

Catalyst

Wholesale Electricity Spot Market
2008 Annual Report



Wholesale Electricity
Spot Market

Catalyst

One spark can start a revolution.

After three years of commercial operations, the WESM has effectively revolutionized the power industry as the country's first competitive electricity market. Through strong leadership and a dynamic, professional organization, we have become a true catalyst for development - a change agent that has made the dream of cost-efficient power relevant not just to institutional customers, but eventually even to small and medium enterprises and end-users through supply aggregators. Moving forward, we are committed to strengthening our business through continuous innovation and investments in technology. With the support and trust of our stakeholders, we fully intend to realize our vision of building the WESM into the model electricity spot market in Southeast Asia.

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Message from the Chairman



A handwritten signature in black ink, appearing to read 'Angelo T. Reyes'.

Sec. Angelo T. Reyes
Chairman

Catalyst for Development

In keeping with its mandate under the Electric Power Industry Reform Act (EPIRA), the Department of Energy (DOE) launched the commercial operations of the Wholesale Electricity Spot Market (WESM) in Luzon in 2006. By design, the WESM is meant to be a neutral venue for the trading of electricity in a free and competitive manner. On its third year of existence, the WESM has gained the respect of an industry that initially doubted the market's capabilities and has since emerged with great potential to facilitate competition in the generation and supply sectors.

It cannot be denied that the WESM served as a catalyst in pushing transparency and efficiency in the power industry. Further, it has become a stimulus for investor interest in generation investment. Since the start of the WESM, investor involvement has increased resulting in the successful privatization of National Power

Corporation (NPC) assets for a total cumulative value of over PhP119 billion, thereby increasing the number of market participants in the bourse and promoting competition.

But the WESM's value lies not only in its capacity to usher in transparency, efficiency, and competition in the industry or bring in the investors, but also on how it has brought together the entire power industry. Through the regular quarterly meetings of the WESM members and participants, an assembly for addressing immediate and long-term market concerns was established. What started out as a meeting for 50 people has grown into a convention for 150 participants, with more expressing interest to join in the discussion.

This is a testament to how the WESM, perhaps the youngest member of the Energy Family, has gained the respect of the power industry. It is incumbent upon the DOE as the overseer of the WESM at this time, to ensure that the market is in order before it is handed over to the regular board. Thus, most recently, the DOE, together with the Interim Board, has taken active steps towards this goal. First, an audit of the systems and processes of the market operations was approved to be conducted in preparation for the entry of the Independent Market Operator (IMO). Second, the review of the By-Laws of the Philippine Electricity Market Corporation (PEMC) was directed to make it consistent with the evolving market structure and the WESM Rules. Third, a legal audit on PEMC's compliance with the government rules and regulations was likewise ordered. Fourth, the reconstitution of the Interim PEM Board to reflect the wider

participation in the market as a result of the privatization of the assets of the National Power Corporation (NPC) was undertaken.

Indeed, the DOE recognizes its role at this time in ensuring the establishment of an electricity market governed by the stakeholders. For the initial steps taken, I thank the Energy Family for their cooperation and expertise in carrying out this task.

The next big challenge is how to bring the market to the level of understanding of the household users – the Filipinos who see electric power as an unavoidable, but necessary cost. I trust that with the expertise of the reconstituted PEM Board, consumer education will be given emphasis.

I wish to thank the members of the Energy Family in giving their full support to the WESM. Indeed, the WESM's birth, development, and operations make its anniversary a celebration that must be shared with the Filipinos who have implicitly placed their trust in its workings. It is a celebration that marks so many victories achieved in so little time, but with still so much ahead of us.

Message from the President



A handwritten signature in black ink, appearing to read 'Melinda'.

Melinda L. Ocampo
President

Moving Forward

Three years of the Wholesale Electricity Spot Market (WESM) operations in Luzon have opened the doors for the Philippine power industry. Being the second country in Asia to take the bold move towards the operation of a competitive electricity market, I believe that this signalled how serious the Philippine government is in undertaking reforms in the electric power industry. Thus, there has been increased interest in the power sector, which resulted in the successful privatization of the assets of the National Power Corporation (NPC) beginning in 2006, which has now hit 2,172.33 MW, or a total of 57.36% privatization level. This is also evident in the renewed interest in the handling of the NPC Independent Power Plants (IPPs) where a significant number of investors expressed interest to become IPP Administrators.

Nonetheless, the road towards a successful electricity market is not paved. Three years of WESM operations have shown us some important lessons

that we ought to consider in forging our future. The first lesson is a simple rule of free market – real competition comes with a sufficient number of genuine participants. At present, PEMC is working towards a better and wider participation of stakeholders in the electricity market. In line with this, we have recently institutionalized our cooperation with the National Electrification Administration (NEA) through the signing of a Memorandum of Agreement (MOA) to build capacity and encourage participation of electric cooperatives (ECs) in the market. Likewise, we also envision the same tie-up with private distribution utilities (DUs) since MERALCO is the only private DU in the list of WESM membership at present. These efforts are preparatory for the eventual termination of the default wholesale supplier (DWS) arrangements in order to relieve NPC of this obligation in the light of its diminishing capacity, and thus allow the entry of other generators and suppliers to provide electricity to the communities.

A wider participation in the WESM also entails the expansion of its operations. PEMC, in cooperation with the DOE, launched the Visayas Supply Augmentation Auction (VSAA) Program, initially to address the power situation in the Visayas region, and eventually to see the full operation of the WESM in the area. To ensure the continuing progress in the evolution of the market, a Department Circular was recently signed by the DOE Secretary to revive the Steering Committee composed of members from the Energy Family and other players in the power industry to draw the road map towards achieving an expanded market with healthy competition. While we are aiming to expand the operation of the market in other regions of our continent, we will simultaneously persist in looking for other market derivatives in Luzon. In fact, we anticipate the opening of the reserve market with the help of the Energy Regulatory Commission (ERC) in order to entice more investors to the market.

The second lesson deals with technology – quick adaptation to technological advancements should always be part of the WESM's plans. The brain of the WESM is its Market Management System (MMS), which after three years, is now on the road to obsolescence. If the PEMC is to operate an electricity market 24/7, there must be conscious planning to constantly improve its hardware, as well as its software. At present, we welcome various offers for the provision of funds for the MMS migration in order to come up with a new system.

Third lesson is the nature of the WESM. It should be stressed that the WESM is neutral. As a clearing house for the trading of electricity, we should

always remember that the WESM does not determine the price, but merely reflects the state of the market. As such, it should always enhance its anti-competitive rules and strengthen its enforcement and compliance.

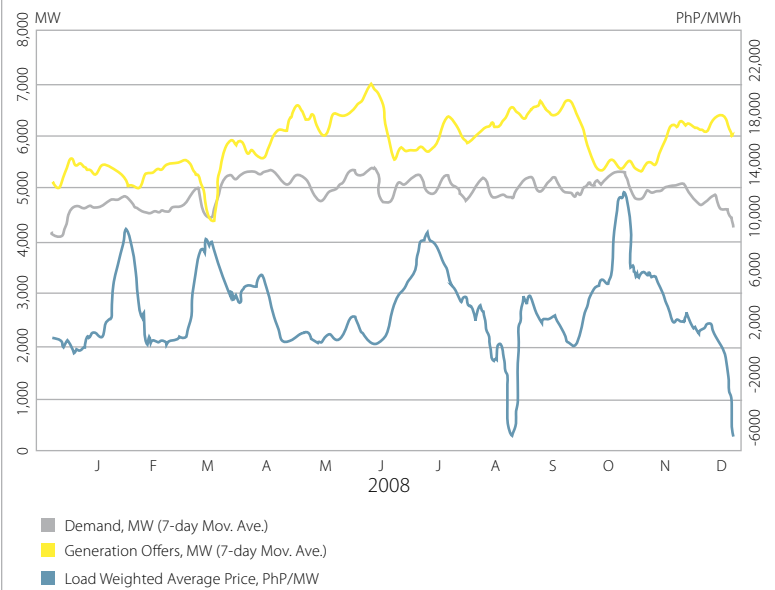
With the aim of eventually moving towards an independent market operator (IMO), PEMC has taken the step to have an audit of the current processes of its market operations, as well as its compliance with the WESM Rules. Taking the change in the investment environment in the energy sector, the DOE has likewise taken steps to reconstitute the PEM Board to reflect a wider participation.

Indeed, all these changes are necessary for our WESM. Being a young market, it is only starting to stand and walk on its own. While a bit wobbly, it is nonetheless moving with the able guidance of the stakeholders that constitute it. I recognize the wisdom, hard work, patience, and persistence of my predecessor as well as the members of the Energy Family to bring about transparency, fairness, and competition in the power sector. I am proud to be part of the WESM from its inception up to its operation, and I am happy to assume office at this most opportune time when we can work and learn from our past to chart a sustainable future.

Market Outcomes/ Highlights

Market Performance

Market Information	2007	2008	% Change
Peak Demand, MW	6,590	6,681	1.38%
Average Energy Offer, MW	5,507	5,990	8.77%
Total Energy Volume (Generation), GWh	40,052	41,153	2.75%
Average Spot (Load) Quantity, %	15%	14%	-6.67%
Generator Payments, Million PhP	33,423	22,267	-33.38%
Cumulative Average Buying Price, PhP/MWh	5,098 (as of Dec. 25, 2007)	4,831 (as of Dec. 25, 2008)	-5.24%



+8.77%
Average Energy Offer

+2.75%
Total Energy Volume

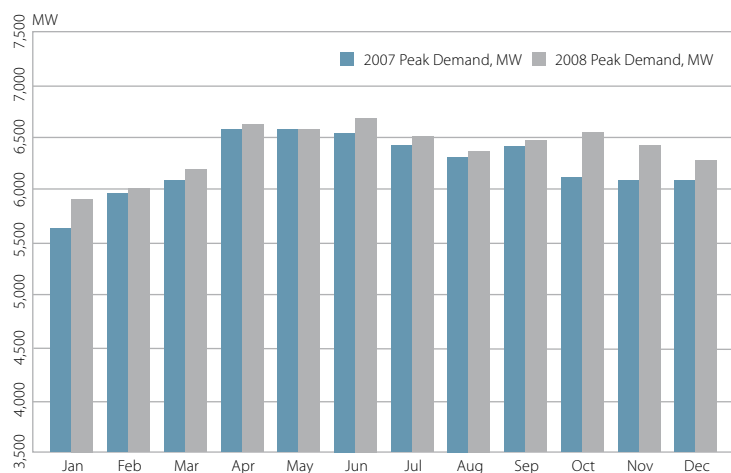
Electricity requirements grew at a conservative rate in 2008. Average annual demand for 2008 is 4,960 MW compared to 4,857 MW in 2007.

Supply condition was better in 2008, with significant improvements in generator availability and market offers. Average energy offer increased from 5,507 MW in 2007 to 5,990 MW in 2008. Average capacity on outage is lesser by 10.85% from 1,447 MW in 2007 to 1,290 MW in 2008.

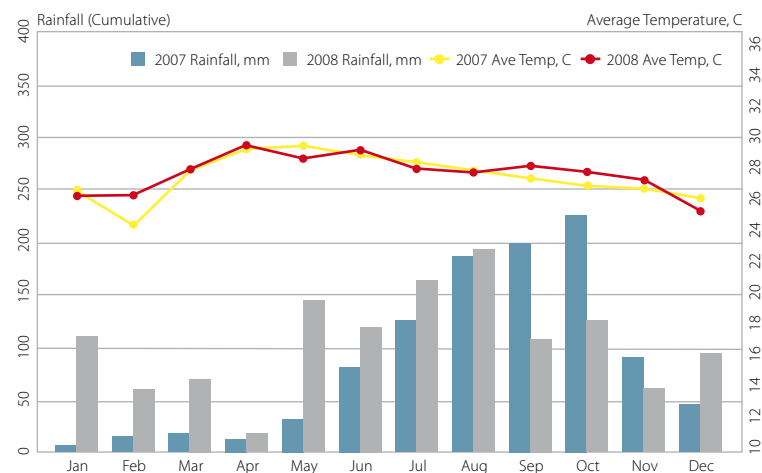
Significant transmission congestion occurred during the second half of the year starting 11 July 2008, as a result of the outage of one of the 600 MVA transformers at the San Jose Sub-Station of the National Transmission Corporation. Replacement of the damaged transformer was completed by September 2008. The network congestion resulted in the curtailment in the dispatch of some generation plants, as well as significant nodal price separations. These prompted the adoption of a price substitution methodology applicable for settlement of market transactions during market intervals where there is nodal price separation due to network congestion.

Market Performance

Monthly Peak Demand



Temperature and Rainfall



Demand

Highest demand for 2008 is 6,681 MW occurring on trading interval 1400H of 4 June 2008. This is the highest recorded demand for a trading interval since the start of the commercial operations of the WESM on 26 June 2006. It is 1.4% higher than the highest demand recorded in 2007 of 6,590 MW occurring in May 2007.

Lowest demand was 1,694 MW also occurring in June 2008. Average demand for the year, meanwhile, is 4,960 MW.

Weather and temperature changes remain to be the major factors affecting demand, with demand relatively lower during the cooler months of January to March and December. A longer Christmas holiday in December 2008 also contributed to lower demand for the month.

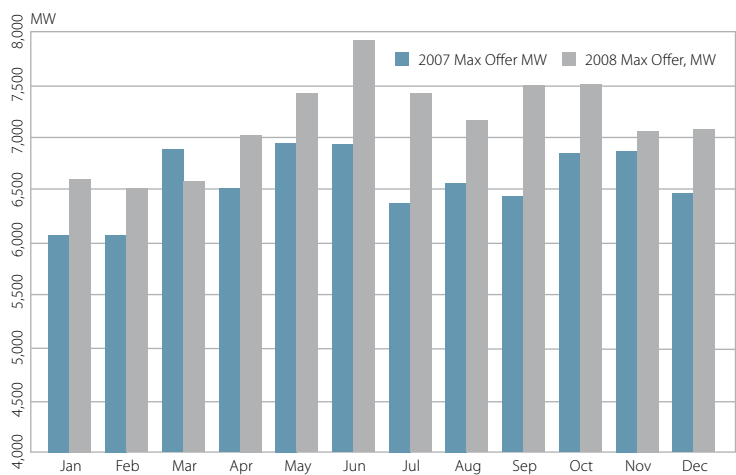
2008 Energy Demand

2008 Demand, MW	J	F	M	A	M	J	J	A	S	O	N	D
Maximum	5949	6034	6205	6619	6590	6681	6512	6374	6448	6520	6395	6338
Minimum	2808	3352	3157	3862	3481	1694	3674	3550	3799	3621	3459	2880
Average	4564	4676	4725	5301	5035	5159	5164	4948	5120	5124	4986	4711

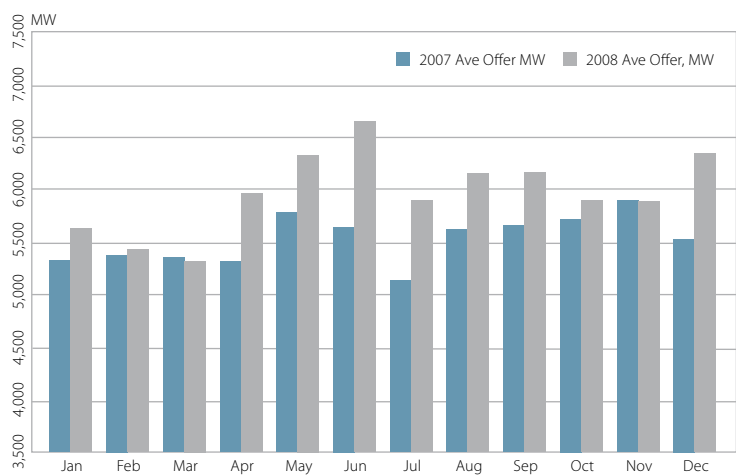
2007 Energy Demand

2007 Demand, MW	J	F	M	A	M	J	J	A	S	O	N	D
Maximum	5739	6021	3108	6559	6590	6547	6413	6339	6376	6103	6088	6092
Minimum	2538	2901	3525	2933	3745	3694	3680	3306	3356	3553	3135	3181
Average	4407	4529	4845	4991	5429	5187	5124	4880	4894	4872	4659	4645

Monthly Maximum Offer



Monthly Average Offer



Supply

Highest energy offer in 2008 was 7,883 MW occurring in June 2008. It was a rainy month with the total amount of rainfall being relatively high at 119 mm. Capacity on outage in June 2008 was the lowest for the year at 860 MW.

Lowest level of energy offers was posted in March 2008 at 3,641 MW. Average offer is 5,990 MW, which is higher by 8.7% compared to the average offer for 2007.

Insufficiency of offers occurred in 5% of the total trading intervals for the year.

2008 Energy Offers

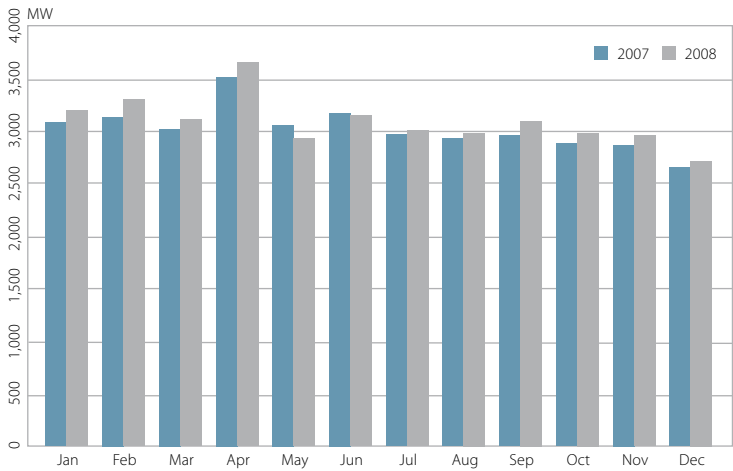
2008 Offers, MW	J	F	M	A	M	J	J	A	S	O	N	D
Maximum	6676	6475	6563	7022	7385	7883	7389	7141	7479	7479	7071	7069
Minimum	4604	4054	3641	4689	4896	4960	4667	4904	5232	4478	4432	4607
Average	5594	5410	5337	5949	6344	6639	5909	6189	6534	5825	5828	6327

2007 Energy Offers

2007 Offers, MW	J	F	M	A	M	J	J	A	S	O	N	D
Maximum	6102	6118	6794	6504	6891	6864	6290	6554	6352	6774	6790	6438
Minimum	4153	4478	3950	4076	4595	4559	3902	4764	4886	4832	4697	4530
Average	5250	5371	5362	5284	5766	5631	5099	5675	5568	5723	5833	5529

Market Performance

Generator Metered Quantity



+2.75%
increase in total
metered energy volume

Energy Generation

In 2008, the total generator metered energy volume was 41,153 GWh, representing a 2.75% increase compared to the 2007 total of 40,052 GWh.

Hydro power share was highest in October 2008 at 15.4% of total generation as water levels rose due to monsoon rains during the month. Lowest contribution was in April 2008 at 7.7%.

Geothermal power share was highest in January at 11.6%, while it's lowest was in December at 9.3%.

Share from coal-fired power plants was highest in November at 36% and lowest in August at 21.2%. Large coal plants have been largely constrained off from July to September due to the network congestion arising from the outage of one of the transformers at the San Jose Sub-Station.

2008 Energy Mix by Fuel Type							
	Hydro	Geo	Coal	Nat Gas	D/O	Wind	Total
Jan 08	11.3%	11.6%	31.8%	43.2%	1.8%	0.2%	100.0%
Feb 08	11.8%	11.5%	29.9%	43.8%	2.9%	0.3%	100.0%
Mar 08	11.9%	10.8%	21.3%	52.9%	2.9%	0.2%	100.0%
Apr 08	7.7%	9.9%	29.3%	48.4%	4.6%	0.1%	100.0%
May 08	12.1%	10.1%	27.6%	49.3%	0.9%	0.1%	100.0%
Jun 08	14.9%	10.2%	28.7%	45.1%	1.1%	0.0%	100.0%
Jul 08	12.9%	9.4%	29.6%	43.0%	5.0%	0.0%	100.0%
Aug 08	15.1%	11.4%	21.2%	47.0%	5.2%	0.1%	100.0%
Sep 08	14.9%	10.4%	24.7%	45.4%	4.5%	0.1%	100.0%
Oct 08	15.4%	9.3%	32.5%	39.8%	2.8%	0.1%	100.0%
Nov 08	10.9%	9.6%	36.0%	20.7%	2.6%	0.2%	100.0%
Dec 08	11.4%	9.3%	33.3%	45.1%	0.6%	0.3%	100.0%

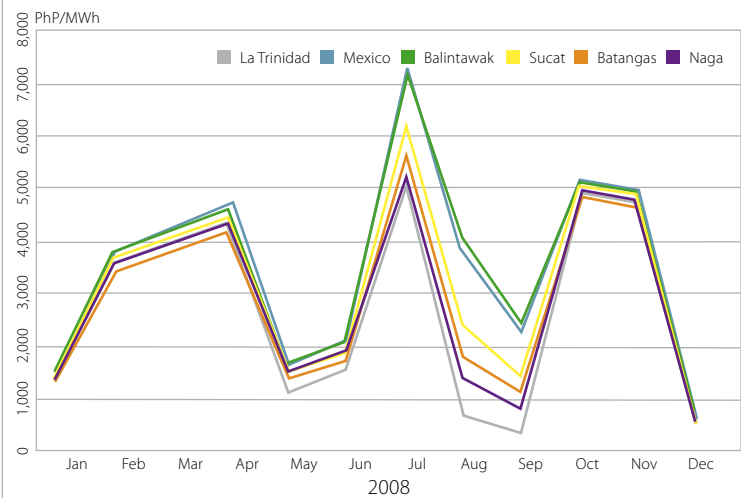
Throughout the year, the share from the natural gas plants was the highest among the different plant types averaging 45% for the year, with the highest at 52.9% in March and lowest at 39.8% in October.

2007 Energy Mix by Fuel Type							
	Hydro	Geo	Coal	Nat Gas	D/O	Wind	Total
Jan 07	11.7%	6.6%	30.3%	50.5%	0.6%	0.3%	100.0%
Feb 07	10.8%	9.6%	28.1%	50.0%	1.5%	0.2%	100.0%
Mar 07	8.6%	9.5%	33.5%	45.7%	2.7%	0.1%	100.0%
Apr 07	6.7%	8.8%	31.5%	46.0%	6.8%	0.1%	100.0%
May 07	5.1%	7.5%	36.3%	48.2%	2.8%	0.1%	100.0%
Jun 07	9.3%	8.9%	32.4%	44.6%	4.8%	0.0%	100.0%
Jul 07	8.9%	9.6%	32.2%	39.7%	9.6%	0.0%	100.0%
Aug 07	9.3%	10.1%	33.7%	44.9%	1.9%	0.1%	100.0%
Sep 07	11.8%	10.6%	29.7%	47.2%	0.6%	0.0%	100.0%
Oct 07	16.2%	11.3%	31.1%	39.9%	1.3%	0.2%	100.0%
Nov 07	17.1%	11.5%	31.8%	38.5%	0.9%	0.3%	100.0%
Dec 07	16.1%	11.7%	31.0%	37.4%	3.6%	0.2%	100.0%

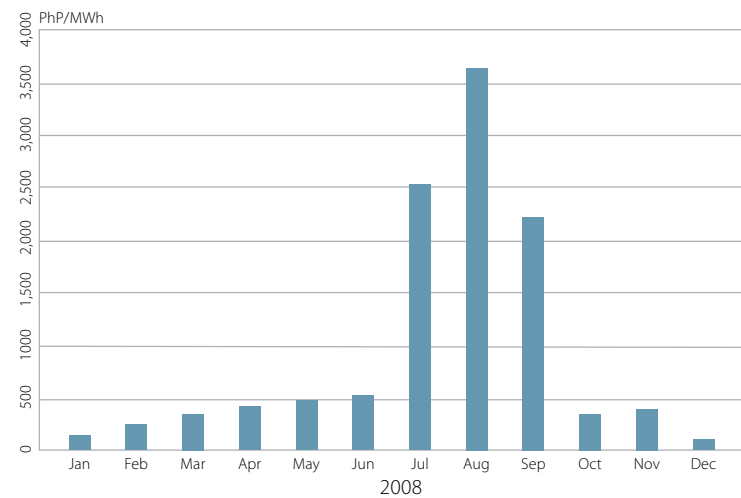
As the coal plants were constrained off as a result of network congestion, diesel and oil-based plants were dispatched at higher levels. Highest level of dispatch was in August, accounting for 5.2% of total generation and lowest in December at 0.6%.

Market Performance

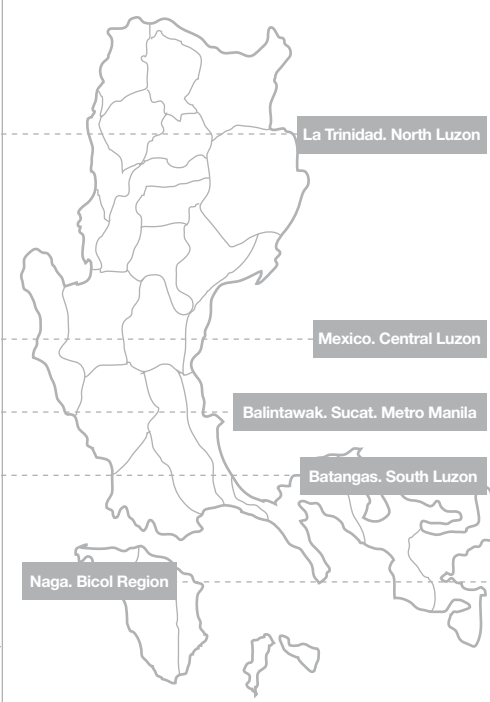
Average Locational Marginal Prices (PhP/MWh) at Representative Nodes



Average Locational Marginal Price Spread (PhP/MWh)



Representative Nodes



Market Prices at Representative Nodes

Six nodes are selected to represent the levels of nodal energy prices (Locational Marginal Prices, LMP) in the Luzon Grid: La Trinidad, Mexico, Balintawak, Sucat, Batangas, and Naga.

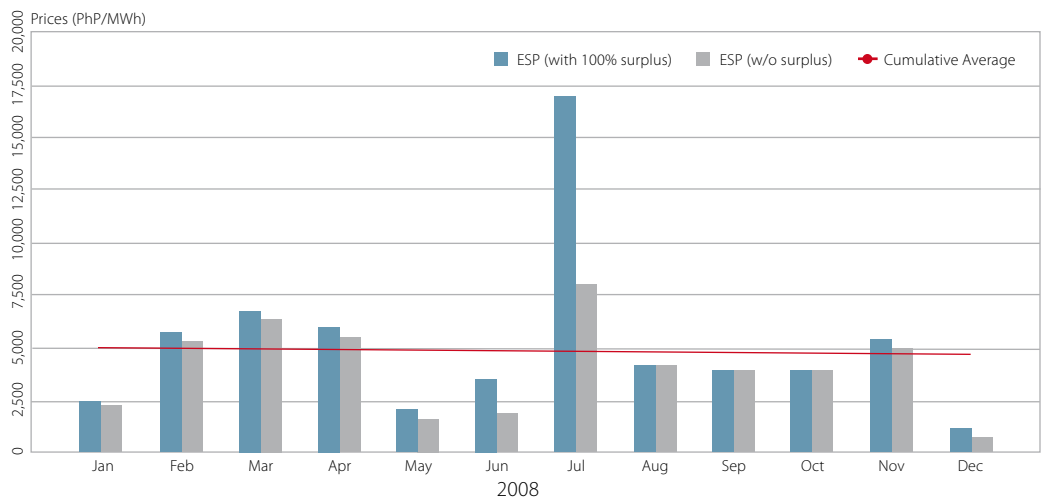
The highest annual average LMP for 2008 was posted at the Balintawak node at PhP3,608/MWh while the La Trinidad node had the lowest at PhP2,764/MWh.

Monthly average LMP was maximum in July 2008 at PhP6,227/MWh, a pricing impact caused by the congestions at the San Jose transformers. Minimum monthly average LMP was recorded at only PhP607/MWh in December 2008 when low market prices were attributed to the low energy demand.

Meanwhile, Average Price Spread was measured to indicate the average price difference between the highest and lowest nodal price for all trading intervals for each month, determined by calculating the mean of the difference between the highest customer nodal price and lowest generator nodal price for each trading interval in a particular month.

High price spread was experienced from July to September 2008 during the outage of one of the transformers at the San Jose substation. The average price spread among the representative nodes ranged from a low of PhP113/MWh in December 2008 to a high of PhP3,671 in August 2008.

Effective Settlement Prices (ESP)



Effective Settlement Prices

Effective Settlement Prices represent the amount paid by the WESM trading participants for their market transactions. Effective Buying Price is the settlement price inclusive of the total net settlement surplus, while effective selling price is exclusive of the total net settlement surplus.

For the year, the average Effective Buying Price was at PhP5,175.72/MWh, while the average Effective Selling Price was at PhP4,080.08/MWh.

Effective Buying Price ranged from a low of PhP1,244.97/MWh in December to a high of PhP16,600.93/MWh in July.

Low Effective Settlement Prices were posted in December 2008 as there was a drop in demand with negative clearing prices occurring frequently during the month.

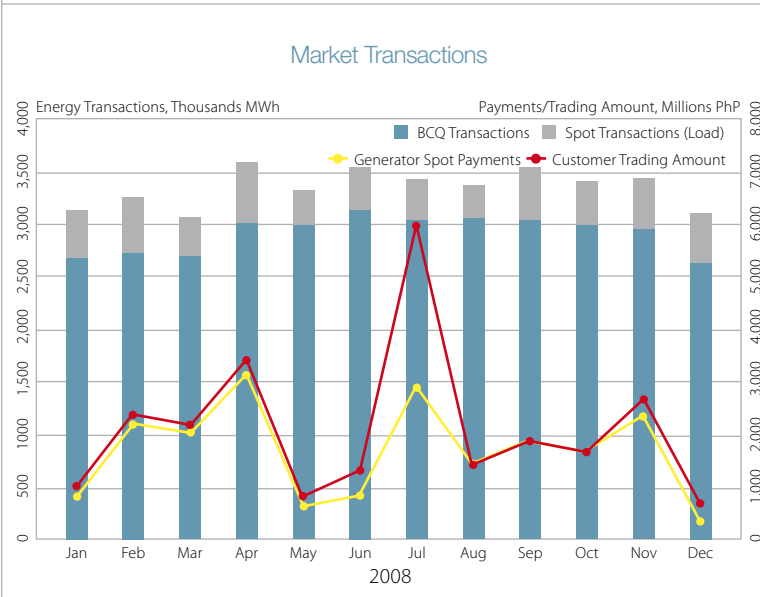
The high settlement prices in July were attributable to the impact on the WESM prices of the network congestion brought about by the San Jose transformer outage, which started during the month.

To temporarily mitigate the impact of the network congestion on the WESM settlements, the Energy Regulatory Commission provisionally directed the

application of the time-of-use (TOU) rates approved for the National Power Corporation for the settlement of WESM transactions for the August to October 2008 billing periods.

The above graph reflects the application of the TOU rates for the settlement of spot market transactions for the August to October 2008 billing periods and the unadjusted settlement amounts for July 2008. The prices and settlements amounts for these periods were subsequently adjusted in view of the retroactive application of the price substitution methodology for trading intervals affected by network congestion.

Market Performance



PhP 22,267 million
total spot payment for the
generator transactions

WESM Market Transactions

Total generator metered quantity amounted to 41,153 GWh, while total load (customer) metered quantity amounted to 40,266 GWh. Fourteen (14) percent of total load requirement was purchased from the WESM, and the rest were covered by bilateral contracts with generators.

Total WESM payments for generator transactions amounted to PhP22,267 million, with a monthly average of PhP1,856 million. Spot market purchases by the customers amounted to PhP27,851 million.

Market Fee Rate

Market Fee rates are calculated by dividing the approved monthly budgetary requirements of PEMC by the total gross energy deliveries of the generators. The monthly market fee rate is then multiplied by the gross energy delivery of a particular generator to get the market fees to be collected from that generator.

Lowest market fee rate was calculated at 1.02 centavos per kWh in April 2008 when the total monthly market transactions by the generators was at the year's maximum. Highest market fee rate was 1.63 centavos per kWh in August 2008.

For 2008, the total Market Fees collected in Luzon amounted to PhP535,396,377.56.

Relative Market Transaction Cost

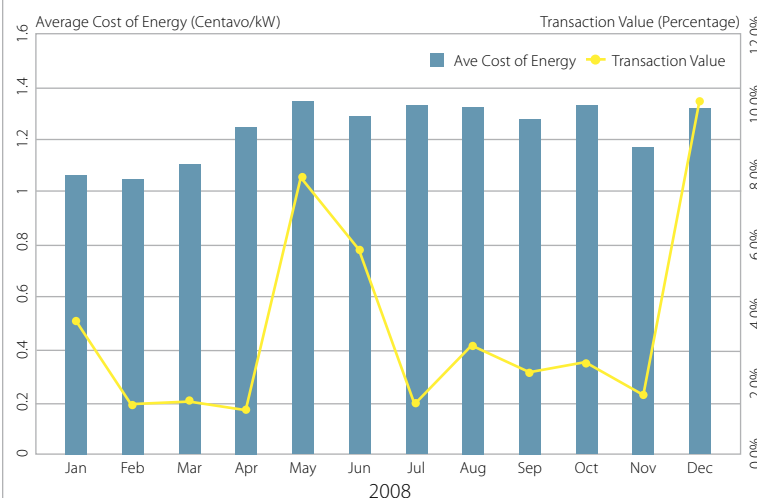
Transaction values, which indicate the ratio of Market Fees collected from the generators to the payment they received for their WESM transactions, are equivalent to about 1.38% to 10.12%.

Average cost of energy, which represents the cost of energy bought by the WESM customers based on the monthly market budget, was calculated at 1.33 centavos/kWh for 2008. Minimum cost of energy was posted in February 2008 at 1.13 centavos/kWh while maximum was in May 2008 at 1.46 centavos/kWh.

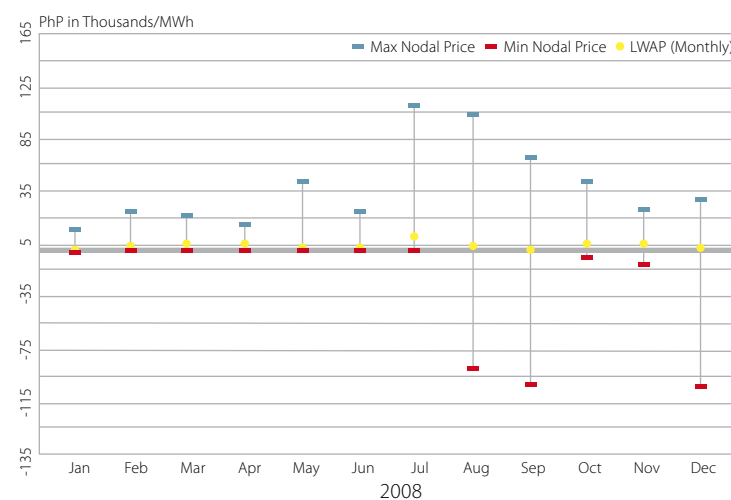
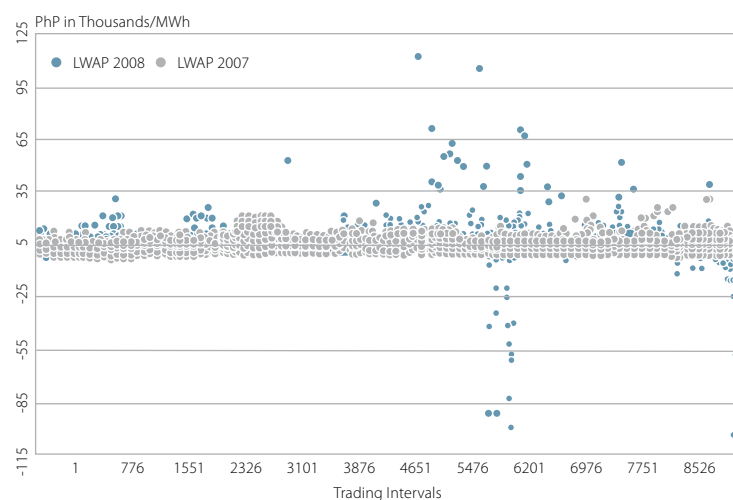
Monthly Market Fee Rate

Billing Date	Market Fee Rate, Cents/kWh
Jan-08	1.07
Feb-08	1.04
Mar-08	1.10
Apr-08	1.24
May-08	1.34
Jun-08	1.27
Jul-08	1.32
Aug-08	1.32
Sept-08	1.28
Oct-08	1.32
Nove-08	1.19
Dec-08	1.31

Market Transaction Cost



Market Assessment



The wholesale electricity spot prices in 2008 was marked by sorties both to extremely positive heights and the deepest negative lows never seen in the young history of the Wholesale Electricity Spot Market (WESM). The factors behind the two extreme price behaviors may differ, but they point out the same area of concern – the need to review the design of the market and the rules that govern it.

Most trading intervals in 2008 conformed to the established price ranges in 2007. Regrettably, some trading intervals posted prices – as measured by the Load Weighted Average Price (LWAP) – that were extremely far off both on the high side and low side.

As shown above, 2008 was characterized by three significant price episodes:

1. Extremely Positive Prices (middle third quarter);
2. Extremely Negative Prices (middle third quarter); and,
3. Extremely Negative Prices (late fourth quarter).

The first and second episodes emanated from the same source – the transmission congestion brought about by the San Jose transformer shutdown. The third episode arose primarily from depressed demand levels, extremely low offer prices, and some loopholes in the market rules regarding PMIN and ramp rates.

The difference between the maximum and minimum nodal price in any trading interval represents the extent of transmission congestion prevailing in the system and manifest via the separation of nodal prices. At the time of the San Jose incident in the third quarter of 2008, the price separation across nodes was at their largest extent. This was the case for the months of August and September 2008 as shown above. The data used in the chart were monthly LWAP, but it did not prevent the hourly price separation incidents from manifesting themselves in the monthly summary data. As of August 2008, the nodal price gap was at a high of PhP195,119/MWh. The large nodal price gaps were repeated in December 2008 – this time the extent of the gap distinctly biased toward the negative extremes.

The retroactive implementation of the Price Substitution Methodology (PSM) as approved by the ERC, subjected all of the trading intervals affected by the San Jose congestion in the second half of 2008 to settlement using the substituted price.

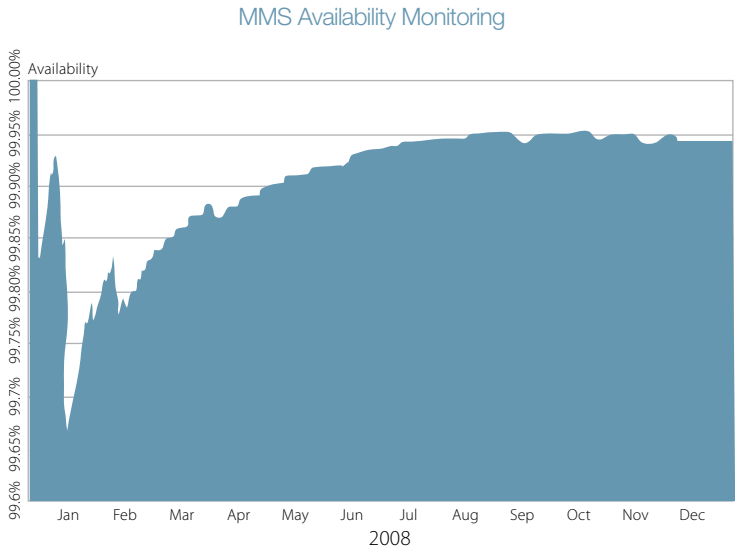
A deeper assessment of the extreme price behavior in the second half of 2008 can be found in the reports of the Market Assessment Group (MAG) to the Market Surveillance Committee (MSC). The findings in these reports are put together in a separate publication called the Annual Market Assessment Report 2008 prepared and published also by the MAG.

Market Operator Performance

Performance Indicator	Measure	Accomplishment
Market Management System	Availability	99.94%
Dispatch Scheduling and Pricing	Real Time Dispatch (RTD) Work Flow Success Rate	99.81%
	Real Time Ex Post (RTD) Work Flow Success Rate	99.91%
	Day Ahead Projection (DAP) Work Flow Success Rate	99.91%
	Week-Ahead Projection (WAP) Work Flow Success Rate	100%
	Completion of pricing errors validation and market re-run	100%
Forecast Accuracy	Mean Absolute Percentage Error (MAPE)	0.89%
	Forecast Error Rate (FER)	1.98%
Billings and Settlements	Timely Issuance of Settlement Statements	100%
	Accuracy of Final Settlement Statements	99.21%

Market Management System Availability

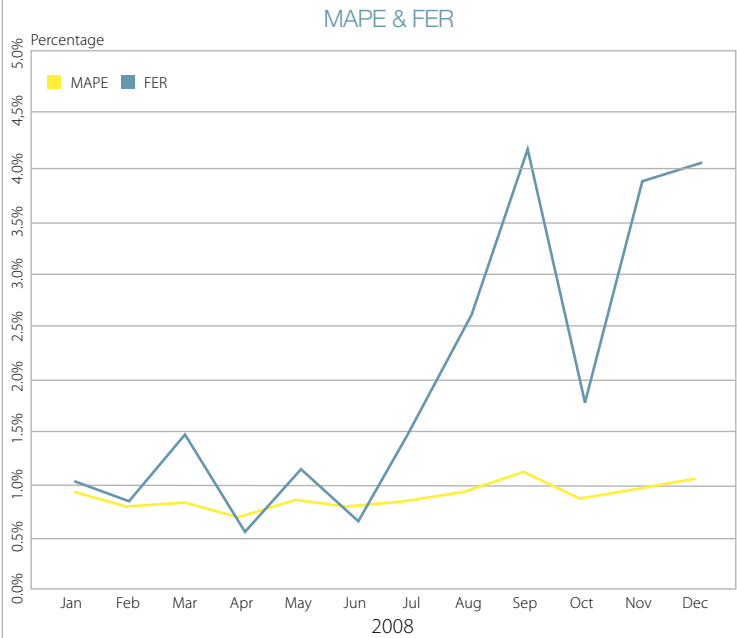
Market Management System Availability is measured in terms of the percentage of the trading intervals in which there was no system downtime.



Market Operator Performance

Scheduling and Pricing Workflows

Market Flow	Workflow Rules				
	Total	Successful	%	Unsuccessful	%
RTD	8784	8767	99.81	17	0.2
RTX	8784	8776	99.91	8	0.1
DAP	2196	2194	99.91	2	0.1
WAP	366	366	100.00	0	0.0



Dispatch Scheduling & Pricing

Performance in the dispatch scheduling and pricing processes are measured in terms of the successful completion of the four (4) major market work flows, namely, Real Time Dispatch (RTD), Real Time Ex-Post (RTX), Day Ahead Projection (DAP), and Week Ahead Projection market runs. The successful completion of all pricing error validation and market re-run before the issuance of the final settlement statements is also monitored.

Forecast Accuracy

The Mean Absolute Percentage Error (MAPE) measures the deviation between the actual demand and the forecasted demand for each trading interval. Forecast Error Rate (FER) is the number of trading intervals over the total number of trading intervals where the MAPE exceeds three (3) percent.

MAPE annual average was recorded at 0.89% or equivalent to a monthly average of 43.7MW discrepancy between the actual and forecasted demand. On the other hand, FER average was at 1.98%, or about 13 trading intervals in a month exceeded the 3% MAPE.

Billing & Settlements

Billing and settlement performance is measured in terms of the timeliness of the issuance of the monthly settlement statements, as well as the accuracy of the settlement calculations. Recording of the rate of timeliness excludes instances when the delay in the issuance of the settlement statements is due to events not within the control of the Market Operator.

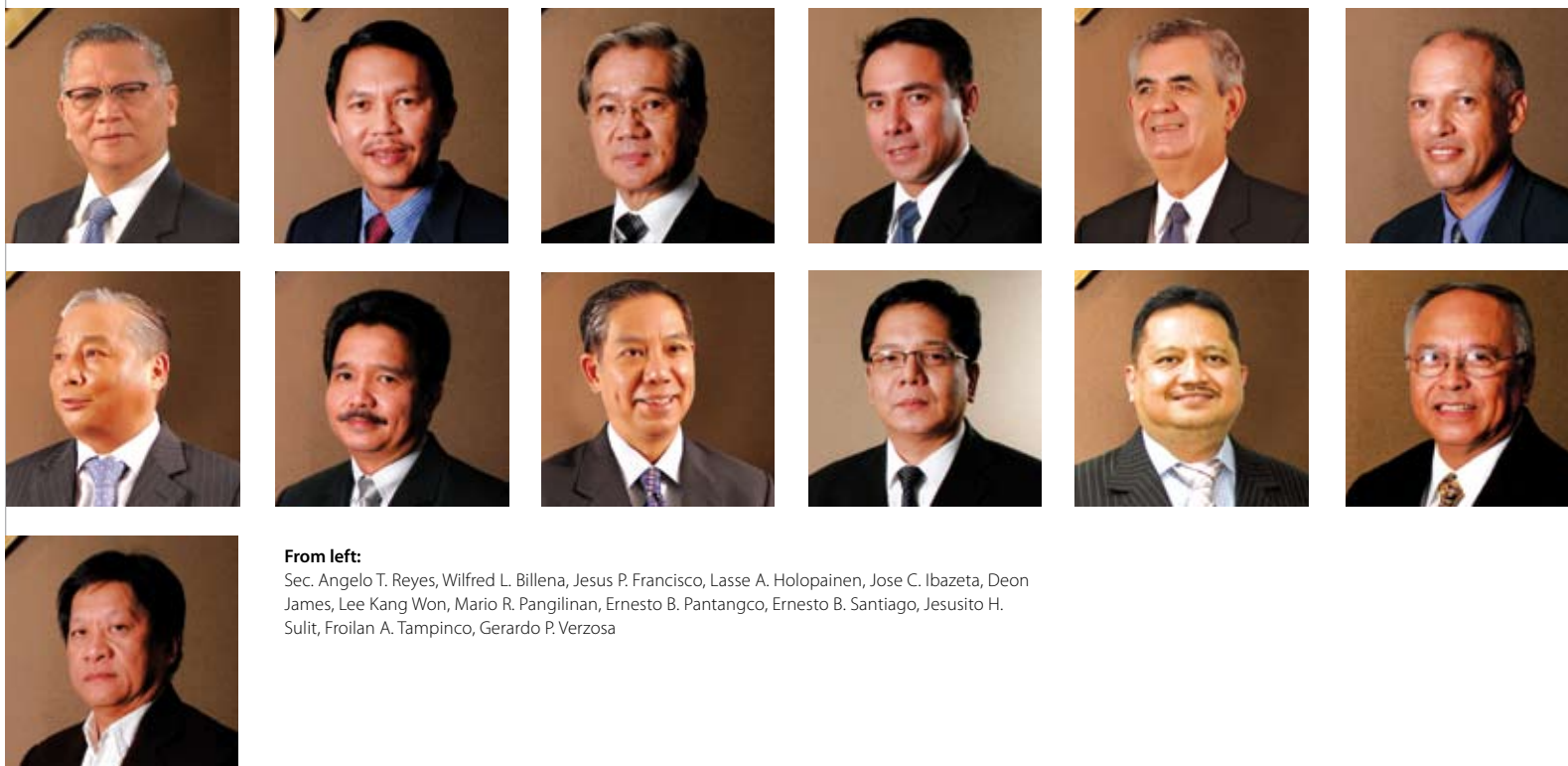
Market Governance

The PEM Board

The WESM is governed by the Philippine Electricity Market Board (PEM Board), which is composed of independent and stakeholder members representing the Philippine electricity market. The PEM Board provides the policies and guidelines of the WESM contained in the Implementing Rules and Regulations of Republic Act No. 9136, also known as the Electric Power Industry Reform Act of 2001 (EPIRA), the WESM Rules, and other relevant laws, rules, and regulations.

Board of Directors

As of 31 December 2008



From left:

Sec. Angelo T. Reyes, Wilfred L. Billena, Jesus P. Francisco, Lasse A. Holopainen, Jose C. Ibazeta, Deon James, Lee Kang Won, Mario R. Pangilinan, Ernesto B. Pantangco, Ernesto B. Santiago, Jesusito H. Sulit, Froilan A. Tampinco, Gerardo P. Verzosa

Name	Board Position
Sec. Angelo T. Reyes Secretary, Department of Energy (DOE)	Chairman 1 Aug. 2007-Present
Wilfred L. Billena General Manager, Iloilo I Electric Cooperative, Inc. (ILECO I)	Member, Distributor 18 Dec. 2003-17 Jun. 2009
Jesus P. Francisco President & CEO, Manila Electric Company (MERALCO)	Member, Distributor 18 Nov. 2003-9 Feb. 2009
Lasse-Matti A. Holopainen President, Philippine Electricity Market Corporation (PEMC)	Member, Independent 18 Dec. 2003-13 Jan. 2009
Jose C. Ibazeta President, Power Sector Assets Liabilities Management Corp. (PSALM)	Member, Generator 27 Apr. 2007-present
Deon James CEO, Dagupan Electric Corporation (DECORP)	Member, Distributor 27 Sep. 2005-present
Lee, Kang Won President & CEO, Korea Electric Power Company-Philippines (KEPCO-Philippines)	Member, Generator 28 Feb. 2007-9 Feb. 2009

Name	Board Position
Mario R. Pangilinan Executive Vice President, Philippine Electricity Market Corporation (PEMC)	Member, Market Operator 20 Jan. 2005-17 Jun. 2009
Ernesto B. Pantangco President, Philippine Independent Power Producers Association, Inc. (PIPPA)	Member, Generator 18 Dec. 2003-17 Jun. 2009
Ernesto B. Santiago President, Semiconductor and Electronics Industries Philippines, Inc. (SEIPI)	Member, Independent 9 Sep. 2004-17 Jun. 2009
Jesusito H. Sulit Senior Vice President, National Grid Corporation of the Philippines (NGCP)	Member, System Operator 28 Nov. 2007-present
Froilan A. Tampinco President, National Power Corporation (NPC)	Member, Generator 23 Oct. 2008-present
* Replaced Cyril C. del Callar (Member, 16 May 2005-22 Oct. 2008)	
Gerardo P. Verzosa General Manager, Benguet Electric Cooperative, Inc. (BENECO)	Member, Distributor 26 Apr. 2004-present

Current Board of Directors

As of June 2009



Front row, left to right: Jose C. Ibazeta, Froilan A. Tampingco, Melinda L. Ocampo, Sec. Angelo T. Reyes, Jesus L. Arranza, Deon James
Back row, left to right: Jesusito H. Sulit, Antonio Agbayani Ver, Nixon G. Hao (representing Jose P. de Jesus), Gustavo E. Luna, Peter G. Nepomuceno, Renato A. Balintec
Not in photo: Luis Miguel Aboitiz, Felixberto U. Bustos Jr., Jose P. de Jesus, and Gerardo Verzosa

Name	Board Position
Sec. Angelo T. Reyes Secretary, Department of Energy (DOE)	Chairman 1 Aug. 2007-Present
Luis Miguel Aboitiz Director, SN Aboitiz Power	Member, Generator 17 Jun. 2009-present
Jesus L. Arranza President, Federation of Philippine Industries (FPI)	Member, Independent 17 Jun. 2009-present
Renato A. Balintec General Manager, Ilocos Norte Electric Cooperative, Inc. (INEC)	Member, Distributor 17 Jun. 2009-present
Felixberto U. Bustos, Jr. Managing Director, Credit Rating and Investors Services Philippines, Inc. Chairman, Philippine Electricity Market Audit Committee (Concurrent)	Member, Independent 17 Jun. 2009-present
Jose P. de Jesus President & CEO, Manila Electric Company (MERALCO)	Member, Distributor 27 Mar. 2009-present
Jose C. Ibazeta President, Power Sector Assets Liabilities Management Corp. (PSALM)	Member, Generator 27 Apr. 2007-present
Deon James CEO, Dagupan Electric Corporation (DECORP)	Member, Distributor 27 Sep. 2005-present

Name	Board Position
Gustavo E. Luna Chief Operating Officer, AES Masinloc Power Partners Co., Ltd.	Member, Generator 17 Jun. 2009-present
Peter G. Nepomuceno President, Angeles Power, Inc.	Member, Supply 17 Jun. 2009-present
Melinda L. Ocampo President, Philippine Electricity Market Corporation (PEMC)	Member, Market Operator 27 Mar. 2009-present
Jesusito H. Sulit Senior Vice President, National Grid Corporation of the Philippines (NGCP)	Member, System Operator 28 Nov. 2007-present
Froilan A. Tampinco President, National Power Corporation (NPC)	Member, Generator 23 Oct. 2008-present
Antonio A. Ver President, H&WB Corporation	Member, Independent 17 Jun. 2009-present
Gerardo P. Verzosa General Manager, Benguet Electric Cooperative, Inc. (BENECO)	Member, Distributor 26 Apr. 2004-present

Role of MAG

The Philippine Electricity Market Board (PEM Board), the WESM Governance Committees (PEM Committees), and the PEMC units, namely, the Market Assessment Group (MAG), and the Enforcement and Compliance Office (ECO), serve as the governance arm of the Philippine Wholesale Electricity Spot Market (WESM).

Governance functions include:

- Market monitoring and assessment
- Market surveillance
- Enforcement
- Rules changes
- Dispute resolution
- Market audit
- Technical review and evaluation

Self-Governance by PEMC

The monitoring and investigation procedures under the WESM Rules and relevant WESM Market Manuals for breaches and anti-competitive behavior of WESM Members, the Market Operator, and the System Operator shall be exercised by the PEMC through its duly constituted PEM Committees and PEM Units. The imposition of sanctions or such other fines or penalties under the WESM Rules and the relevant WESM Market Manuals shall be exercised by the PEMC through the PEM Board, in accordance with its self-regulatory powers. The said sanctions, fines, and penalties shall be in the nature of contractual penalties imposed between private parties.

The Market Assessment Group

Implementation and experience in competitive electricity markets in the world

has recognized the need and usefulness of monitoring the market and those that trade in the market (the Trading Participants). As a consequence, market monitoring has been created as a new function in wholesale electricity markets, evolving in time with new experiences and more in-depth understanding of the various commodities traded in the market.

Pursuant to the WESM Rules (as amended by the Department of Energy (DOE) DC No. 2006-01-000 dated 10 January 2006), the MAG was established with the following powers and functions:

- Serve as the primary support unit of the PEM Committees, namely, Rules Change Committee, Market Surveillance Committee, Disputes Resolution Group, Technical Committee, and PEM Audit Committee;
- Assist the PEM Board or the Market Surveillance Committee to establish the procedures for the monitoring and assessing the performance of the WESM and the activities conducted by the WESM members with the end view of ensuring the effective functioning or over-all efficiency of the WESM;
- Regularly collect and process market monitoring data and indices;
- Prepare periodic assessment reports on over-all market performance and competitiveness; and
- Perform such other tasks as assigned by the PEM Board, the PEM Committees or the President of the PEMC.

The MAG, likewise, assists the Market Surveillance Committee (MSC) in monitoring unusual trading activities in the spot market and alleged breaches of the WESM Rules. The Catalogue of Market Monitoring Data and Indices serve as a tool for the MAG and MSC to assess how well the WESM is working and development of the electricity prices in the WESM and the conduct of Trading Participants.

In compliance with the ERC-PEMC Protocol, the MAG and the Energy Regulatory Commission (ERC) hold a quarterly coordination meeting for the purpose of discussing the development and adoption of various monitoring indices in order to improve and enhance the respective monitoring functions of the PEMC and the ERC.

Role of ECO

Enforcement and Compliance Office

The Philippine Electricity Market (PEM) Board, in consultation with the Market Operator and the System Operator, is required to do all things reasonably necessary to ensure that all WESM members comply with the WESM Rules.

In relation to its role to ensure compliance of all participants to the WESM rules, the PEM Board created the Enforcement and Compliance Office (ECO).

The ECO serves as the technical and investigative support unit of the PEM Board. It is tasked with establishing a mechanism to promote consultation and voluntary compliance of industry participants. It has to continuously develop systems and procedures to deter breaches of the WESM Rules and further evolve enforcement of penalties consistent with the objectives of the WESM.

The ECO is also mandated to undertake the following responsibilities:

- (a) Review Non-Compliance Notices upon the direction of the PEM Board;
- (b) Monitor compliance with remedial or preventive measures imposed by the PEM Board upon a party filing a Non-Compliance Notice;
- (c) Conduct investigations of alleged Breach, abuse of market power and anti-competitive behavior, subject to the existing Memorandum of Agreement and Protocol with the Energy Regulatory Commission (ERC). Under the Memorandum of Agreement and Protocol,

PEMC shall refrain from taking cognizance of a case involving anti-competitive behavior unless directed by the ERC to do so, or if the PEMC has been expressly or impliedly allowed by the ERC to conduct an investigation of the case;

- (d) Recommend mitigation measures to the MSC when, in the course of an investigation, it determines that anti-competitive behavior or abuse of market power may reasonably exist, subject to the existing Memorandum of Agreement and Protocol with the ERC. Under the existing Memorandum of Agreement and Protocol with the ERC, the ERC shall have primary authority to impose mitigating measures against acts suspected as constituting anti-competitive behavior. PEMC may issue a recommendation to the ERC for the imposition of the proper mitigating measure against the suspected anti-competitive behavior;

- (e) Monitor compliance by a party to a Suspension Notice issued by the PEM Board; and

Composition of the ECO

The ECO is presently composed of an Enforcement and Compliance Officer, Corporate Legal Officer, Power Systems Engineer, and a Legal and Compliance Associate. The ECO represents a mix of legal, power systems, utility economics, investigative and administrative competencies, with each member bringing expertise and experience from the power industry, legal profession, governance, and financial market.

Accomplishments for the Calendar Year 2008

Enforcement

In relation with its enforcement function, the ECO conducted plant visits for further verification of data and other technical documents. It also scheduled conferences with parties under investigation.

Compliance

Aside from enforcement of the WESM Rules and the WESM manuals, the ECO also conducts activities aimed at fostering a culture of compliance of Market Participants with the WESM Rules and promoting good governance. It also develops programs that will focus on strengthening stakeholder relations.

The ECO participated and made a presentation during the 2nd Stakeholders' Meeting held on 7-8 February 2008 at the Lighthouse Marina Resort in Subic Freeport, Olongapo City together with the Market Assessment Group (MAG) and WESM Governance Committees. The ECO Team gave presentations on the following: Overview of Compliance and Enforcement; Compliance Matters: Ethics Matters Most; Investigations: What You Should Know; and Non-compliance Notice: Importance of Self-reporting.

The ECO likewise conducted trainings on compliance and solicited comments for the improvement of the WESM from the electric cooperatives (ECs) intending to become direct members of the WESM. These trainings were conducted in coordination with the MO-Training and Promotions Group.

The ECO, together with MAG, developed the concept, basic principles, and template of a traders' code of conduct, which was presented to the RCC and Industry participants in a roundtable discussion.

WESM

Committee Members

Market Surveillance Committee

Name	Position
Danilo P. Mercado, Sr.	Chairman
Peter L. Wallace	Member
Bernarda C. Lavisores	Member
George N. Manzano	Member
Ma. Joy V. Abrenica	Member

Technical Committee

Name	Position
Meleusipo E. Fonollera, Sr.	Chairman
Edgardo Graciolo F. Alcazar	Member
Carlito C. Claudio	Member, GMC Representative
Francis V. Mapile	Member, DMC Representative

Dispute Resolution Administrator

Name	Position
Rogelio M. Avenido	Acting DRA

Dispute Resolution Group

Name	Position
Victoria Mario A. Dimagiba	Member
German A. Umali	Member
Alfred J. Non	Member

PEM Audit Committee

Name	Position
Felixberto U. Bustos, Jr.	Chairman
Gloria Victoria Y. Taruc	Member

Rules Change Committee

Name	Position	Sector/Company
Phares P. Parayno	Chairman	Independent/Miriam College
Lassi-Matti A. Holopainen	Member	Independent/PEMC
Robinson P. Descanzo Edwin N. Mosa	Member Alternate	Market Operations/PEMC
Raul Joseph G. Seludo	Member	System Operations/TransCo
Nixon G. Hao Vicente C. Sioson	Member Alternate	Distribution/MERALCO
Crisanto R. Laset, Jr.	Member	Distribution/PEPOA
Wendell V. Ballesteros	Member	Distribution/PHILRECA
Pablo M. Pan Jose H. Seguban	Member Alternate	Distribution/NEA
Liberty Z. Dumlao Ronald U. Siquioco	Member Alternate	Generation/PSALM
Melburgo S. Chiu	Member	Generation/NPC
Rassen M. Lopez Carlo L. Vega	Member Alternate	Generation/PIPPA
Ramon B. Diaz de Rivera Manolo T. Candaleria	Member Alternate	Generation/EDC

Committee Updates

Market Surveillance Committee

The Market Surveillance Committee (MSC), an independent body tasked to monitor the performance of the market has made several recommendations for the PEM Board's approval on matters pertaining to the following:

- Review of the Enforcement and Compliance Office investigation report on one generating facility for the period of July-September 2006 (submitted on 13 Nov. 2008); and
- Request for investigation on the possible breaches of the WESM Rules by five power plants due to non-compliance with the RTD (ex-ante) instruction/schedule in various trading intervals within the period of August 2007-November 2008.

In 12 February 2008, the MSC promulgated the Financial Penalty Manual after conducting a series of consultations with the stakeholders, Rules Change Committee, and the PEM Board. The said Manual establishes the determination and schedule of financial penalties for breaches to the WESM Rules and Market Manuals by the WESM Member, Market Operator, or System Operator. The MSC, jointly with the MAG, conducted a study on the Analysis on the Competitiveness of the Visayas Electricity Market submitted to the PEM Board on 10 January 2008, as well. The study presents the results of the assessment of the supply and demand situation, as well as the readiness of the Market Participants and the infrastructure needed to support the operation of the market in Visayas.

To further enhance and address issues in the operations of the market, the MSC has been conducting studies on the following:

- Review of implementing guideline of the Financial Penalty Manual to further clarify ambiguous provisions;
- Proposed mitigation measures on the shortage of coal supply;
- Study on the San Jose Transformer congestion incident; and
- Study on the issue of ramp up/down rates.

Rules Change Committee

The Rules Change Committee (RCC), mandated to provide assistance to the PEM Board and the Department of Energy (DOE) in revising and proposing amendments to the WESM Rules, conducted its Planning Workshop Session in order to come up with the priority areas of WESM Rules changes, and review for 2008. During the planning session, Dr. Phares P. Parayno, who has been an independent member of the RCC since 2005, was endorsed as the new Chairperson, replacing PEMC President Lasse A. Holopainen, who served as Chairperson of the Committee since 2003.

In order to meet its agenda for 2008, the RCC reconfirmed the membership of its RCC Sub-committees with membership composed of representatives from different sectors of the electricity industry to assist the RCC in the study of proposals for changes in the WESM Rules and Market Manuals.

For 2008, the RCC approved the proposed changes to the WESM Rules and Manuals on the following:

- Shortening of the Gate Closure Time for the submission of energy offers from two hours to one hour before the RTD execution was approved by the PEM Board on 22 February 2008;
- Methodology for determining pricing errors and price substitution due to congestion for energy transactions in the WESM was approved by the PEM Board on 28 August 2008;
- WESM Rules changes to address the WESM dysfunctions cited by the Special WESM Rules Review Committee (SWRRC) was approved by the RCC on 14 October 2008;
- Alternative Dispute Resolution process; was approved by the RCC on 10 December 2008.

PEM Audit Committee

The PEM Audit Committee (PAC), tasked to conduct audits of the Market Operator, settlement system, and other procedures to the spot market, has worked for the preparation of the conduct of WESM Audits and the streamlining of the audit process.

The PAC submitted to the PEMC Board proposed short listed auditing firms and Requests for Proposals (RFPs) for the Operational Audit of the Billing and Settlements, the Market Operator Systems, and Procedures. The RFP contains the Terms

of Reference (TOR), Instructions to Bidders (ITB), Audit Service Contract, and Standard Bidding Forms.

To streamline the audit processes, the PAC submitted to the RCC its proposed amendments to the audit process under the WESM Rules and the PEM Audit Manual.

Technical Committee

The Technical Committee (TC) is mandated to monitor technical matters relating to the operation of the spot market and assist the PEM Board by providing expertise in relation to information on metering technology and metering data, among others.

The TC prepared two Position Papers in response to the request for the reclassification from scheduled generating facilities to a New and Renewable Energy (NRE) with intermittent resource of the Bakun HEP and Casesnan HEP. The TC has recommended that the aforementioned generators remain a scheduled generation facilities considering the technical matters and internationally accepted definition of renewable energy in its study.

As a result of the study, the TC proposed WESM Rules changes to harmonization the definition of renewable energy under the EPIRA and its IRR, as well as the impact of the renewable energy in the reliability and security of the transmission system.

Dispute Resolution Group

The Dispute Resolution Group (DRG), Chaired by the Dispute Resolution Administrator (DRA)

is mandated to facilitate the alternative dispute resolution in line with the principles of self-governance, expeditious, just, and least expensive disposition of disputes. The WESM dispute resolution is a voluntary process, which follows the stages of negotiation, mediation, and arbitration.

The DRG conducted an information campaign on 21 November 2008, which aims to disseminate information about the availability of WESM alternative dispute resolution service, including the details of the process and procedures.

There has been no case formally filed for mediation and arbitration before the DRG in 2008.

Regulatory Updates as of 31 Dec. 2008

Compensation of Must-Run Units

The Energy Regulatory Commission ("ERC") approved the compensation and settlement methodology for must run units ("MRUs"). The approved MRU generation pricing involves the use of the generation price index, which is a blend of bilateral contract payments and spot market payments. The approved methodology is directed to be applied for a period of one year, after which a new methodology may be proposed for further regulatory approval.

Price Substitution Methodology

Frequent nodal price separations arising due to spring washer effect was brought about by the network congestion that was, in turn, due to the outage of one of the 600 MVA EHV transformers at the San Jose sub-station occurring from July to September 2008. This prompted the filing of an application for ERC approval of a price substitution methodology that will be used to determine market prices in times of extreme nodal price separations. (Note: The price substitution methodology was approved by the ERC in April 2009 and is made effective retroactive to July 2008).

Structure and Level of Market Fees

The structure and level of market fees for the three-year period from 2009 to 2011 was filed with the ERC for approval. A new methodology was introduced featuring among other things, the introduction of an output-based budgeting and a three-year regulatory period. (Note: In its Decision promulgated in May 2009, the ERC approved a new market fees rate for CY 2009, and directed that further study be made on the application of an output-based budgeting methodology).

Registration

WESM Members

Direct Participants

Company	Effective Date of Registration
Generators	
FGP Corporation	26-Jun-06
First Gas Power Corporation	26-Jun-06
First Gen Hydro Corporation	18-Nov-06
Masinloc Power Partners Co. Ltd.	17-Apr-08
National Irrigation Administration	26-Oct-08
National Power Corporation	26-Jun-06
Power Sector Assets & Liabilities Management Corporation	26-Jun-06
Quezon Power Philippines (Limited) Company	26-Jun-06
SN Aboitiz Power - Benguet, Inc.	11-Jul-08
SN Aboitiz Power - Magat, Inc.	26-Apr-07
Trans Asia Power Generation Corporation	5-Jan-07
Distribution Utilities	
Manila Electric Company	26-Jun-06
Electric Cooperatives	
Albay Electric Cooperative, Inc.	26-Aug-07
Benguet Electric Cooperative, Inc.	26-Apr-08
Camarines Sur II Electric Cooperative, Inc.	6-Dec-06
Ilocos Norte Electric Cooperative, Inc.	26-Nov-06
Sorsogon I Electric Cooperative, Inc.	26-Jun-08
Tarlac I Electric Cooperative, Inc.	26-May-08
Wholesale Aggregators	
Aboitiz Energy Solution, Inc.	4-Jun-07
AES Philippines Inc.	13-Apr-08
Angeles Power Inc.	8-Apr-08
Team (Philippines) Energy Corporation	2-Jan-08
Trans-Asia Oil and Development Corporation	20-Sep-07

Indirect Participants

Company	Category
Dagupan Electric Corporation	Distribution Utility
Angeles Electric Corporation	Distribution Utility
Central Pangasinan Electric Cooperative, Inc.	Electric Cooperative
Pangasinan I Electric Cooperative, Inc.	Electric Cooperative
Abra Electric Cooperative, Inc.	Electric Cooperative
Mountain Province Electric Cooperative, Inc.	Electric Cooperative
Camarines Sur III Electric Cooperative, Inc.	Electric Cooperative
Sorsogon II Electric Cooperative, Inc.	Electric Cooperative
Pangasinan III Electric Cooperative, Inc.	Electric Cooperative
Tarlac II Electric Cooperative, Inc.	Electric Cooperative
Holcim Philippines, Inc.	Non-utilities

Corporate Update

Organization



Front row, left to right: Sheila P. Ingco, Mario R. Pangilinan, Melinda L. Ocampo, Chrysanthus S. Heruela, Celina R. Encarnacion
Back row, left to right: Rachel Angela P. Anosan, Patrick S. Fernandez, Robinson P. Descanzo, Edwin N. Mosa, Elaine R. de Guzman-Gonzales, Isidro E. Cacho Jr., Rodolfo M. Alfara, Marissa P. Gandia, Millan H. Libongco, Medardo T. Nuñez, Erland D. Navarro, Criselda S. Martin-Funelas

June 2009

PEMC Groups and Departments	PEMC Officers
Office of the President	Melinda L. Ocampo - President
	Criselda S. Martin-Funelas - Chief of Staff
Enforcement and Compliance Office	Sheila P. Ingco - Vice President
Legal Department	Celina R. Encarnacion - Vice President
Funds and Contracts Management Office	Medardo T. Nuñez (Concurrent)
Market Operations Group	Mario R. Pangilinan - Executive Vice President
Office of the Executive Vice President/ Corporate and Technical Staff Department	Rachel Angela P. Anosan - Vice President/Chief of Staff
Trading Operations Department	Edwin N. Mosa - Department Head
Operations Planning and Business Development Department	Robinson P. Descanzo - Vice President
	Isidro E. Cacho, Jr. - Assistant Vice President
Information Management Department	Patrick S. Fernandez - Assistant Vice President
Billing, Settlement, and Metering Department	Millan H. Libongco - Department Head

PEMC Groups and Departments	PEMC Officers
Corporate Services Group	Medardo T. Nuñez - Vice President
Administrative Services Department	Rodolfo M. Alfara - Department Head
Finance Department	Marissa P. Gandia - Department Head
Human Resources and Organization Development Department	Erland D. Navarro - Human Resources Director
Market Assessment Group	Chrysanthus S. Heruela - Vice President
	Elaine R. de Guzman-Gonzales - Department Head

December 2008

PEMC Groups and Departments	PEMC Officers
Office of the President	Lassi-Matti A. Holopainen - President
Enforcement and Compliance Office	Sheila P. Ingco - Vice President
Legal Department	Celina R. Encarnacion - Vice President
Funds and Contracts Management Office	Medardo T. Nuñez - Assistant Vice President
Market Operations Group	Mario R. Pangilinan - Executive Vice President
Office of the Executive Vice President/ Corporate and Technical Staff Department	Rachel Angela P. Anosan - Vice President/Chief of Staff
Trading Operations Department	Edwin N. Mosa - Department Head
Operations Planning and Business Development Department	Robinson P. Descanzo - Vice President
	Isidro E. Cacho, Jr. - Assistant Vice President
Information Management Department	Patrick S. Fernandez - Assistant Vice President
Billing, Settlement, and Metering Department	Millan H. Libongco - Department Head
Corporate Services Group	Medardo T. Nuñez - Officer-in-Charge

PEMC Groups and Departments	PEMC Officers
Administrative Services Department	Rodolfo M. Alfara - Department Head
Finance Department	Marissa P. Gandia - Department Head
Human Resources and Organization Development Department	Erland D. Navarro - Human Resources Director
Market Assessment Group	Chrysanthus S. Heruela - Vice President
	Elaine R. de Guzman-Gonzales - Department Head

Typical Employee Profile in PEMC

In PEMC, functional competencies are acquired through competitive and professional standards in the hiring of new employees. We continuously invest in annual training and development plans that aim to develop core competencies in leadership, teamwork, business orientation, problem solving, innovation, effective communication, interpersonal relations, and service orientation. Thus, high performing employees in PEMC have a typical competency profile.

Technical personnel in the Market Operations Group are licensed engineers (mostly electrical engineers) with earned units in MS or MBA post-graduate degrees. While they have less than 10 years of work experience in the power industry, they possess comprehensive knowledge in power systems operations, simulation, analysis, and planning. They are trained in energy derivatives, as well.

Market Operations Managers are licensed engineers with MS or MBA post-graduate degrees with 10 to 20 years of managerial experience in the power industry. They have acquired comprehensive knowledge in the planning and execution of market operations, and are trained in energy derivatives and market management systems.

Information systems and technology professionals in PEMC are graduates of Computer Engineering, Mechanical Engineering, or Information Technology. With an average of 10 years work experience in the power industry, they have solid experience in program systems design specification and enhancement. They have acquired expertise in market management systems, and are trained in current and advanced computer technology programs.

Market Governance and Corporate Support Managers and staff are graduates of Economics or Engineering degrees with either earned or

completed MS or MA post-graduate studies with 10 to 25 years of managerial experience in the power industry. They have all acquired knowledge of industry and market trends, and have developed skills in market research and investigation through on-the-job training and professional development programs.

Major Corporate Events

2nd WESM Annual Participants' Meeting

The Philippine Electricity Market Corporation (PEMC) held the 2nd Wholesale Electricity Spot Market (WESM) Annual Participants' Meeting in July 2008 to commemorate the electricity bourse's 2nd year of Commercial Operations.

Already two years in operation, the WESM reflects a turnaround in the prices of electricity starting at the end of 2007 to the first half of 2008. In the May 2008 billing, the Effective Settlement Prices (ESP) registered at its lowest since the start of the market. This was brought about by the shift in annual peak demand for the first half of 2008, the early start of the rainy season resulting in higher hydroelectric plant contribution.

Energy efficiency has improved with the continuing decrease in the utilization of diesel and oil-based generating plants from 11.5% of the total demand in 2005 to 2.4% in the first half of 2008. The decrease in dependency on oil-based plants shields the consumers from the increasing prices of oil in the international market. Conversely, indigenous natural gas contribution to the energy mix has increased to 47.1% for the first half of 2008 from 36.1% in 2005 before the start of the market.

There has also been a notable increase in investor interest in generation investment since the start of Commercial Operations. Power Sector Assets and Liabilities Management (PSALM) Corporation has successfully privatized the Pantabangan-Masiway Hydroelectric Plant (112 MW) in 2006. This was followed closely

by the sale of the Magat Hydro (360 MW), Masinloc Coal (600 MW), Calaca Coal (600 MW) and Ambuklao-Binga Hydro (175 MW) for a total cumulative value of over PhP119 billion.

The continued operation of the WESM only bodes well for the participants and the consumers. As it marks its second year of operation, the market also marks the broader achievements it has earned: an atmosphere of equity, fair competition, and transparency, accomplished through the spirit of cooperation and professionalism.

2nd Luzon WESM Stakeholders' Meeting

The various stakeholders of the Wholesale Electricity Spot Market (WESM) in Luzon participated in a two-day meeting on market governance in February 2008. Generators, distributors, energy aggregators, electric cooperative representatives, regulators, and consumers were updated on WESM operations, governance, and future projects.

The program included an overview of the WESM; the systems, procedures, and rules of the market; the latest market assessment update of the Luzon market; and a thorough introduction of the WESM's market monitoring, surveillance, and governance framework.

The highlight of the meeting was the group discussion and workshop sessions that solicited ideas from the stakeholders, not only on what has been presented to them during the plenary portion of the meeting, but also about their experiences both as direct and indirect participants in the WESM.

As stated in the preamble to the workshop guidelines, the stakeholders' meeting was organized as a periodic activity to provide the electricity market participants a venue to air out their concerns on the present WESM operations and outlook on how the market can serve them better. The primary motivation is the strong belief that a WESM who listens is a WESM that can serve the market better and improve its economic efficiency.

The exchange of ideas during the open forum, the conference workshop, and the participants' survey resulted in several recommendations on how to improve the WESM and its market governance. Some of the major recommendations are the following:

- Campaigns to educate and train both direct and indirect participants on the WESM;
- Institution of a participant level compliance office;
- Institution of industry standards and performance benchmarks for the market;
- Enhancement on the membership incentives to electric cooperatives and the means to address the risks of participation;
- Adoption of an industry code of ethics;
- Evolution toward a proactive and real-time market monitoring;
- Full implementation of the EPIRA, especially on the area of privatization, open access, and retail participation; and,
- Transparency and symmetrical access to market information.

Energy Library Project Launch

The Energy Beat Reporters, with the support of the Philippine Electricity Market Corporation (PEMC), inaugurated the Energy Library on June 2008 at the WESM Offices in Ortigas. The Energy Industry's luminaries graced the launch with Energy Secretary Angelo T. Reyes and Energy Regulatory Commission Chairman Rodolfo Albano unveiling the commemorative marker.

The Energy Beat Reporters unveiled a rare collection of energy books donated by the industry as well as a number of volumes from Stanford University. Currently however, the library is still in the process of building its collection, and industry participants are expected to contribute energy-related books and materials. Rare volumes, an online collection, as well as an energy database are in the plans for the library's expansion in the future.

The library is intended to make information accessible to the energy beat journalists, and eventually to the general public. Organizers of the project are currently finalizing the guidelines that will make the Energy Library accessible to local and foreign journalists, students, and researchers. The library will be open from Mondays to Fridays from 9:00 AM to 5:00 PM, and will be closed on weekends and holidays. Visits may be scheduled through the PEMC Corporate Communications Office, 18th Floor, Robinson's Equitable Tower, Ortigas Center, Pasig City at telephone number 02.631.8734.

Associations/ Memberships

PEMC Memberships

Association	Description	Membership Date
Energy Intermarket Surveillance Group (EISG)	International organization of Wholesale Electricity Market Monitors	March 2006
Association of Power Exchanges (APEX)	International organization of Electric Power Markets	July 2007
People Management Association of the Philippines (PMAP)	Organization of human resource practitioners and people managers in the Philippines	November 2008

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