



# Market Surveillance Committee Monthly Market Assessment Report

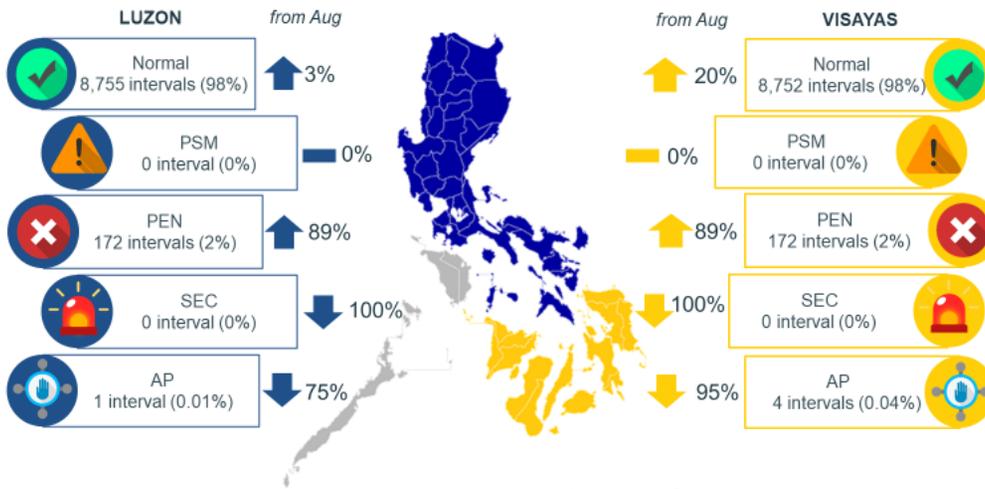
26 August to 25 September 2021

**JULY 2022**

This Report is prepared by the  
Philippine Electricity Market Corporation –  
Market Assessment Group for the  
Market Surveillance Committee

## ASSESSMENT OF THE MARKET

### SUMMARY OF PRICING CONDITIONS



### NOTABLE HIGHLIGHTS

- Ilijan and San Gabriel units were derated by around 600MW
  - Caused by SPEX Malampaya gas supply restriction since 22 March 2021, 2200H
- Slight dip in effective supply was found to be driven by the increase in both capacities not offered/nominated and ramp limited capacities
- System Demand declined by an average of 2%
  - With the observance of the rainy season and implementation of granular lockdown in NCR and placing Metro Manila to Alert Level 4.
- Absence of Secondary Price Cap (SPC)
  - There were no intervals for the month of September that breached the cumulative price threshold of PHP9,000/MWh.
- ERC mitigating measures of halting the collection of congestion charges due to the damaged line
  - ERC issued an Order to halt the collection of congestion charges and other applicable charges attributable to the damaged Samboan-Amlan line is not yet lifted and will take effect until a new Order is release by the ERC.

- No intervals imposed with Price Substitution Methodology (PSM) despite the recurring congestion events in the Samboan-Amlan line. The latest change in the Price Determination Methodology (PDM) now **excludes radial lines in the PSM criteria** upon commercial operations of the Enhanced WESM Design and Operations (EWDO).
- Intervals with pricing error notices were mainly resulted from inappropriate input data which affecting prices and schedules for 172 intervals both for Luzon and Visayas.
- No imposition of secondary price cap recorded for the month of September.
- Market Operator initiated Market Intervention in Luzon and Visayas was implemented as a result of non-generation of RTD by the MMS on 04 September 2021, 23:45. System Operation initiated Market Intervention was implemented in Visayas for 3 intervals due to erroneous SCADA data on 13 September 2021, 15:15 to 15:25.

**Secondary Price Cap** is a preventive mitigating measure instituted by the ERC to avoid excessive high market prices through its imposition on succeeding intervals, upon **breach of PHP9,000/MWh** Rolling Average of the generator-weighted average price (GWAP) for a running period of 3 days or 864 5-minute intervals. In this case, market prices are **capped at PHP6,245/MWh**.

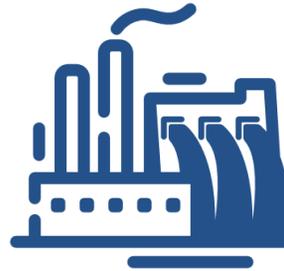
## MARKET OUTCOME

### SUPPLY MARGIN



**↑ 511 MW**  
(402 MW in August)

### EFFECTIVE SUPPLY

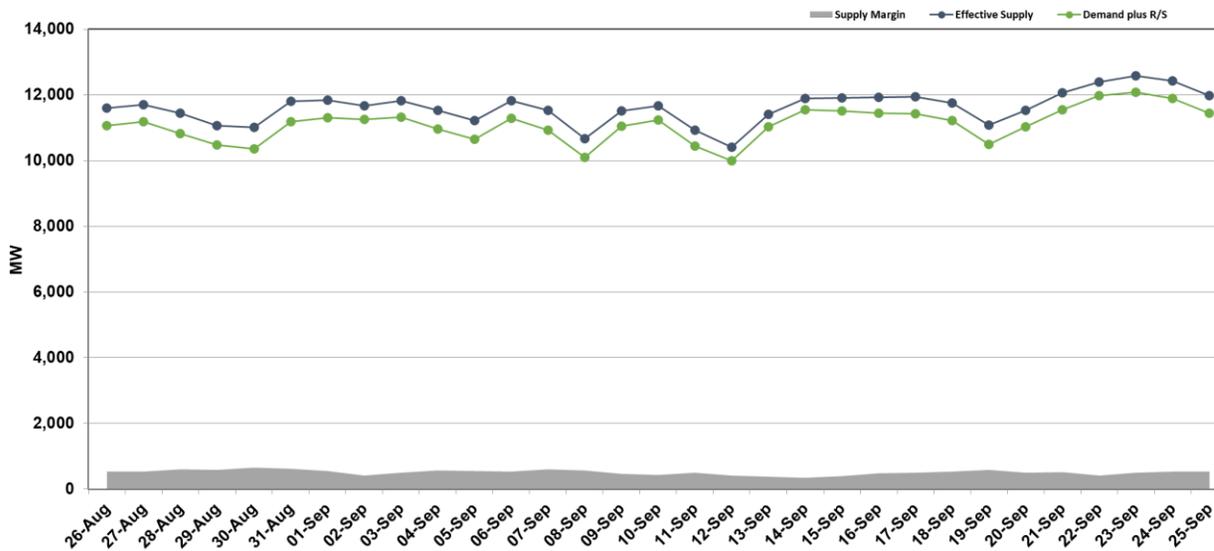


**↓ 11,615 MW**  
(11,707 MW in August)

### DEMAND PLUS RESERVE SCHEDULE



**↓ 11,104 MW**  
(11,305 MW in August)



Electricity demand with consideration of reserve schedules dropped by an average of 2 percent or an average of 11,305 MW last month to 11,104 MW this month. With the observance of the holiday season, economic activities started to pick up towards the end of the month which led to the increase in system demand.

Effective supply declined due to the recorded outages and the gas restriction from the SPEX Malampaya natural gas.

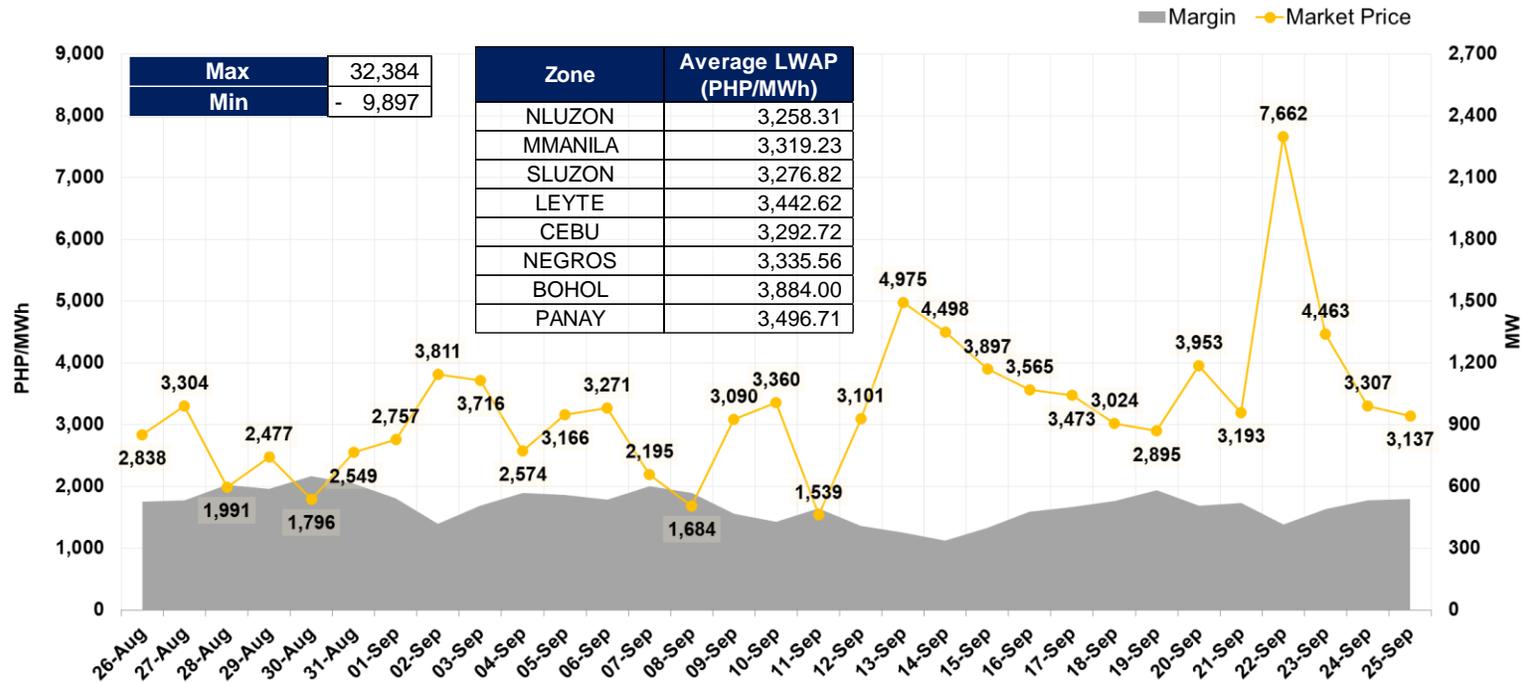
Supply Margin improved this month to 496MW from last month's 416MW. However, the supply margin is still considered thin when compared historically with the months before the EWDO which amounts to an average of about 2,000MW. The thinning of the supply margin became more evident due to the recorded forced outages and ramp limited generating units as the schedules of generators were highly dependent on their ramp rate input in the MMS more so under the shorter dispatch time in the EWDO.

## MARKET OUTCOME

### PRICE



**3,187**  
PHP/MWh  
(PHP4,853/MWh in August)



The underwater drilling operations activity of DPWH caused damages in one of the submarine cables of NGCP connecting the Cebu-Negros islands on 15 June 2021, which affected the power rates in the Visayas region. The incident resulted to the price discrepancy between Bohol and the rest of the grid with the former sitting at the higher end of the spectrum.

The September billing month opened with relatively low market prices following the lower price trend from the previous month. However, there were still episodes of price spikes largely due to the uptick in outages as the SPEX Malampaya gas field halted its operations in supplying natural gas to several large power plants in preparation for the scheduled maintenance shutdown which led to the sourcing of more expensive fuel sources. Furthermore, the shorter dispatch interval resulted to relatively more ramp-limited capacities leaving the dispatching engine to schedule higher-priced generator which in turn impacted the resulting market price. Even with the foregoing events, it is noteworthy that no SPC imposition had occurred in the billing month under review.

With the imposition of the granular lockdown and the community quarantine which placed Metro Manila to alert level 4 and was implemented on September 16-30, 2021, it posted a slight decline in the system demand. Meanwhile, the gradual increase in the supply margin subsequently led to a gradual drop in market prices from September 14-19, 2021.

## MARKET OUTCOME

### RAMP LIMITED CAPACITY

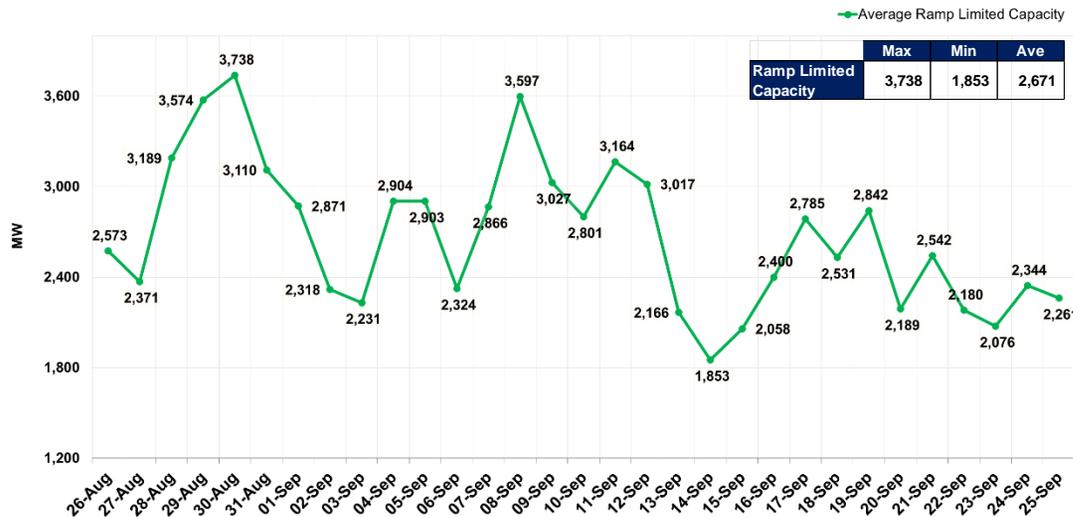
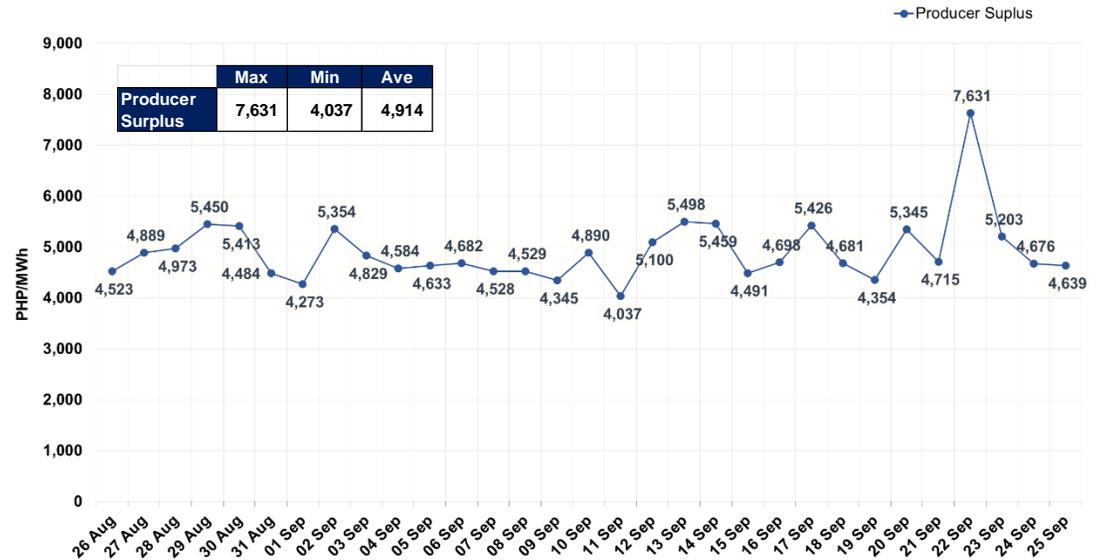


**2,671**  
MW  
(2,042MW in August)

### PRODUCER SURPLUS



**4,914**  
PHP  
(5,554PHP in August)

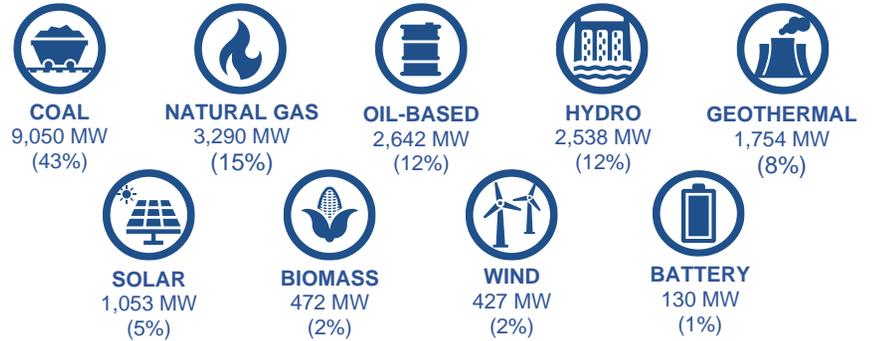


Ramp limited capacities for the month of September increased by an average of 31 percent from last month. Occurrences of ramp limited capacities were more evident in the new market regime due to shorter intervals requiring for faster delivery of scheduled generations. Notwithstanding, capacities offered/nominated went up and the outage level remained high, while the system demand level declined.

Producer/generator surplus is derived from the difference between market price and offer price which averaged at PHP4,914/MWh across all generators during the month.

- Daily average price of the producer/generator surplus was derived from the daily weighted average price of all generator TPs during peak and off-peak hours. Increase and decrease in the daily weighted average price depend on the generator schedule per dispatch interval.

## CAPACITY PROFILE



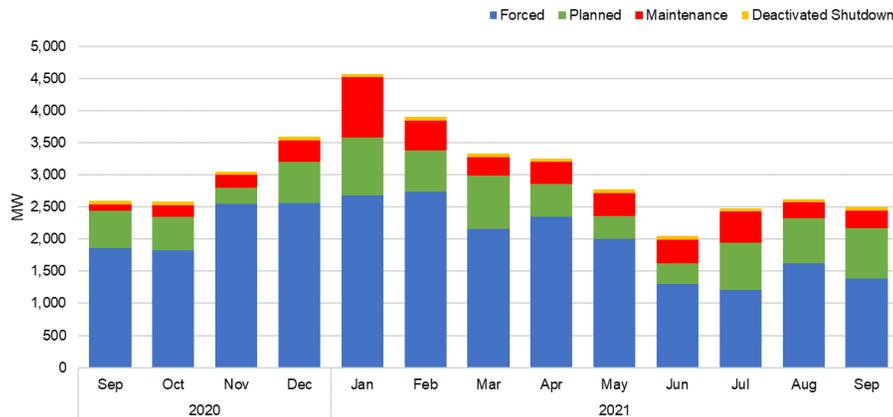
**Note:** Capacities not offered are further subject to validation and assessment of the PEMC-Enforcement and Compliance Office (ECO)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Generators on testing and commissioning (T&C) for a prolonged period of more than 2 months were additionally provided a maximum of 2 months to conduct T&C upon effectivity of the DOE DC No. 2021-06-0013.

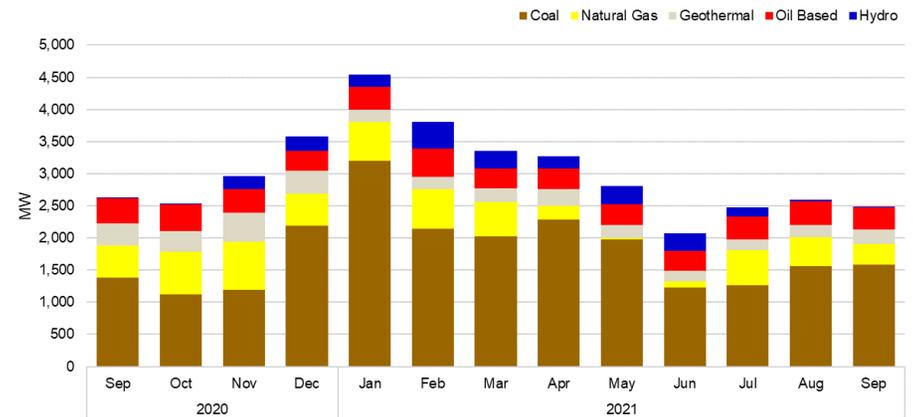
- The WESM registered capacity effectively decreased by 10 MW from a total of 21,366 MW to 21,356 MW
  - Total net decrease in maximum capacity (Pmax) of plants amounted to 10 MW
- Plant that decreased its capacity is the unit 1 of SEM Calaca Coal power plant.
- Universal power solutions, Inc. battery power plant were added to the capacity mix this month

## OUTAGE CAPACITY BY OUTAGE CATEGORY



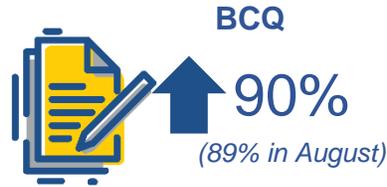
Average outage capacity for the month of September continued to increase except for forced outages. For ease of reference, Annex A shows the detailed information on plant outages in both categories.

## OUTAGE CAPACITY BY PLANT TYPE



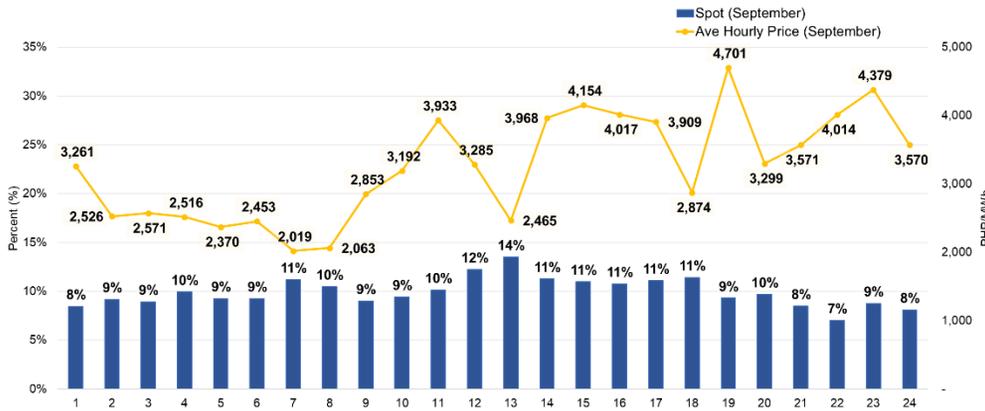
All plant types recorded increases on their averages except for natural gas and oil-based power plants, which can be relate to the decreased of forced outages for the month.

## MARKET TRANSACTIONS

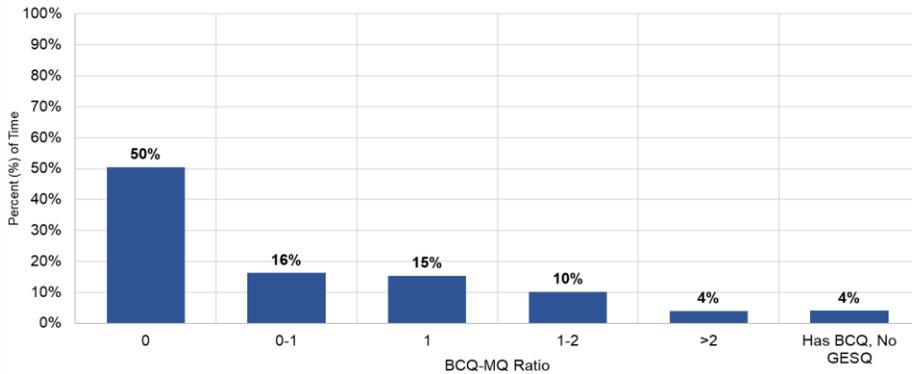


*Note: Spot share percentage is computed as the ratio of spot over the metered quantity in MWh.*

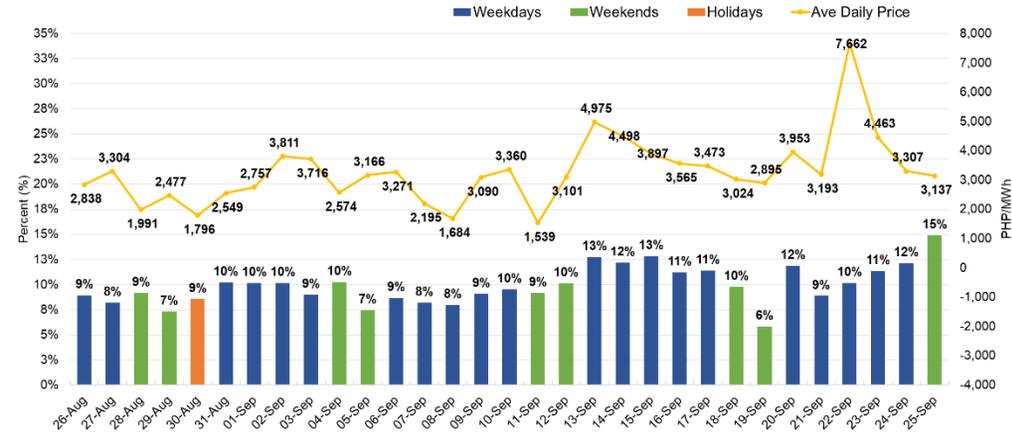
### HOURLY SPOT



Total spot quantities of generator participants in September stood at an average of 9.1 percent during off-peak and 10.7 percent during peak hours, indicating less quantities exposed in the market during high prices.



### DAILY SPOT



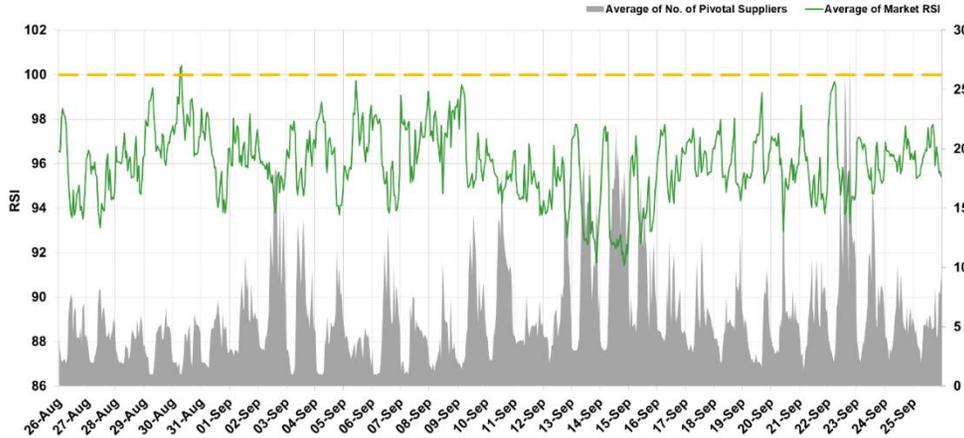
Spot share during weekdays averaged at 10.2 percent while it was 9.4 percent during weekends. Generally, the spot exposures during weekends were noted to be high due to lower demands which necessarily results to lower prices in the market.

### BCQ-MQ RATIO

- The resulting BCQ to MQ ratio of 0 demonstrates that the entire generations were fully sold in the market at half of the time.
- Roughly 15 percent had a BCQ to MQ ratio of 1 which resulted from all metered quantities being allocated to serve bilateral contract obligations.
- Generators with no MQ and fully bought energy in the market to serve their bilateral contract obligations were accounted at 4 percent of the time.
- The remaining 30 percent accounted for BCQs consuming a fraction of their MQ (16 percent), declared BCQs up to twice their MQ (10 percent), and declared BCQs more than twice their MQ (4 percent).

## STRUCTURAL COMPETITION INDICES

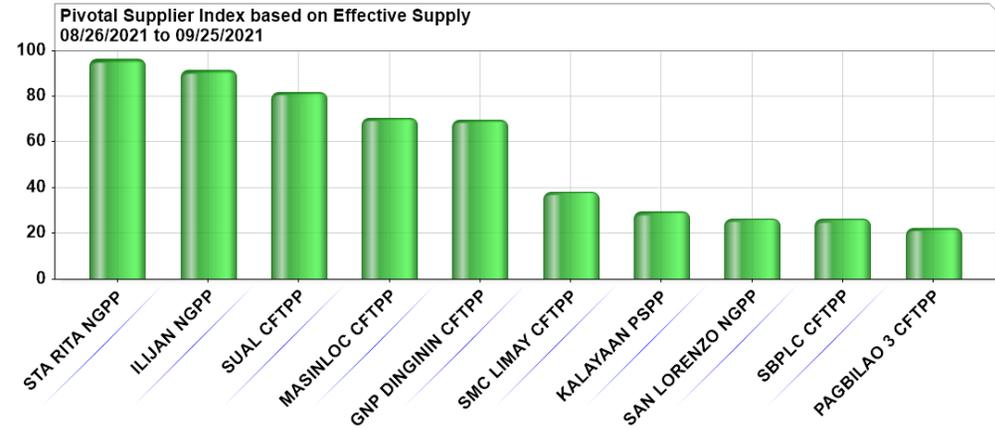
### MARKET RSI



Out of the 8,928 trading intervals in September 2021 billing month, almost all or 8,892 intervals had a Residual Supply Index (RSI) below the 100 percent mark, indicating presence of pivotal suppliers all throughout the month.

The average market prices for intervals with RSI below 100 percent was PHP3,311/MWh while those with RSI above 100 was PHP1,080/MWh.

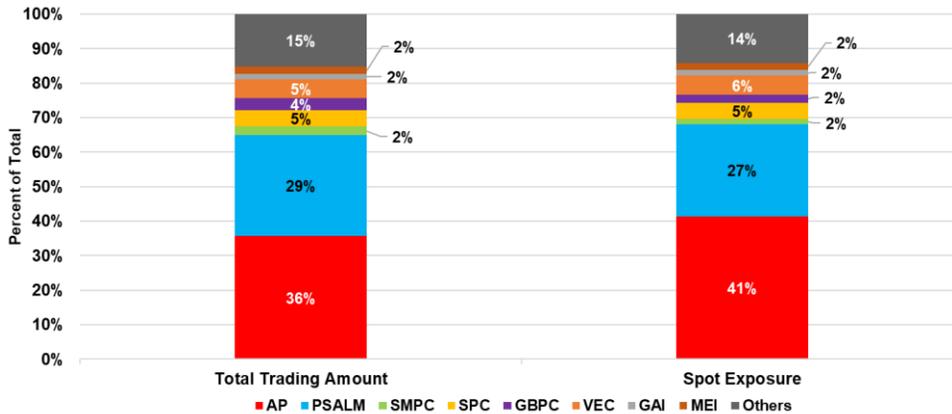
### PIVOTAL PLANTS



A total of 146 power plants were pivotal during the period with 102 coming from Luzon and 44 from Visayas.

The notable decline in effective supply due to the increased of ramp limited capacities translated to a low RSI and high number of pivotal suppliers per 5-min dispatch interval

## TTA AND SPOT SHARE



- Aboitiz Power Corporation (AP) topped the list as the entity with the highest TTA share of sellers in the market with approximately 36 percent.
- Power Sector Assets and Liabilities and Management (PSALM) remained as the second highest TTA share of around 29 percent.
- Vivant Energy Corp. (VEC) maintained its third place, ending with a 5 percent of TTA share.
- The top 3 highest TTA shares corresponded to high spot shares in the market.

## Annex A. List of Major Plant Outages

Region	Plant Type	Plant/ Unit Name	Capacity (MW)	Date Out	Date In	Duration (Days)	Outage Type	Remarks
CVIS	COAL	Kepco Salcon 1	103	09/21/2021 5:24	09/24/2021 5:47	3.02	Forced Outage	EMERGENCY CUT-OUT DUE TO BOILER TUBE LEAK
CLUZ	NATG	San Gabriel	420	09/18/2021 0:30	09/20/2021 9:47	2.39	Forced Outage	Malampaya Natural Gas Supply Restriction
CLUZ	NATG	Ilijan B1	190	09/12/2021 19:51	09/17/2021 13:57	4.75	Forced Outage	Natural Gas Restriction.
CVIS	BIOF	URC 2	40	09/11/2021 3:59	09/14/2021 8:17	3.18	Forced Outage	Offline due to boiler problem
CLUZ	NATG	San Gabriel	420	09/11/2021 0:32	09/14/2021 17:19	3.70	Forced Outage	Natural Gas Fuel Supply Restriction from SPEX Malampaya
CLUZ	NATG	San Lorenzo 1	264.8	09/10/2021 14:36	09/13/2021 6:53	2.68	Forced Outage	Natural Gas Fuel Supply Restriction from SPEX Malampaya
CVIS	BIOF	URC 1	40	09/09/2021 19:30	09/13/2021 21:04	4.07	Forced Outage	Offline due to boiler problem
CVIS	COAL	Kepco Salcon 1	103	09/09/2021 9:09	09/12/2021 6:16	2.88	Forced Outage	Manually cut-out due to boiler tube leak
CLUZ	GEO	Bacman 1	60	09/09/2021 0:29	09/11/2021 12:36	2.50	Forced Outage	Emergency Shutdown due to excitation problem
CLUZ	OIL	Limay 5	60	09/04/2021 0:01	09/08/2021 14:13	4.59	Planned Outage	Planned Outage
CVIS	BIOF	URC 2	40	09/01/2021 22:24	09/07/2021 10:08	5.49	Maintenance Outage	Offline after overspeed test
CVIS	BIOF	URC 1	40	09/01/2021 20:45	09/08/2021 14:46	6.75	Forced Outage	Emergency offline due to boiler problem
CLUZ	NATG	Ilijan A1	190	09/01/2021 16:22	09/14/2021 14:22	12.92	Maintenance Outage	Unplanned outage to rectify generator bearing 5 lube oil line leak
CLUZ	BIOF	BT2020	13	09/01/2021 7:22	09/17/2021 20:15	16.54	Maintenance Outage	Preventive Maintenance schedule
CVIS	BIOF	URC 2	40	06/28/2021 8:18	09/01/2021 22:15	65.58	Forced Outage	Offline due to Boiler problem
CVIS	OIL	TPVI 4	6.8	08/18/2021 14:28	09/22/2021 18:39	35.17	Forced Outage	Turbocharger A bank crack outlet casing
CLUZ	COAL	SMC 1	150	07/31/2021 1:50	08/26/2021 18:26	26.69	Forced Outage	Autotripped via generator unit transformer protection
CLUZ	NATG	San Lorenzo 1	264.8	08/16/2021 3:27	08/27/2021 22:41	11.80	Planned Outage	Maintenance Outage until 25 August 2021
CVIS	SOLR	San Carlos Sun	46.8	08/21/2021 16:11	09/05/2021 6:18	14.59	Forced Outage	Auto-tripped due to activation of Transformer Overcurrent Relay
CVIS	OIL	PDPP3 C	12	08/24/2021 15:33	08/27/2021 18:20	3.12	Forced Outage	FO - High torsional vibration
CLUZ	COAL	Masinloc 2	344	08/08/2021 23:41	09/07/2021 10:28	29.45	Planned Outage	Planned Outage
CVIS	GEO	Mahanagdong B1	5	08/24/2021 0:18	08/29/2021 20:21	5.84	Maintenance Outage	PMS
CLUZ	OIL	Limay 7	60	07/12/2021 0:01	09/03/2021 19:41	53.82	Planned Outage	Major overhaul of gas turbine
CVIS	OIL	CENPRI 4	6.7	08/23/2021 15:44	09/12/2021 6:27	19.61	Forced Outage	Emergency offline due to broken intake valve
CLUZ	COAL	Calaca 2	300	12/03/2020 9:01	09/19/2021 7:32	289.94	Forced Outage	Generator stator earth fault
CLUZ	BIOF	BT2020	13	08/16/2021 4:27	08/28/2021 22:25	12.75	Forced Outage	Emergency shutdown due to IDF high bearing vibration