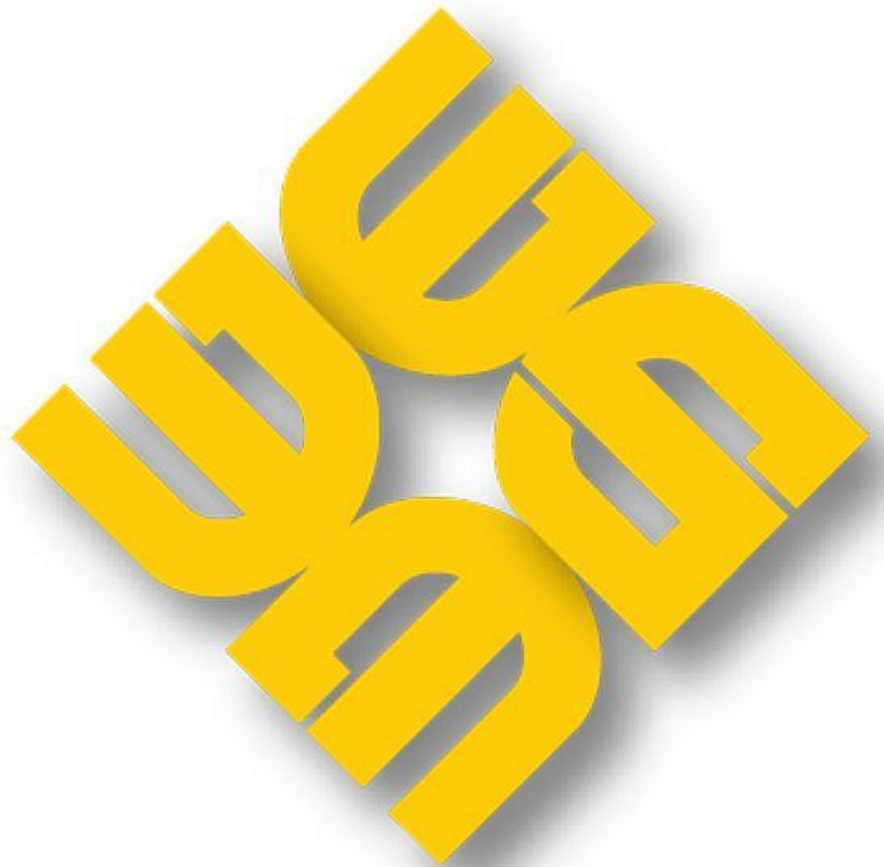


MONTHLY MARKET ASSESSMENT REPORT

For the Billing Period 26 May to 25 June 2011



DISCLAIMER: The information contained in this document is based on the electricity spot market data that are subject to continuous verification by the Philippines Electricity Market Corporation (PEMC). The same information is subject to change as updated figures come in. As such, the PEMC does not make any representations or warranties as to the completeness of this information. The PEMC, likewise accepts no responsibility or liability whatsoever for any loss or costs incurred by a reader arising from, or in relation to, any conclusions or assumptions derived from the information found herein.

Market Assessment Highlights

This Report highlights the results of the integrated Luzon and Visayas market operation for the period 26 May to 25 June 2011 and how the market performed compared with the previous billing month.

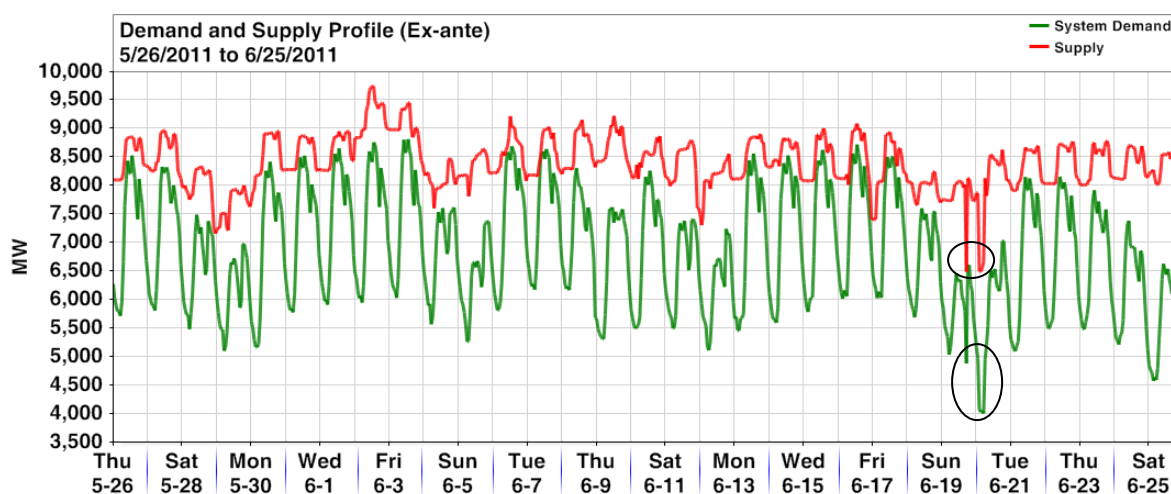
Supply and Demand Situation

As shown in Table 1, the monthly average system demand (ex-ante) in June 2011 decreased by 3.4 percent to 6,913 MW from the previous billing month's 7,153 MW with system demand ranging from a minimum 4,578 MW to a maximum 8,819 MW. Colder weather conditions experienced during the month is seen as one of the factors that contributed to the decline in demand. Regional average demand decreased by 3.8 percent from 6,065 MW to 5,836 MW in Luzon and 2 percent from 1,087 MW to 1,066 MW in Visayas (Table 2).

In June, the supply ranged from 7,163 MW to 9,748 MW. The monthly average supply slightly increased from the previous billing month by 0.5 percent to 8,419 MW (Table 1). The average supply in Luzon region increased by 1 percent to 6,895 MW, while the average supply in Visayas decreased by around 1.3 percent to 1,522 MW (Table 3).

The resulting margin between the supply and demand in June was calculated at an average of 1,506 MW (minimum at 72 MW and maximum at 3,703 MW). This was higher by 24.2 percent from the previous billing month's average margin of 1,213 MW (Table 1).

Figure 1. Demand and Supply (Ex-ante), June 2011



Note: The encircled demand and supply results exclude the data for Visayas during the trading intervals where market intervention was declared in Visayas, June 19 (1800H) and June 20 (0300H-0600H).

Table 1. Demand and Supply Summary (Ex-ante), May and June 2011

	May 2011 (In MW)			June 2011 (In MW)			% M-on-M Change (May. 2011 - Jun. 2011)		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
Demand	8,842	4,347	7,153	8,819	4,578	6,913	(0.3)	5.3	(3.4)
Supply	9,402	6,928	8,365	9,748	7,163	8,419	3.7	3.4	0.6
Supply/Demand Variance	3,052	(135)	1,213	3,703	72	1,506	21.3	153.6	24.2

Table 2. Regional Demand Summary (Ex-ante), May and June 2011

	May 2011 (In MW)			June 2011 (In MW)			% M-on-M Change (May. 2011 - Jun. 2011)		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
Luzon	7,485	3,621	6,065	7,458	3,750	5,836	(0.4)	3.6	(3.8)
Visayas	1,380	726	1,087	1,363	689	1,066	(1.2)	(5.1)	(2.0)

Table 3. Regional Supply Summary (Ex-ante), May and June 2011

	May 2011 (In MW)			June 2011 (In MW)			% M-on-M Change (May. 2011 - Jun. 2011)		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
Luzon	7,829	5,430	6,823	8,129	5,784	6,895	3.8	6.5	1.0
Visayas	1,740	1,256	1,542	1,693	1,310	1,522	(2.7)	4.3	(1.3)

Plant Outages

Figures 2 and 3 below show the outage capacity (*forced and scheduled*) by plant type considered during the ex-ante scheduling process (left Y-Axis) compared with the outage schedule based on NGCP-SO's CY2011 Grid Operating and Maintenance Program (GOMP).

In Luzon, each unit of coal plant Calaca encountered forced outages on May 30-June 1 and June 21-24. One unit of Pagbilao coal plant was placed on maintenance outage on May 24-28. Meanwhile, the other unit of Pagbilao went on emergency shutdown on June 6-9 and was eventually placed on maintenance outage starting June 11 consistent with the GOMP plant outage. (*Figure 2*)

Aside from the hydro plants in Luzon that were already on outage, other hydro plants were placed on maintenance outage during the period, which include the following: (i) two units of Kalayaan on May 31-June 8, (ii) the other two units of Kalayaan on June 10-16, (iii) the whole San Roque plant on June 4-14, and (iv) one unit of San Roque starting June 22. The Kalayaan outages and the latter outage of one unit of San Roque were in line with the GOMP planned outages. Other hydro generating units went on forced outages including one unit of Ambuklao on June 9-11 and one unit of Magat on June 6-11. (*Figure 2*)

Further, one unit of Malaya thermal plant in Luzon likewise went on forced outage starting June 14. (*Figure 2*)

Figure 2. Plant Outage Capacity, June 2011 - Luzon

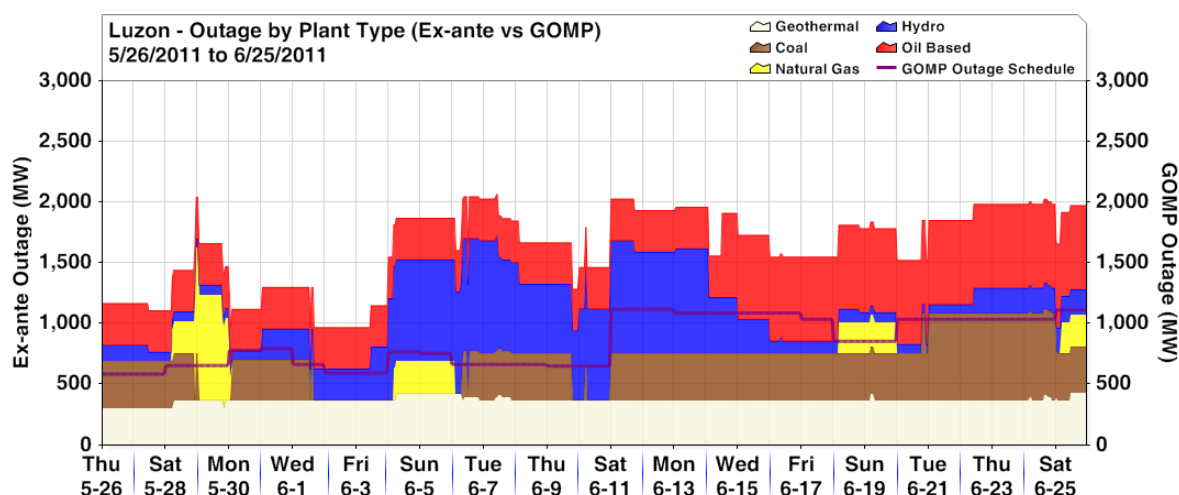


Table 4. Luzon Regional Outage Summary (Ex-ante), May and June 2011

Resource Type	May 2011			June 2011			% M-on-M Change (May. 2011 - June 2011)		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
Coal	1,676	0	364	712	0	335	(57.5)		(7.9)
Natural Gas	270	0	31	870	0	76	222.1		142.7
Geothermal	489	308	376	428	308	372	(12.5)	0.0	(1.1)
Hydro	657	118	308	952	76	375	44.9	(35.6)	21.5
Oil Based	342	342	342	682	332	464	99.4	(2.9)	35.6
TOTAL	2,666	927	1,422	2,057	959	1,622	(22.9)	3.5	14.1

Several coal plants in Visayas went on forced outages during the period. These include the Cebu TPP 2 on June 6-7, Cebu TPP 1 on June 13-15, and one unit of CEDC on June 15-23. One unit of the geothermal plant PGPP 1 also went on forced outage starting June 10. On positive note, two generating units that are on outage went back online during the period (i.e. one unit of coal plant KSPC on May 27 and one unit of geothermal plant Upper Mahiao on June 6). (Figure 3)

Figure 3. Plant Outage Capacity, June 2011 - Visayas

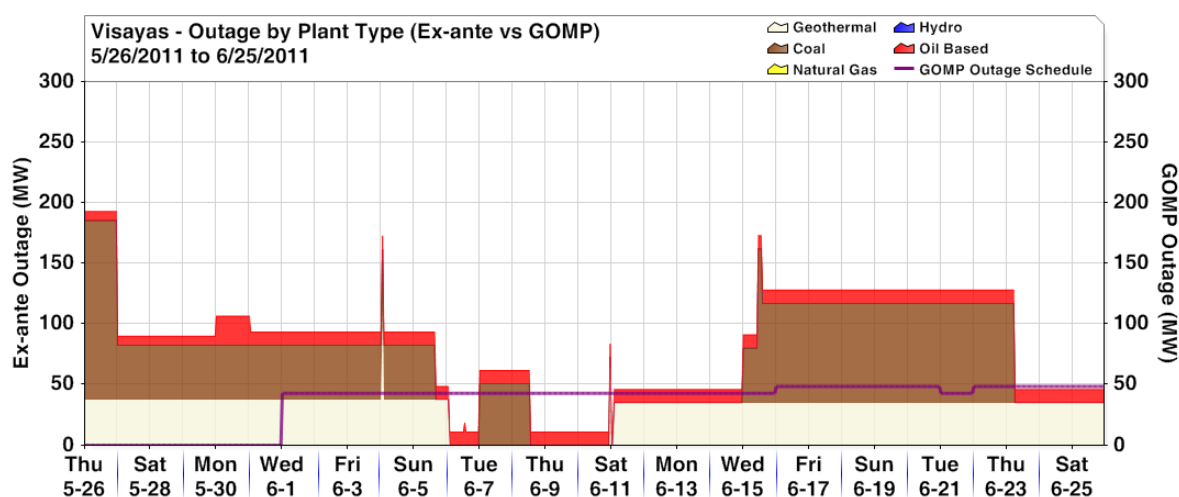


Table 5. Visayas Regional Outage Summary (Ex-ante), May and June 2011

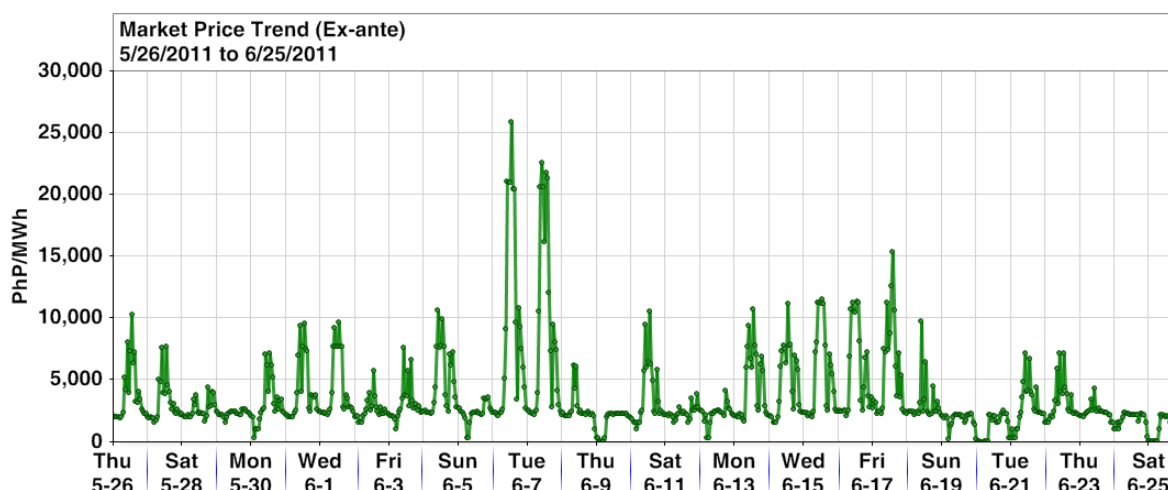
Resource Type	May 2011			June 2011			% M-on-M Change (Feb. 2011 - Mar. 2011)		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
Coal	148	0	16	148	0	43	0.0		170.1
Geothermal	74	0	27	117	0	30	56.7		14.7
Hydro	0	0	0	0	0	0			
Oil Based	22	0	5	24	11	12	9.1		173.9
TOTAL	193	0	47	204	11	86	5.7		82.5

Market Price Outcome

Figure 4 below shows the hourly market prices¹ in the billing month of June 2011. The market prices have considerably decreased from an average of PhP5,946/MWh in May to PhP3,890/MWh in June. It should be noted that the market prices had gone up in the billing month of May due to the tight supply condition that prevailed during the period particularly during peak hours brought about, among others, by the increase in demand as well as the occurrence of power plant outages. In June, the decrease in demand contributed to a better supply and demand condition that translated to lower market price outcomes during the period.

Looking at regional prices, the calculations showed similar outcomes for Luzon and Visayas. The average price in Luzon decreased by 35.5 percent from PhP6,008/MWh to PhP3,895/MWh, while the average price in Visayas decreased by 31 percent from PhP5,600/MWh to PhP3,864/MWh (*Table 6*)

Figure 4. Market Price Trend, June 2011



¹ The market prices were represented by the following: (i) ex-ante load weighted average price (LWAP) for trading intervals without pricing error during ex-ante, (ii) ex-post LWAP for trading intervals with pricing error during ex-ante but without pricing error during ex-post, (iii) LWAP based on the market re-run result for trading intervals with pricing error both during ex-ante and ex-post, (iv) administered price for loads for trading intervals under market intervention, and (v) estimated load reference price (ELRP) for trading intervals where the ERC-approved Price Substitution Mechanism (PSM) was applied.

Table 6. Market Price Summary, May and June 2011²

	May 2011 (In PhP/MWh)			June 2011 (In PhP/MWh)			% M-on-M Change (May. 2011 - Jun. 2011)		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
Luz-Viz	61,703	0	5,946	25,866	0	3,890	(58.1)		(34.6)
Luzon	62,125	0	6,008	25,866	0	3,895	(58.4)		(35.2)
Visayas	59,489	0	5,600	25,866	0	3,864	(56.5)		(31.0)

The frequency of market prices falling within the price levels of PhP5,000/MWh and below notably increased from 68.2 percent of the time in May to 81.9 percent in June. On the other hand, prices falling within the price levels of PhP5,000/MWh to PhP10,000/MWh and above PhP10,000/MWh decreased from 18.8 percent to 13.4 percent and 13.1 percent to 4.7 percent, respectively (*Figure 5 and Table 7*).

Figure 5. Market Price Distribution, May and June 2011

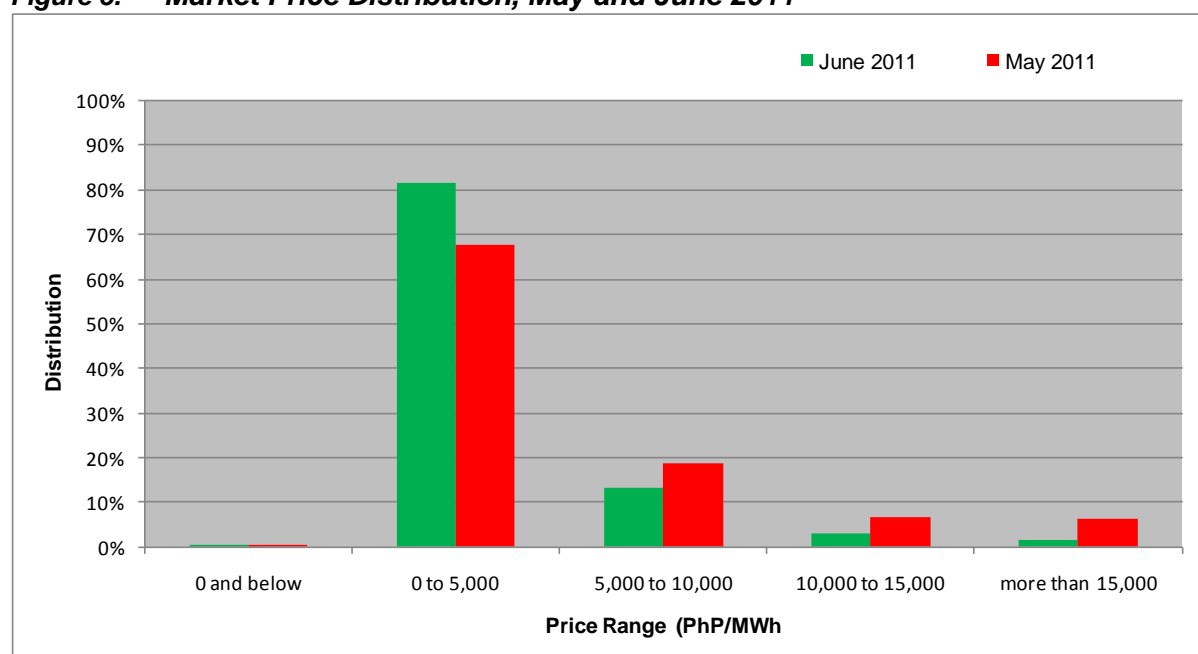


Table 7. Market Price Distribution, May and June 2011

Price Range (PhP/MWh)	% Distribution	
	May. 2011	June. 2011
0 and below	0.4	0.3
0 to 5,000	67.8	81.6
5,000 to 10,000	18.8	13.4
10,000 to 15,000	6.7	3.0
more than 15,000	6.4	1.7

The same as the previous month's results, the average price in Luzon was 0.8 percent higher than the average price in Visayas (*Table 8*).

² The market prices in May as reported in the May 2011 Market Highlights were adjusted to reflect the following: (i) use of ELRP instead of the generator unconstrained price for trading intervals where PSM was applied, and (ii) re-calculation of average monthly LWAP.

Table 8. Regional Price Summary, May and June 2011

	Luzon (In PhP/MWh)			Visayas (In PhP/MWh)			% Difference		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
June 2011	25,866	0	3,895	25,866	0	3,864	0.0		(0.8)
May 2011	62,125	0	6,008	59,489	0	5,600	(4.2)		(6.8)

Pricing Errors and Market Intervention

In compliance with the ERC order, the PEMC operationalized the regional application of the price substitution methodology (PSM) and the administered price determination methodology (APDM), and the regional issuance of non-congestion pricing error starting the billing month of June.

Looking at the PEN, PSM and MI summary (Table 9), the market results showed pricing errors occurring in Luzon at about 44 percent of the time or 326 trading intervals during the ex-ante process due to the violation of the contingency (N-1) requirement at MERALCO interchange substations in Zapote, Duhat and Araneta. Meanwhile, system-wide pricing errors were issued in 13 trading intervals due to MMS input data concerns.

The ex-post market results, on the other hand, indicated system pricing errors in 13 trading intervals due to undergeneration condition and MMS input data concerns.

During ex-ante, the PSM was applied for the whole system (Luzon and Visayas) in 34 trading intervals. Luzon had eight (8) trading intervals with PSM application. These were brought about by the following: (i) constraint at Calauan – Makban A 230kV Line as a result of the N-1 contingency applied at the Araneta – Sucat 230 kV Lines, and (ii) constraint at Bauang – Payocpoc 230kV Line as a result on N-1 contingency applied at the Araneta – Sucat 230 kV Lines. During ex-post, the PSM was applied for the whole system in four (4) trading intervals, also attributed to the constraint at Calauan – Makban A 230kV Line.

The Visayas System Operator (VSO) initiated market intervention in Visayas in five (5) trading intervals. As reported by VSO, the market intervention was issued due to the unimplementable RTD schedule of Leyte A on June 19 (1800H) and June 20 (0300H-0600H). On June 19 (1800H), Leyte A was scheduled at zero (0) MW due to its non-submission of energy offers. On June 20 (0300H-0600H), Leyte A had valid offers but was scheduled at zero (0) MW in trading intervals 0400H & 0600H, 18 MW in 0300H, and 33 MW in 0500H due to low demand.

Table 9. PEN, PSM and MI Summary, May and June 2011

	Luz-Viz		Luzon		Visayas		Total	
	Freq.	% of Time	Freq.	% of Time	Freq.	% of Time	Freq.	% of Time
PEN (RTD)	13	1.7	326	43.8	1	0.1	339	45.6
PEN (RTX)	13	1.7						
PSM (RTD)	34	4.6	8	1.1				
PSM (RTX)	4	0.5						
MI					5	0.7		

HVDC Scheduling and Price Separations

As shown in table 10, price separation between Luzon and Visayas regions occurred in 49 and 43 trading intervals during ex-ante and ex-post, respectively. Most of the price separation occurred on June 18-20 where the transfer capability of the HVDC from Visayas to Luzon was limited to 100 MW due to the maintenance of San Jose - Tayabas 500 kV Line 1.

Table 10. Summary of HVDC Limits Imposed by NGCP-SO and Results of HVDC Schedules (Ex-ante and Ex-post), June 2011

Results of HVDC Scheduling	HVDC Limit during Ex-ante (Visayas/Luzon)					HVDC Limit during Ex-post (Visayas/Luzon)				
	(No. of Trading Intervals)					(No. of Trading Intervals)				
	100/100	150/100	150/143	150/440	Total	100/100	150/100	150/143	150/440	Total
Visayas to Luzon		56	3	620	679		56	2	620	678
Limit Not Maximized		14	3	620	637		18	2	620	640
Limit Maximized ^{1\}		42			42		38			38
Luzon to Visayas	3	18	1	43	65	3	17	2	43	66
Limit Not Maximized	1	16	1	40	58	1	17	2	40	61
Limit Maximized ^{1\}	2	2		3	7	2			3	5
TOTAL	3	74	4	663	744	3	73	4	663	744

Notes: 1\ with price separation

Price Setting Plants³

As shown in Figure 6, 21 plants from Luzon have been considered as price setters across all price levels in June. The top five frequent price setters during the month include the coal plants Masinloc (at 41%), Sual (at 36%), Pagbilao (at 31%) and Calaca (at 14%), and natural gas plant KEPCO Ilijan (at 12%). Masinloc, Sual, Pagbilao and KEPCO Ilijan were also the most frequent price setters in May.

From Visayas, 16 plants have been considered as price setters across all price levels. The unified geothermal plant Leyte A (at 31%), coal plant KSPC (at 29%), and oil-based plant Panay III (at 9%) remained the three most frequent price setters in Visayas. The coal plants TPC (Sangi) (at 8%) and CEDC (at 8%) complete the top five most frequent price setters in Visayas. (Figure 7)

³ 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 percentages stated in the price setting discussion represent the percent of time that a given plant was considered as price setter during the billing month.

Figure 6. Price Setting Frequency Index (Luzon Plants), May and June 2011

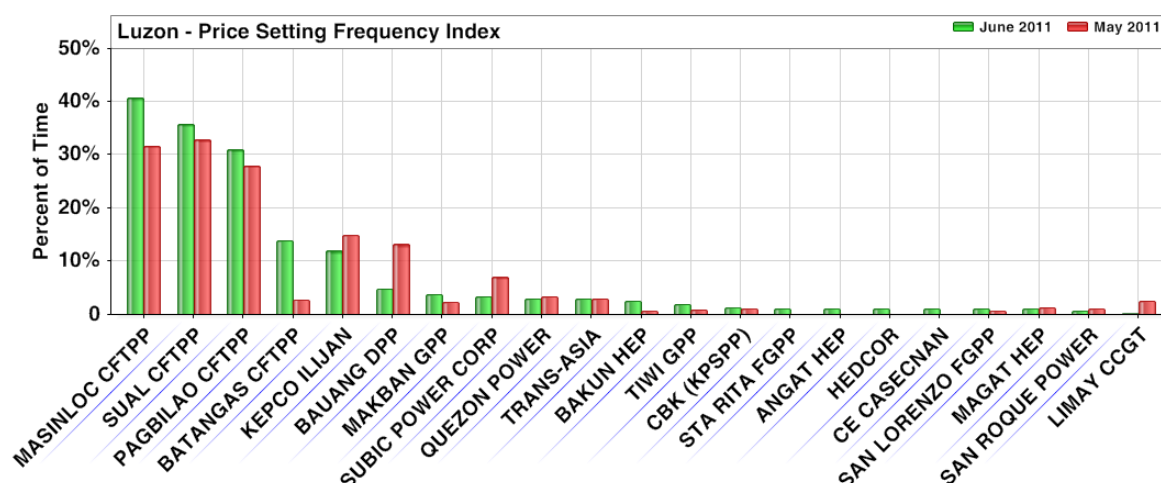
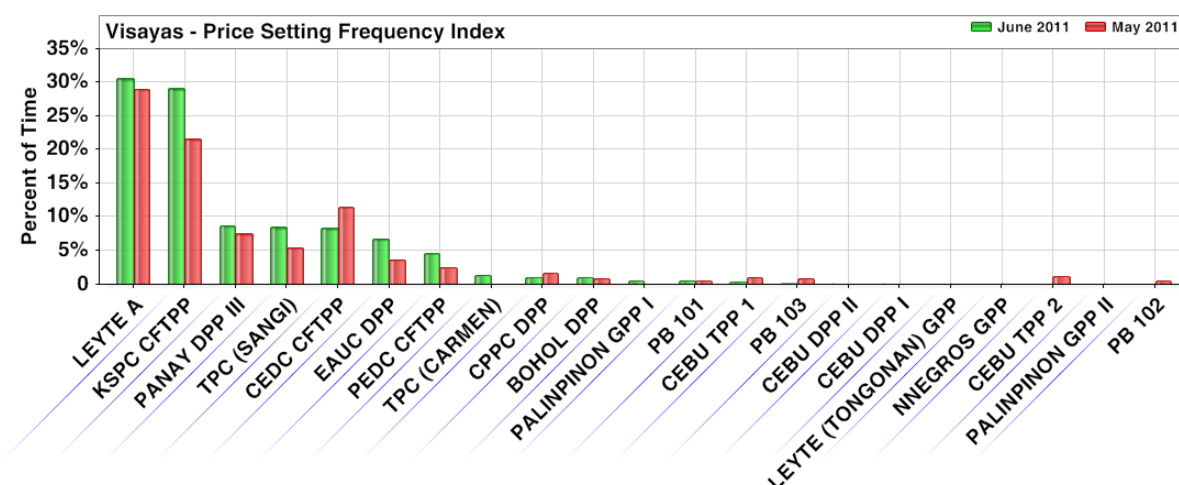
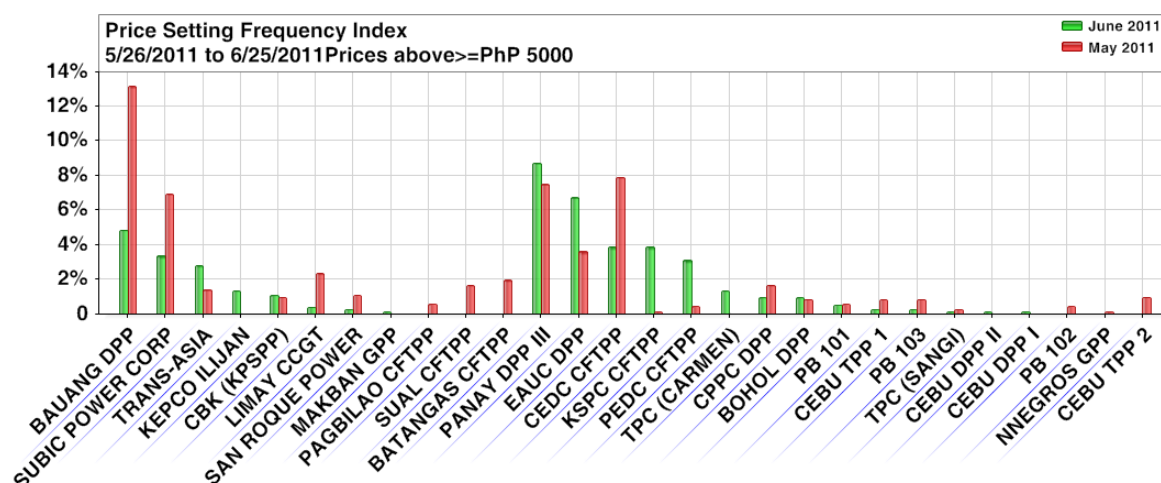


Figure 7. Price Setting Frequency Index (Visayas Plants), May and June 2011



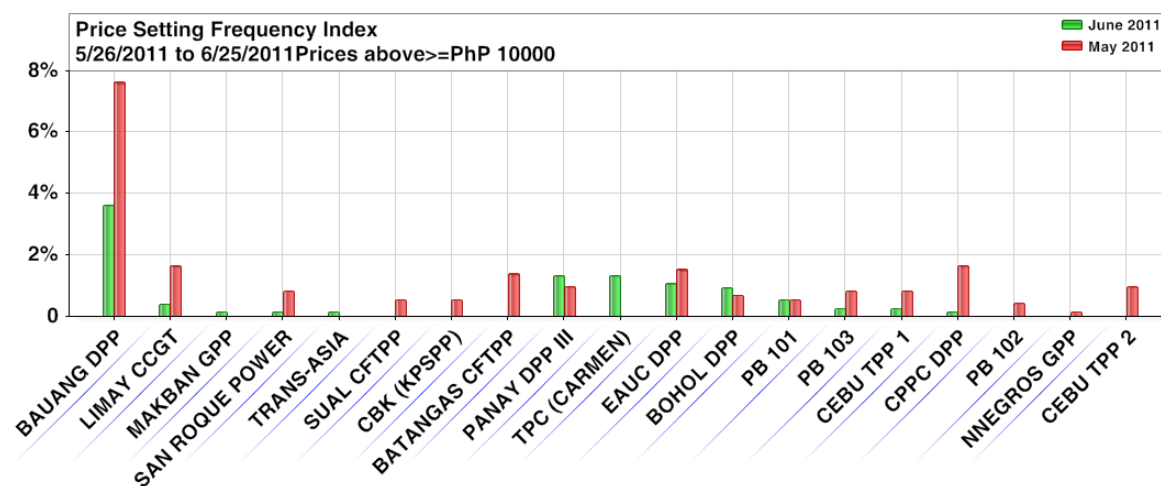
Looking at the PhP5,000/MWh and above price range, the number of price setters were reduced to eight (8) plants from Luzon and fourteen (14) plants from Visayas (*Figure 8*). The oil-based plants Bauang (at 4.8%), Subic-Enron (at 3.4%) and Trans-Asia (at 2.8 %) topped the price setting plants from Luzon. Meanwhile, the oil-based plants Panay III (at 8.7%), EAUC (at 6.7%), and coal plants CEDC (at 3.9%), KSPC (3.9%), and PEDC (3.1%) were the top price setting plants from Visayas.

Figure 8. Price Setting Frequency Index (PhP5,000 and Above), May and June 2011



The price setters at the price levels of PhP10,000/MWh and above were reduced to five (5) plants from Luzon and eight (8) plants from Visayas (Figure 9).

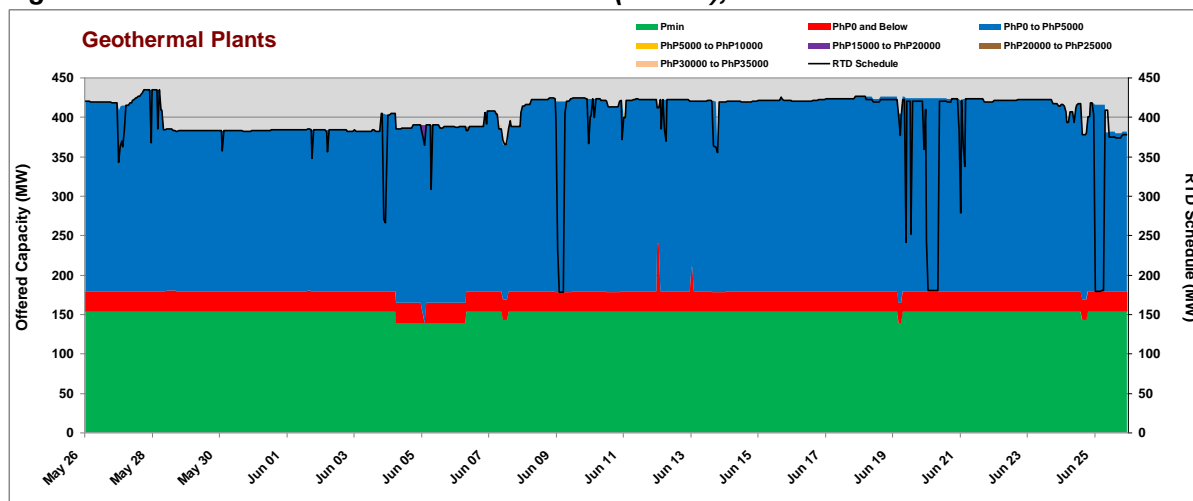
Figure 9. Price Setting Frequency Index (PhP10,000 and Above), May and June 2011



Generator Offer Pattern

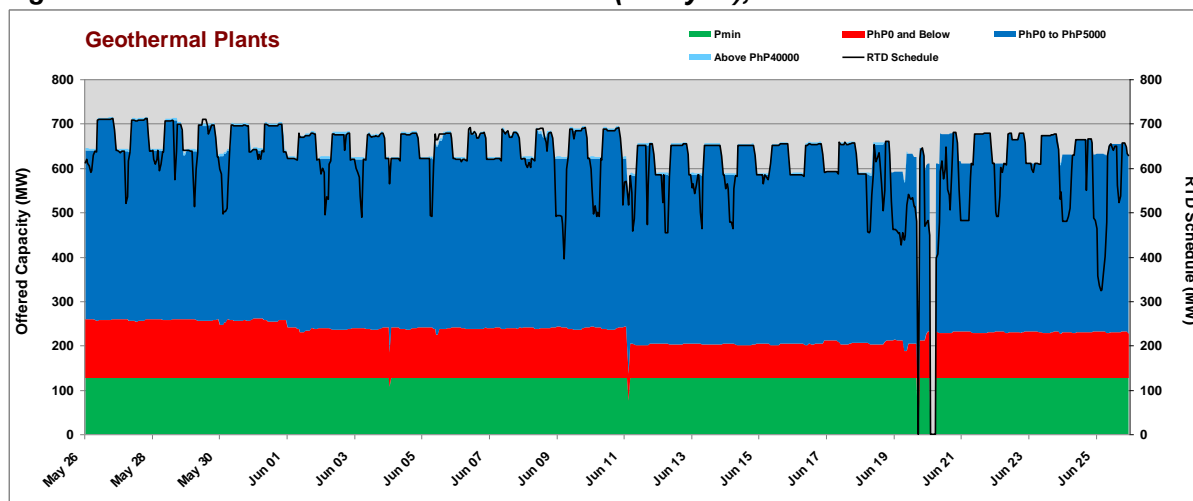
The offer prices of the geothermal plants in Luzon generally remained below PhP5,000/MW. (Figure 10).

Figure 10. Geothermal Plants Offer Pattern (Luzon), June 2011



The peak and offpeak variation in capacity offer of geothermal plants in Visayas was still evident during the period (Figure 11). One geothermal plant had offered a 5 MW capacity at the bid cap of PhP62,000/MW until June 18.

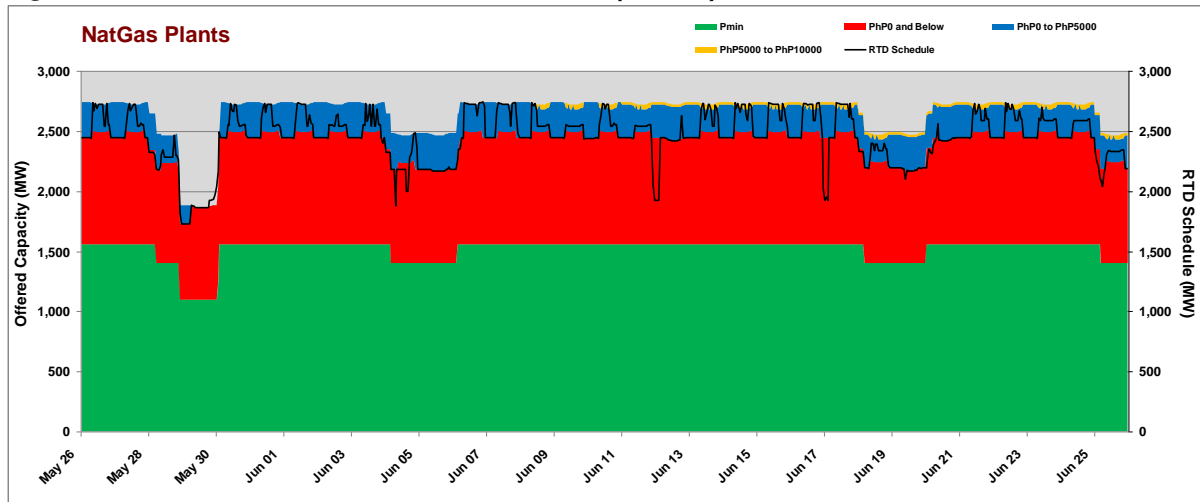
Figure 11. Geothermal Plants Offer Pattern (Visayas), June 2011



Note: "Null" values were used during the trading intervals under market intervention

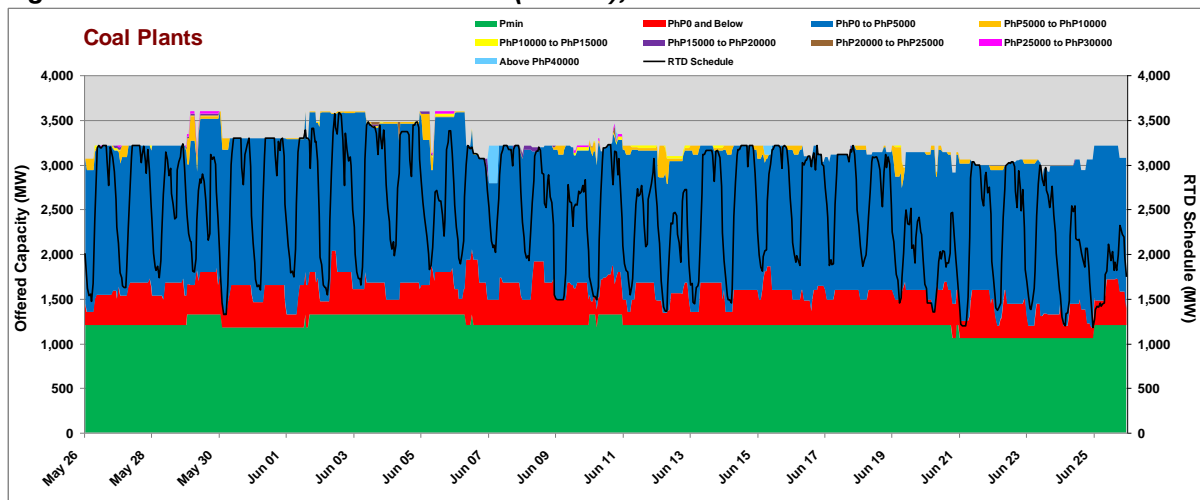
Aside from the 20 MW and 40 MW offer at PhP5,000/MW to PhP10,000/MW starting June 8, the rest of the offered capacities (average of 2,639 MW) of natural gas plants were priced below PhP5,000/MW.

Figure 12. Natural Gas Plants Offer Pattern (Luzon), June 2011



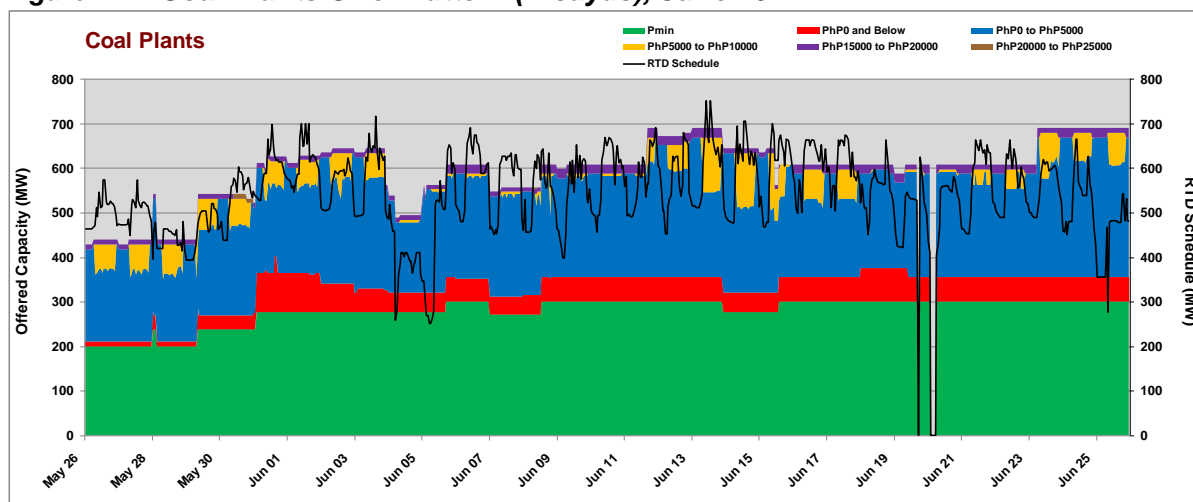
For coal plants in Luzon, 99% of the offered capacities (averaged of 3,197 MW) were priced at PhP5,000/MW and below (Figure 13). The other 1% of the offered capacities (averaged of 43 MW) were priced above PhP5,000/MW, reaching as high as PhP55,000/MWh.

Figure 13. Coal Plants Offer Pattern (Luzon), June 2011



About 10% of the offered capacity of coal plants in Visayas (average of 42 MW) were priced above PhP5,000/MW, reaching as high as PhP23,000/MW (Figure 14).

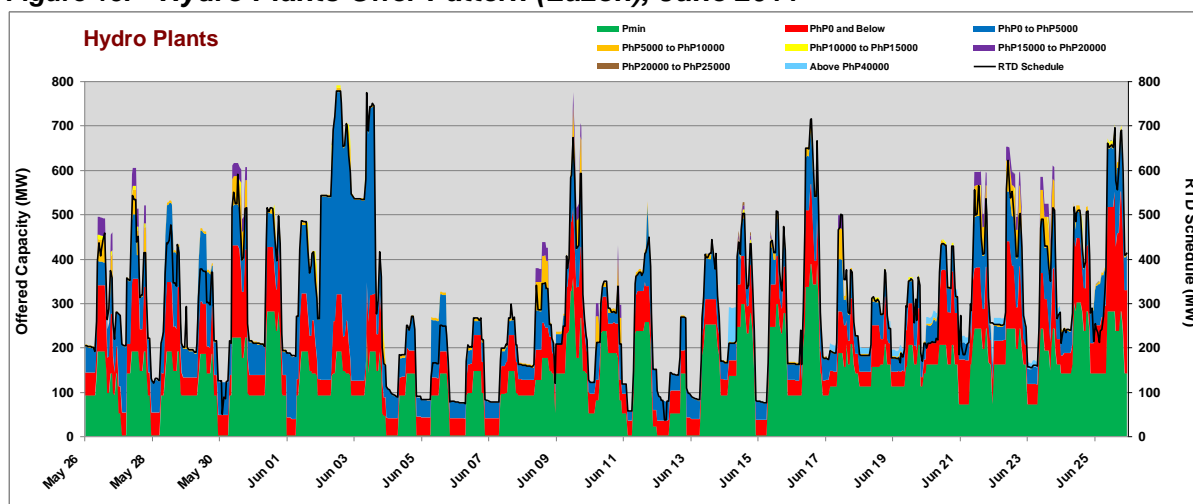
Figure 14. Coal Plants Offer Pattern (Visayas), June 2011



Note: "Null" values were used during the trading intervals under market intervention

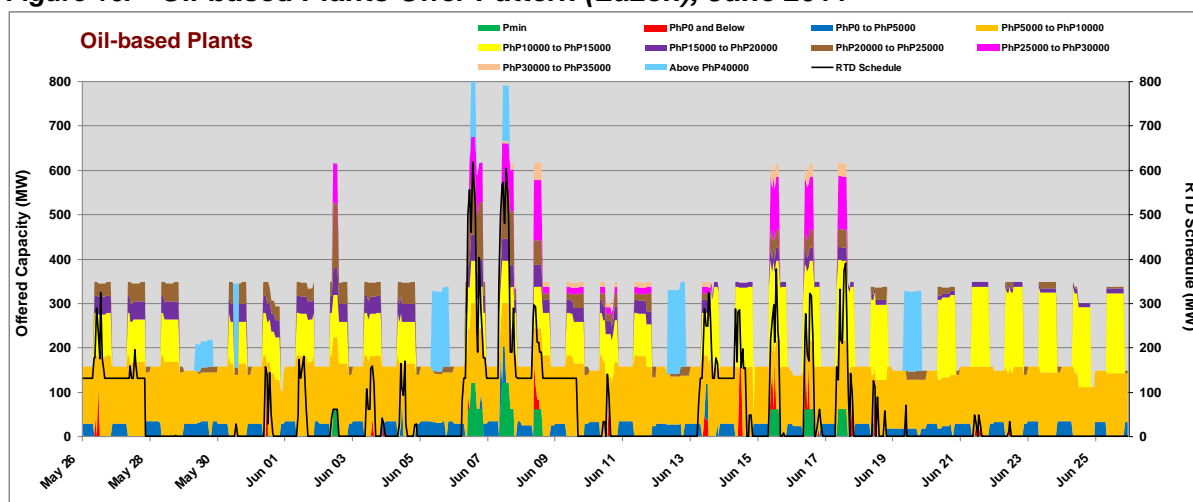
The aggregate hourly offer pattern of hydro plants in Luzon remained highly volatile in terms of capacity and price (Figure 15). The capacity offers ranged from 56 MW to 791 MW while the offer prices ranged from negative PhP1.0/MW to PhP62,000/MW. The limited or non-submission of offers from hydro plants still comprised about 53% of the capacity gap in Luzon.

Figure 15. Hydro Plants Offer Pattern (Luzon), June 2011



The limited or non-submission of offers from oil-based plants in Luzon accounts to about 35% of the capacity gap in the region (decreased to average of 1,087 MW from 1,245 MW in May) (*Figure 16*). The offered capacity of the Luzon oil-based plants ranged from 102 MW to 800 MW while the offer prices ranged between PhP0.00/MW and PhP62,000/MW.

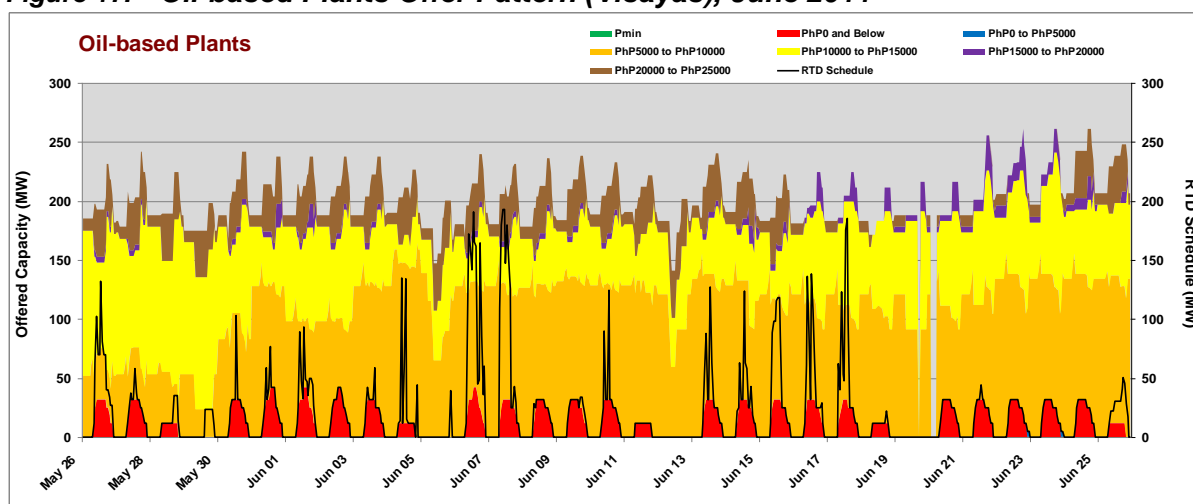
Figure 16. Oil-based Plants Offer Pattern (Luzon), June 2011



Note: "Null" values were used during the trading intervals under market intervention

The capacity and price offers from oil-based plants in Visayas ranged from 141 MW to 261 MW and PhP0.00/MW to PhP20,540/MW, respectively (*Figure 17*). The oil-based plants contributed about 49% of the capacity gap in Visayas (decreased to average of 287 MW from 332 MW in May).

Figure 17. Oil-based Plants Offer Pattern (Visayas), June 2011



Note: "Null" values were used during the trading intervals under market intervention

Capacity Factor

Calculations showed significant decrease in the capacity factor of oil-based plants in June. This may be attributed to lower dispatch of the oil-based plants brought about by the improvement in the supply and demand condition. The coal plants also exhibited a slight decrease in their capacity factor. (*Figure 18 and table 11*).

Figure 18. Capacity Factor (Luzon Plants), June 2011

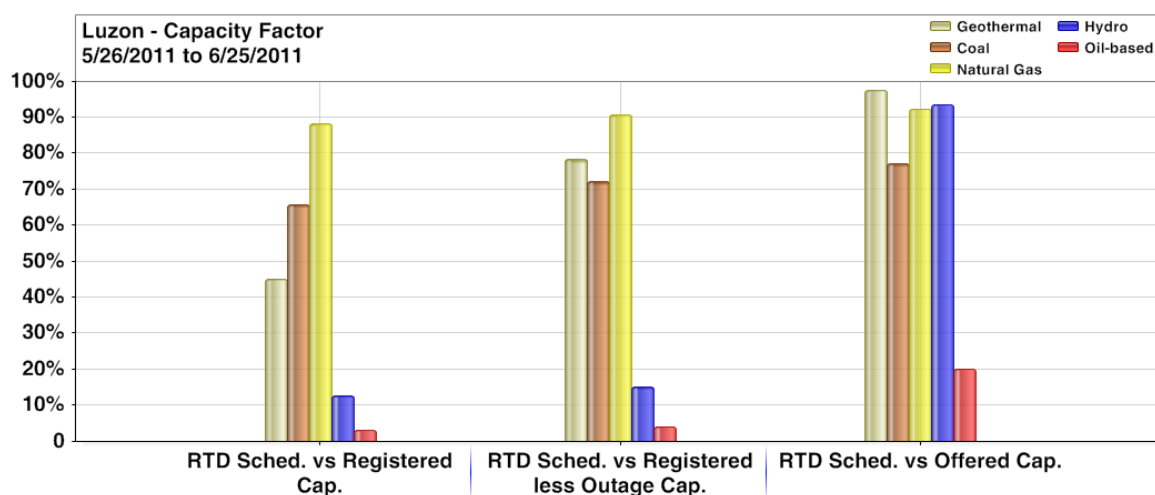


Table 11. Summary of Capacity Factor by Plant Type in Luzon, May and June 2011

Plant Type	RTD Sched. vs Registered Cap.			RTD Sched. vs Registered less Outage Cap.			RTD Sched. vs Offered Cap.		
	May. 2011	Jun. 2011	%Change	May. 2011	Jun. 2011	%Change	May. 2011	Jun. 2011	%Change
Coal	69%	66%	-5%	76%	72%	-6%	83%	77%	-7%
Natural Gas	90%	88%	-2%	91%	91%	0%	92%	92%	0%
Geothermal	43%	45%	6%	75%	78%	5%	97%	98%	0%
Hydro	10%	13%	28%	11%	15%	33%	92%	94%	2%
Oil-based	9%	3%	-67%	11%	4%	-64%	56%	20%	-64%

Table 12. Capacity Factor Data by Plant Type in Luzon, June 2011

Plant Type	Total RTD Sched. (MW)	Total Registered Cap. (MW)	Total Registered less Outage Cap. (MW)	Total Offered Cap. (MW)	Capacity Factors		
					Registered Cap.	Registered less Outage Cap.	Offered Cap
					(A / B)	(A / C)	(A / D)
	(A)	(B)	(C)	(D)			
Coal	1,863,716	2,832,408	2,582,930	2,410,977	66%	72%	77%
Natural Gas	1,822,148	2,067,204	2,010,835	1,974,160	88%	91%	92%
Geothermal	295,928	654,497	377,725	303,450	45%	78%	98%
Hydro	223,715	1,749,658	1,470,894	239,040	13%	15%	94%
Oil-based	41,052	1,363,368	1,018,320	203,592	3%	4%	20%

Similarly in Luzon, the capacity factors of oil-based and coal plants in Visayas exhibited reductions in June. (Figure 19 and Table 13)

Figure 19. Capacity Factor (Visayas Plants), June 2011

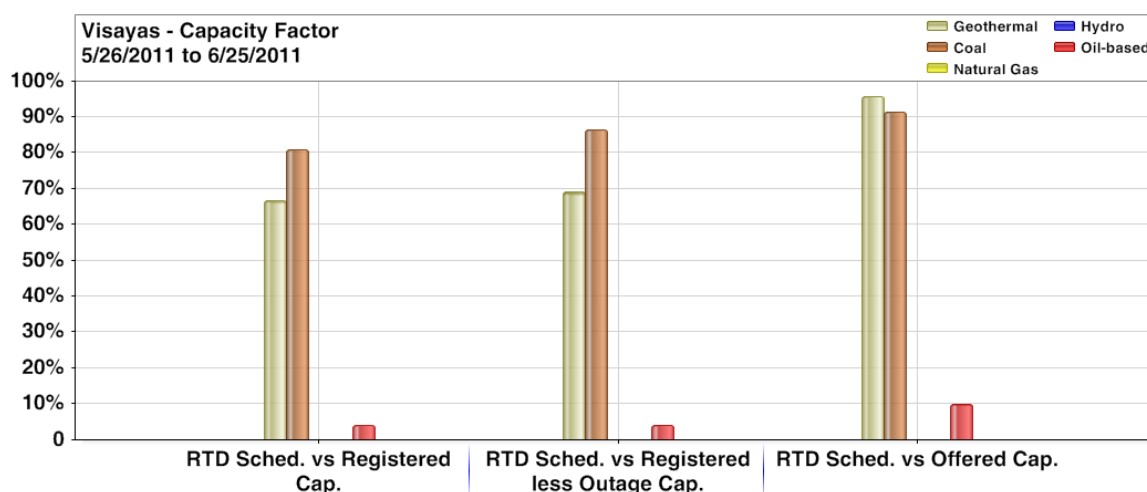


Table 13. Summary of Capacity Factor by Plant Type in Visayas, May and June 2011

Plant Type	RTD Sched. vs Registered Cap.			RTD Sched. vs Registered less Outage Cap.			RTD Sched. vs Offered Cap.		
	May. 2011	Jun. 2011	%Change	May. 2011	Jun. 2011	%Change	May. 2011	Jun. 2011	%Change
Coal	97%	81%	-16%	99%	86%	-13%	100%	91%	-9%
Geothermal	70%	67%	-5%	72%	69%	-4%	97%	96%	-1%
Oil-based	5%	4%	-20%	6%	4%	-26%	15%	10%	-34%

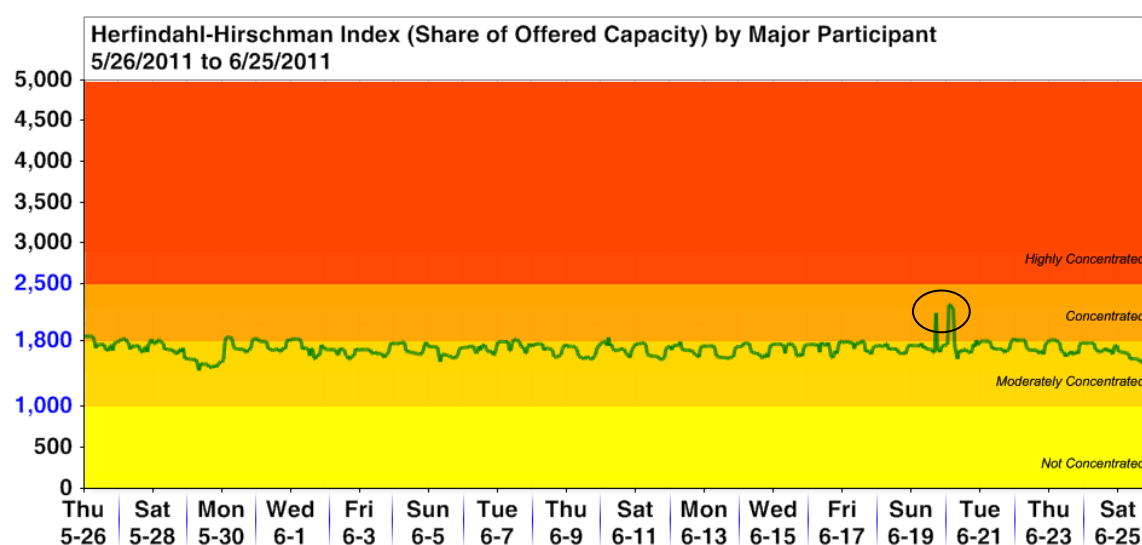
Table 14. Capacity Factor Data by Plant Type in Visayas, June 2011

Plant Type	Total RTD Sched. (MW)	Total Registered Cap. (MW)	Total Registered less Outage Cap. (MW)	Total Offered Cap. (MW)	Capacity Factors		
					Registered Cap.	Registered less Outage Cap.	Offered Cap
	(A)	(B)	(C)	(D)	(A / B)	(A / C)	(A / D)
Coal	402,639	497,402	466,027	440,152	81%	86%	91%
Geothermal	459,521	688,600	666,087	479,678	67%	69%	96%
Oil-based	14,760	370,387	361,205	149,190	4%	4%	10%

Market Concentration

The Herfindahl-Hirschman Index (HHI) – a measure of market concentration - reads out consistent results as in previous months. Major participants' grouping still indicated a moderately concentrated to concentrated market (*Figure 20*) condition.

Figure 20. Hourly HHI based on Offered Capacity by Major Participant Grouping, June 2011



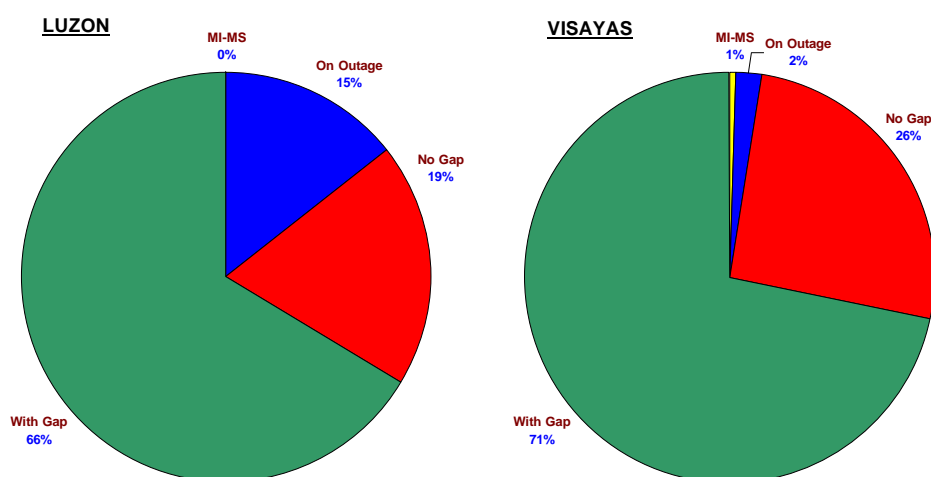
Note: The encircled results exclude the data for Visayas during the trading intervals where market intervention was declared in Visayas, June 19 (1800H) and June 20 (0300H-0600H).

Compliance Monitoring

Compliance to Must Offer Rule

Continued non-compliance with the must-offer rule by generator trading participants was observed throughout the covered period. Figure 21 shows a high percentage of capacity gap⁴ at around 66% and 71% of the total generator resource-hours⁵ in Luzon and Visayas, respectively.

Figure 21. Summary of Compliance Monitoring to Must Offer Rule, June 2011

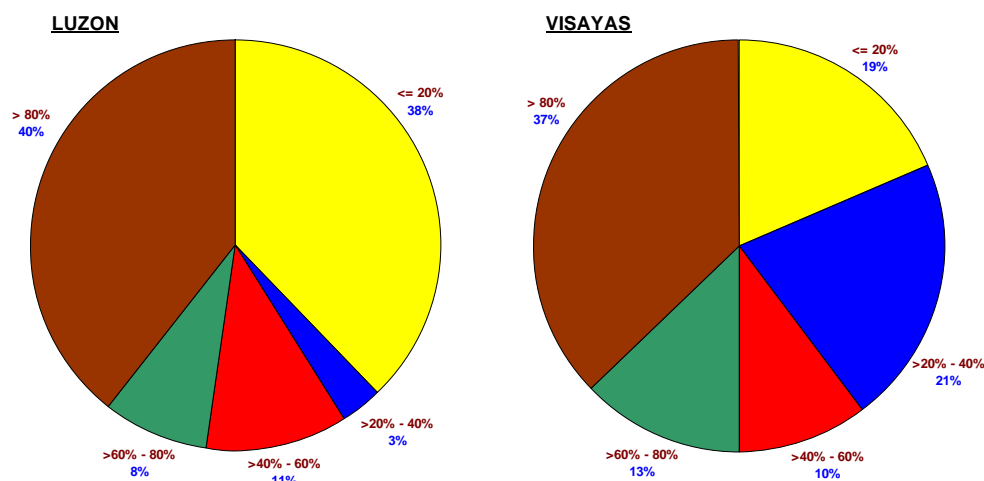


⁴ Capacity gap - registered capacity less outage capacity less offered capacity, calculated for each generator resource node per trading hour.

⁵ Total generator resource-hours - calculated as the number of registered generator resource nodes multiplied by the total trading hours in the billing month.

Figure 22 shows the proportion of the capacity gap to the registered capacity⁶ net of outage capacity⁷ and the corresponding frequency distribution of the generator resource-hours with capacity gap. It shows that the proportion of the capacity gap above 80% constitute about 40% and 37% of the relevant generator resource-hours in Luzon and Visayas, respectively.

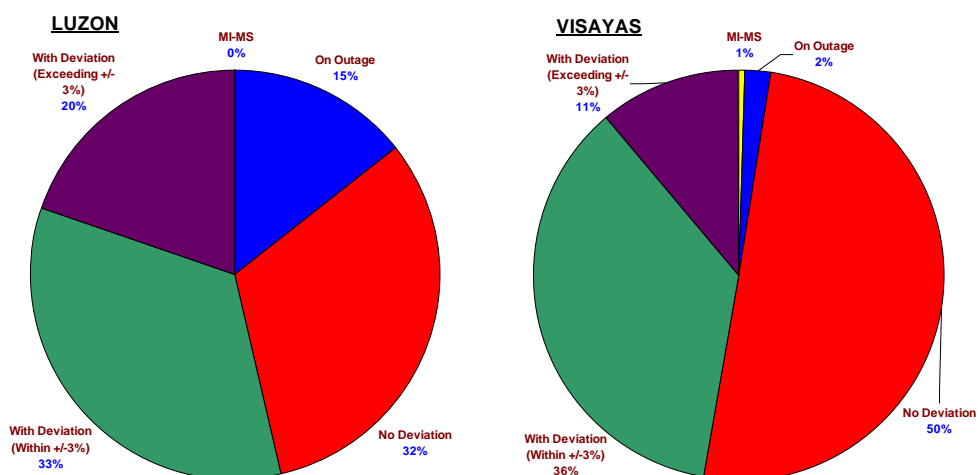
Figure 22. Distribution of Observed Capacity Gap, June 2011



Compliance to RTD Schedule

Figure 23 shows that around 20% and 11% of the total generator resource-hours in Luzon and Visayas, respectively, have deviations between the RTD schedule⁸ and actual dispatch⁹ exceeding the +/-3% tolerance limit¹⁰ in the billing month of June 2011.

Figure 23. Summary of Compliance Monitoring to RTD Schedule, June 2011



⁶ Registered capacity - capacity of each generator resource node registered with the market.

⁷ Outage capacity - validated outage capacity of each generator resource node per trading hour.

⁸ RTD schedule - target loading level of each generator resource node at the end of the trading hour.

⁹ Actual dispatch - actual loading of each generator resource node at the end of the trading hour (based on minute 59 snapshot data).

¹⁰ +/-3% tolerance limit - initial dispatch tolerance limits adopted per PEM Board Resolution No. 2005-15.

The summary of dispatch deviations exceeding the $\pm 3\%$ in terms of percent deviation and frequency distribution is shown in Figure 24. Majority of the dispatch deviations were within $\pm 20\%$ at about 73% and 78% of the relevant generator resource-hours in Luzon and Visayas, respectively. Likewise noted was the frequency of dispatch deviations exceeding 80% at 15% and 13% in Luzon and Visayas, respectively.

Figure 24. Distribution of Observed Deviation, June 2011

