACITY ON OUTAGE BY OUTAGE CATEGORY



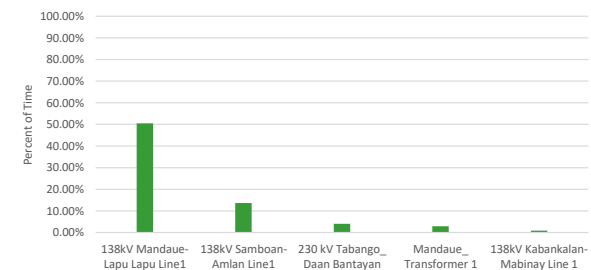
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		08 - 14 Jan 2024	Previous Week (01 - 07 Jan 2024)	Same Week, Previous Year (09 - 15 Jan 2023)	Percent Change From	
					Previous Week	Same Week, Prev Year
GWAP (PHP/MWh)	max	32,711.45	31,884.99	34,572.79	2.59%	-5.38%
	min	0.00	-1,791.80	-0.99	100.00%	100.00%
	ave	4,591.45	5,225.73	5,749.79	-12.14%	-20.15%
Effective Supply (MW)	max	15,018.61	14,807.12	12,999.06	1.43%	15.54%
	min	10,133.40	9,660.85	9,222.02	4.89%	9.88%
	ave	12,518.49	12,140.55	11,270.06	3.11%	11.08%
System Demand (MW)	max	13,529.19	12,873.54	11,167.95	5.09%	21.14%
	min	8,547.59	7,648.91	0.00	11.75%	-
	ave	10,987.52	10,508.08	9,595.10	4.56%	14.51%
Demand + Reserve Schedule (MW)	max	14,503.57	14,229.64	12,573.45	1.93%	15.35%
	min	9,512.59	8,733.83	0.00	8.92%	-
	ave	11,948.74	11,507.05	10,672.73	3.84%	11.96%
Supply Margin (MW)	max	989.55	1,310.29	1,258.66	-24.48%	-21.38%
	min	119.92	20.84	0.00	475.40%	-
	ave	569.76	633.50	591.74	-10.06%	-3.72%

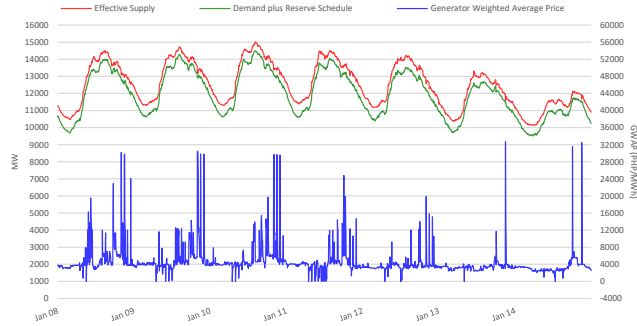
CAPACITY PROFILE



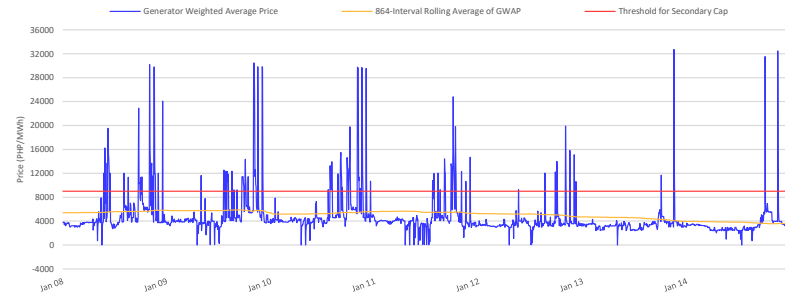
RTD CONGESTION



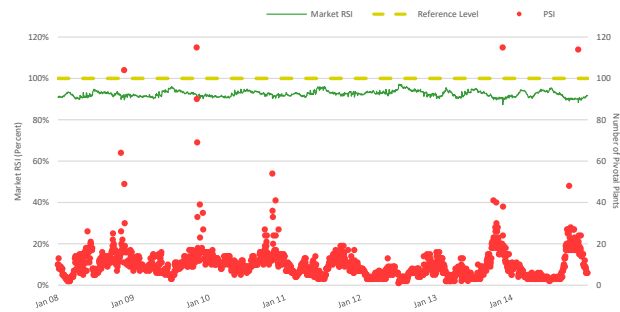
SUPPLY, DEMAND AND PRICE



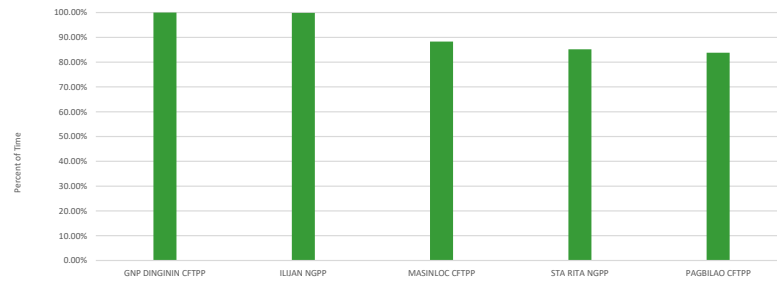
GENERATOR WEIGHTED AVERAGE PRICE



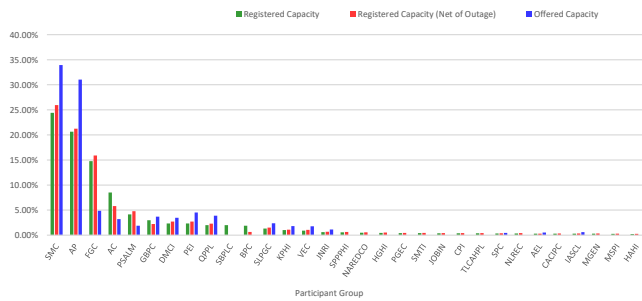
MARKET RSI VS PIVOTAL PLANTS



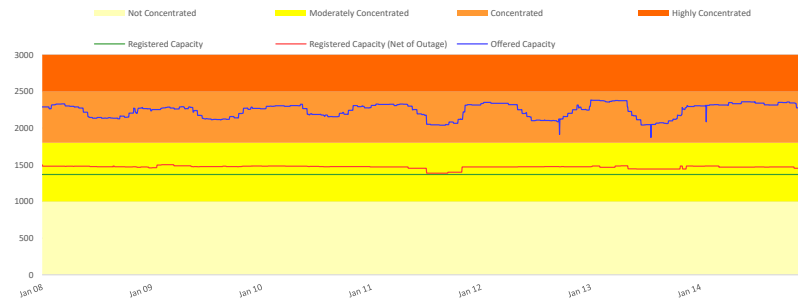
PSI



MARKET SHARE

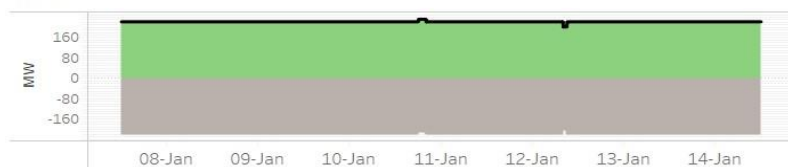


HERFINDAHL-HIRSCHMAN INDEX

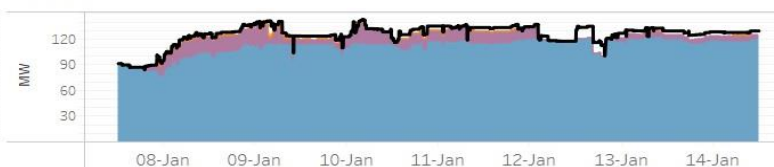


OFFER PATTERN ANALYSIS

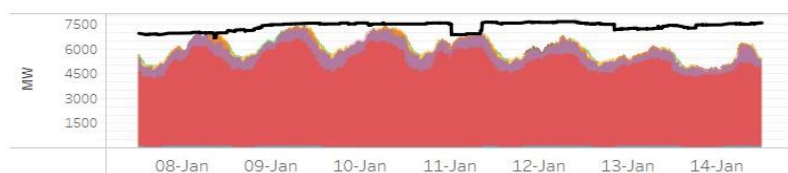
BATTERY



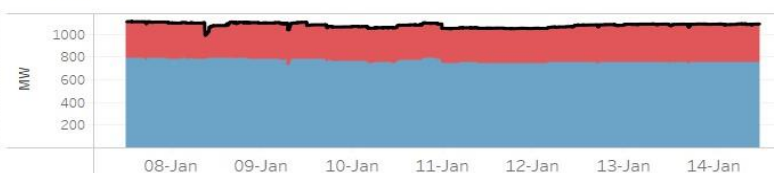
BIOFUEL



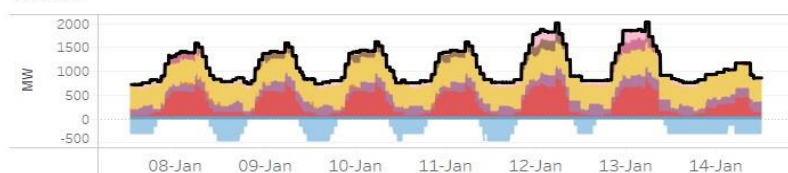
COAL



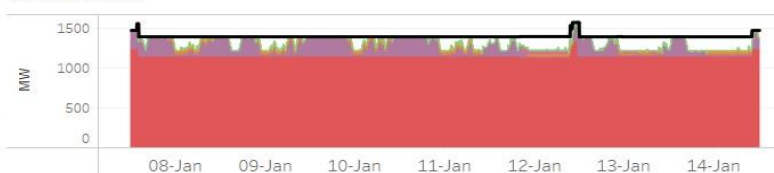
GEO THERMAL



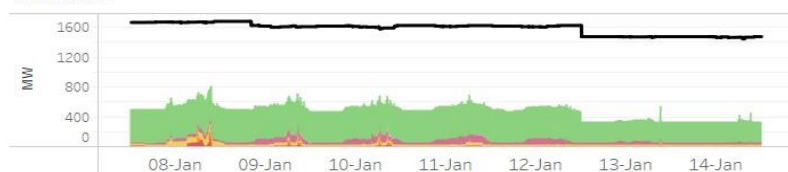
HYDRO



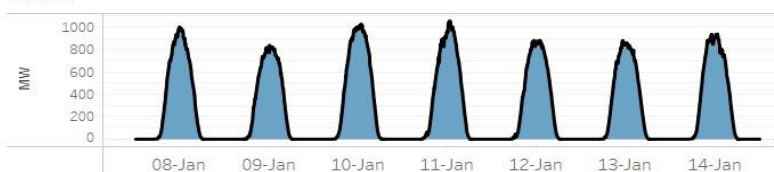
NATURAL GAS



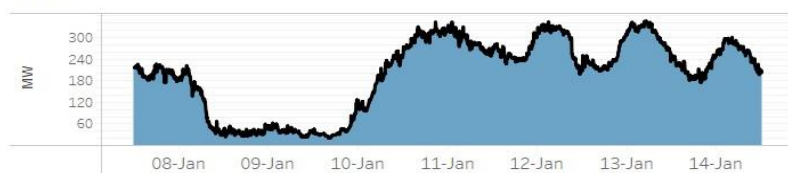
OIL-BASED



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.

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.