HIGHLIGHTS

· The average demand (including the average reserve schedule), recorded at 10,285 MW in November 2020, was lower than the previous billing at 10,878 MW and also lower than same month last year at 11,262 MW. From 01–19 November 2020 – the National Capital Region, Batangas, Iloilo City, Bacolod City, Tacloban City, Iligan City and Lanao del Sur were under the General Community Quarantine (GCQ) while the rest of the country was under the Modified General Community Quarantine (MGCQ). The drop in demand around 27 October, 02 November and 12 November were due to the Quinta, Rolly and Ulysses cyclones respectively.

· An average supply margin of 2,603 MW was observed during this period, higher by 13 percent than October 2020 figures and 43 percent than November 2019.

· The WESM registered capacity stood at 20,859 MW by the end of the billing month, higher than the 20,206 MW by the end of the last billing month. The increase was due to the entry of the coal generator GNP Dinginin CFTPP unit 1 (668 MW) during the November billing month.

· The outage capacity averaged at 2,943 MW. About 40% of which involved coal plants while, in terms of classification, about 84% were forced outages. The outage capacity spikes around 27 October, 02 November and 12 November were due to the outage of several generating units (caused by the Quinta, Rolly and Ulysses cyclones respectively).

· This period experienced an average effective supply of 12,888 MW, lower than the 13,180 MW of the previous billing month and also lower than the 13,086 MW in November 2019.

· Average GWAP reached PHP 1,930/MWh, slightly lower than the PHP 1,969/MWh in October 2020. This is likewise lower than the PHP 4,948/MWh of same month last year. The increases in GWAP around 28 October were mainly due to the outage of a number of generating units (caused by Typhoon Quinta). Administered prices will be used in Luzon from 12 November (hour 1)–13 November (hour 23). Luzon was under the market intervention on 12 November (hours 1–9) and under the market suspension from 12 November (hour 10)–13 November (hour 23) due to Typhoon Ulysses.

· The secondary price cap was not imposed during the billing month.

· The top 5 participant groups accounted for about 77% of the average offered capacity. The Herfindahl-Hirschman Index (HHI) by major participant grouping indicated a moderately concentrated market based on the registered capacity.

· Based on the effective supply, the top 5 pivotal plants during the billing month were –

1. Masinloc Coal-Fired Thermal Power Plant (about 2% of the time)
2. Pagbilao Coal-Fired Thermal Power Plant (about 1% of the time)
3. Sta. Rita Natural Gas Power Plant (about 1% of the time)
4. Kalayaan Pumped Storage Power Plant (about 1% of the time)
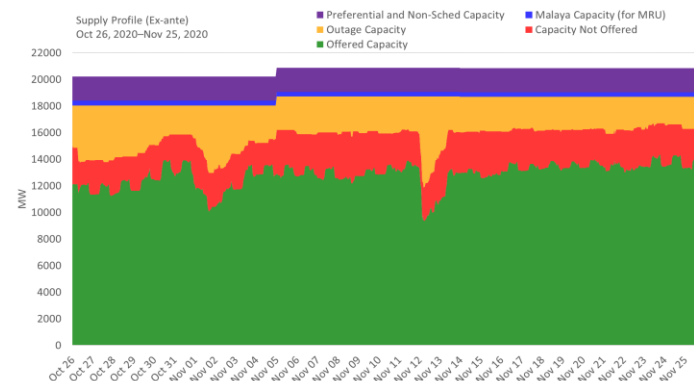5. Sual Coal-Fired Thermal Power Plant (about 0.67% of the time)
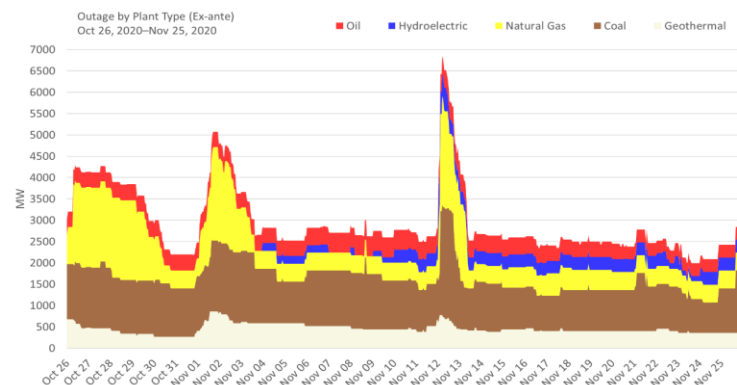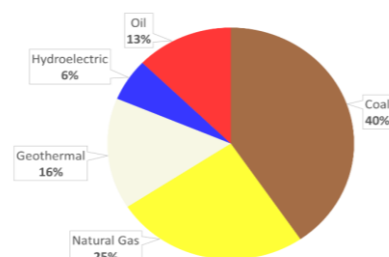
SUMMARY (PRICE, SUPPLY, DEMAND AND RESERVE SCHEDULE)

Particulars		November 2020 Billing Month	Previous Billing Month (October 2020)	Same Billing Month, Prev. Year (November 2019)	Percent Change From	
					Prev. Billing Month	Same Billing Month, Prev. Year
GWAP (PHP/MWh)	max	21,524.36	16,347.80	39,155.14	31.67%	-45.03%
	min.	-992.15	-9.86	0.00	-9,963.37%	-
	w. ave.	1,930.35	1,968.50	4,948.38	-1.94%	-60.99%
Effective Supply (MW)	max	14,958.30	14,790.45	14,814.09	1.13%	0.97%
	min.	8,471.86	11,671.10	11,282.25	-27.41%	-24.91%
	ave.	12,888.27	13,179.98	13,085.69	-2.21%	-1.51%
System Demand (MW)	max	11,854.26	12,300.52	12,388.71	-3.63%	-4.31%
	min.	3,001.13	7,311.84	7,438.18	-58.96%	-59.65%
	ave.	9,229.87	9,788.20	10,217.70	-5.70%	-9.67%
Demand + Reserve Schedule (MW)	max	13,054.86	13,450.54	13,551.68	-2.94%	-3.67%
	min.	3,971.13	8,389.74	8,303.28	-52.67%	-52.17%
	ave.	10,284.95	10,877.78	11,261.81	-5.45%	-8.67%
Supply Margin (MW)	max	7,343.46	4,143.34	3,583.29	77.24%	104.94%
	min.	389.50	734.70	20.83	-46.99%	1,769.90%
	ave.	2,603.31	2,302.20	1,823.88	13.08%	42.73%

SUPPLY PROFILE

Supply Profile (Ex-ante)
Oct 26, 2020–Nov 25, 2020

Legend: Preferential and Non-Sched Capacity, Malaya Capacity (for MRU), Outage Capacity, Capacity Not Offered, Offered Capacity

OUTAGE CAPACITY BY PLANT TYPE

Outage by Plant Type (Ex-ante)
Oct 26, 2020–Nov 25, 2020
Legend: Oil, Hydroelectric, Natural Gas, Coal, Geothermal

OUTAGE CAPACITY BY PLANT TYPE

- Oil 13%
- Hydroelectric 6%
- Geothermal 16%
- Natural Gas 25%
- Coal 40%

OUTAGE CAPACITY BY OUTAGE CATEGORY

- Deactivated Shutdown 2%
- Planned Outage 7%
- Maintenance Outage 7%
- Forced Outage 84%

Philippine Electricity Market Corporation
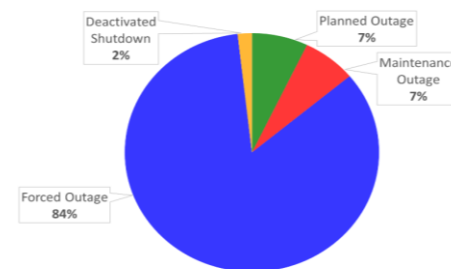
SUPPLY, DEMAND AND PRICE

GENERATOR WEIGHTED AVERAGE PRICE
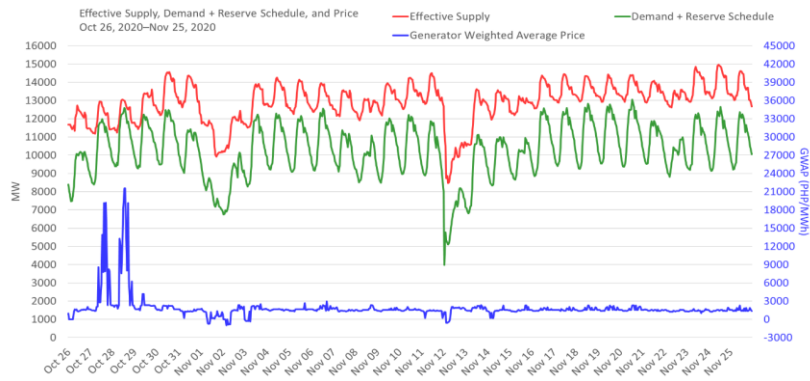
MARKET RSI VS PIVOTAL PLANTS

PSI

MARKET SHARE
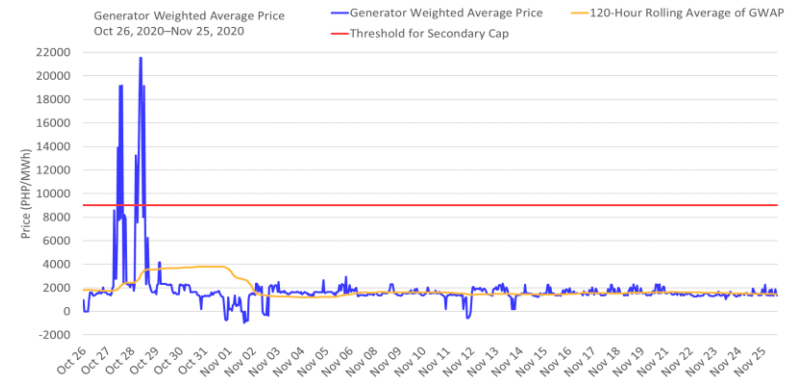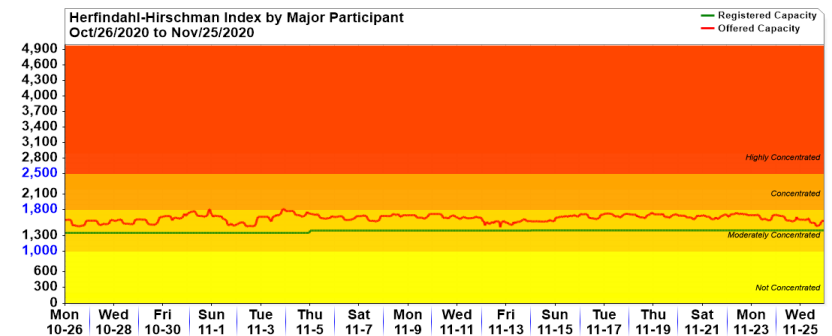

HERFINDAHL-HIRSCHMAN INDEX

GLOSSARY OF TERMS

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.

The HHI is calculated using the (i) registered capacity, (ii) registered capacity net of outage, (iii) offered capacity, (iv) metered quantity, and (v) spot transaction (metered quantity net of bilateral contract declarations).

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.

PRICE SETTING FREQUENCY INDEX (PSFI) - A generator trading node is considered as a price setter when its last accepted offer price is between 95% to 100% of its nodal price. A generating plant is considered as price setter if at least one of its trading nodes was price setter in a given trading hour. The price setters are determined from: (i) ex-ante for trading intervals without pricing error during ex-ante, (ii) ex-post with pricing error during ex-ante but without pricing error during ex-post, (iii) market re-run results for trading intervals with pricing error both in ex-ante and ex-post, and (iv) trading intervals where the price substitution methodology (PSM) was applied. For trading intervals affected by PSM, the unconstrained marginal plants are considered price setters. Further, in instances of regional price separation, price setters are determined separately for each region.

MARKET SHARE - The fraction of the total capacity or energy that a company or related group owns or controls in the market.

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).

CAPACITY FACTOR - The index assesses the performance of the generators in the market. A high capacity factor indicates the high utilization of the generators.

CAPACITY PROFILE - The hourly factors affecting supply, which include, among others, the offered capacity, outage capacity and ancillary services schedule.

MAJOR PARTICIPANT GROUP - The grouping of generators by ownership or control.

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 hourly offer to supply electricity submitted by a generator.

METERED QUANTITY - The hourly quantity of electricity generated by a generator.

SPOT TRANSACTION - The hourly quantity of electricity sold to the market by a generator net of bilateal contract declaration accounted for in the settlement.

ANCILLARY SERVICES SCHEDULES - The hourly quantity scheduled by the System Operator to provide regulating, contingency and dispatchable reserves.

EFFECTIVE SUPPLY - The houly 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.