

PEMC MARKET ASSESSMENT HIGHLIGHTS

- The average demand and the reserve schedule, recorded at 2,153 MW during the week of 15 - 21 Jan 2024, was lower than the previous week at 2,228 MW.
- The average effective supply during the week was 2,461 MW, lower than the 2,598 MW of the previous week. Ramping limitations were considered in the calculation of the effective supply.
 - The capacity on outage averaged at 396 MW, lower than last week's 458 MW. In terms of capacity on outage by plant type, about 74% of the 396 MW involved Coal Plants, while in terms of outage by category, about 78% were Forced Outages.
- As a result, an average supply margin of 308 MW was observed during the week, which is lower by about 16.913% relative to the previous week. The minimum supply margin based on MMS solution was 150.17 MW on 17 January 2024 at 15:35h. The average supply margin was 285.69 MW at peak intervals and 325.18 MW at off-peak intervals.
- Correspondingly, average GWAP was recorded at PHP 3,479/MWh from PHP 4,280/MWh last week.
 - No secondary price cap was imposed for this week
- The top 5 participant groups accounted for about 77% of the offered capacity. The Herfindahl-Hirschman Index (HHI) by participant group indicated moderately concentrated market based on the offered and registered capacities.
- The top 5 pivotal plants during the week were –
 - FDC MISAMIS CFTPP (about 59.77% of the time)
 - THERMA SOUTH CFTPP (about 20.19% of the time)
 - GN POWER KAUSWAGAN CFTPP (about 11.26% of the time)
 - MINDANAO CFTPP (about 0.64% of the time)
 - PULANGI 4 HEPP (about 0.3% of the time)
- Based on the MMS Solution, the congested equipment during the week were –
 - Zamboanga Transformer2 (about 9% of the time)
 - Sultan Kudarat Transformer3 (about 3.8% of the time)
- OPA ANALYSIS
 - The capacity offered by coal plants was comparable to the previous week. However, there was a decrease in the last three days due to outages.
 - The capacity offered by geothermal was comparable to previous week. However, there was a decrease in the last three days due to lower offer in Mt Apo U1.
 - There was an observed offered capacity of approximately 185 MW in Hydro Plants on January 15, with prices ranging from Php 25,000/MWh to Php 30,000/MWh.
 - Solar plants recorded their highest nomination on January 20 and their lowest on January 18.

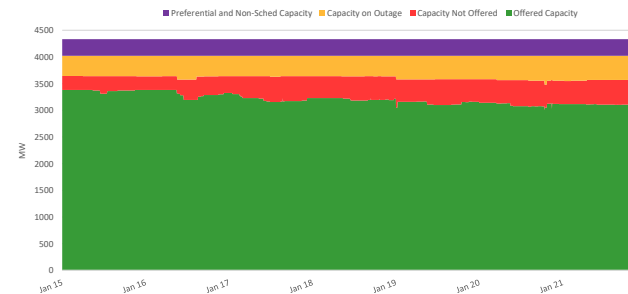
IEMOP MARKET SYSTEMS ADVISORY

- Market Intervention was initiated in Visayas grid by SO from 18:50h to 19:10h on 17 January 2024 due to manual load dropping at Negros - Panay subgrid caused by overloading of 138kV Amlan - Samboan line.

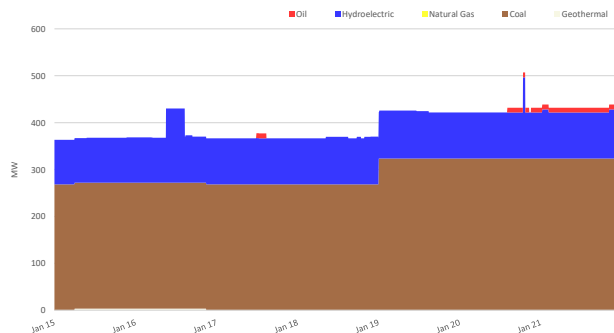
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		15 - 21 Jan 2024	Previous Week (08 - 14 Jan 2024)	Percent Change
GWAP (PHP/MWh)	max	25,147.612	25,683.100	-2.085%
	min	-1,073.642	-0.015	-7M%
	ave	3,478.702	4,279.767	-18.717%
Effective Supply (MW)	max	2,868.903	3,006.185	-4.567%
	min	2,051.700	2,212.500	-7.268%
	ave	2,460.695	2,598.001	-5.285%
System Demand (MW)	max	2,253.780	2,439.110	-7.598%
	min	1,387.050	1,487.970	-6.782%
	ave	1,770.279	1,926.819	-8.124%
Demand + Reserve Schedule (MW)	max	2,586.580	2,657.110	-2.654%
	min	1,715.280	1,756.070	-2.323%
	ave	2,152.907	2,227.561	-3.351%
Supply Margin (MW)	max	470.123	566.543	-17.019%
	min	150.165	132.090	13.684%
	ave	307.788	370.441	-16.913%

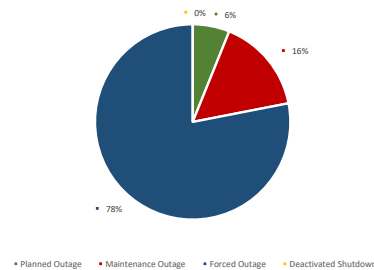
CAPACITY PROFILE



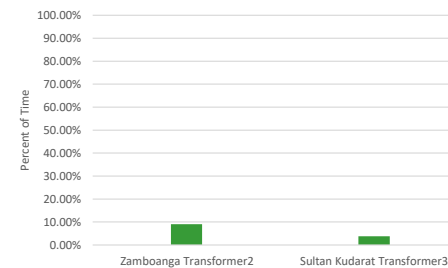
CAPACITY ON OUTAGE BY PLANT TYPE



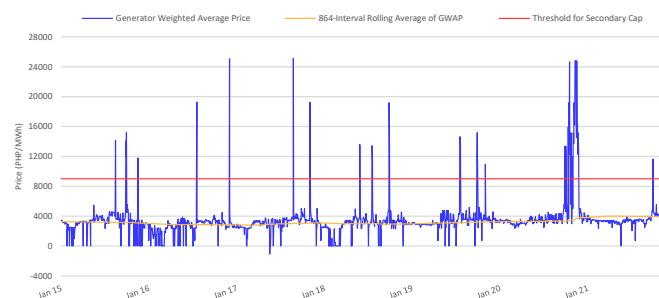
CAPACITY ON OUTAGE BY OUTAGE CATEGORY



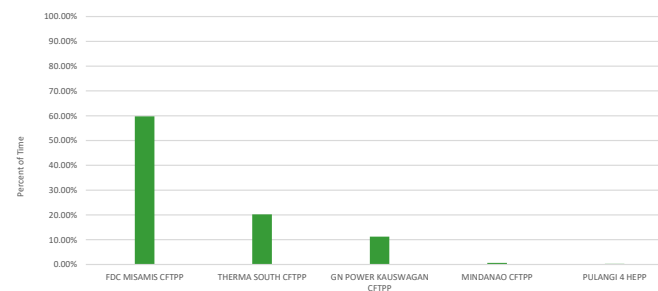
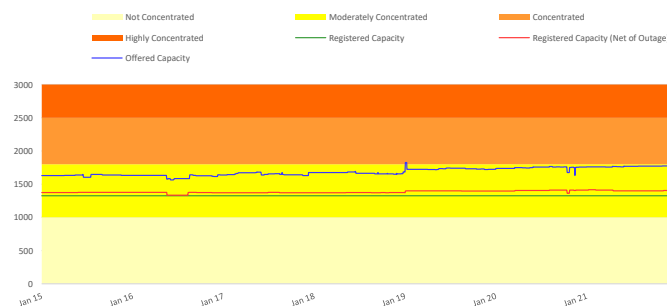
RTD CONGESTION



GENERATOR WEIGHTED AVERAGE PRICE

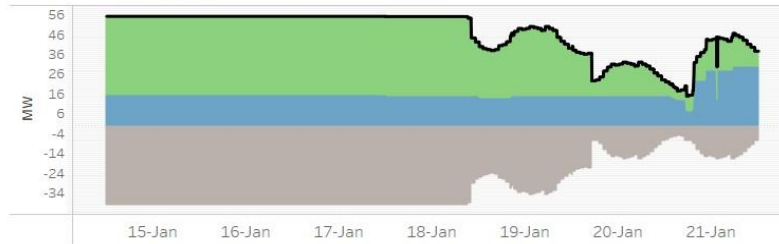


PSI

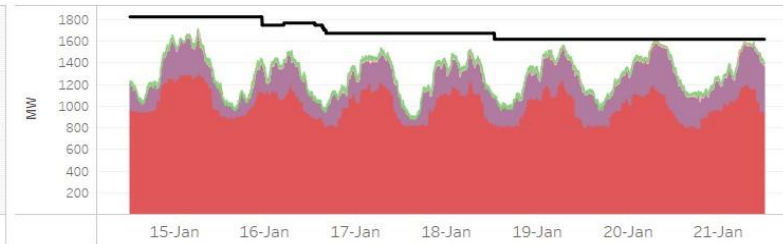
**HERFINDAHL-HIRSCHMAN INDEX**

OFFER PATTERN ANALYSIS

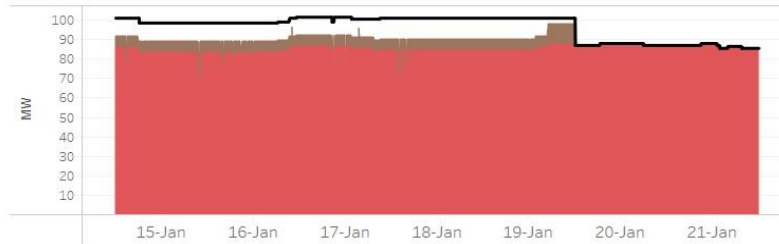
BATTERY AND BIOFUEL



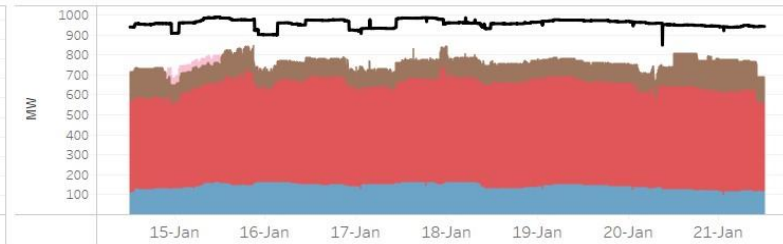
COAL



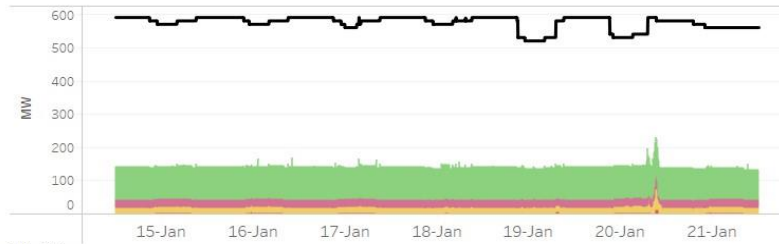
GEOTHERMAL



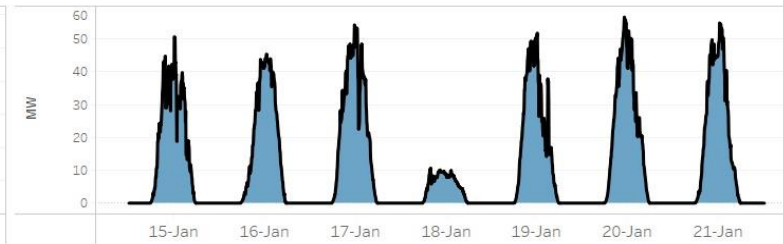
HYDRO



OIL-BASED



SOLAR



Offer Price

■ Battery Charging Offer	■ Php 0 and below	■ Php (5000,10000]	■ Php (15000,20000]
■ Preferential Nomination	■ Php (0,5000]	■ Php (10000,15000]	■ Php (20000,25000]

■ Php (25000,30000]
■ Php (30000,32000]
■ Offered and Nominated Capacity

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.