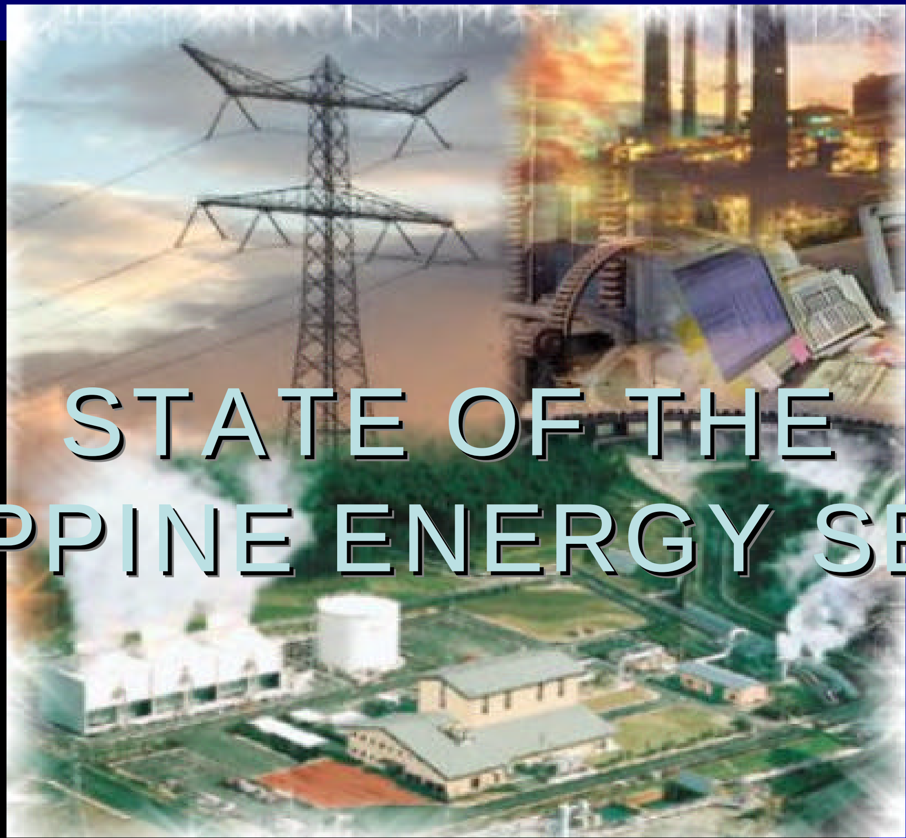
STATE OF THE PHILIPPINE ENERGY SECTOR



SEC. VINCE S. PÉREZ

Department of Energy

30 July 2003

OUTLINE OF PRESENTATION

- Status of EPIRA Implementation
  - Reforms
  - Privatization
  - IPP Review
- Priority Energy Projects/Programs
- Status of the Philippine Power Sector
  - Luzon, Visayas, Mindanao
  - Critical: Cebu, Negros, Panay (CNP) Situation
- Impact of Reforms
- Conclusion

POWER SECTOR REFORMS

POWER SECTOR REFORM

What has been done

- **Creation of new, independent ERC**
- **Creation of PSALM**
- **Creation of TRANSCO**
- **Reorganization of:**
  - **DOE (done)**
  - **NPC (done)**
  - **Transco (done)**
  - **NEA (On-going)**

POWER SECTOR REFORM

What has been done, 2001-2002

Implementation of the P0.30/kWh Mandated Rate Reduction	Aug. 2001
Promulgation of Distribution & Grid Codes	Dec. 2001
Promulgation of EPIRA-IRR	Feb. 27, 2002
ERC's issuance of Demonopolization & Shareholding Dispersal	26 Mar 2002
Unbundling of NPC Rates	26 June 2002
ERC's issuance of Rules on GenCos Certificate of Compliance	26 June, 2002

POWER SECTOR REFORM

What has been done, 2001-2002

Adoption/Promulgation of WESM Rules	28 June 2002
Launching of PGMA's 10-Pt. Plan to Reduce Power Rates	28 June 2002
Completion of the Review of NPC IPP Contracts	05 July 2002
Launching of the Special Program to Enhance Electricity Demand	July 2002
Issuance of E.O. 119 on Electric Coops Loan Condonation	28 Aug. 2002
Approval of the Priva Plan for NPC Generation Assets and TRANSCO through Concession	28 Aug. 2002

POWER SECTOR REFORM

What Has Been Done, 2003

- **Promulgation of Transco's Performance-Based Rate Making Methodology**
- **Open Access Transmission Service (OATS) Rules**
- **WESM's Price Determination Methodology**
- **NPC awaiting ERC approval on the Long-Run Avoidable Cost/Time of Use Pricing scheme**
- **Performance-Based Rate Making Methodology for DUs**
- **Review of Systems Loss Cap Guidelines**

POWER SECTOR REFORM

Unbundling

- Generation Rate Adjustment Mechanism **(GRAM)**
- Incremental Currency Exchange Rate Adjustment **(ICERA)**
- Unbundling of MERALCO's billing
- ERC to date, has decided on unbundling of rates application of **20 ECs, 2 DUs**
- ERC introduced pre-tax WACC

POWER SECTOR REFORM

Loan Condonation

- **ERC granted provisional authority to 100 ECs to reduce rates as a result of loan condonation**
  - **49 ECs in Luzon**
  - **25 in Visayas**
  - **26 in Mindanao**
- **Approx. 5 million consumers nationwide expected to enjoy lower rates**

POWER SECTOR REFORM

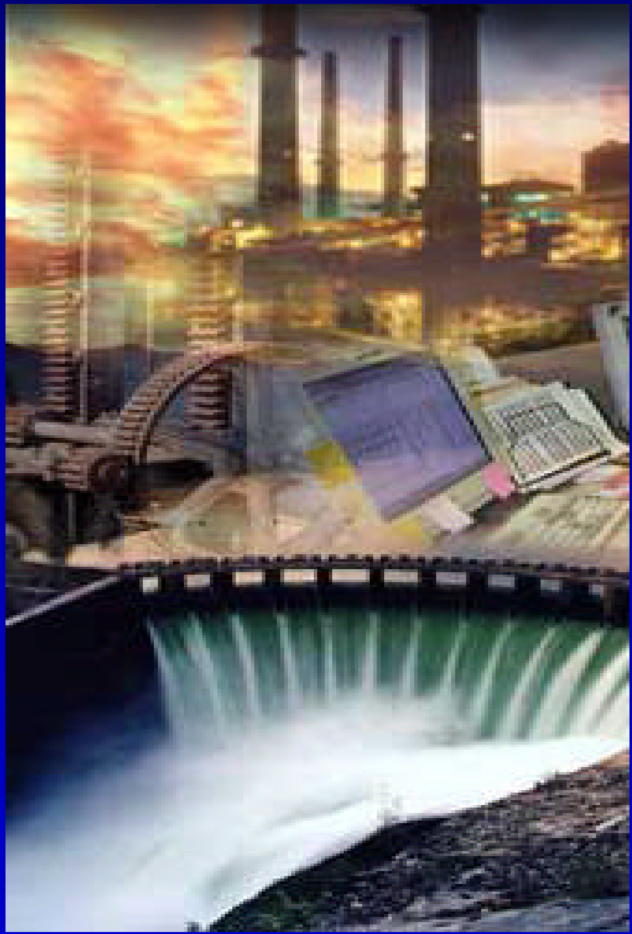
Wholesale Electricity Spot Market

- **Market Management System (MMS) Turnkey Project**
  - **Bidding among shortlisted firms held last June**
  - **Five firms qualified, technical evaluation on-going (ABB, Logica, Alstom, Siemens, Mitsubishi)**
  - **TWG presenting to Transco Bids & Awards Committee 30 July**
- **WESM Project Management Consultancy Services**
  - **Bidding among shortlisted firms held last June (On-Line Systems, KEMA, APW, EFRI, M-Co)**
  - **Technical evaluation submitted to ADB for concurrence**
- **Set-up Market Operator site**
  - **Robinsons Equitable Tower, ready by September**

POWER SECTOR REFORM

Wholesale Electricity Spot Market

- **Commencement of demo market by late Aug. 2003**
- **Constitution of the AGMO by 4Q 2003**
- **Trial introduction of demo WESM in Luzon by 4Q ’03**
- **Full WESM by 30 June ‘04**



TRANSCO PRIVATIZATION

Transmission Assets

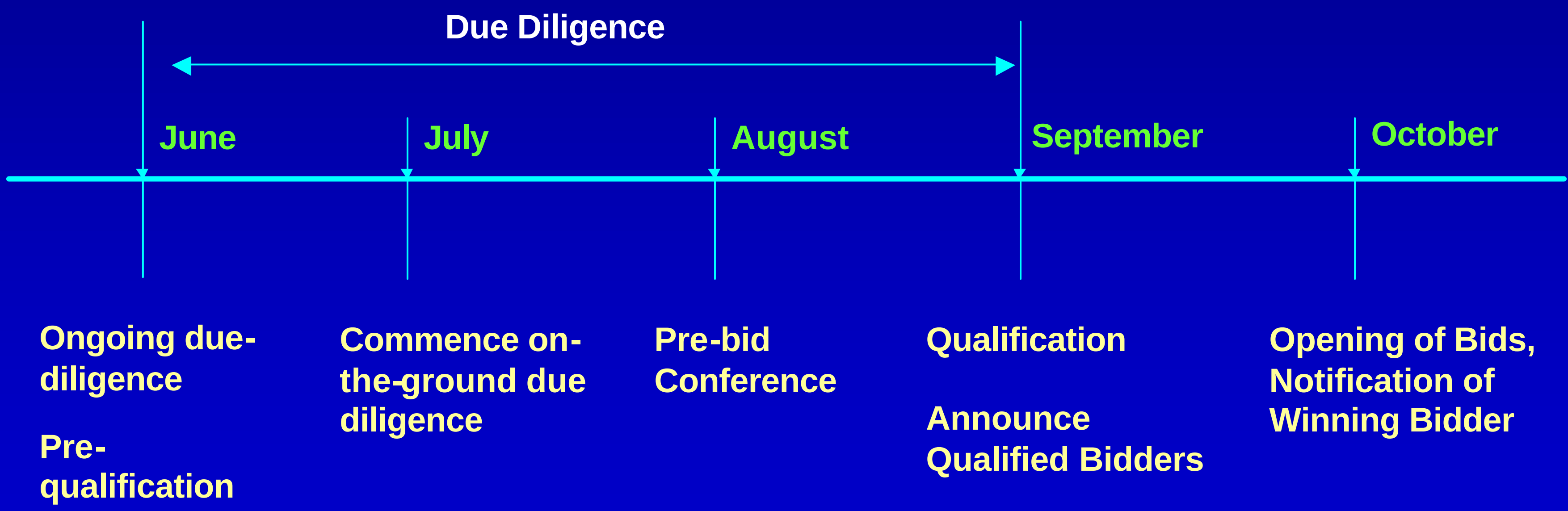
- **20,729 circuit-kms**
- **141 substations with total capacity of 23,628 MVA**
- **US$ 1.8 billion rate base**
- **Privatization via 2-phased concession**
- **Completed Bidding Package as of 21 April 2003**

TRANSCO PRIVATIZATION

TRANSCO's Timeline

Next Steps

- On-the-ground Due Diligence
- Pre-qualification
- Qualification
- Bidding and Award



GENCO PRIVATIZATION

Preparing for Privatization

1. Asset Sales

Plants
- Pinamucan
- Navotas I

Rationale
- IPP contracts due to expire; plants need to be relocated from site
- Do not require WESM

2. Initial Sales

Plants
- Sucat; Limay
- Bohol / Loboc
- Talomo
- Ambuklao / Binga

Rationale
- Energy integration opportunities - gas
- Investor interest

3. All Other Generation Assets

Plants
- All other plants (including Masinloc and Calaca)
- Individual plants groupings

Rationale
- Groupings to be based on investor feedback

IPP CONTRACTS REVIEW

Overview of IPPs & Sponsors

Aboitiz / Pacific Hydro	*Benguet (Ampohaw)* *Bakun*
Alsons / Tomen	*Iligan City 1* *Iligan City 1* *Zamboanga* *General Santos*
Alstom	*Limay Bataan A & B*
BPPC	*Bauang La Union*
Covanta	*Cavite EPZA* *Bataan EPZA*
Enron	*Pinamucan* *Subic Zambales*
IMPSA / EME	*CBK*
KEPCO	*Malaya* *Ilijan Gas*
Sithe Marubeni	*San Roque*
Mirant	*Navota I-III* *Navotas IV* *Pagbilao* *Sual*
Mitsui	*Mindanao Barges*
NIA	*Casecnan*
Ormat	*MakBan Binary*
PNOC-EDC	*Leyte A&B* *Mt. Apo I* *Mt. Apo II*
Salcon	*Naga Complex*
State Power	*Mindanao Coal*
Chevron-Texaco	*San Pascual*
BHEPI	*Binga*

Total 18 firms/consortia representing 32 IPP contracts
Private sector BOT contractors in NIA-Casecnan and PNOC-EDC projects

IPP CONTRACTS REVIEW

Overview of Status to Date

11 Contracts	-	Agreement concluded (Enron, Mirant, BHEPI, Aboitiz, SRMP, Min. Coal NO IAC issues outstanding
3 Contracts	-	No IAC issues, no scope for savings (Ambuklao, Paragua, Toledo No action being taken
1 Contracts	-	IAC issue resolved, no scope for savings (Ormat MakBan Binary No further action being taken
5 Contracts	-	Agreement in principle, documentation being finalized (Alsons, San Pascual, Mindanao Coal)
3 Contracts	-	No pending IAC issues (Ilijan, Alstom – separate discussions on-going re: Limay Privatization
2 Contracts	-	Recent agreements reached (CBK, Salcon)

25 out of total 35 contracts largely resolved

3 Contracts	-	Discussions on-going
7 Contracts	-	Pending actions by other Government Agencies

IPP CONTRACTS REVIEW

Savings per IPP

Sponsor / IPP	Savings, NPV (in US$Mn)		Sponsor / IPP	Savings, NPV (in US$Mn)
Mirant • Sual & Pagbilao • NAV 1-3 • NAV 4	144		**State Power Corp.** •Mindanao Coal	99
Enron • Pinamucan • Subic	20		**BHEPI** • Binga	8.8
Aboitiz • Bakun • Benguet	13		**Alsons** • NMPC 1&2 • WMPC & SPPC	10.2
Chevron Texaco/EME • San Pascual	300		**Salcon** • Naga Complex	20
SRPC • San Roque	148		**IMPSA/EME** • CBK	71.3

TOTAL SAVINGS FOR 18 CONTRACTS US$834.3Mn

REGIONAL POWER SITUATION

OVERVIEW

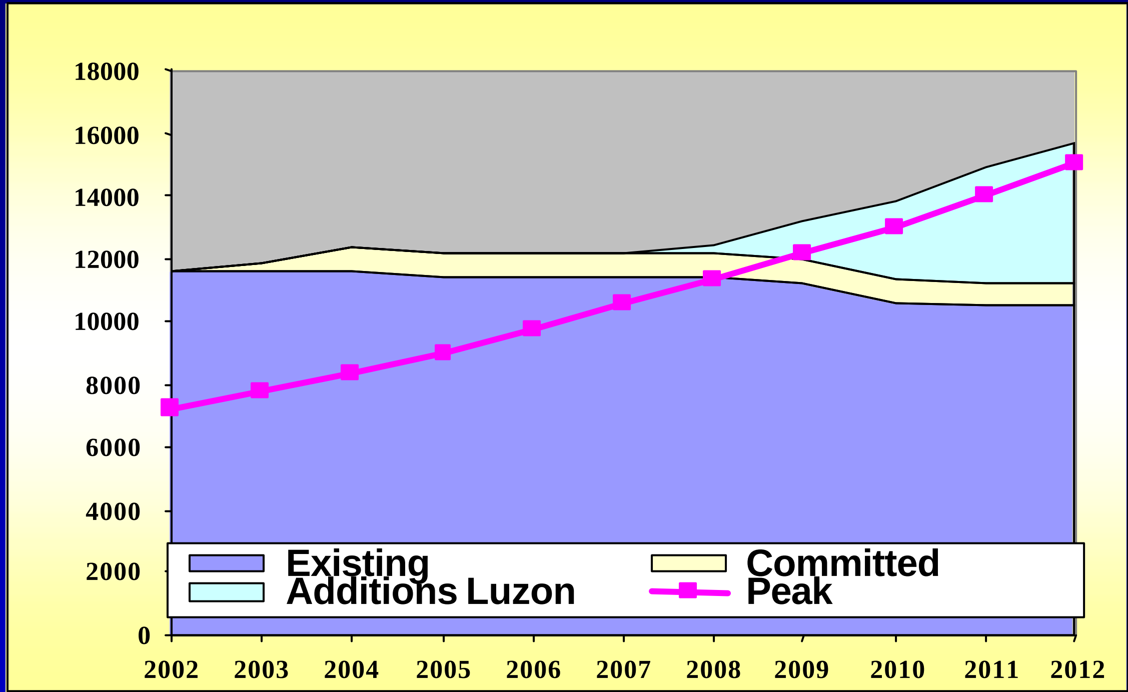
Philippine Power Development Plan

- **Electricity growth rate forecast at 7.4% annually**
- **Elasticity: demand to GDP maintain at 1.4*x***
- **Total installed capacity = 14,702 MW**
- **Dependable capacity = 12,909 MW**
- **Supply reliability dependent on interconnections and transmissions**

SUPPLY-DEMAND PROFILE

Luzon Power Situationer

- **Supply–demand situation secure only until 2007-2008**
- **Long-range avoidable cost rate setting proposed to encourage new investments & promote efficient use of existing capacity**



LUZON POWER SITUATIONER

Major Projects for Luzon

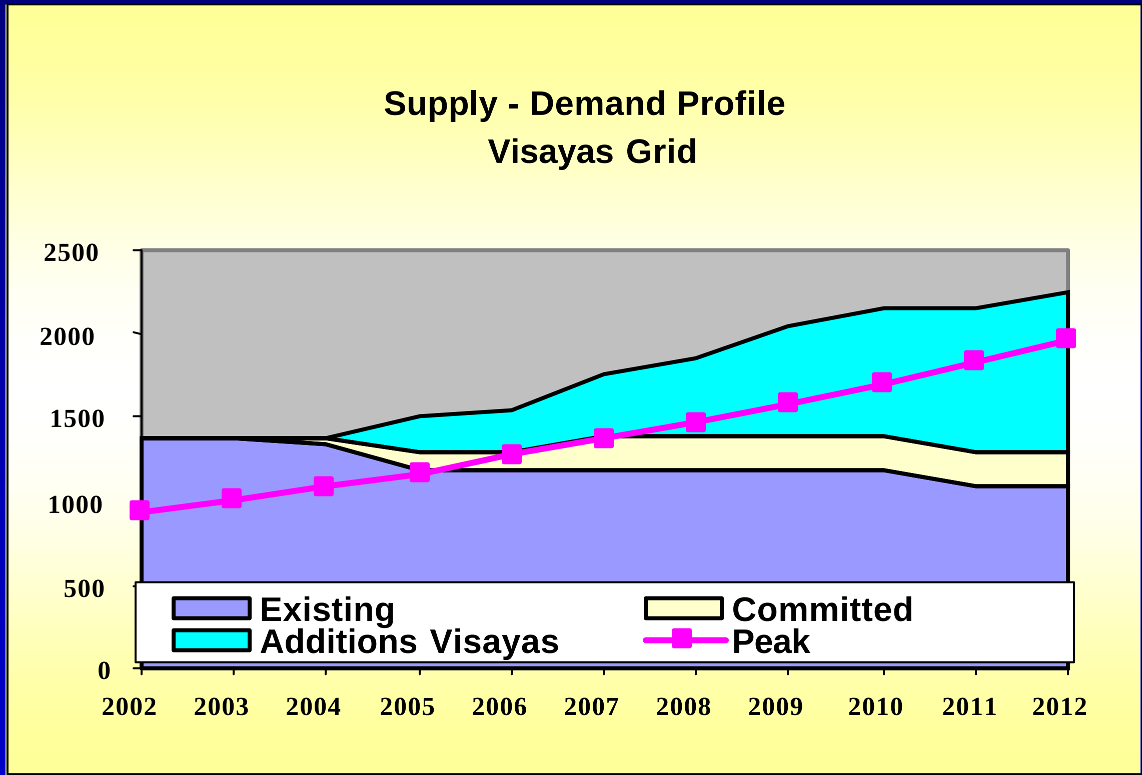
- **TOTAL Committed = 760 MW:**
  - **San Roque Hydro, 345 MW as of May ‘03**
  - **Kalayaan 3 & 4, 350 MW by 1Q ’04**
  - **Northwind Wind Power, 25 MW by 4Q ’04**
  - **TIPCO/Formosa Plastics Clean Coal, 50 MW**
  - **PNOC-EDC Wind Power, 40 MW by 1Q ’06**

- **TOTAL Indicative @ 2,190-2,590 MW:**
  - **Batangas 4 T-Lines Upgrades, Jan/June/Aug./Dec. ’04;**
    - **3 Substations – Feb./May/Dec. ‘05**
  - **Makban Geo-3 Rehab., Jan. ’05**
  - **BatMan Natgas pipeline, 1Q ‘07**
  - **Bacman Opt., 40 MW by Sept. ‘07**
  - **Sucat Priva., 450-850 MW (Bidding by 4Q ’03)**
  - **Limay Expansion (LNG), 500 MW (Bidding by 4Q ’03)**
  - **Mariveles Greenfield (LNG), 1,200 MW**

SUPPLY-DEMAND PROFILE

Visayas Power Situationer

- **Supply–demand situation for the whole Visayas including Leyte-Samar**
- **Low generation rates discourage new investments in power generation**
- **However, Cebu-Negros-Panay currently in critical supply situation**



DEPARTMENT OF ENERGY

VISAYAS POWER SITUATIONER

CNP Interdependence, May 2003

PANAY
Dep. Cap.
73 MW
Peak
125 MW
Deficit
-52 MW

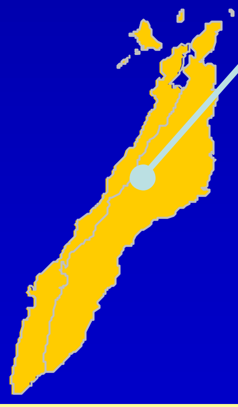
NEGROS
Dep. Cap.
180 MW
Peak
193 MW
Deficit
-13 MW

CEBU
Dep. Cap.
346 MW
Peak
439 MW
Deficit
-93 MW

Leyte/Samar
Dep. Cap.
684 MW
Peak
173 MW
Surplus
* 511 MW

Exports 100 MW (74 MW)

Exports 100 MW (87 MW)

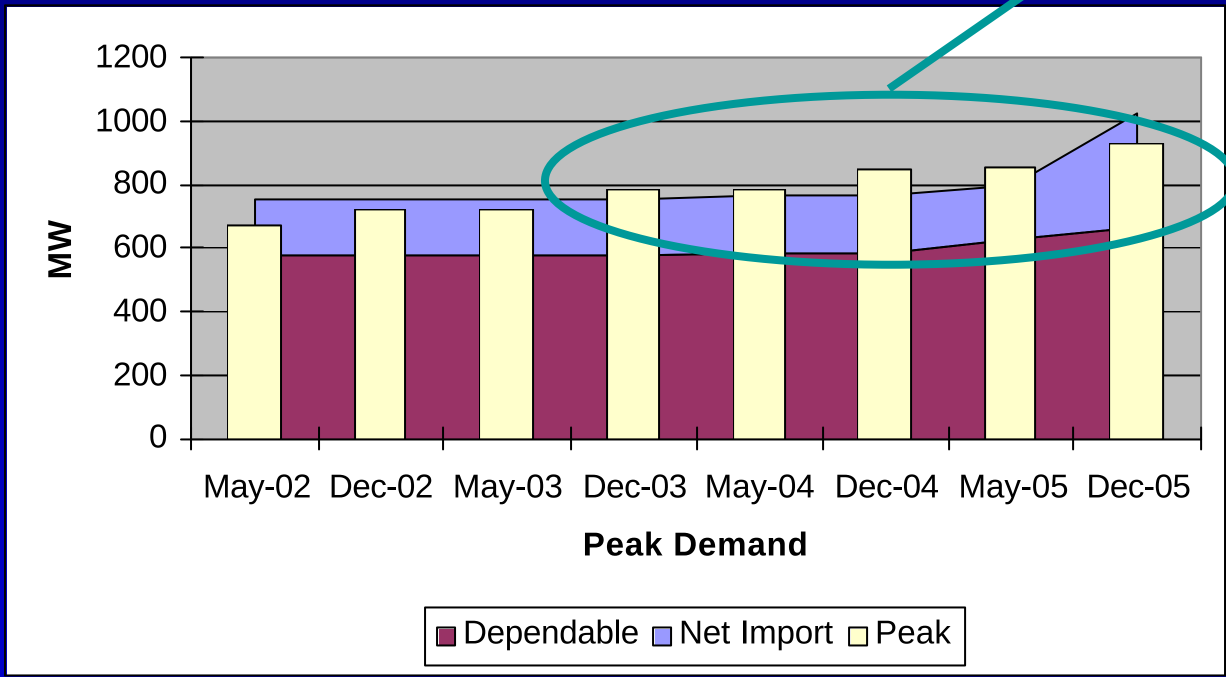


Exports 200 MW (180 MW)

** Most of the surplus capacity are exported to Luzon & some to Bohol*

CEBU, NEGROS, PANAY (CNP)

CNP Supply-Demand Profile



Dec '03 – May '05:

Demand for electricity exceeds available supply

VISAYAS POWER SITUATIONER

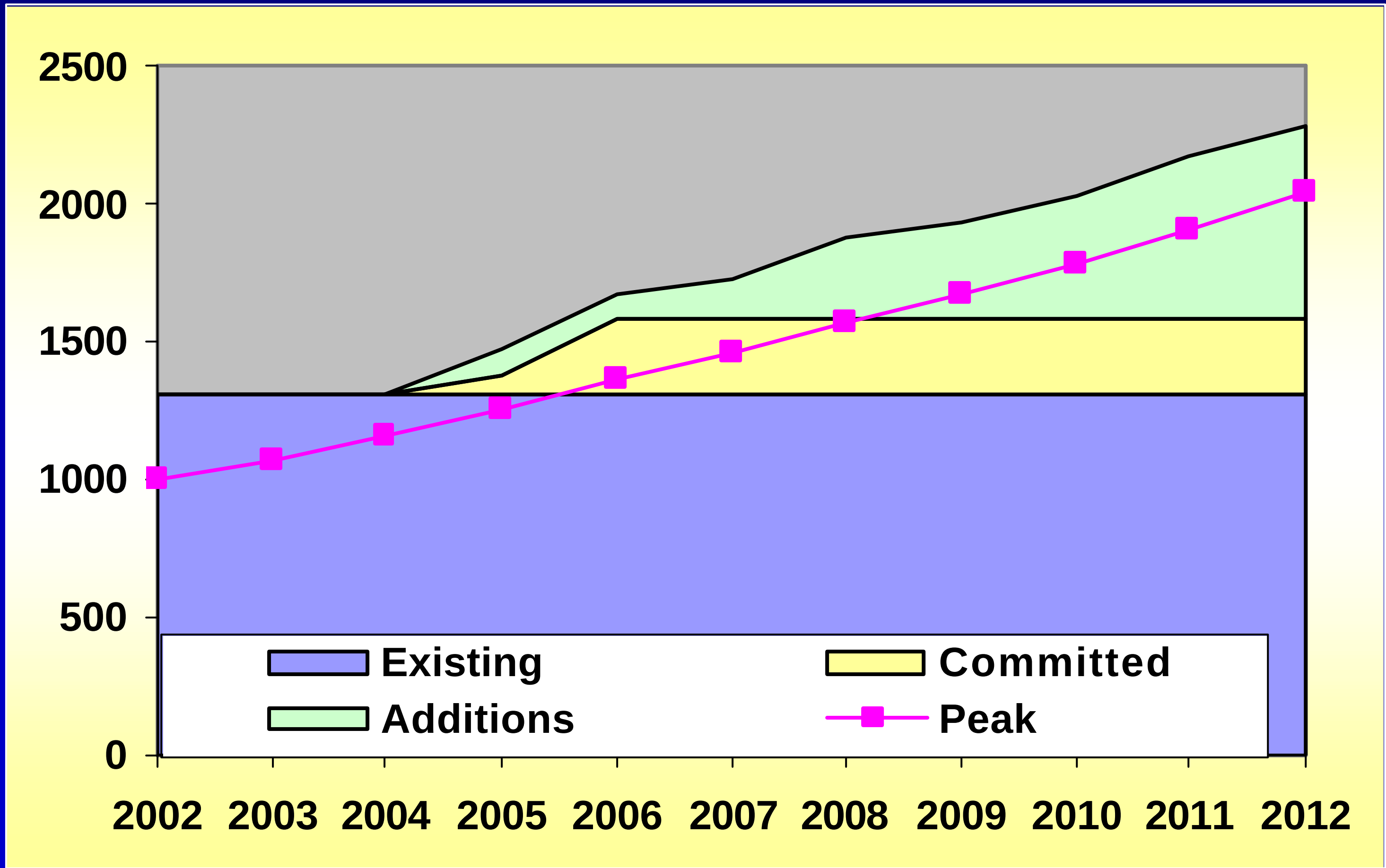
Major Projects for Visayas

- **Committed ≤ 60 MW :**
  - Leyte-Bohol Interconnection 40-100 MW by May '04
  - Leyte-Cebu Interconnection 200 MW by Feb. '05
  - Cebu-Mactan Interconnection by Sept. '05
  - Northern Negros Geothermal, 40 MW by Oct. '05
  - Palinpinon Optimization, 20 MW by Dec. '05

- **Total Indicative = 267.5 MW:**
  - TransAsia Diesel Power Plant (Boracay), 7.5 MW by Mar. '04
  - Mirant Diesel Power Plant (Iloilo), 10 MW (8 mos. after ECC)
  - Victorias Bioenergy (Negros), 50MW by Oct. '05
  - Panay Clean Coal Power Plant (KEPCO), 100 MW by end-'05
  - Southern Leyte Geothermal, 100 MW by Apr. '08

SUPPLY-DEMAND PROFILE

Mindanao Grid in MW, Low GDP Scenario



DEPARTMENT OF ENERGY

MINDANAO POWER SITUATIONER

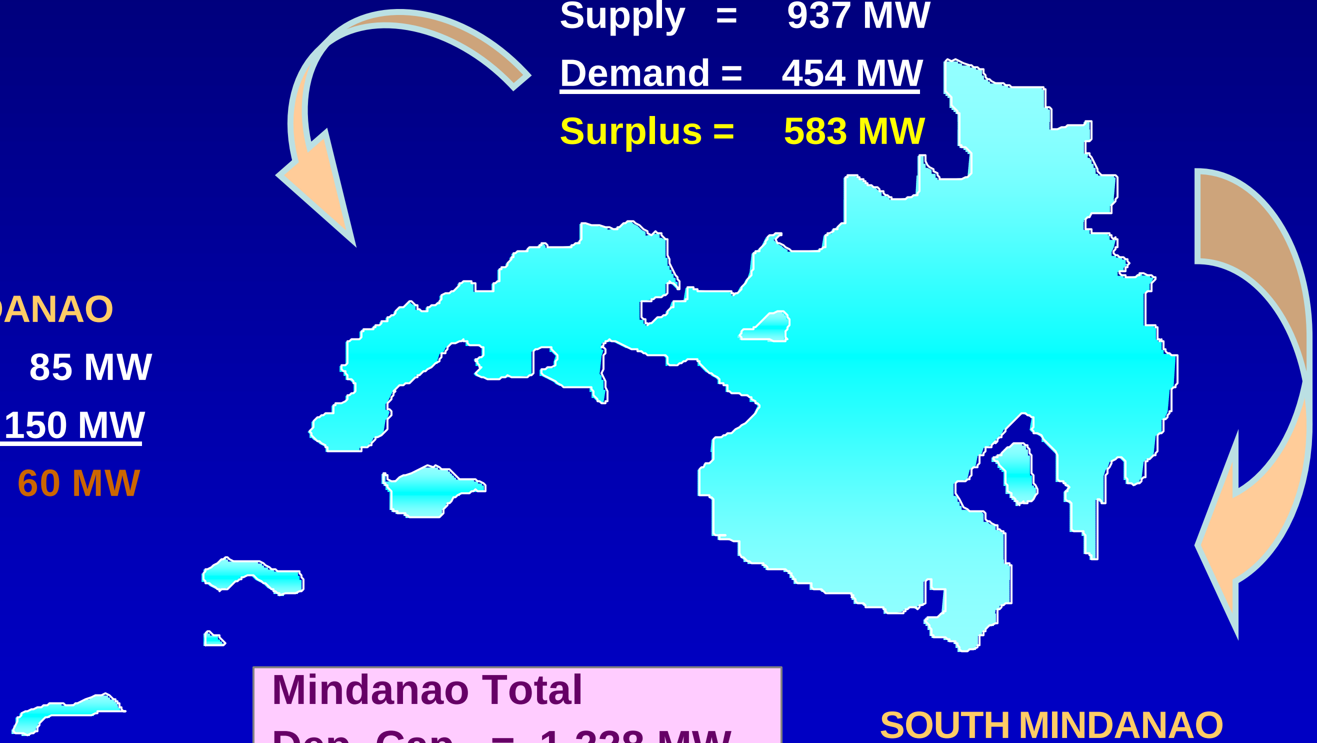
Supply Interdependence

NORTH MINDANAO

Supply = 937 MW

Demand = 454 MW

Surplus = 583 MW



WEST MINDANAO

Supply = 85 MW

Demand = 150 MW

Deficit = 60 MW

Mindanao Total

Dep. Cap	**=**	**1,228 MW**
Peak	**=**	**1,074 MW**
Surplus	**=**	**154 MW**

SOUTH MINDANAO

Supply = 206 MW

Demand = 470 MW

Deficit = 264 MW

GOVERNMENT EFFORTS

GOVERNMENT EFFORTS

Results of Cebu-Negros-Panay Power Summit

- **Consultations held in Iloilo, Bacolod & Cebu from 23-24 July**
- **Power Summit held in Cebu on 25 July**
- **Outcome of the Summit as follows:**
  - **Indefinite withdrawal of CPPC's suspension of operation**
  - **Covenant among CNP stakeholders (NG/LGUs, IPPs, DUs, Business Sector, NGO, Consumer Groups) to implement effectively supply- & demand-side power management programs**
  - **Transfer of Pinamucan to Dingle, Iloilo (110 MW)**

GOVERNMENT EFFORTS

Supply-Side Management: Generation Projects

- **1st Quarter 2004: Implementation of contracts pending in Panay and Negros**
  - **Mirant's PPCC & commitment to connect to the grid and to add 40 MW of capacity to Panay by early next year**
  - **PNOC-EDC Palimpinon Geothermal – 20 MW (end 2005)**
  - **Northern Negros Geothermal – 40MW (October 2005)**
  - **Victorias Bioenergy – 51 MW co-generation (Oct 2005)**

GOVERNMENT EFFORTS

Supply-Side Management: Transmission Projects

- **Completion of Leyte-Cebu interconnection uprating will add 200 MW to the Visayas system (2005)**
- **Panay Transmission Backbone Project (Dec 2005)**
- **Negros-Panay Interconnection Uprating (2006-2007)**
- **Negros-Cebu Interconnection Uprating**
- **TRANSCO Privatization**

GOVERNMENT EFFORTS

Rates Issues

Generation rate:

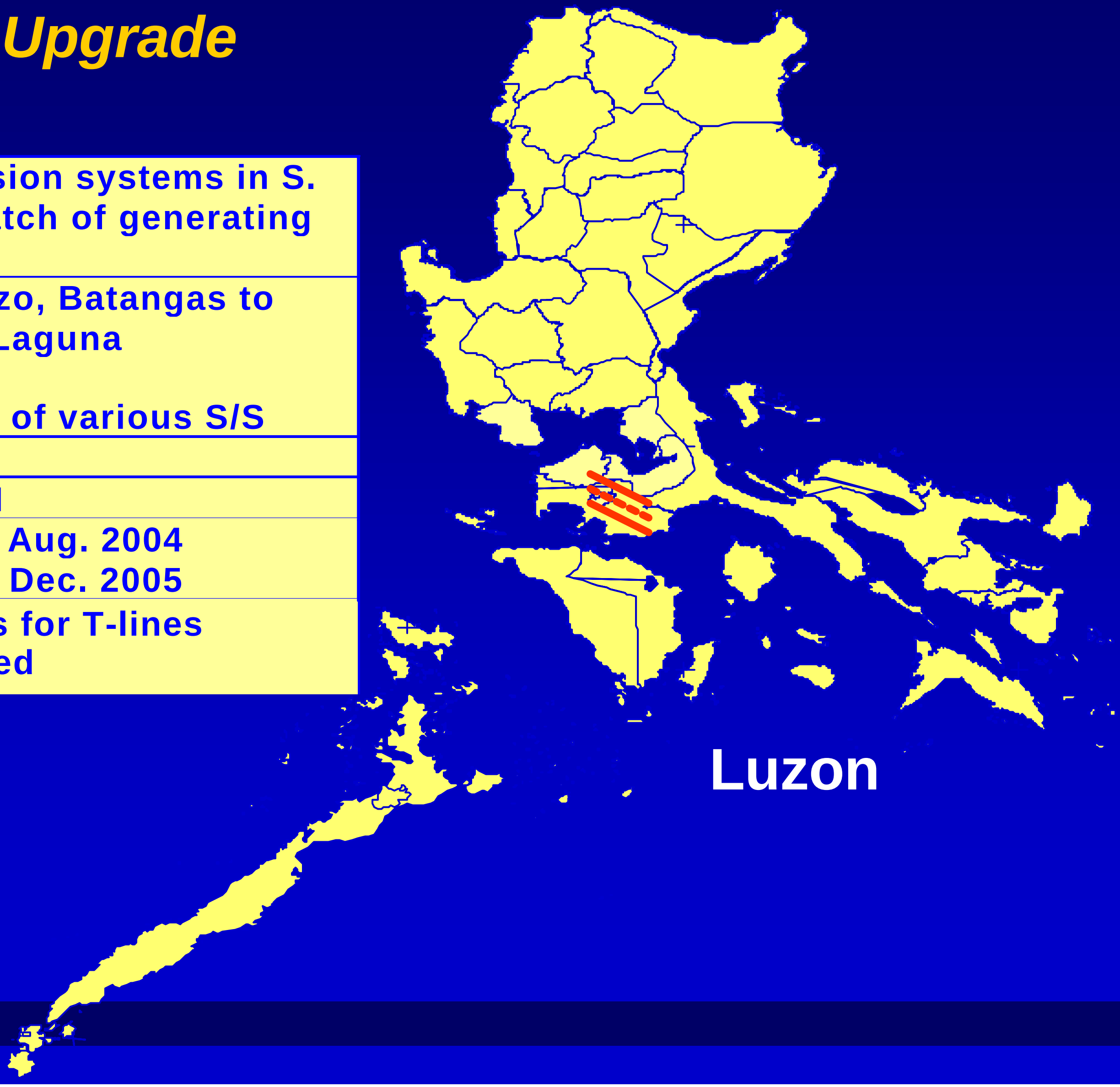
- P2.21/kWh (Jun ’03 onwards) vs. P2.08/kWh (past)
  - Past rate: NPC loss estimated at P1/kWh
  - New rate: NPC loss estimated at P0.86/kWh
- NPC filed a new TOU – new rates are between P2.80 (Cebu & Negros) and P2.90/kWh (Panay)
  - Rate filing is based on a Best New Entrant (BNE) price
  - Status: Awaiting ERC decision

PRIORITY ENERGY PROJECTS/PROGRAMS

PRIORITY TRANSMISSION PROJECTS

Batangas T-Line Upgrade

To augment existing transmission systems in S. Luzon & allow maximum dispatch of generating plants in the area	
Location	San Lorenzo, Batangas to Calamba, Laguna Expansion of various S/S
Length	80 km
Project Cost	US$76.68M
Target Completion Date	T-Lines Aug. 2004 S/S Dec. 2005
Status	• Biddings for T-lines completed



PRIORITY TRANSMISSION PROJECTS

Leyte-Cebu Interconnection

Installation of 33 km submarine cable intended to transmit additional 200 MW demand in Cebu Island	
Location	Talisay, Cebu to Tabango, Leyte
Project Cost	US$68.60M
Status	E-bidding scheduled today, July 30, 2003
Target Project Completion	Feb. 2005

PRIORITY ENERGY PROJECTS

Development of Natural Gas

- **IRR for the transmission, distribution & supply of nat gas promulgated on 27 Aug. 2002**
- **Natural Gas Policy Framework issued 16 October 2003**
- **Proposed nat gas pipeline projects**
  - **Batangas-Manila 1**
  - **Bataan-Manila 2**
  - **Bataan-Cavite**

PRIORITY ENERGY PROJECTS

Renewable Energy

- **Launched Renewable Energy Policy Framework 30 June 2003**
- **Targets by 2013:**
  - **Be the number one geothermal energy producer in the world**
  - **Be the number one wind energy producer in ASEAN**
  - **Double hydro capacity using run-of-river development scheme**
  - **Develop other renewable systems (i.e. solar, biomass, ocean, etc.)**
  - **Become a solar manufacturing base**
  - **Passage of appropriate measures and incentives to promote development of RE**

PRIORITY ENERGY PROGRAM

Special Program to Enhance Electricity Demand

SPEED

- **Approved by ERC on 25 July 2003 authorizing Meralco to implement SPEED**
  - **Meralco industrial customers to enjoy a P0.12/kWh discount for incremental consumption**
  - **To be implemented in 2 phases:**
    - **Phase 1: 224 eligible industrial customers with a minimum consumption of 1,000 kW**
    - **Phase 2: 1,148 eligible industrial & non-industrial customers with minimum consumption of 500 kW**
- **NPC to give a P0.50/kWh discount for bulk users in Luzon**

PRIORITY ENERGY PROGRAM

Transmission Incentive Program

TIP

- **Provides special rate discount to large electricity consumers availing NPC's SPEED**
- **Discount rate of P0.10/kWh applied to the actual monthly energy consumption**
- **Approved by ERC on 25 July 2003**
  - **To be implemented in 2 phases:**
    - **Phase 1: Discounts to be given to industrial and commercial customers consuming at least 1,000kW/month**
    - **Phase 2: Customers consuming at least 500kW/month**

PRIORITY ENERGY PROGRAM

Special Program to Enhance Electricity Demand

CONTACT PERSONS:

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Mr. Red Marquez
MERALCO
Asst. Vice President
for Account Management
1622 – 302965

IMPACT OF REFORMS

IMPACT OF REFORMS

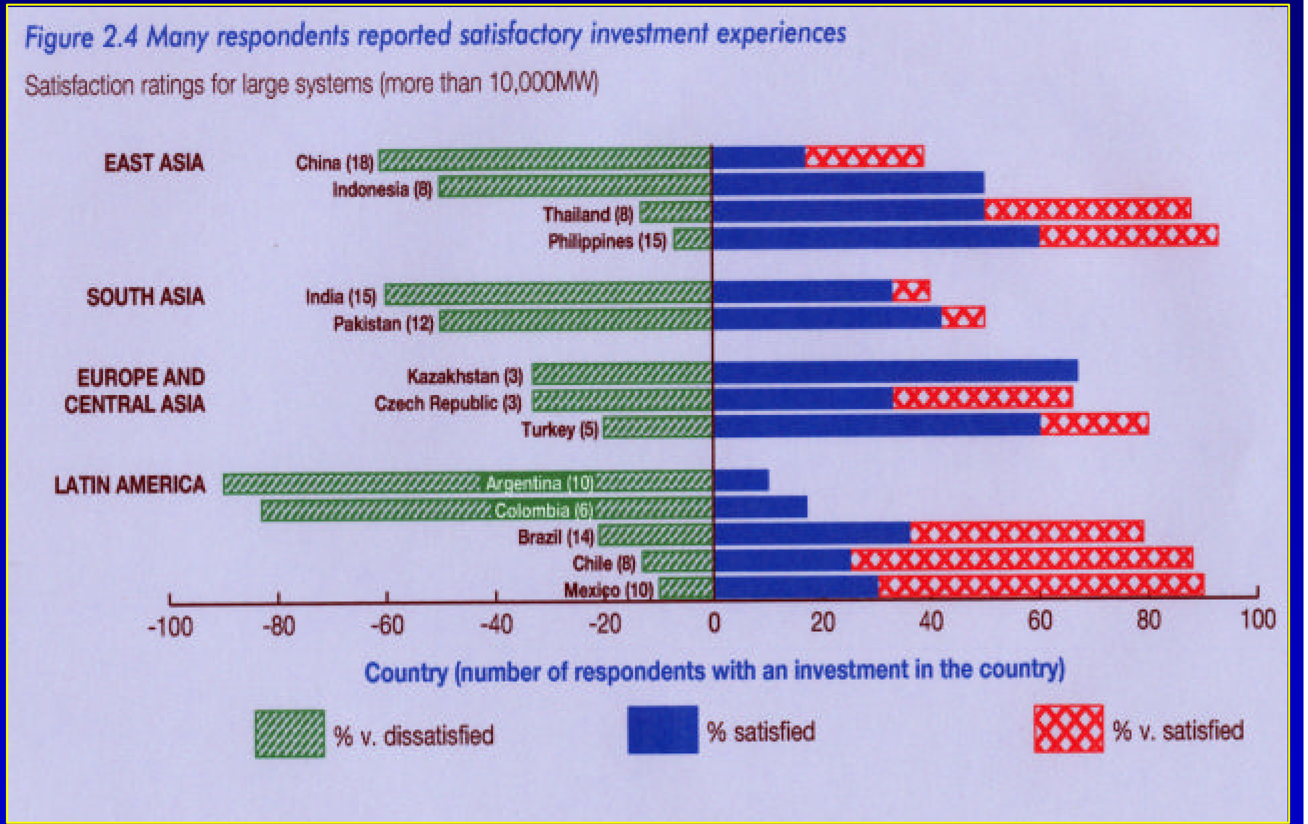
Average Electricity Rates as of July 2003, in US cents/kWh

	Resd'l.	Comm'l.	Indus'l.
1. Japan	21.400	14.300	14.300
2. Cambodia	17.062	17.062	15.749
3. Hongkong	16.067	13.797	13.797
4. Brunei	14.272	11.422	11.422
5. Singapore	9.159	7.121	6.645
6. Malaysia	8.947	10.527	10.527
7. Philippines	8.489	10.942	10.073
8. Myanmar	8.041	8.041	8.041
9. Vietnam	8.188	13.989	13.989
10. Thailand	7.100	7.100	6.773
11. Indonesia	4.555	5.588	4.338
12. Laos PDR	2.724	3.742	2.516

IMPACT OF REFORMS

World Bank Report, May 2003

- **Philippines received favorable ratings**
- **Of the 15 firms with investments:**
  - **13 reported satisfaction with their investment experience**
  - **7 said they had best experience in investment**



Source: Survey of International Investors in the Power Sector 2002, The World Bank Group

IMPACT OF REFORMS

World Bank Report, May 2003

- **Investors still consider some developing countries as prospects for more investments**
  - **RP ranks 2nd next to Brazil**

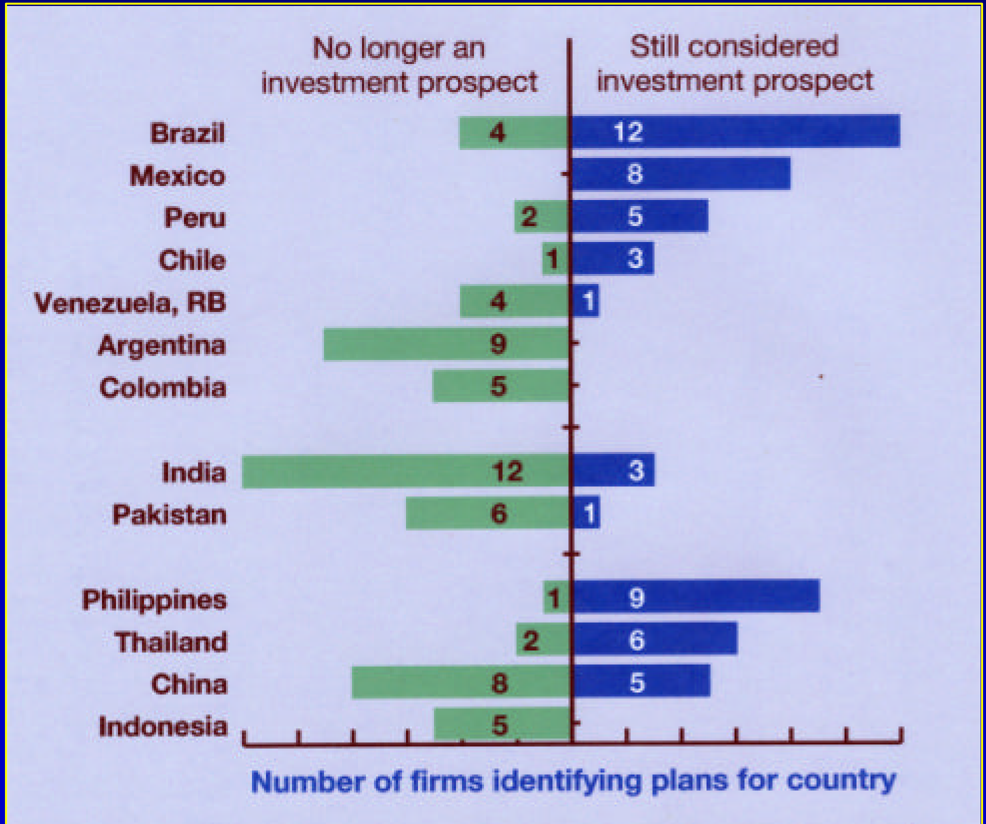


Figure includes only the countries mentioned most frequently by survey respondents

Source: Survey of International Investors in the Power Sector 2002, The World Bank Group

CONCLUSION

CONCLUSION

Way Forward

- **Power reform is only a 2-year old work-in-progress & would need the support of the private sector to make is successful**
- **Significant progress made despite difficult environment & new challenges**
- **We need to build new power plants NOW to mitigate power shortage by 2004 (Visayas), 2006 (Mindanao) & 2008 (Luzon)**
- **We need viable & sustainable power rates to encourage new investments in power generation and distribution**
- **As we proceed with the privatization process, the Government reiterates its position of upholding the sanctity of all contracts**

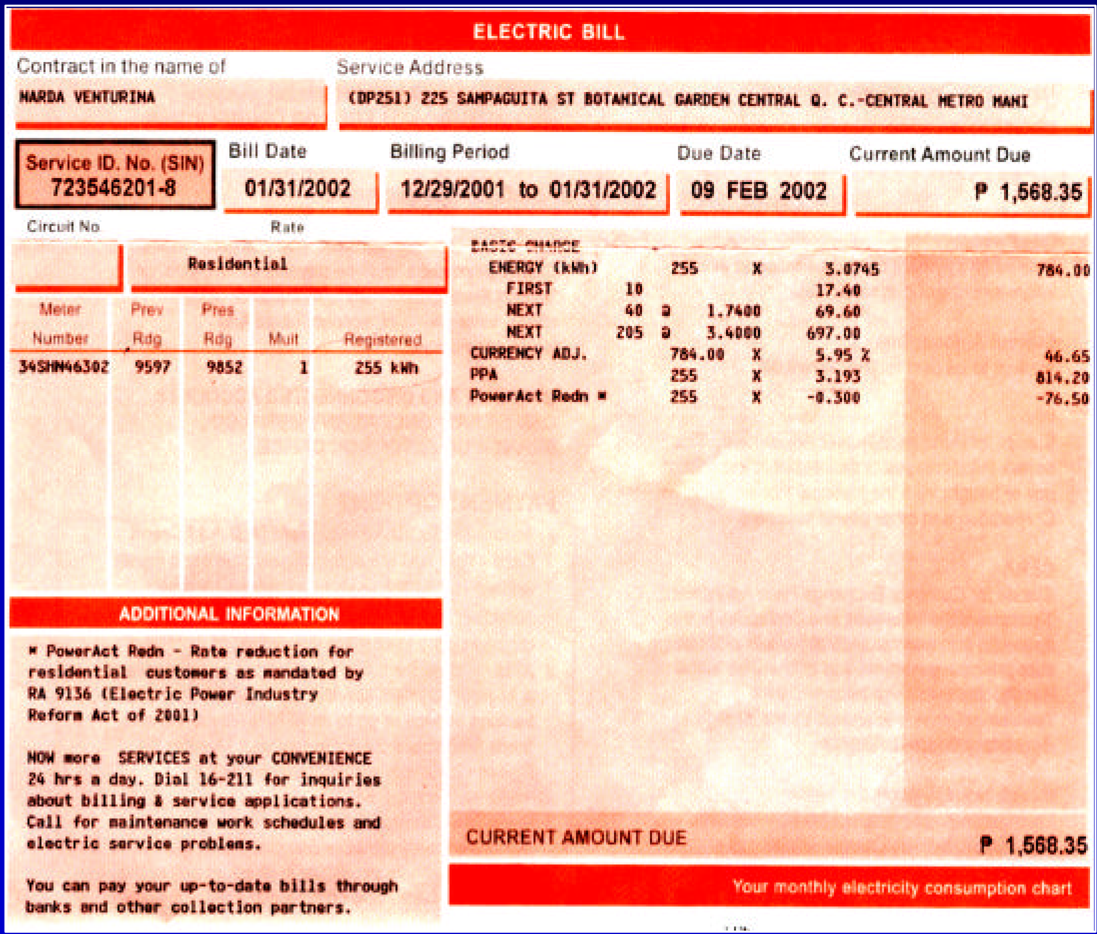
"No electricity is the most expensive electricity"

THANK YOU!

www.doe.gov.ph

MERALCO UNBUNDLING

Sample Billing Prior to Unbundling



ELECTRIC BILL

Contract in the name of: NARDA VENTURINA

Service Address: (DP251) 225 SAMPAGUITA ST BOTANICAL GARDEN CENTRAL Q. C.-CENTRAL METRO MANI

Service ID. No. (SIN)	Bill Date	Billing Period	Due Date	Current Amount Due
723546201-8	01/31/2002	12/29/2001 to 01/31/2002	09 FEB 2002	₱ 1,568.35

Circuit No	Rate
	Residential

Meter Number	Prev Rdg	Pres Rdg	Mult	Registered
34SHN46302	9597	9852	1	255 kWh

BASIC CHARGE					
ENERGY (kWh)		255 X		3.0745	784.00
FIRST	10			17.40	
NEXT	40	@	1.7400	69.60	
NEXT	205	@	3.4000	697.00	
CURRENCY ADJ.		784.00 X		5.95 %	46.65
PPA		255 X		3.193	814.20
PowerAct Redn *		255 X		-0.300	-76.50

CURRENT AMOUNT DUE ₱ 1,568.35

Your monthly electricity consumption chart

ADDITIONAL INFORMATION

* PowerAct Redn - Rate reduction for residential customers as mandated by RA 9136 (Electric Power Industry Reform Act of 2001)

NOW more SERVICES at your CONVENIENCE 24 hrs a day. Dial 16-211 for inquiries about billing & service applications. Call for maintenance work schedules and electric service problems.

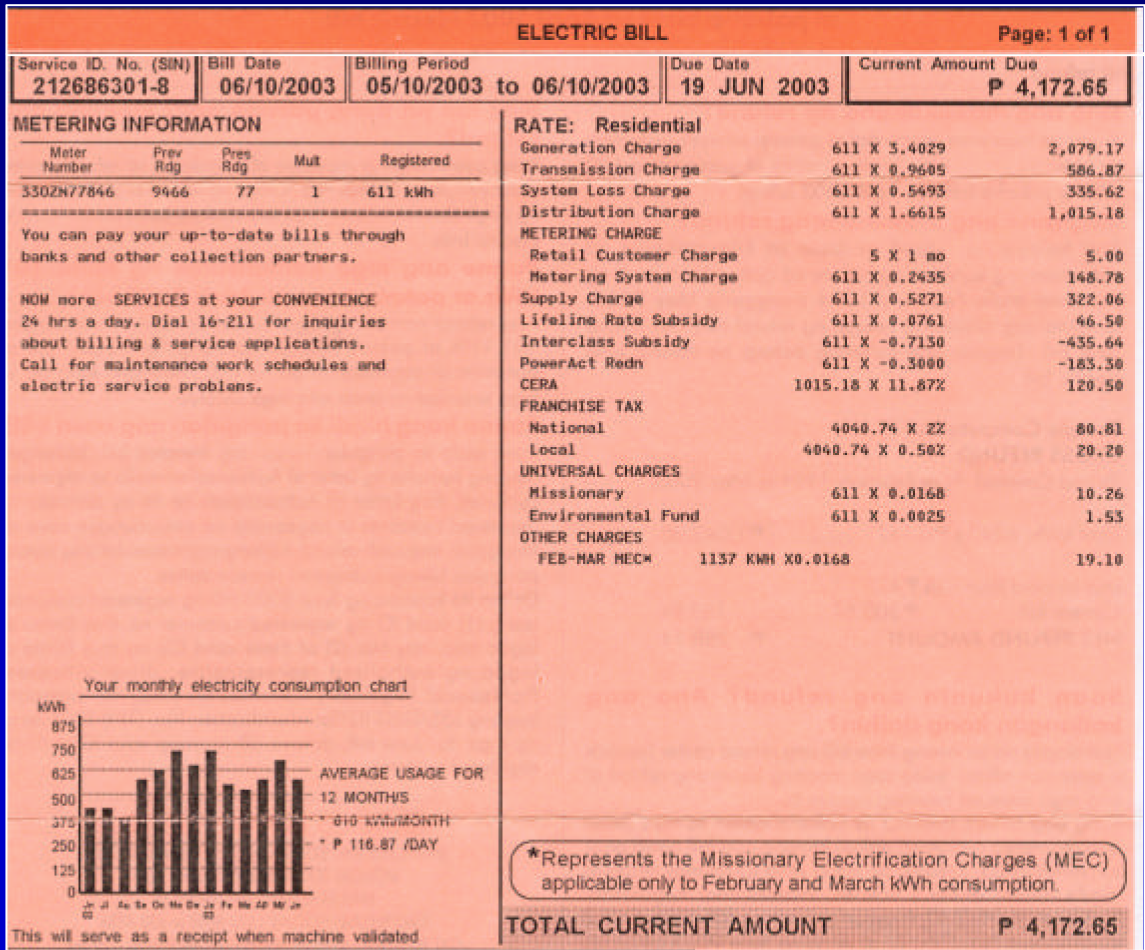
You can pay your up-to-date bills through banks and other collection partners.

Components:

1. **Basic Charge**
2. **Currency Adjustment**
3. **PPA**
4. **Power Act Reduction**

MERALCO UNBUNDLING

Sample Unbundled Billing



ELECTRIC BILL — Page: 1 of 1

Service ID. No. (SIN)	Bill Date	Billing Period	Due Date	Current Amount Due
212686301-8	06/10/2003	05/10/2003 to 06/10/2003	19 JUN 2003	P 4,172.65

METERING INFORMATION

Meter Number	Prev Rdg	Pres Rdg	Mult	Registered
3302N77846	9466	77	1	611 kWh

You can pay your up-to-date bills through banks and other collection partners.

NOW more SERVICES at your CONVENIENCE 24 hrs a day. Dial 16-211 for inquiries about billing & service applications. Call for maintenance work schedules and electric service problems.

Your monthly electricity consumption chart

AVERAGE USAGE FOR 12 MONTH/S
* 610 KWH/MONTH
* P 116.87 /DAY

This will serve as a receipt when machine validated

RATE: Residential

Generation Charge	611 X 3.4029	2,079.17
Transmission Charge	611 X 0.9605	586.87
System Loss Charge	611 X 0.5493	335.62
Distribution Charge	611 X 1.6615	1,015.18
METERING CHARGE		
Retail Customer Charge	5 X 1 mo	5.00
Metering System Charge	611 X 0.2435	148.78
Supply Charge	611 X 0.5271	322.06
Lifeline Rate Subsidy	611 X 0.0761	46.50
Interclass Subsidy	611 X -0.7130	-435.64
PowerAct Redn	611 X -0.3000	-183.30
CERA	1015.18 X 11.87%	120.50
FRANCHISE TAX		
National	4040.74 X 2%	80.81
Local	4040.74 X 0.50%	20.20
UNIVERSAL CHARGES		
Missionary	611 X 0.0168	10.26
Environmental Fund	611 X 0.0025	1.53
OTHER CHARGES		
FEB-MAR MEC*	1137 KWH X0.0168	19.10

*Represents the Missionary Electrification Charges (MEC) applicable only to February and March kWh consumption.

TOTAL CURRENT AMOUNT P 4,172.65

Components:

1. Generation
2. Transmission
3. Systems Loss
4. Distribution
5. Metering
6. Supply
7. Lifeline Rate Subsidy
8. Interclass Subsidy
9. Power Act Reduction
10. CERA
11. Franchise Tax
12. Universal Charges
13. Other Charges
14. Refund

Back

DEPARTMENT OF ENERGY