

# Contents

	Page
<b>I. An Overview of the Philippine Energy Sector</b>	<b>3</b>
<b>II. Philippine Power Demand Forecast</b>	<b>3</b>
A. Luzon Grid	4
B. Visayas Grid	5
C. Mindanao Grid	5
<b>III. In Focus: Reforms in the Electric Power Industry</b>	<b>6</b>
<b>IV. Privatization of National Power Corporation's Generation Assets and Transmission Business</b>	<b>8</b>
A. Investment Opportunities in Generation Assets: Powering a Promising Economy	8
B. Investment Opportunity in Transmission: Potential for a Viable Transmission Business in Asia	22
C. Investments through IPP Administration: A Unique Prospect in the Philippine Power Business	26
<b>V. WESM: An Emerging Competitive Electricity Market</b>	<b>31</b>
<b>VI. Benefits of Engagement in the Philippine Power Sector</b>	<b>33</b>
<b>Generation Assets' Privatization Sale Process</b>	<b>36</b>
How To Participate in the Formal Sale Process	37

## VISION

**Transparent and innovative privatization  
towards an efficient and competitive electric  
power industry**



Top photo shows the Angat hydroelectric power plant. Below, technical crew undertakes maintenance and upgrading operations for the transmission lines.

## I. AN OVERVIEW OF THE PHILIPPINE ENERGY SECTOR

Under the updated 2007-2014 Philippine Energy Plan (PEP) prepared by the Department of Energy (DOE), the Philippine government reinforces its policy towards energy independence and reforms in the electric power industry.

The objective of the energy independence package is to reach an energy self-sufficiency level of 60% beyond 2010. To achieve this, the government energy sector is pursuing plans to accelerate exploration, development and utilization of indigenous energy resources, intensify renewable energy development, increase use of alternative fuels, establish strategic alliances with other countries, and enhance energy efficiency and conservation measures.

The underlying principle behind the introduction of power sector reforms is to pave the way for a globally competitive Philippine energy sector. The twin strategies of establishing a transparent process for the privatization of state-owned generation, transmission, and other assets as well as creating an investment climate attractive to investors continue to be pursued.

## II. PHILIPPINE POWER DEMAND FORECAST

Power demand in the Philippines is forecast to rise at an average of 4.6% until 2014 due to a number of factors such as population increase, upswing in agro-industrial activity, and growth in mining, telecommunications, and commercial and residential construction.

From 2006 to 2014, the DOE Power Development Program (PDP) estimates an annual average increase of 4% in the Luzon grid, while demand in the Visayas and Mindanao is expected to grow relatively faster at 5.7% and 6%, respectively. This means that the Philippines will need an additional 3,917 megawatts (MW) of new generating capacity to adequately address the upsurge in power demand and supply, the PDP states.

Considered as the main indicator of the projected trend in the country's demand and supply of electricity in the years to come, the PDP provides a road map for the power industry stakeholders to attain a reliable and sustainable electricity supply at affordable prices. The document also spells out required capacity additions, and what and when power plants must be constructed if they are to efficiently meet power requirements in certain years.

### A. LUZON GRID

Historically, the Luzon grid, which accounts for around 75% of the country's total generation and installed capacity, has exhibited variations in electricity consumption. The PDP shows that growth rates on a year-on-year basis were registered from as high as 10.9% experienced in 1997 to a low of 1.9% recorded in 2005. From 1995 to 2005, the annual average growth rate was 5.1%. On a per grid basis, 6,443-MW peak demand was recorded for Luzon in 2005.

From 2006 to 2014, the PDP sees Luzon's power requirements increasing from 8,302 MW in 2006 to 9,721 MW in 2010 and 11,596 MW in 2014. *The critical period is 2010 when there will be a need for a 150-MW peaking plant.* Peaking power plants are facilities that run only when there is a high demand, or a peak demand, for electricity. The time a peaking plant operates may be many hours a day to as little as a few hours per year, depending on the condition of the electrical grid where it is located.

By 2014, the Luzon grid will need an aggregate 1,988 MW of new generating capacity to meet the expected demand growth. The required capacity additions include committed projects such as the 8.25-MW North Wind Power project and the 30-MW North Luzon Wind Power Project (NLWPP) Phase I of the Philippine National Oil Company-Energy Development Corporation (PNOC-EDC).

## B. VISAYAS GRID

Historical peak demand patterns in the Visayas grid are similar to actual peak demand movements in the Luzon grid. Demand growth rates fluctuated yearly, ranging from 12.1% in 1997 to a negative 2.5% in 1998. In the last 10 years, the average annual rate rise was registered at 5%. Peak demand in the Visayas was reported at 1,037 MW in 2005.

With an average annual increase of 5.7%, the Visayas grid will require an additional capacity of around 869 MW until 2014 to meet the growing electricity demand in the area. The additional capacity will also cover the retirement of the Panay Diesel Power Plant 1 (PDPP 1) with a capacity of 36.5 MW in 2007 and the 55-MW Land Based Gas Turbine 1 (LBGT 1) in 2011.

By 2011, the Visayas is expected to experience power shortages if no new power plants are constructed. The area is composed of five main but interdependent sub-grids: Leyte-Samar, Bohol, Cebu, Negros and Panay. These islands are interconnected by submarine cables that make up the transmission system for the region.

## C. MINDANAO GRID

According to the PDP, the Mindanao grid posted a 4.7% annual average growth rate in its actual electricity demand from 1995 to 2004. The growth ranged from a high of 13.7% in 2003 to a low of 1.5% in 2001. System peak demand was posted at 1,177 MW in Mindanao.

The PDP forecasts a 6% annual average growth in electricity demand in the Mindanao grid from 2006 to 2014. From 1,149 MW in 2005, demand is expected to reach 1,620 MW by 2010 and 2,112 MW by 2014. The growth in demand will require capacity addition of 850 MW until 2014.

Capacity additions are in line with the government's thrust to provide fiscal and other incentives to encourage investments in the energy sector, particularly energy sourcing, power generation and transmission, and rural electrification, to meet the increasing power demand and supply.

Significant opportunities also await suppliers of projects that will tap the country's indigenous resources such as wind, geothermal, solar, hydro and biomass. Moreover, the National Transmission Corporation (TransCo) is expanding and improving the Philippine transmission infrastructure, creating further opportunity.

## III. IN FOCUS: REFORMS IN THE ELECTRIC POWER INDUSTRY

After emerging from the crippling power crisis that occurred in the early 1990s, the Philippine government embarked on an industry privatization and restructuring program envisioned to ensure the adequate supply of electricity to energize its developing economy. This restructuring scheme is embodied in Republic Act No. 9136, the Electric Power Industry Reform Act (EPIRA).

Approved on 08 June 2001, the EPIRA seeks to ensure quality, reliable, secure and affordable electric power supply; encourage free and fair competition; enhance the inflow of private capital; and broaden the ownership base of power generation, transmission and distribution.

With the EPIRA in force, the industry was separated into the generation, transmission, distribution and supply sectors. All electrical transmission functions of the National Power Corporation, on the other hand, were transferred to a new company, TransCo, which acts as the operator of the nationwide transmission and sub-transmission system. Meanwhile, National Power continues to operate and maintain the power plants.

In preparation for open access at the sector where distribution wires and associated facilities will be open to qualified entities, the DOE was tasked to establish the Wholesale Electricity Spot Market (WESM).

The establishment of the WESM is a precondition to open access, along with the approval of unbundled transmission and distribution wheeling charges, the initial implementation of the cross subsidy removal scheme, the privatization of at least 70% of the total capacity of generating assets of National Power in Luzon and Visayas as well as the transfer of the management and control to IPP (independent power producer) Administrators of at least 70% of the total energy output of IPPs under contract with National Power.

#### REGULATION FRAMEWORK

The industry is regulated by an independent, quasi-judicial body, the Energy Regulatory Commission (ERC). It was established in accordance with the EPIRA to promote competition, encourage market development, ensure customer choice, and penalize abuse of market power in the electricity industry.

The ERC has the flexibility to design the rate-setting mechanisms of the rates and charges for the transmission and distribution of electricity. It may adopt alternative forms of internationally accepted, rate-setting methodologies, provided that the methodology adopted ensures a reasonable price of electricity. The ERC approves the price determination methodology and market fees as well as sets the criteria for eligibility for membership in the WESM and the performance standards through the Grid Code.

The ERC will maintain a level playing field and prevent abuse of market power in the competitive sectors (generation and supply), and regulate the transmission and distribution sectors.

## **IV. PRIVATIZATION OF NATIONAL POWER CORPORATION'S GENERATION ASSETS AND TRANSMISSION BUSINESS**

Privatization is a significant means to achieve structural reforms in the power sector. Tasked to help transform the power industry into a competitive, market-driven sector is the ***Power Sector Assets and Liabilities Management (PSALM) Corporation***.

PSALM, which began its operations on 11 July 2001, is mandated to take ownership of all existing generation assets, liabilities, real estate and all other disposable assets of National Power Corporation (NPC), including contracts with independent power producers (IPPs). PSALM shall privatize and dispose of these assets with the objective of liquidating in an optimal manner all NPC financial obligations and stranded contract costs.

PSALM is responsible for two of the preconditions to open access and retail competition: the privatization of at least 70% of the total capacity of National Power-owned generating assets in Luzon and the Visayas, and at least 70% of the total energy output of IPPs under contract with National Power. This will be done, as it is being done, in an open and transparent manner through a competitive public bidding process.

### **A. INVESTMENT OPPORTUNITIES IN GENERATION ASSETS: POWERING A PROMISING ECONOMY**

Depending on their preference and technical competence, investors may vie for the various hydro, geothermal, coal, diesel, and bunker fuel fired power plants operating in various locations all over the country.

Changes in the sale schedule of the power assets are due to the inclusion of certain IPPs with contracts expiring between 2008 and 2010 and the selection of IPP Administrator/s beginning in 2009. Some plants have also been uprated, which account

for the adjustments in total capacities to be privatized and successfully bid out.

There are 30 generation assets identified for privatization with an aggregate capacity of 5,356.6 MW (including decommissioned or retired plants). This does not include the 620-MW Limay diesel/bunker plant which was reclassified as a turned-over IPP plant whose contract is to expire in 2008, and the Agus and Pulangui hydroelectric power complexes in Mindanao which cannot be privatized earlier than 10 years from the effectivity of the EPIRA (2001).

The total *operating* capacity of the generating plants is 3,897.23 MW.

*Table 1. List of Generation Assets for Privatization*

FUEL TYPE	PLANT NAME	RATED CAPACITY (in MW)	LOCATION
Coal	Calaca*	600	Calaca, Batangas, Luzon
	Masinloc*	600	Masinloc, Zambales, Luzon
Diesel/Bunker	Navotas I & II	210 & 100	Navotas, Metro Manila, Luzon
	Panay I*	36.5	Tinocuan, Dingle, Iloilo, Visayas
	Iligan I & II	114	Mapalad, Iligan City, Mindanao
	Bohol*	22	Tagbilaran City, Bohol, Visayas
	Panay III*	110	Dingle, Iloilo, Visayas

<b>Geothermal</b>	Mak-Ban*	458.53	Laguna & Batangas, Luzon
	Tiwi*	289	Tiwi, Albay, Luzon
	Bac-Man	150	Manito, Albay & Bacon, Sorsogon, Luzon
	Palinpinon	192.5	Valencia, Negros Oriental, Visayas
	Tongonan/Leyte	112.5	Lim-ao, Kananga, Leyte, Visayas
<b>Hydro</b>	Magat*	360	Ramon, Isabela, Luzon
	Angat	246	Norzagaray, Bulacan, Luzon
	Binga*	100	Tinongdan, Itogon, Benguet, Luzon
	Pantabangan*	100	Pantabangan, Nueva Ecija, Luzon
	Ambuklao*	75	Bokod, Benguet, Luzon
	Masiway*	12	Pantabangan, Nueva Ecija, Luzon
	Barit*	1.8	Buhi, Camarines Sur, Luzon
	Cawayan*	0.4	Sorsogon City, Sorsogon, Luzon
	Amlan*	0.8	Amlan, Negros Oriental, Visayas
	Agusan*	1.6	Manolo Fortich, Bukidnon, Mindanao
	Loboc*	1.2	Loboc, Bohol, Visayas
	Talomo*	3.5	Tugbok, Davao City, Mindanao

Decommissioned Plants	Generation assets that have been retired	
	Bataan Thermal*	225
Manila Thermal*	200	Isla del Provisor, Ermita, Manila, Luzon
Sucac Thermal	850	Sucac, Muntinlupa City, Luzon
Cebu II Diesel*	54	Talavera, Toledo City, Cebu, Visayas
Aplaya Diesel*	108	Aplaya, Jasaan, Misamis Oriental, Mindanao
General Santos Diesel*	22.3	Gen. Santos City, South Cotabato, Mindanao
<b>Total capacity of Luzon-Visayas grids</b>	<b>3,778.23</b>	
<b>Total MW Capacity</b>	<b>5,356.63</b>	

\*Successfully bid out/negotiated as of 31 August 2009.

#### A. 1 Investment Considerations

##### ▪ *Alternatives to Ownership Restrictions*

Philippine laws have restricted the ownership of private land to Philippine citizens or domestic private corporations with at least 60% Filipino capital. However, investors may enter into a land lease agreement with an option to purchase which is assignable to qualified parties, or operation and maintenance agreement for non-power components of the generating asset. The restriction is the same for the acquisition/ownership of indigenous sources of fuel such as steam field assets for geothermal plants.

##### ▪ *Sale structures for specific types of plants (e.g. hydro and geothermal)*

Guided by laws on the exploration, development and utilization of natural resources, private entities may enter into co-production, joint venture, or production sharing agreements with the government. The asset and the land

will be sold and leased, respectively, on an **“as is, where is” basis**.

##### ▪ *Environmental Regulations*

There are environmental laws, rules, regulations and standards in accordance with existing Philippines laws that govern power investments and projects. The Department of Environment and Natural Resources (DENR) is mandated to regulate the industry and ensure its compliance through the conduct of regular inspections and the issuance of permits to operate.

##### ▪ *Tax Regulations*

Potential investors of generation assets are also governed by certain Philippine tax regulations and requirements such as taxes on dividends, capital gains and documentary stamps.

##### ▪ *Transition Supply Contracts*

Section 67 of the EPIRA provides that National Power, with the assistance of PSALM, negotiate and establish Transition Supply Contracts (TSC) with distribution utilities, which can be assigned to successor generating companies of National Power, subject to the approval of the ERC. The existence of TSCs that can be allocated to certain plants may enhance the value of the plants and hasten the pace of privatization in general. TSCs do not only guarantee investors with a ready market for the generating plants, they also offer assurance of steady and predictable revenue flows. This level of certainty in cash flow from the generation assets allows potential investors to meet the requirements of their creditors. Thus, supply contracts are a significant factor in generating greater investor interest in power assets as they assure potential bidders of having off takers for their electricity.

On 10 January 2007, the ERC granted provisional approval to the TSC between National Power and the Manila Electric Company (Meralco), the single, largest distribution company in the country. The TSC covers a five-year contract term commencing 17 November 2006 until 2011 and guarantees Meralco and its electricity consumers with a power supply of 6,600 GWh (gigawatt-hours) per year for the next five years. PSALM continues to work with National Power on the volume levels and assignment of supply contracts to the generating assets to be privatized.

- *Bidding Procedures*

The formal bidding procedures officially begin with the publication of the Invitation to Bid in at least two newspapers of general circulation for three consecutive days. The Invitation to Bid specifies the requirements for participating in the bidding and the deadlines for submission of these requirements. Generally, two weeks are provided for the submission of a letter of interest.

A pre-bid conference is then held where questions and concerns about the bidding procedure are addressed before all attending bidders.

All bidders are granted equal access to relevant information in PSALM's custody, and equal opportunity to conduct an ocular inspection or site visit of the power plant that is the subject of the bidding. At least two bidders must submit a bid on the bidding date. A failed bidding occurs if only one bidder submits a bid or if none of the bids meet the reserve price. The bidder meeting the reserve price with the highest bid price submitted is declared the highest bidder.

- *Qualification Requirements*

Specific technical experience and financial capability requirements may vary depending on the size, fuel type and valuation of the plant.

*Technical Experience.* Generally, the bidder must be a generation asset operator or an entity that has experience in operating a generation asset, or will cause an affiliate that possesses the experience to operate a generation asset to enter into an Operations and Maintenance Agreement of the Asset; or in case of failure to meet the preceding requirements, the bidder must execute a detailed plan or program on how it intends to operate and maintain the asset.

*Financial Capability.* The bidder must meet certain levels of net asset value or market capitalization as predetermined by PSALM.

- *Deferred Payment Structure & Terms*

Structure and terms may differ depending on the capacity (MW) of the asset. Generally, an upfront payment amounting to 40% of the bid price is required. The remaining (deferred) amount is amortized with fixed and equal semi-annual payments for a period of seven years (straight line amortizing). This encourages refinancing and avoids back-ending amortization. Interest is charged at 12% per annum.

## A.2 Status of Privatization

PSALM has successfully bid out eighteen (18) generating plants, sixteen (16) of which are located in the Luzon and Visayas grids, and which have a total rated capacity of 2,767.23 MW.

This includes the successful bidding for the Tiwi-Makban package in July 2008, the Panay-Bohol plant package in November 2008, the Amlan plant in December 2008, and the Calaca power plant in July 2009.

AP Renewables Inc., with an offer of USD446.8 million for the Tiwi-Makban geothermal assets, was declared the highest bidder on 30 July 2008. PSALM issued the Notice of Award on 21 August 2008 and the Certificate of Effectivity was handed over to AP Renewables, on 22 August 2008.

On the other hand, SPC Power Corp. (SPC) gave the highest bid of USD5.86 million (USD5,857,553.34) for the 146.5-megawatt (MW) Panay (I and III) and 22-MW Bohol diesel power plants in a public bidding held last 12 November 2008. SPC's offer exceeded the reserve price set by the PSALM Board for the three power plants. On 28 November 2008, PSALM issued the Notice of Award to SPC Power Corporation.

Similarly, PSALM commenced the second round of bid for the 0.8-MW Amlan Hydroelectric Power Plant with the issuance of the ITB on 03 September 2008. On 10 December, the 0.8 MW Amlan Hydroelectric plant was successfully bid out to ICS Renewables, Inc. which offered the highest bid of USD230,000. The hydroelectric power facility was turned over to its new owner on 24 June 2009.

Despite the decision of the first winning bidder of the Calaca coal-fired power plant, Emerald Energy Corporation (EEC), formerly Calaca Holdco Inc., to terminate its purchase citing as its reason the alleged deterioration of the power plant, PSALM was able to successfully privatize again said plant in July 2009. DMCI Holdings Inc. (DMCIHI) was declared the highest bidder in the negotiated sale conducted for this power facility with an offer of USD361,709,000 .

With the successful privatization of the Calaca power plant, PSALM was able to breach the 70% privatization threshold for the generating assets in the Luzon and Visayas grids.

*Table 2. List of Generating Capacity Successfully Bid Out as of 31 August 2009*

Year	Generation Plants (Per Grid)	Fuel Type	Rated Capacity (MW)
2004	Luzon		
	Barit	Hydro	1.8
	Cawayan	Hydro	0.4
	Visayas		
	Loboc	Hydro	1.2
	<b>Sub-Total (MW Capacity successfully bid out)</b>		<b>3.4</b>
	Mindanao		
	Agusan	Hydro	1.6
	Talomo	Hydro	3.5
2006	Luzon		
	Pantabangan-Masiway	Hydro	112.0
	Magat	Hydro	360.0
	<b>Sub-Total (MW Capacity successfully bid out)</b>		<b>472.0</b>
2007	Luzon		
	Masinloc	Coal	600.0
	Ambuklao-Binga	Hydro	175.0
	<b>Sub-Total (MW Capacity successfully bid out)</b>		<b>775.0</b>
2008	Luzon		
	Tiwi-Makban	Geothermal	747.53
	Visayas		
	Panay (I and III)-Bohol	Bunker Diesel	168.5
	Amlan	Hydro	0.8
	<b>Sub-Total (MW Capacity successfully bid out)</b>		<b>916.83</b>
2009	Luzon		
	Calaca	Coal	600.0
	<b>Sub-Total (MW Capacity successfully bid out)</b>		<b>600.00</b>
<b>TOTAL MW CAPACITY BID OUT IN LUZON-VISAYAS GRIDS</b>			<b>2,767.23</b>

To date, seventeen (17) generating assets were turned over to private owners, with only the recently privatized Calaca coal-fired plant as the remaining sold asset that is still for turnover.

For the turned-over IPP plants, PSALM was able to successfully privatize Power Barges (PB) 117 and 118 on 31 July 2009. Therma Mobile Inc. and Therma Marine Inc, both of the Aboitiz Power Corporation, acquired PBs 117 and 118 in a negotiated sale for USD 16 million and USD 14 million, respectively. On 26 August 2009, the Limay power plant was successfully privatized with San Miguel's price offer of USD 13.5 million.

*Table 3. List of Winning Bidders for Generating Assets as of 31 August 2009*

No.	Name of Operating Plant	Winning Bidder	Bid Date
1	Talomo	Hydro Electric Development Corp.	25 March 2004
2	Agusan	First Generation Holdings Corp.	04 June 2004
3	Barit	People's Energy Services Inc.	25 June 2004
4	Cawayan	Sorsogon II Electric Cooperative, Inc.	30 September 2004
5	Loboc	Santa Clara International Corp	10 November 2004
6-7	Pantabangan- Masiway	First Generation Hydro Corp.	6 September 2006
8	Magat	SN Aboitiz Power	14 December 2006
9	Masinloc	Masinloc Power Partners Co. Ltd.	26 July 2007
10-11	Ambuklao-Binga	SN Aboitiz Power	28 November 2007
12-13	Tiwi-Makban	AP Renewables Inc.	30 July 2008
14-15-16	Panay (I and III)-Bohol	SPC Power Corporation	12 November 2008
17	Amlan	ICS Renewables, Inc.	10 December 2008
18	Calaca	DMCI Holdings Inc.	08 July 2009

*Table 4. List of Winning Bidders for Turned-over NPC-IPP Generating Assets Successfully Privatized*

*as of 31 August 2009*

No.	Name of Plant	Winning Bidder	Date	Rated Capacity (MW)
1	PB 117	Therma Mobile Inc.	31 July 2009	100.0
2	PB 118	Therma Marine Inc.	31 July 2009	100.0
3	Limay	San Miguel Energy Corporation (SMEC)	26 August 2009	620
<b>3</b>	<b>TOTAL</b>			<b>820</b>

### A.3 Privatization Targets, 2009-2010

The overall sale schedule for the privatization of generation assets may change depending on the confluence of factors such as investors' interest and plant-specific concerns, including Operations and Maintenance agreements for multipurpose hydropower plants, fuel supply agreements (e.g. geothermal steam and coal), and land-related issues as among the major and critical ones.

To optimize opportunities in privatizing the plants, PSALM studies the alternative sale mode of pairing or grouping a mix of plants under a portfolio and bidding them out as one package. The specific timetable for the asset or the asset package is released publicly a few months before the bid date. The following table shows that geothermal power assets are lined up for privatization this year, marking the first time that these assets will be put on the selling block.

Tables 5 and 6, respectively, show the indicative sale schedules of generating assets and National Power-IPPs to be turned over to National Power scheduled to be privatized in 2009 until 2010.

These privatization targets are based on PSALM's 2009 Corporate Action Plan and ten year strategic plan subject to Board approval. The schedule may change and individual plants may be considered for pairing or grouping as may be viable.

*Table 5. Indicative Privatization Targets for Generating Assets, 2009-2010*

YEAR	No.	GRID	Plants	Fuel Type	Rated Capacity (MW)
2009	1	Visayas	Palinpinon	Geothermal	192.5
	2	Visayas	Tongonan	Geothermal	112.5
				<b>Sub-total</b>	<b>305</b>
2010	3	Luzon	Bacman	Geothermal	150.0
	4	Luzon	Navotas I&II	Diesel	310
	5	Mindanao	Iligan I & II	Diesel/ Bunker	114.0
	6	Luzon	Angat	Hydro	246
				<b>Sub-total</b>	<b>820</b>
	<b>6</b>	<b>TOTAL</b>			<b>1125</b>
<b>Total Operating Capacity for Luzon and Visayas Grids</b>					<b>3,778.23</b>

*Table 6. Indicative Privatization Targets of Turned-Over NPC-IPP Plants, 2009-2010*

YEAR	No.	GRID	Plants	Fuel Type	Rated Capacity (MW)
2009	1	Mindanao	PB 117*	Diesel	100.0
	2	Mindanao	PB 118*	Diesel	100.0
	3-4	Visayas	Cebu/Naga LBGT 1 & 2	Diesel/ Bunker	55.0
	5	Luzon	Limay*	Diesel/ Bunker	620
				<b>Sub-Total</b>	<b>875</b>
2010	6	Luzon	Bauang	Diesel	235.5
				<b>Sub-Total</b>	<b>481.5</b>

	<b>6</b>	<b>TOTAL</b>	<b>1356.5</b>
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*\*Successfully negotiated/bid out as of 31 August 2009*

The list of National Power-IPP plants includes those plants whose contracts are expected to expire within the next two years.

*Investors' Preliminary Asset Review Process (IPARP)*

The IPARP allows potential bidders to have a better assessment of their target power plants through site visits and access to plant data. IPARP is a prior-to-bidding process for parties who want to participate in the bidding exercises of PSALM. Though it is not part of the formal bid process, it facilitates the bidding process as potential bidders are expected to spend less time in undertaking their formal due diligence activities. *Once a particular power plant is announced for sale through an Invitation to Bid, the IPARP process is terminated and the potential bidder may continue its due diligence if it submits its letter of interest for the power plant as part of the formal due diligence process in the Bidding Procedures.*

**Decommissioned or Retired Plants**

In 2005, the PSALM Board approved an *alternative* disposal strategy for the decommissioned plants through a Third Party Auctioneer. Nonetheless, PSALM can proceed with the disposal through the preferred open, competitive bidding process. "Retired" or non-operational plants usually generate interest for their scrap value.

On 06 February 2008, PSALM declared a failure of bidding for the decommissioned or retired Manila Thermal Power Plant (MTPP) when the bid offer of Gagasan Steel Inc., the lone bidder to pass the technical qualifications, did not meet the reserve price. PSALM held negotiations, and on 25 April 2008, it successfully closed the transaction with Gagasan Steel, which agreed to pay USD2.5 million (USD2,506,000.00) for the MTPP. The Notice of Award was issued

to Gagasan Steel on 15 May 2008. With PSALM receiving full payment on 19 February 2009, Gagasan Steel has assumed the ownership of the said decommissioned power facility.

Following the successful sale of the MTPP, PSALM firmed up the sale of other decommissioned plants in the last quarter of 2008. The ITB for the decommissioned Aplaya-GenSan power plant package was published on 03 September 2008. However, with only one bidder submitting the documentary requirements during the opening of bids, PSALM declared a failure of bidding on 10 November 2008 with the issuance of a Supplemental Bid Bulletin. To pursue the sale of these plants, PSALM issued the ITB for the second round of bidding for the plant package on 18 March 2009 and slated the bidding date for May 2009. A pre-bid conference was held on 01 April 2009. On 25 May 2009, the Aplaya-GenSan package was successfully bid out, through a negotiated bidding, to TEC Industries, Inc. (TEC).

The ITB for the Cebu and Bataan Thermal power plants was published on 30 October 2008, while the bid dates are scheduled in January and March 2009, respectively. A Pre-Bid Conference for the Cebu II plant was held on 26 November 2008.

After two failed biddings, the Cebu II plant was successfully privatized through a negotiated sale with Taifu Metal Exchange Corp. on 22 January 2009.

Meanwhile, after three failed biddings, the Bataan Thermal Power Plant was successfully privatized through a negotiated sale with Rubenori Inc. on 16 April 2009.

*Table 7. Indicative Privatization Targets for Decommissioned Assets, 2010*

YEAR	No.	GRID	Plants	Fuel Type	Capacity
2010	1	Luzon	Sucat	Bunker	850.0

1	TOTAL	850.0
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*Table 8. List of Winning Bidders for Decommissioned Plants as of 31 August 2009*

No.	Name of Decommissioned Plant	Winning Bidder	Date
1	Manila Thermal	Gagasan Steel Inc.	25 April 2008
2	Cebu II	Taifu Metal Exchange Corp.	22 January 2009
3	Bataan TPP	Rubenori, Inc.	16 April 2009
4	Aplaya	TEC Industries, Inc.	25 May 2009
5	Gen. Santos	TEC Industries, Inc.	25 May 2009

## **B. INVESTMENT OPPORTUNITY IN TRANSMISSION: POTENTIAL FOR A VIABLE TRANSMISSION BUSINESS IN ASIA**

As the sole national electricity transmission company for the Philippines, TransCo is one of the best deals among the assets on the selling block. TransCo has a nationwide network of 20,236 circuit kilometers (combined length of transmission and sub-transmission) and a total capacity of 24,607 mega-volt amperes.

TransCo will be privatized with the award of a 25-year concession contract through a public bidding. The contract may be extended to a further 25 years, with a recovery payment to the concessionaire at the end of the concession.

The ERC is responsible for determining and approving the transmission and distribution wheeling charges and retail rates, through an ERC established and enforced methodology, to promote efficiency and non-discrimination.

In June 2006, the ERC issued the Final Determination of TransCo's revenues for the 2nd regulatory period (2006-2010). TransCo has a beginning regulatory asset base (RAB) for 2007 of about USD3.25 billion. In 2003, the ERC adopted the Performance Based Regulation, or PBR, (with five-year revenue cap) methodology for the regulation of transmission rates.

### B.1 Status of Privatization

After three unsuccessful bids, PSALM declared on 12 December 2007, the consortium of Monte Oro Grid Corporation, Inc. as the highest bidder for the 25-year concession of TransCo. On its 4<sup>th</sup> round of bidding, the consortium of the Monte Oro Grid Resources Corp., Calaca High Power Corp. and State Grid Corp. of China offered USD3.950 billion for the concession contract, besting the consortium of San Miguel Energy Corp., Dutch firm TPG Aurora BV and Malaysia's TNB Prai Sdn Bhd bid of USD3.905 billion.

The Securities and Exchange Commission (SEC) approved the incorporation of the National Grid Corporation of the Philippines (NGCP), the "Concessionaire", established by the Consortium of Monte Oro Grid Resources Corp., Calaca High Power Corp., and State Grid Corp. of China, on 21 February 2007. The Concession Agreement, after the execution and delivery to the Concessionaire, became effective on 28 February 2008. Thereafter, the Concessionaire submitted its franchise application to Congress on 10 March 2008. The TransCo Franchise Bill (House Bill No. 4358) was passed on third and final reading in the House of Representatives in August and subsequently transmitted to the Senate. After conducting its own deliberations, the Senate passed on third and final reading the bill on 18 November 2008.

The Concession Agreement for the privatization of TransCo was executed and became effective on 28 February 2008. The TransCo Franchise Law (Republic Act No. 9511) was enacted

on 01 December 2008, and became effective on 20 December 2008 (15 days after its publication on 05 December 2008). With the enactment of the TransCo franchise law, NGCP has secured the required Congressional franchise to operate, maintain and expand the country's transmission system. The formal turnover ceremony was held on 14 January 2009 and effected the commencement of the Concession Agreement the following day, 15 January 2009.

### B.2 Features of TransCo Privatization

- *Bidding Procedures*

Like the bidding for the generation assets, the TransCo concession contract underwent an open and transparent bid process which commenced with the publication of an Invitation to Bid. Data room access was expedited through a CD-ROM package, while documentation was provided early in the process. There were rounds of comments from bidders, and all prequalified bidders were given the same set of final documentation. A two-envelope final bid process was followed: the technical bid validated prequalification criteria and confirmed agreement to final documentation, while the financial bid was based on a single financial parameter (Concession Fee).

The concessionaire will be responsible for the improvement, expansion, operation and maintenance of the transmission system and, correspondingly, will be entitled to receive relevant regulated transmission charges, although the legal title to the transmission assets will remain with the government. Under Philippine laws, the electricity transmission business is in the nature of a public utility, and public utilities require a congressional franchise to operate. The concession contract will include, but will not be limited to, the provision of performance and financial guarantees or any other covenants which the national government may require.

▪ *Qualification Requirements*

Bidders for the TransCo concession must have a member or affiliate with experience in operating and maintaining electricity transmission systems comparable to that of the Philippines, with at least 6,000 circuit kilometers, a minimum 6,000 MW peak demand and a voltage level of 115 kilovolts (kV) to 230 kV.

The member of the prospective bidder who meets the technical prequalification criteria must have a net asset value or market capitalization of USD500 million.

Bidders should also have the capability to form a concessionaire that will meet the 60% Filipino ownership restrictions for grantees of a public utility franchise. The largest foreign and Filipino members of the prospective bidder will also need to pass a net asset value market capitalization test.

▪ *Deferred Payment Structure*

The concessionaire will be required to pay a minimum of 25% of its bid price for the concession (concession fee) upfront, paid on commencement date (that is, after all conditions precedent to the completion of the transaction). The remaining 75% is payable via a 15-year repayment profile, providing a “pre-gearred” investment structure to the investor.

**C. Investments through IPP Administration: A Unique Prospect in the Philippine Power Business**

An Independent Power Producer (IPP) is an existing power generating entity which is not owned by National Power. The

IPP boom in the Philippines started from 1988 to 1998 to alleviate the power crisis. This brought in an additional capacity of 3,835 MW into the power generation system. After the crisis had abated, additional IPPs were contracted to meet the projected growth in the economy. During the “Power Restoration Years”, an additional 4,394-MW generating capacity was put on stream. The first IPP contract was signed in 1988 during the Aquino administration with the opening of the power generation industry to the private sector by virtue of Executive Order No. 215, the “Private Sector Participation in Power Generation.”

During the Ramos administration, the Philippines was at the peak of the power crisis. The government contracted 16 IPPs, including several insurance capacity plants, under the Electric Power Crisis Act (EPCA) of 1993. After the crisis was over and growth prospects looked optimistic, additional IPPs were contracted to meet the forecast increase in demand for electricity.

The Independent Power Producer Administrators (IPPAs) are qualified private sector independent entities that will administer and manage the contracted energy from the Energy Conversion Agreements (ECAs) and Power Purchase Agreements that the National Power Corporation entered into with the IPPs. The IPPAs will be appointed through public bidding to be conducted by PSALM

The IPP plants located in Luzon will initially be bid out to prospective IPPAs since the current operations of the WESM cover the Luzon grid only.

*Table 8. List of Active IPPs in Luzon*

No.	Project Name	Type of Fuel	Contracted Capacity (in MW)	IPP Sponsor	Contract Expiry Year
<b>LUZON GRID</b>					
1	Northern Mini Hydro Corp*	Hydro	30.75	Hydro Electric Devt Corp (HEDECOR)	January 2018

	(Benguet)				
2	Pagbilao Coal-Fired PP (Quezon)	Coal	700.00	TEAM Energy	August 2025
4	Sual Coal-Fired PP*** (Pangasinan)	Coal	1,000.00	TEAM Energy	October 2024
6	Casecnan Multi-Purpose* (Nueva Ecija)	Hydro	140.00	National Irrigation Admin.	April 2022
7	Bakun (Benguet, Ilocos Sur)	Hydro	70.00	AEV-NMHC-others	February 2026
8	San Roque Multi-Purpose (Pangasinan)	Hydro	345.00	Marubeni/Sithe	May 2028
9	Ilijan Natural Gas PP (Batangas)	Natural Gas	1,200	KEPCO Ilijan Corp (KEILCO)	June 2022
10	Kalayaan I & II (Laguna)	Hydro	684.60	J POWER	February 2026
	Botocan (Laguna)		20.80		
	Caliraya (Laguna)		22.60		
<b>Total</b>			<b>4,213.75</b>		

\*Contracted capacities indicated for NMHC/Hedcor and Casecnan are its installed capacities since the Power Purchase Agreements (PPA) for Casecnan provides a guaranteed annual energy of 228 GWH while NMHC is based on its actual energy delivered.

\*\*\* and \*\*\*\* were successfully privatized thru public bidding on 28 August 2009

### C.1 An opportunity to trade in the WESM without the expense of building a brand new plant

The IPPA process gives successful bidders a way to enter the Wholesale Electricity Spot Market (WESM) for a very low capital outlay. The Sual and Pagbilao structure, for example, enables bidders to pay the monthly fees, both for the opportunity to trade, and the payments for the physical assets, out of cashflow. Thus, no upfront financing is required.

This is a unique way to enter the WESM. The assets are relatively new, high quality plants that were built and are well

maintained by some of the best IPP developers in the world. The IPPAs will have most of the benefits of being owners of generating stations, such as controlling the fuel and its dispatch, trading, and contracting of the plant, but without maintenance costs or capital upgrades.

Also, many of the risks of owning a plant are explicitly managed through the contract. If there is an extended outage, for example, there is up to a 90% discount on the monthly fees, while PSALM continues to bear Force Majeure risks.;

### Electricity Trading

PSALM has two teams handling the trading of the electricity produced by the National Power-IPPs. The trading function is only transitory until the IPPs have been turned over to IPP administrators. The current trading being undertaken by PSALM generates data for the use of prospective investors.

## C2. Role of IPP Administrators

Among the tasks that the appointed IPPAs handle are:

- Unfettered ability to trade the IPP energy output in the WESM.
- Unfettered ability to procure their fuel requirements (coal plants only).
- Guaranteed revenues for the first few years through the assignment of Transition Supply Contracts (TSCs) (thermal plants only).
- Freedom to enter into bilateral contracts and seek other markets for the balance of their contracted capacities and energy.
- Freedom to enter into other forms of financial hedging instruments if desired to manage their position in and exposure to the market.

### C3. Who may Qualify as IPP Administrator

- International and local companies financially and technically qualified.
- International and local companies financially qualified with affiliates that are technically qualified.
- IPP sponsors.

### C.4 Towards IPPA selection

The initial phase of IPPA appointments will cover only the contracted energy output in the Luzon Grid since the WESM is not yet operational in the Visayas and in Mindanao.

The first stage of IPPA appointments covers the contracted capacities of the Sual and Pagbilao coal-fired thermal power plants. The joint NPC and PSALM Boards approved in November 2008 the structure for the IPP selection process of these plants. The June 2009 bidding was declared a failure when the bidders did not meet the reserve price for the contracted capacity of Sual and Pagbilao plants. On 28 August 2009, San Miguel Energy Corp. was declared highest bidder as IPPA for Sual with its bid offer of USD 1.072 billion, while Therma Luzon of the Aboitiz Group was declared highest bidders as IPPA for Pagbilao with its offer of USD 691.099 million.

For these plants, PSALM entered into “back-to back” contracts with the IPPAs wherein the energy offtake from the ECAs will now be managed and traded by the IPPAs in the WESM. Obligations such as fuel procurement, which were formerly the responsibilities of National Power, will also be transferred to the IPPAs to manage. A number of risks will also be transferred with the agreements, but PSALM will continue to bear key risks that the IPPA cannot manage, such as Government Force Majeure risks and extended outage risks.

The back-to-back contracts include the transfer of ownership of the power station to the IPPAs at the end of the ECA cooperation period.

Following the successful privatization of the Sual and Pagbilao capacities, the next IPP contracts to be offered include the San Roque, Casecnan, Bakun, and Benguet mini hydroelectric power plants.

The approach and the commercial structure for these contracts have not been finalized and may differ from the legal and commercial structure adopted for the contracted capacities of the Sual and Pagbilao plants, depending on the unit. Some of these hydroelectric plants are either already owned by private entities or are build-operate-transfer projects that involve other government agencies, such as the National Irrigation Administration (NIA) that serves the irrigation requirements of the farmers. Thus, only Bakun and San Roque may have a transfer component.

The Casecnan and San Roque hydroelectric power plants were also constructed as multipurpose projects. The Casecnan Multipurpose Project diverts water from the Casecnan, Denip, and Cagayan River to the Pantabangan reservoir. The San Roque Multipurpose Project also serves the irrigation requirements of the NIA.

There are opportunities for these plants’ contracted capacities and energy to serve the energy and ancillary markets in the WESM primarily because of their ability to store water (San Roque, for instance, has a large storage reservoir).

The hydro stations are necessarily dependent on rainfall as fuel, which means no fuel procurement is necessary. However, it does make the output of the plants somewhat less certain than a thermal plant. These are relatively small plants and will, thus, make ideal additions to a portfolio of other

plants to enable diversity of fuel supplies and generation types.

Following the auctions for these hydroelectric plants, the next IPP contract to be tendered involves the contracted capacity of the 1200-megawatt Ilijan Natural Gas-Fired Power Plant. This asset comes complete with a Gas Supply and Purchase Agreement.

It is the objective of PSALM to achieve, through open and competitive bidding, the transfer of the management and control of at least 70% of the total energy output of the IPP power plants under contract with National Power to the IPPAs before the end of this year.

This means that the open access condition will be met and the next stage of the evolution of the WESM can commence. An IPPA will be in an excellent position to benefit from open access with flexibility and control over the trading of the assets.

## **V. WESM: AN EMERGING COMPETITIVE ELECTRICITY MARKET**

**T**he WESM was established to provide an efficient, competitive, transparent and reliable market for the sale and purchase of electricity in the Philippines.

It is a trading place where competing generators offer their output to buyers of electricity, using supply and demand to set the price. The law requires that for the first five years of the establishment of the WESM, power distribution utilities will source at least 10% of their electricity demand from the WESM. Or stated otherwise, no distribution utility will source more than 90% of its total demand from bilateral power supply contracts through which the price can be fixed over a specific period of time.

The components of the WESM are:

- The competitive energy and reserves market centers around the WESM, as managed by a systems operator (TransCo). This covers the sale of electricity by generators and suppliers, utilities and large customers, and the provision of reserves by generators.
- Bilateral trades in electricity entered into by buyers and sellers outside the WESM but dispatched centrally through the WESM. Power supply contracts forged by generators with certain electricity users (such as distributors or large industrial customers) are included in the spot trading, and the volume or bilateral contract quantity (BCQ) is “dispatched” through the WESM upon clearance by the Market Operator (MO). Payment for the bilateral contract quantities traded can be settled outside of the Market settlement process (gross dispatched-net settlement principle).

The MO is responsible for the optimal dispatch of generation by matching offers of generators with demand bids of customers, setting the “spot price” for electricity and facilitating the settlement of financial accounts.

The WESM is only the second of its kind in Asia next to Singapore. It is currently participated in by trading groups from National Power representing National Power-owned plants, PSALM, which represents National Power-IPPs, and a number of non-National Power-IPPs.

## **VI. BENEFITS OF ENGAGEMENT IN THE PHILIPPINE POWER SECTOR**

**I**nvestors have the opportunity to participate in a promising electric power industry in this part of Asia.

The restructuring of the power sector is progressing despite initial snags in the implementation, and it continues to be supported by the government as well as multilateral and bilateral donors.

By investing in the Philippine electric power industry now, investors will benefit from a regulatory framework that will maintain a level playing field among participants while promoting competition in the generation and supply sectors. Rates will reflect the true cost of producing electricity. Price transparency among industry participants will provide economic price signals to encourage investment in the industry and supply the demand of consumers. This will enable investors who will purchase the generating assets greater recovery of their investments.

The Philippine electricity spot market is a positive signal to international investors and multilateral agencies supporting energy restructuring efforts that reforms in the Philippine electric power sector are moving more steadily. It also supports privatization as investors interested in power assets now have a market to sell power to, and can make reasonable returns out of their investments in the assets under the privatization program.

The concession arrangement for TransCo ensures that while the government retains legal ownership of the transmission assets, the returns from operating the business will be effectively transferred to the investor.

Assets to be privatized are sold debt-free, with deferred payment schemes offered for high value transactions. Knowing how important this business is to its prospective investors, the government — through PSALM — will help secure the requirements, such as creditors' consent and various operating permits, to ensure continuous operations of these plants and the expeditious transfer of ownership to winning bidders, and, consequently, the immediate opportunity to generate income from the assets.

Ultimately, electricity sector restructuring in general and privatization in particular, contribute to end the inherently inefficient monopoly system for generating and selling electricity. Under this emerging regime, investors can operate with a fair rate of return in

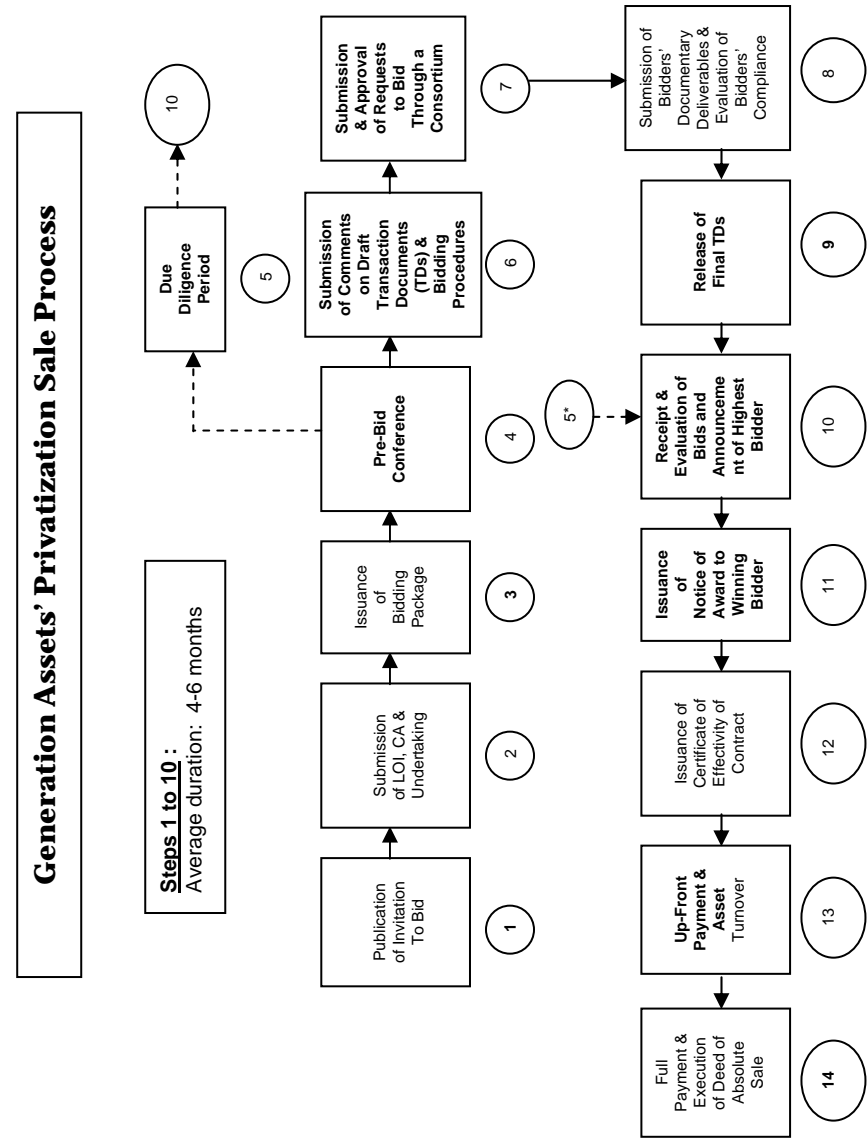
their business as they provide consumers with the “choice of power” and the “power of choice.”

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Source: Asset Management and Electricity Trading Group  
\*Due diligence period ends a day before bid date.

### **How to Participate in the Formal Sale Process**

Interested parties who meet the qualifications may participate in the formal bidding process through the following steps:

- Submit a Letter of Interest (LOI) as soon as PSALM officially starts the bidding process with the publication of an Invitation to Bid (ITB) in two (2) national broadsheets for three (3) consecutive days and in PSALM's website (<http://www.psalm.gov.ph>)

The LOI should include the following information:

- Full name of interested party
  - Office Address
  - Telephone/Fax Number
  - Name of principal contact
  - Signature of authorized representative
  - Latest audited financial statement
- Execute and submit a Confidentiality Agreement (CA) and an Undertaking. The forms will be furnished by PSALM.

With the submission of all the documentary requirements, interested parties must pay the participation fee.

### **Investor's Preliminary Asset Review Process (IPARP)**

The detailed technical information regarding the assets on sale can be obtained through the Investor's Preliminary Asset Review Process (IPARP). The IPARP allows prospective bidders to have a better assessment of their target or priority decommissioned plants through site visits and access to plant data.

IPARP is a prior-to-bidding process for interested parties who want to participate in the bidding exercises. While it is not part of the formal bid process, it facilitates the bidding process as potential

bidders are expected to take up less time in undertaking their formal due diligence activities.

The IPARP is ongoing to allow (but not require) interested parties to review the generation assets. Interested parties will still have the opportunity to conduct their due diligence during the formal sale process.

### **GENCO Data Room**

The Data Room contains information, data, documents and other papers pertaining to the Assets to be privatized. Parties undertaking the Investor Preliminary Asset Review Process (IPARP) and the formal sale processes may access, review, examine and assess the documents contained in the Data Room.

The Data Room is located at the PSALM office, 5<sup>th</sup> Floor, Bankmer Building 6756 Ayala Avenue Makati City, Philippines. Office hours are between 9 a.m. and 6 p.m. on weekdays, except public holidays. IPARP participants and bidders may conduct an ocular inspection of the assets by submitting a formal letter of request addressed to concerned officials of PSALM.

### **Due Diligence and Site Visit Protocol**

Under PSALM's due diligence and site visit procedures, prospective bidders are allowed to conduct their own investigation, valuation and appraisal of the assets. Interested bidders should comply with all pertinent requirements, safety rules and regulations being imposed/implemented at all National Power stations and facilities.

### **Bidding Procedures**

The Bidding Procedures will specify the timetable, and the terms and conditions under which the bidding for the plants will be conducted. The salient features of PSALM's Bidding Procedures are contained in a separate document.