

# ENERGY DEVELOPMENT CORPORATION

LONG ISLAND INVESTMENTS (TEAM PHILIPPINES)

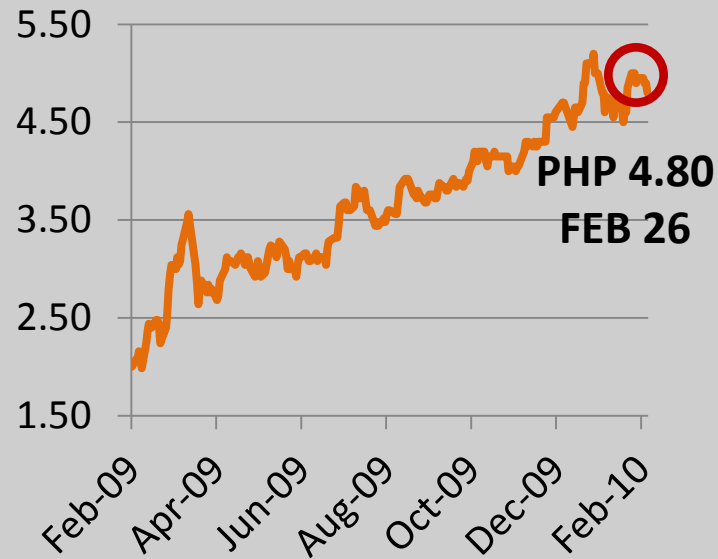


## **ENERGY DEVELOPMENT CORPORATION**

- **Largest geothermal energy producer in the Philippines, 2<sup>nd</sup> in the world**
- **80% of revenues from steam and electricity sales to power distributors**
- **66% of geothermal energy in the country**
- **Fully privatized in 2007**



## EDC'S 52-WEEK STOCK PRICE



Source: Philippine Stock Exchange

**1-YEAR PRICE TARGET: PHP 7.00**

**46% UPSIDE BASED ON DCF-FCFF**

\*FX: PHP 46.26: USD 1

## INVESTMENT MERITS



**BUY RECOMMENDATION**

Regular power interruptions in southern and central Philippines since 2009. News of possible blackouts in Metro Manila last February.

Energy Crisis Calls for Immediate Action

Legislation Favors RE Sector

Geothermal Energy to Remain Competitive

NEWS / A2	BUSINESS / B1	WORLD / A18	ACROSS / A11
<b>Why is there sudden power lack in South?</b>	<b>Pastor Quiboloy says he's no double election registrant</b>	<b>BSP says OFW bond float to hurt exporters</b>	<b>Chile quake, tsunami toll passes 700</b>
<b>Cebu dam water supply drops by 60%</b>			

By Lina Sagara-Reyes  
*Reporter, Mindanews*  
 Army R. Renuo and Gil Cabacungan Jr. in Manila

REELING FROM THE POWER SHORTAGE in Mindanao, rural electric cooperatives suspect that "some sectors might be manipulating events to cause an artificial crisis" on the island.

"Why this sudden power supply shortage in the last two months?" asked Sergio Dago-oc, president of the Association

PHILIPPINE DAILY INQUIRER  
 BALANCED NEWS, FEARLESS VIEWS

Tuesday, March 2, 2010 \*\* 5 sections / Vol. 25 / No. 84 P18

**Power play at PGH: Is the chief doctor in or out?**

By Jeannette I. Andrade  
*IS THE CHIEF DOCTOR IN?*  
 It depends on which of the opposing camps at Philippine General Hospital (PGH) you asked.

The historic govern- POWER PLAY: AA



# Brownouts hit Luzon

**Metro now also reeling from power shortage**

By Army R. Renuo

ROTATING BROWNOUTS yesterday hit Luzon, including Metro Manila, because of the breakdown of certain units of the island's three coal-fired power plants. More brownouts are expected in the



**GMA AT PMA**  
 President Macapagal-Arroyo troves the line for the last time at the Philippine Military Academy where she arrived late for the graduation rites of the "Masiklat" Class 2010 at Fort del Pilar in Baguio City on Monday. She speaks at length about the legacy of her nine-year administration but gives no forecast for well as

Source: Philippine Daily Inquirer

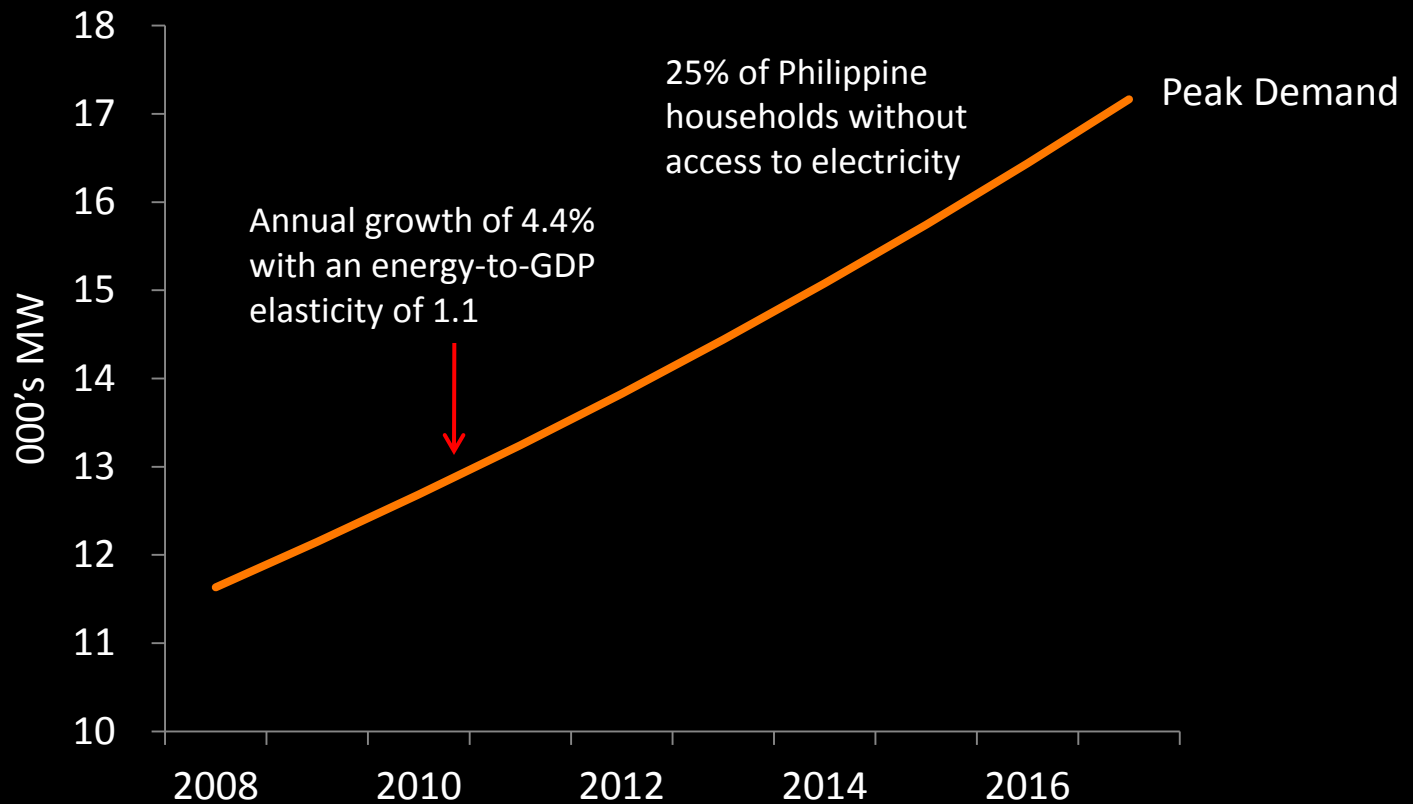
Regular power interruptions in southern and central Philippines since 2009.  
News of possible blackouts in Metro Manila last February.

Energy Crisis  
Calls for  
Immediate  
Action

Legislation  
Favors RE  
Sector

Geothermal  
Energy  
Prevails Over  
Competition

### Philippine Energy Demand and Supply



Source: Department of Energy (Philippines)

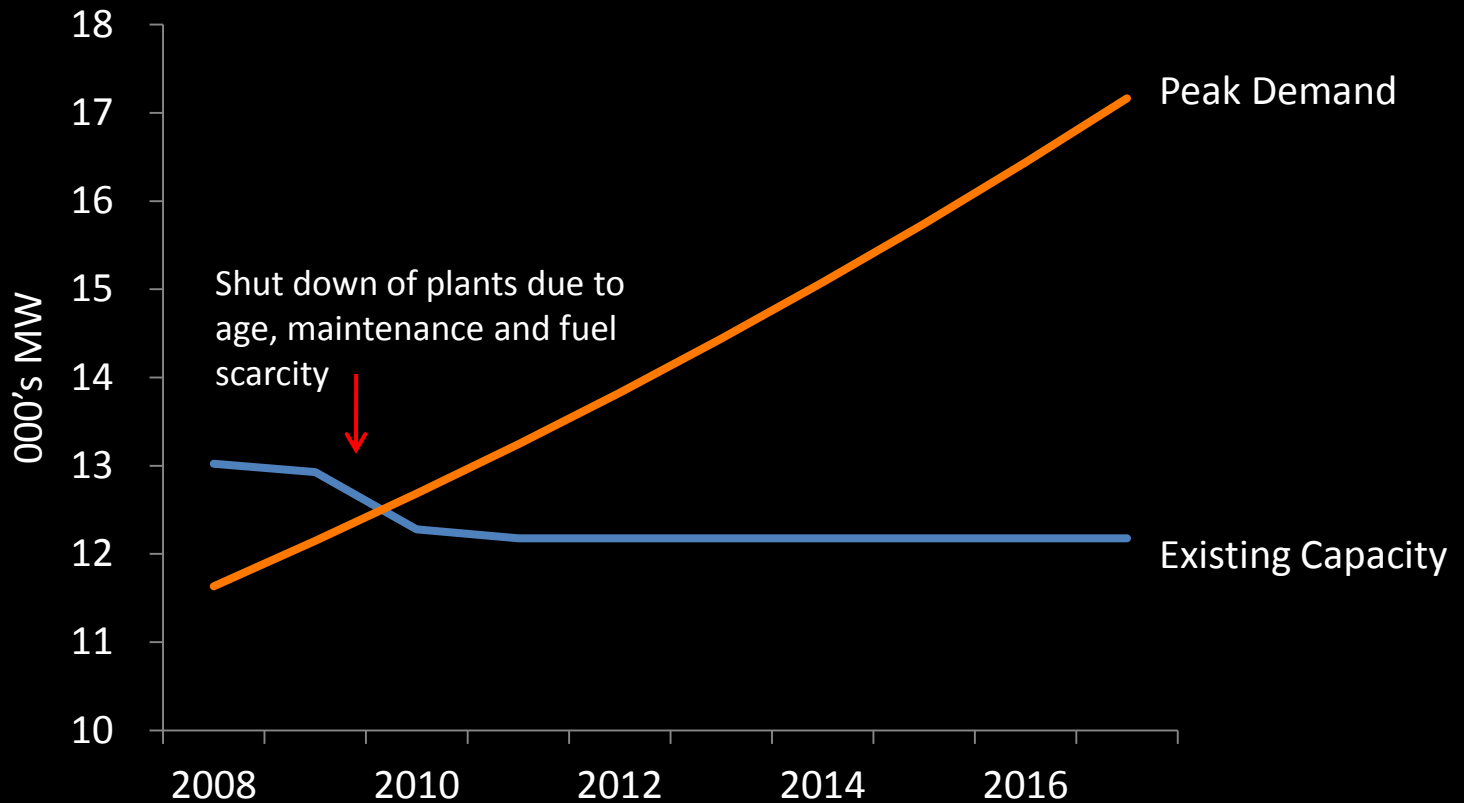
**Regular power interruptions in southern and central Philippines since 2009. News of possible blackouts in Metro Manila last February.**

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**Energy Demand vs. Supply**



Source: Department of Energy (Philippines)

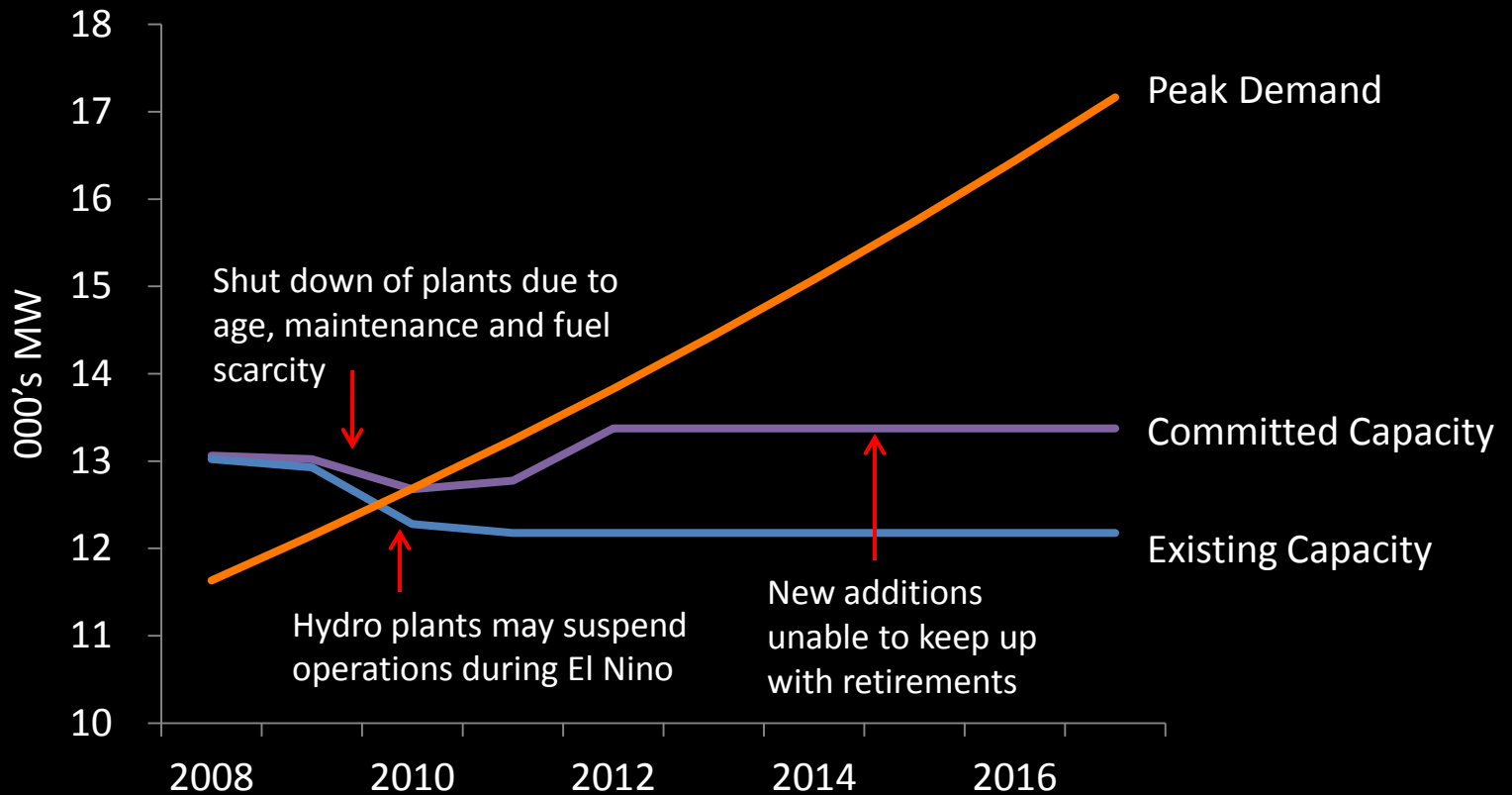
**Regular power interruptions in southern and central Philippines since 2009. News of possible blackouts in Metro Manila last February.**

**Energy Crisis Calls for Immediate Action**

Legislation Favors RE Sector

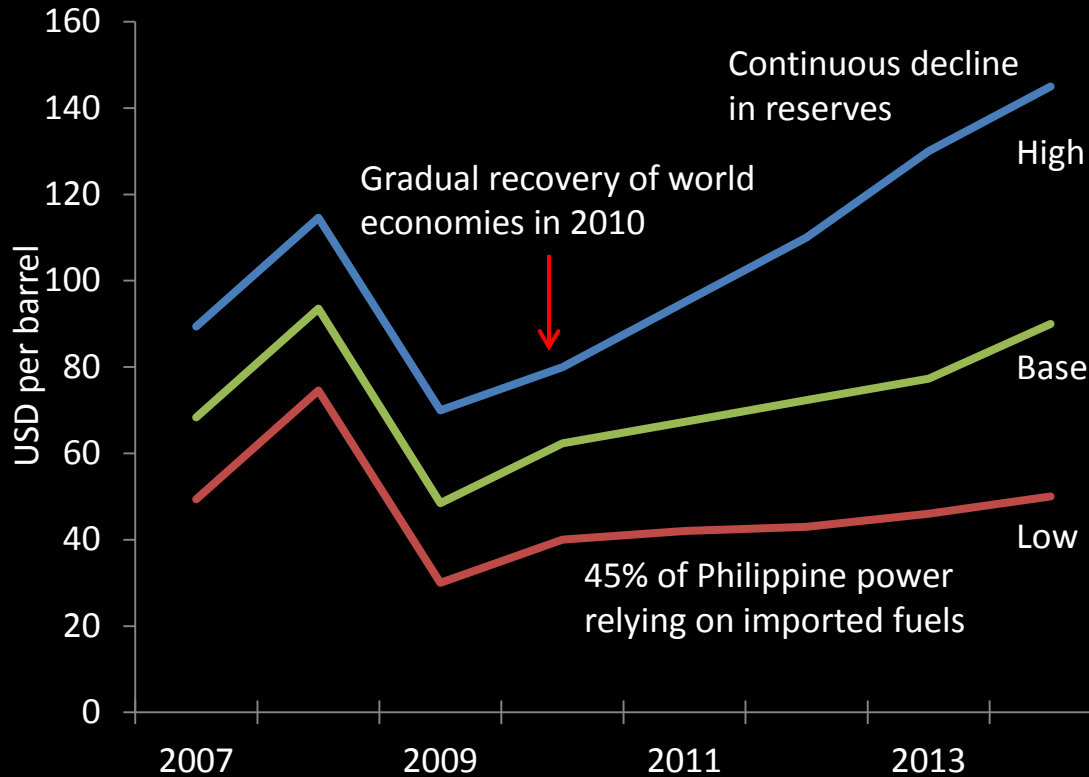
Geothermal Energy to Remain Competitive

### Energy Demand vs. Supply



Source: Department of Energy (Philippines)

## Dubai Crude Oil Price Forecast



Source: Asian Development Bank (Asian Development Outlook)

### Electricity Rates, 2006 In US cents per kWh

Japan	17.54
Philippines	14.01
Hongkong	13.44
India	11.42
Indonesia	11.32
Singapore	10.59
Vietnam	9.83
China	8.24
Thailand	7.92
Malaysia	6.71

Source: Wholesale  
Electricity Market  
Report

Energy Crisis  
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Geothermal  
Energy to  
Remain  
Competitive

**Only sustainable option is to develop low-cost indigenous energy sources**



**2009 RE Law**  
(Renewable Energy Law)

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Immediate  
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Geothermal  
Energy to  
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Competitive

Incentives	Pre-RE Law	RE Law
Corporate Income Tax Rate	30%	10%
Income Tax Holiday for New Plants	5 years	7 years
Royalty Fees for Use of Steam Fields (% of gross revenues)	6%	1.5%

**Incentives to trigger RE investments of over PHP 90B**

Energy Crisis  
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Current  
Energy Crisis

Favorable  
Legislation

- Attractive picture for RE industry
- Competitive environment

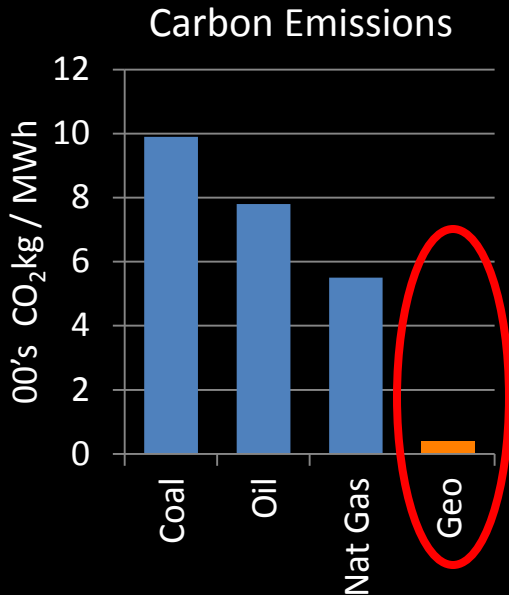
**Geothermal energy is expected to become more relevant in the future.**

Energy Crisis  
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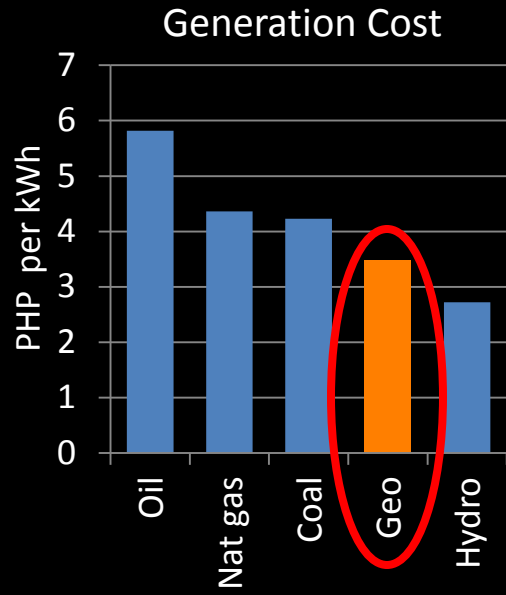
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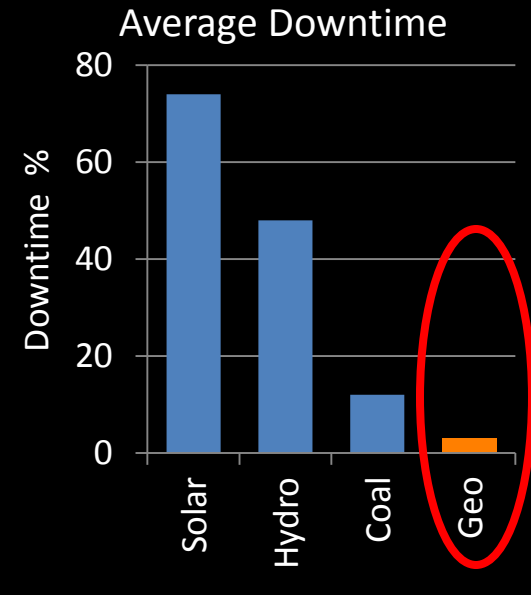
**CLEANER**



**CHEAPER**



**MORE RELIABLE**



Source: Credit Suisse, Department of Energy (Philippines)

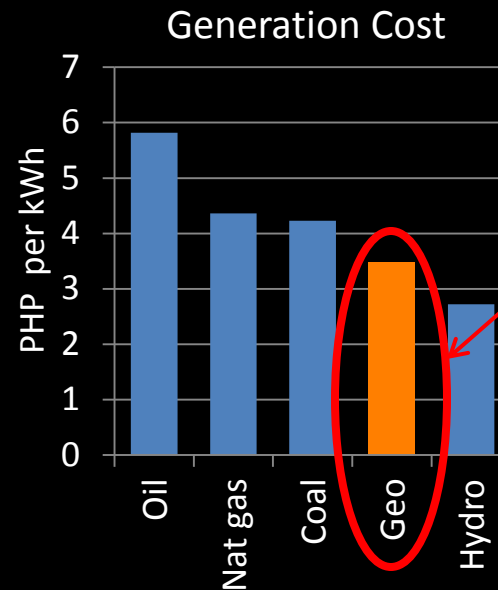
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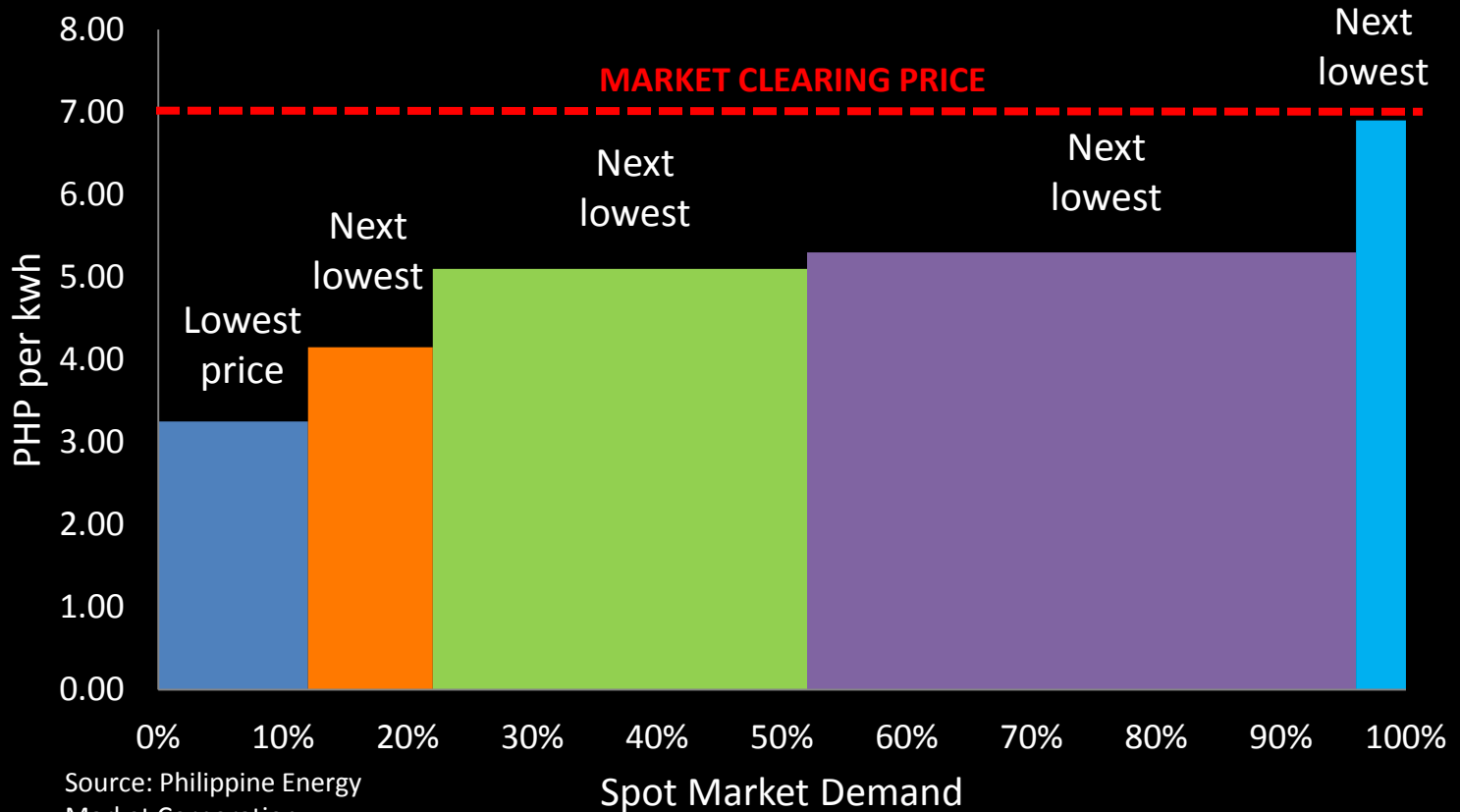
Geothermal  
Energy to  
Remain  
Competitive

CHEAPER



Geothermal energy's  
low cost complements  
the Philippine  
electricity spot market

## Philippine Electricity Spot Market, 2008



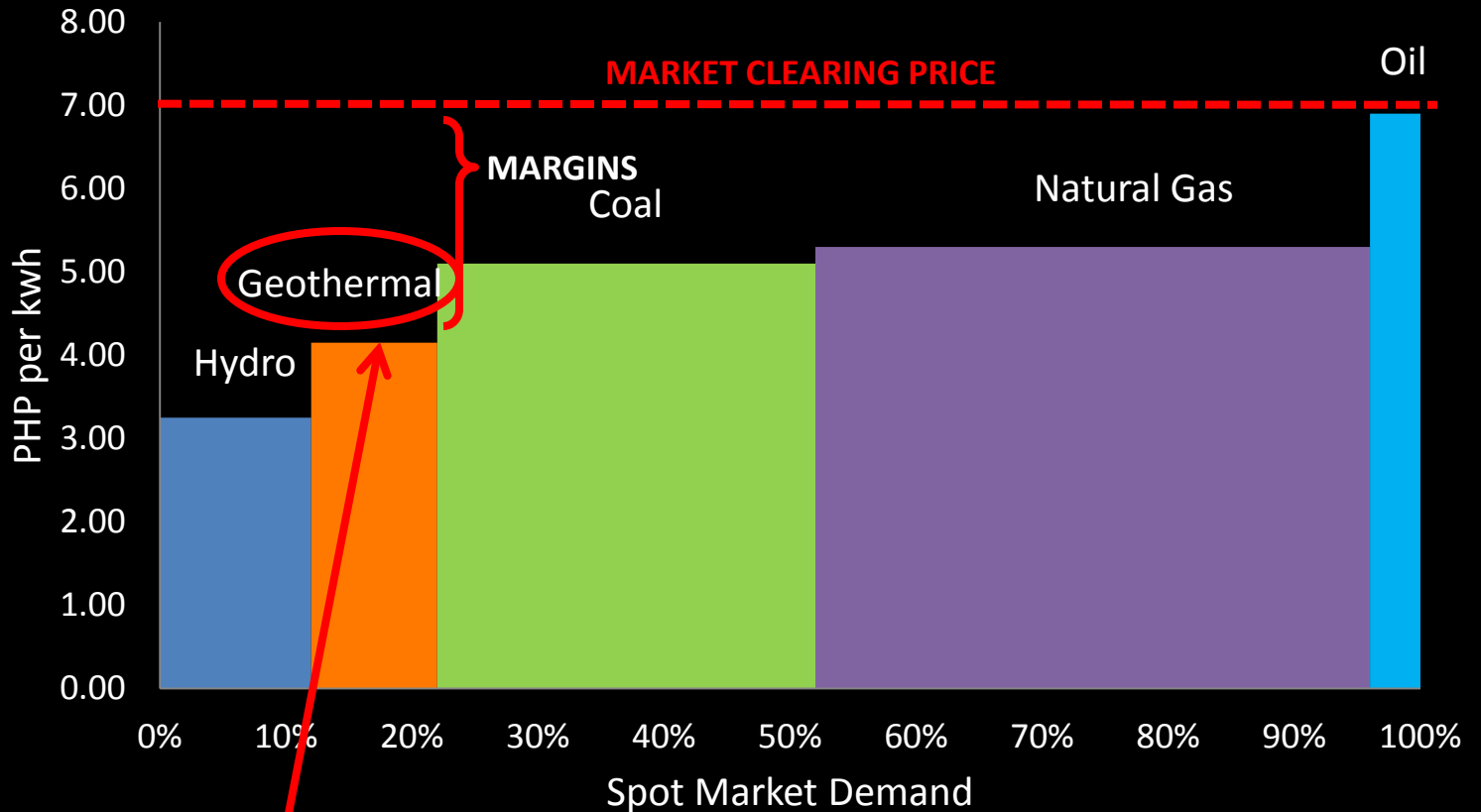
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Geothermal Energy to Remain Competitive

**Energy sources with the lowest prices are first to be dispatched. Process continues until demand for electricity is satisfied. All energy is sold at market clearing price.**

## Philippine Electricity Spot Market, 2008



Energy Crisis Calls for Immediate Action

Legislation Favors RE Sector

**Geothermal Energy to Remain Competitive**

Low cost guarantees all geothermal energy produced is sold. Geothermal suppliers also realize wider margins.

## PLAYERS IN THE PHILIPPINE GEOTHERMAL INDUSTRY

	Steam Field	Power Plant
EDC	✓	✓
Chevron	✓	x
Aboitiz	x	✓

Source: Company Data

Vertical  
Integration  
Strengthens  
Competitive  
Position

Expansion  
Activities  
Address  
Shortage

Higher operating efficiency  
due to coordinated  
scheduling of resources

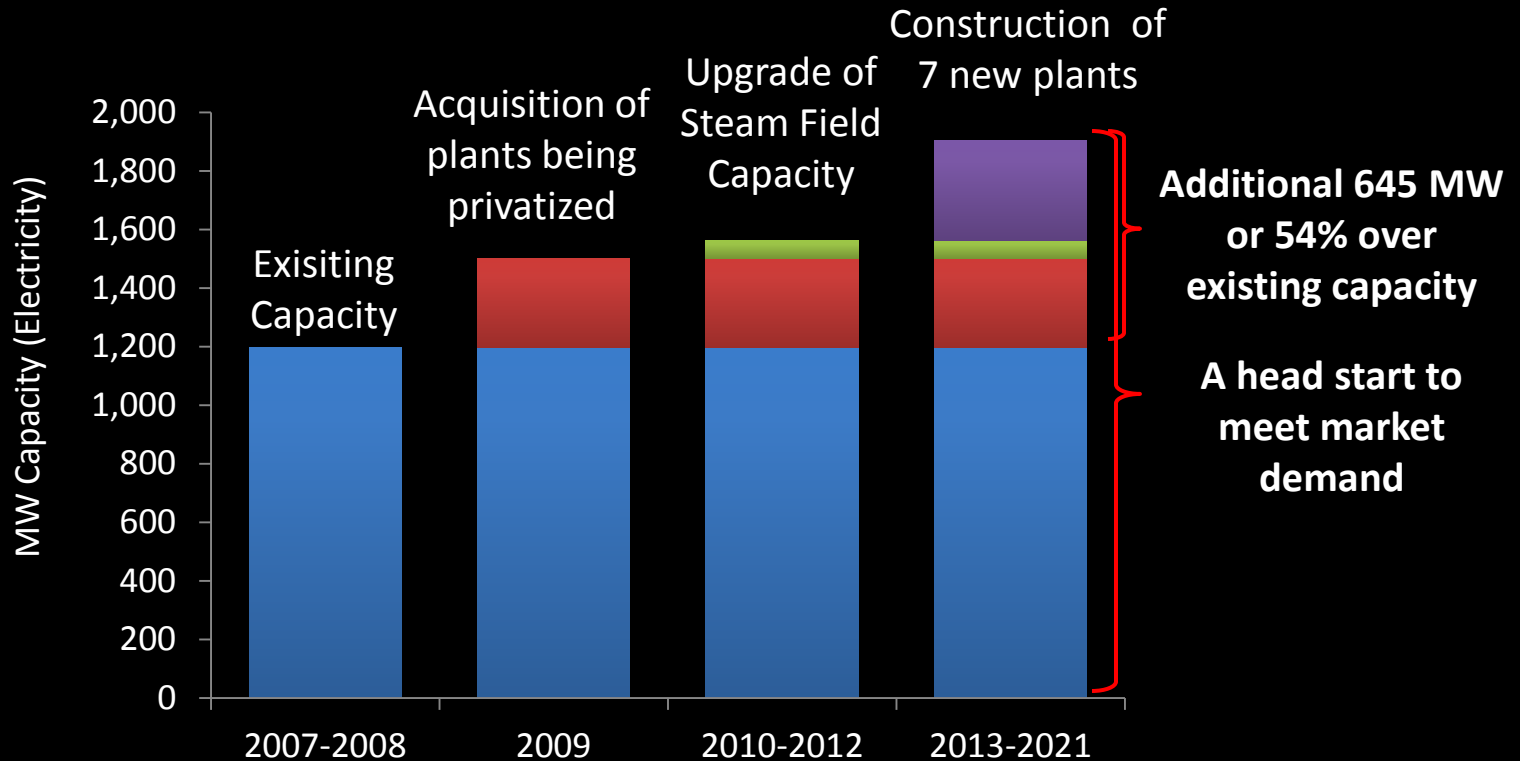
Lower production costs by  
30% due to internal  
generation of steam

**EDC will have over 1,600 MW in installed capacity by the time new geothermal entrants complete their exploration stages which take a minimum of 6 years**

## EDC's Expansion Activities

Vertical  
Integration  
Strengthens  
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Position

Expansion  
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Address  
Shortage

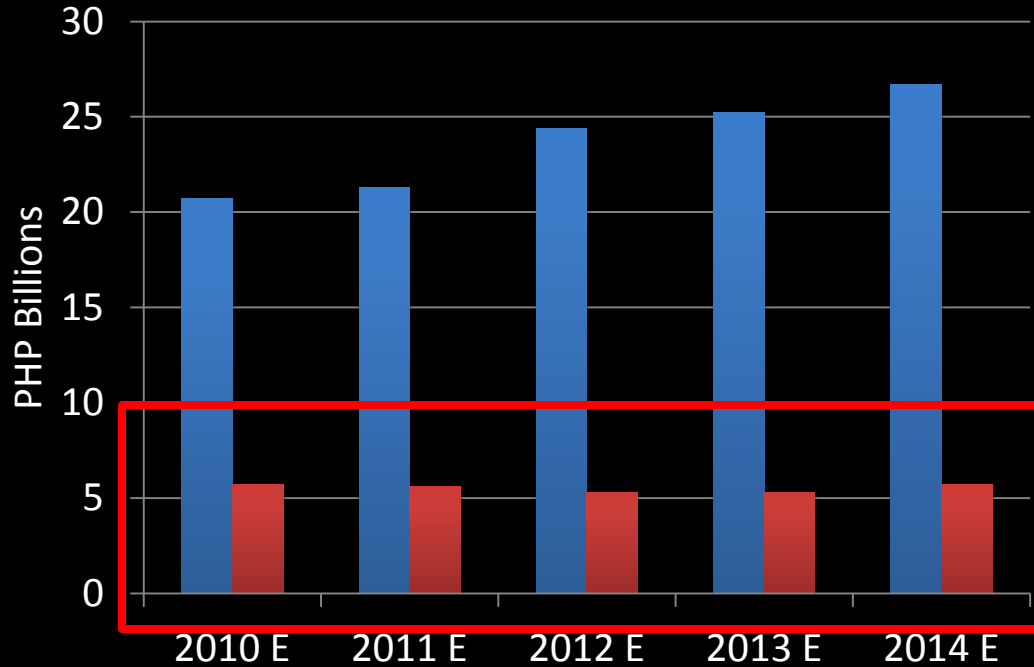


Source: Company Data



Available financing to support expansion activities

EDC's OCF and CAPEX



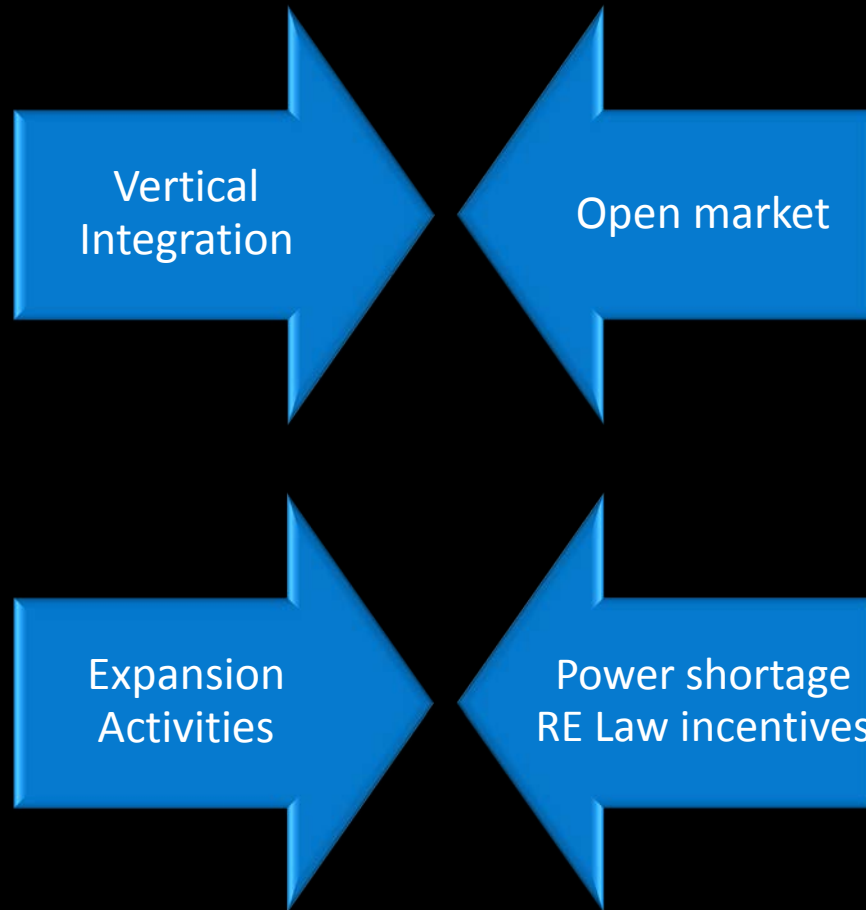
Construction requires only 20% of OCF for new plants

Vertical Integration Secures Dominance

Expansion Activities Address Shortage

## EDC's Strategies

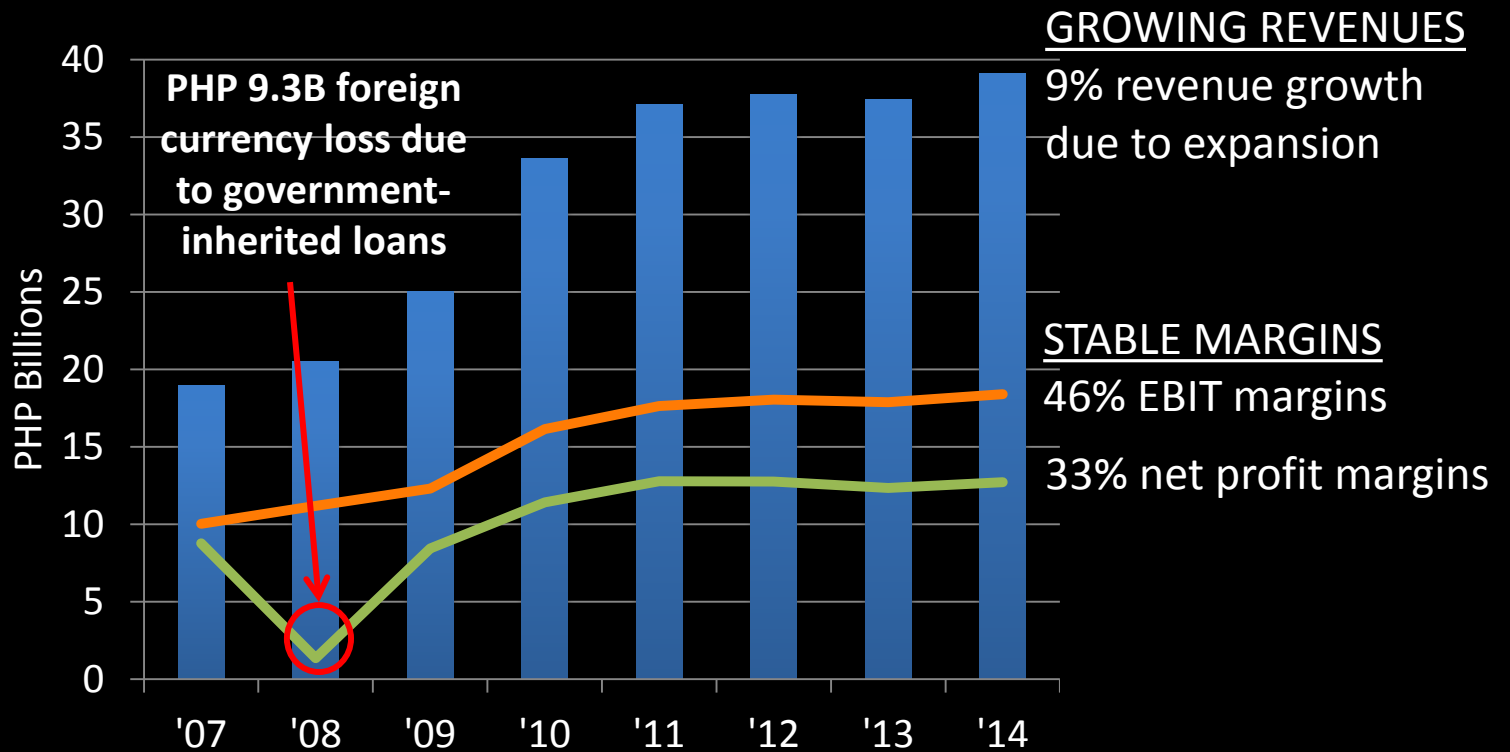
## Industry Opportunities Maximized



## Financial Performance

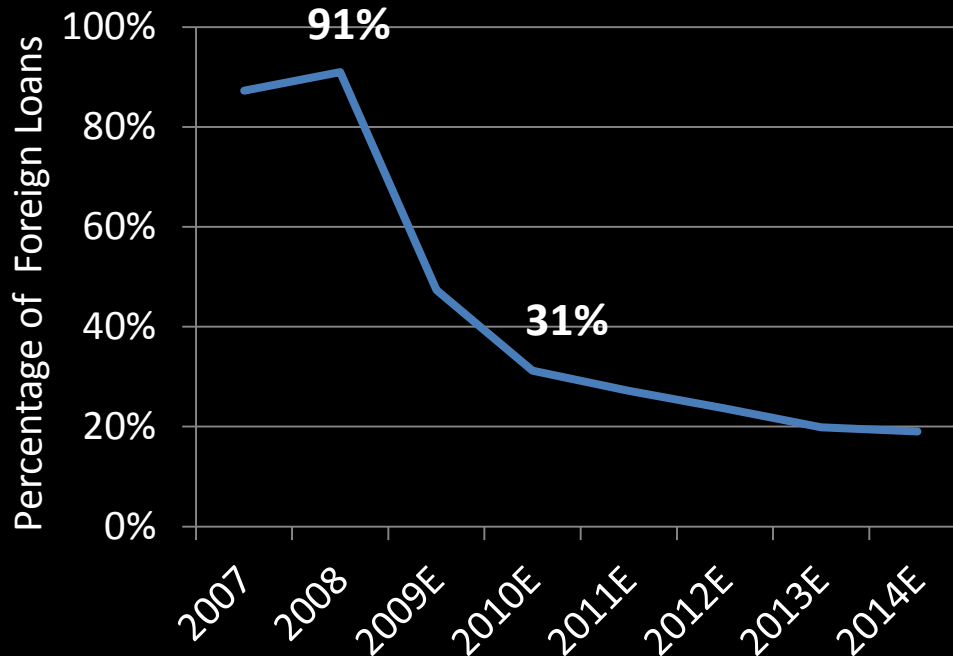
**Strong  
Financial  
Prospects  
Drive Upside**

**Manageable  
Risks Prove  
Resilience**



## Financial Performance

### % Foreign Loans



Strong  
Financial  
Prospects  
Drive Upside

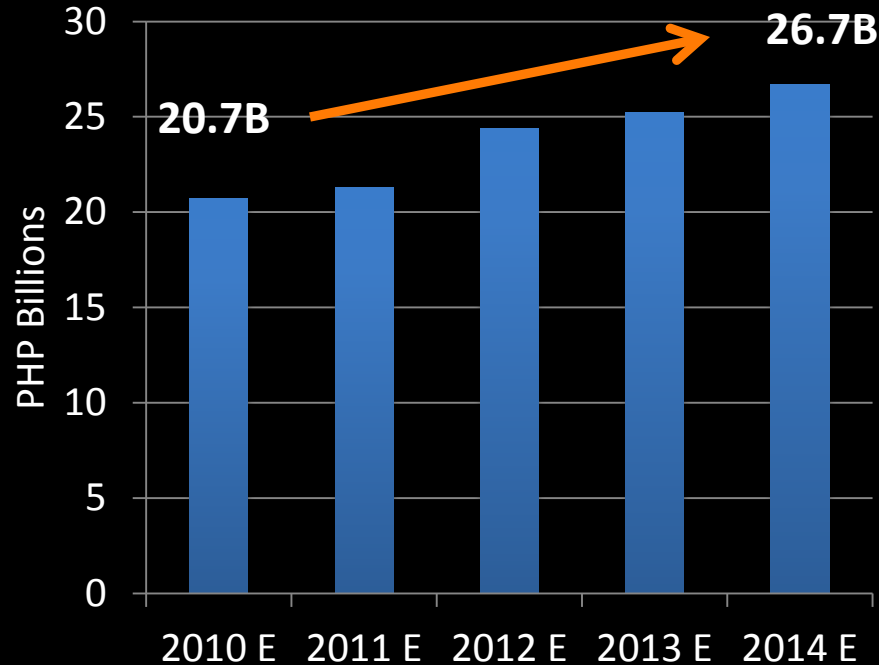
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### IMPROVING BALANCE SHEET

Refinancing foreign-currency denominated loans with Peso loans

## Financial Performance

### Operating Cash Flows



Strong  
Financial  
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Drive Upside

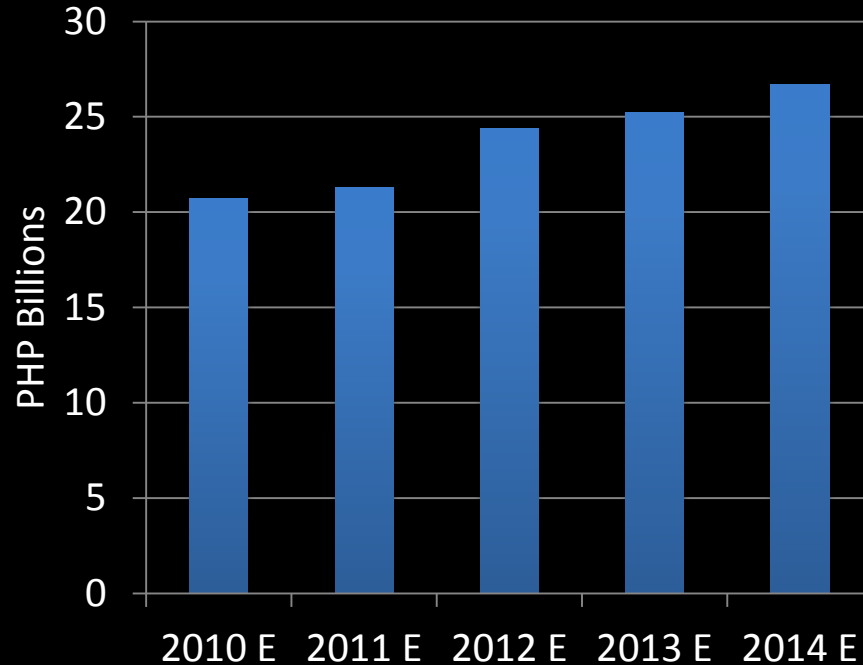
Manageable  
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HEALTHY CASH  
GENERATION

Recurring streams of  
cash flows

## Valuation

### Operating Cash Flows



**Strong  
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**Manageable  
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Projected until 2031  
when rights over steam  
fields expire

### PRIMARY ASSUMPTIONS

COST OF CAPITAL	
Cost of Debt	8.5%
Cost of Equity	13.9%
Risk-free Rate	9.25%
Market Return	12.86%
Beta	1.1
Debt Ratio	55%
WACC	10.9%

**PRICE TARGET PHP 7.00**

**Strong  
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<b>VALUE DRIVERS</b>	<b>FCFE</b>
<b>Value from Existing Plants</b>	<b>PHP 3.40</b>
Preferential tax treatment	1.70
Lower royalty fees	0.40
<b>Value of RE Law Savings on Old Plants</b>	<b>PHP 2.10</b>
New plants in Northern Philippines	0.80
New plants in Central Philippines	0.50
New plants in Southern Philippines	0.20
<b>Value from New Plants*</b>	<b>PHP 1.50</b>
<b>PRICE TARGET</b>	<b>PHP 7.00</b>
<b>UPSIDE</b>	<b>46%</b>

*\*Net of additional RE Law savings thereon*

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ASIA POWER UTILITIES	2010 P/E
<b>Renewables</b>	<b>20.6</b>
EDC	10.6
China Yangtze Power	18.5
<b>Integrated Utilities</b>	<b>13.7</b>
Aboitiz Power	11.7
Hongkong Electric	13.6
<b>Independent Power Producers</b>	<b>11.8</b>
Guangdong Electric	11.5
Huaneng Power	11.4

Source: Bloomberg



Strong  
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Risk Category	Sources of Risk	Mitigating Factors
Operational	Open market <b>increases competition</b>	Cost leadership
	Natural disasters <b>disrupt plant efficiency</b>	Geographically-dispersed plants
	Equipment failures require <b>more maintenance costs</b>	Continuous facility maintenance and upgrades

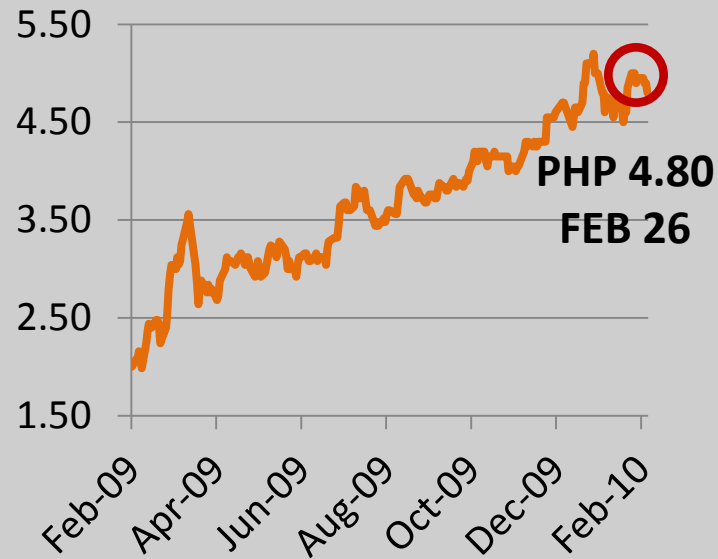
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Risk Category	Sources of Risk	Mitigating Factors
<b>Financial</b>	Interest rate and exchange rate volatility causes <b>unpredictable cash outflows</b>	Fixed interest rates More Peso-denominated loans Triple A bond rating
<b>Political</b>	Government may attempt to put <b>a cap on energy rates</b>	Only deters private investments and worsens energy crisis



## EDC'S 52-WEEK STOCK PRICE



Source: Philippine Stock Exchange

**1-YEAR PRICE TARGET: PHP 7.00**  
**46% UPSIDE BASED ON DCF-FCFF**

## INVESTMENT MERITS

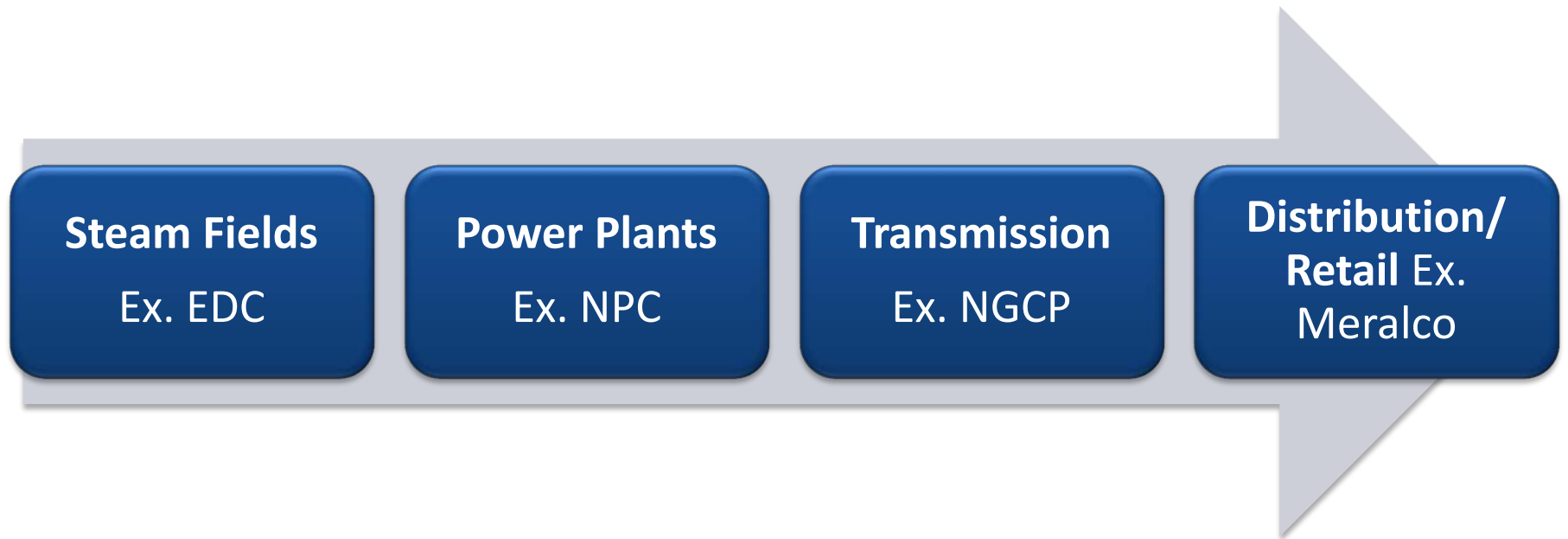


**BUY RECOMMENDATION**

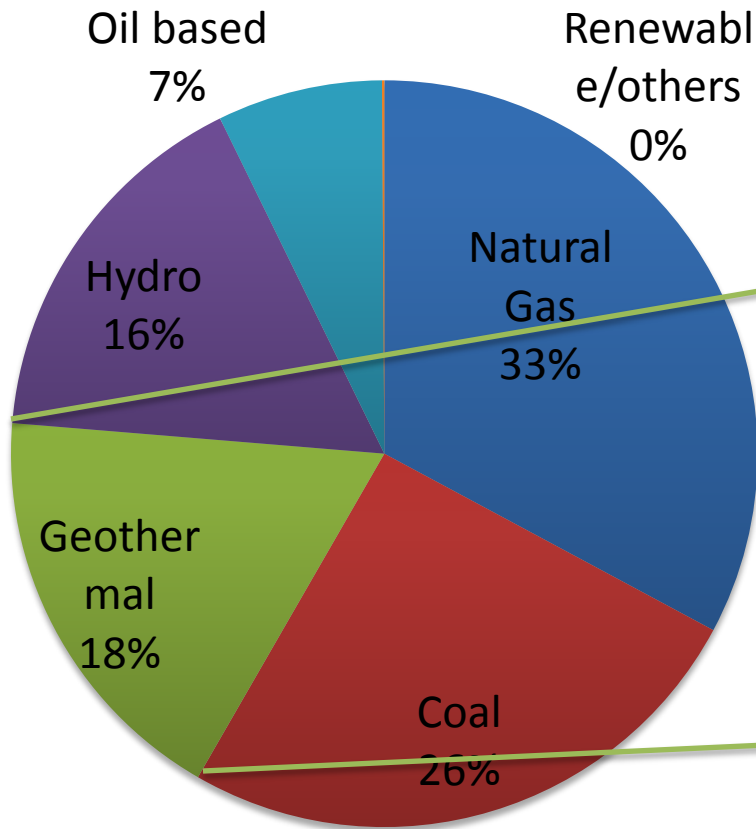


# Industry Information

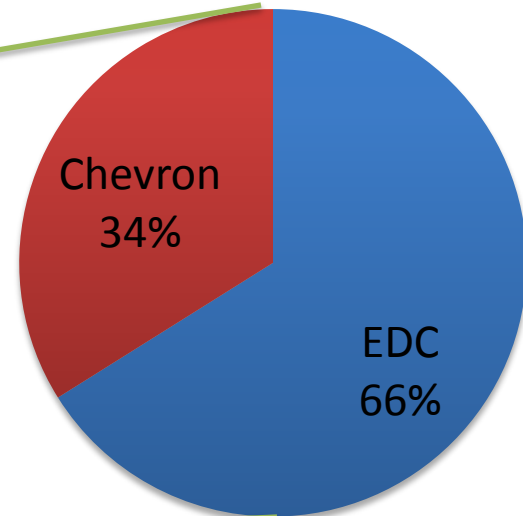
# The Geothermal Industry Value Chain



# Philippine Energy Mix & The Role of Geothermal Energy



## Share in the Geothermal Industry



**Philippine Energy Mix: Electricity Generated in GWh**

- Geothermal energy accounts for 18% of the Philippine power mix – 66% of which is contributed by EDC

# Top 5 Countries in Installed Geothermal Capacity in 2008

	Country	Geothermal Capacity in MW	Company
1	USA	2,687	Chevron – 1273 MW
2	Philippines	1,976	EDC – 1198 MW
3	Indonesia	992	
4	Mexico	953	
5	Italy	810	

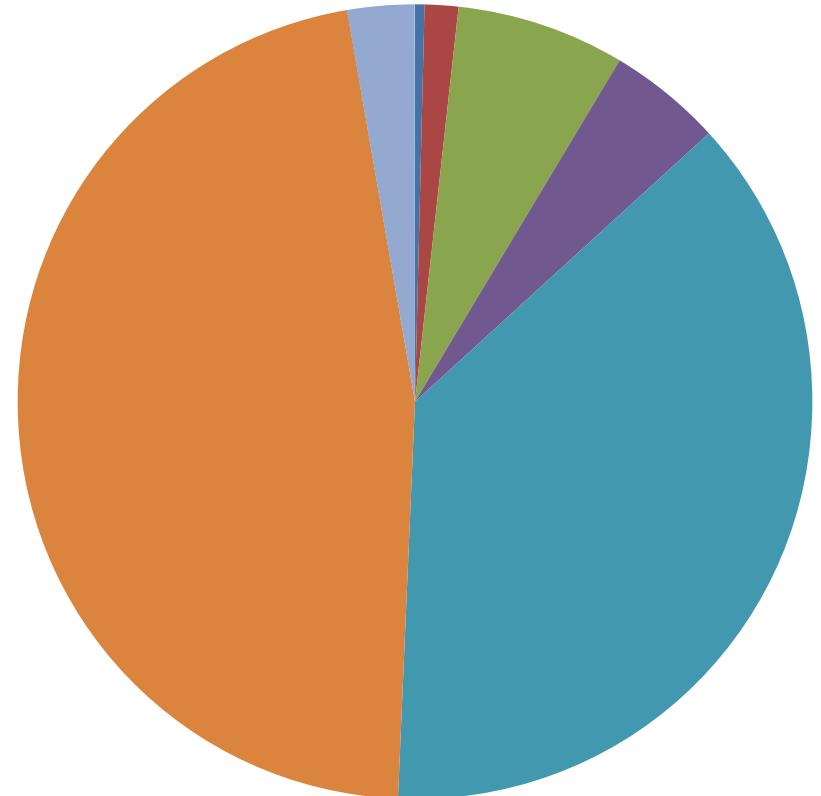
Source: Geo Resources Council Bulletin



# Geothermal Plant Development Costs

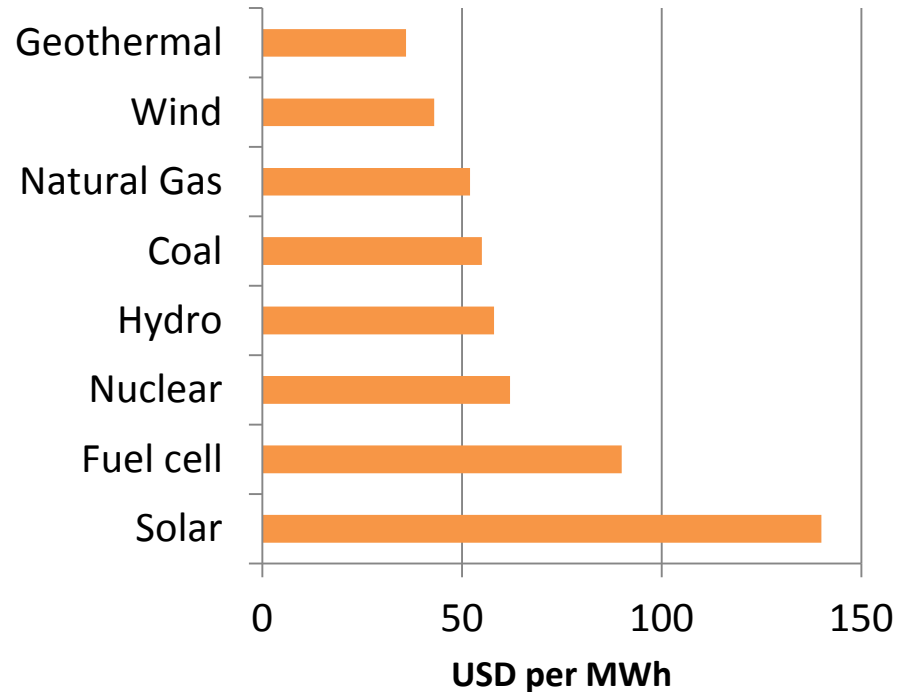
Developmental Stage	Cost (\$ per kW installed)
Exploration Stage	14
Permitting	50
Steam Gathering	250
Exploratory Drilling	169
Production Drilling	1367
Plant Construction	1700
<b>Total</b>	<b>3,550</b>

Source: Geothermal Technologies Market Report, 2008



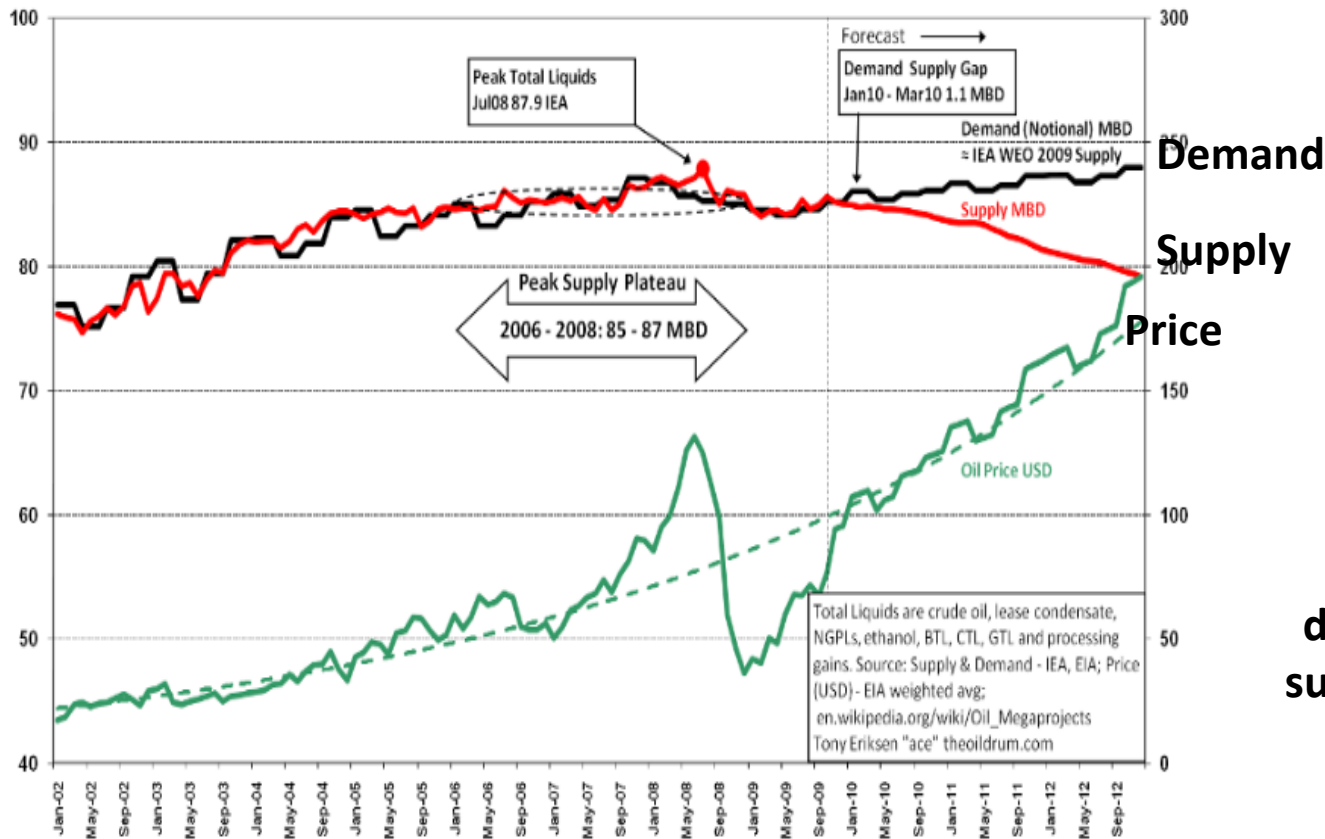
# Levelized Cost of Electricity in 2009

**Levelized cost of electricity** refers to the average cost of power production over the life of a plant. It considers: (1) upfront capital investments, (2) operating and maintenance costs and (3) fuel costs for plants that rely on external fuel sources.



Source: Credit Suisse

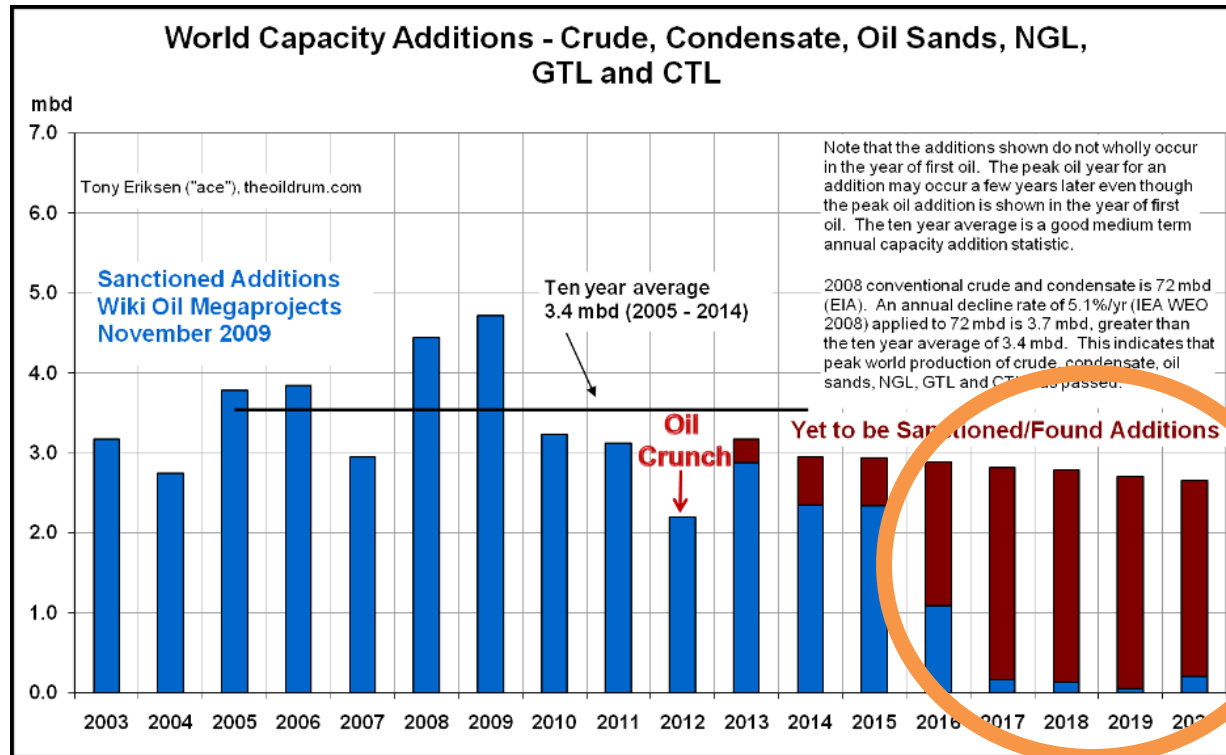
# World Total Liquids Supply, Demand, Prices



Source: International Energy Agency

Oil prices are expected to rise steadily into the future as **world demand outpaces supply and capacity**

# World Capacity Additions for Oil

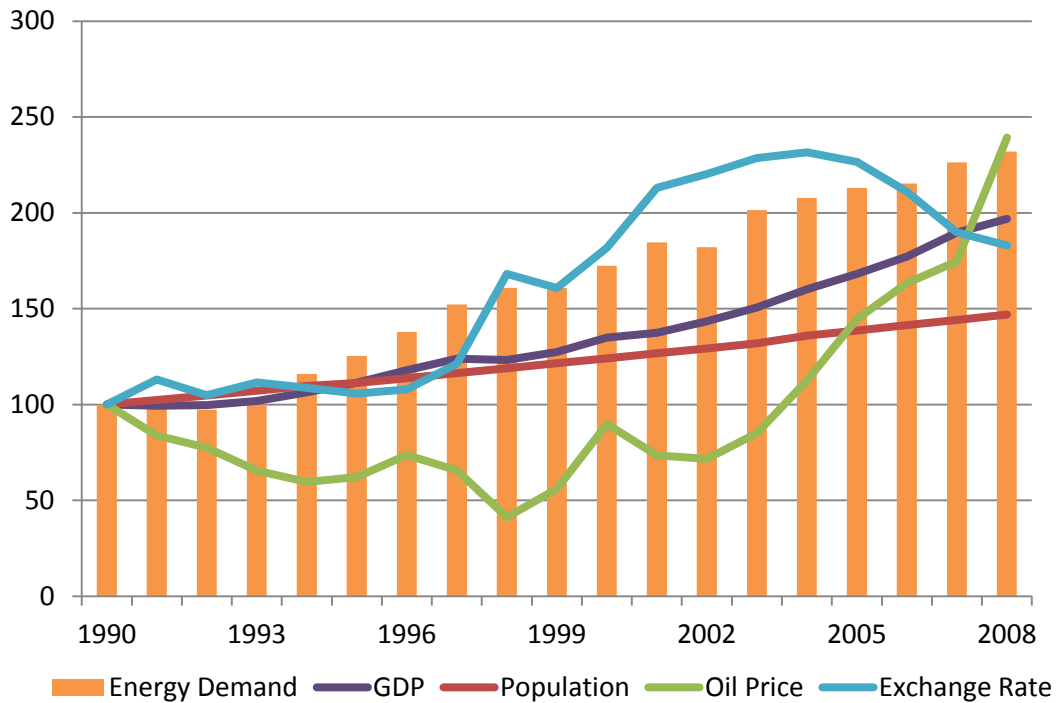


Source: International Energy Agency

Insufficient investments due to more difficult/costly oil exploration/excavation

# Energy Demand Drivers

Energy Demand Drivers



Energy demand **rises with GDP and population growth** and is unaffected by oil prices and exchange rates

# Low Generation Cost

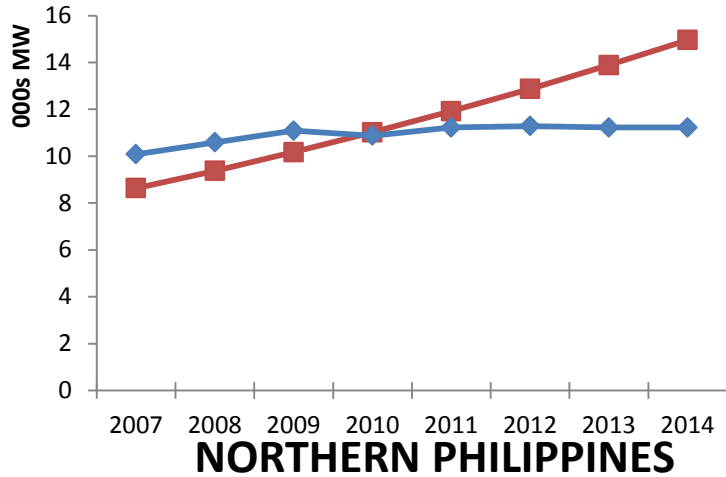
## Energy Sources Ranked by Cost

Energy Source	Cost Estimate (Php per kWh)
Hydroelectric	2.72
Geothermal	3.47
Coal	4.23
Natural gas	4.36
Oil-based	5.82

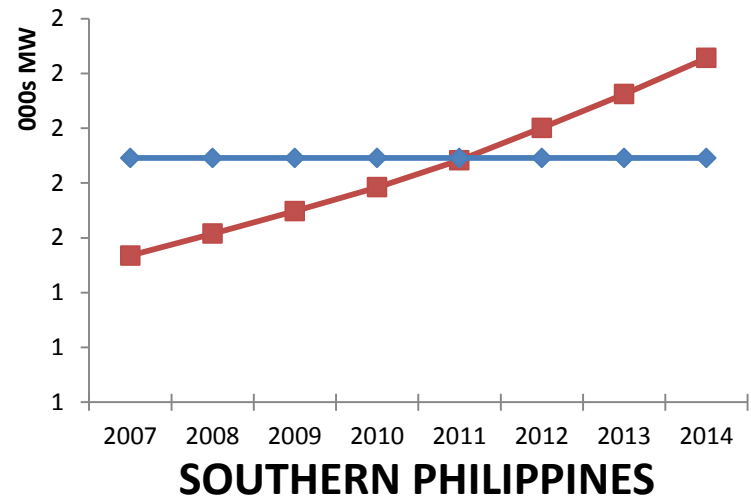
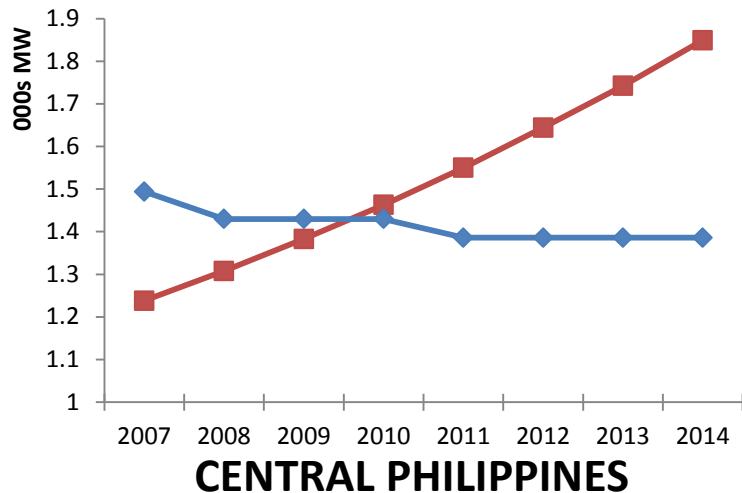
Geothermal energy having one of the **lowest generation costs is among the first to be dispatched**

Source: University of the Philippines College of Engineering

# Per-Grid Energy Situation



The energy crisis in the country is prevalent **in all island grids** with a significant gap in Luzon and Visayas



# Company Information



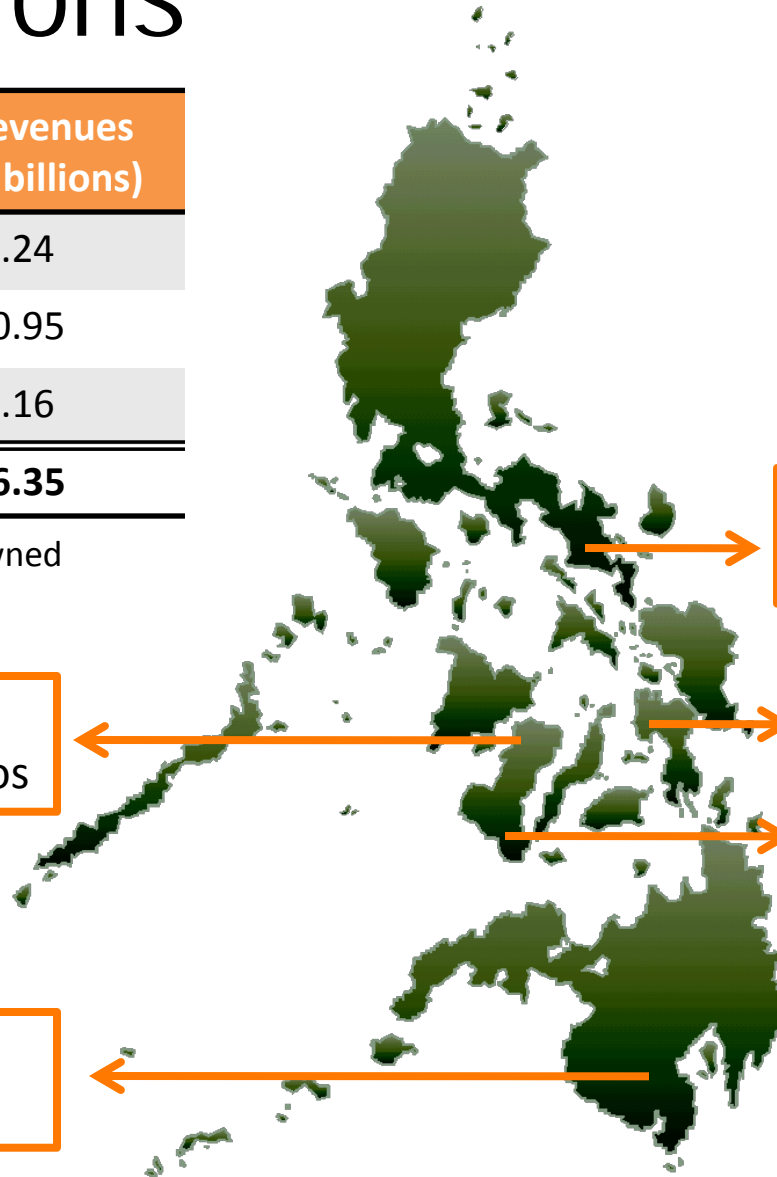
# Plant Locations

Island	MW	2008 Revenues (Php in billions)
Luzon	150	4.24
Visayas	942	10.95
Mindanao	106	1.16
<b>Total</b>	<b>1198</b>	<b>16.35</b>

\*Steam fields supplying to NPC-owned power plants

49 MW  
Northern Negros

106 MW  
Mindanao



150 MW  
Bacon-Manito

701 MW  
Unified Leyte

192 MW  
Southern Negros

# 7 New Geothermal Power Plants

Name	Location	Capacity (MW)	Target Start of Operations
Nasulo	Visayas	20	2013
Mindanao 3	Mindanao	50	2013
Dauin	Visayas	40	2015
Tanawon	Luzon	40	2017
Rangas	Luzon	40	2018
Kayabon	Luzon	40	2019
Southern Leyte	Visayas	50-80	2021
<b>TOTAL</b>		<b>280-310</b>	

# Privatization of NPC-owned Geothermal Plants

Year	NPC asset	Capacity (in MW)	Winning Bidder
2007	Tiwi-Makban	747.5	Aboitiz
2009	Tongonan	112.5	EDC
2009	Palinpinon I & II	192.0	EDC
2010	BacMan I & II	150.0	-

Source: Power Sector Assets and Liabilities Management

# EDC's Sales Contracts

Field or Plant	Present - 2012	2013 - 2022	2023-2024	2025 - 2031
Tongonan	Bilateral Contracts***			
Unified Leyte	Power Purchase Agreement*		Bilateral Contracts***	
Northern Negros	Electricity Sales Agreement**	Bilateral Contracts***		
Palinpinon I	Bilateral Contracts***			
Palinpinon II	Bilateral Contracts***			
BacMan I	Geothermal Resource Service Contract**			
BacMan II	Geothermal Resource Service Contract**			
Mindanao I	Power Purchase Agreement*		Bilateral Contracts***	
Mindanao II	Power Purchase Agreement*			Bilateral Contracts***

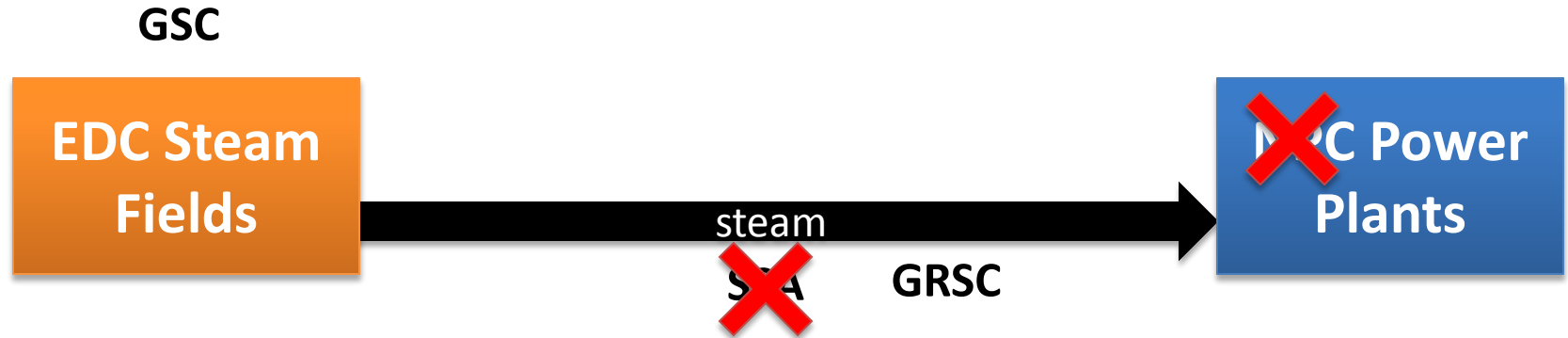
\*With NPC

\*\*With private cooperatives

\*\*\*EDC's stated preference over spot sales in an open market

# EDC's Contracts

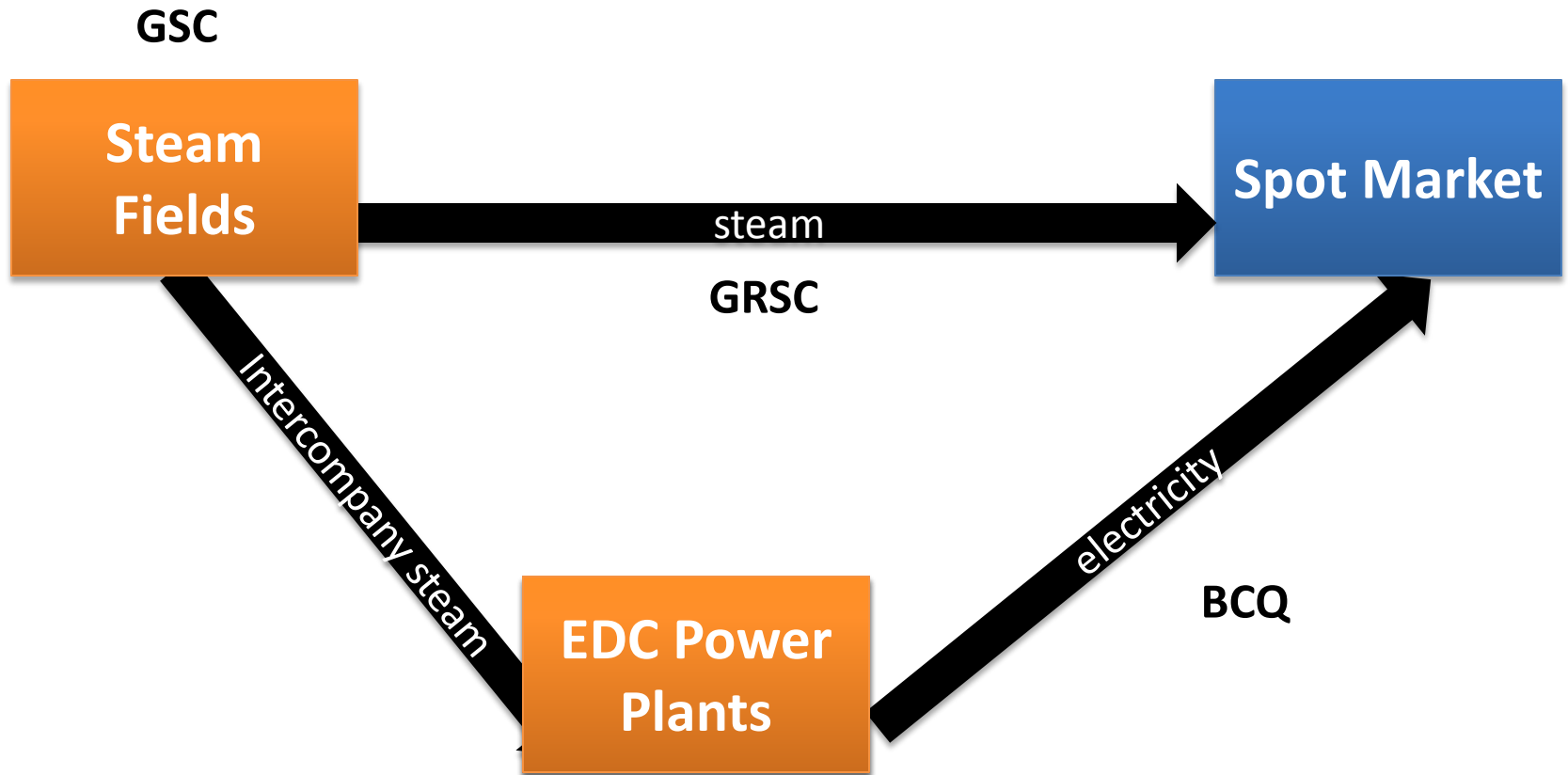
## NEW FRAMEWORK



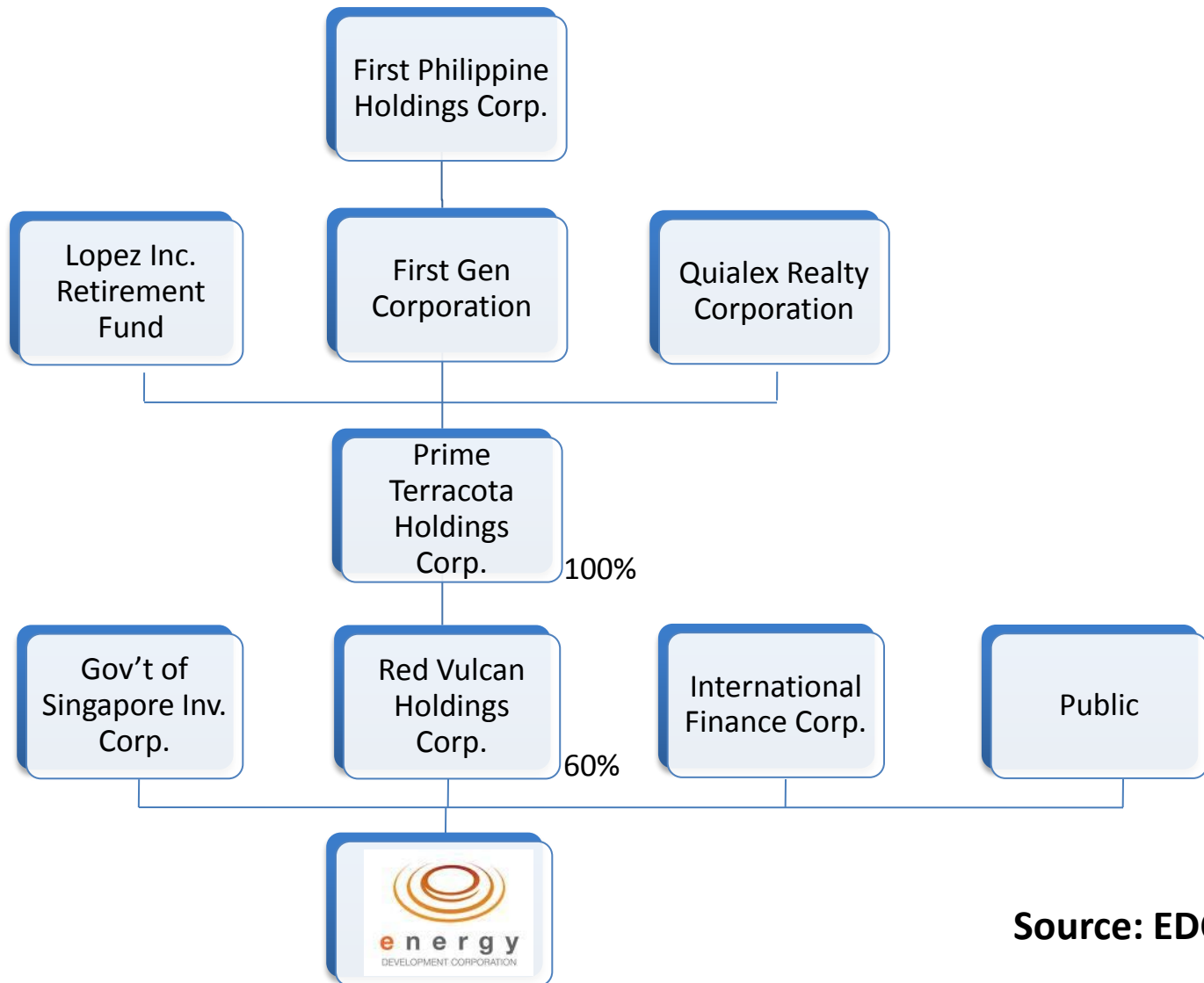
SSA	GRSC
75% of installed capacity, take-or-pay volume	No minimum volume
Pre-determined prices with escalation factor	Indexed to coal prices (Barlowe Jonker Index and Japanese Power Utilities Index)

# EDC's Contracts

## NEW FRAMEWORK



# Ownership Structure



Source: EDC

# Expiry of Service Concessions

	Prior to 2031	After 2031
Steam Field	✓	✗
Power Plants	✓	✓



# High Level of Vertical Integration

## Scope of Geothermal Operations: Leading Global Companies

R&D	Exploration	Drilling	Confirmation	Engineering	Construction	O&M
EDC (PH), Ormat (US), Chevron (US), Enel (IT), Calpine (US)						
PT Pertamina (ID), Reykjavik Energy (IS)						
Boart Longyear (US), Halliburton (US)			Sumitomo (JP), Shaw Group (US)			
Govt/Univ Labs (All)		Iceland Drilling Co. (IS), Baker Drilling (US), Parker Drilling (US), ThermaSource (US), GeothermEx (US)		Siemens (DE), Enex (IS)		
				Mannvit (IS), Power Eng (US)	MHI (JP), GE (US), Fuji (JP), UTC	

Source: New Energy Finance, 2008

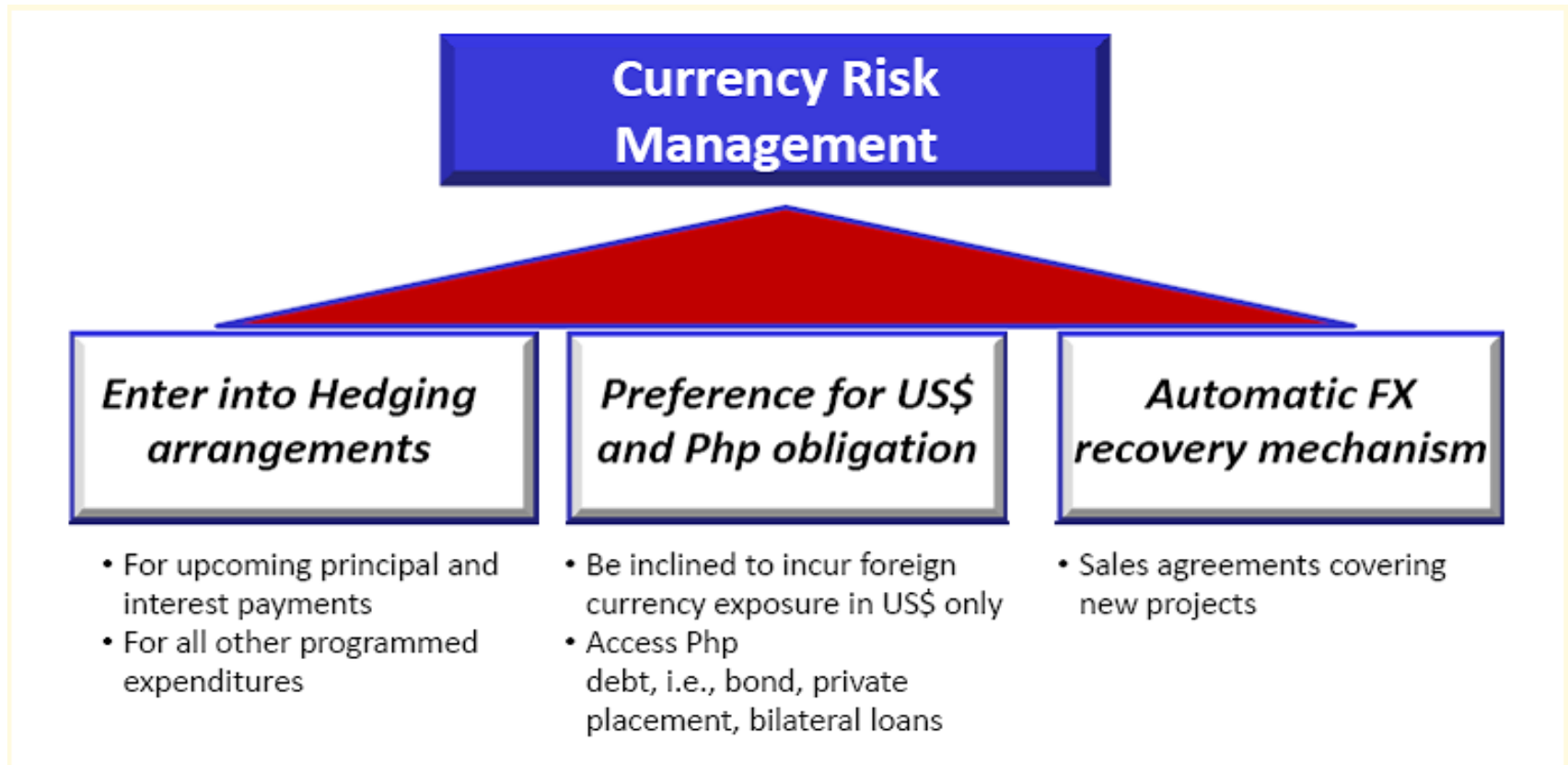
DE: Denmark | ID: Indonesia | IS: Iceland | IT: Italy | JP: Japan | PH: Philippines | US: United States

**EDC's level of vertical integration allows it to span across the entire value chain – resulting in enhanced efficiency and cost savings vs. other energy producers**

# EDC's Maintenance and Upgrade

- Purchase of a brand new drilling rig in 2008 for delivery by November 2009
- On-going up rating program for Rigs 8,10, and 23 with the purchase of top drive, mud mixers, and other lifting equipment
- Upgrade of the Palinpinon plants to rehabilitate and bring it back to its rated capacity of 192.5 MW
- Upgrade of Tongonan plant to bring back to 112MW from the current utilization of 84MW

# Currency Risk Management



Source: EDC

# Hedging Strategies

Source: EDC

- Fully Hedged Miyazawa I
  - JPY8 B using Range Bonus Forward
  - JPY4 B and USD 118 M using a Plain Vanilla Forward
  - Net gain of PHP95 M

# Key Executives

**CHAIRMAN**

**Mr. Oscar M. Lopez**

**PRESIDENT and CEO**

**Mr. Paul A. Aquino**

**DEPUTY PRESIDENT and  
CHIEF OPERATING OFFICER**

**Mr. Richard B. Tantoco**

**CHIEF FINANCIAL OFFICER**

**Ms. Ana Regina B. Go**

**EXECUTIVE PRESIDENT**

**Mr. Ernesto B. Pantangco**

# CHAIRMAN | Oscar M. Lopez

- Chairman of EDC since November 2007.
- He also serves as Chairman and Chief Executive Officer of the First Philippine Holdings Corp. (FPHC), and Chairman of Benpres Holdings Corporation (Benpres) and all member-companies of First Gen Corp. (First Gen) and First Gas groups of companies.
- Through his Chairmanship of FPHC and Benpres, Mr. Lopez serves as Chairman of the Lopez Group of Companies. He is also a member of the board of ABS-CBN Broadcasting Corporation.
- Mr. Lopez has led FPHC's efforts in other businesses aside from energy and power, including toll road construction, industrial park and real estate development, and electronics manufacturing.
- He holds a **Masters degree in Public Administration from the Littauer School of Public Administration in Harvard University (1955)**, where he also earned his Bachelor of Arts degree, cum laude (1951).

# PRESIDENT and CEO | Paul A. Aquino

- President and CEO since February 2004. He has been a Director of the Company since 2001.
- He is also a Director of the First Gen Hydro Power Corporation. He previously served as president to various companies, including Dynamic Computer Services, Corinthian Securities and Management Dynamics.
- Mr. Aquino was also a consultant for Sycip, Gorres & Velayo from 1967 to 1969. He also serves as an Honorary Consul of the Republic of Malta.
- He is an **electrical engineer by profession** and **has a master's degree in business administration**.

# COO | Richard B. Tantoco

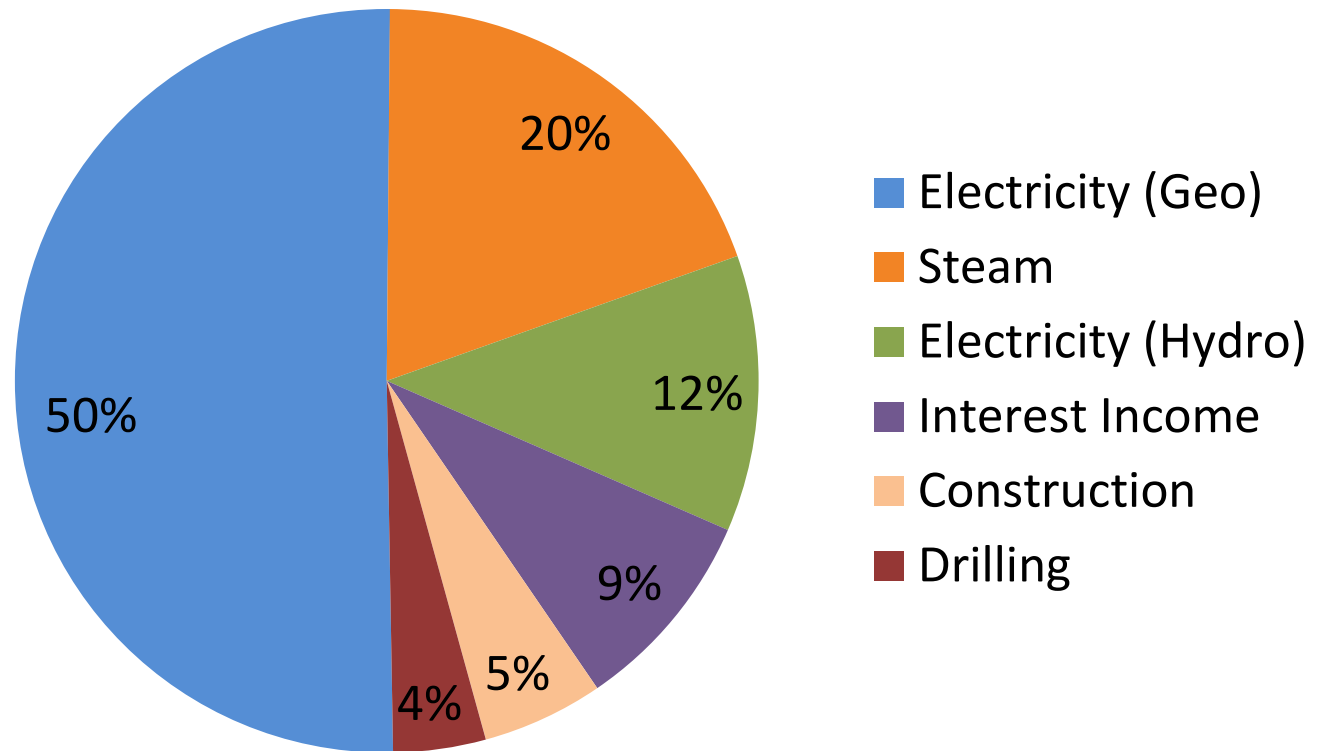
- Elected Deputy President and Chief Operating Officer of EDC on February 24, 2009. He has been a Director of the Company since November 2007.
- He is also Executive Vice-President and Chief Operating Officer of First Gen, FGLuzon, FG Bukidnon, FGHPC, First Gen Geothermal Power Corp., First Gen Visayas Hydro Power Corp., First Gen Mindanao Hydro Power Corp., First Gen Energy Solutions, Inc., First Gen Northern Energy Corp., First Gen Premiere Energy Corp., Red Vulcan, Prime Terracota, First Gen Visayas Energy Inc., First Gen Prime Energy Corp., FGHC, FGPC, FGP, AlliedGen, Unified, FNPC, FGLand, and FGPipeline. He is also Senior Vice-President of FPHC.
- Mr. Tantoco worked previously with management consulting firm Booz, Allen and Hamilton, Inc. in New York and London.
- He has an **MBA in Finance from the Wharton School of Business of the University of Pennsylvania (1993)** and a Bachelor of Science degree in Business Management from the Ateneo de Manila University where he graduated with honors (1988).



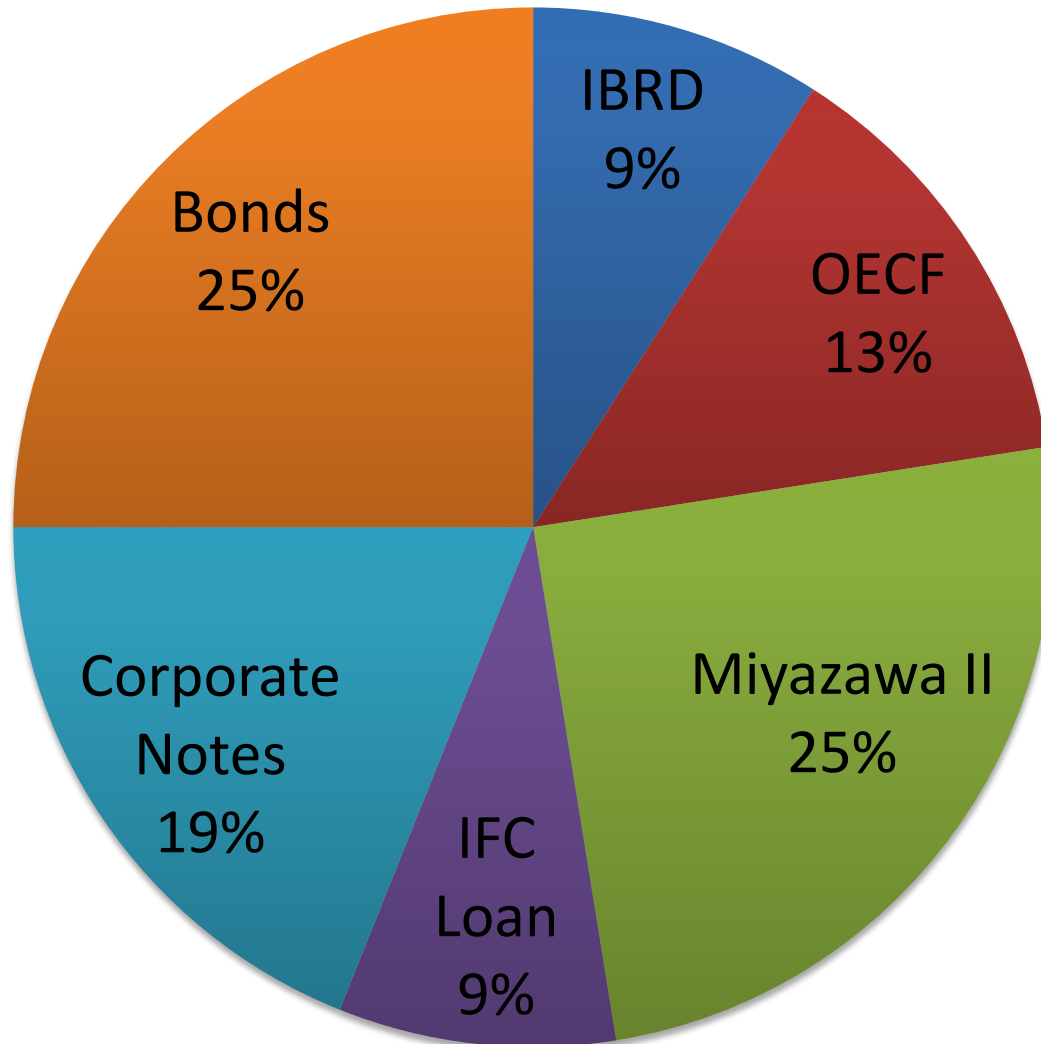
# EVP | Ernesto B. Pantangco

- Elected Executive Vice-President of EDC on May 21, 2008. He has been a Director of the Company since November 2007.
- He is Senior Vice- President of First Gen, and President and CEO of FPPC and BPPC. He also sits in the boards of First Gen, FGLuzon, FG Bukidnon, FGHPC, First Gen Geothermal Power Corp., First Gen Visayas Hydro Power Corp., First Gen Mindanao Hydro Power Corp., and First Gen Northern Energy Corp. He is Senior Vice-President of FGLuzon, FGHPC, First Gen Geothermal Power Corp., First Gen Visayas Hydro Power Corp., First Gen Mindanao Hydro Power Corp., First Gen Northern Energy Corp. and Red Vulcan.
- Mr. Pantangco is also. **President of the Philippine Independent Power Producers Association (PIPPA)**
- He has a **Bachelor of Science in Mechanical Engineering degree from the De La Salle University (1973)** and Master of Business Administration degree from the Asian Institute of Management, dean's list (1976). He is a **registered mechanical engineer** and **placed 6<sup>th</sup> in the 1973 board exams.**

# 2008 Revenue Breakdown



# 2009 Long-Term Debt Breakdown



# Loan Availments in 2009

Loan	Principal (in Php Millions)	Period	Stated Rate	Issue Date
Short-term financing from other local banks	124.5			
IFC Loan	4,100	15yr w/ 3yr grace pd	5.6488%	
Fixed Rate Corporate Notes				
A	2,644	5yr + 1 day	8.3729%	3-Jul-09
B	4,856	7yr	9.4042%	3-Jul-09
C	1,500	5yr + 1 day	8.4321%	3-Sep-09
Bond -A	6,000	5.5yr	8.9938%	11-Nov-09
Bond -B	6,000	7yr	9.8375%	11-Nov-09
<b>Total LT debt</b>	<b>25,100</b>			

# Loan Covenants

Source: EDC

- Current ratio of not less than 1:1
- Debt-Equity ratio of not more than 70:30
- Debt service coverage ratio of at least 1.2x

# Financial Analysis & Valuation

# Key Assumptions

Factors in acquisition of Tongonan  
Palinpinon plants

<u>PHP MILLIONS</u>	<u>2008</u>	<u>2009</u>	<u>2010E</u>	<u>2011E</u>	<u>2012E</u>	<u>2013E</u>	<u>2014E</u>
<b>REVENUES</b>							
Electricity	12,518	14,504	<b>23,420</b>	24,397	25,042	28,194	29,002
Steam	4,242	4,850	<b>1,696</b>	3,196	3,424	1,227	1,301
Interest	2,108	1,970	<b>1,706</b>	1,556	1,449	1,336	1,216
Drilling	726	1,122	<b>1,412</b>	1,534	1,574	1,491	1,527
Construction	932	2,617	<b>5,373</b>	6,435	6,293	5,172	6,083
<b>OPERATING COSTS</b>							
Repairs & maintenance	1,895	2,170	<b>2,823</b>	3,068	3,149	2,983	3,055
Personnel costs	1,388	1,590	<b>2,001</b>	2,174	2,231	2,113	2,164
Materials and supplies	969	1,110	<b>1,444</b>	1,570	1,611	1,526	1,563
Royalty fees	590	355	<b>379</b>	407	436	427	453
Rent and insurance	272	311	<b>392</b>	426	437	414	424
Business expenses	137	157	<b>198</b>	215	221	209	214

Privatization of Bacon-Manito Plant Complex results in elimination of fixed agreements but eventual improvement in utilization rates

Repairs & maintenance expenses rise proportionately with movements in steam and electricity revenues

# Other Revenue Assumptions - Price

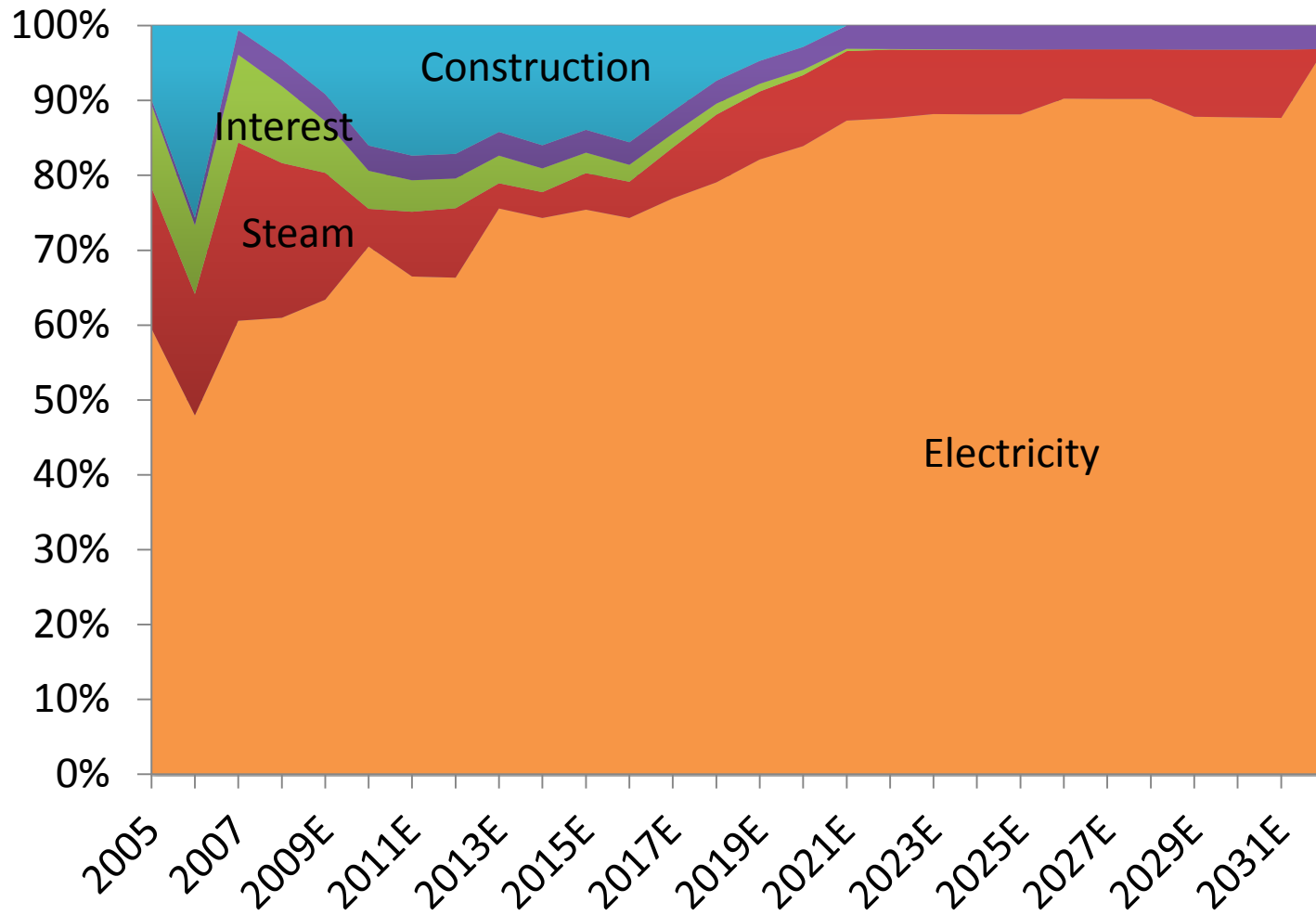
<b>IN VARIOUS UNITS</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010E</b>	<b>2011E</b>	<b>2012E</b>	<b>2013E</b>	<b>2014E</b>
<b>Real GDP (Php T)</b>	1.18	1.22	1.25	<b>1.28</b>	1.31	1.34	1.38	1.41
<b>PHP to USD</b>	41.40	47.49	48.97	<b>49.73</b>	50.33	50.96	51.50	51.90
<b>PHP to JPY</b>	0.36	0.52	0.55	<b>0.57</b>	0.59	0.62	0.64	0.67
<b>Inflation: RP (%)</b>	1.52	3.97	4.15	<b>4.12</b>	3.84	3.94	3.57	3.12
<b>Inflation: US (%)</b>	2.85	3.84	0.98	<b>2.54</b>	2.61	2.66	2.47	2.31
<b>Inflation: Japan (%)</b>	-0.79	-0.57	-0.38	<b>-0.31</b>	-0.30	-0.34	-0.46	-0.48
<b>Japan Power Utilities</b>	107.98	80.35	86.64	<b>92.92</b>	99.21	105.49	111.77	118.06
<b>Barlow Jonker Index</b>	128.08	94.45	103.00	<b>111.55</b>	120.10	128.65	137.20	145.75

These assumptions serve as the **basis to adjust for prices of energy sold** through fixed, contractual agreements

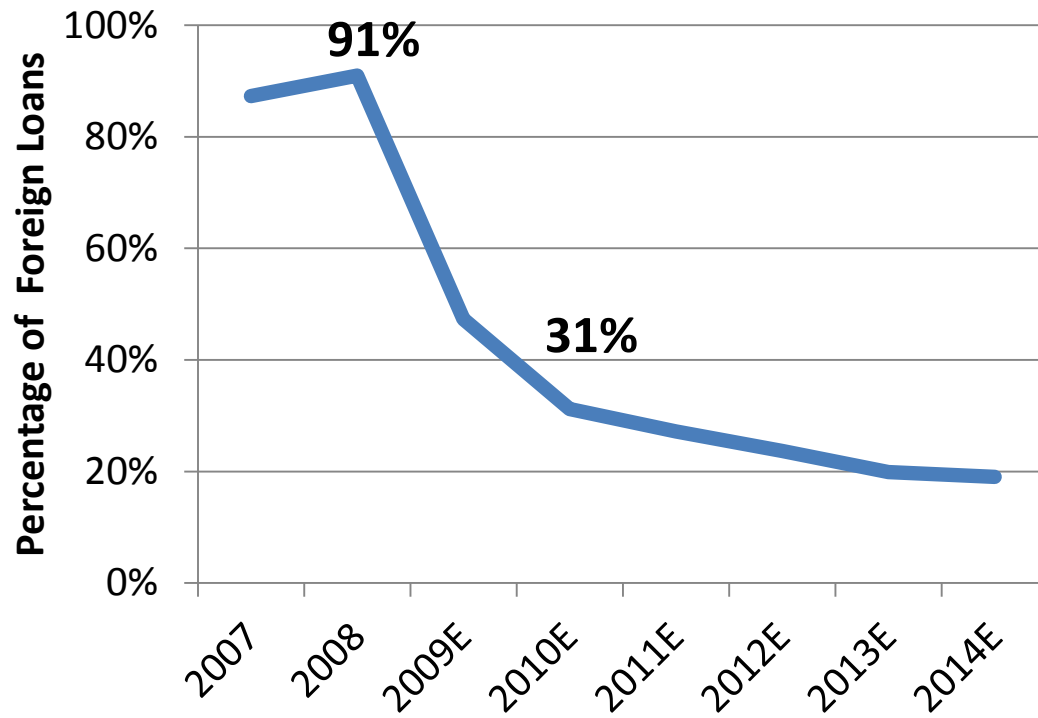
Contracted revenues **are partly tied to foreign exchange rates**, which manages EDC's remaining exposure through dollar & yen denominated loans



# Revenue Mix



# Long-Term Debt Mix



Refinancing its government-inherited foreign-currency denominated loans with Peso loans reveals prudence in financial management

# Income Statement

Php millions	2007	2008	2009 E	2010 E	2011 E	2012 E	2013 E	2014 E
Electricity	11,509	12,518	14,504	18,848	19,651	20,202	20,772	21,348
Steam	4,521	4,242	4,850	1,696	3,196	3,424	1,227	1,301
Interest	2,237	2,108	1,970	1,706	1,556	1,449	1,336	1,216
Drilling	625	726	1,122	1,171	1,284	1,320	1,228	1,256
Construction	109	932	911	1,337	1,040	632	-	-
<b>REVENUES</b>	<b>19,001</b>	<b>20,527</b>	<b>23,357</b>	<b>24,758</b>	<b>26,727</b>	<b>27,026</b>	<b>24,563</b>	<b>25,121</b>
Service costs	(3,111)	(1,524)	(1,440)	(1,351)	(1,481)	(1,522)	(1,416)	(1,449)
Construction	(101)	(804)	(837)	(1,228)	(956)	(581)	-	-
Operations	(3,079)	(5,046)	(6,524)	(6,951)	(7,588)	(7,870)	(7,408)	(7,641)
Administration	(2,426)	(1,313)	(2,762)	(2,636)	(2,738)	(2,845)	(2,944)	(3,036)
<b>EBITDA</b>	<b>10,283</b>	<b>11,841</b>	<b>11,794</b>	<b>12,592</b>	<b>13,963</b>	<b>14,208</b>	<b>12,794</b>	<b>12,996</b>
Depreciation	(244)	(657)	(687)	(1,323)	(1,458)	(1,474)	(1,467)	(1,456)
<b>EBIT</b>	<b>10,039</b>	<b>11,183</b>	<b>11,107</b>	<b>11,270</b>	<b>12,506</b>	<b>12,734</b>	<b>11,327</b>	<b>11,540</b>
Int. income	650	333	333	333	333	333	333	333
Int. expense	(1,600)	(2,153)	(2,334)	(3,473)	(3,143)	(3,276)	(3,692)	(3,944)
Forex losses	3,996	(9,357)	(939)	(335)	(265)	(243)	(206)	(172)
Other line items	(148)	2,646	-	-	-	-	-	-
<b>PRETAX PROFIT</b>	<b>12,937</b>	<b>2,653</b>	<b>8,166</b>	<b>7,795</b>	<b>9,430</b>	<b>9,547</b>	<b>7,762</b>	<b>7,758</b>
Income tax	(4,168)	(1,308)	(2,450)	(2,339)	(2,829)	(2,864)	(2,329)	(2,327)
<b>NET PROFIT</b>	<b>8,768</b>	<b>1,345</b>	<b>5,717</b>	<b>5,457</b>	<b>6,601</b>	<b>6,683</b>	<b>5,434</b>	<b>5,430</b>

# Balance Sheet

Php millions	2007	2008	2009 E	2010 E	2011 E	2012 E	2013 E	2014 E
Cash	3,297	957	3,504	1,238	1,336	2,547	3,684	3,768
Receivables	42,022	40,108	38,838	33,882	32,608	30,796	28,170	26,084
Inventories	1,141	1,563	1,908	1,912	1,923	1,919	1,912	1,911
Intangibles	11,329	11,883	23,132	27,082	26,984	26,621	25,626	24,632
Net PPE	4,712	5,280	5,923	6,047	6,327	6,061	5,710	5,546
Exploration costs	1,172	1,000	1,348	1,071	3,564	9,928	14,784	20,639
Other assets	8,317	8,555	6,757	6,757	6,757	6,757	6,757	6,757
<b>TOTAL ASSETS</b>	<b>71,990</b>	<b>69,346</b>	<b>81,410</b>	<b>77,989</b>	<b>79,499</b>	<b>84,628</b>	<b>86,644</b>	<b>89,338</b>
Trade dues	4,243	3,065	4,136	8,563	4,792	4,958	4,651	4,793
Royalty fees	1,734	1,688	1,755	982	802	611	427	453
Long term debt	25,733	32,229	48,594	37,707	39,892	43,470	45,153	47,621
Other liabilities	5,748	3,628	1,628	1,628	1,628	1,628	1,628	1,628
<b>TOTAL DEBT</b>	<b>37,457</b>	<b>40,610</b>	<b>56,113</b>	<b>48,880</b>	<b>47,114</b>	<b>50,666</b>	<b>51,859</b>	<b>54,494</b>
Retained profits	13,172	9,978	6,717	10,332	13,439	14,934	15,715	15,771
Minority interest	3,345	1,484	1,307	1,503	1,673	1,754	1,797	1,800
Other equities	18,015	17,273	17,273	17,273	17,273	17,273	17,273	17,273
<b>TOTAL EQUITIES</b>	<b>34,532</b>	<b>28,735</b>	<b>25,297</b>	<b>29,109</b>	<b>32,385</b>	<b>33,962</b>	<b>34,785</b>	<b>34,844</b>
<b>TOTAL CAPITAL</b>	<b>71,990</b>	<b>69,346</b>	<b>81,410</b>	<b>77,989</b>	<b>79,499</b>	<b>84,628</b>	<b>86,644</b>	<b>89,338</b>

# Statement of Cash Flows

Php millions	2007	2008	2009 E	2010 E	2011 E	2012 E	2013 E	2014 E
Cash revenues	21,857	24,244	23,722	25,029	26,961	28,206	27,189	27,207
Cash expenses	(10,396)	(18,300)	(10,949)	(12,670)	(12,557)	(12,817)	(12,196)	(11,937)
ST financing	(1,058)	(1,508)	(2,043)	2,167	(5,137)	(4,036)	(2,031)	(1,995)
<b>CORE CFO</b>	<b>10,403</b>	<b>4,436</b>	<b>10,730</b>	<b>14,525</b>	<b>9,266</b>	<b>11,353</b>	<b>12,962</b>	<b>13,275</b>
Exploration costs	462	264	(348)	277	-	143	143	145
Net PPE	(183)	(1,073)	(941)	(454)	(620)	(92)	-	(178)
Intangibles	(109)	(932)	(10,747)	(277)	-	(143)	(143)	(145)
<b>CORE CFI</b>	<b>170</b>	<b>(1,741)</b>	<b>(12,035)</b>	<b>(454)</b>	<b>(620)</b>	<b>(92)</b>	<b>-</b>	<b>(178)</b>
Loan principals	(9,843)	(528)	13,421	(11,158)	(2,019)	(1,589)	(3,422)	(3,583)
Dividends	(1,485)	(5,303)	(9,155)	(1,644)	(3,325)	(5,105)	(4,611)	(5,371)
Interest	(1,170)	(1,825)	(2,334)	(3,473)	(3,143)	(3,276)	(3,692)	(3,944)
<b>CORE CFF</b>	<b>(12,498)</b>	<b>(7,656)</b>	<b>1,932</b>	<b>(16,275)</b>	<b>(8,488)</b>	<b>(9,971)</b>	<b>(11,725)</b>	<b>(12,897)</b>
Forex effect	(8)	2	122	(62)	(60)	(79)	(100)	(117)
Other line items	(4,770)	2,619	1,798	-	-	-	-	-
<b>CASH INC (DEC)</b>	<b>(6,703)</b>	<b>(2,339)</b>	<b>2,546</b>	<b>(2,266)</b>	<b>98</b>	<b>1,210</b>	<b>1,138</b>	<b>84</b>

# Key Financial Ratios

KEY FINANCIAL RATIOS	2007	2008	2009 E	2010 E	2011 E	2012 E	2013 E	2014 E
<b>Turnover</b>								
Receivables (X)	4.01	3.90	4.03	3.91	3.95	3.76	3.49	3.67
Fixed Assets (X)	1.26	1.16	0.96	0.77	0.78	0.79	0.75	0.80
Total Assets (X)	0.25	0.29	0.31	0.31	0.34	0.33	0.29	0.29
<b>Profitability</b>								
EBITDA Margin (%)	54.12	57.68	50.49	50.86	52.24	52.57	52.09	51.73
EBIT Margin (%)	52.84	54.48	47.55	45.52	46.79	47.12	46.12	45.94
Net Profit Margin (%)	46.15	6.55	24.47	22.04	24.70	24.73	22.12	21.62
Return on Assets (%)	13.44	15.83	14.73	14.14	15.73	15.38	13.23	13.12
Return on Equity (%)	28.33	4.25	21.16	20.06	21.47	20.14	15.81	15.60
<b>Solvency</b>								
Total Debt Ratio (%)	52.03	58.56	68.93	62.68	60.02	59.87	59.85	61.00
Long-term Debt Ratio (%)	35.74	46.48	59.69	48.35	44.31	40.73	35.96	30.92
<b>Liquidity</b>								
Interest Coverage (X)	6.27	5.20	4.76	3.25	3.98	3.89	3.07	2.93
Current Ratio (X)	1.33	0.87	0.92	1.17	1.61	1.69	1.83	1.42
Acid Test Ratio (X)	0.74	0.41	0.58	0.67	0.95	1.05	1.15	0.90
<b>Per Share Data</b>								
Total Earnings (Php)	0.47	0.07	0.49	0.61	0.63	0.65	0.65	0.67
Recurring Earnings (Php)	0.25	0.57	0.35	0.31	0.37	0.37	0.30	0.30
Dividends (Php)	0.08	0.28	0.49	0.09	0.18	0.27	0.25	0.29
Book Value (Php)	1.84	1.53	1.35	1.55	1.72	1.81	1.85	1.85

# EDC vs. Aboitiz – DuPont Analysis

	FY06		FY07		FY08	
	EDC	ABOITIZ	EDC	ABOITIZ	EDC	ABOITIZ
Return on Equity	18.5%	22.5%	18.2%	15.6%	20.3%	14.4%
Operating Margins	39.7%	27.2%	52.8%	42.3%	54.5%	41.2%
Interest / Tax	49.6%	80.2%	62.5%	89.3%	52.2%	87.7%
Asset Turnover	33.2%	70.7%	26.4%	31.3%	29.6%	25.9%
Financial Leverage	282.7%	146.2%	208.5%	132.2%	241.3%	154.0%

# Valuation Summary

<b><u>PHP BILLIONS</u></b>	<b><u>2010E</u></b>	<b><u>2011E</u></b>	<b><u>2012E</u></b>	<b><u>2013E</u></b>	<b><u>2014E</u></b>	<b><u>2019E</u></b>	<b><u>2024E</u></b>	<b><u>2031E</u></b>
Operating Cash Flow	21.95	20.46	24.58	25.42	26.91	28.06	29.23	30.98
Capital expenditures	-5.72	-5.64	-5.32	-5.31	-5.80	-2.60	-0.33	-0.20
<b>Free Cash Flow to Firm</b>	<b>16.23</b>	<b>14.82</b>	<b>19.26</b>	<b>20.11</b>	<b>21.11</b>	<b>25.46</b>	<b>28.89</b>	<b>30.78</b>
Payments to lenders	-14.64	-5.57	-5.59	-7.87	-8.18	-5.60	-8.92	-3.68
<b>Free Cash Flow to Equity</b>	<b>1.59</b>	<b>9.25</b>	<b>13.67</b>	<b>12.24</b>	<b>12.93</b>	<b>19.86</b>	<b>19.98</b>	<b>27.10</b>
Of which dividends	3.43	8.60	10.75	12.38	12.65	19.49	19.47	26.91

<b><u>IN PERCENT</u></b>	<b><u>2010E</u></b>	<b><u>2011E</u></b>	<b><u>2012E</u></b>	<b><u>2013E</u></b>	<b><u>2014E</u></b>	<b><u>2019E</u></b>	<b><u>2024E</u></b>	<b><u>2031E</u></b>
Effective tax rate	9.75	9.72	9.72	8.88	8.90	8.39	9.17	10.00
Cost of debt	7.53	6.76	7.31	8.14	8.47	9.40	8.15	8.34
<b>Cost of equity</b>	<b>13.85</b>	<b>13.88</b>	<b>13.85</b>	<b>13.90</b>	<b>13.88</b>	<b>13.91</b>	<b>13.87</b>	<b>13.85</b>
<b>Cost of capital</b>	<b>10.38</b>	<b>9.95</b>	<b>10.26</b>	<b>10.73</b>	<b>10.91</b>	<b>11.43</b>	<b>10.73</b>	<b>10.83</b>



# Cost of Capital

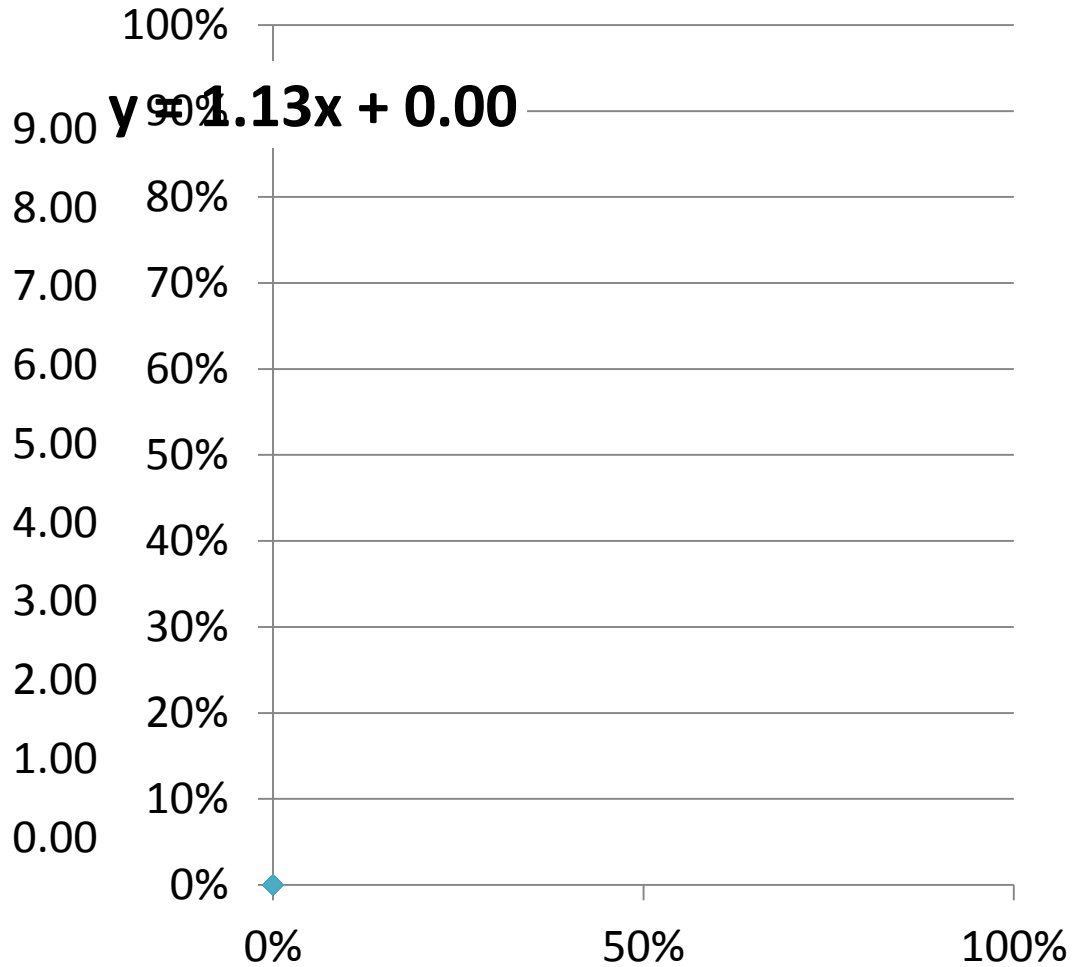
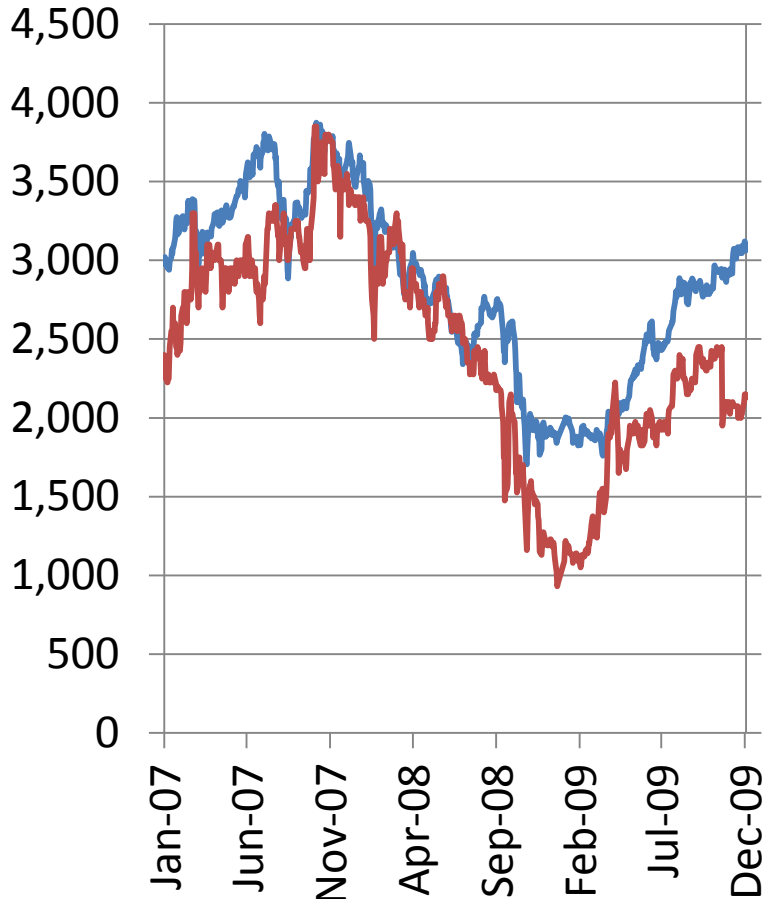
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<b><u>VARIABLE</u></b>	<b><u>VALUE</u></b>	<b><u>REFERENCE</u></b>
Levered beta	<b>1.13</b>	Calculations using market data - Jan 2007 to June 2009
Riskfree return	<b>9.25%</b>	03 Nov 2009 auction for 25-year on-the-run T-Bond
Market return	<b>12.86%</b>	Calculations using market data - Jan 1987 to June 2009
Terminal growth	<b>4.40%</b>	IMF, Citigroup, CAGR from 1999 to 2008
Pretax cost of debt	<b>9.33%</b>	12 Nov 2009 prospectus for 7-year Fixed Rate Bonds
New tax rate	<b>10.00%</b>	RA 9513 - Renewable Energy Act of 2008
Historical tax rate	<b>30.00%</b>	PD 1158 - National Internal Revenue Code of 1997
Debt to equity	<b>1.22</b>	30 Sep 2009 3Q Report - Note 34 Capital Management

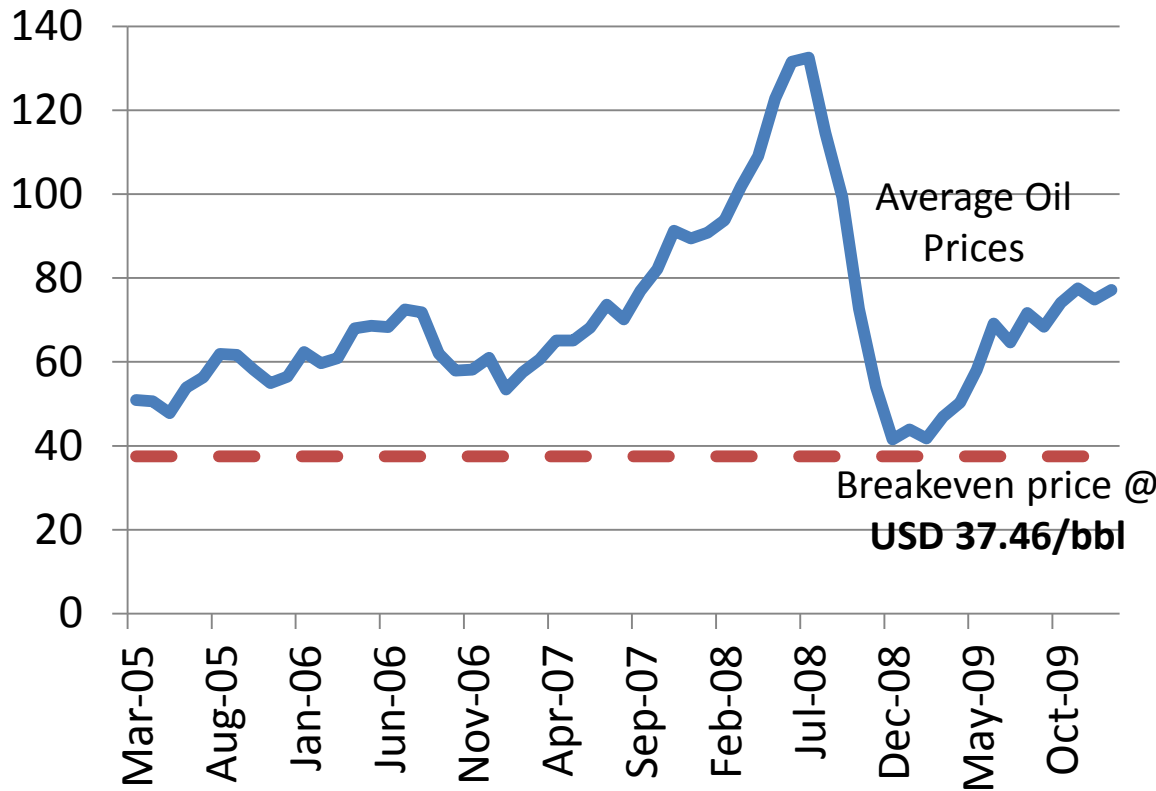
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# Levered Beta Calculation

— PSEi — EDC



# Breakeven Price of Oil



Assumptions	
Breakeven (Php/kwh)	P 3.02
USD to PHP exch rate	P 0.02
Capacity (kwh/bbl)	575.12

Source: International Energy Agency

# Sensitivity Analysis – WACC & Terminal Growth

		TERMINAL GROWTH RATE					
		2.90%	3.40%	3.90%	4.40%	4.90%	5.40%
WACC	9.40%	9.07	9.21	9.37	9.56	9.79	10.07
	9.90%	8.26	8.36	8.47	8.59	8.73	8.90
	10.40%	7.56	7.62	7.69	7.76	<b>7.84</b>	7.90
	10.90%	6.92	6.96	6.98	<b>7.00</b>	7.03	7.08
	11.40%	6.36	6.38	<b>6.39</b>	6.40	6.41	6.45
	11.90%	5.75	5.75	5.77	5.80	5.82	5.84
	12.40%	5.30	5.31	5.32	5.34	5.36	5.36



Worst Case



Base Case



Best Case

# Sensitivity Analysis

## Other Risk Factors

VARIABLE	SHOCK	UPSIDE (Php)	DOWNSIDE (Php)
Spot market shares	5%	---	(0.70)
Plant capacity factors	10%	+0.50	(0.70)
Peso-dollar rate	Php2.00	+0.40	(0.60)
AAA credit spread	100bps	---	(0.40)
Sovereign bond rating	100bps	+0.60	(0.80)
Offsetting effect	---	(0.70)	+1.00
<b>COMBINED EFFECT</b>	---	<b>+1.50</b>	<b>(2.20)</b>

# Price Relative Estimates

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**2010E**

<b>P/E</b>	Php 6.50
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<b>P/S</b>	Php 7.20
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<b>P/CF</b>	Php 6.90
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<b>P/BV</b>	Php 6.10
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Source: Long Island estimates

# Consensus Analyst Estimates

## **ACROSS TIME:**

- 30 Apr 07 – Php 7.60 (31%)
- 02 Nov 07 – Php 8.60 (13%)
- 12 Feb 08 – Php 7.90 (36%)
- 08 Aug 08 – Php 6.80 (51%)
- 19 Jun 09 – Php 5.80 (51%)
- 29 Oct 09 – Php 5.60 (35%)

## **ACROSS THE MARKET:**

- JP Morgan – Php5.60 (16%)
- Citisec – Php6.50 (35%)
- UBS – Php4.90 (2%)
- PEP – Php6.20 (29%)
- Long Island – Php7.00 (46%)

# Market & Macro Economic Information



# EDC's Stock Price Movement



**The spike in late March can be attributed to the cash dividends...**

On March 30, 2009, the BOD of the Parent Company approved the following cash dividends in favor of all stockholders of record as of April 16, 2009 which were paid on May 11, 2009:

- cash dividend of PHP0.0008 per share on the preferred shares
- regular cash dividend of PHP0.125 per share on the common shares.

# EDC Stock Information

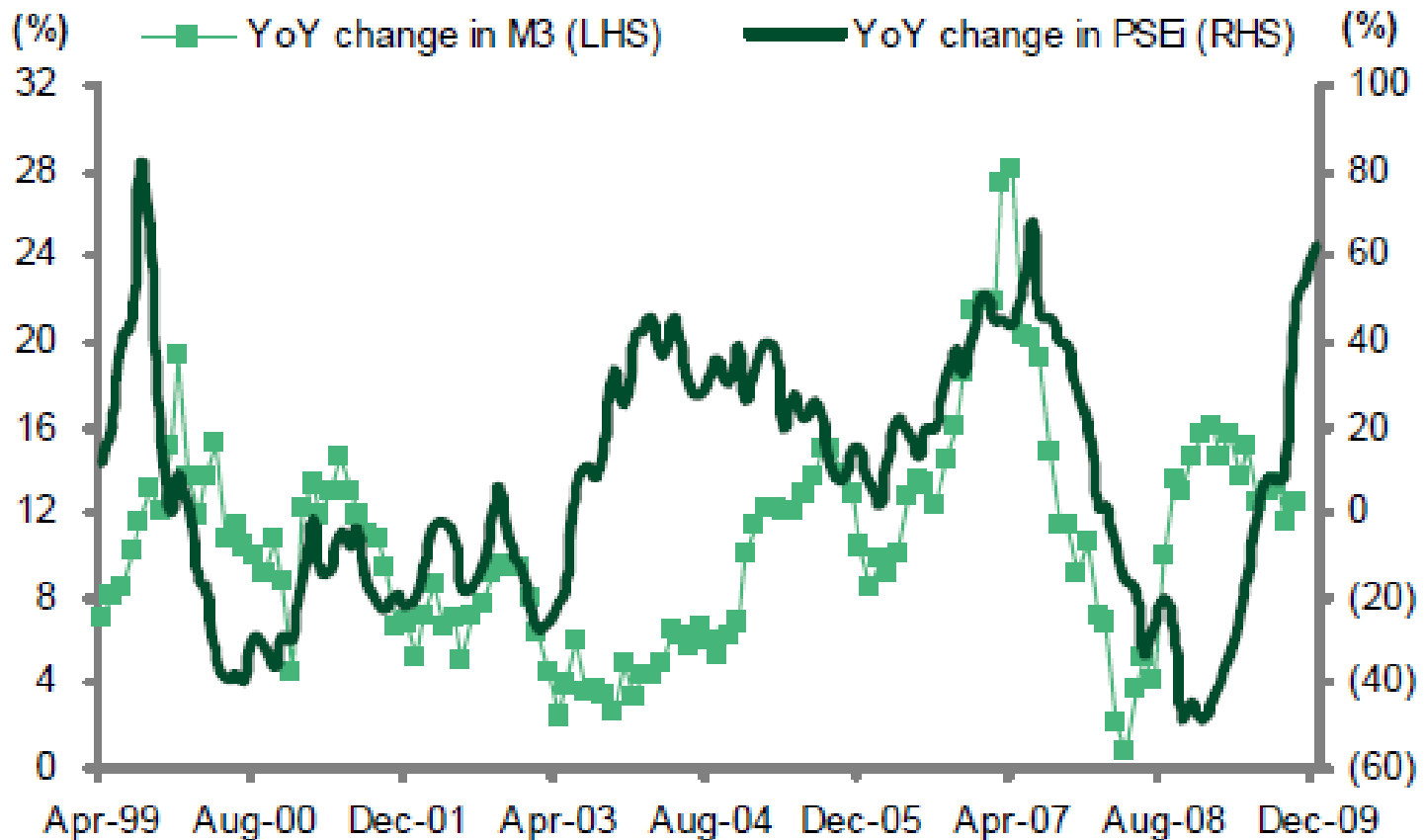
Boar Lot	1,000
Par Value	1.00
Listed Shares	18,750,000,000
Outstanding Shares	18,750,000,000
Free Float Level	60%
Market Capitalization	90,937,500,000
Foreign Limit (Percent)	40
YearEnd EPS (End: 31-Dec-2008)	0.087
Interim EPS (Period: 9mos Sep 2009)	0.068
Current P/E Ratio	54.59770115
52 Week High	5.30
52 Week Low	2.44

Source:  
Philippine Stock Exchange

# MONEY SUPPLY (M3)

COMMENT: Strong liquidity to remain as world economy rebounds.

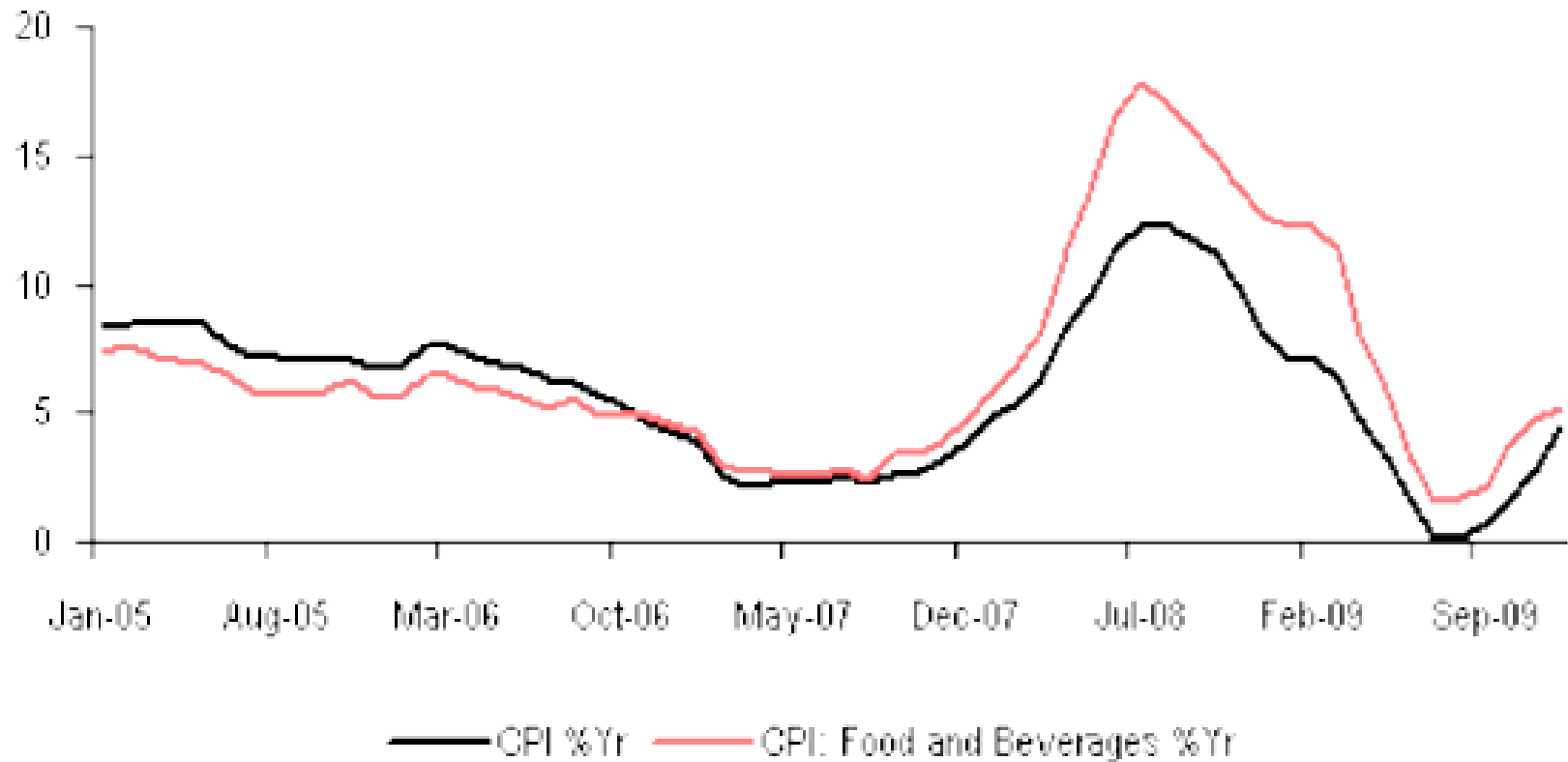
REFERENCE: Bloomberg



## INFLATION (CPI)

COMMENT: Inflation may rise to 5.1% from 3.3%

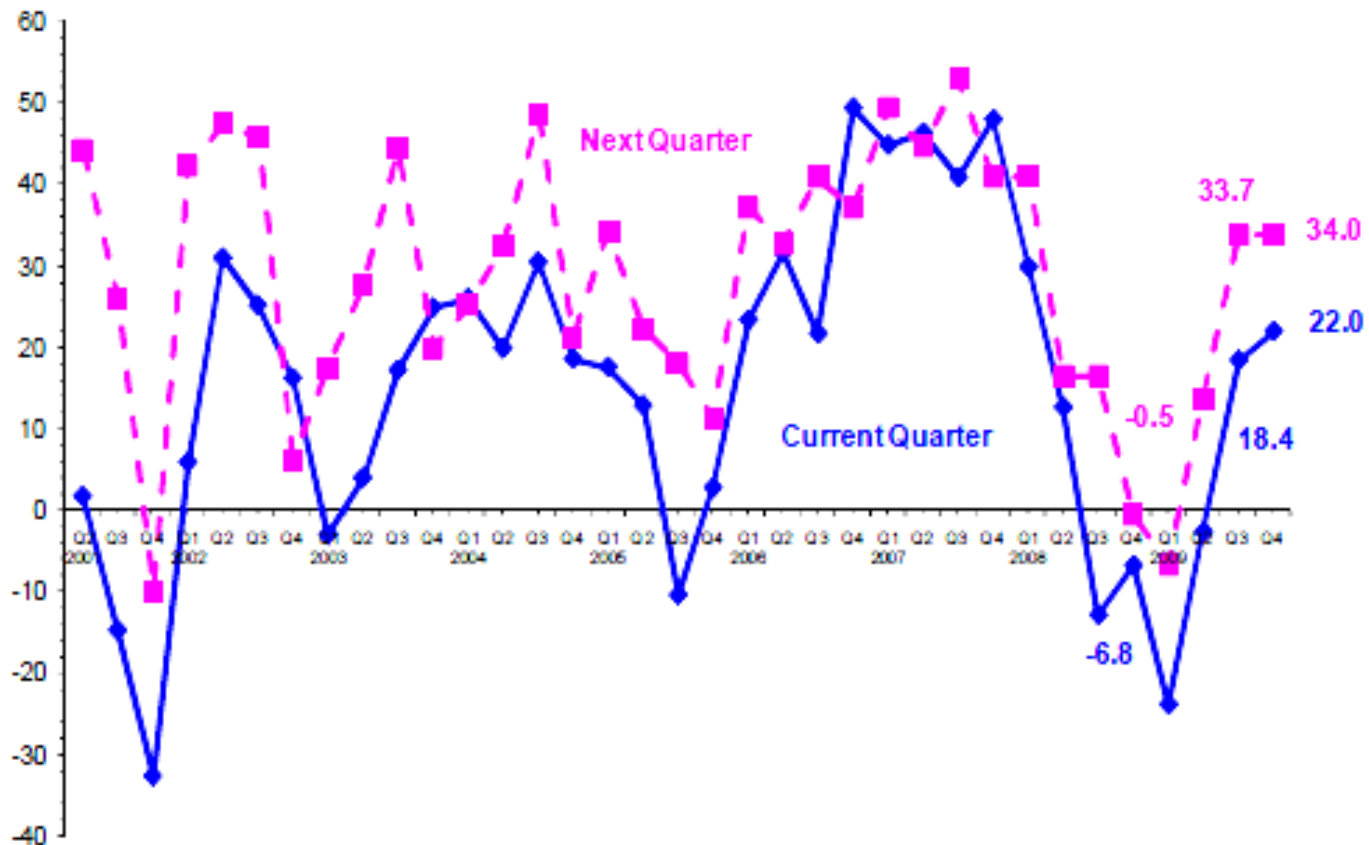
REFERENCE: BSP



# BUSINESS CONFIDENCE (CI)

COMMENT: Business outlook positive behind improving economy.

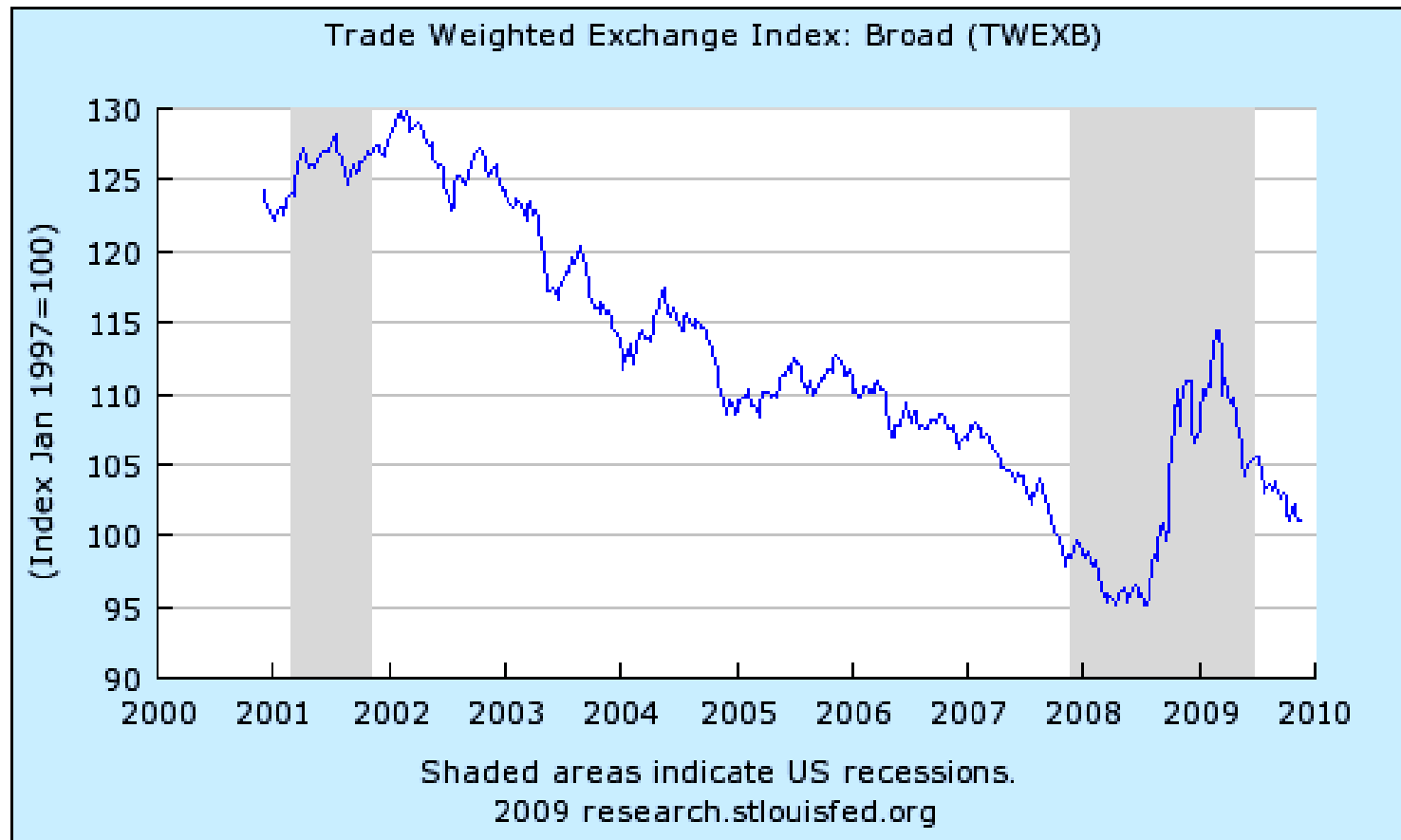
REFERENCE: BSP



## US DOLLAR (1997 = 100)

COMMENT: Long-term BOP deficit precludes dollar recovery.

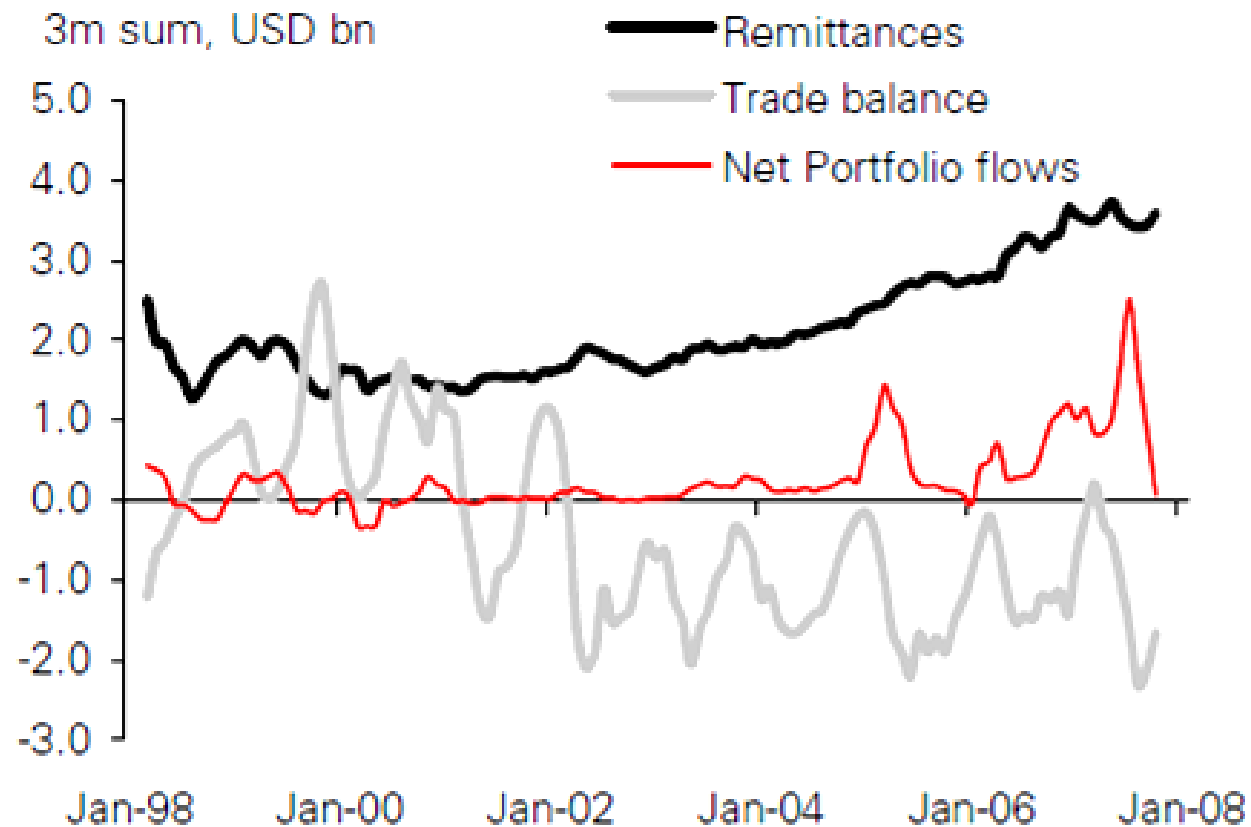
REFERENCE: Federal Reserve



## BALANCE OF PAYMENTS

COMMENT: Remittances cushion BOP fuelling steady appreciation.

REFERENCE: BSP



# COMMODITIES

COMMENT: Gold sets off US dollar but moves with other currencies.

REFERENCE: Bloomberg





## EQUITIES

COMMENT: No. 1 dividend yield among utilities and No. 3 overall

REFERENCE: Philippine Stock Exchange

### Top 11 Composite Firms in Terms of Dividend Yields

	Dividend/ Share	Shares (in M)	Total Dividends (in M)	Price/Share	Div. Yield
MEG	0.27	25,638	6,897	1.42	18.9%
GLO	114.00	132	15,087	890.00	12.8%
EDC	0.35	18,750	6,563	4.25	8.2%
TEL	207.00	187	38,667	2,590.00	8.0%
GMA7	0.35	3,361	1,176	7.80	4.5%

## ASIAN EQUITIES

COMMENT: Philippine stocks one of best buys in the region.

REFERENCE: Bloomberg

	PER	PEG
India	21.3	1.09
Indonesia	13.6	1.08
Malaysia	17.7	1.05
Singapore	15.9	1.03
Hong Kong	14.8	0.96
Thailand	11.9	0.88
Philippines	12.4	0.82