SEMIRARA MINING & POWER CORPORATION

Company Profile

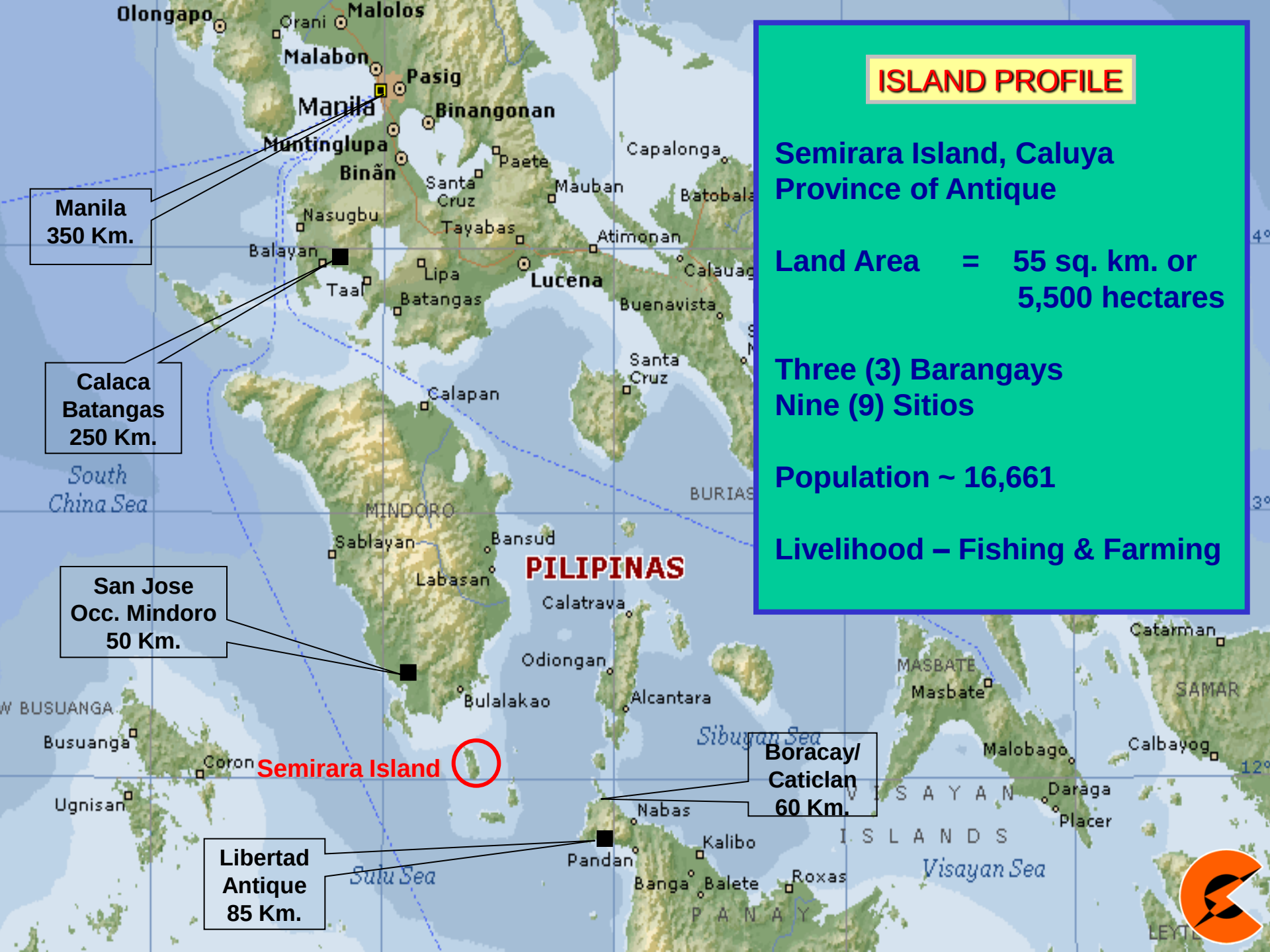
ORGANIZATIONAL STRUCTURE

SEMIRARA MINING & POWER CORPORATION

A member of the DMCI Holdings, Inc. group of companies

100%	100%	100%	100%	100%	100%	100%
Sem-Calaca Power Corp.	*Southwest Luzon Power Generation Corp.	*Sem-Cal Industrial Park Developers, Inc.	*Semirara Claystone, Inc.	*Semirara Energy Utilities, Inc.	*St. Raphael Power Generation Corp.	*Sem-Balayan Power Power Generation Corp.
Sem-Calaca RES Corp.						

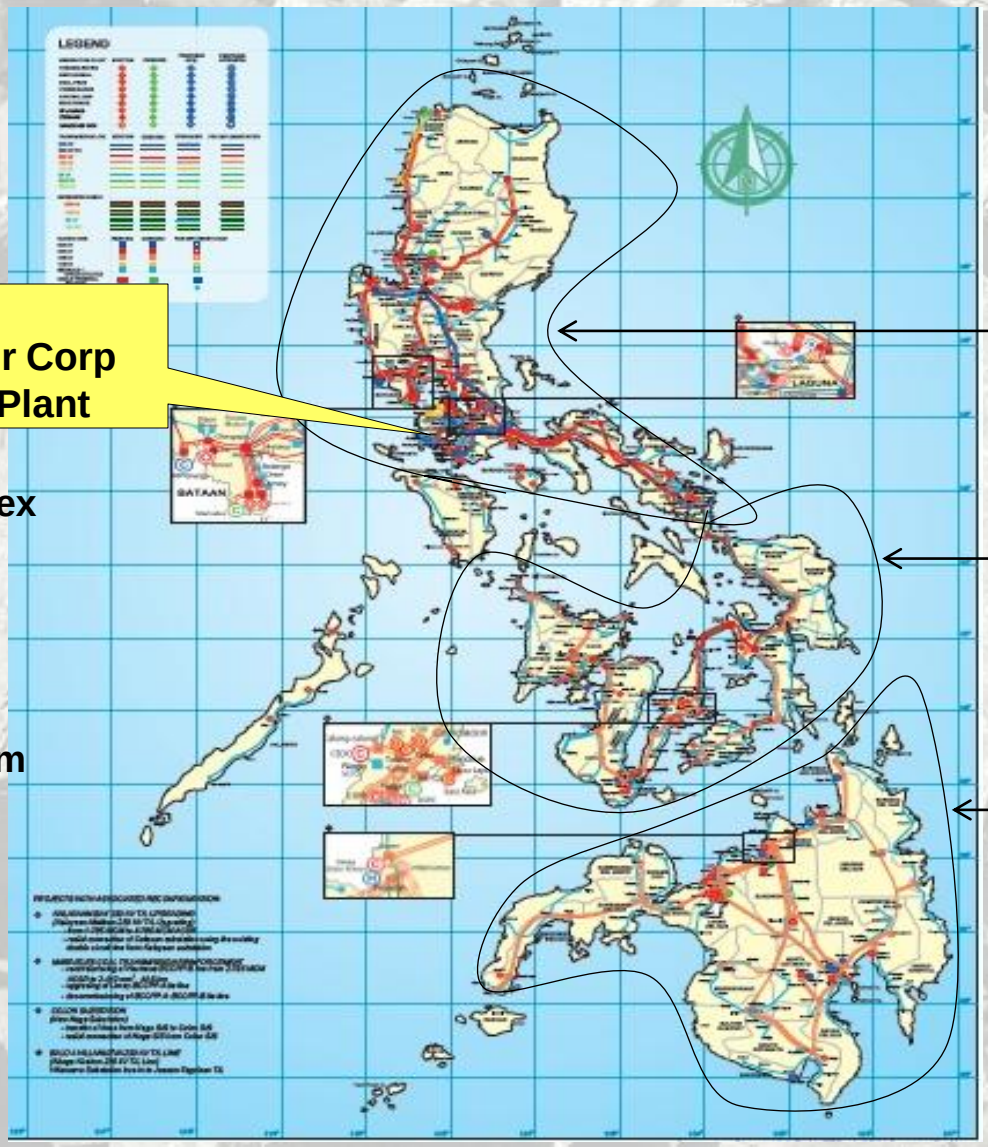
** pre-operating*


ISLAND PROFILE
Semirara Island, Caluya
Province of Antique
Land Area = 55 sq. km. or
5,500 hectares
Three (3) Barangays
Nine (9) Sitios
Population ~ 16,661
Livelihood – Fishing & Farming
Manila
350 Km.
Calaca
Batangas
250 Km.
San Jose
Occ. Mindoro
50 Km.
Libertad
Antique
85 Km.
Boracay/
Caticlan
60 Km.
Semirara Island
Olongapo
Malolos
Orani
Malabon
Pasig
Manila
Binangonan
Muntinglupa
Binan
Paete
Capalonga
Santa
Cruz
Mauban
Batobala
Nasugbu
Tayabas
Atimonan
Balayan
Lipa
Lucena
Calauag
Taal
Batangas
Buenavista
Santa
Cruz
Calapan
South
China Sea
MINDORO
BURIAS
Sablayan
Bansud
PILIPINAS
Labasan
Calatrava
Odiongan
Alcantara
Bulalakao
W BUSUANGA
Busuanga
Coron
Ugnisan
Sibuyan Sea
Catarman
MASBATE
Masbate
SAMAR
Malobago
Calbayog
Daraga
Placer
V I S A Y A N
I S L A N D S
Nabas
Kalibo
Pandan
Banga
Balete
Roxas
Sulu Sea
Visayan Sea
P A N A Y
LEYTE

SEM-CALACA LOCATION

2 x 300 MW
SEM-Calaca Power Corp
Coal-Fired Power Plant

- **167 hectare complex**
- **Units 1 & 2 cover 67 hectares**
- **about 115kms south of Manila**
- **270kms by sea from Semirara Island**



• *Luzon & Visayas Grids are inter-connected*

Luzon Grid*

Visayas Grid*

Mindanao Grid

MILESTONES

1940	Pres. Quezon through Proclamation # 649 declared the islands of Semirara, Sibay, and Caluya of Antique as coal mining reservation
1980	Incorporated in the Philippines as a limited liability company
1983	Initial public offering, listing on the Philippines Stock Exchange
1984	Commercial production at the Unong mine commenced
1997	DMCI Holdings, Inc. (DMCI-HI) purchased 40% interest in Semirara
1998	Debt to equity conversion increased DMCI-HI's interest to 74% Installation of coal washing plant
1999	New management team installed by DMCI-HI
1999-2000	Unong mine depleted, operations commenced at Panian; Full shift from continuous to conventional mining system;
2004	Capital restructuring increased DMCI-HI's interest to 94.5%; Declared stock dividend of PHP225m, consisting of 225m common shares; Authorized capital increased to 1b shares
2005	International and Domestic Offering of 105.046m shares, comprising of 46.875m primary shares and 58.171m secondary offering, increased outstanding common shares to 296.875m; DMCI-HI's interest reduced to 60%
2007	Maiden voyage carrying 28.8K MTs of coal to Xiamen, China SEC's Top 20 PLCs for Corporate Governance
2008	Coal Operating Contract is extended up to 14 July 2027 BOI Registration as expanding coal producer ISO Certifications – ISO 9001:2000, ISO14001:2004, OHSAS 18001:2007 Exploratory drilling activities indicated substantial coal deposits Silver Awardee for SEC's Top PLCs for Corporate Governance

MILESTONES

- **2009**
  - Acquisition of 2 x 300 MW Calaca power plants (Sem-Calaca Power Generation Corp.)
  - Silver Awardee for SEC's Top PLCs for Corporate Governance
- **2010**
  - Stock Rights Offering of 59.375m shares increased outstanding common shares to 356.25m
  - Silver Awardee for SEC's Top PLCs for Corporate Governance
  - Most Committed to a Strong Dividend Policy, Finance Asia Magazine's 10th Annual Best Managed Company's Poll
- **2012**
  - Financial close of PHP 11.5 billion project debt facility to finance Phase 1 expansion
  - Commence Phase I power expansion of 2x150 MW in Calaca (Southwest Luzon Power Generation Corp.)
  - BOI Registration of Bobog Mine under non-pioneer status, maximum of 8 years
- **2013**
  - 2nd Runner Up, ASEAN Best Practices in Coal Projects – CSR category, 2013 ASEAN Coal Energy Awards
  - 6th among Most Committed to a Strong Dividend Policy, Finance Asia Magazine's 13th Annual Best Managed Company's Poll
  - Among the top 10 finalists (out of 289 PLCs) in 2013 PSE Bell Awards for Corporate Governance
  - Awarded 2 new mining areas (Mindoro and Mindanao)
  - Incorporated 2 new corporations for power capacity expansion
- **2014**
  - 4th among Most Committed to a Strong Dividend Policy and 9th Best Corporate Social Responsibility, Finance Asia Magazine's 14th Annual Best Managed Company's Poll

MILESTONES

Investment in Sem-Calaca

The 2 x 300 MW coal-fired power plants in Calaca, Batangas was acquired by the Company in 2 December 2009 for $361.7 M

SEMIRARA RESOURCES

Coal and Other Reserves

► Coal Reserves

Open Pit ……. 146 million mt
Remaining as of Jan .1, 2014

Underground …. 12 million mt
Initial for Tuong

► Other Minerals

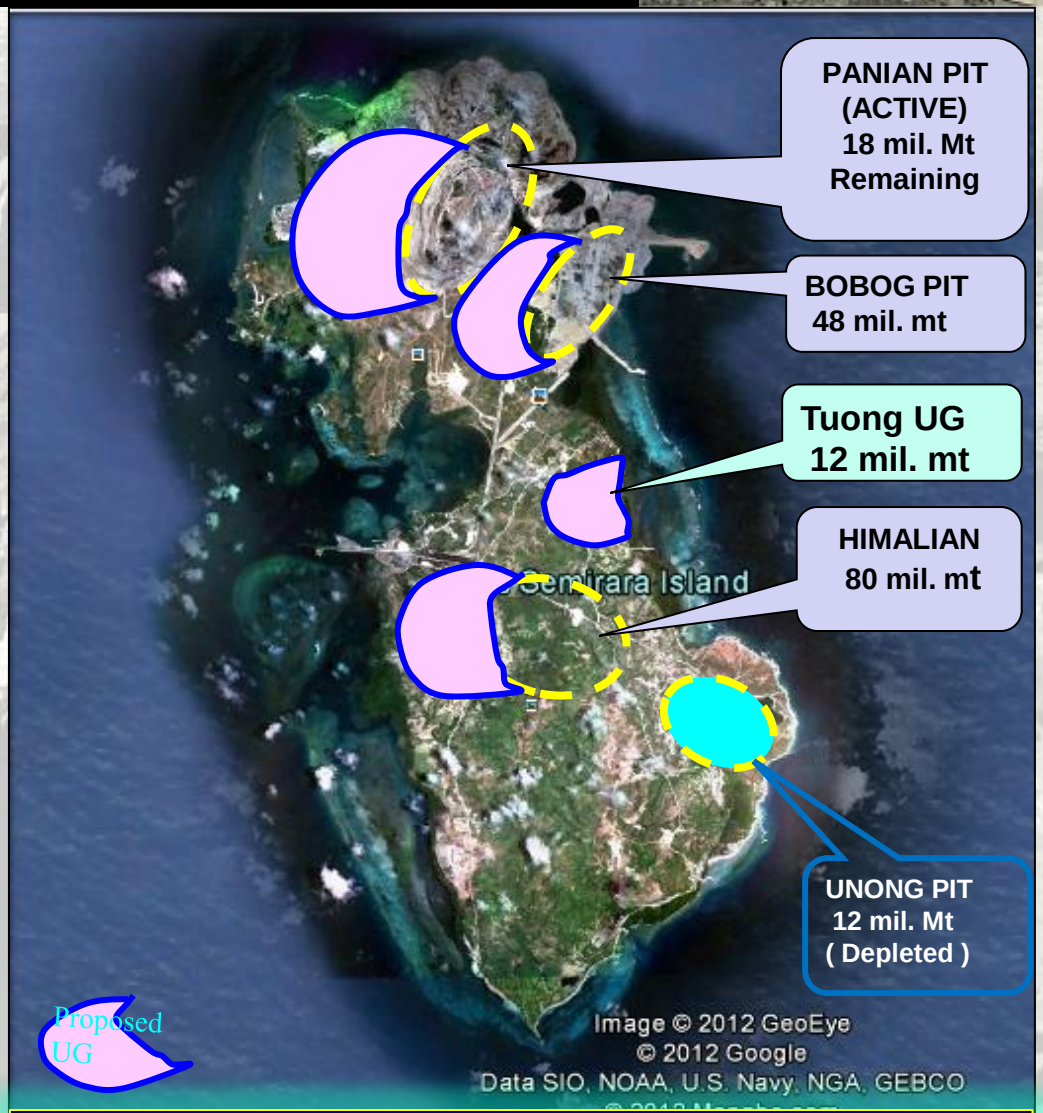
Limestone …….. 1.2 Billion Mt
Clay……..... 2.9 Million Mt

► Earlier Studies Conducted by:

AustroMineral Contractors, 1980-85
Dames & Moore, 1982
Geomontan, 1990
Monenco Consultants Limited, 1990

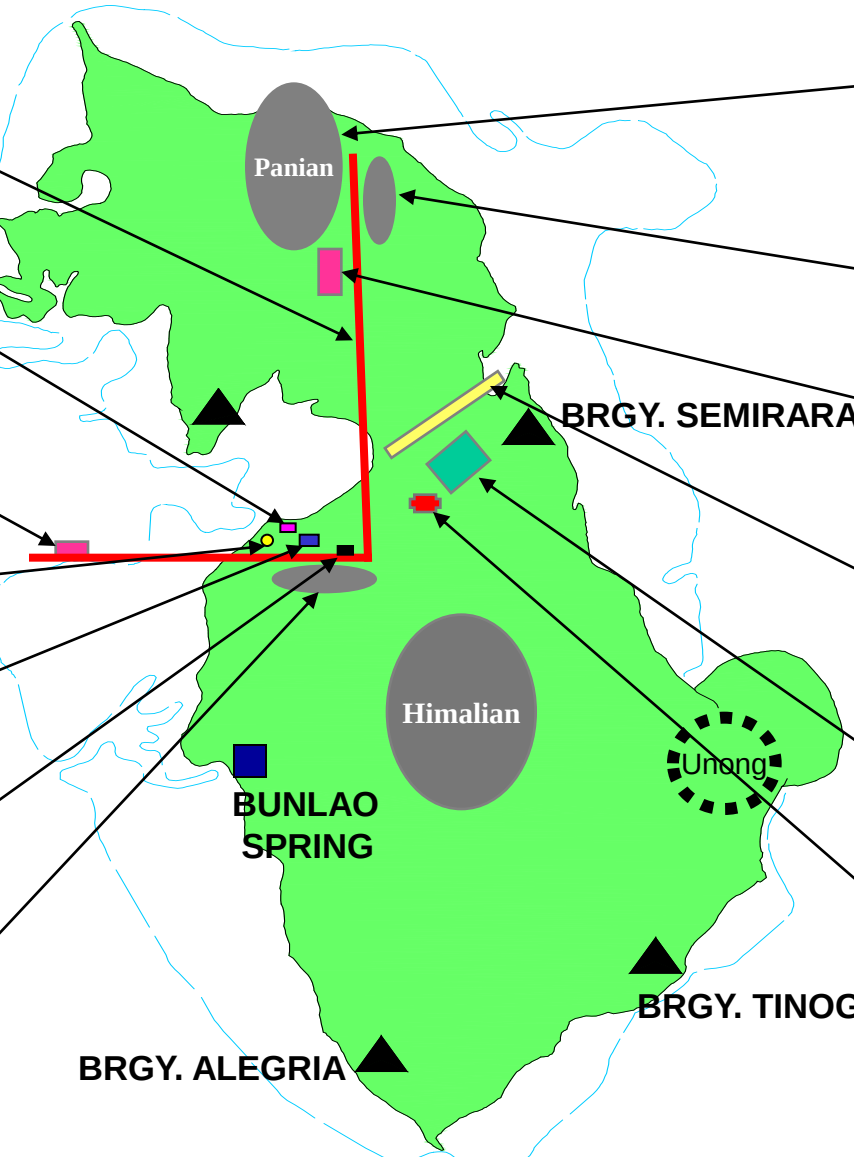
► Inhouse Drilling (2006-present)

690 Exploration & confirmatory drill holes

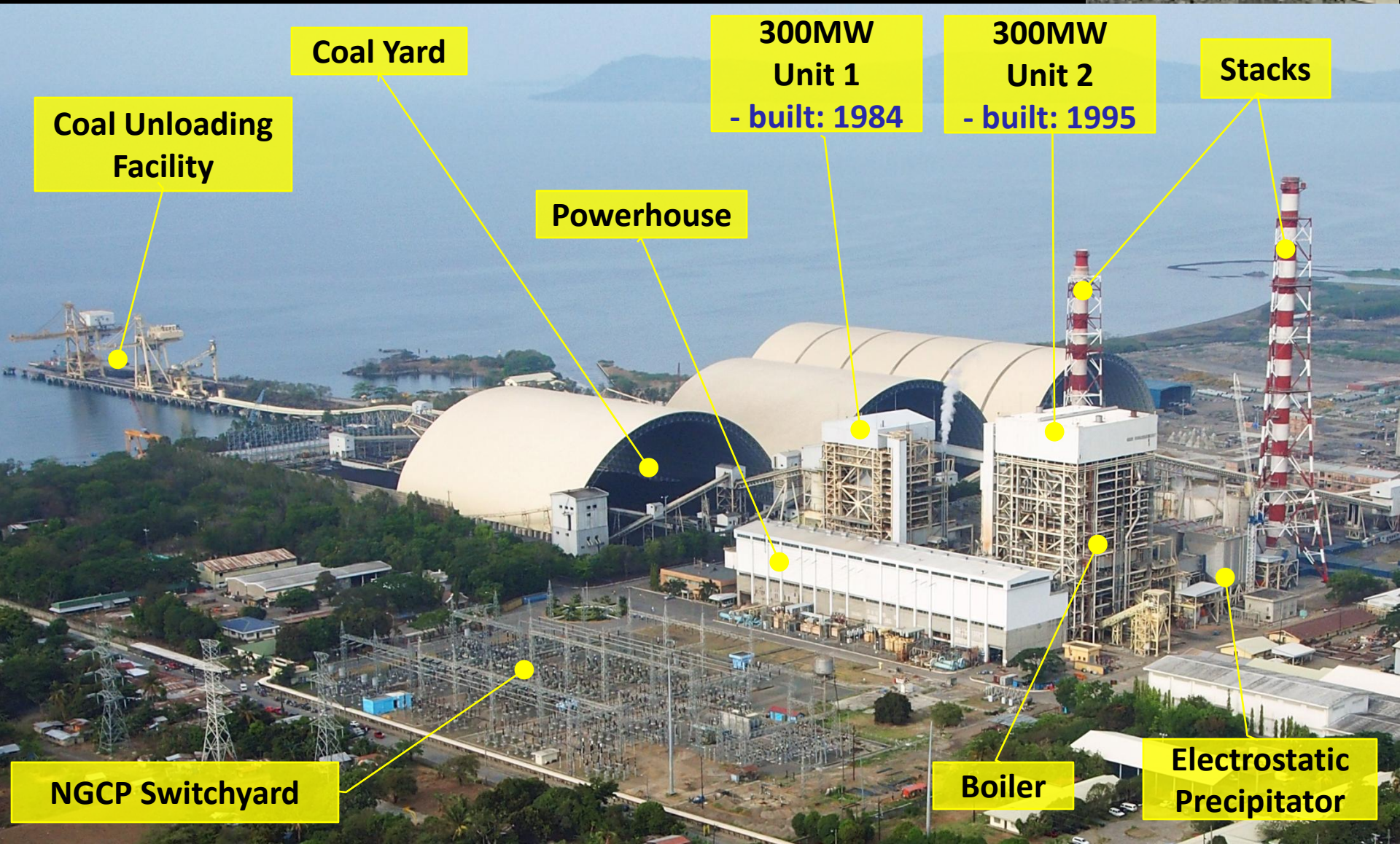


SEMIRARA RESOURCES

Facilities



SEM-CALACA FACILITIES



SEM-CALACA FACILITIES

SEM-CALACA OEM / EPC

EQUIPMENT	UNIT 1	UNIT 2
Steam Generator	Foster Wheeler (FWEC), USA	Asea Brown Boveri/ Combustion Eng'g (ABB-CE), USA
Steam Turbine	Toshiba, Japan	GEC-Alsthom, France
Electric Generator	Toshiba, Japan	GEC-Alsthom, France
Condenser	Toshiba, Japan	GEC-Alsthom, France
EPC	**Mitsui and Co., Japan**	**Mitsubishi, Japan**

PRODUCTION

& OPERATIONS

COAL PRODUCTION FLOW DIAGRAM

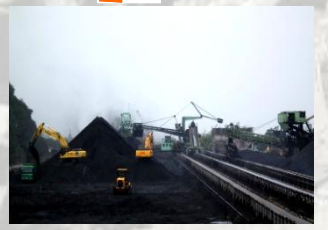
5

Washing

6

Blending & Pre-acceptance

7 Shiploading



Washable Coal

Clean Coal

4 Stockpiling

3 Hauling,

2 Coal Extraction

1 Waste Stripping

COAL SPECIFICATIONS

PARAMETER	TYPICAL		
Gross Calorific Value, Btu/lb (Air Dried)	8,700	-	10,000
Gross Calorific Value, Btu/lb (As Received)	7,300	-	9,000
Proximate Analysis		-	
Ash %	6	-	17
Fixed Carbon %	33	-	44
Volatile Combustible Matter	34	-	40
Total Sulfur, % (Air Dried, ASTM D2015)	0.20	-	1.00
Total Moisture, % (As Received)	21	-	29
Residual Moisture, % (Air Dried)	8	-	18
Hardgrove Grindability Index	40	-	50
Size, mm	50	-	200

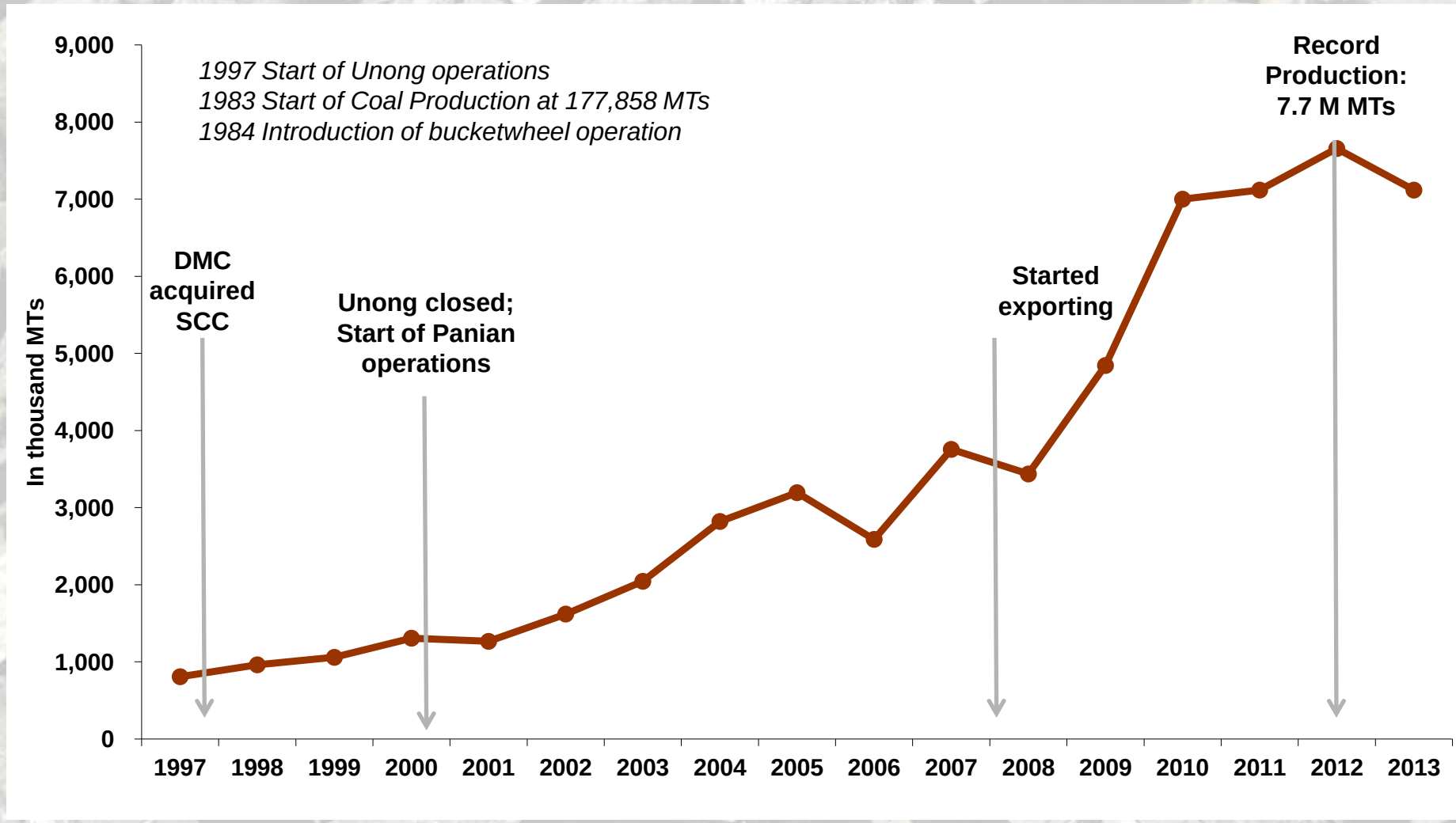
COAL MINING EQUIPMENT

Capacity

EQUIPMENT	# OF UNITS							
	2007	2008	2009	2010	2011	2012	2013	2014
LOADING								
16 m^3 Excavators	5	7	7	7	8	16	2	4
15 m^3 Excavators			2	5	5	5	8	8
12 m^3 Excavators	-	3	4	4	4	4	8	8
7 m^3 Excavators	5	7	4	2	2	2	2	1
TOTAL	**10**	**17**	**17**	**18**	**19**	**27**	**20**	**21**
HAULING								
100-tonne Dump Trucks	**56**	**73**	**102**	**121**	**121**	**120**	**107**	**120**
SUPPORT								
Dozers	14	19	19	29	26	25	25	25
Motor Graders	5	5	6	6	6	6	5	5
Water Trucks	3	4	4	6	6	7	4	4
Small Power Shovels	3	6	10	12	15	12	14	14
Crusher	2	2	2	2	0	0	0	0
Crane					2	2	4	4
Drilling Machine / Eqpt					1	21	21	20
TOTAL	**27**	**36**	**41**	**55**	**56**	**73**	**73**	**72**
FLEET CAPACITY (M bcm)	**32**	**38**	**62**	**80**	**85**	**80**	**82**	**82**

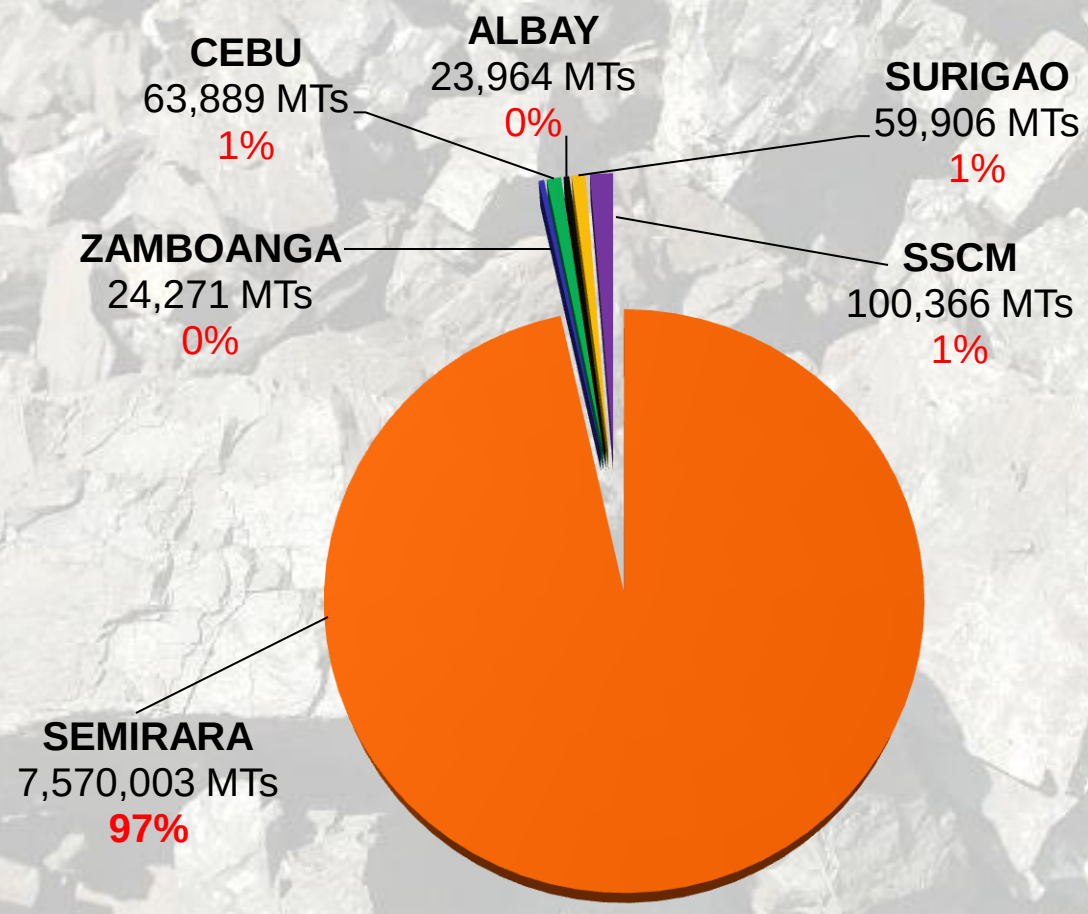
HISTORICAL COAL PRODUCTION

Unong and Panian Annual Coal Production



2013 PHILIPPINE ROM COAL PRODUCTION

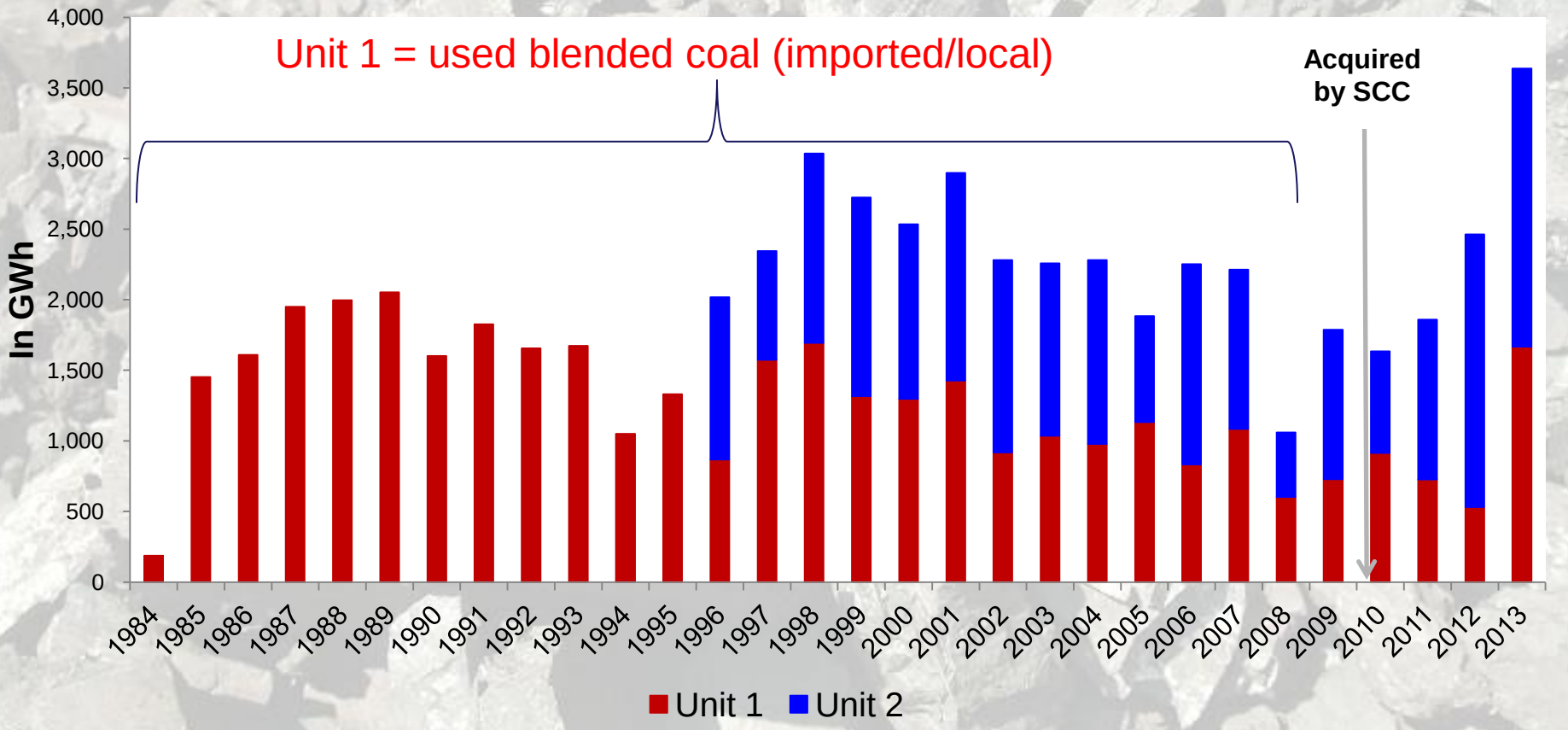
In metric tons



Total: 7.84 M MTs

Source: DOE

CALACA HISTORICAL GROSS ENERGY GENERATION



SEM-CALACA REHABILITATION PROGRAM

Target Key Parameters

KEY PARAMETERS (UNIT 1)	PRE-REHAB (2010)	POST-REHAB (2013)
Net Heate Rate; BTU/Kwh	12,140	10,438
Capability; MW	150	245
Availability; %	69	83
Coal usage; MT/Nkwhr	0.705	0.60

Rehab Period: 8 August 2010 – 6 November 2010

KEY PARAMETERS (UNIT 2)	PRE-REHAB (2009)	POST-REHAB (2011-2013)
Net Heate Rate; BTU/Kwh	11,375	11,162
Capability; MW	200	300
Availability; %	65	79
Coal usage; MT/Nkwhr	0.65	0.66

Rehab Period: 29 August 2011 – 4 August 2012

SALES

& MARKETING

PHILIPPINE COAL CUSTOMERS

Petron Corp.
Lima, Bataan

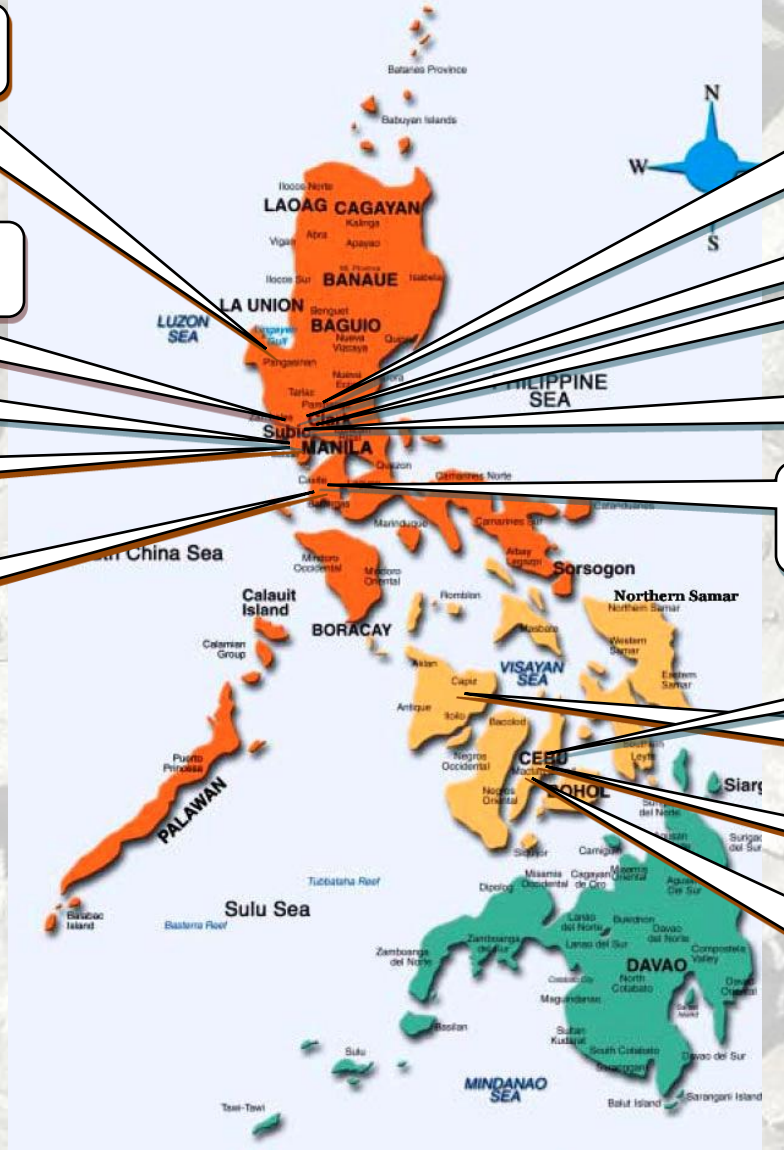
Asia Pacific Energy Corp.
Pampanga

United Pulp and Paper Co., Inc.
Calumpit, Bulacan

PNOC Exploration Corp.
North Harbor, Manila

Jet Power Corp.
North Harbor, Manila

Sem-Calaca Power Corp.
San Rafael, Calaca, Batangas



Eagle Cement Corp.
Bulacan

HOLCIM Philippines Inc.
Norzagaray, Bulacan

Solid Cement Corp.
Antipolo City, Rizal

Lafarge Cement Corp.
Bulacan

Lafarge-Republic Cement Corp.
Batangas

APO Cement Corp.
Naga, Cebu

Panay Energy Development Corp.
Iloilo, City

Cebu Energy Dev't Corp.
Toledo City, Cebu

Toledo Power Corp.
Toledo City, Cebu

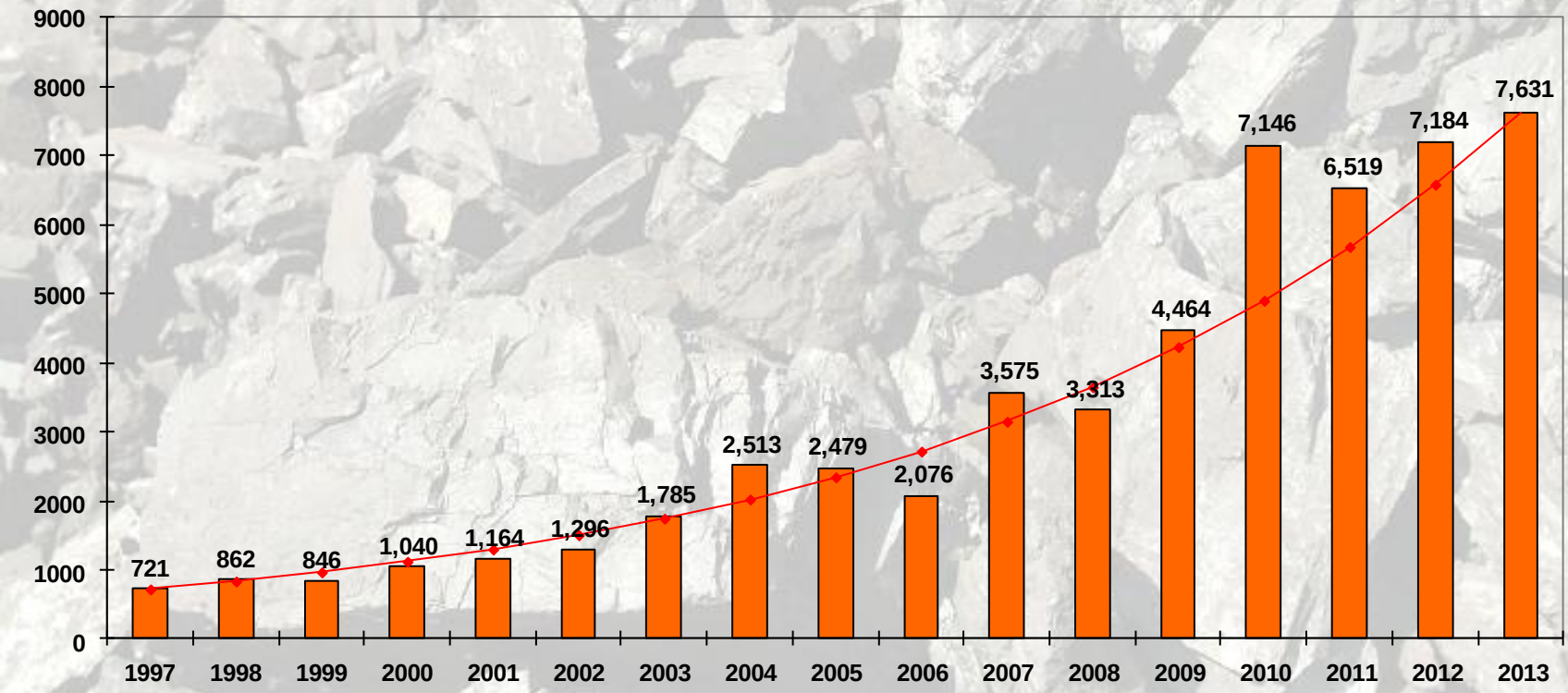
Legend:

- Cement Plants
- Power Plants
- Other Plants

COAL EXPORT MARKETS

COAL SALES VOLUME

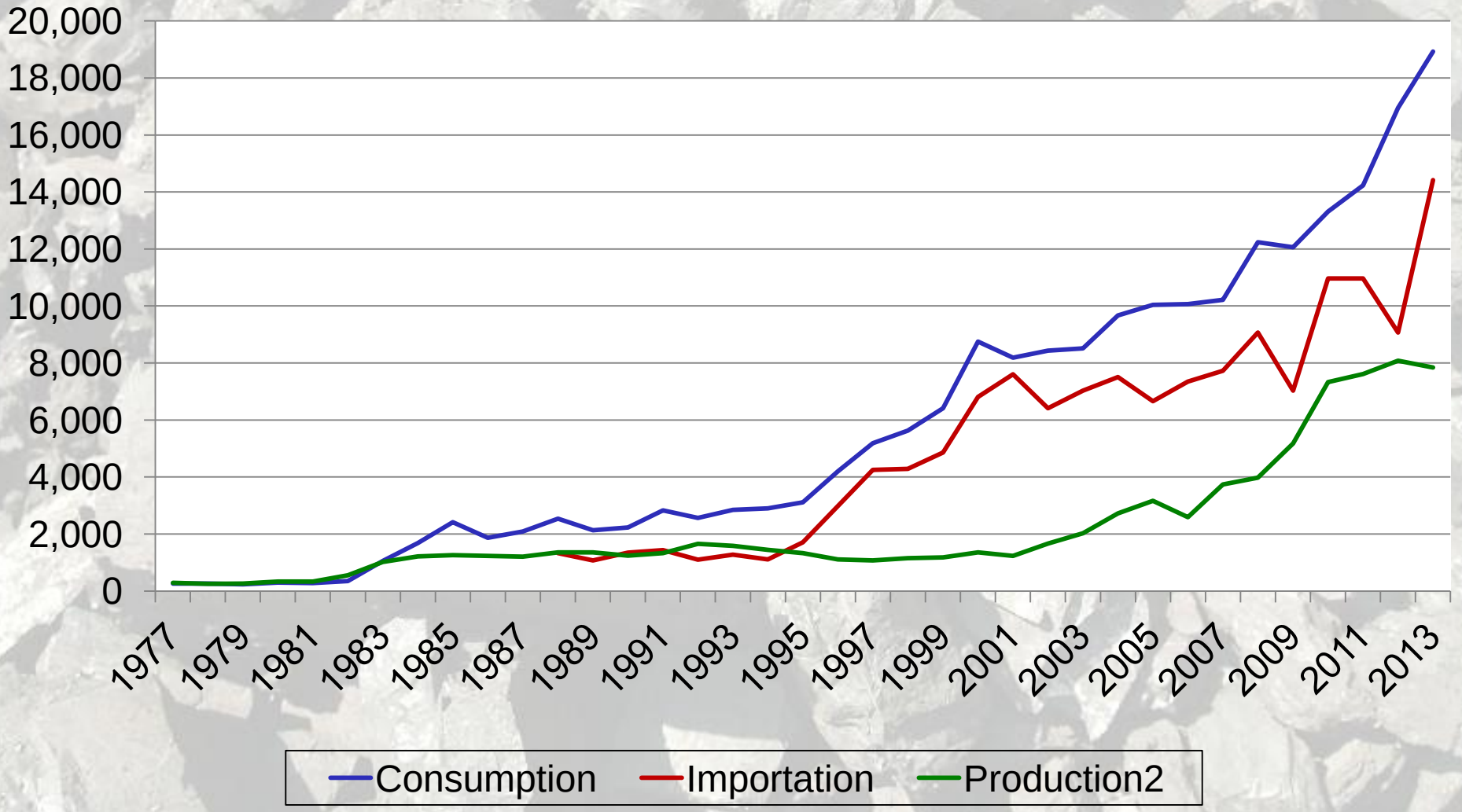
In '000 MTs



Average annual growth rate: 16%

PHILIPPINE COAL PRODUCTION, IMPORTATION & CONSUMPTION

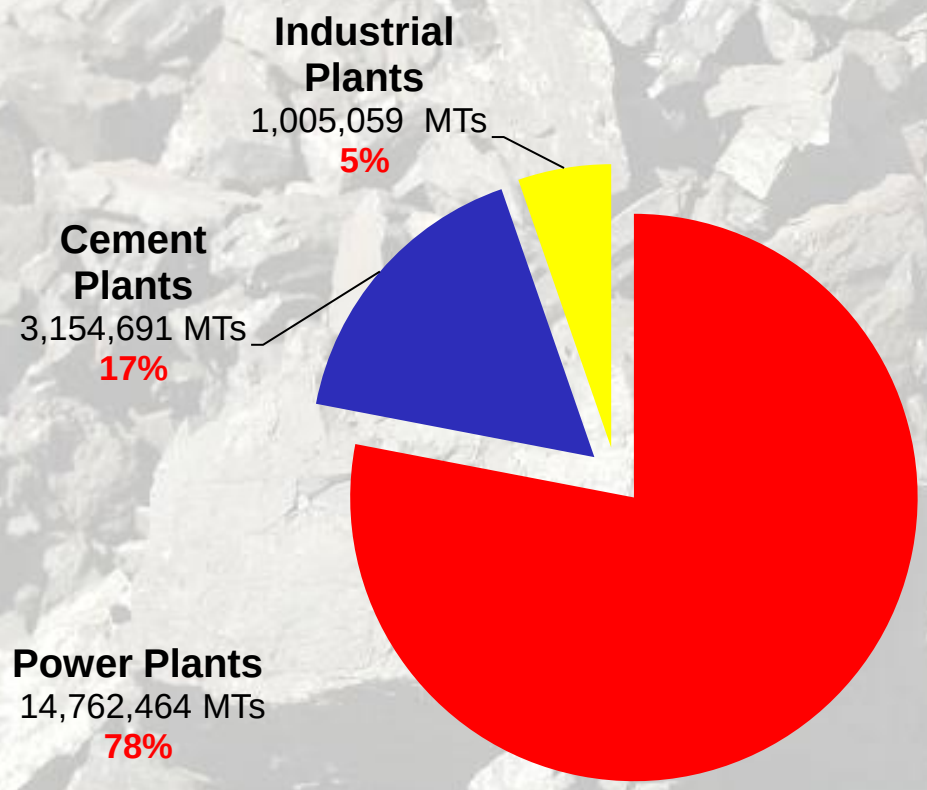
1977 – 2013 (in million metric tons)



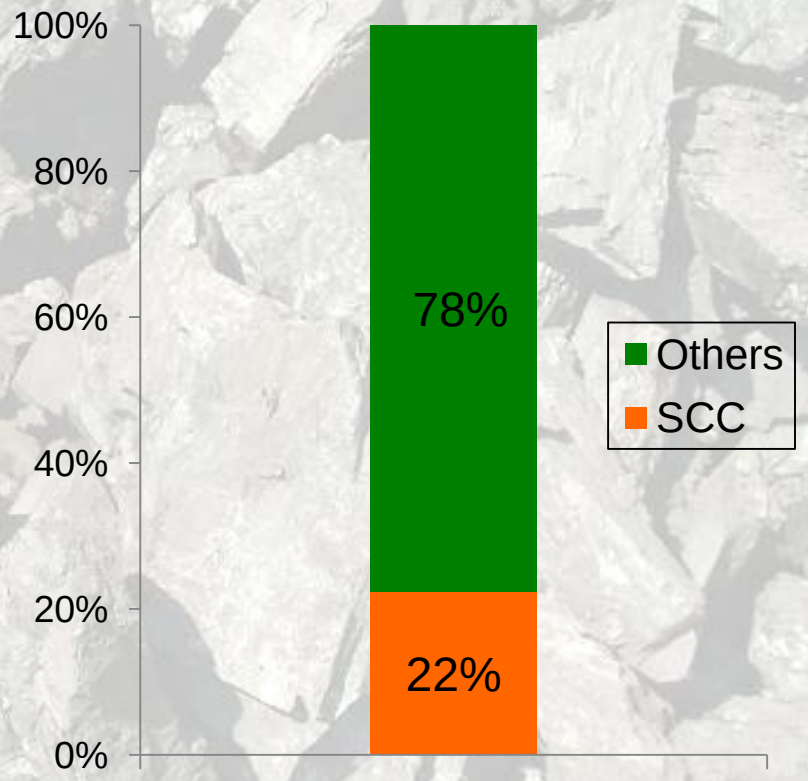
Source: DOE

SCC PHILIPPINE MARKET SHARE

2013 COAL CONSUMPTION



SCC MARKET SHARE

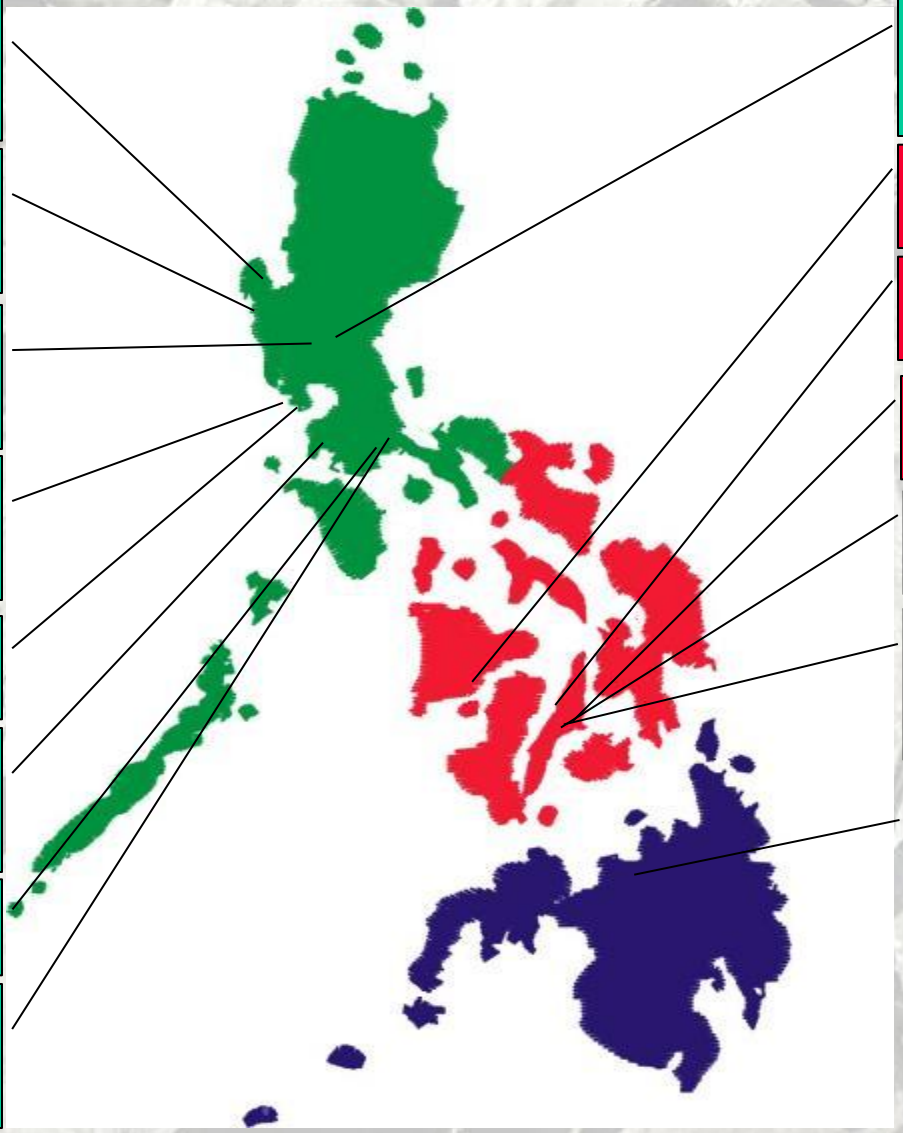


Total Local Consumption: 18.92 M MTs

Source: DOE

EXISTING COAL-FIRED POWER PLANTS

- 2 x 647 MW Sual Coal-Fired Power Plant, Pangasinan (TeaM Energy)
- 2 x 315 MW Masinloc Coal-Fired Power Plant, Pangasinan (AES)
- 50 MW CFB APEC Coal-Fired Power Plant, Pampanga (TIPCO)
- 2 x 600 MW CFB Mariveles Coal-Fired Power Plant, Bataan (GN Power) 2012
- 70 MW Petron Coal-Fired Power Plant, Limay Bataan
- 2 x 300 MW Batangas Coal-Power Plant, (SEM-Calaca/DMCI Group)
- 456 MW QPPL Coal-Fired Power Plant, (Quezon Power)
- 2 x 382 MW Pagbilao Coal-Fired Power Plant, Quezon (TeamM Energy)



- 25 MW CFB UPPC Coal-Fired Power Plant, Bulacan (UPPC)
- 2 x 82 MW CFB PEDC, Iloilo (Global Business Power Corp.)
- 3 x 82 MW CFB CEDC, Cebu (Global Business Power Corp.)
- 2 x 50 MW CFB CTPP, Cebu (Salcon Power Corp.)
- 2 x 100 MW CFB KSPC, Cebu (KEPCO-Salcon)
- 89 MW Toledo Power Corp., Cebu (Global Business Power Corp.)
- 2 x 105 MW Mindanao Coal-Fired Power Plant, Misamis Oriental (STEAG)

COMMITTED POWER PROJECTS

Luzon Grid Committed Power Projects

Proponent	Location	Type	Rated Capacity (MW)	Project Costs (PHP Billion)	Target Commissioning
South Luzon Thermal Energy Corp. (SLTEC)	Puting Bato, West, Calaca, Batangas	Coal-Fired	135.0	12.9	August 2014
South Luzon Thermal Energy Corp. (SLTEC)	Puting Bato, West, Calaca, Batangas	Coal-Fired	135.0	9.6	November 2015
Southwest Luzon Power Generation Corp. (SLPGC)	San Rafael, Calaca, Batangas	Coal-Fired	300.0	45.4	October 2014
San Jose 1 Power Corp.	Brgy. Tulat, San Jose, Nueva Ecija	Biomass	9.9	1.2	November 2014
Energy Development Corp.	Sitio Burgos, Ilocos	Wind	87.0	32	December 2014
TOTAL			**666.9**	**101.1**	

Visayas Grid Committed Power Projects

Proponent	Location	Type	Rated Capacity (MW)	Project Costs (PHP Billion)	Target Commissioning
Toledo Power Corporation	Toledo City, Cebu	Coal-Fired	82.0	10.2	September 2014
Energy Development Corp.	Nasuji, Valencia, Negros Or.	Geothermal	50.0	4.0	August 2014
Sunwest Water & Electric Co., Inc.	Brgy. Igsoro, Bugasong, Antique	Hydro	8.0	1.4	May 2014
San Carlos BioPower Corp.	San Carlos City, Negros Occ.	Biomass	18.0	1.7	March 2015
Petrogreen Energy Corp.	Brgy. Pawa, Nabas, Aklan	Wind	50.0	5.4	December 2014
Trans-Asia Oil Renewable Energy Corp.	San Lorenzo, Guimaras	Wind	54.0	4.3	August 2014
TOTAL			**262.0**	**27**	

Mindanao Grid Committed Power Projects

Proponent	Location	Type	Rated Capacity (MW)	Project Costs (PHP Billion)	Target Commissioning
Peak Power Soccsargen Inc.	SocSarGen	Biomass	20.9	0.250	September 2014
Peakpower San Francisco Inc.	SocSarGen	Biomass	5.2		September 2014
Therma South, Inc.	Brgy. Binugao, Toril, Davao Brgy. Inawayan, Davao del Sur	Coal-Fired	150.0	12.0	March 2015
TOTAL			**176.1**	**12.25**	

Source: DOE

CEMENT & INDUSTRIAL COAL END-USERS

Source: DOE/ERDB, 11 Jul 2012

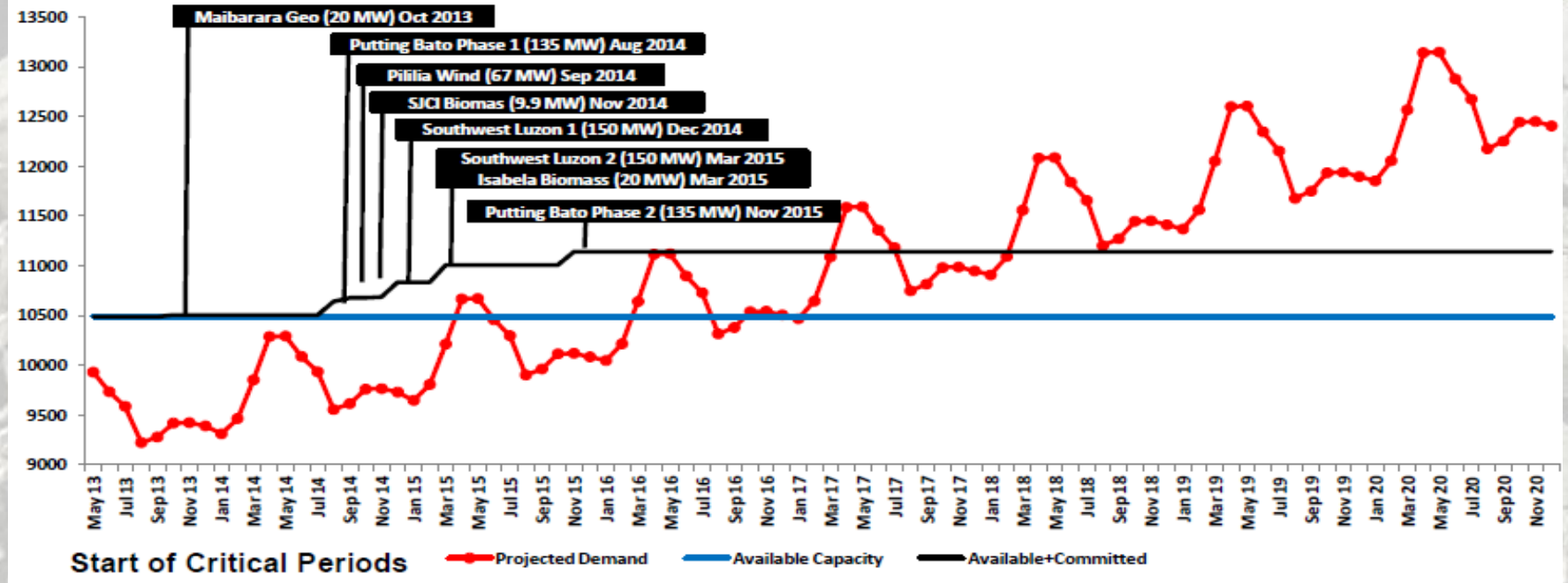
INSTALLED CAPACITY & DEPENDABLE CAPACITY

In MW

FUELTYPE	INSTALLED			DEPENDABLE			TOTAL	
	Luzon	Visayas	Mindanao	Luzon	Visayas	Mindanao	Installed	Dependable
Coal	4,617	728	232	4,415	650	212	5,577	5,277
Oil Based	2,341	661	677	1,842	496	651	3,679	2,989
Diesel	1,043	606	677	745	496	651	2,326	1,892
Oil Thermal	650			557			650	557
Gas Turbine	648	55		540	-		703	540
Natural Gas	2,881	1		2,871	1		2,882	2,872
Geothermal	843	953	108	470	625	97	1,904	1,192
Hydro	2,471	13	1,048	2,374	11	967	3,532	3,352
Solar			1			1	1	1
Wind	33			33			33	33
Biomass	37	45	36	37	44	36	118	117
TOTAL	**13,224**	**2,400**	**2,102**	**12,041**	**1,827**	**1,964**	17,727	15,832

Source: ERC Resolution 3 Series of 2014

LUZON SUPPLY & DEMAND OUTLOOK 2013-2030



On Available Capacity:

- Apr-May 2015: Projected Deficit of 184 MW
- Mar-Jul 2016: Projected Deficit of 240 to 635 MW

On Available Capacity + Committed:

- Apr-Jun 2017: Projected Deficit of 200 to 450 MW
- Mar-Dec 2018: Projected Deficit of 270 to 940 MW

Notes

a. Demand curve as plotted includes total of peak demand and required Reserve Margin (RM) i.e. 4% regulating reserve and contingency and dispatchable reserve requirement

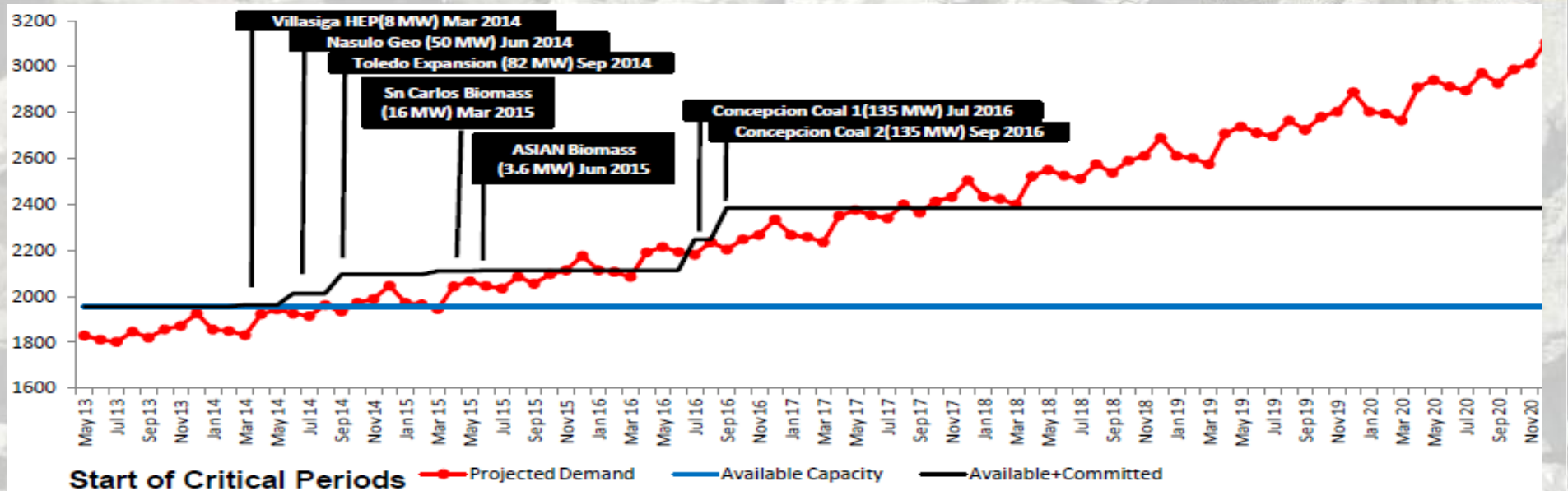
b. 4.2 % peak demand growth rate resulted from observed 0.6 elasticity ratio of demand for electric power with national economic growth applied to 7 percent GDP growth rate (GR) target for 2013-2015.

c. 4.8 % peak demand growth rate resulted from observed 0.6 elasticity ratio of demand for electric power with national economic growth applied to 8 percent GDP growth rate (GR) target for 2016-2020.

d. Assumed 6.6 percent average forced outage of the total dependable capacity

Source: DOE

VISAYAS SUPPLY & DEMAND OUTLOOK 2013-2030



On Available Capacity:

- Nov-Dec 2014: Projected Deficit of 30 to 90 MW
- Apr-Dec 2015: Projected Deficit of 80 MW to Max 220 MW

On Available Capacity + Committed:

- Dec 2015: Projected Deficit of 60 MW
- Apr-Jun 2016: Projected Deficit of 70 to 100 MW
- Dec 2017-Dec 2018: Projected Deficit of 120 to 305 MW

Notes

a. Demand curve as plotted includes total of peak demand and required Reserve Margin (RM) i.e. 4% regulating reserve and contingency and dispatchable reserve requirement

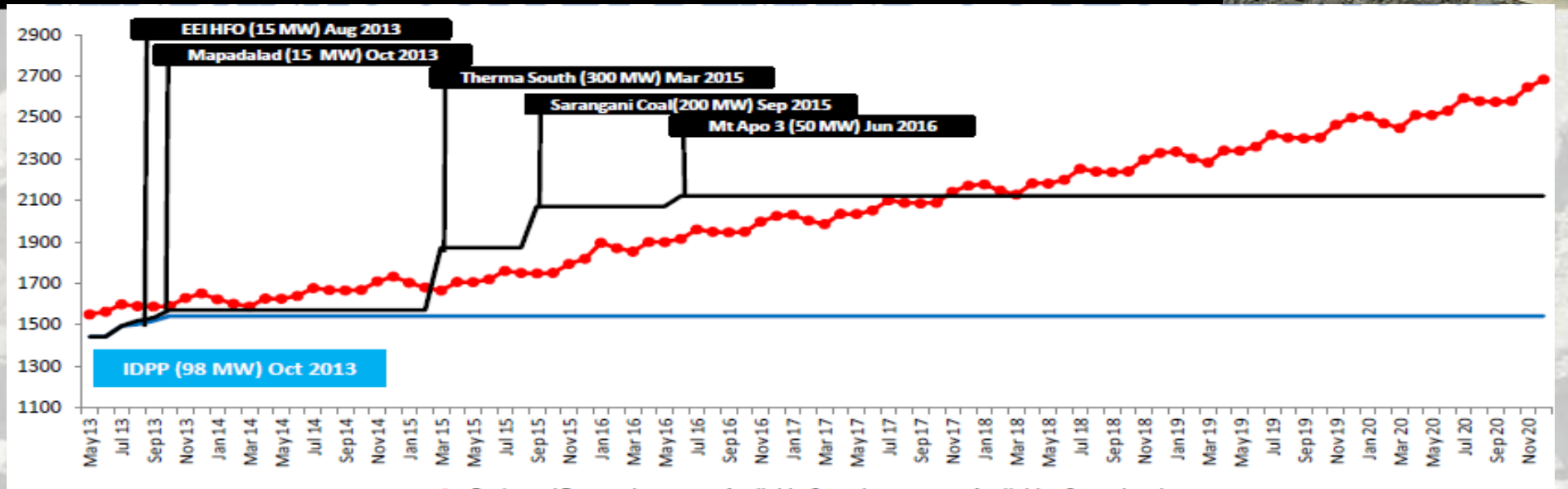
b. 7 % peak demand growth rate resulted from observed 1 elasticity ratio of demand for electric power with national economic growth applied to 7 percent GDP growth rate (GR) target for 2013-2015.

c. 8 % peak demand growth rate resulted from observed 1 elasticity ratio of demand for electric power with national economic growth applied to 8 percent GDP growth rate (GR) target for 2016-2020.

d. Assumed 7 percent average forced outage of the total dependable capacity

Source: DOE

MINDANAO SUPPLY & DEMAND OUTLOOK 2013-2030



Critical Periods

On Available Capacity:

- 2013: Projected Deficit of 50 to 110 MW
- 2014: Projected Deficit of 50 to 190 MW
- 2015: Projected Deficit 120 to 280 MW

Next Critical Periods

On Available Capacity + Committed:

- Jan-Feb 2015: Projected Deficit of 100 to 130 MW
- Nov-Dec 2017: Projected Deficit of 20 to 50 MW
- 2018: Projected Deficit of 50 to 200 MW

Notes

a. Demand curve as plotted includes total of peak demand and required Reserve Margin (RM) i.e. 4% regulating reserve and contingency and dispatchable reserve requirement

b. 5.6 % peak demand growth rate resulted from observed 0.8 elasticity ratio of demand for electric power with national economic growth applied to 7 percent GDP growth rate (GR) target for 2013-2015.

c. 12.8 % peak demand growth rate resulted from observed 1.6 elasticity ratio of demand for electric power with national economic growth applied to 8 percent GDP growth rate (GR) target for 2016

d. 8 % peak demand growth rate resulted from observed 1 elasticity ratio of demand for electric power with national economic growth applied to 8 percent GDP growth rate (GR) target for 2017-2020

e. Assumed 3.41 percent average forced outage of the total dependable capacity

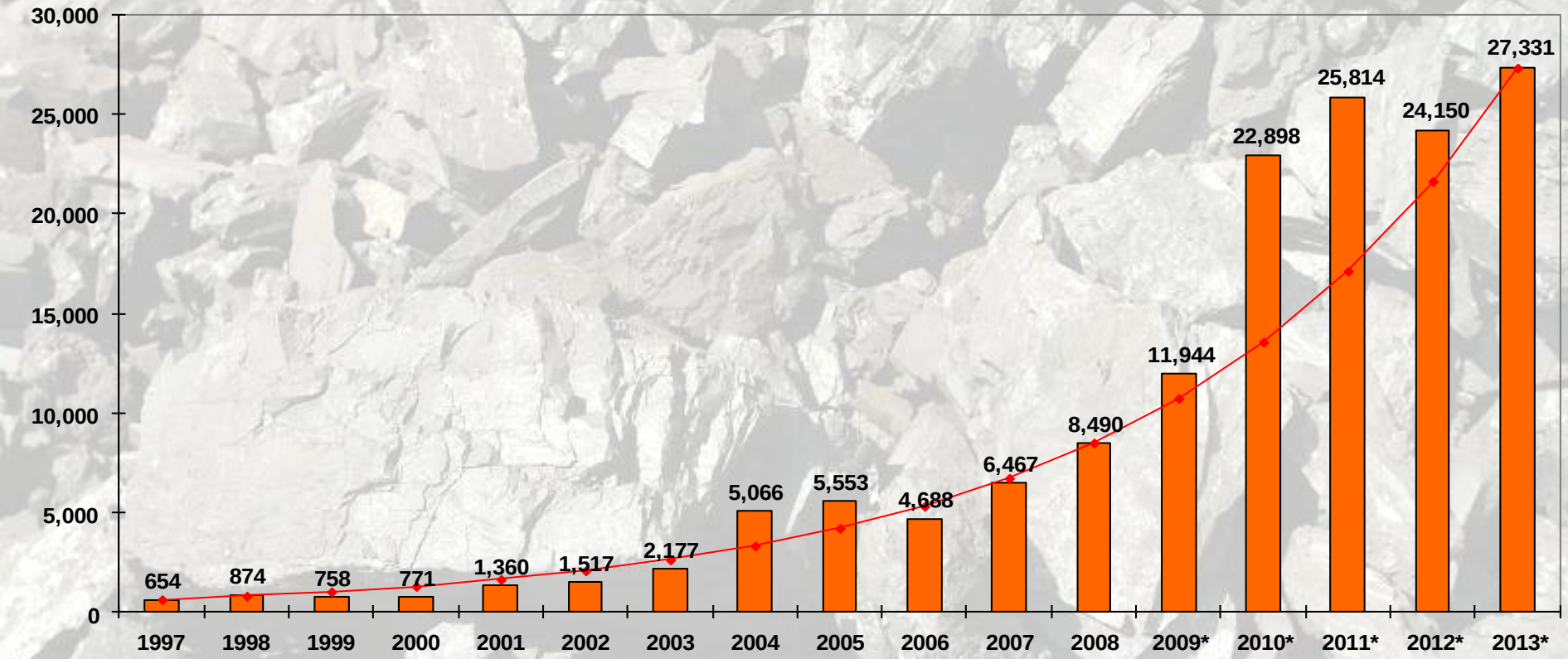
Source: DOE

FINANCIAL

HIGHLIGHTS

TOTAL REVENUES

In Million Pesos

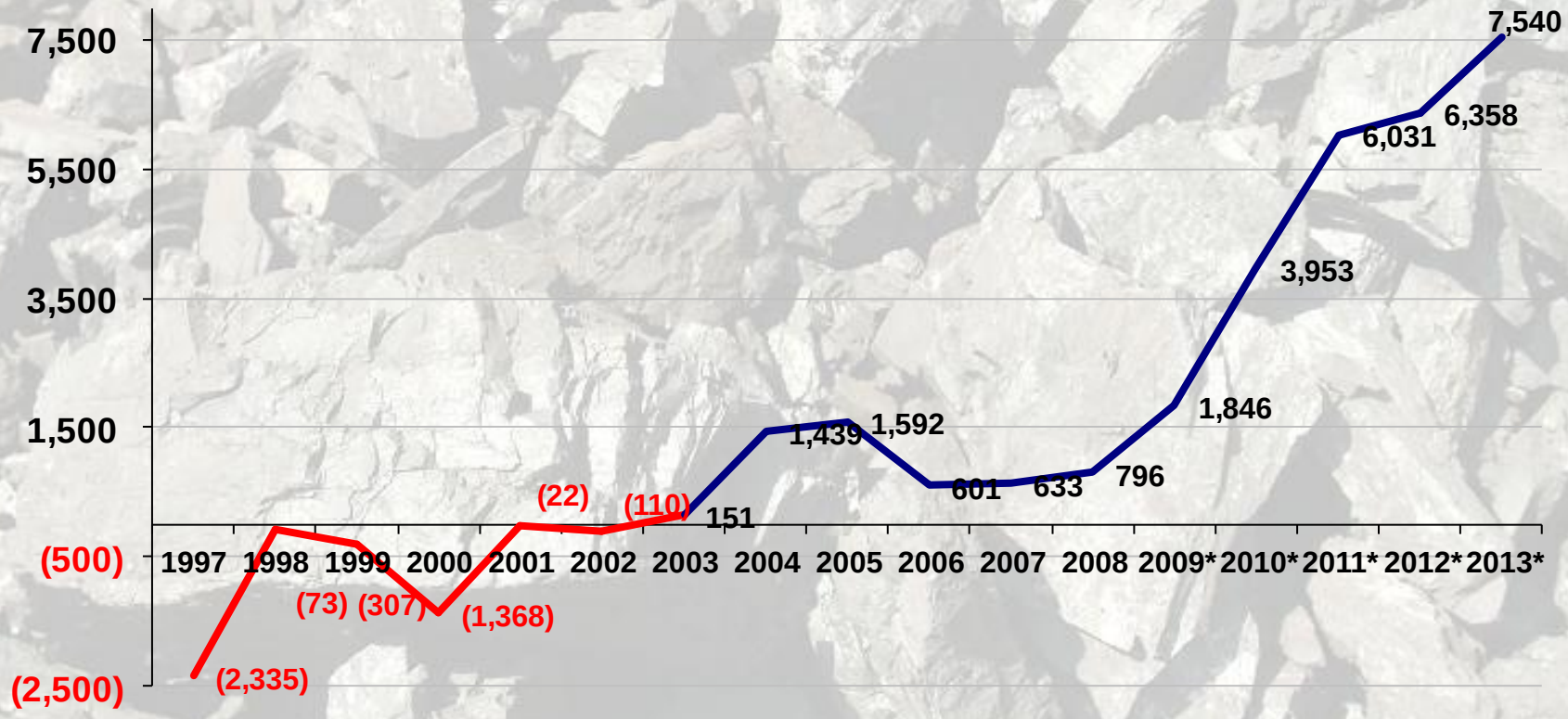


**Consolidated*

Average annual growth rate: 26%

NET INCOME AFTER TAX

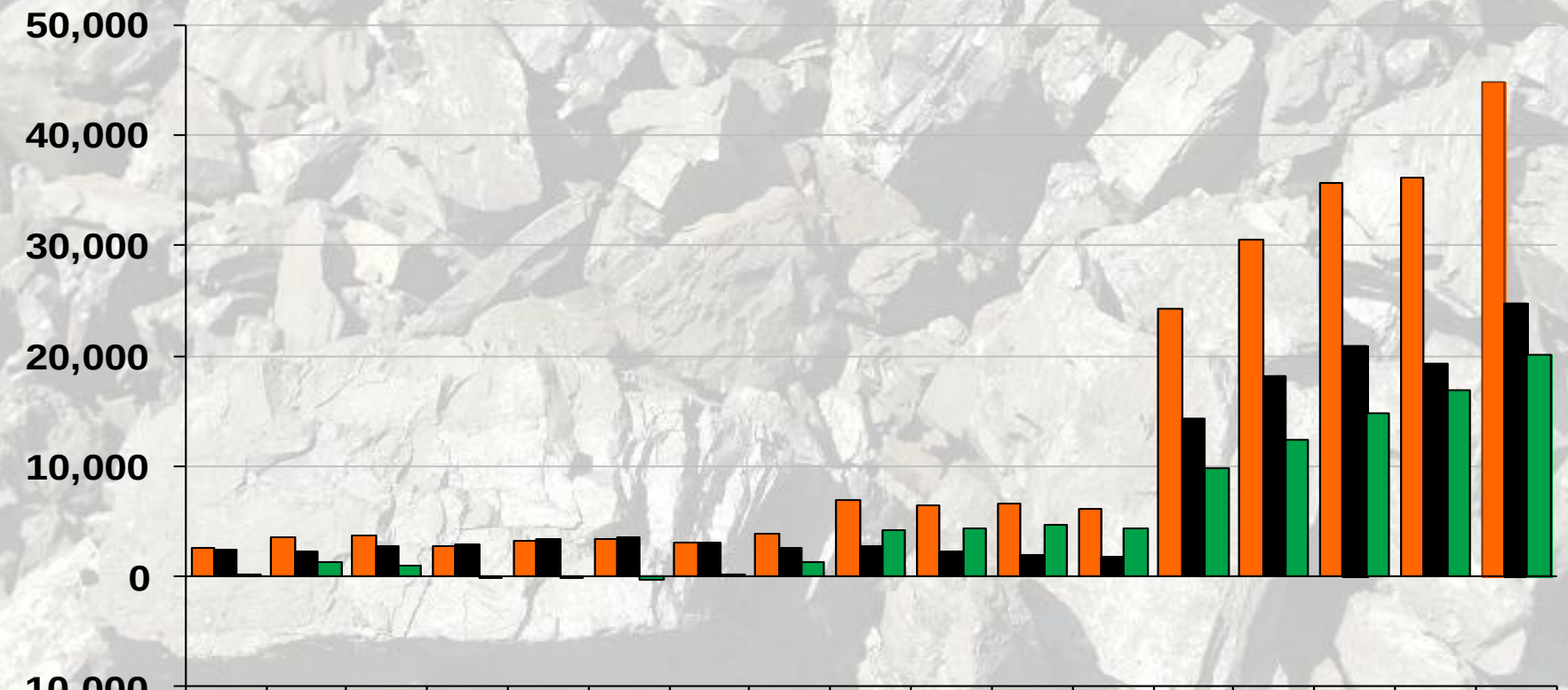
In Million Pesos



*Consolidated

BALANCE SHEET

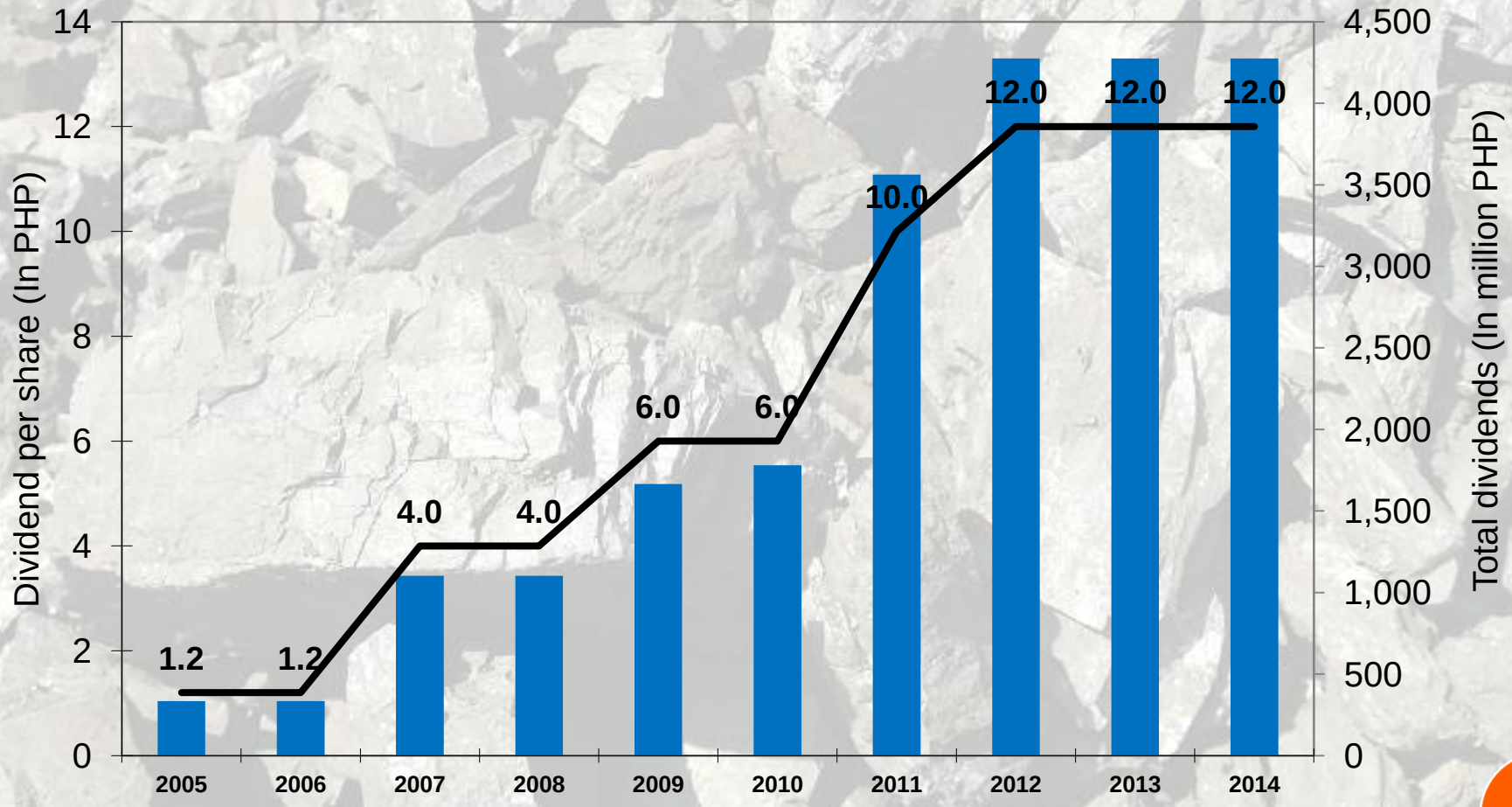
In Million Pesos



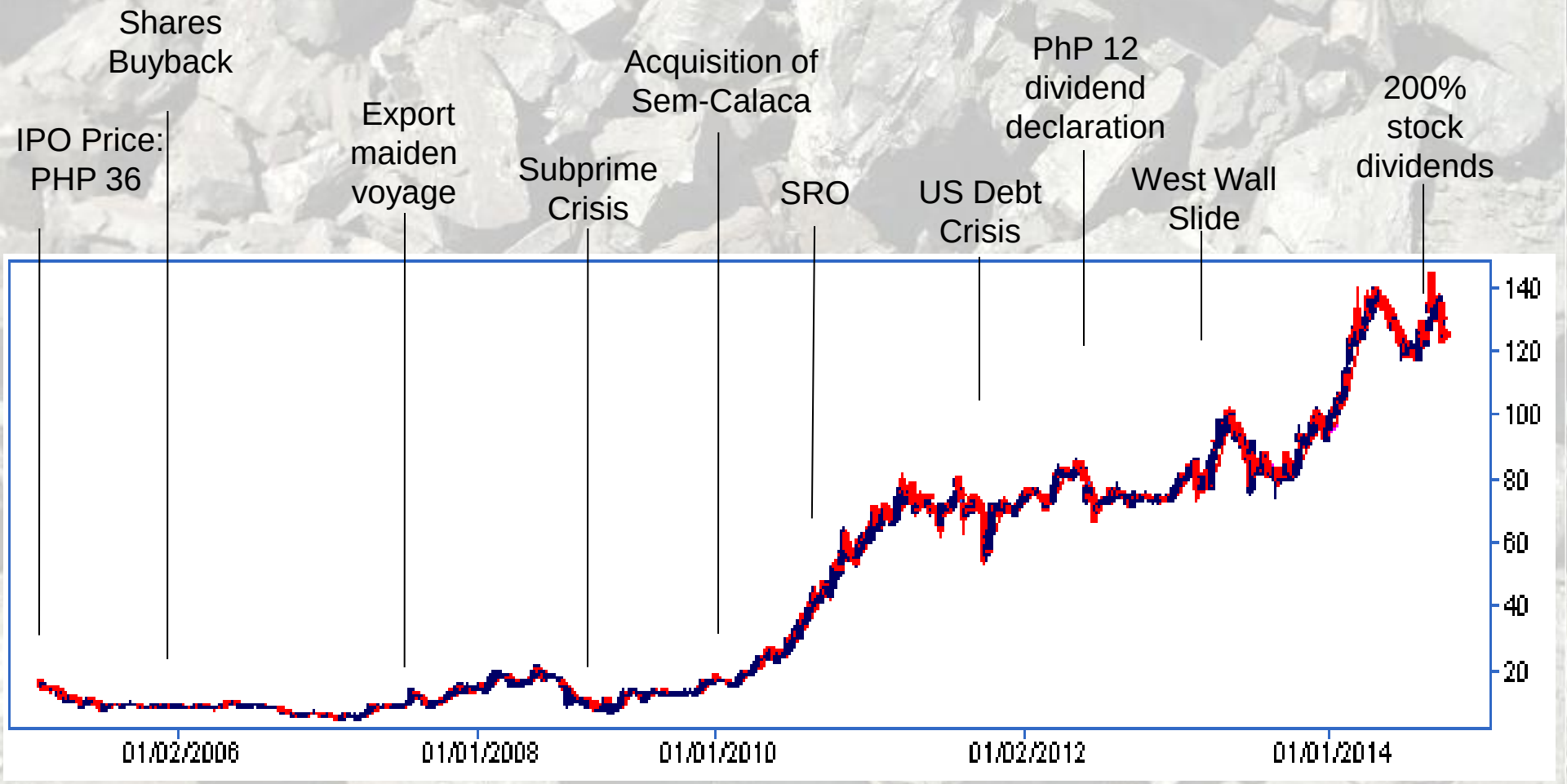
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009*	2010*	2011*	2012*	2013*
Assets	2,598	3,506	3,679	2,736	3,240	3,413	3,099	3,862	6,928	6,511	6,558	6,111	24,26	30,49	35,62	36,18	44,83
Liabilities	2,353	2,248	2,729	2,853	3,379	3,546	3,094	2,502	2,736	2,197	1,944	1,811	14,38	18,15	20,82	19,29	24,70
Equity	245	1,258	951	(117)	(139)	(249)	6	1,361	4,192	4,315	4,615	4,301	9,884	12,34	14,80	16,89	20,13

**Consolidated*

HISTORICAL DIVIDENDS



STOCK PRICE MOVEMENT



COMMUNITY SOCIAL

RESPONSIBILITY

5 E's PROGRAM

The 5 E's Program: *Electrification, Education, Employment, Economics, Environmental Protection & Conservation*