

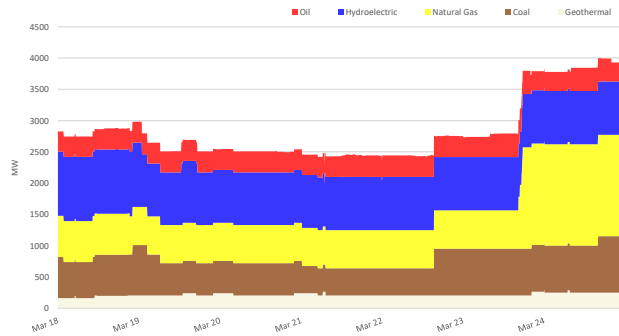
PEMC MARKET ASSESSMENT HIGHLIGHTS

- The average demand and the reserve schedule, recorded at 12,765 MW during the week of 18 - 24 Mar 2024, was higher than the previous week at 12,725 MW and higher than the same week last year at 12,143 MW.
- The average effective supply during the week was 13,306 MW, higher than the 13,267 MW of the previous week and higher than the 12,530 MW during the same week last year. Ramping limitations were considered in the calculation of the effective supply.
 - The capacity on outage averaged at 2,838 MW, lower than last week's 3,017 MW. In terms of capacity on outage by plant type, about 31% of the 2,838 MW involved Hydroelectric Plants, while in terms of category, about 51% were Planned Outages.
- As a result, an average supply margin of 541 MW was observed during the week, which is lower by about 0.129% relative to the previous week and higher by about 40% in comparison with the same week last year. The thinnest supply margin based on MMS solution was 1.53 MW on 24 March 2024 18:35h. The average supply margin was 512.39 MW at peak intervals and 563.34 MW at off-peak intervals.
- Correspondingly, average GWAP was recorded at PHP 4,254/MWh from PHP 4,333/MWh last week. This is lower than the PHP8,640/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 mostly concentrated and moderately concentrated market based on the offered and registered capacities, respectively.
- The top 5 pivotal plants during the week were –
 - GNP DINGININ CFTPP (about 100.0% of the time)
 - STA RITA NGPP (about 99.9% of the time)
 - MASINLOC CFTPP (about 98.91% of the time)
 - SUAL CFTPP (about 95.49% of the time)
 - MARIVELES CFTPP (about 95.24% of the time)
- Based on the MMS Solution, the top 5 congested equipment during the week were –
 - 138kV Maasin-Ubay Line 1 (about 24.1% of the time)
 - 138kV Samboan-Amlan Line1 (about 15.1% of the time)
 - 230kV Bauang-Latrinidad Line1 (about 2% of the time)
 - 230kV Bauang-Latrinidad Line2 (about 1.8% of the time)
 - 69kV Bacolod_Barotac Viejo (about 1.1% of the time)
- OFFER PATTERN ANALYSIS
 - The offered capacity of coal plants was higher than the previous week due to fewer outages. However, there was intermittent lower offered capacity observed within the week, attributed to simultaneous testing of plants scheduled thru security limits imposed by the Systems Operator.
 - The offered capacity of the hydro plants was lower from March 19 to 21, attributed to commercial testing of plants scheduled thru security limits imposed by the Systems Operator.
 - The offered capacity of natural gas plants was lower from 12:00 PM to 6:00 PM on March 20 to 21, attributed to commercial testing of plants scheduled thru security limits imposed by the Systems Operator. Meanwhile, on March 24, the decrease in offered capacity was attributed to an increase in outages.
 - The lowest Solar Plant nomination was recorded on March 20, while the highest was recorded on March 18.
 - The lowest nomination for Wind Plants was recorded on March 19, while the highest was on March 20.

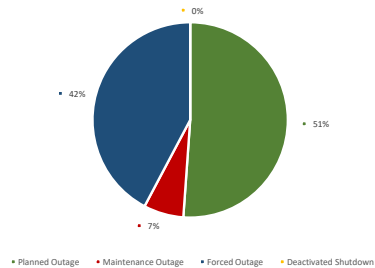
IEOMP MARKET SYSTEMS ADVISORY

- No IT-related issue was advised in IEOMP's market systems from 18 - 24 Mar 2024.

CAPACITY ON OUTAGE BY PLANT TYPE



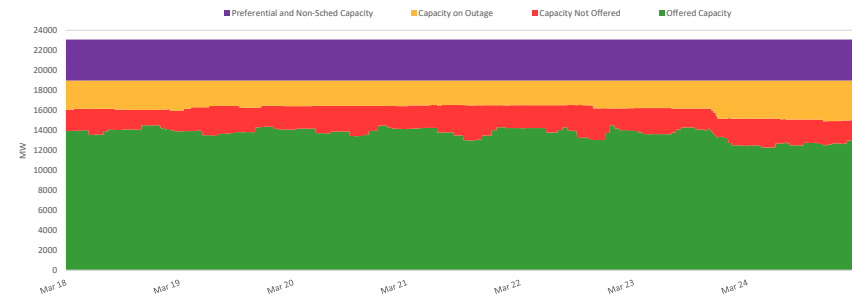
CAPACITY ON OUTAGE BY OUTAGE CATEGORY



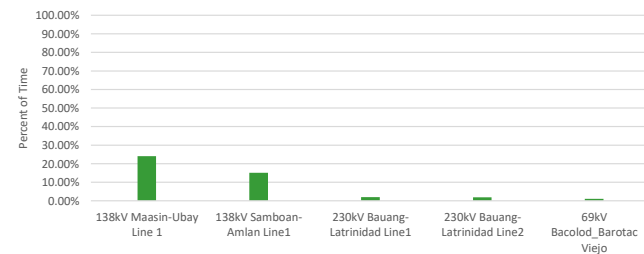
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		18 - 24 Mar 2024	Previous Week (11 - 17 Mar 2024)	Same Week, Previous Year (20 - 26 Mar 2023)	Percent Change From	
					Previous Week	Same Week, Prev Year
GWAP (PHP/MWh)	max	32,218.613	19,708.419	93,864.381	63.476%	-65.675%
	min	-8,343.833	-36.421	-1.000	-22k%	-834k%
	ave	4,253.671	4,333.197	8,640.484	-1.835%	-50.770%
Effective Supply (MW)	max	15,744.152	15,617.619	14,533.961	0.810%	8.327%
	min	10,984.681	10,642.287	10,002.863	3.217%	9.815%
	ave	13,306.311	13,266.531	12,529.753	0.300%	6.198%
System Demand (MW)	max	13,520.620	13,636.090	13,712.030	-0.847%	-1.396%
	min	9,377.850	9,037.390	8,498.430	3.767%	10.348%
	ave	11,428.440	11,469.674	11,285.446	-0.360%	1.267%
Demand + Reserve Schedule (MW)	max	15,146.200	15,269.020	14,420.190	-0.804%	5.035%
	min	10,410.450	10,218.310	9,291.430	1.880%	12.044%
	ave	12,765.413	12,724.937	12,142.693	0.318%	5.128%
Supply Margin (MW)	max	876.945	1,006.181	917.604	-12.844%	-4.431%
	min	1.528	202.733	-162.219	-99.246%	100.942%
	ave	540.898	541.594	387.060	-0.129%	39.745%

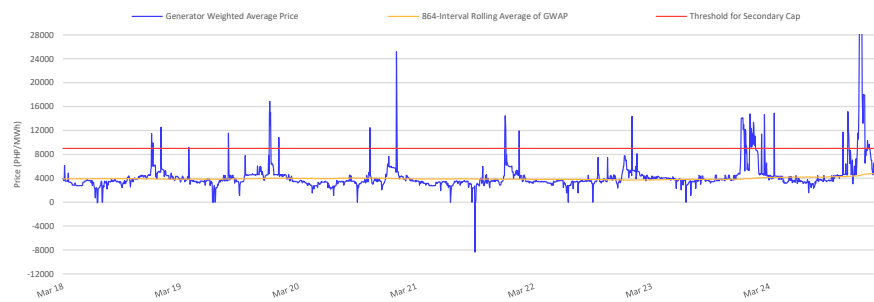
CAPACITY PROFILE



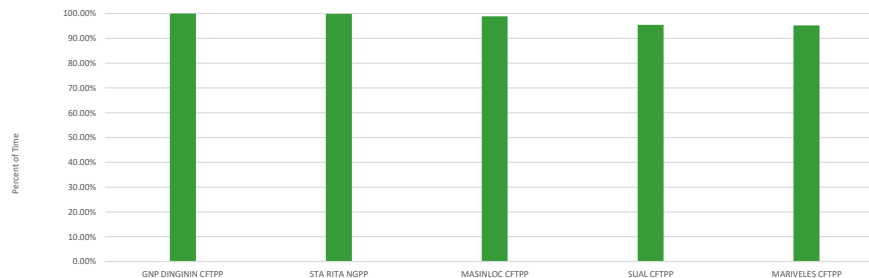
RTD CONGESTION



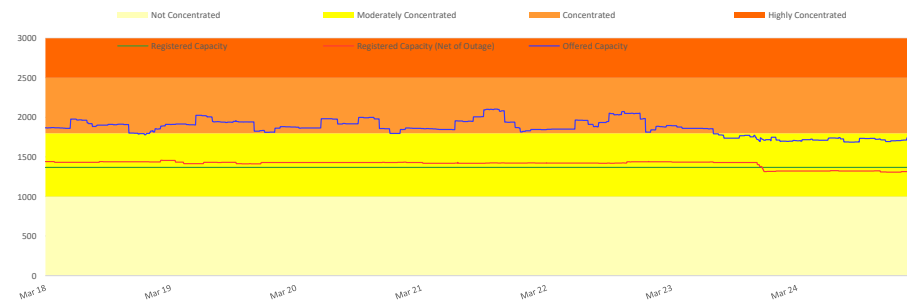
GENERATOR WEIGHTED AVERAGE PRICE



PSI

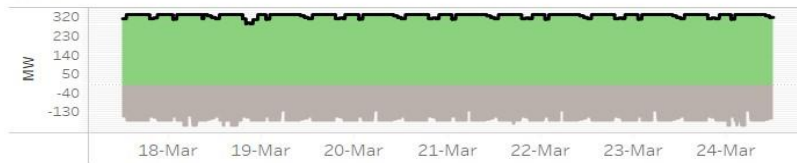


HERFINDAHL-HIRSCHMAN INDEX

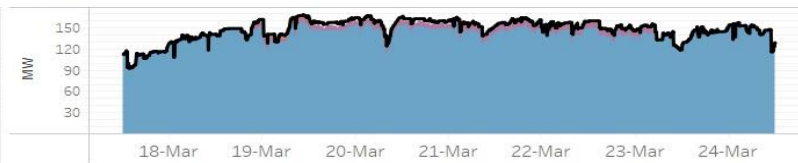


OFFER PATTERN ANALYSIS

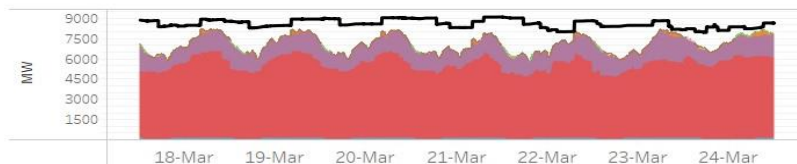
BATTERY



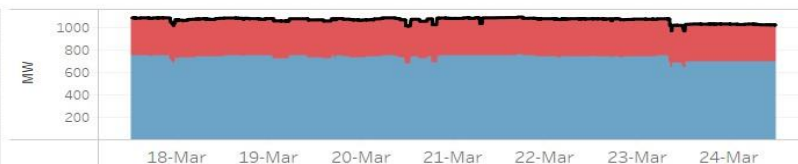
BIOFUEL



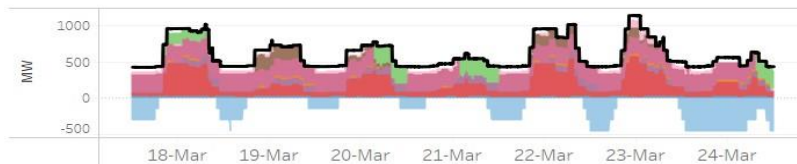
COAL



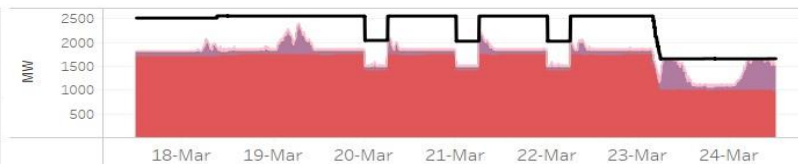
GEOTHERMAL



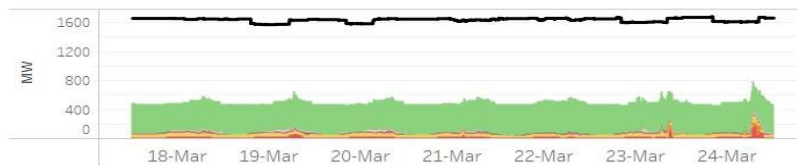
HYDRO



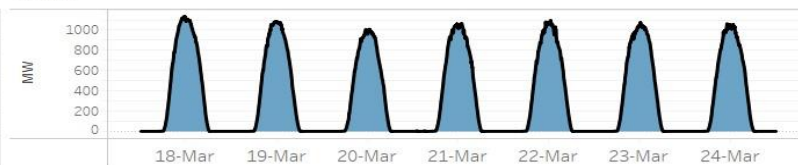
NATURAL GAS



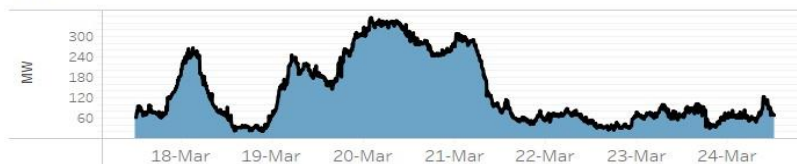
OIL-BASED



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.