CFA Institute

CFA Institute Research Challenge

hosted by

CFA Society of the Philippines

University of the Philippines—Diliman

University of the Philippines—Diliman Student Research

This report is published for educational purposes only by students competing in The CFA Institute Research Challenge

Industrial Sector, Utilities Industry
Philippine Stock Exchange (PSE)

Manila Electric Company

Date: 29/12/2013 **Current Price: PHP278.00** **Recommendation: BUY (43% Upside)**
Ticker: MER:PM (Bloomberg) **USD1.00: PHP43.71** **Target Price: PHP397.40 (USD9.09)**

MER: Lighting the Way

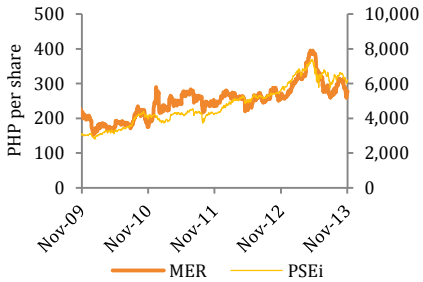
Market Profile	
Closing Price (PHP)	278.00
52-Week Price Range (PHP)	252.00 – 397.00
Average Daily Volume	598,705
Shares outstanding	1,127,098,705
Market Cap (PHP Millions)	313,333.44
Dividend Yield (ntm)	3.71%
P/E (ntm)	16.1
P/B (ntm)	3.80
EV/EBITDA (ntm)	8.60

Sources: *PSE, Bloomberg and Thomson Reuters*

Target Price Breakdown	
Component	**Value (PHP)**
Power Distribution	299.20
Open Access	7.80
Distribution	**307.00**
RP Energy	37.20
Quezon Power 2	21.00
Global Business Power	8.40
PacificLight	23.80
Generation	**90.40**
Target Price	**397.40**

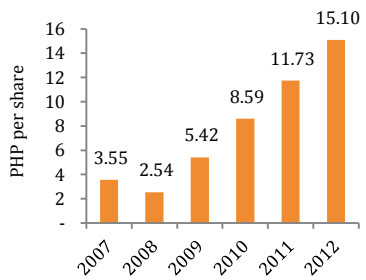
Source: *Team estimates*

Share Price Movement



Source: *Thomson Reuters*

MER Earnings per Share



Source: *Company data*

We issue a **BUY** recommendation on Manila Electric Company (MER) with a one-year target price of PHP397.40 using the Discounted Free Cash Flow to Firm Method. This offers a 43% upside from its closing price of PHP278.00 on November 29, 2013. MER is able to capitalize on its highly defensive core distribution business through solid business performance and strong operating cash flows. This positions MER to invest into the lucrative power generation business and further maximize firm value.

Highly Defensive Core Distribution Business

MER's core distribution business is highly defensive for three reasons: (1) Electricity is a basic necessity; (2) MER is a virtual monopoly in its franchise area which accounts for 46% of the country's Gross Domestic Product (GDP); (3) MER's profitability is protected by the Performance Based Regulation Scheme (PBR) which guarantees the recovery of expenses and capital expenditures plus a return on capital as approved by the Energy Regulatory Commission (ERC). PBR also protects the core business from market risks such as inflation and foreign currency fluctuations, and provides incentives based on meeting service level targets.

Solid Business Performance and Strong Operating Cash Flows

The ability of MER to continually meet regulatory performance requirements allows it to take full advantage of the PBR scheme. From 2010 to 2012, the company has been able to consistently convert revenues into stable operating margins ranging from 5% to 7%. The company is also able to consistently generate positive operating cash flows, ranging from PHP20 billion to PHP36 billion during the same period. These high operating cash flows allow the company to venture into unrelated and less regulated businesses such as power generation.

Lucrative Prospects in the Power Generation Business

MER is building a portfolio of power plants – growing its local committed capacity of 1,060MW to 3,000MW by 2020. The generation industry produced average revenues of PHP21 million per MW in the past two years. With the projected annual demand growth for electricity of 4.5%, the Luzon grid would require an additional 11,900MW capacity by 2030. The industry has immense growth potential as the projected demand for electricity is expected to outpace supply in the next 10 years. With MER's current expansion through local and foreign power plants, it expects additional income of around PHP6.1 billion by the time all power plants are operational in 2019, resulting in an additional PHP90.40 contribution to MER's target price.

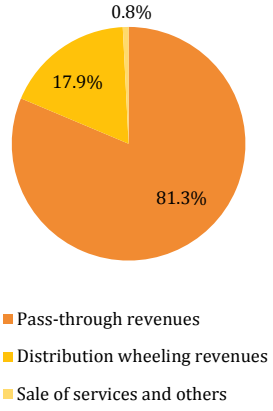
Backed up by the core distribution business, MER's move to build its generation portfolio enables itself to capture the growth in the Philippine energy industry.

MER's Key Financial Ratios

KEY RATIOS	2011	2012	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Cash Ratio	0.83	1.02	1.08	1.06	1.26	1.48	1.39	1.45	1.48
Operating Margin	7.0%	7.3%	9.0%	8.4%	8.5%	8.3%	8.9%	9.8%	9.6%
Net Profit Margin	5.0%	5.7%	6.7%	6.4%	6.4%	6.3%	6.8%	7.7%	7.5%
Fixed Asset Turnover	0.47	0.49	0.54	0.53	0.49	0.45	0.47	0.49	0.51
LT Debt to Assets	0.09	0.09	0.08	0.12	0.14	0.18	0.17	0.18	0.16
Interest Coverage	12.31	12.41	21.34	26.24	17.73	12.91	11.28	11.61	11.82
Earnings per Share	12.18	15.22	18.90	18.16	17.56	16.48	19.47	24.00	25.47
Return on Equity	19.4%	23.8%	29.3%	25.2%	22.5%	19.7%	21.7%	24.8%	24.3%

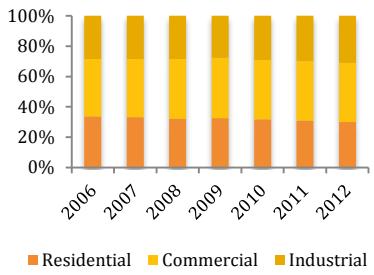
Source: *Company data, Team estimates*

Figure 1. Revenue Breakdown as of December 31, 2012



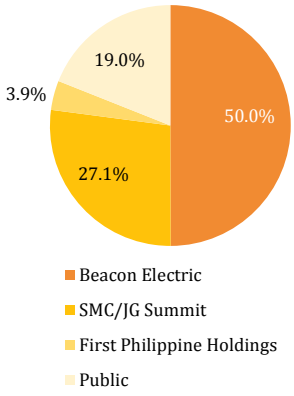
Source: *Company data*

Figure 2. Sales by Customer Class (in GWh) as of December 31, 2012



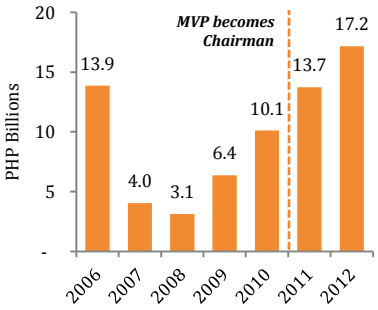
Source: *Company data*

Figure 3. Shareholder Structure



Source: *Company data*

Figure 4. Net Income



Source: *Company Data*

Business Description

Manila Electric Company (MER) is the largest electric power distribution utility (DU) in the Philippines and the only DU in Metro Manila. Established in 1903, MER now accounts for approximately 55% of energy sales—measured in gigawatt hours (GWh), or in thousands of kilowatt hours (kWh)—in the Philippines and serves around 25% of the Philippine population.[1]

MER's current franchise was granted under Republic Act (RA) No. 9209 in 2003, allowing it to construct, operate, and maintain the electric distribution system in its 9,337km² franchise area for 25 years, subject to renewal at the end of the period.[2] Although highly regulated by the Energy Regulatory Commission (ERC), the company holds a monopoly over such area, which contributes approximately 46% of the country's GDP.[3]

The company is currently expanding by venturing into the power generation business—building and acquiring various power plants locally and abroad.[4] This will strengthen MER's foothold in the Philippine power segment while simultaneously benefitting from the country's electricity supply gap.

On average, 99.2% of MER's total revenues are derived from the sale of electricity (Figure 1). 81.3% comprise pass through revenues and 17.9% are distribution-wheeling revenues (DWR).[5] Pass-through revenues are composed of generation, transmission, and system loss charges as allowed by the ERC.[6] All of these collections are revenue-neutral to MER since these are remitted entirely to their respective retailers. On the contrary, DWR drives MER's core net income as it consists of distribution, supply, and metering charges, which accrue fully to the company.[7]

Customers from the distribution business can be divided into four segments: industrial, commercial, residential, and streetlights.[8] Majority of the company's energy sales come from the commercial segment, while the rest are equally divided between the residential and industrial segments (Figure 2).[9] Energy sales are expected to continue to increase due to favorable economic conditions.

Company Strategies

The company's strategic direction focuses on five points:

- **Strengthening of the core business** – MER aims to strengthen and upgrade distribution infrastructure to ensure continuing profitability in its core business and to support its growing customer base.[10] In addition, the firm plans to introduce value-added services, such as prepaid metering, to provide more options for its customers, particularly the residential segment.[11] These value-added services aim to reduce operating costs by increasing efficiency.
- **Retail electricity supply** – MER is participating as a local retail electricity supplier in the Retail Competition and Open Access (RCOA) program of the ERC.[12] The RCOA is a shift in the business model of the power industry, allowing contestable customers – those with an average load of one MW and above – to effectively choose their power supplier.[13] Participating in the RCOA increases the opportunity for profit of MER. As one of the first participants in the implementation of this new regime, MER was able to capture 60% of all eligible contestable customers in its franchise area.[14]
- **Power generation** – MER plans to expand its foothold in the power industry by investing in both new and existing power generation plants through its wholly-owned subsidiary MERALCO Power Generation Company (MGen).[15] It has a target portfolio of 2,700MW to 3,000MW domestically, while selectively participating in overseas generation projects. Local committed capacity as of 2013 is 1,060MW.[16] This strategy of vertical integration drives higher profitability as it allows MER to earn generation charges from consumers.
- **Franchise expansion and power related privatization** – MER intends to bring its operational efficiency to underserved areas outside its franchise coverage through partnering with other distribution utilities and electric cooperatives. MER is already a technical partner to Integrated Energy Distribution and Marketing Services Limited for the privatization of distribution utilities in Nigeria, Africa.[17]
- **Subsidiary value optimization** – MER's subsidiaries aim to further the company's growth by engaging in service-oriented businesses, aside from power distribution. Examples include bills collection, engineering services, and property insurance. This will add more sources of revenue and tap new markets for MER.

Shareholder Structure[18]

MER is owned by three major shareholder groups and the public. As of November 2013, Beacon Electric Asset Holdings (Beacon Electric) owns 50% of the common shares. The San Miguel Corporation (SMC) group owns 27.1% of the outstanding shares. The third major shareholder group is First Philippine Holdings and First Philippine Utilities Corporation, which owns 3.9% of outstanding shares. The public owns the remaining 19%. (Figure 3). In September 2013, however, SMC has agreed to sell its whole stake in MER to JG Summit Holdings, a Philippine conglomerate with various businesses in food, telecommunications, air transportation, and petrochemicals.[19] This deal, to be finalized in December 2013, will have no significant impact on MER's operations since it only shifts a non-controlling interest to JG Summit.[20] (Appendix 23)

Beacon Electric is a joint venture organized in 2010 between Philippine Long Distance Telephone Company (PLDT, PSE: TEL) and Metro Pacific Investments Corporation (MPI, PSE: MPIC). PLDT is an affiliate of MPI, and both are controlled by First Pacific Co Ltd (First Pac; Ticker HKSE: 142HK). PLDT and MPI are managed by Manuel V. Pangilinan (MVP) as he is the Chairman of MPI, and CEO and Managing Director of First Pac.

Corporate Management

MVP became the Chairman of MER after Philippine Long Distance Telephone Company (PLDT, PSE: TEL) acquired a controlling stake in the company in 2009. Other firms managed by MVP belong in the following industries: telecommunications, water distribution, toll road operations and healthcare. These infrastructure-heavy companies have prospered under his leadership. Similarly, MER's performance has improved, with earnings growth approximately 20% every year since 2010. (Figure 4).[21]

Table 1. Beneficial Ownership

Stakeholders	% of Outstanding Shares
Directors	0.20%
Executive Officers	0.02%
Total	**0.22%**

Source: *Company data*

Table 2. Compensation of Key Management

Compensation (in millions)	2010	2011	2012
Short-term benefits	376	413	432
Long-term benefits	133	112	69
Share-based	14	16	31
Total	**523**	**541**	**532**

Source: *Company data*

Corporate Governance and Social Responsibility

Corporate Governance

MER delivers best practices in corporate governance in Asia. The company was awarded in 2013 the Bell Award for Corporate Governance by the PSE, and Asia's Icon on Corporate Governance by Corporate Governance Asia (Appendix 22). In addition, we evaluated MER's quality of governance in four main facets:

- **Board -** Established audit, risk, governance, and nomination and election committees
- **Shareholder Rights -** One-share-one-vote policy; mechanisms in place that protect minority shareholders against actions of controlling shareholders such as the right to nominate candidates for the board of directors, pre-emptive right, right of inspection, appraisal rights, and a right to dividends
- **Audit and Oversight** - Separate internal audit function, overseen by board; comprehensive enterprise-wide compliance program that is annually reviewed; Designated Chief Governance Officer
- **Compensation –** Discloses compensation policies and beneficial ownership of management (Tables 1&2)[22]

To further improve its corporate governance, MER contracted KPMG-Manabat Sanagustin & Co. for a risk assessment of the company to give management a better grasp of possible risks the business may face.[23] Based on our analysis, MER complies with the standard requirements and best practices in corporate governance.

Social Responsibility

The company actively finds opportunities to leave a lasting impact in the country through the One MER Foundation (OMF). OMF is committed to empowering the community in four areas: Community Electrification, Grassroots Partnerships, Youth Sports Advocacy, and Emergency Preparedness and Disaster Response. A total of 28,286 families directly benefited from these programs. Moreover, an educational scholarship program of the company called the MVP Academic Assistance Awards had given educational aid to 180 individuals in 2012. This commitment to service has transcended through most employees that more than 19,000 employees volunteered to serve in its various socially oriented activities.[24]

Industry Overview and Competitive Positioning

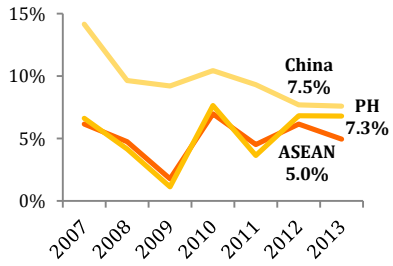
Philippine Economic Performance

Strong GDP Growth Despite Europe and US crises

The European Union debt crisis and the declining United States (US) economy did not have much adverse effects on the Philippine economy. The government established strong economic fundamentals by stabilizing commodity prices, managing debt relative to GDP, and controlling inflation with sound monetary policy.[25]

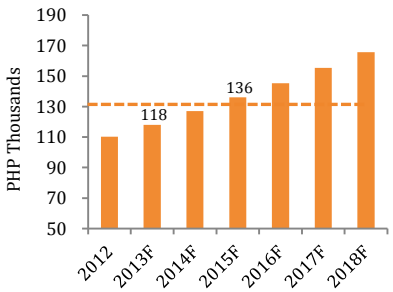
The Philippines achieved a strong economic performance in 2012 with a growth of 6.8%, exceeding the World Bank's forecast of 6.6%.[26] Sustained by strong economic fundamentals, the year to date GDP growth of 7.3% is closely comparable to China's GDP growth (Figure 5). With the declining economies in the West, this strong growth makes the Philippines a strong component in the global portfolio. The Bangko Sentral ng Pilipinas (BSP) projects the trend to continue with its current performance.[27]

Figure 5. GDP Growth



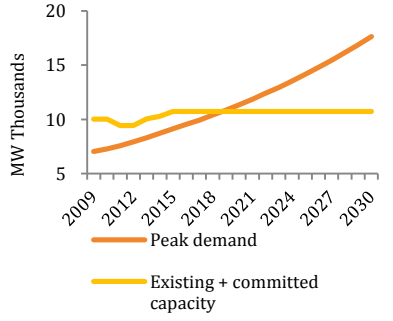
Source: *World Bank, IMF*

Figure 6. PH GDP per Capita



Source: *World Bank, IMF Estimates*

Figure 7. Luzon Power Supply-Demand Gap



Source: *DOE Projections*

Fast-Growing Services Sector Driving Economic Growth

Most recently, the source of GDP growth was spurred by the commercial and real estate sector. This is primarily driven by the rapidly growing Business Process Outsourcing industry. Projections by the BSP for this sector's growth are expected to result in a contribution of around PHP1 trillion (USD23 billion) by 2016.[28]

Household Final Consumption Expenditure Growth Expected to Continue

Household final consumption expenditure (HFCE) grew by 5.5% and 5.2% in the first two quarters of 2013.[29] This was spurred by an increasing marginal propensity to consume. A study by the International Monetary Fund (IMF) shows that when the GDP per capita reaches PHP130,500 (USD3,000), the propensity to spend beyond the basic necessities increases.[30] According to the IMF, the expected GDP per capita for 2013 is around PHP121,000 (USD2,800) and is expected to exceed PHP130,500 by 2015 (Figure 6).[31]

Industrial Sector Expected to Recover

With its high need for capital, growth in the industrial sector slowed down as a result of the 200bp increase in the ten-year Philippine bonds interest rates in 2013.[32] The interest rate hike was due to the expected tapering down of the quantitative easing in the US. However, since this did not occur by September 2013, the BSP did not raise interest rates in response.[33] In addition, the recent credit rating upgrade of the Philippines decreases the borrowing cost for companies, providing an opportunity for the industrial sector to recover.

Philippine Power Sector

Power Supply Demand Gap: Impulse to Invest in Generation[34]

Due to an improving economy, electricity demand is expected to increase in the future. According to the Department of Energy's Power Development Plan, by 2020 only 83.0% of total demand for electricity in Luzon will be met by existing supply (Figure 7). This demand is expected to grow at a Compounded Annual Growth Rate (CAGR) of 4.5% until 2030. An additional 11,900MW is needed by the Luzon grid to meet this expected increase in demand. As a result, investing in power generation is a lucrative prospect as the current level of electricity supply barely meets present peak demand and reserve margin requirement.

Philippine Distribution Sector

Electricity distribution in the Philippines is highly regulated, where the right to distribute electricity in a particular geographic area is granted through a franchise from the government.[35] Under Philippine law, a party that wishes to secure a franchise must first prove to the ERC its technical and financial competence to operate a DU. The ultimate decision to grant a franchise or renew an existing one rests with the Philippine Congress. As of 2010, there are 136 DUs in the country, where 17 are privately owned and 119 are electric cooperatives.[36]

Transition to a Fully Competitive Retail Market[37]

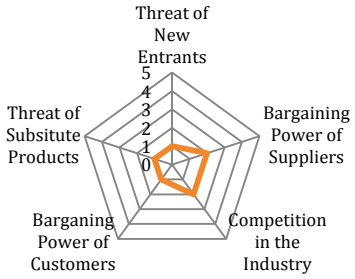
As mandated by RA No. 9136—the Electric Power Industry Reform Act (EPIRA)—the DOE has begun the voluntary implementation of the RCOA regime in the Philippines as of June 26, 2013. Here, a "contestable

Table 3. Salient Points of RCOA

Key Points	Summary
Definition of RCOA	RCOA refers to the provision of electricity to a CC by a RES through open access
Definition of an RES	Any entity authorized to sell electricity to CCs
Changes brought about by RCOA	CC can choose a RES, and RES will do buying and selling, DU will deliver electricity.
Choosing a RES	Various licensed RES may now market their services to customers.
RES prices	RES will earn a margin on generation charge; RES retail rate is based on agreements between the CC and RES.

Source: *ERC, DTI*

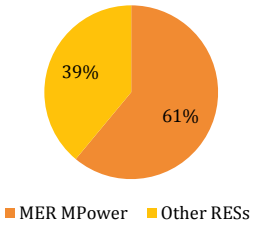
Figure 8. Five Forces Analysis



Legend
0 - No threat to the business
5 - High threat to the business

Source: *Team estimates*

Figure 9. Market Share of CC within Franchise Area as of Q3 2013



Source: *Company data*

customer" (CC)—defined as a customer with a monthly average peak demand of at least one MW in the preceding twelve months—is granted the right to choose their retail electricity supplier (RES). The implementation of this system is expected to bring down the price of electricity. (Appendix 18)

Regardless of a CC's choice of RES, however, the DU's core business profitability remains unaffected, as this customer will nevertheless use the facilities of its original DU.[38] Should the CC select another RES, the "supply charge" component of the electric bill will no longer accrue to MER.[39] However, the related costs of the supply charge will not be incurred as well, offsetting the decrease in revenues.[40]

RCOA can provide a new source of income for DUs if they are selected as RES.[41] Generation charges, which were fully pass-through, can now be sold at a margin by being a RES, resulting in additional margins for the DU.

Power Generation
Under EPIRA, the power generation sector was deregulated through the privatization of the National Power Corporation. Government-owned power plants were placed under the custody of the Power Sector Assets and Liabilities Management Corp. (PSALM) and bid out to private companies. New generation companies shall secure a certificate of compliance from the ERC, but shall not be required to secure a franchise. Similarly, prices charged by generation companies shall not be subject to regulation by the ERC. In order to minimize market power abuse, they are required to submit their pricing formulas as well as their financial statements to ERC.

Competitive Positioning
Favorable Position in Competitive Environment
As mandated by RA 9209, MER has the exclusive franchise to construct, operate and maintain a electric distribution system in Metro Manila, Bulacan, Cavite, and Rizal, and areas in Batangas, Laguna, Quezon and Pampanga. Effectively, MER operates as a monopoly within its franchise area, thereby limiting the bargaining power of its customers. Suppliers' bargaining power is also limited because MER is the sole buyer of electricity in its area. Our analysis (Figure 8) reveals a profitable environment for MER's core business. (Appendix 20)

Improving the Local Distribution Landscape[42]
One of MER's key developments in the distribution segment is the Smart Grid project. This shall computerize the entire power grid from the supplier to the consumer, automating the gathering of information to improve the production and distribution of electricity. In conjunction with this, MER also intends to roll out a new prepaid electricity scheme. This is a "sachet pricing technique", in denominations ranging from PHP100-PHP1,000, improving customers' ability to manage their electricity expenditures. This new system also speeds up the collection of monthly electricity bills as cash is received upon purchase of the card.

Initial Projects in Power Generation[43]
The company aims to capture more profit by moving into the power generation business. Through its wholly-owned subsidiary, MER Power Generation Corporation (MGEN), MER plans to develop a portfolio of up to 3,000MW by 2020. This allows the company to meet market demand, minimize dependence on its current suppliers, and enhance its growth and profitability. Current local projects include the development of RP Energy (RP) and Quezon Power 2 (QP2). RP is a 2x300MW circulating fluidized-bed coal-fired power plant in the Redondo Peninsula, Subic. QP2 is a 460MW supercritical coal-fired plant in Quezon. While both investments are currently in the pipeline, they are expected to be operational by 2017 and 2018 respectively, in time to address the expected power shortage in the region (Table 4). Other projects in the pipeline include a Grid Impact Study with Chubu Electric Power Corp. for a 1500MW LNG plant in Quezon. MER also partnered with Pilipinas Shell in conducting a feasibility study for a 1700MW LNG plant in Batangas.[44] (Appendix 25)

Expanding Outside Luzon
In October 2013, MER made its first local investment outside Luzon by acquiring a 20% stake in Global Business Power (GBP), an Independent Power Producer in Visayas that owns and operates eight plants with a combined installed capacity of 665MW (Table 5).[45] With the DOE's Outlook estimating an additional 2,150MW investment in Visayas by 2030, MER is poised to capture a significant part of the growth in the region.[46]

Venturing into International Market
In March 2013, FPM Power Holdings Ltd, a 60-40% joint venture between First Pacific Co Ltd and MGen successfully concluded an acquisition of a 70.0% stake in a 2x400MW Liquefied Natural Gas (LNG)-combined cycle combustion turbine power plant in Jurong Island, Singapore from GMR Energy.[47] With the project in the latter stages of completion, full commercial operations are expected to begin by January 2014.

Market Leadership under Open Access
MER participates in RCOA through its wholly owned subsidiary and retailer, MPower.[48] We believe MER has the industry experience and technical expertise to be the retailer of choice of customers in this new market. After the first three months of implementation, 254 out of the 700 qualified CCs of MER's franchise area opted to participate in RCOA. Out of this 254, 155 chose MPower as their RES (Figure 9).[49] Based on the initial results, MER may end up being chosen by most of those who are yet to exercise their right to choose. (Appendix 18)

Table 4. MGen Power Generation Portfolio

Company	Type	Capacity (MW)	Location	MER's Interest
PacificLight	LNG-fired	2x400	Jurong Island, SG	28%
RP Energy	Circulating Fluidized Bed Coal-fired	2x300	Subic Freeport Zone, PH	47%
Quezon Power 2	Supercritical coal-fired	460	Quezon Province, PH	49%
Global Business Power	Portfolio of coal and diesel	665.5	Mindoro and Visayas, PH	20%

Source: *MER Investor Relations*

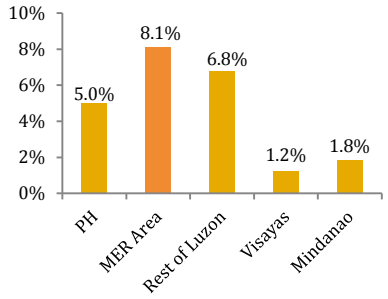
Table 5. GBP Power Plants

GBP Power Plants	Type	Capacity	Effective Ownership
Cebu Energy Development Corp.	Coal	246MW	10.4%
Panay Energy Development Corp.	Coal	164MW	17.9%
Toledo Power Co.	Diesel	134.6MW	20%
Panay Power Corp	Coal and Diesel	112.5MW	17.9%
GBH Power Resources Inc.	Diesel	8.4MW	20%
Total		**665.5MW**	
Total interest acquired			**20%**
Acquisition price of GBP			**PHP7.115b**

Source: *GBP Website*

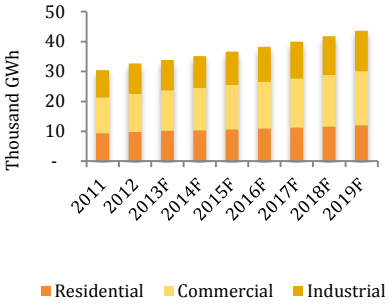
Investment Summary

Figure 10. Regional GDP Growth average of 2007-2012



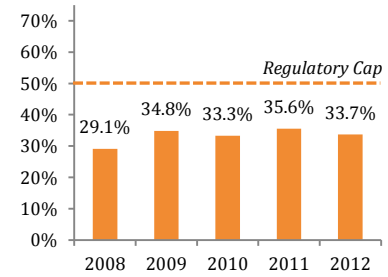
Source: *National Statistics Coordination Board*

Figure 11. MER Annual Energy Sales



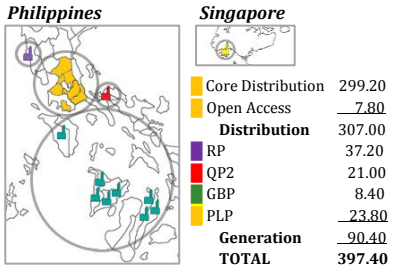
Source: *Company disclosure, Team estimates*

FIgure 12. Long-Term Debt to Equity



Source: *Company data*

Figure 13. Target Price Breakdown



Core Distribution	299.20
Open Access	7.80
Distribution	307.00
RP	37.20
QP2	21.00
GBP	8.40
PLP	23.80
Generation	90.40
TOTAL	**397.40**

Source: *Team estimates, Company disclosure*

We issue a BUY recommendation on Manila Electric Company (MER) with a target price of PHP397.40 using the Discounted Free Cash Flow to Firm method. This offers a 43% upside from its closing price of PHP278.00 on November 29, 2013. MER is able to capitalize on its highly defensive core distribution business through solid business performance and strong operating cash flows. The EPIRA also allows MER to invest into the lucrative and deregulated power generation business, which can further maximize firm value.

MER's core business of power distribution is highly defensive because (1) electricity is a basic necessity; (2) MER is a virtual monopoly within its franchise area; and (3) its profitability is protected by the PBR scheme (Appendix 17). On June 9, 2003, the Congress of the Philippines, through RA No. 9209, granted a renewal of its franchise to operate and maintain its distribution system for 25 years, subject to renewal after the end of the period. Under this franchise, MER holds an exclusive right to the distribution of electricity within its designated franchise area. While this franchise covers only approximately 3% of the country's total land area, MER's distribution business powers 46.0% of Philippine GDP. The GDP of the regions in MER's franchise area grew by an average of 8.1% over the past five years, higher than the growth of the Philippines at 5.0%. (Figure 10)

As a DU, MER is subject to heavy regulation by the ERC which determines the tariff through the PBR scheme.[50] Through the PBR scheme, the government guarantees the recovery of allowed expenses and capital expenditures plus a return on capital every regulatory period. Price adjustment mechanisms also effectively protect the core business from market risks such as inflation and foreign currency risk, and provide incentives based on meeting service level targets.

Core Distribution Operations Providing High Operating Cash Flows
Electricity volume has been consistently increasing over the years and is expected to continue this trend in the future. Under the PBR scheme, MER is able to deliver solid operations as evidenced by consistently meeting regulatory performance goals. The company has constantly received rewards in the form of marginal increases in its rate. The growth in electricity volume and efficient operations translates to stable operating margins of 8.4%-9.8% during the forecast period (Figure 11).[51] Another result of the company's effective performance under the PBR scheme can be seen from its high operating cash flows. (Projected annual operating cash flows exceed PHP16.0 billion for periods 2013F-2019F)

A Strong Balance Sheet as a Foundation for Growth
MER has a favorable cash position as shown by its high liquidity ratios. Also, the company has low levels of debt, lower than its regulatory cap of 50% (LTD to Equity – 34.0% 2010-2012, Figure 12). These two conditions give the company financial flexibility to invest in new ventures.[52] By taking advantage of this favorable position, MER is able to capture further returns from investing in strategic segments of the industry such as power generation. (Figure 13)

Lucrative Prospects in the Power Generation Business
MER is building a portfolio of power plants – growing its local committed capacity of 1,060MW to 3,000MW by 2020 (Appendix 16). This is strategic given that the deregulated nature of power generation allows MER to make additional profits. It also allows MER to ensure adequate supply of energy for its customers, and allows MER to diversify its business into both local and international markets. With the projected annual demand growth for electricity of 4.5%, the Luzon grid would require an additional 11,900MW capacity by 2030. The industry has immense growth potential as the demand for electricity is expected to outpace supply in the next ten years. Moreover, MER recently acquired a 28.0% interest in a power plant in Singapore, which is forecasted to contribute around PHP67 million of income to MER in 2014, its first year of operations. (Appendix 26)

We expect an additional operating profit of PHP6.1 billion by the time all power plants are operational in 2019, resulting in a PHP90.40 contribution to MER's target price. Supported by the core distribution business, MER's move to build its generation portfolio enables itself to capture the growth in the Philippine energy industry.

Valuation Methods
We derived our target price by using the Discounted Free Cash Flow to Firm method.

Drivers of Volatility in Earnings
Our research identifies the Maximum Average Price (MAP) and energy sales to be the main drivers of volatility in MER's earnings. As the next regulatory period approaches, there is uncertainty regarding the MAP for the next regulatory period. A detailed discussion on the computation of the MAP is outlined in Appendix 14.

On the other hand, energy sales of MER are driven by the various components of GDP. Growth in the energy sales in the residential segment is driven by the HFCE; the commercial segment is driven by Real Estate and Other Services, and; the industrial segment is driven by the Manufacturing sector. (Appendix 13)

Possible Investment Risks
Key risks investors must be aware of include Regulatory Risk such as stringent restrictions in rate setting, failure to meet performance targets and the non-renewal of MER's franchise. MER also faces Legal Risk that may cause a delay in plant commissioning. Market Risks include unfavorable market conditions resulting in lower demand. Operational Risks include downtime caused by fortuitous events, unplanned breakdown of Plant and Equipment, uncertainty in fuel supply, and the shift to an open market. A detailed discussion of the risks, mitigation factors and their impacts on value are discussed in the Investment Risk section.

Figure 14. MER share prices and news flow

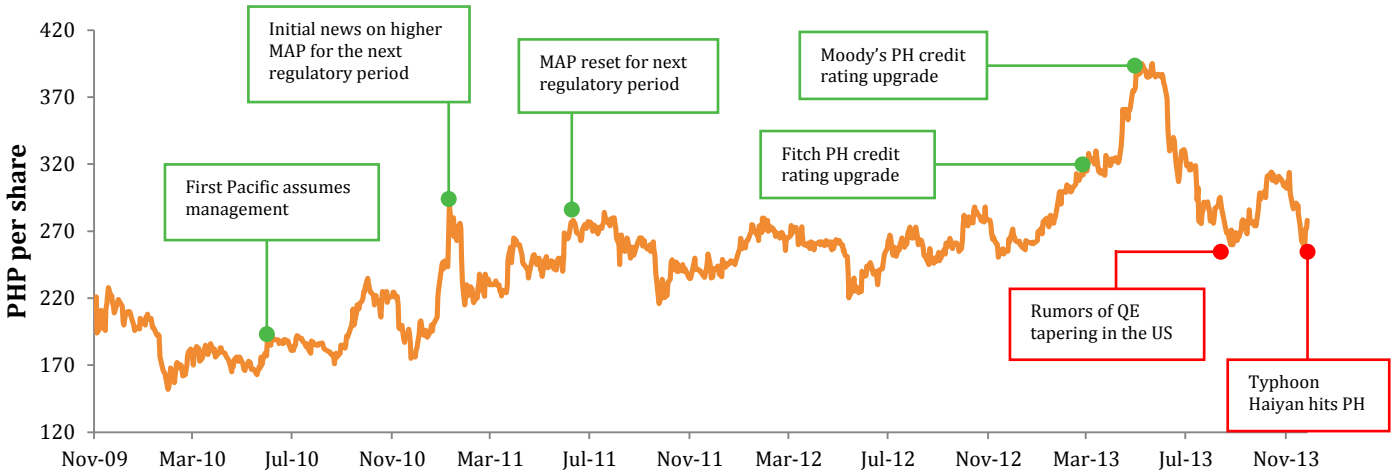


Table 6. Target Price Breakdown

Component	Value (PHP)
Power Distribution	299.20
Open Access	7.80
Distribution	**307.00**
RP Energy	37.20
Quezon Power 2	21.00
Global Business Power	8.40
Pacific Light	23.80
Generation	**90.40**
Target Price	**397.40**

Source: Team estimates

Table 7. Power Distribution Volume Drivers

Customer Segment	Relevant GDP Component	Annual Growth
Residential	Household Final Consumption Expenditure	2.4%
Commercial	Real Estate and Other Services	4.9%
Industrial	Manufacturing	4.4%

Source: Team estimates

Table 8. Raw MAP Forecast Computation (PHP Billions)

Primary Building Blocks	2016F	2017F	2018F	2019F
Return on Capital	23.86	24.18	24.55	24.93
OPEX	17.24	17.78	18.36	18.94
Regulatory Depreciation	10.42	10.84	11.15	11.62
Income Tax	-	-	-	-
Other Taxes	0.45	0.47	0.48	0.50
Sub-total	51.98	53.28	54.55	56.00
Recoveries	-	-	-	-
Total	51.98	53.28	54.55	56.00
Guaranteed Service Level	0.26	0.27	0.27	0.28
Total ARR	52.24	53.55	54.82	56.28
Demand Forecast	37.57	39.22	40.96	42.79
Raw MAP (PHP per kWh)	**1.39**	**1.37**	**1.34**	**1.32**

Source: *Team estimates*

Table 9. Regulatory Year (RY) MAP Comparison

Adjusted MAP (PHP per kWh)	
RY2014	1.5557
RY2015	1.6315
RY2016F	1.3022
RY2017F	1.3656
RY2018F	1.4322
RY2019F	1.4986

Source: ERC, Team estimates

Valuation

DCF Valuation

We used the Discounted Free Cash Flow to Firm (DCF) method in arriving at a value per common share of PHP397.40 (Table 6). This method involves estimating the firm's value and adjusting it for net debt to arrive at equity value.

In applying the DCF analysis, the company was broken down into two components: the core distribution business and the power generation segment (Appendix 13). We forecasted the core distribution component using a two-stage growth model. The first phase includes a detailed year-to-year forecast up to 2019, the end of the Fourth Regulatory Period, while we assumed a constant growth rate for the terminal phase. Similarly, a two-stage growth model was also used in forecasting the power generation component. The value of the power generation component was derived by summing up MER's share of each plant's value under the DCF method. The first phase of the forecast covers each plant's original technical life, ranging from 25 to 30 years. After their respective technical lives, we assumed that cash flows from each plant would grow by a constant growth rate.

Based on this approach, MER's value per common share of PHP397.40 can be decomposed into the value of the power distribution business at PHP299.20, the value of open access at PHP7.80 and that of the power generation segment at PHP90.40.

Core Distribution Business

MER's core business primarily involves power distribution in its franchise area, including other activities such as the participation in RCOA and providing other related services.

Power Distribution

- **Volume (Energy Sales) –** Volume sales growth was forecasted per customer segment: Residential, Commercial, Industrial and Streetlights. The growth in each segment was forecasted using the relevant volume drivers identified from the components of GDP (Table 7). Based on the results of our forecast, total energy sales are expected to grow by 4% compounded annually from 2013 to 2019.
- **Price (MAP Computation)[53] –** We utilized the PBR scheme set by ERC to forecast the MAP for the next regulatory period (2016-2019). For each year, the ARR was forecasted using the Primary Building Blocks made up of operating expenses, regulatory depreciation, taxes (except corporate income tax[54]), and return on capital. Each of the following building blocks was estimated using relevant drivers:
  - **Operating expenses** – Operating expenses were derived from the approved amounts of the previous regulatory period and then grown based on total customer count and the RAB.
  - **Taxes** – The taxes were computed using the relevant national tax rates.
  - **Regulatory Depreciation** – The regulatory depreciation was obtained from the projected capital expenditures and the opening RAB.
  - **Return on Capital** – The return on capital was projected by applying the regulatory WACC on the optimized RAB and working capital.[55] The regulatory WACC was computed following the prescribed methodology of ERC which includes an estimate of the cost of debt and equity. The cost of debt was based on the risk free rate plus a 2.5% spread prescribed by the ERC. Such risk free rate was computed based on the indirect method, which translates the yield on the 20-year US bonds into a Philippine risk free rate (Appendix 14). On the other hand, the cost of equity was computed based on the Capital Asset Pricing Model (CAPM). The beta was computed by applying the pure-play method on a list of comparable companies prescribed by the ERC. A market risk premium of 9.34% was used, based on a local study that analyzed 26 years of Philippine market data.[56]

  The ARR was divided by the forecasted electricity volume demand per year to derive the raw MAP, computed at PHP1.3903 for 2016 (Table 8). Finally, the raw MAP is adjusted for inflation, a smoothing factor, and a performance incentive factor to arrive at the regulatory MAP. (See Appendix 14 for a comprehensive MAP computation and discussion)
- **Capital Expenditures** – Capital expenditures (CAPEX) in the forecast period will be driven by the need to meet energy demand growth and systems loss requirements set by the ERC.[57] MER is expected to follow the approved CAPEX for the rest of the Third Regulatory Period (2013-2015). For the Fourth Regulatory Period, we forecasted the CAPEX as a function of the expected increase in energy sales per year. The forecasted CAPEX were 6.9% higher than those of the previous regulatory period.

Table 10. WACC Computation

Power Distribution	
Risk free rate	3.34%
Beta	0.98
Market risk premium	9.34%
Cost of equity	**12.51%**
Cost of debt	4.78%
Marginal tax rate	30%
Cost of debt, post tax	**3.35%**
Weight of equity	81.59%
Weight of debt	18.41%
WACC	**10.82%**

Source: *Company data, Team estimates*

Table 11. MER's Power Plant Portfolio Capacity

Plant	Installed Capacity (MW)	Load Factor
PLP	800	96.3%
GBP: Diesel	499	70.0%
GBP: Coal	158	85.0%
RP	600	85.0%
QP2	460	85.0%

Source: Company data

Table 12. Power Plant Base Price and Escalation Factor

Plant	Base Price (per kWh)	Escalation Factor
PLP	SGD0.21	All Buildings Tender Price Index
	SGD0.19	Growth in crude oil prices
GBP: Diesel	PHP1.95	PH Inflation
GBP: Coal	PHP3.56	PH Inflation
RP	PHP4.33	PH Inflation
QP2	PHP4.33	PH Inflation

Source: PSAs, Team estimates

Table 13. Fuel Mass-Energy Balancing Computation for 2019 (* in billions) (see Appendix 13)

Plant Fuel	PLP LNG	GBP Diesel	GBP Coal	RP Coal	QP2 Coal
Volume (kWh*)	6.72	1.33	4.04	6.19	5.17
Heat Rate (thousand BTU/kWh)	7.11	10.83	10.4	10.44	10.44
Heat Used (BTU*)	46,732	11,489	36,507	64657	53,955
Heating Value (thousand BTU/kg)	47.30	163.00	30.0	30.00	30.00
Fuel Used (kg*)	0.99	0.07	1.22	2.15	1.80
PHP/kg	15.63	19.57	4.56	4.56	4.56
Fuel Cost (PHP*)	15.47	1.37	5.56	9.84	8.21

Source: *Team estimates, EIA, EMA, R. Rajput*

Table 14. WACC Computation

Power Generation	
Global Business Power	
Cost of equity	13.15%
After-tax cost of debt	3.50%
WACC	**7.13%**
Redondo Plant & Quezon Power 2	
Cost of equity	13.15%
After-tax cost of debt	3.50%
WACC	**6.44%**
PacificLight Power	
Cost of equity	9.46%
After-tax cost of debt	4.15%
WACC	**6.27%**

Source: *EMA, Energy Information Agency*

Retail Electricity Supply

- **Volume (Energy sold to Contestable Customers)** - The volume of energy sold to contestable customers during the forecast period was projected using the growth in electricity sold to industrial customers.
- **Income (Margin per contract)** – To determine the income generated from retail supply contracts, a net profit margin of 5.00% was used which was in line with expectations of market analysts and benchmarked with the findings of international studies in foreign markets.[58]

Terminal Growth

Terminal Growth Rate is based on the energy volume growth rate and expected inflation. Growth in energy volume is assumed to be 2.00%, the normal historical growth rate computed by the ERC.[59] We forecasted an inflation rate of 2.87% for the terminal phase.

Weighted Average Cost of Capital

The cost of equity was calculated using the CAPM. The risk free rate of 3.34% was based on the current yield of 10-year government bonds (November 2013, Asian Development Bank).[60] Beta of 0.98 was computed by regressing historical MER returns with the Philippine Stock Exchange Index (PSEi) returns from January 1992 to November 2013. The market risk premium of 9.34% is based on a local study that analyzed 26 years of Philippine market data.[61] Applying CAPM to the components above resulted in a cost of equity of 12.51%. The weighted average after tax cost of debt of 3.35% is based on relevant interest bearing liabilities. Based on the market value-weighted target capital structure, the WACC is 10.82%. (Table 10) (Appendix 12)

Power Generation

MER's power generation portfolio is composed of investments in local and foreign companies through its wholly-owned subsidiary, MGen. It has a 20% stake in GBP, 28% stake in PLP, 47% in RP and 49% in QP2.

- **Volume (Energy Produced and Sold) –** All of MGen's plants are base load plants, operating 24 hours a day, 365 days a year. A load and degradation factor was estimated per type of plant and was used to forecast energy produced per year (Table 11). The energy produced will be sold through the following agreements: 100.0% of GBP's output to their respective DUs through Power Supply Agreements (PSA); 30.0% of PLP's output through vesting contracts with the Singapore government, with the remaining 70.0% through retail; and 100.0% of RP's and QP2's outputs through bilateral contracts with MER.[62,63]

- **Price (Base Price) –** For existing plants, we analyzed prices based on PSAs with their respective off-takers. For projects in the pipeline, prices were based on comparable power plants (Table 12).

  GBP – Prices were based on the plants' existing PSA with DUs. Each PSA ensures recovery of allowable operating costs plus an agreed mark-up, adjusted annually for inflation.[64]

  PLP – Electricity sold through vesting contracts were initially based on prices set by the Energy Market Authority in Singapore and forecasted subsequently based on changes in the *"All Buildings" Tender Price Index*. On the other hand, retail electricity prices were forecasted using the growth in crude oil prices adjusted by a slope factor of 16.67%, as per industry practice.[65]

  RP and QP2 – Inflation adjusted prices were benchmarked on the energy selling price of a 700MW base load coal plant–Therma Luzon, Inc. (TLI)–which approximates the capacity of RP and QP2.[66]

- **Capital Expenditures –** Forecasted capital expenditures of PHP56 billion for RP and PHP43.0 billion for QP2 were based on MER disclosures. Maintenance capital expenditures for all plants were forecasted based on annual depreciation adjusted for inflation.[67]

- **Fuel Costs –** For each plant, we estimated the fuel volume required to produce the forecasted units of output through the Fuel Mass Energy Balancing Method (Table 13). We identified the type of fuel used by each plant and determined the Heat Rate and Heating Value per fuel type. We then multiplied the forecasted output per plant by the appropriate Heat Rate to get the total level of heat required per plant. From there, the total level of heat required was divided by each type of fuel's Heating Value to arrive at the volume of fuel required per plant. Fuel prices were based on the Commodity Markets Outlook of the World Bank, validated by international studies.[68]

- **Terminal Growth –** Terminal Growth Rate was based on the degradation factor and expected inflation. Annual degradation factor was assumed to be 0.10%.[69] We forecasted an inflation rate of 2.87% for the terminal phase for the Philippine plants and 2.46% for the Singapore plant.[70,71]

- **WACC –** We computed the WACC for each of MER's power generation companies (Table 14), using the same set of assumptions for all plants located in the Philippines and another set for Singapore (Appendix 12).

  Plants in the Philippines – A single cost of equity for all the Philippine-based plants was calculated using the CAPM. Beta of 1.05 was computed using the pure play method computed by regressing historical First Generation Corporation (PSE: FGEN) returns with the PSEi returns from February 2006 to November 2013. The same risk free rate of 3.34% and equity risk premium of 9.34% in the distribution business was used. Applying the CAPM to the components above resulted in a cost of equity of 13.15%. GBP, RP, and QP2's after tax cost of debt of 3.50% was based on the bond yields of power generation companies used to finance the construction of new power plants. Based on the market value-weighted target capital structure, the WACC of GBP is 7.13%, while that of RP and QP2 is 6.44%.

  Plant in Singapore – PLP's after tax cost of debt of 4.15% was based on actual relevant interest-bearing liabilities of Sembcorp Industries, Ltd. (Sembcorp, SGX: SCI), a Singapore company with comparable power plants. PLP's cost of equity was also calculated using the CAPM. Beta of 1.17 was computed using by regressing daily returns of Sembcorp, with the Singapore Straits Times Index.[72] The equity risk premium of 5.75% was based on A. Damodaran's estimates for Singapore.[73] Applying the CAPM to the components above resulted in a cost of equity of 9.46%. Based on the market value-weighted target capital structure, the WACC is 6.27%.

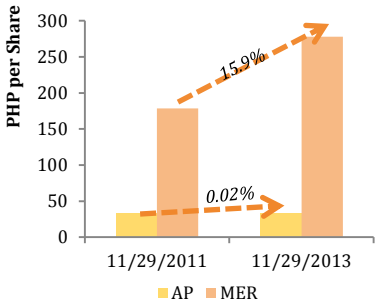
Price Multiples

While the DCF method was the main valuation approach, we also analyzed trailing price relatives of comparable firms.

Company	EV/Sales	EV/ EBITDA	P/E	P/B	Dividend Yield
MER	**0.9**	**8.1**	**16.3**	**4.1**	**4.07%**
Peer Median	**4.8**	**11.3**	**13.9**	**2.1**	**4.17%**
AP	4.8	10.8	13.9	3.3	4.17%
CLP (0002)	2.2	11.3	17.7	1.8	4.21%
PowerAssets (0006)	14.0	18.6	12.8	2.1	4.17%

Source: *Thomson Reuters*

Figure 15. Comparative Share Price CAGR



Source: *PSE Website*

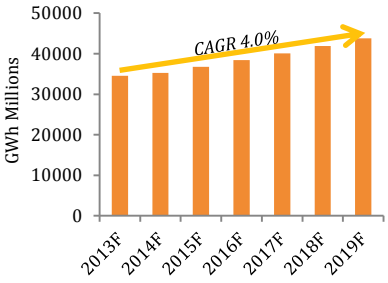
We identified the most appropriate local peer of MER as AboitizPower (PSE: AP) since it is also engaged in both distribution and power generation (Appendix 15). However, majority of AP's business is in power generation. Given the more defensive nature of power distribution business and MER's more conservative capital structure, MER has consistently posted relatively higher Price to Earnings (P/E) ratios compared to AP.[74] Although a high relative P/E ratio may indicate that MER's stock will have more limited upside, its historical performance has indicated otherwise with an increase of 15.9% CAGR, from PHP178.70/sh to PHP278.00/sh over 3 years. This is in contrast to its local peer that posted only 0.02% CAGR, from PHP32.80/sh to PHP33.25/sh over the same period, despite its lower P/E ratio.

Also, a relative analysis was conducted among MER's regional peers. China Light and Power (HKSE: 0002) and PowerAsset Holdings (HKSE: 0006) of Hong Kong are the most similar since other utility firms in the region are state-owned.

MER's P/E of 16.3x has been historically higher compared to its local and regional peers, but this is justified by its relatively lower PEG ratio of 0.74x.

Another measure for comparison is EV/EBITDA, which is appropriate in analyzing the value of an infrastructure-intensive business. By using this method, the effect of depreciation policies is removed. Also, this allows the comparison to focus on company value regardless of capital structure. An analysis of the EV/EBITDA ratios of these companies reveals that MER has been trading at a discount. Moreover, its dividend yield is comparable to its peers and higher than the yields of most of government securities in the Philippines, reinforcing our bullish outlook. (Appendix 15)

Figure 16. Volume Sales for the Forecast Period



Source: *Team estimates*

Financial Analysis

RATIOS	2011	2012	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Profitability									
EBITDA margin	9.1%	9.2%	10.8%	10.3%	10.7%	10.8%	11.2%	12.1%	11.8%
Operating profit margin	7.0%	7.3%	9.0%	8.4%	8.5%	8.3%	8.9%	9.8%	9.6%
Core operating margin	35.0%	39.1%	47.3%	44.1%	44.5%	43.6%	46.6%	51.5%	50.6%
Net profit margin	5.0%	5.7%	6.7%	6.4%	6.4%	6.3%	6.8%	7.7%	7.5%
Return on assets	6.5%	6.8%	8.7%	7.5%	7.0%	6.3%	7.0%	8.0%	7.9%
Return on equity	19.4%	23.8%	29.3%	25.2%	22.5%	19.7%	21.7%	24.8%	24.3%
Liquidity									
Current ratio	1.46	1.55	1.64	1.71	1.99	2.21	2.10	2.18	2.17
Quick ratio	1.38	1.49	1.56	1.62	1.88	2.10	1.99	2.07	2.07
Cash ratio	0.83	1.02	1.08	1.06	1.26	1.48	1.39	1.45	1.48
Activity									
Cash Conversion Cycle	3.29	0.03	(4.35)	(3.95)	(0.79)	(1.00)	(0.96)	(0.81)	(0.67)
Total asset turnover	0.26	0.25	0.26	0.24	0.22	0.21	0.21	0.22	0.22
Fixed asset turnover	0.47	0.49	0.54	0.53	0.49	0.45	0.47	0.49	0.51
Financial leverage									
Long-term debt to assets	0.09	0.09	0.08	0.12	0.14	0.18	0.17	0.18	0.16
Long-term debt to equity	0.36	0.34	0.27	0.35	0.42	0.50	0.50	0.50	0.50
Debt to equity	0.36	0.36	0.29	0.37	0.44	0.52	0.52	0.52	0.51
Interest coverage	12.31	12.41	21.34	26.24	17.73	12.91	11.28	11.61	11.82
Debt Service Coverage	3.49	2.59	8.48	21.45	25.71	24.80	19.69	8.62	11.17
Shareholder Ratios									
Earnings per share	12.18	15.22	18.90	18.16	17.56	16.48	19.47	24.00	25.47
Dividend payout ratio	66.0%	54.0%	54.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%

Table 15. S-Factor Improvement - 2013 vs. 2012

Measure	% improvement
SAIFI	12.90%
CAIDI	4.10%
SAIDI	5.80%
Voltage Level	0.05%
Time to Process Application	3.00%
Time to Connect	5.70%
Call Center Performance	39.20%
System Losses	0.48%

Source: *Company data*

Increasing Electricity Volume supported by Solid Operations

With the Philippines enjoying strong growth in GDP and the developing commercial sector, we expect total electricity volume of MER to increase by 4% year on year (Figure 16, 2013F-2019F). The commercial segment of MER's customers contributed more energy sales than any other segment at an average of 39.3% for the past five years. We expect this trend to continue in the future with 40.6% of sales coming from the commercial segment with the recent growth of the commercial BPO industry.

Maximized Performance Based Incentives

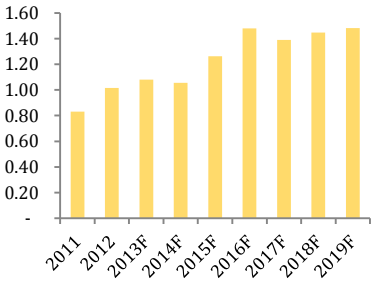
The rate that MER can charge is set by the ERC. However, the mechanism of the PBR scheme allows MER to be given rewards in the form of a rate increase when it meets certain performance criteria.[75] For example, the company has avoided system loss violations since 2008—which we estimate to contribute an average of PHP32 million per year. By taking advantage of this mechanism called the S-Factor, we forecast MER to earn additional revenues of PHP655 million per year for the next regulatory period. (Table 15)

Table 16. GSL Improvement - 2013 vs. 2012

Measure	% improvement
GSL 1 (duration of interruptions)	55.78%
GSL 2 (service interruption instances)	100.00%
GSL 3 (disrupted service recoveries)	62.65%
GSL 4 (delayed connections)	72.21%

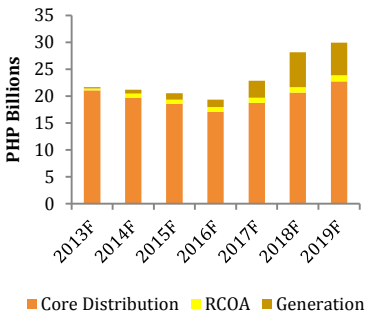
Source: *Company data*

Figure 17. Cash Ratio



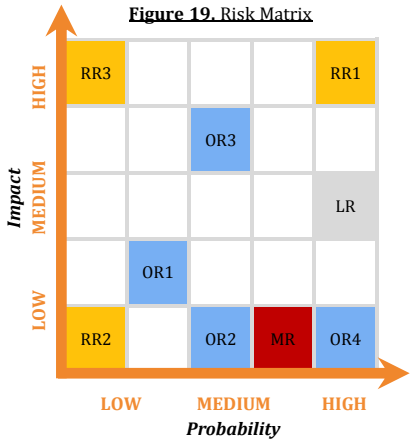
Source: *Company data, Team estimates*

Figure 18. Net Income Breakdown



Source: *Team estimates*

Figure 19. Risk Matrix



Source: *Team analysis*

Service Requirement Compliance Evidencing Efficient Operations
To support the growth in volume, MER is expected to make capital expenditures that will both meet the projected energy volume and at the same time make operations more efficient. We expect MER to make full use of its investments and therefore forecast its Fixed Asset Turnover (computed using Sales net of purchased power) to improve from 0.44x during 2010-2012 to 0.50x during 2013F-2019F. This is evidenced by MER's ability to consistently meet operating requirements under the PBR scheme, which is measured by the S-Factor and Guaranteed Service Levels (GSL, Table 16).[76] In fact, MER had its best performance to date based on these indicators, as of the 3rd quarter of 2013. Having met these performance requirements for the past five years, we expect this positive trend to continue.

Stable Core Margins and Additional Income from RCOA
Margins have been stable due to the nature of its core business with Core Operating Margin (computed using Sales net of purchased power) of 37.1% during 2011-2012.[77] This historical margin is higher than the 35.1% of AboitizPower during the same period. During 2013F-2019F, we forecast MER's Core Operating Margin over total revenues to be stable at an average of 46.9%. In addition, we anticipate MER's participation in RCOA will contribute PHP1.0 Billion by 2018. The results of our forecast also shows high earnings quality as represented by 91.1% CFO/EBIT (2013F-2019F).

Strong Cash Generating Engine
We expect MER to continually produce positive Operating Cash Flows because of its solid performance under the PBR scheme. This is noticeable in its working capital management, shown by the match between average collection period and the days payable. We project this relationship to further improve in the future. This improvement in the forecast period is supported by their pilot-test and proposed roll-out of the Smart Grid and prepaid electricity scheme.

Another strong indicator of the company's favorable cash position is its ability to finance most of its capital expenditures from internally generated funds. The company's CFO/CAPEX has historically been very high at 383% in 2011 and 388% in 2012. We expect this strong cash generating capacity to continue because of the company's consistent ability to exceed performance standards. These strong cash flows also led to lower debt ratios, which in turn provides the company financial flexibility.

Flexibility in Financing New Ventures
MER has the option to finance its new ventures with internally generated funds or borrowings. The financial statements show high liquidity ratios best shown by its cash ratio, which we project to be more than 1.0x over the forecast period (Figure 17). Currently, the company has used excess cash to issue special dividends above its 50.0% dividend payout ratio policy.[78]

Long-Term Debt to Assets has been low at an average of 9% from 2010 to 2012, even though it has expanded its operations in the past three years (7.9% increase in Utility Plant and Others).[79] This conservative leverage position is also apparent in its interest coverage ratios of 12.31x in 2011 and 12.41x in 2012. MER's extra capacity for debt positions it well to finance future growth opportunities.

Optimistic Outlook for MER's Power Generation Business
MER's total capacity of 1,725MW in power generation will contribute significant returns to its investment. With MER's current expansion through local and foreign power plants, we forecast the contribution of the power generation business to MER's core operating income to grow from 3.2% in 2014 to 16.7% in 2019. By which time, all power plants are expected to be operational and contributing additional income amounting to PHP6.1 billion (Figure 18). This represents a 530% growth in income contribution in just five years. The Return on Invested Capital of MGen's stakes in power generation during 2019 is 9.4% for GBP; 6.7% for QP2; 8.5% for RP; and 6.3% for PLP. These returns exceeded their respective cost of capital of 7.15% for GBP; 6.44% for QP2; 6.44% for RP; and 6.3% for PLP, thus providing positive contributions to MER's shareholder value.

Investment Risks

Impact and likelihood of the following risks are presented in Figure 19.

Individual Risk Analysis

Regulatory Risk | ***Stringent Restrictions in Rate Setting (RR1)***
The ERC could impose more stringent restrictions in the determination of the building blocks and regulatory WACC, decreasing the MAP. In order to mitigate this risk, MER's continuing consultations with the ERC even prior to the formal rate rebasing exercise minimizes the adverse effects of this risk. Also, MER has been educating customers through public advisories. Based on our analysis, the MAP would have to drop to a low of PHP1.03 in order to change our recommendation from a buy to a hold, and fall even further to PHP0.77 for a sell recommendation.

Regulatory Risk | ***Failure to Meet Performance Targets (RR2)***
Under the PBR, MER may be penalized based on its inability to meet performance targets set by the ERC for the regulatory period, resulting in lower tariffs. MER's annual results show that they were not only able to meet the minimum requirements set by the ERC, but post its best performance to date across all performance measures as reflected in its S-factor of 0.78 for 2013.

Based on our analysis, the S-factor has low impact on the value of MER since it comprises approximately 2% of the MAP for 2014. The S-factor would have to change to -1.40 from the current forecast of 0.5 in order to change our recommendation from a buy to a hold, and fall even further to -3.44 for a sell recommendation. We believe that these scenarios are unlikely given that these values exceed the floor for the S-factor of -1.00.

Regulatory Risk | ***Non-Renewal of Franchise (RR3)***
RA 9209 mandates that MER shall retain exclusive control over the franchise area until 2028. Upon expiry, the government will reevaluate the renewal of MER's franchise.

We believe that MER's strong track record enforces the possibility of franchise renewal. In fact, MER is the only company that has ever been awarded the franchise in this area.

Table 17. Risk Factors and Mitigation Strategies

Risks	Mitigating Factors
Regulatory Risk	
Stringent Restrictions in Rate Setting could result in a lower MAP for MER	Active participation during rate rebasing
Failure to Meet Performance Targets could result in lower S-factor	Best performance across all S-factor categories
Non-Renewal of Franchise	Strong track record
Market Risks	
Unfavorable Market Conditions Result in Lower Energy Demand	Annual rate setting review adjustments, steady GDP growth
Legal Risk	
Delay in Plant Commissioning	Compliance with legal requirements
Operational Risk	
Downtime Caused by Fortuitous Events	Insurance, PBR recovery mechanism, geographically-dispersed plants
Unplanned Breakdown of Plant and Equipment	Maintenance CAPEX
Uncertainty in Fuel Supply	Long term contracts with suppliers
Shift to Open Market	Industry experience and technical expertise

Source: *Team analysis*

Table 18. Sensitivity Analysis

Change in Assumptions to Recommend a Hold/Sell			
Variable	**Base Case**	**Hold**	**Sell**
MAP (PHP)	**1.30**	1.06	0.79
Regulatory WACC	**12.4%**	7.9%	2.6%
S-Factor as an adjusted factor	**0.50**	-1.40	-3.44
Load factor as % of installed capacity	**87.7%**	77.0%	66.4%
Energy sales growth rate	**4.0%**	-1.5%	-16.2%
FOREX risk as % depreciation in FOREX (Coal)	**0.0%**	28.8%	59.8%
Commodity price risk as % increase in commodity prices	**0.0%**	63.2%	131.0%

Source: *Team estimates*

Rating Guide (over the next 12 months)

Buy*	Hold	Sell
15% or greater	Flat returns	Negative returns

**A buy rating recommends that investors take a position above the security's weight in the Philippine Composite.*

Market Risk | ***Unfavorable Market Conditions result in Lower Energy Demand (MR)***
Unfavorable macroeconomic conditions such as low GDP growth will result in lower energy volume. To mitigate such risk, MER has an annual rate setting review with the ERC where actual results for the year are presented and adjustments to the tariff are proposed. For the next six years, we expect an average GDP growth of 5.4%. A GDP growth of 4.0% from the base case would lead to a change in the target price to PHP363.60, while a 3.0% GDP growth would lead to a target price of PHP343.40.

Legal Risk | ***Delay in Plant Commissioning Due to Legal Impediments (LR)***
Issues in the processing of environmental permits of RP could result in a delay of plant commissioning. Currently, RP is facing a case challenging the validity of its Environmental Compliance Certificate (ECC).[80] The Court of Appeals recently ruled in favor of MER, stating that the petitioners failed to prove that the plant would cause environmental damage.[81] However, RP's ECC was revoked and the project was put on hold due to a missing signature in the Statement of Accountability. Despite this, MER expects RP to commission by 2018.

To mitigate this risk, MER complies with the necessary requirements to setup new power plants such as ensuring the use of clean coal technology and compensating the affected communities in the surrounding area. We also expect that RP Energy will comply with the necessary requirements to ensure the timely commissioning of this plant.

A sensitivity analysis on the date of plant commissioning was conducted assessing the impact on value caused by the delay. A three-year delay results in a 2.4% decrease in the target price (PHP387.80), while a five year delay results in a 3.7% (PHP382.60) decrease. Our buy recommendation still holds despite these delays.

Operational Risks | ***Downtime Caused by Fortuitous Events (OR1)***
Natural calamities damage both the distribution and generation businesses by causing major service interruptions. Widespread damage could also mean significant increases in unplanned repairs expenses. MER is able to mitigate these risks through insurance. The PBR scheme also allows the recovery of costs from force majeure events.[82] MGen is also able to minimize the impact through its geographically dispersed plants.

Operational Risks | ***Unplanned Breakdown of Plant and Equipment (OR2)***
Breakdown of equipment, transmission or distribution lines can result in unplanned outages in the distribution and generation businesses. To mitigate this risk, MGen continually invests heavily in maintenance CAPEX.

Currently, plants operate at an average load factor of 87.7%. This would have to drop to 77.0% in order to change our recommendation to a hold, while it will have to fall further to 66.4% to result in a sell.

Operational Risks | ***Uncertainty in Fuel Supply (OR3)***
The inability to source coal poses a supply risk for GBP, QP, and RP2. As mandated by the ERC, coal plants must maintain a reserve of three months' worth of coal inventory. Long-term contracts with various suppliers of coal from Australia and Indonesia are being negotiated to ensure stability of supply.[83]

Operational Risks | ***Shift to Open Market (OR4)***
The shift towards a more competitive electricity industry could result in new competitors, which could adversely impact MER's generation and supply business. We believe that despite this shift in the industry, MER has the industry experience and technical expertise to be the retailer of choice of customers in the new market, as evidenced by capturing 61% of contestable customers during the initial phase of RCOA.

Drivers of Volatility in Earnings

We performed a sensitivity analysis on the identified investment risks to determine their impact on the value of MER. First, we determined how much change in the risk variable would prompt a shift in our recommendation (Table 18). To supplement this analysis, we evaluated the impact of a change in these risk variables to the target price of MER. Table 19 shows the impact of risk variables relating to the core distribution business while Table 20 details the effect of the risk variables from the power generation business.

Table 19. Effect of Changes in GDP Growth and Regulatory WACC on Target Share Prices

	GDP Growth						
Regulatory WACC	2.0%	3.0%	4.0%	5.4%	6.0%	7.0%	8.0%
9.0%	293.80	309.60	327.20	356.80	370.00	396.00	426.20
10.0%	303.20	319.80	338.20	369.00	382.80	409.80	441.20
11.0%	312.60	329.80	348.80	380.80	395.20	423.40	456.00
12.4%	325.60	343.40	363.60	397.40	412.40	442.20	476.60
13.0%	330.80	349.20	369.80	404.20	419.60	450.00	485.00
14.0%	339.80	358.80	380.00	415.60	431.60	463.00	499.20
15.0%	348.40	368.00	390.00	426.80	443.20	475.60	513.20

Source: *Team estimates*

Table 20. Effect of Percentage Change in Load Factor and Commodity Prices on Target Share Prices

	Change in Load Factor						
Change in Price of Commodities	-15.0%	-10.0%	-5.0%	0.0%	5.0%	10.0%	15.0%
-30.0%	342.60	373.80	404.40	434.40	463.80	493.00	522.00
-20.0%	328.60	360.40	391.40	422.00	452.00	481.60	511.00
-10.0%	314.40	346.80	378.60	409.80	440.20	470.20	500.00
0.0%	300.20	333.40	365.80	397.40	428.40	458.80	489.00
10.0%	286.00	320.00	353.00	385.00	416.60	447.40	478.00
20.0%	272.00	306.60	340.20	372.80	404.80	436.00	467.00
30.0%	257.80	293.00	327.20	360.40	393.00	424.60	456.00

Source: *Team estimates*

Appendices

Appendix 1: Statement of Financial Position (MER)

In PHP Millions	2011	2012	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Cash and cash equivalents	44,141	60,500	62,581	61,534	64,634	73,130	76,905	83,459	99,406
Trade and other receivables - net	29,108	28,077	27,576	32,995	31,859	30,590	33,240	36,113	39,230
Inventories - lower of cost or NRV	1,675	1,371	1,668	1,703	1,777	1,854	1,936	2,022	2,113
Other current assets	2,500	2,295	3,343	3,694	3,692	3,685	3,902	4,134	4,381
Current Assets	**77,424**	**92,243**	**95,168**	**99,926**	**101,962**	**109,259**	**115,983**	**125,728**	**145,130**
Utility plant and others - net	105,510	109,312	111,433	115,488	120,119	125,753	131,609	137,434	143,123
Investments in associates and joint ventures	844	1,815	17,870	25,056	25,803	26,683	28,171	30,608	33,125
Investment properties - net	1,642	1,634	1,626	1,618	1,610	1,602	1,594	1,586	1,578
Deferred tax assets - net	25	3,232	6,990	7,167	7,036	6,884	7,312	7,773	8,268
Other noncurrent assets - net	6,594	8,837	8,670	8,541	8,205	7,842	8,267	8,738	9,257
Noncurrent assets	**114,615**	**124,830**	**146,589**	**157,869**	**162,772**	**168,764**	**176,954**	**186,138**	**195,351**
Assets of Discontinued Operations	18,349								
ASSETS	**210,388**	**217,073**	**241,757**	**257,795**	**264,734**	**278,023**	**292,936**	**311,866**	**340,481**
Notes payable	67	1,787	1,787	1,787	1,787	1,787	1,787	1,787	1,787
Trade payables and other current liabilities	40,011	47,576	49,129	49,339	47,628	45,962	49,179	52,850	56,690
Customers' refund	6,250	6,127	5,690	5,209	-	-	-	-	-
Income Tax Payable	2,154	1,668	610	1,919	1,750	1,619	1,888	2,061	2,257
Current portion of interest-bearing long-term financial liabilities	4,560	2,360	642	42	42	33	2,467	970	6,271
Current Liabilities	**53,042**	**59,518**	**57,858**	**58,296**	**51,207**	**49,401**	**55,321**	**57,668**	**67,005**
Interest-bearing long-term financial liabilities - net of current portion	19,816	20,466	20,337	29,933	38,375	48,698	49,884	55,844	55,279
Customers' deposits - net of current portion	24,080	23,313	23,335	23,005	22,751	22,307	22,251	22,497	23,056
Provisions	16,919	19,411	27,441	26,474	25,414	24,244	24,005	24,563	33,442
Long-term employee benefits	8,226	9,438	7,525	7,645	7,762	7,878	7,992	8,103	8,213
Refundable service extension costs - net of current portion	3,794	4,357	4,641	4,614	4,427	4,221	4,621	5,055	5,527
Deferred tax liabilities - net	595	-	9,920	9,589	9,258	8,927	8,596	8,265	7,934
Other noncurrent liabilities	6,302	12,843	12,843	13,523	14,203	14,884	15,564	16,244	16,924
Noncurrent liabilities	**79,732**	**89,828**	**106,042**	**114,784**	**122,191**	**131,159**	**132,912**	**140,571**	**150,375**
Liabilities of Discontinued Operations	9,113	-	-	-	-	-	-	-	-
LIABILITIES	**141,887**	**149,346**	**163,899**	**173,080**	**173,399**	**180,560**	**188,234**	**198,239**	**217,381**
Common stock	11,273	11,273	11,273	11,273	11,273	11,273	11,273	11,273	11,273
Subscriptions receivable	(521)	(211)	-	-	-	-	-	-	-
Additional paid-in capital	4,111	4,111	4,111	4,111	4,111	4,111	4,111	4,111	4,111
Excess of acquisition cost over carrying value of non-controlling interest acquired	(328)	(328)	(328)	(328)	(328)	(328)	(328)	(328)	(328)
Employee stock purchase plan	915	1,049	1,167	1,270	1,360	1,360	1,360	1,360	1,360
Unrealized fair value gains on available-for-sale or AFS investments	85	120	120	120	120	120	120	120	120
Unrealized fair value gains on AFS investments of discontinued operations	14	-	-	-	-	-	-	-	-
Cumulative translation adjustments of a subsidiary and an associate	12	3	3	3	3	3	3	3	3
Cost of treasury shares held	(9)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)
Retained earnings - appropriated	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Retained earnings - unappropriated	42,236	45,473	55,099	61,684	68,050	74,023	81,081	89,782	99,018
Equity Attributable to Equity Holders of the Parent	63,788	67,479	77,434	84,121	90,578	96,552	103,610	112,311	121,546
Non-controlling Interests	4,713	248	424	594	757	911	1,093	1,316	1,554
EQUITY	**68,501**	**67,727**	**77,858**	**84,715**	**91,335**	**97,463**	**104,702**	**113,627**	**123,100**
LIABILITIES AND EQUITY	**210,388**	**217,073**	**241,757**	**257,795**	**264,734**	**278,023**	**292,936**	**311,866**	**340,481**

Appendix 2: Statement of Comprehensive Income (MER)

In PHP Millions	2011	2012	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Sale of electricity	253,989	282,991	316,469	316,642	303,862	289,660	317,114	346,921	379,320
Sale of services and others	2,819	2,279	3,701	3,849	3,980	4,113	4,249	4,386	4,526
REVENUES	**256,808**	**285,270**	**320,170**	**320,491**	**307,842**	**293,774**	**321,363**	**351,307**	**383,845**
Purchased Power	205,674	232,068	259,522	259,664	249,183	237,537	260,051	284,494	311,063
Salaries, wages and employee benefits	10,911	11,750	11,404	12,683	12,279	11,751	12,661	13,648	14,720
Contracted services	3,333	2,702	3,155	3,712	3,580	3,432	3,741	4,077	4,441
Provision for doubtful accounts - net	2,243	832	319	672	187	163	498	543	593
Taxes, fees and permits	399	403	415	432	446	461	476	492	508
Other expenses	2,887	3,750	3,731	3,742	3,609	3,460	3,772	4,110	4,477
Provision for probable charges and expenses from claims	8,065	9,226	8,284	8,258	7,964	7,635	8,324	9,071	9,881
Equity in net losses (earnings) of associates and joint ventures	(67)	15	(310)	(847)	(1,286)	(1,439)	(3,243)	(6,552)	(6,168)
Others	(44)	(1,852)	(948)	(948)	(948)	(948)	(948)	(948)	(948)
EBITDA	**23,407**	**26,376**	**34,598**	**33,123**	**32,829**	**31,722**	**36,030**	**42,371**	**45,279**
Depreciation and amortization	5,504	5,576	5,940	6,316	6,738	7,218	7,444	7,934	8,427
Operating Income/EBIT	**17,903**	**20,800**	**28,658**	**26,807**	**26,092**	**24,504**	**28,586**	**34,437**	**36,852**
Interest and other financial income	(2,264)	(2,569)	(2,919)	(3,020)	(2,969)	(3,119)	(3,529)	(3,711)	(4,027)
Interest and other financial charges	1,445	1,528	1,284	953	1,345	1,714	2,164	2,321	2,515
Derivative mark-to-market loss (gain)	16	(40)	-	-	-	-	-	-	-
Foreign exchange loss (gain)	7	4	-	-	-	-	-	-	-
INCOME BEFORE INCOME TAX FROM CONTINUING OPERATIONS/EBT	**18,699**	**21,877**	**30,294**	**28,874**	**27,716**	**25,910**	**29,951**	**35,827**	**38,364**
Current	8,454	9,490	2,833	8,916	8,129	7,521	8,771	9,574	10,485
Deferred	(2,515)	(3,793)	6,162	(508)	(200)	(180)	(759)	(791)	(827)
PROVISION FOR (BENEFIT FROM) INCOME TAX	**5,939**	**5,697**	**8,995**	**8,408**	**7,929**	**7,341**	**8,012**	**8,783**	**9,659**
INCOME FROM CONTINUING OPERATIONS	**12,760**	**16,180**	**21,299**	**20,466**	**19,787**	**18,568**	**21,938**	**27,045**	**28,706**
Income from discontinued operations, net of income tax	966	978	-	-	-	-	-	-	-
NET INCOME	**13,726**	**17,158**	**21,299**	**20,466**	**19,787**	**18,568**	**21,938**	**27,045**	**28,706**
Attributable to									
Equity holders of the Parent	13,277	17,016	21,122	20,296	19,623	18,415	21,757	26,821	28,468
Non-controlling interests	499	142	176	169	164	154	182	224	238
Basic Earnings Per Share Attributable to Equity Holders of the Parent	11.73	15.10	18.90	18.16	17.56	16.47	19.46	24.00	25.47

Appendix 3: Statement of Cash Flows (MER)

In PHP Millions	2011	2012	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Income before income tax of continuing operations	18,699	21,877	30,294	28,874	27,716	25,910	29,951	35,827	38,364
Income before income tax of discontinued operations	1,288	1,061							
Income before income tax	**19,987**	**22,938**	30,294	28,874	27,716	25,910	29,951	35,827	38,364
Adjustments for:									
Depreciation and amortization	5,637	5,731	5,940	6,316	6,738	7,218	7,444	7,934	8,427
Provisions, net of settlement	7,869	8,948	8,030	(966)	(1,061)	(1,170)	(239)	558	8,879
Interest and other financial income	(2,784)	(2,683)	(2,919)	(3,020)	(2,969)	(3,119)	(3,529)	(3,711)	(4,027)
Interest and other financial charges	1,628	1,599	1,284	953	1,345	1,714	2,164	2,321	2,515
Provision for doubtful accounts - net	2,243	832	319	672	187	163	498	543	593
Gain on disposal of investment	(24)	(780)	-	-	-	-	-	-	-
Reversal of write-down of inventory to net realizable value	(18)	(45)	-	-	-	-	-	-	-
Loss (gain) on disposal of utility plant and others	461	(12)	-	-	-	-	-	-	-
Employee share-based payments	172	134	118	103	91	-	-	-	-
Equity in net (earnings) losses of associates and joint ventures	(67)	15	(310)	(847)	(1,286)	(1,439)	(3,243)	(6,552)	(6,168)
Operating income before working capital changes	**35,104**	**36,677**	**42,755**	**40,920**	**38,900**	**36,676**	**40,019**	**43,644**	**47,577**
Decrease (increase) in:									
Trade and other receivables	(4,964)	(2,134)	182	(6,091)	950	1,106	(3,149)	(3,416)	(3,710)
Inventories	323	357	(297)	(35)	(74)	(78)	(82)	(86)	(91)
Other current assets	(2,180)	285	(1,048)	(350)	1	8	(218)	(232)	(247)
Increase (decrease) in:									
Trade payables and accrued expenses	11,163	4,622	1,553	209	(1,710)	(1,666)	3,217	3,671	3,840
Customers' refund	(881)	(123)	(438)	(481)	(5,209)	-	-	-	-
Customers' deposits			22	(329)	(254)	(444)	(56)	246	559
Refundable Service Extension Costs			284	(27)	(186)	(207)	400	434	472
Long-term employee benefits	(1,301)	1,212	(1,913)	120	118	116	114	112	109
Net cash generated from operations	**35,155**	**40,896**	41,100	25,102	24,395	28,112	33,273	37,649	49,516
Income tax paid	(5,309)	(7,228)	(3,891)	(7,607)	(8,298)	(7,652)	(8,502)	(9,401)	(10,289)
	20	33	170	521	539	559	1,755	4,115	3,651
Net Cash Flows from (Used in) Operating Activities	29,866	33,701	37,378	18,016	16,636	21,018	26,526	32,363	42,878
Additions to:									
Utility plant and others	(8,343)	(9,353)	(8,133)	(10,450)	(11,457)	(12,950)	(13,410)	(13,882)	(14,250)
Intangibles	(209)	(315)	-	-	-	-	-	-	-
Investment properties	(42)	-	-	-	-	-	-	-	-
Investment in an associate	(517)	(198)	(15,915)	(6,860)	-	-	-	-	-
Decrease (increase) in:									
Other noncurrent assets	653	(2,075)	73	36	242	269	(520)	(564)	(613)
Interest and other financial income received	1,450	2,174	2,919	3,020	2,969	3,119	3,529	3,711	4,027
Proceeds from:									
Disposal of utility plant and others	107	155	174	181	190	200	212	224	236
Return of investment	65	30	-	-	-	-	-	-	-

Net Cash Flows from (Used in) Investing Activities	**(6,816)**	**(9,549)**	(20,882)	(14,073)	(8,055)	(9,362)	(10,189)	(10,511)	(10,599)
Proceeds from:									
Interest-bearing long-term financial liabilities, net of issue costs	11,720	3,000	-	9,623	8,469	10,341	3,638	6,922	5,706
Notes payable	2,150	1,720	1,787	1,787	1,787	1,787	1,787	1,787	1,787
Collection of subscriptions receivable	217	310	211	-	-	-	-	-	-
Payments of:									
Dividends	(9,866)	(8,890)	(11,496)	(13,712)	(13,257)	(12,441)	(14,699)	(18,120)	(19,233)
Interest-bearing long-term financial liabilities	(5,620)	(4,565)	(1,847)	(627)	(27)	(27)	(18)	(2,460)	(970)
Interest and other financial charges	(1,960)	(2,882)	(1,284)	(953)	(1,345)	(1,714)	(2,164)	(2,321)	(2,515)
Notes payable	(2,082)	-	(1,787)	(1,787)	(1,787)	(1,787)	(1,787)	(1,787)	(1,787)
Acquisition of treasury shares	(9)	(2)	-	-	-	-	-	-	-
Increase (decrease) in:									
Other noncurrent liabilities	872	973	-	680	680	680	680	680	-
Net Cash Flows From (Used In) Financing Activities	**(4,578)**	**(10,336)**	(14,416)	(4,989)	(5,480)	(3,160)	(12,562)	(15,298)	(16,331)
NET INCREASE IN CASH AND CASH EQUIVALENTS	**18,452**	**13,783**	2,081	(1,046)	3,100	8,496	3,774	6,554	15,947
Cash and Cash Equivalents at the Beginning of the Year	24,370	44,141	60,500	62,581	61,534	64,634	73,130	76,905	83,459
Cash and Cash Equivalents at End of Year	**42,053**	**57,924**	62,581	61,534	64,634	73,130	76,905	83,459	99,406

Appendix 4: Common-Size Statement of Financial Position (MER)

% of Total Assets	2011	2012	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Cash and cash equivalents	20.98%	27.87%	25.89%	23.87%	24.41%	26.30%	26.25%	26.76%	29.20%
Trade and other receivables - net	13.84%	12.93%	11.41%	12.80%	12.03%	11.00%	11.35%	11.58%	11.52%
Inventories - lower of cost or NRV	0.80%	0.63%	0.69%	0.66%	0.67%	0.67%	0.66%	0.65%	0.62%
Other current assets	1.19%	1.06%	1.38%	1.43%	1.39%	1.33%	1.33%	1.33%	1.29%
Current Assets	**36.80%**	**42.49%**	**39.37%**	**38.76%**	**38.51%**	**39.30%**	**39.59%**	**40.31%**	**42.63%**
Utility plant and others - net	50.15%	50.36%	46.09%	44.80%	45.37%	45.23%	44.93%	44.07%	42.04%
Investments in associates and joint ventures	0.40%	0.84%	7.39%	9.72%	9.75%	9.60%	9.62%	9.81%	9.73%
Investment properties - net	0.78%	0.75%	0.67%	0.63%	0.61%	0.58%	0.54%	0.51%	0.46%
Deferred tax assets - net	0.01%	1.49%	2.89%	2.78%	2.66%	2.48%	2.50%	2.49%	2.43%
Other noncurrent assets - net	3.13%	4.07%	3.59%	3.31%	3.10%	2.82%	2.82%	2.80%	2.72%
Noncurrent assets	**54.48%**	**57.51%**	**60.63%**	**61.24%**	**61.49%**	**60.70%**	**60.41%**	**59.69%**	**57.37%**
Assets of Discontinued Operations	8.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
ASSETS	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Notes payable	0.03%	0.82%	0.74%	0.69%	0.68%	0.64%	0.61%	0.57%	0.52%
Trade payables and other current liabilities	19.02%	21.92%	20.32%	19.14%	17.99%	16.53%	16.79%	16.95%	16.65%
Customers' refund	2.97%	2.82%	2.35%	2.02%	0.00%	0.00%	0.00%	0.00%	0.00%
Income Tax Payable	1.02%	0.77%	0.25%	0.74%	0.66%	0.58%	0.64%	0.66%	0.66%
Current portion of interest-bearing long-term financial liabilities	2.17%	1.09%	0.27%	0.02%	0.02%	0.01%	0.84%	0.31%	1.84%
Current Liabilities	**25.21%**	**27.42%**	**23.93%**	**22.61%**	**19.34%**	**17.77%**	**18.89%**	**18.49%**	**19.68%**
Interest-bearing long-term financial liabilities - net of current portion	9.42%	9.43%	8.41%	11.61%	14.50%	17.52%	17.03%	17.91%	16.24%
Customers' deposits - net of current portion	11.45%	10.74%	9.65%	8.92%	8.59%	8.02%	7.60%	7.21%	6.77%
Provisions	8.04%	8.94%	11.35%	10.27%	9.60%	8.72%	8.19%	7.88%	9.82%
Long-term employee benefits	3.91%	4.35%	3.11%	2.97%	2.93%	2.83%	2.73%	2.60%	2.41%
Refundable service extension costs - net of current portion	1.80%	2.01%	1.92%	1.79%	1.67%	1.52%	1.58%	1.62%	1.62%
Deferred tax liabilities - net	0.28%	0.00%	4.10%	3.72%	3.50%	3.21%	2.93%	2.65%	2.33%
Other noncurrent liabilities	3.00%	5.92%	5.31%	5.25%	5.37%	5.35%	5.31%	5.21%	4.97%
Noncurrent liabilities	**37.90%**	**41.38%**	**43.86%**	**44.53%**	**46.16%**	**47.18%**	**45.37%**	**45.07%**	**44.17%**
Liabilities of Discontinued	4.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Operations									
LIABILITIES	**67.44%**	**68.80%**	**67.79%**	**67.14%**	**65.50%**	**64.94%**	**64.26%**	**63.57%**	**63.85%**
Common stock	5.36%	5.19%	4.66%	4.37%	4.26%	4.05%	3.85%	3.61%	3.31%
Subscriptions receivable	-0.25%	-0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Additional paid-in capital	1.95%	1.89%	1.70%	1.59%	1.55%	1.48%	1.40%	1.32%	1.21%
Excess of acquisition cost over carrying value of non-controlling interest acquired	-0.16%	-0.15%	-0.14%	-0.13%	-0.12%	-0.12%	-0.11%	-0.11%	-0.10%
Employee stock purchase plan	0.43%	0.48%	0.48%	0.49%	0.51%	0.49%	0.46%	0.44%	0.40%
Unrealized fair value gains on available-for-sale or AFS investments	0.04%	0.06%	0.05%	0.05%	0.05%	0.04%	0.04%	0.04%	0.04%
Unrealized fair value gains on AFS investments of discontinued operations	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cumulative translation adjustments of a subsidiary and an associate	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cost of treasury shares held	0.00%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Retained earnings - appropriated	2.85%	2.76%	2.48%	2.33%	2.27%	2.16%	2.05%	1.92%	1.76%
Retained earnings - unappropriated	20.08%	20.95%	22.79%	23.93%	25.70%	26.62%	27.68%	28.79%	29.08%
Equity Attributable to Equity Holders of the Parent	30.32%	31.09%	32.03%	32.63%	34.21%	34.73%	35.37%	36.01%	35.70%
Non-controlling Interests	2.24%	0.11%	0.18%	0.23%	0.29%	0.33%	0.37%	0.42%	0.46%
EQUITY	**32.56%**	**31.20%**	**32.21%**	**32.86%**	**34.50%**	**35.06%**	**35.74%**	**36.43%**	**36.15%**
LIABILITIES AND EQUITY	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Appendix 5: Common-Size Statement of Comprehensive Income (MER)

% of Revenues	2011	2012	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Sale of electricity net of PP	94.49%	95.72%	93.90%	93.67%	93.21%	92.69%	93.07%	93.44%	93.78%
Sale of services and others	5.51%	4.28%	6.10%	6.33%	6.79%	7.31%	6.93%	6.56%	6.22%
Revenues	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Salaries, wages and employee benefits	21.34%	22.09%	18.80%	20.85%	20.93%	20.89%	20.65%	20.43%	20.22%
Provision for probable charges and expenses from claims	15.77%	17.34%	13.66%	13.58%	13.58%	13.58%	13.58%	13.58%	13.58%
Depreciation and amortization	10.76%	10.48%	9.79%	10.38%	11.49%	12.84%	12.14%	11.87%	11.58%
Contracted services	6.52%	5.08%	5.20%	6.10%	6.10%	6.10%	6.10%	6.10%	6.10%
Provision for doubtful accounts - net	4.39%	1.56%	0.53%	1.10%	0.32%	0.29%	0.81%	0.81%	0.81%
Taxes, fees and permits	0.78%	0.76%	0.68%	0.71%	0.76%	0.82%	0.78%	0.74%	0.70%
Other expenses	5.65%	7.05%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%
Interest and other financial income	-4.43%	-4.83%	-4.81%	-4.96%	-5.06%	-5.55%	-5.76%	-5.55%	-5.53%
Interest and other financial charges	2.83%	2.87%	2.12%	1.57%	2.29%	3.05%	3.53%	3.47%	3.46%
Equity in net losses (earnings) of associates and joint ventures	-0.13%	0.03%	-0.51%	-1.39%	-2.19%	-2.56%	-5.29%	-9.81%	-8.47%
Derivative mark-to-market loss (gain)	0.03%	-0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Foreign exchange loss (gain)	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Others	-0.09%	-3.48%	-1.56%	-1.56%	-1.62%	-1.69%	-1.55%	-1.42%	-1.30%
Expenses (Income)	**63.43%**	**58.88%**	**50.05%**	**52.53%**	**52.75%**	**53.93%**	**51.15%**	**46.38%**	**47.29%**
Income before Income Tax from Continuing Operations	**36.57%**	**41.12%**	**49.95%**	**47.47%**	**47.25%**	**46.07%**	**48.85%**	**53.62%**	**52.71%**
Current	16.53%	17.84%	4.67%	14.66%	13.86%	13.37%	14.31%	14.33%	14.41%
Deferred	-4.92%	-7.13%	10.16%	-0.83%	-0.34%	-0.32%	-1.24%	-1.18%	-1.14%
Provision for Income Tax	**11.61%**	**10.71%**	**14.83%**	**13.82%**	**13.52%**	**13.05%**	**13.07%**	**13.15%**	**13.27%**
Income From Continuing Operations	**24.95%**	**30.41%**	**35.12%**	**33.65%**	**33.73%**	**33.02%**	**35.78%**	**40.48%**	**39.44%**
Income from discontinued operations, net of income tax	1.89%	1.84%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NET INCOME	**26.84%**	**32.25%**	**35.12%**	**33.65%**	**33.73%**	**33.02%**	**35.78%**	**40.48%**	**39.44%**
Attributable to									
Equity holders of the Parent	25.97%	31.98%	34.83%	33.37%	33.45%	32.74%	35.49%	40.14%	39.11%
Non-controlling interests	0.98%	0.27%	0.29%	0.28%	0.28%	0.27%	0.30%	0.34%	0.33%
Basic Earnings Per Share Attributable to Equity Holders of the Parent	**11.73**	**15.10**	**17.75**	**16.81**	**16.41**	**15.51**	**18.63**	**22.62**	**11.73**

Appendix 6: Key Financial Ratios (MER)

RATIOS	2011	2012	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Profitability									
EBITDA margin	9.1%	9.2%	10.8%	10.3%	10.7%	10.8%	11.2%	12.1%	11.8%
Operating profit margin	7.0%	7.3%	9.0%	8.4%	8.5%	8.3%	8.9%	9.8%	9.6%
Core operating margin	35.0%	39.1%	47.3%	44.1%	44.5%	43.6%	46.6%	51.5%	50.6%
Net profit margin	5.0%	5.7%	6.7%	6.4%	6.4%	6.3%	6.8%	7.7%	7.5%
Return on assets	6.5%	6.8%	8.7%	7.5%	7.0%	6.3%	7.0%	8.0%	7.9%
Return on equity	19.4%	23.8%	29.3%	25.2%	22.5%	19.7%	21.7%	24.8%	24.3%
Liquidity									
Current ratio	1.46	1.55	1.64	1.71	1.99	2.21	2.10	2.18	2.17
Quick ratio	1.38	1.49	1.56	1.62	1.88	2.10	1.99	2.07	2.07
Cash ratio	0.83	1.02	1.08	1.06	1.26	1.48	1.39	1.45	1.48
Activity									
Cash Conversion Cycle	3.29	0.03	(4.35)	(3.95)	(0.79)	(1.00)	(0.96)	(0.81)	(0.67)
Total asset turnover	0.26	0.25	0.26	0.24	0.22	0.21	0.21	0.22	0.22
Fixed asset turnover	0.47	0.49	0.54	0.53	0.49	0.45	0.47	0.49	0.51
Financial leverage									
Long-term debt to assets	0.09	0.09	0.08	0.12	0.14	0.18	0.17	0.18	0.16
Long-term debt to equity	0.36	0.34	0.27	0.35	0.42	0.50	0.50	0.50	0.50
Debt to equity	0.36	0.36	0.29	0.37	0.44	0.52	0.52	0.52	0.51
Interest coverage	12.31	12.41	21.34	26.24	17.73	12.91	11.28	11.61	11.82
Debt Service Coverage	3.49	2.59	8.48	21.45	25.71	24.80	19.69	8.62	11.17
Shareholder Ratios									
Earnings per share	12.18	15.22	18.90	18.16	17.56	16.48	19.47	24.00	25.47
Dividend payout ratio	66.0%	54.0%	54.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%

Appendix 7: Statement of Financial Position (Generation Business)

Global Business Power								
In PHP Millions	**2013F**	**2014F**	**2015F**	**2016F**	**2017F**	**2022F**	**2027F**	**2032F**
Cash	15,630	17,851	20,109	22,409	24,747	36,717	48,347	58,103
Accounts Receivable	2,461	2,559	2,646	2,735	2,825	3,296	3,806	4,384
Inventory	971	1,019	1,054	1,079	1,104	1,229	1,332	1,403
Current Assets	**19,061**	**21,430**	**23,809**	**26,223**	**28,675**	**41,243**	**53,484**	**63,890**
Land	7,988	7,988	7,988	7,988	7,988	7,988	7,988	7,988
Property, Plant and Equipment	28,713	28,707	28,738	28,811	28,930	30,427	34,203	42,118
Noncurrent Assets	**36,701**	**36,695**	**36,726**	**36,799**	**36,919**	**38,415**	**42,191**	**50,106**
ASSETS	**55,763**	**58,124**	**60,535**	**63,022**	**65,594**	**79,658**	**95,675**	**113,996**
Accounts Payable	490	514	530	542	554	617	667	703
Other Current Payables	13,627	13,627	13,627	13,627	13,627	13,627	13,627	13,627
Current Liabilities	**14,117**	**14,141**	**14,157**	**14,169**	**14,181**	**14,244**	**14,294**	**14,330**
Noncurrent Liabilities	26,221	27,694	29,201	30,760	32,371	41,187	51,240	62,753
LIABILITIES	**40,338**	**41,834**	**43,358**	**44,928**	**46,552**	**55,431**	**65,534**	**77,083**
Shareholders' Equity	15,424	16,290	17,177	18,094	19,042	24,228	30,141	36,914
LIABILITIES AND EQUITY	**15,424**	**16,290**	**17,177**	**18,094**	**19,042**	**24,228**	**30,141**	**36,914**

RP Energy									
In PHP Millions	**2018F**	**2019F**	**2020F**	**2021F**	**2022F**	**2027F**	**2032F**	**2037F**	**2042F**
Cash	6,287	10,237	14,464	18,707	22,965	44,548	67,640	92,328	118,448
Accounts Receivable	1,910	1,969	2,028	2,088	2,149	2,467	2,824	3,234	3,702
Inventory	1,599	1,640	1,681	1,722	1,763	1,933	2,049	2,171	2,301
Current Assets	9,796	13,845	18,173	22,517	26,877	48,949	72,513	97,734	124,452
Property, Plant and Equipment	56,208	56,184	56,234	56,357	56,554	58,688	62,877	69,395	78,557
Noncurrent Assets	**56,208**	**56,184**	**56,234**	**56,357**	**56,554**	**58,688**	**62,877**	**69,395**	**78,557**
ASSETS	**66,004**	**70,029**	**74,406**	**78,874**	**83,431**	**107,637**	**135,390**	**167,129**	**203,008**
Accounts Payable	1,865	1,646	1,688	1,729	1,770	1,937	2,053	2,176	2,306
Current Liabilities	**1,865**	**1,646**	**1,688**	**1,729**	**1,770**	**1,937**	**2,053**	**2,176**	**2,306**
Noncurrent Liabilities	44,897	47,868	50,903	54,002	57,163	73,990	93,336	115,467	140,492
LIABILITIES	**46,762**	**49,515**	**52,591**	**55,731**	**58,933**	**75,927**	**95,389**	**117,643**	**142,798**
Shareholders' Equity	19,242	20,515	21,816	23,144	24,498	31,710	40,001	49,486	60,211
LIABILITIES AND EQUITY	**66,004**	**70,029**	**74,406**	**78,874**	**83,431**	**107,637**	**135,390**	**167,129**	**203,008**

Quezon Power 2									
In PHP Millions	**2017F**	**2018F**	**2019F**	**2020F**	**2021F**	**2022F**	**2027F**	**2032F**	**2037F**
Cash	3,088	6,026	8,739	11,456	14,174	27,736	42,036	57,211	73,025
Accounts Receivable	1,419	1,463	1,507	1,553	1,598	1,837	2,102	2,405	2,752
Inventory	1,299	1,334	1,368	1,403	1,437	1,596	1,692	1,794	1,903
Current Assets	**5,806**	**8,822**	**11,615**	**14,411**	**17,209**	**31,168**	**45,830**	**61,411**	**77,680**
Property, Plant and Equipment	46,840	46,821	46,865	46,970	47,139	48,955	52,495	57,984	65,683
Noncurrent Assets	**46,840**	**46,821**	**46,865**	**46,970**	**47,139**	**48,955**	**52,495**	**57,984**	**65,683**
ASSETS	**52,646**	**55,644**	**58,480**	**61,382**	**64,348**	**80,123**	**98,325**	**119,395**	**143,364**
Accounts Payable	1,083	1,348	1,384	1,420	1,457	1,628	1,751	1,885	2,032
Current Liabilities	**1,083**	**1,348**	**1,384**	**1,420**	**1,457**	**1,628**	**1,751**	**1,885**	**2,032**
Noncurrent Liabilities	36,094	38,007	39,967	41,973	44,024	54,947	67,602	82,257	98,932
LIABILITIES	**37,177**	**39,355**	**41,351**	**43,393**	**45,481**	**56,575**	**69,353**	**84,142**	**100,964**
Shareholders' Equity	15,469	16,289	17,129	17,988	18,867	23,549	28,972	35,253	42,399
LIABILITIES AND EQUITY	**52,646**	**55,644**	**58,480**	**61,382**	**64,348**	**80,123**	**98,325**	**119,395**	**143,364**

PacificLight Power										
In SGD Millions	**2014F**	**2015F**	**2016F**	**2017F**	**2018F**	**2023F**	**2028F**	**2033F**	**2038F**	**2043F**
Cash and cash equivalents	188	137	97	65	42	1,499	2,479	3,410	4,255	5,040
Trade and other receivables	136	136	137	137	138	141	145	150	154	160
Inventories	16	16	16	15	15	14	14	14	14	14
Current Assets	**341**	**289**	**249**	**218**	**196**	**1,654**	**2,637**	**3,573**	**4,424**	**5,214**
Construction in Progress	-	-	-	-	-	-	-	-	-	-
Property, plant and equipment	1,557	1,558	1,559	1,560	1,561	1,568	1,574	1,580	1,586	1,592
Noncurrent assets	**1,557**	**1,558**	**1,559**	**1,560**	**1,561**	**1,568**	**1,574**	**1,580**	**1,586**	**1,592**
ASSETS	**1,898**	**1,847**	**1,808**	**1,778**	**1,757**	**3,222**	**4,211**	**5,153**	**6,010**	**6,807**
Trade and other payables	191	183	182	179	177	164	158	161	164	167
Borrowings (current portion)	67	67	67	67	67	184	232	363	406	467
Current Liabilities	**258**	**250**	**249**	**246**	**244**	**348**	**390**	**524**	**571**	**634**
Borrowings	875	807	740	673	605	1,651	2,200	2,632	3,101	3,517
Noncurrent liabilities	**875**	**807**	**740**	**673**	**605**	**1,651**	**2,200**	**2,632**	**3,101**	**3,517**
LIABILITIES	**1,133**	**1,058**	**989**	**919**	**850**	**1,999**	**2,590**	**3,156**	**3,672**	**4,151**
Share capital	761	761	761	761	761	761	761	761	761	761
Retained earnings	3	28	58	98	146	462	860	1,235	1,577	1,895
EQUITY	**765**	**789**	**819**	**860**	**907**	**1,223**	**1,621**	**1,997**	**2,338**	**2,656**
LIABILITIES AND EQUITY	**1,898**	**1,847**	**1,808**	**1,778**	**1,757**	**3,222**	**4,211**	**5,153**	**6,010**	**6,807**

Appendix 8: Statement of Comprehensive Income (Generation Business)

Global Business Power								
In PHP Millions	**2013F**	**2014F**	**2015F**	**2016F**	**2017F**	**2022F**	**2027F**	**2032F**
Revenues	14,764	15,355	15,877	16,408	16,947	19,777	22,835	26,302
Cost of Coal	(4,577)	(4,841)	(5,029)	(5,162)	(5,289)	(5,952)	(6,487)	(6,834)
Cost of Diesel	(1,247)	(1,274)	(1,294)	(1,314)	(1,333)	(1,423)	(1,503)	(1,583)
Variable Operating and Maintenance Costs (Foreign)	(110)	(115)	(119)	(122)	(126)	(144)	(160)	(178)
Variable Operating and Maintenance Costs (Local)	(13)	(14)	(14)	(14)	(14)	(15)	(16)	(17)
Insurance	(228)	(237)	(245)	(253)	(262)	(305)	(353)	(406)
Business Related Expenses	(606)	(631)	(652)	(674)	(696)	(812)	(938)	(1,080)
Taxes and Licenses	(4)	(4)	(4)	(4)	(4)	(5)	(6)	(6)
Repairs and Maintenance	(14)	(14)	(15)	(15)	(16)	(18)	(21)	(25)
Salaries and Wages	(34)	(36)	(37)	(38)	(39)	(46)	(53)	(61)
EBITDA	**7,930**	**8,190**	**8,469**	**8,811**	**9,168**	**11,056**	**13,299**	**16,111**
Depreciation and Amortization	(1,774)	(1,855)	(1,942)	(2,034)	(2,132)	(2,737)	(3,595)	(4,853)
EBIT	**6,156**	**6,334**	**6,527**	**6,777**	**7,036**	**8,319**	**9,703**	**11,258**
Interest Expense	(1,311)	(1,385)	(1,460)	(1,538)	(1,619)	(2,059)	(2,562)	(3,138)
Pre-tax Income	**4,845**	**4,950**	**5,067**	**5,239**	**5,417**	**6,260**	**7,141**	**8,120**
Income Taxes	(1,454)	(1,485)	(1,520)	(1,572)	(1,625)	(1,878)	(2,142)	(2,436)
NET INCOME	**3,392**	**3,465**	**3,547**	**3,667**	**3,792**	**4,382**	**4,999**	**5,684**

RP Energy									
In PHP Millions	**2018F**	**2019F**	**2020F**	**2021F**	**2022F**	**2027F**	**2032F**	**2037F**	**2042F**
Revenues	22,924	23,626	24,338	25,059	25,791	29,603	33,894	38,805	44,426
Cost of Coal	(9,591)	(9,838)	(10,085)	(10,332)	(10,579)	(11,599)	(12,293)	(13,028)	(13,808)
Variable Operating and Maintenance Costs (Foreign)	(541)	(559)	(576)	(594)	(612)	(707)	(814)	(937)	(1,080)
Variable Operating and Maintenance Costs (Local)	(60)	(61)	(63)	(64)	(65)	(71)	(78)	(85)	(93)
Insurance	(118)	(122)	(125)	(129)	(133)	(152)	(174)	(200)	(229)
Business Related Expenses	(314)	(323)	(333)	(343)	(353)	(405)	(464)	(531)	(608)
Taxes and Licenses	(2)	(2)	(2)	(2)	(2)	(2)	(3)	(3)	(4)
Repairs and Maintenance	(7)	(7)	(8)	(8)	(8)	(9)	(11)	(12)	(14)
Salaries and Wages	(458)	(473)	(487)	(501)	(516)	(592)	(678)	(776)	(889)
EBITDA	**11,831**	**12,241**	**12,660**	**13,087**	**13,523**	**16,065**	**19,380**	**23,232**	**27,703**
Depreciation and Amortization	(2,470)	(2,572)	(2,682)	(2,798)	(2,923)	(3,680)	(4,702)	(6,060)	(7,845)
EBIT	**9,361**	**9,669**	**9,978**	**10,288**	**10,600**	**12,385**	**14,678**	**17,173**	**19,858**
Interest Expense	(2,101)	(2,393)	(2,545)	(2,700)	(2,858)	(3,699)	(4,667)	(5,773)	(7,025)
Pre-tax Income	**7,260**	**7,275**	**7,433**	**7,588**	**7,741**	**8,685**	**10,012**	**11,399**	**12,834**
Income Taxes	(2,178)	(2,183)	(2,230)	(2,276)	(2,322)	(2,606)	(3,003)	(3,420)	(3,850)
NET INCOME	**5,082**	**5,093**	**5,203**	**5,312**	**5,419**	**6,080**	**7,008**	**7,979**	**8,984**

Quezon Power 2									
In PHP Millions	**2017F**	**2018F**	**2019F**	**2020F**	**2021F**	**2022F**	**2027F**	**2032F**	**2037F**
Revenues	17,024	17,552	18,088	18,631	19,182	19,739	22,645	25,914	29,652
Cost of Coal	(7,797)	(8,003)	(8,209)	(8,416)	(8,624)	(8,831)	(9,687)	(10,272)	(10,893)
Variable Operating and Maintenance Costs (Foreign)	(409)	(423)	(436)	(450)	(464)	(478)	(552)	(635)	(732)
Variable Operating and Maintenance Costs (Local)	(46)	(47)	(48)	(49)	(50)	(51)	(55)	(61)	(66)
Insurance	(88)	(90)	(93)	(96)	(99)	(102)	(117)	(133)	(153)
Business Related Expenses	(233)	(240)	(248)	(255)	(263)	(270)	(310)	(355)	(406)
Taxes and Licenses	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(2)
Repairs and Maintenance	(5)	(5)	(6)	(6)	(6)	(6)	(7)	(8)	(9)
Salaries and Wages	(13)	(14)	(14)	(14)	(15)	(15)	(17)	(20)	(23)
EBITDA	**8,431**	**8,729**	**9,033**	**9,344**	**9,661**	**9,985**	**11,898**	**14,427**	**17,369**
Depreciation and Amortization	(2,059)	(2,144)	(2,235)	(2,332)	(2,436)	(2,548)	(3,221)	(4,126)	(5,326)
EBIT	**6,373**	**6,585**	**6,798**	**7,011**	**7,225**	**7,437**	**8,677**	**10,302**	**12,043**
Interest Expense	(1,805)	(1,900)	(1,998)	(2,099)	(2,201)	(2,306)	(2,866)	(3,519)	(4,272)
Pretax Income	**4,568**	**4,685**	**4,800**	**4,913**	**5,023**	**5,131**	**5,811**	**6,783**	**7,772**
Income Taxes	(1,370)	(1,405)	(1,440)	(1,474)	(1,507)	(1,539)	(1,743)	(2,035)	(2,331)
NET INCOME	**3,198**	**3,279**	**3,360**	**3,439**	**3,516**	**3,592**	**4,068**	**4,748**	**5,440**

PacificLight Power										
In SGD Millions	**2014F**	**2015F**	**2016F**	**2017F**	**2018F**	**2023F**	**2028F**	**2033F**	**2038F**	**2043F**
Revenues	1,351	1,352	1,356	1,361	1,367	1,399	1,437	1,481	1,529	1,582
Cost of fuel	(461)	(441)	(438)	(431)	(426)	(395)	(381)	(388)	(396)	(403)
Cost of materials	(691)	(662)	(657)	(646)	(639)	(592)	(572)	(582)	(594)	(605)
Operating expenses	(89)	(91)	(93)	(96)	(98)	(110)	(124)	(140)	(157)	(177)
EBITDA	**2,592**	**2,546**	**2,543**	**2,534**	**2,530**	**2,496**	**2,514**	**2,591**	**2,676**	**2,768**
Depreciation and Amortization	(51)	(51)	(51)	(51)	(52)	(52)	(52)	(52)	(52)	(53)
EBIT	**2,644**	**2,598**	**2,595**	**2,585**	**2,582**	**2,548**	**2,566**	**2,643**	**2,728**	**2,820**
Interest Expense	(50)	(47)	(44)	(40)	(37)	(87)	(116)	(144)	(170)	(195)
Pretax Income	**8**	**59**	**73**	**97**	**115**	**164**	**193**	**174**	**159**	**149**
Income Taxes	(1)	(10)	(12)	(17)	(20)	(28)	(33)	(30)	(27)	(25)
NET INCOME	**7**	**49**	**61**	**81**	**96**	**136**	**160**	**144**	**132**	**124**

Appendix 9: Statement of Cash Flows (Generation Business)

Global Business Power								
In PHP Millions	**2013F**	**2014F**	**2015F**	**2016F**	**2017F**	**2022F**	**2027F**	**2032F**
Net Income	3,392	3,465	3,547	3,667	3,792	4,382	4,999	5,684
Depreciation and Amortization	1,774	1,855	1,942	2,034	2,132	2,737	3,595	4,853
Interest Expense	1,311	1,385	1,460	1,538	1,619	2,059	2,562	3,138
Decrease (Increase) in Accounts Receivable	(142)	(98)	(87)	(88)	(90)	(97)	(106)	(122)
Decrease (Increase) in Inventory	(61)	(48)	(35)	(25)	(24)	(25)	(14)	(15)
Increase (Decrease) in Accounts Payable	(40)	23	16	12	12	12	7	7
Increase (Decrease) in Other Current Liabilities	-	-	-	-	-	-	-	-
Net Operating Cash Flow	**6,234**	**6,581**	**6,843**	**7,137**	**7,441**	**9,068**	**11,043**	**13,545**
Additions	(1,748)	(1,849)	(1,973)	(2,107)	(2,252)	(3,179)	(4,602)	(6,910)
Disposals	-	-	-	-	-	-	-	-
Net Investing Cash Flow	**(1,748)**	**(1,849)**	**(1,973)**	**(2,107)**	**(2,252)**	**(3,179)**	**(4,602)**	**(6,910)**
Issuances	1,442	1,473	1,507	1,559	1,612	2,002	2,898	4,351
Repayments	-	-	-	-	-	(139)	(773)	(1,935)
Interest Paid	(1,311)	(1,385)	(1,460)	(1,538)	(1,619)	(2,059)	(2,562)	(3,138)
Dividends Paid	(2,544)	(2,599)	(2,660)	(2,751)	(2,844)	(3,287)	(3,749)	(4,263)
Net Financing Cash Flow	**(2,413)**	**(2,511)**	**(2,613)**	**(2,730)**	**(2,851)**	**(3,484)**	**(4,187)**	**(4,985)**
Cash, beginning	**13,557**	**15,630**	**17,851**	**20,109**	**22,409**	**34,312**	**46,092**	**56,453**
Net Cash Inflow (Outflow)	**2,073**	**2,221**	**2,257**	**2,301**	**2,338**	**2,406**	**2,254**	**1,651**
CASH	**15,630**	**17,851**	**20,109**	**22,409**	**24,747**	**36,717**	**48,347**	**58,103**

RP Energy									
In PHP Millions	**2018F**	**2019F**	**2020F**	**2021F**	**2022F**	**2027F**	**2032F**	**2037F**	**2042F**
Net Income	5,082	5,093	5,203	5,312	5,419	6,080	7,008	7,979	8,984
Depreciation and Amortization	2,470	2,572	2,682	2,798	2,923	3,680	4,702	6,060	7,845
Interest Expense	2,101	2,393	2,545	2,700	2,858	3,699	4,667	5,773	7,025
Decrease (Increase) in Accounts Receivable	(1,910)	(59)	(59)	(60)	(61)	(66)	(75)	(86)	(99)
Decrease (Increase) in Inventory	(1,599)	(41)	(41)	(41)	(41)	(22)	(24)	(25)	(27)
Increase (Decrease) in Accounts Payable	1,865	(218)	41	41	41	22	24	25	27
Net Operating Cash Flow	**8,009**	**9,740**	**10,370**	**10,750**	**11,139**	**13,394**	**16,301**	**19,726**	**23,754**
Additions	-	(2,549)	(2,731)	(2,921)	(3,121)	(4,264)	(5,716)	(7,564)	(9,905)
Disposals	-	-	-	-	-	-	-	-	-
Net Investing Cash Flow	**-**	**(2,549)**	**(2,731)**	**(2,921)**	**(3,121)**	**(4,264)**	**(5,716)**	**(7,564)**	**(9,905)**
Issuances	3,823	2,971	3,035	3,099	3,161	3,547	4,088	4,655	5,240
Repayments	-	-	-	-	-	-	-	-	-
Interest Paid	(2,101)	(2,393)	(2,545)	(2,700)	(2,858)	(3,699)	(4,667)	(5,773)	(7,025)
Share Issuance	-	-	-	-	-	-	-	-	-
Dividends Paid	(4,915)	(3,820)	(3,902)	(3,984)	(4,064)	(4,560)	(5,256)	(5,985)	(6,738)
Net Financing Cash Flow	**(3,193)**	**(3,242)**	**(3,412)**	**(3,585)**	**(3,761)**	**(4,713)**	**(5,835)**	**(7,103)**	**(8,522)**
Cash, beginning	**-**	**4,816**	**8,765**	**12,992**	**17,235**	**40,131**	**62,890**	**87,270**	**113,121**
Net Cash Inflow (Outflow)	**4,816**	**3,949**	**4,227**	**4,243**	**4,258**	**4,417**	**4,750**	**5,059**	**5,327**
CASH	**4,816**	**8,765**	**12,992**	**17,235**	**21,493**	**44,548**	**67,640**	**92,328**	**118,448**

Quezon Power 2									
In PHP Millions	**2017F**	**2018F**	**2019F**	**2020F**	**2021F**	**2022F**	**2027F**	**2032F**	**2037F**
Net Income	3,198	3,279	3,360	3,439	3,516	3,592	4,068	4,748	5,440
Depreciation and Amortization	2,059	2,144	2,235	2,332	2,436	2,548	3,221	4,126	5,326
Interest Expense	1,805	1,900	1,998	2,099	2,201	2,306	2,866	3,519	4,272
Decrease (Increase) in Accounts Receivable	(1,419)	(44)	(45)	(45)	(46)	(46)	(50)	(57)	(66)
Decrease (Increase) in Inventory	(1,299)	(34)	(34)	(35)	(35)	(35)	(19)	(20)	(21)
Increase (Decrease) in Accounts Payable	1,083	265	36	36	36	36	24	26	28
Net Operating Cash Flow	5,426	7,510	7,550	7,826	8,110	8,401	10,109	12,341	14,979
Additions	-	(2,125)	(2,278)	(2,438)	(2,605)	(2,780)	(3,784)	(5,059)	(6,680)
Disposals	-	-	-	-	-	-	-	-	-
Net Investing Cash Flow	-	(2,125)	(2,278)	(2,438)	(2,605)	(2,780)	(3,784)	(5,059)	(6,680)
Issuances	1,865	1,913	1,960	2,006	2,051	2,095	2,373	2,770	3,173
Repayments	-	-	-	-	-	-	-	-	-
Interest Paid	(1,805)	(1,900)	(1,998)	(2,099)	(2,201)	(2,306)	(2,866)	(3,519)	(4,272)
Share Issuance	-	-	-	-	-	-	-	-	-
Dividends Paid	(2,398)	(2,459)	(2,520)	(2,579)	(2,637)	(2,694)	(3,051)	(3,561)	(4,080)
Net Financing Cash Flow	**(2,338)**	**(2,447)**	**(2,558)**	**(2,672)**	**(2,787)**	**(2,905)**	**(3,544)**	**(4,310)**	**(5,178)**
Cash, beginning	**-**	**3,088**	**6,026**	**8,739**	**11,456**	**14,174**	**27,736**	**42,036**	**57,211**
Net Cash Inflow (Outflow)	**3,088**	**2,938**	**2,714**	**2,717**	**2,718**	**2,716**	**2,781**	**2,972**	**3,121**
CASH	**3,088**	**6,026**	**8,739**	**11,456**	**14,174**	**16,890**	**30,517**	**45,007**	**60,332**

PacificLight Power										
In SGD Millions	**2014F**	**2015F**	**2016F**	**2017F**	**2018F**	**2023F**	**2028F**	**2033F**	**2038F**	**2043F**
Net income	7	49	61	81	96	136	160	144	132	124
Depreciation and amortization	51	51	51	51	52	52	52	52	52	53
Interest expense	50	47	44	40	37	87	116	144	170	195
Decrease (Increase) in Accounts Receivable	(136)	(0.1)	(0.4)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Decrease (Increase) in Inventory	(16)	1	0.1	0.3	0.2	0.2	(0.1)	(0.1)	(0.1)	(0.1)
Increase (Decrease) in Accounts Payable	191	(8)	(2)	(3)	(2)	(2)	1	1	1	1
Net Operating Cash Flow	**147**	**140**	**154**	**169**	**182**	**272**	**328**	**340**	**355**	**371**
Purchases of PPE	-	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(54)	(54)
Net Investing Cash Flow	**-**	**(53)**	**(53)**	**(53)**	**(53)**	**(53)**	**(53)**	**(53)**	**(54)**	**(54)**
Dividends paid	(3)	(24)	(30)	(40)	(48)	(68)	(80)	(72)	(66)	(62)
Interest paid	(50)	(47)	(44)	(40)	(37)	(87)	(116)	(144)	(170)	(195)
Proceeds from borrowings	-	-	-	-	-	268	393	442	491	550
Repayment of borrowings	(67)	(67)	(67)	(67)	(67)	(166)	(273)	(334)	(392)	(457)
Net Financing Cash Flow	**(121)**	**(139)**	**(141)**	**(148)**	**(152)**	**(53)**	**(76)**	**(108)**	**(137)**	**(164)**
Cash, beginning	**162**	**188**	**137**	**97**	**65**	**1,333**	**2,280**	**3,231**	**4,092**	**4,887**
Net Cash Inflow (Outflow)	**26**	**(52)**	**(40)**	**(31)**	**(23)**	**166**	**199**	**179**	**164**	**153**
CASH	**188**	**137**	**97**	**65**	**42**	**1,499**	**2,479**	**3,410**	**4,255**	**5,040**

Appendix 10: Key Financial Ratios (Generation Business)

Financial Ratios presented are for the plants' first five years in operation.

Global Business Power	2013F	2014F	2015F	2016F	2017F
Profitability					
Gross Profit Margin	53.71%	53.34%	53.34%	53.70%	54.10%
Operating Margin	41.70%	41.25%	41.11%	41.30%	41.51%
Net Profit Margin	22.97%	22.57%	22.34%	22.35%	22.38%
Return on Assets	9.37%	5.96%	5.84%	5.74%	5.70%
Return on Equity	34.13%	21.39%	20.71%	20.11%	19.75%
Liquidity					
Current Ratio	38.86	41.72	44.94	48.40	51.77
Quick Ratio	31.87	34.75	37.95	41.36	44.68
Activity					
Fixed Asset Turnover	37.05%	36.87%	36.45%	35.98%	35.47%
Financial Leverage					
Long-Term Debt to Assets	0.47	0.48	0.48	0.49	0.49
Interest Coverage	6.05	5.91	5.80	5.73	5.66
Shareholder Ratios					
Earnings Per Share	0.60	0.61	0.63	0.65	0.67

RP Energy	2019F	2020F	2021F	2022F	2023F
Profitability					
Gross Profit Margin	58.36%	58.56%	58.77%	58.98%	59.19%
Operating Margin	40.92%	41.00%	41.06%	41.10%	41.13%
Net Profit Margin	21.56%	21.38%	21.20%	21.01%	20.82%
Return on Assets	7.49%	7.20%	6.93%	6.68%	6.44%
Return on Equity	25.62%	24.58%	23.63%	22.75%	21.93%
Liquidity					
Current Ratio	8.41	10.77	13.02	15.18	17.25
Quick Ratio	7.41	9.77	12.03	14.19	16.26
Activity					
Fixed Asset Turnover	39.41%	38.88%	38.31%	37.68%	37.02%
Financial Leverage					
Long-Term Debt to Assets	0.68	0.68	0.68	0.69	0.69
Interest Coverage	5.11	4.97	4.85	4.73	4.63
Shareholder Ratios					
Earnings Per Share	2.12	2.17	2.21	2.26	2.30

Quezon Power 2	2017F	2018F	2019F	2020F	2021F
Profitability					
Gross Profit Margin	54.20%	54.41%	54.61%	54.83%	55.04%
Operating Margin	37.43%	37.52%	37.58%	37.63%	37.66%
Net Profit Margin	18.78%	18.68%	18.57%	18.46%	18.33%
Return on Assets	6.30%	6.06%	5.89%	5.74%	5.59%
Return on Equity	21.22%	20.65%	20.11%	19.59%	19.08%
Liquidity					
Current Ratio	5.36	6.55	8.39	10.15	11.82
Quick Ratio	4.16	5.56	7.40	9.16	10.83
Activity					
Fixed Asset Turnover		0.35	0.35	0.34	0.34
Financial Leverage					
Long-Term Debt to Assets	0.69	0.68	0.68	0.68	0.68
Interest Coverage	4.67	4.59	4.52	4.45	4.39
Shareholder Ratios					
Earnings Per Share	1.39	1.43	1.46	1.50	1.53

PacificLight Power	2014F	2015F	2016F	2017F	2018F
Profitability					
Gross Profit Margin	14.72%	18.37%	19.30%	20.91%	22.06%
Operating Margin	4.34%	7.82%	8.61%	10.11%	11.14%
Net Profit Margin	0.50%	3.60%	4.47%	5.93%	7.00%
Return on Assets	0.36%	2.63%	3.35%	4.54%	5.45%
Return on Equity	0.88%	6.16%	7.40%	9.39%	10.55%
Liquidity					
Current Ratio	1.32	1.15	1.00	0.89	0.80
Quick Ratio	1.26	1.09	0.94	0.82	0.74
Activity					
Fixed Asset Turnover		0.87	0.87	0.87	0.88
Financial Leverage					
Long-Term Debt to Assets	0.50	0.47	0.45	0.42	0.38
Interest Coverage	1.16	2.24	2.67	3.41	4.12
Shareholder Ratios					
Earnings Per Share (PHP/sh)	0.06	0.43	0.54	0.73	0.87

Appendix 11: DCF Analysis

A. Distribution

In PHP Millions	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Cash Flow from Operations	2,489	17,538	15,948	20,389	24,178	27,306	37,913
Capital expenditures	(678)	(10,450)	(11,457)	(12,950)	(13,410)	(13,882)	(14,250)
Free Cash Flow to Firm	1,811	7,088	4,491	7,439	10,768	13,424	23,663
WACC	10.82%	10.82%	10.82%	10.82%	10.82%	10.82%	10.82%
PV of FCFF	**1,795**	**6,342**	**3,625**	**5,419**	**7,077**	**7,962**	**12,664**

Price Target	
PV of FCFF less Net Debt (Value of Equity)	**307,361**
No. of Common Shares	1,127
Intrinsic Value of Core Distribution Business	**272.70**
Attributable to Power Distribution	265.77
Attributable to Power Open Access	6.93
One-year Price Target (PHP/share)	**307.00**
Attributable to Power Distribution	**299.20**
Attributable to Power Open Access	**7.80**

B. Generation

Global Business Power								
In PHP Millions	2013F	2014F	2015F	2016F	2017F	2022F	2027F	2032F
Cash Flow from Operations	4,138	4,456	4,657	4,878	5,111	6,404	6,897	7,646
Capital expenditures	(1,749)	(1,848)	(1,973)	(2,106)	(2,252)	(3,179)	(3,602)	(4,220)
Free Cash Flow to Firm	2,389	2,608	2,684	2,772	2,859	3,225	3,295	3,426
WACC	7.07%	7.07%	7.07%	7.07%	7.07%	7.07%	7.07%	7.07%
PV of FCFF	**2,356**	**2,393**	**2,300**	**2,219**	**2,137**	**1,713**	**1,253**	**932**

8,009	**9,740**	**10,370**	**10,750**	**11,139**

Price Target	
Gross Discounted Cash Flows	53,181
Market Value of Net Debt	(11,222)
Net Discounted Cash Flows	**41,959**
Ownership	20%
Net DCF to MER	**8,392**
No. of Common Shares (MER)	1,127
Intrinsic Value	**7.45**
One-year Price Target (PHP/share)	**8.40**

RP Energy										
In PHP Millions	2016F	2017F	2018F	2019F	2020F	2025F	2030F	2035F	2040F	2042F
Cash Flow from Operations	-	-	8,009	9,740	10,370	12,358	15,080	18,289	22,065	23,754
Capital Expenditures	(29,339)	(29,339)	-	(2,549)	(2,731)	(3,775)	(5,093)	(6,772)	(8,902)	(9,905)
Free Cash Flow to Firm	(29,339)	(29,339)	8,009	7,191	7,639	8,583	9,988	11,517	13,162	13,849
WACC	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%
PV of FCFF	**(24,235)**	**(22,779)**	**6,219**	**4,932**	**4,925**	**4,058**	**3,464**	**2,930**	**2,456**	**2,283**

Price Target	
PV of FCFF (growth phase)	42,250
PV of Terminal Value	68,522
Market Value of Net Debt	(31,890)
Net Discounted Cash Flows	**78,882**
Ownership of MER	47%
Net DCF to MER	**37,074**
No. of Common Shares (MER)	1,127
Intrinsic Value	**32.89**
One-year Price Target (PHP/share)	**37.20**

Quezon Power 2									
In PHP Millions	**2015F**	**2016F**	**2017F**	**2018F**	**2021F**	**2026F**	**2031F**	**2036F**	**2041F**
Cash Flow from Operations	-	-	5,426	7,510	7,550	9,707	11,864	14,416	17,426
Capital Expenditures	(24,449)	(24,449)	-	(2,125)	(2,278)	(3,565)	(4,779)	(6,324)	(8,281)
Free Cash Flow to Firm	(24,449)	(24,449)	5,426	5,385	5.272	6,142	7,085	8,091	9,145
WACC	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%
PV of FCFF	**(21,487)**	**(20,196)**	**4,212**	**3,929**	**3,616**	**2,730**	**2,310**	**1,935**	**1,604**

Price Target	
PV of FCFF (growth phase)	23,084
PV of Terminal Value	48,058
Market Value of Net Debt	(28,274)
Net Discounted Cash Flows	**42,867**
Ownership of MER	49%
Net DCF to MER	**21,005**
No. of Common Shares (MER)	1,127
Intrinsic Value	**18.64**
One-year Price Target (PHP/share)	**21.00**

PacificLight Power										
In SGD Millions	**2014F**	**2015F**	**2016F**	**2017F**	**2018F**	**2023F**	**2028F**	**2033F**	**2038F**	**2043F**
Cash Flow from Operations	138	132	147	162	176	257	308	316	326	338
Capital expenditures	-	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(54)	(54)
Free Cash Flow to Firm	138	79	94	110	123	204	255	262	272	284
WACC	6.27%	6.27%	6.27%	6.27%	6.27%	6.27%	6.27%	6.27%	6.27%	6.27%
PV of FCFF	**130**	**70**	**78**	**86**	**90**	**110**	**102**	**77**	**59**	**45**

Price Target	
PV of FCFF (growth phase)	2,540
PV of Terminal Value	812
Market Value of Net Debt	(847)
Net Discounted Cash Flows (SGD)	**2,505**
Ownership of MER	28%
PHP/SGD	35.02
Net DCF to MER (PHP)	**24,566**
No. of Common Shares (MER)	1,127
Intrinsic Value	**21.80**
One-year Price Target (PHP/share)	**23.86**

Appendix 12: DCF Assumptions – WACC

A. Distribution

Variable	Value	Basis
Risk-free Rate	3.34%	27 Nov 2013 10- year Government Bond
Market Risk Premium	9.34%	"Rates of Return on Financial Assets in the Philippines, 1987-2000" by R.C. Ybanez (Extended up to 2012)
Beta	0.98	Regression of MER share returns against PSEi (1992-2013)
Cost of Equity	**12.51%**	Team computations
Pre-tax Cost of Debt	4.78%	Team computations
Marginal Tax Rate	30%	PD 1158 as amended - National Internal Revenue Code of 1997
Cost of debt, post-tax	**3.35%**	Team computations
Capital Structure	18.41% Debt 81.59% Equity	Market value weights of the book value target capital structure of 34% Debt, 66% Equity.
WACC	**10.82%**	Team computations

1. Risk-Free Rate

The risk-free rate was based on 10-year Philippine Government Bonds with yield of 3.34% as of November 27, 2013.

2. Beta

The value of the beta of the was computed by using a regression of MER share returns against the Philippine Stock Exchange Index (PSEi) returns from January 1992 to November 2013. The levered beta based on our regression analysis is .98.

3. Market Risk Premium

The market risk premium was based on the study of Professor Ybanez from the University of the Philippines. He has originally considered PSEi historical rates of return covering the 13-year period from 1987 to 2000 and has extended the same methodology to additional data up to 2012.

4. Pre-tax Cost of Debt

The cost of debt of the core distribution business was computed using the weighted average interest of the different interest bearing debts of MER. This computation resulted to a weighted cost of debt of 4.78%. The table below shows the different interest rates for each debt.

Debt	Interest Rate
Short-term Debt (Notes Payable)	3.90%
Floating Rate Notes	3.95%
Fixed Rate Notes/Loans	6.35%
7 year Bonds	4.38%
12 year Bonds	4.87%

5. Marginal Tax Rate

The tax rate of 30% is based on the corporate income tax rate set by the Bureau of Internal Revenue of the Philippines.

6. Capital Structure

The capital structure of 18:82 (D/E) is based on the market value weights of the book value target capital structure of 34:66. The book value capital structure is based on the limit allowed by the ERC on the capital structure of a distribution utility.

B. Generation

Global Business Power		
Variable	**Value**	**Basis**
Risk-free Rate	3.34%	27 Nov 2013 10- year Government Bond
Market Risk Premium	9.34%	"Rates of Return on Financial Assets in the Philippines, 1987-2000" by R.C. Ybanez (Extended up to 2012)
Beta	1.05	Pure-play method using Beta of First Gen (FGen)
Cost of equity	**13.15%**	Team computations
Pre-tax Cost of Debt	5.00%	2013 weighted average interest rate of loans
Marginal Tax Rate	30%	PD 1158 as amended - National Internal Revenue Code of 1997
Cost of debt, post-tax	**3.50%**	Team computations
Capital Structure	63% Debt 37% Equity	Company disclosure
WACC	**7.13%**	Team computations

RP Energy and Quezon Power 2		
Variable	**Value**	**Basis**
Risk-free Rate	3.34%	27 Nov 2013 10- year Government Bond
Market Risk Premium	9.34%	"Rates of Return on Financial Assets in the Philippines, 1987-2000" by R.C. Ybanez (Extended up to 2012)
Beta	1.05	Pure-play method using Beta of First Gen (FGen)
Cost of Equity	**13.15%**	Team computations
Pre-tax Cost of Debt	5.00%	Indicative rate of latest bond issue of comparable firm
Marginal Tax Rate	30%	PD 1158 as amended - National Internal Revenue Code of 1997
Cost of debt, post-tax	**3.50%**	Team computations
Capital Structure	70% Debt 30% Equity	Company disclosure
WACC	**6.44%**	Team computations

PacificLight Power		
Variable	**Value**	**Basis**
Risk-free Rate	2.75%	21 Nov 2013 30-year Government Bond
Market Risk Premium	5.75%	"Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2013 Edition" by Aswath Damodaran
Beta	1.17	Pure-play method using Beta of Sembcorp Industries, Ltd. (Sembcorp)
Cost of equity	**9.46%**	Team computations
Pre-tax Cost of Debt	5.00%	Indicative rate of latest bond issue of comparable firm
Marginal tax rate	17%	Corporate tax rate as dictated by the Singapore Ministry of Finance
Cost of debt, post-tax	**4.15%**	Team computations
Capital Structure	60% Debt 40% Equity	Company disclosure
WACC	**6.27%**	Team computations

1. Risk-Free Rate

The risk-free rate applicable to RP Energy, Quezon Power and GBP was based on 10-year Philippine Government Bonds with yield of 3.34% as of November 27, 2013. On the other hand, the risk free rate used on PacificLight was taken from 30-year Singapore Government Bonds with yield of 2.75% as of November 21, 2013.

2. Beta

We used the pure play method in determining the equity beta of the various generation plants. In applying this method, we first identified comparable companies in the same line of business within the same geographic area. The equity beta of the comparable companies was then converted to asset beta by removing the effect of the capital structure. The asset beta was then converted to the equity beta by applying MER's target capital structure of 70:30 for RP Energy and Quezon Power 2, 63:37 for Global Business Power, and 60:40 for PacificLight.

3. Market Risk Premium

The market risk premium for the Philippines of 9.34% is based on a 26-year local study on the Market Risk Premium. For Singapore, the market risk premium of 5.75% is based on the study of Aswath Damodaran from New York University.

4. Pre-tax Cost of Debt

The pre-tax cost of debt for Philippine plants was based on the bond yields of power generation companies used to finance the construction of new plants. The pre-tax cost of debt for Singapore was based on the latest bond issue of a firm with comparable power plants, Sembcorp Industries, Ltd.

5. Marginal Tax Rate

The tax rate of 30% is based on the corporate income tax rate set by the Bureau of Internal Revenue of the Philippines. The 17% tax rate applied to PacificLight, the power plant in Singapore, is based on the corporate income tax rate set by the Singapore Ministry of Finance.

6. Capital Structure

The target capital structure of 70:30 (D:E) of RP Energy and Quezon Power 2 is based on MER's disclosure. The target capital structure of 63:37 of Global Business Power is based on the historical structure of the firm. PacificLight's target capital structure of 60:40 is based on the target set by MER.

Appendix 13: DCF Assumptions – Others

A. Distribution

1. Volume

The volume sales during the forecast period were forecasted per customer segment: Residential, Commercial, Industrial and Streetlights. For each customer segment, an appropriate volume driver was chosen. As a first step, qualitative analysis was conducted on the economic indices and its relationship with the energy sales to the customer segments. A list of the customer segments and their possible drivers are shown below

Customer Segment	Possible Drivers
Residential	Population, Household Consumption Final Expenditure
Commercial	Durable Equipment, Real Estate, and Other Services
Industrial	Durable Equipment, Manufacturing
Streetlights	N/A

As a next step, the appropriateness of each identified driver is validated using regression analysis. The analysis is made on data from 2006 to the first half of 2013 with the volume sales per quarter as the dependent variable and the amount of the identified driver per quarter as the independent variable.

Y	X	Adjusted R Square	F Test	Significance F
Residential	Population	0.009	1.249	0.273
Residential	Household Consumption Final Expenditure	0.315	14.360	0.001
Industrial	Durable Equipment	0.409	21.055	0.000
Industrial	Manufacturing	0.654	55.765	0.000
Commercial	Other Services	0.837	149.542	0.000
Commercial	Other Services and Real Estate	0.883	220.290	0.000

Based on the adjusted R squared and the f-test, the appropriate driver for each customer segment is detailed below:

Customer Segment	Identified Driver
Residential	Household Consumption Final Expenditure
Commercial	Real Estate and Other Services
Industrial	Manufacturing

Using the regression equation of their chosen drivers, energy sales per quarter from the second half of 2013 to 2019 was projected. Based on the forecast, total energy sales would grow by 4.0%. This growth is spurred by the commercial and residential segment registering 5.1% and 4.9% compound annual growth respectively during the forecast period. On the other hand, the volume sales to residential segment would only increase by 2.6% compounded annually while volume sales to streetlights would remain flat. The table below shows the forecasted energy sales per quarter to each customer segment.

Sale of Electricity (GWh)	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Residential	10,252	10,356	10,647	10,955	11,279	11,620	11,981
Industrial	13,399	14,169	14,872	15,614	16,396	17,221	18,091
Commercial	10,191	10,610	11,137	11,693	12,280	12,898	13,549
Streetlights	132	132	132	132	132	132	132
Total	**33,973**	**35,267**	**36,789**	**38,394**	**40,087**	**41,871**	**43,753**

2. Capital Expenditures

Capital Expenditures for the forecast period are divided between expenditures to be made during the Third and Fourth Regulatory Period. The capital expenditures to be incurred for the remaining years of the Third Regulatory Period will be based on the approved capital expenditures in 2010 real terms by the ERC (Decision Case No. 2010-069). Using the forecasted Consumer Price Index for each year, approved capital expenditures stated in 2010 real terms are converted into nominal amounts. The table below shows a summary of the capital expenditures approved for the remainder of the current Regulatory Period:

Capital Expenditures (PHP Millions)	2011	2012	2013	2014	2015
Major Projects	5,851	5,463	5,215	4,635	4,447
Non-network	1,098	1,686	842	905	634
Retail Services	1,006	1,703	1,600	1,678	1,338
Refurbishment	-	268	213	205	209
Renewal	-	1,996	1,903	1,831	1,888
Total	**7,955**	**11,115**	**9,773**	**9,252**	**8,514**

For the Fourth Regulatory Period, capital expenditures were first classified into the following types of expenditures – Major Projects and Growth, Non-Network, Retail Services, Refurbishment, and Renewal. The forecast for these expenditures are based on the approved amounts by the ERC during the two previous regulatory periods. The table below shows the definition of each type of capital expenditure is detailed below as lifted from ERC Decision Case No. 2010-069 and the assumptions for forecasting purposes.

Type of Expenditure	Definition	Assumptions
Growth	Capital projects required to accommodate electricity demand or new connections	Regressed against Energy Sales (Volume) for the past eight regulatory years
Renewal	Replacement for existing assets where it is no longer economically feasible to maintain the assets, or where technological obsolescence forces their replacement	Average of amounts in previous regulatory period
Refurbishment	Expenditures to extend asset serviceability to beyond standard lives	Average of amounts in previous regulatory period
Non-network	Relates to expenditure on non-network assets	Average of amounts in previous regulatory periods
Major	Expenditures that will exceed the lesser of 20% of total capital expenditure forecast for a Regulatory Year or PHP 30 million	Regressed against Energy Sales (volume) for the past eight regulatory years

Source of definitions from ERC Decision Case No. 2010-069

The forecast of the capital expenditures in real terms is shown below:

	2011	2012	2013	2014	2015	2016F	2017F	2018F	2019F
Major Projects	5,850.80	5,462.50	5,214.50	4,634.50	4,446.60	5,562.18	5,590.32	5,620.00	5,651.28
Non-network	1,098.40	1,686.30	842.40	905.00	633.80	1,016.88	1,016.88	1,016.88	1,016.88
Retail Services	1,006.10	1,702.90	1,600.20	1,677.60	1,337.60	1,579.58	1,579.58	1,579.58	1,579.58
Refurbishment	-	267.80	212.90	204.50	208.80	223.50	223.50	223.50	223.50
Renewal	-	1,995.90	1,903.30	1,830.60	1,887.60	1,904.35	1,904.35	1,904.35	1,904.35
Total (PHP Millions)	**7,955.30**	**11,115.40**	**9,773.30**	**9,252.20**	**8,514.40**	**10,286.48**	**10,314.62**	**10,344.30**	**10,375.58**

To convert this to nominal amounts, the values obtained were adjusted using the CPI forecast applicable to each year. The table below shows a summary of the nominal amounts for the capital expenditures.

	2011	2012	2013	2014	2015	2016F	2017F	2018F	2019F
Major Projects	5,850.80	5,902.59	5,803.64	5,364.44	5,321.94	6,879.70	7,141.92	7,412.16	7,690.79
Non-network	1,098.40	1,822.16	937.58	1,047.54	758.57	1,257.74	1,299.11	1,341.15	1,383.86
Retail Services	1,006.10	1,840.09	1,780.99	1,941.82	1,600.91	1,953.73	2,017.99	2,083.29	2,149.63
Refurbishment	-	289.38	236.95	236.71	249.90	276.44	285.53	294.77	304.16
Renewal	-	2,156.70	2,118.34	2,118.92	2,259.19	2,355.44	2,432.90	2,511.63	2,591.62
Total (PHP Millions)	**7,955.30**	**12,010.91**	**10,877.50**	**10,709.43**	**10,190.51**	**12,723.06**	**13,177.45**	**13,643.00**	**14,120.05**

These capital expenditures were then subsequently distributed to each type of asset under Utility, Plant and Others. The distribution among the different assets is based on their average percentage share in capital expenditures in 2011 and 2012. A schedule of the distribution of capital expenditures is shown below.

	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Subtransmission	1,152	1,480	1,623	1,834	1,899	1,966	2,018
Land	175	225	246	279	288	299	307
Buildings and Improvement	12	15	16	18	19	20	20
Communication Equipment	86	111	122	138	143	148	151
Office Furniture, Fixtures and Other Equipment	180	231	254	287	297	307	315
Transportation Equipment	243	312	342	386	400	414	425
Others	234	300	329	372	385	399	410
Construction in Progress	6,052	7,776	8,525	9,636	9,978	10,329	10,603

3. Salaries, Wages, and Employee Benefits

The projection on Salaries, Wages and Employee Benefits was decomposed to the different accounts that comprise it. The table below shows the assumptions for each line item of Salaries, Wages and Employee Benefits.

Account	Assumption
Salaries and Wages	Percentage of Revenues
Pension Expense	Discount Rate of 6%, Expected Return on Plan Assets of 6%, and Current Service Cost of PHP 1.045 Million. The annual pension expense is computed in accordance with PAS 19, Employee Benefits
Health, Medical and related benefits	Percentage of Revenues
Other Long-term Post-employment benefits	Discount Rate of 6%, and Current Service Cost of PHP 85 million and realization of unrecognized actuarial loss of PHP 150 million. The annual other long-term post-employment benefits expense is computed in accordance with PAS 19: Employee Benefits.

4. Depreciation and Amortization

Straight line amortization was utilized on each type of asset under Utility, Plant and Others except for Land and Construction in Progress. The depreciation also takes into account capital expenditures made for each year. The table below summarizes the useful life assumptions for each type of asset.

Useful Life (years)	Subtransmission and Distribution	Buildings and Improvements	Communication Equipment	Office Furniture, Fixtures and Other Equipment	Transportation Equipment	Others
Minimum	10	15			5	5
Maximum	50	40			10	20
Average	30	27.5	10	5	7.5	12.5

Source: MER 2012 Annual Report

These useful lives were then used to compute for the depreciation for each type of Utility, Plant and Others for each year. A summary of the Depreciation Expense is shown below:

Depreciation Summary (PHP Millions)	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Sub Transmission	4,538	4,760	5,010	5,297	5,599	5,914	6,236
Buildings and Improvement	140	148	157	167	178	189	201
Communication Equipment	433	473	519	570	624	680	738
Office Furniture, Fixtures and Other Equipment	323	368	416	471	250	275	292
Transportation Equipment	236	274	316	363	412	462	513
Others	168	192	218	248	279	312	345
TOTAL	**5,838**	**6,214**	**6,636**	**7,116**	**7,342**	**7,832**	**8,325**

5. Utility, Plant and Others

The balance of Utility, Plant and Others takes into account the forecasted capital expenditures, depreciation and disposals. The table below shows the movements in the Utility, Plant and Others for 2013.

Utility, Plant and Others (PHP Millions)	2013F	2014F	2015F	2016F	2017F	2018F	2019F
Cost:							
Balance at beginning of year	171,435	177,780	186,368	195,871	206,765	218,002	229,587
Additions	8,133	10,450	11,457	12,950	13,410	13,882	14,249
Transfer from Construction in Progress net	-	-	-	-	-	-	-
Disposals/retirements	(1,788)	(1,862)	(1,953)	(2,057)	(2,173)	(2,296)	(2,424)
Ending Balance	**177,780**	**186,368**	**195,871**	**206,765**	**218,002**	**229,587**	**241,412**
Less: accumulated depreciation and amortization							
Balance at beginning of year	62,123	66,347	70,880	75,753	81,012	86,393	92,153
Depreciation and amortization	5,838	6,214	6,636	7,116	7,342	7,832	8,325
Disposals/retirements	(1,614)	(1,681)	(1,763)	(1,856)	(1,961)	(2,072)	(2,187)
Ending Balance	**66,347**	**70,880**	**75,753**	**81,012**	**86,393**	**92,153**	**98,291**
Utility, Plant and Others Net	**111,433**	**115,488**	**120,119**	**125,753**	**131,609**	**137,434**	**143,122**

6. Income Statement Accounts

Account	Assumption
Revenue from Services and Others	Inflation
Provision for probable charges and claims	Percentage of Sales of Electricity
Contracted Services	Percentage of Sales of Electricity
Provisions for Doubtful Accounts	Projected as the Change in Allowance in Doubtful accounts net of write-offs
Taxes, Fees and Permits	Forecasted using inflation rate
Other Expenses	Percentage of Total Revenue
Others	Equal to 2012 Nominal Value
Interest Expense	Based on the interest rate for short-term debt and long-term debt of 3.9% and 5.4%.
Interest Income	Interest on Cash in Banks
Equity in Associate's or Joint Venture's Net Losses or Income	Based on the Net Income of the Associate or Joint Venture multiplied by the percentage ownership

7. Balance Sheet Accounts

Account	Assumptions
Trade and Other Receivables	
Billed Receivables	Percentage of Sale of Electricity
Unbilled Receivables	Percentage of Sale of Electricity
Service Contracts	Percentage of Sale of Services
Insurance Receivable	Inflation Rate
Cost and Estimated Earnings in excess of billings on uncompleted contracts	Inflation Rate
Non-trade	Inflation Rate
Inventory (Materials and Supplies)	Percentage of Sale of Electricity
Other Current Assets	Inflation Rate
Investment Property	Cost model in Investment Property, PAS 40: Investment Property
Deferred Tax Assets	Deferred Tax Assets arising from Provisions from various claims, Unfunded pension cost and unamortized past service cost and allowance for doubtful accounts
Other Non-Current Assets	Sale of Electricity/2012 recorded nominal amounts

Investment in Joint Ventures and Associates	Acquisition cost per joint venture or associate plus changes in equity attributable to net income and dividends
Notes Payable	Equal to 2012 nominal amount throughout the forecast period
Deferred Tax Liabilities	Deferred Tax Liabilities arising from Revaluation increment in Utility, Plant and Others, Depreciation Method differential, capitalized interest, capitalized duties and taxes deducted in advance, and others
Trade Payables	Percentage of Sale of Electricity/Sale of Revenues
Customer Refund	Customers' Refund only up until December 31, 2015 (Note 21, MER 2012 Annual Report)
Income Tax Payable	Percentage of Current Income Tax Expense
Long-term Debt	Target Capital Structure of 33:67to be met by 2016
Customers' Deposit	Additions – Percentage of Sales Refunds –Percentage of Beginning Balance
Provisions	Additions – Provision from Claims Refunds – Percentage of Beginning Balance
Long-Term Employee Benefits	Defined Benefit Obligation net of Fair Value of Plan Assets
Refundable Service Cost	Additions – Percentage of Sale of Electricity
Other Non-current Liabilities	Equal to 2012 Nominal Amount
Subscriptions Receivable	Fully collected by 2013
Employee Stock Purchase Plan	Additions – Employee Stock Purchase Plan Expense
Appropriated Retained Earnings	Equal to 2012 Nominal Amount
Unappropriated Retained Earnings	Additions – Net Income attributable to Parent, Decreases – Dividends declared
Non-Controlling Interest	Additions – Net Income attributable to Non-Controlling Interest
Dividends	Equal to 67% of Core Net Income

8. Terminal Value

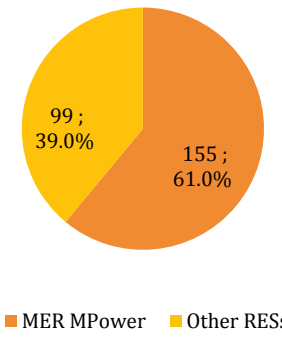
Terminal Value – The terminal growth for the core distribution business is composed of the growth in energy volume and the growth in the Maximum Average Price. Growth in energy volume for the terminal phase is expected to be at 2% which is the normal historical growth rate computed by the ERC (ERC Order 2010-069 page 25). On the other hand, the growth in Maximum Average Price will be equal to the forecasted inflation rate of 2.87%. This is in line with the PBR mechanism which allows for the adjustment of the MAP for inflation. From these two components, the terminal growth for the core distribution business is 4.93%.

B. Retail Competition and Open Access

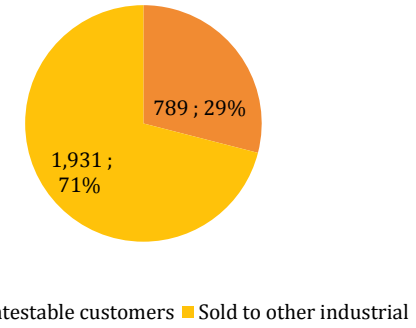
1. Volume

As of the start of the implementation of Retail Competition and Open Access, MER has captured approximately 61% (155 out of the 254) of contestable customers within its franchise area. Total energy sold to these customers during 3rd quarter 2013 totaled 788.6 GWh. This represents 29% of total energy sales to Industrial customers.

Market Share of Contestable Customers within Franchise Area as of Q3 2013



Energy Sold to Industrial Segment as of Q3 (GWh)



To forecast future volume sold to contestable customers, the percentage of energy sales to contestable customers over energy sales to industrial customers was held constant. Currently, the application for Retail Electricity by contestable customers is only voluntary. Whether or not implementation of the Retail Electricity Scheme will become mandatory will only be decided by the regulatory authority which has yet to announce any updates regarding the issue. Thus, our forecasts assume that there would be no future additions to the total number of contestable customers, as there is doubt whether the implementation would still be mandatory as originally planned. The percentage of 29% is then multiplied to the forecasted energy sales to industrial customers to obtain the volume sold to contestable customers.

		Total Energy Sold to Industrial (GWh)	% of CCs/ Industrial	Total Energy Sold to CCs by MER (GWh)
		(a)	(b)	(a) x (b)
2013F	Q1	N/A	N/A	**N/A**
	Q2	N/A	N/A	**N/A**
	Q3F	2,708	29%	**789**
	Q4F	2,691	29%	**784**
2014F	Q1F	2,518	29%	**733**
	Q2F	2,684	29%	**782**
	Q3F	2,567	29%	**748**
	Q4F	2,841	29%	**827**
2015F	Q1F	2,643	29%	**770**
	Q2F	2,817	29%	**820**
	Q3F	2,694	29%	**785**
	Q4F	2,983	29%	**869**
2016F	Q1F	2,774	29%	**808**
	Q2F	2,958	29%	**861**
	Q3F	2,828	29%	**824**
	Q4F	3,133	29%	**912**
2017F	Q1F	2,912	29%	**848**
	Q2F	3,106	29%	**905**
	Q3F	2,970	29%	**865**
	Q4F	3,291	29%	**958**
2018F	Q1F	3,058	29%	**891**
	Q2F	3,263	29%	**950**
	Q3F	3,119	29%	**908**
	Q4F	3,458	29%	**1,007**
2019F	Q1F	3,212	29%	**935**
	Q2F	3,428	29%	**998**
	Q3F	3,276	29%	**954**
	Q4F	3,633	29%	**1,058**

2. Margins

Participants in Retail Competition and Open Access are allowed to make profits from their retail electricity supply contracts with contestable customers. To forecast the profits earned by MER (through its subsidiary MPower) under RCOA, a 5% profit margin from the generation charge in retail contracts was assumed. This figure is the average of the industry benchmark for profit margins of 3 – 7%, a range provided by a face-to-face interview with MER.

Studies on the Retail Electricity Supply of overseas markets were used to substantiate the range as well as the profit margin used. Specifically, two studies confirm the profit margin range, a study in the United Kingdom market (Quarterly Reports on Retail Electricity and Gas Markets in Britain: A Retrospective) and a study for the Australian retail electricity market (Estimation of the Regulated Profit Margin for Electricity Retailers in New South Wales). These studies are applicable to the market in the Philippines because the mechanisms of the electrical utility industry between the Philippines and these countries are the same. The study in the UK market which used data on years 2009 to 2011 employed estimates of NERA, an economic consultant, and Ofgem, the regulatory authority of the electricity market in the United Kingdom. Using their methodology, they found that the electricity retail market has margins ranging from 4%-9% (NERA) and 4%-8% (Ofgem).

Similarly, the study in the Australian market concluded that the net margin of retail electricity would range from 4.1%-4.9%. This range was derived from three approaches applied by the study author, SFG Consulting: (1)The expected returns technique produced a range of 2.6% to 3.6%; (2) A benchmarking analysis produced a range of 5.1% to 5.4%; and (3) the bottom-up analysis produced a range of 4.5% to 5.9%. These studies supplement our research and reinforce the profit margin estimate of 5% for the MER's retail segment.

The 5% profit margin is multiplied to the total revenues from generation charge to contestable customers of PHP 3.7 billion from RCOA to obtain the total margin earned. Using the assumed margin, MER generated PHP 185 million in profits from RCOA for 3rd quarter 2013. This amount is then divided by the total energy sold to contestable customers of 788 GWh to get the margin earned per GWh. This margin would then be converted adjusted for inflation in the future periods. The table below shows the computation of this margin.

		Historical Open Access Revenues (a)	Profit Margin (b)	Profit Earned (a) x (b) = (c)	Total Energy Sold to CCs by MER in GWH (d)	Margin per GwH (c) / (d)	Philippine Inflation	Sale of Electricity Net of Exp per GWH	Revenues per year from Open Access (PHP Millions)
2013	Q1	N/A	N/A	N/A	N/A	N/A	3.0%	N/A	369
	Q2	N/A	N/A	N/A	N/A	N/A	3.0%	N/A	
	Q3F	3,700	5.0%	185	789	0.23	3.0%	23%	
	Q4F			184	784	0.23	3.0%	23%	
2014	Q1F			179	733	0.24	4.0%	23%	754
	Q2F			191	782	0.24	4.0%	23%	
	Q3F			182	748	0.24	4.0%	23%	
	Q4F			202	827	0.24	4.0%	23%	
2015	Q1F			194	770	0.25	3.4%	23%	818
	Q2F			207	820	0.25	3.4%	23%	
	Q3F			198	785	0.25	3.4%	23%	
	Q4F			219	869	0.25	3.4%	23%	
2016	Q1F			211	808	0.26	3.3%	23%	888
	Q2F			225	861	0.26	3.3%	23%	
	Q3F			215	824	0.26	3.3%	23%	
	Q4F			238	912	0.26	3.3%	23%	
2017	Q1F			228	848	0.27	3.3%	23%	963
	Q2F			244	905	0.27	3.3%	23%	
	Q3F			233	865	0.27	3.3%	23%	
	Q4F			258	958	0.27	3.3%	23%	
2018	Q1F			248	891	0.28	3.2%	23%	1,044
	Q2F			264	950	0.28	3.2%	23%	
	Q3F			252	908	0.28	3.2%	23%	
	Q4F			280	1,007	0.28	3.2%	23%	
2019	Q1F			268	935	0.29	3.2%	23%	1,132
	Q2F			286	998	0.29	3.2%	23%	
	Q3F			274	954	0.29	3.2%	23%	
	Q4F			304	1,058	0.29	3.2%	23%	

C. Generation

1. Volume

RP Energy, Quezon Power 2 and Global Business Power

Based on company disclosure, both RP Energy and Quezon Power will operate as base load plants, operating 24 hours a day, 365 days a year. A load factor of 85% was assumed, this rate also takes into account scheduled maintenance and machine down times, along with the parasitic load, or energy consumed by the plant itself. This is also consistent with the load factor of coal plants in the Philippines, and the average utilization of coal plants. (Source: International Energy Authority)

Studies conducted by the IEA show that coal plants have an average degradation factor of 0.10% annually. Applying this, we expect the plant to have an average utilization rate of approximately 2.5% at the end of the plant's life. All capacity from both plants will be sold through bilateral contracts with MER. (Source: Company Disclosure)

PacificLight Power

PacificLight Power is considered a base load plant, operating 24 hours a day, 365 days a year. Its utilization rate of 96.38% takes into account scheduled maintenance and machine downtimes. PacificLight's load factor of 98.0% takes into account the plant's parasitic load, or energy consumed by the plant itself. These figures are based on official press releases of First Pacific Power Holdings and MGen, validated through an average data released by Singapore's Energy Market Authority (EMA) on plants of similar class.

Based on studies conducted by the EMA, liquefied natural gas power plants have an average degradation of 0.10% annually. Applying this degradation factor will reduce the plant's sellable electricity to approximately 92% of total installed capacity by the end of its 30-year useful life. PacificLight has entered into a vesting contract with the Singapore government, effectively locking the latter to purchase 30% of the plant's total sellable electricity for the wholesale electricity market. The remaining 70% will be sold through retail.

On first year of operations	RP Energy	Quezon Power 2	Global Business Power		PacificLight
			Coal	Diesel	
Installed Capacity (MW)	600MW	460MW	498.8MW	166.7MW	800MW
Dependable Capacity (MWh)	5,256,000	4,029,600	4,117,369	1,334,415	6,753,960
Load Factor (%)	85.0%	85.0%	85.0%	80.0%	97.95%
Net Saleable Capacity (MWh)	**4,467,600**	**3,425,160**	**3,499,763**	**1,067,532**	**6,615,504**

2. Sales Prices

RP Energy, Quezon Power 2 and Global Business Power

The price of the bilateral contracts of RP and QP2 was based on the average contract price of MER with the Therma Luzon Inc.'s Pagbilao plant, a 700MW base load coal plant. The most recent release indicates that electricity was sold at P4.3301/kWh for August 2013. From there, the price was adjusted against CPI to reflect the change in prices every year.

The price of the Power Supply Agreements of Global Business Power is based on historical prices of the company.

	RP Energy	Quezon Power 2	Global Business Power				
			Cebu Energy Development Corp.	Panay Energy Development Corp.	Panay Power Corp.	Toledo Power Company	GBH Power Resources, Inc.
Base Price (PHP per kWh)	4.330	4.330	5.005	1.900	1.897	1.897	1.897
Escalation Factor	Philippine Inflation						

PacificLight Power

The price of electricity sold to the wholesale market was based on the vesting contract price set by the EMA. The vesting contract scheme aims to find the average price "at which the most efficiently configured generation facility with the most economic generation technology in operation in Singapore will cover its variable and fixed costs and provide reasonable return." (Source: EMA) The price is reset every two years by estimating the cost to build a power plant at that certain point in time on a per MWh basis, among other operating costs.

Forecasted vesting contract prices were determined by getting the historical vesting price for the 2013-2014 period. The contract prices were then escalated using the geometric mean of the "All Buildings" Tender Price Index from 2007to 2013.

Retail electricity prices are determined by the growth in crude oil prices adjusted by a slope factor of 16.67%, as per industry practice. The growth in crude oil prices for the forecast period was computed by using forecasted prices from the World Bank. Applying the sloped growth factor to the current retail prices, we get the forecasted electricity retail prices.

	PacificLight	
	Vesting Contracts	Retail
Base Price (SGD per kWh)	0.19	0.21
Escalation Factor	"All Buildings" Tender Price Index	Sloped Growth in Crude Oil Prices

SGD/kWh	2014F	2015F	2016F	2017F	2018F	2023F	2028F	2033F	2038F	2043F
Retail Prices	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Vesting Contract Price	0.19	0.19	0.20	0.20	0.21	0.23	0.25	0.28	0.31	0.34

3. Costs

RP Energy, Quezon Power 2 and Global Business Power

Fuel Costs – Fuel costs were derived using a bottom-up approach. For each plant, we estimated the fuel volume required to produce the forecasted units of output through the Fuel Mass Energy Balancing Method. We identified the type of fuel used by each plant and determined the Heat Rate and Heating Value per fuel type. We then multiplied the forecasted output per plant by the appropriate Heat Rate to get the total level of heat required per plant. From there, the total level of heat required was divided by each type of fuel's Heating Value to arrive at the volume of fuel required per plant. (Values presented below are for 2019, the year when all plants are operational.)

RP Energy and Quezon will use clean-coal technology and therefore require thermal coal. This type of coal has higher heat content but releases less sulfur as it is burned. This type of coal has to be imported from various suppliers in the region. This coal will be imported from different mines in the region, and the price indexed against the Newcastle Index in Australia.

Plant / Fuel	GBP Diesel	GBP Coal	RP Coal	QP2 Coal
Volume (billion kWh)	1.33	4.04	4.5	3.4
Heat Rate (thousand BTU/kWh)	10.83	10.4	10.4	10.4
Heat Used (billion BTU)	11,489	36,507	46,601	35,676
Heating Value (thousand BTU/kg)	163.0	30.0	30.0	30.0
Fuel Used (million tonnes)	0.07	1.22	2.15	1.80
PHP/kg (/gal for Diesel)	19.57	4.56	4.56	4.56
Total Cost (PHP millions)	1,370	5,555	9,838	8,209

Source: *EIA, EMA, R. Rajput, Team estimates*

Chemicals, Limestone, and other Variable O&M – In order to process coal and convert it to energy, various chemicals such as limestone will have to be imported. Other variable costs such as minor repairs and maintenance will also be incurred. These costs will be contracted out to third parties, with the price based on the fees charged to Therma Luzon's Pagbilao plant, and adjusted based on US CPI.

Water, Ash Disposal Costs – Water and ash disposal costs are also incurred by the plant as part of its daily operations. These costs are based on the average price charged to Therma Luzon Inc. and adjusted for changes in the PH CPI.

General and Administrative Expenses – General and Administrative expenses such as Insurance, business related expenses, taxes and licenses, Repairs and Maintenance, and salaries and wages were projected as a share of revenues.

Depreciation expense – Depreciation was based on the estimated cost of construction of the plant allocated over its estimated useful life of 25 years.

PacificLight Power
Fuel costs – Fuel used by the plant is liquefied natural gas, shipped to the power plant via a gas pipeline. Costs were determined using the bottom-up approach, similar to the method used to forecast the costs for the plants in the Philippines. LNG costs were taken from the Asian commodities market outlook by the World Bank. Values were validated using various studies on LNG prices in Asia. Forecasted prices are going down in the long run due to the increasing supply of natural gas and alternative cheaper methods of harvesting such gas (e.g. shale fracking in North America). Moreover, since LNG prices are denominated in US dollars, we forecasted the Singapore-US Dollar exchange rate using the Purchasing Power Parity theory.

Plant Fuel	PLP LNG
Volume (kWh)	6,753,960,000
Conversion factor (kWh/therm)	29.31
Heat needed (therm*)	230,453,775.32
Gas price per therm (SGD/therm)	2.00
Cost of fuel	460,907,550.63

Source: *EIA, Team estimates*
*Therm is a unit of energy, equivalent to 0.10 million BTU. Values above are based on PLP's first year of operations

USD per mmbtu	2013	2014F	2015F	2016F	2017F	2023F	2028F	2033F	2038F	2043F
Forecasted LNG Prices	16.00	15.20	15.00	14.70	14.50	13.00	12.50	12.50	12.50	12.50

Source: *World Bank*

Exchange Rates	2013	2014F	2015F	2016F	2017F	2023F	2028F	2033F	2038F	2043F
SGD per USD	1.25	1.26	1.27	1.28	1.28	1.32	1.35	1.38	1.41	1.45

Source: *Team estimates, Google*

Note that total costs of fuel are based on the volume produced by the plant, including parasitic load.

Cost of materials – Raw LNG must be treated with petrochemicals before it can be burned to create energy. Historically, the cost of materials in LNG power plants is approximately 1.5 times larger than the cost of fuel. As such, cost of materials per year was derived by taking the cost of fuel per year, and multiplying it by 1.5.

Depreciation expense – The capital cost of the plant was depreciated over the course of its 30-year useful life using the straight-line method.

Fixed operating expenses – Ordinary operating expenses can be subdivided into the following, based on regulations set by the EMA: (1) personnel manning and head office services; (2) general fixed maintenance and operations; (3) government license fees; (4) insurance; and (5) various taxes. These costs are expected to be fairly stable over the forecasted period, and sourced from Singapore. Thus, these costs were escalated using the expected consumer price index in Singapore.

Variable operating expenses – Variable expenses are expressed on a per MWh basis as produced by the plant. These can be subdivided into the following, based on regulations set by the EMA: (1) maintenance of gas and steam turbine; (2) general chemicals and consumables; (3) town water; and (4) government energy fees. Similar to fixed operating expenses, these costs are expected to be stable over the forecast period. As such, they were escalated using CPI forecasts for Singapore.

Interest expense – Interest of 5% was computed based on the latest bond issue of a comparable company with similar power plants.

4. Capital Expenditures
Forecasted capital expenditures of PHP56 Billion for RP Energy and PHP43 Billion for Quezon Power 2 were based on MER disclosures. Capital expenditures for GBP and PacificLight Power were no longer forecasted as these were already incurred before MER's acquisition of the companies.

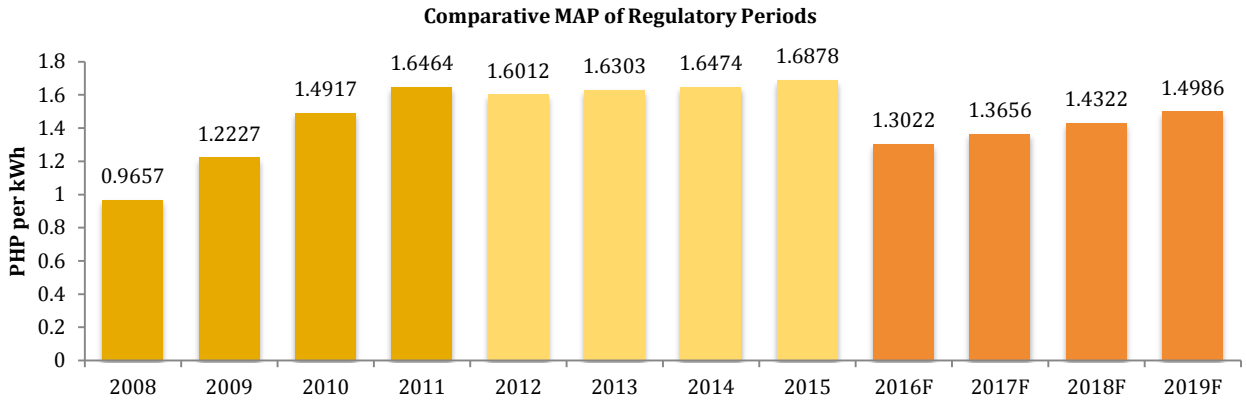
Maintenance capital expenditures for all plants were forecasted based on annual depreciation adjusted for changes in the Philippine CPI.

5. Terminal Value
The terminal growth for RP Energy, Quezon Power and GBP is mainly driven by inflation representing the growth in prices. It is assumed that plant capacity will not be increased during the terminal phase and will continue to have normal degradation of .10%. The terminal growth for these power plants is expected to be at 2.9%. The same set of assumptions holds for Pacific Light except that Singapore inflation of 2.46% is used. The resulting growth rate is 2.4%.

Appendix 14: Team Computations of Regulatory Maximum Average Price and Regulatory WACC

Maximum Average Price (MAP) Computation

The team used the methodology used by the Energy Regulatory Commission (ERC) to compute for the MAP. This method included forecasting each of the Primary Building Blocks, the Regulatory WACC, Smoothing Factor (X Factor), Performance Incentive Factors (S Factor), and other components that the ERC prescribed. A summary of the MAP for the past regulatory periods as well as our forecasted MAP is shown in the graph below:



Source: *ERC, Team estimates*

Primary Building Blocks

To compute for the MAP, the Annual Revenue Requirement (ARR) is divided by the forecasted electricity volume. The ARR is the aggregation of five components, (1) Operating and maintenance expenditure; (2) taxes other than corporate income tax; (3) regulatory depreciation; (4) return on capital; and (5) corporate income tax. A table was prepared to shows a comparison of the MAP computation between the most recent regulatory period (RY 2012 – RY 2015) and our forecasted MAP for the next regulatory period (RY 2016 – RY 2019).

Comparative Maximum Average Price (MAP) Computation								
	3rd Regulatory Period (ERC) July 2011 to July 2015				4th Regulatory Period (Forecast) July 2015 to July 2019			
Primary Building Blocks	**2012**	**2013**	**2014**	**2015**	**2016F**	**2017F**	**2018F**	**2019F**
Return on Capital	19,136.97	19,770.14	20,261.26	20,684.92	23,859.30	24,181.27	24,551.56	24,931.42
OPEX	13,942.48	14,831.57	15,746.30	16,694.52	17,239.78	17,782.63	18,364.65	18,944.78
Regulatory Depreciation	5,214.64	5,752.94	6,063.52	6,317.73	10,427.35	10,842.90	11,152.94	11,618.39
Corporate Income Tax	-	-	-	-	-	-	-	-
Other Taxes	241.78	182.17	308.11	248.96	453.83	468.88	484.18	499.72
Sub-total	38,535.87	40,536.82	42,379.18	43,946.13	51,980.27	53,275.69	54,553.33	55,994.30
Recoveries of under or over recovery	6,568.70	6,711.30	4,573.60	6,305.20	-	-	-	-
Total	45,104.57	47,248.12	46,952.78	50,251.33	51,980.27	53,275.69	54,553.33	55,994.30
Guaranteed Service Level	193.00	203.00	212.00	220.00	259.90	266.38	272.77	279.97
Total ARR	45,297.57	47,451.12	47,164.78	50,471.33	52,240.17	53,542.06	54,826.10	56,274.28
Demand Forecast- ERC (2012-2015); Forecast (2015-2016)	29,116.00	29,710.00	30,317.00	30,935.00	37,574.61	39,222.52	40,960.00	42,791.91
Demand Growth	0.01	0.02	0.02	0.02	0.04	0.04	0.04	0.04
Raw MAP (PHP per kWh)	**1.5558**	**1.5971**	**1.5557**	**1.6315**	**1.3903**	**1.3651**	**1.3385**	**1.3151**

Source: *ERC, Team estimates*

The resulting MAP from the computations is called the Raw MAP, which is the rate before applying the MAP Price Control Formula. By applying such formula, the MAP is adjusted for inflation, a smoothing factor, performance incentives, over or under recoveries, and tax. It is important to be pointed out that a big difference between the previous MAP with our forecasted MAP comes from under recoveries applied in the last Regulatory Period's computation. Our forecast did not include such over or under recoveries because it was assumed that the entire ARR would be recovered by the time the most recent RY ends.

MAP Price Control formula

$$MAPt = [MAPt - 1\ x\ \{1 + CWIt - X\}] + St - Kt + ITAt$$

Where:

MAP_{t-1}=Maximum Average Price for the previous regulatory year

CWI_t=Change in Weighted Index for Regulatory Year t as calculated in accordance with Section 4.5;

X=An Efficiency Factor in respect of that Regulated Distribution System for Regulatory Year t. X equals the value calculated by the ERC for the Second Regulatory Period under Section 4.15.3, or recalculated (and, if applicable, increased) under Sections 12.2.2 or 12.4.6 (as the case may be) (subject to any recalculation under Sections 12.2.2 or 12.4.6, it is constant for the whole of the Second Regulatory Period). For the avoidance of doubt, X may be a positive or negative value or may be zero;

S_t=A performance incentive factor calculated in accordance with Section 4.18.2 to reward each Regulated Entity for achieving specified target levels of performance and penalize each Regulated Entity for failing to achieve specified target levels of performance during the calendar year ending on *March 31a* of Regulatory Year t-1;

K_t=Correction Factor to adjust for over or under recovery of revenue in Regulatory Year t-1.

ITA_t = Tax Adjustment to adjust for over or under recovery of corporate income tax in Regulatory Year t-1. Where Regulatory Year t is the first or second Regulatory Year in the Second Regulatory Period, ITA_t equals 0 (zero). Where Regulatory Year t is a Regulatory Year (other than the first or second Regulatory Year) in the Second Regulatory Period, ITA_t is calculated in accordance with Section 4.4.

Source*:* ERC Disclosure: Rules for Setting Distribution Wheeling Rates

Our forecast included the effects of the Price Control Formula which resulted to the following adjusted MAP:

	2016F	2017F	2018F	2019F
Raw MAP	1.3903	1.3651	1.3385	1.3151
Adjusted MAP	1.3022	1.3656	1.4322	1.4986

Source: *Team Estimates*

X Smoothing Factor. The X-factor used in the Maximum Average Price (MAP) is an adjustment used every regulatory period to smoothen the transition between regulatory periods. This is needed as a protection for price shocks for both utility revenues at one side, and consumer expenses on the other. To compute for the X-factor, the following dynamics are considered: the immediately previous MAP, the annual revenue requirements for the four years of the regulatory period, the forecasted electricity demand, the WACC, and inflation.

S-Incentive Factor. Another element in the Maximum Average Price (MAP) is the performance incentive factor (S-Factor). This extra amount in the price formula is at risk such that it rewards the distribution utility if it is able to reach certain regulatory goals, or it penalizes the utility if they fall short of the imposed operational requirements. MER is assessed by eight factors split between two categories, Network Performance Measures and Service Performance Measures.

Network Performance Measures	Description
System average interruption frequency index (SAIFI)	A measure of the average number of sustained planned and unplanned service interruptions experienced per customer over the measurement period
Planned customer average interruption duration index (CAIDI)	A measure of the average duration of planned sustained service interruptions over the measurement period
System average interruption duration index (SAIDI)	A measure of the average duration of sustained planned and unplanned service interruptions for all customers over the measurement period
Voltage regulation	A measure of the probability of Distribution System voltage levels falling outside the boundaries prescribed in the Distribution Code
System losses	An indication of total losses on a Regulated Distribution System, including technical and non-technical losses (but excluding administrative losses)
Service Performance Measures	
Time to process applications for Regulated Distribution Services	
Time to connect premises to the Regulated Distribution System after compliance with all government and Regulated Entity	
Percentage of calls answered at the call center (or equivalent) within a predetermined time	

Source: *ERC Rules for Setting Distribution Wheeling Rates*

The S-factor is then computed by applying assessing each measure, assigning a score of (-1), (-0.5), (0), (0.5), or (1), depending on the performance of the utility. These scores are then designated weights, predetermined by the regulatory agency, and then applied to a formula set by the regulatory agency. To forecast the resulting S-factor incentive for the estimated MAP, a trend analysis of the historical results of MER was used.

Measure	2008	2009	2010	2011	2012	Average	Std. Dev.
SAIFI (times)	7.66	7.28	6.52	4.8	3.9	6.57	1.10
CAIDI (times)	153.74	144.61	141.27	116.67	103.3	139.07	13.72
SAIDI (Minutes)	122.77	144.6	93.81	80.05	76.15	110.31	25.09
Probability of Voltage Violations (% failed)	0.88	0.75	0.5	0.23	0.04	0.59	0.25
Average Time to Process Applications (Days)	11.42	8.18	5.94	5.34	4.6	7.72	2.38
Average Time to Connect (Days)	4.25	3.42	3.38	3.06	2.12	3.53	0.44
Call Center Performance (Seconds)	16.93	25.79	24.55	16.99	13.17	21.07	4.13
Systems Loss (%)	9.28	8.61	7.94	7.35	7.04	8.30	0.72

Source: *MER's 4th Quarter 2012 Investors' Briefing Report*

Measure	Weights	Performance	S
SAIFI (times)	0.20	0.5	0.10
CAIDI (times)	0.15	0.5	0.08
SAIDI (Minutes)	0.20	0.5	0.10
Probability of Volatage Violations (% failed)	0.10	0.5	0.05
Average Time to Process Applications (Days)	0.10	0.5	0.05
Average Time to Connect (Days)	0.10	0.5	0.05
Call Center Performance (Seconds)	0.10	0.5	0.05
Systems Loss (%)	0.05	0.5	0.03
Total			**0.50**

Performance scores are Team estimates

$$S_t = \frac{[S_{SAIFI,t} + S_{CAIDI,t} + S_{SAIDI,t} + S_{VoltViol,t} + S_{Sysloss,t} + S_{Proc,t} + S_{Con,t} + S_{Call,t}] \times 0.025 ARR_t}{FQ_t}$$

Formula for calculating the S-factor for every regulatory year

The resulting figure when applied to the formula is added to the MAP of the company which is then additional revenue of MER per amount of electricity distributed. Depending on the future performance of MER, this represents additional upside to the value of MER. Historically, MER has posted superior performance that have exceeded regulatory criteria. For example, the company has consistently kept system losses below the regulatory cap from 2008.

Computation of the Regulatory WACC

To calculate the regulatory WACC, the computation and methodology of the Energy Regulatory Commission was reproduced. According to ERC Case No. 2010-069, the regulatory WACC is made up of only two components--the cost of debt, and the cost of equity. The standard weight of each respective cost is 40% debt and 60% equity. A sensitivity table was also used to create a range of possible WACC values, and then the 75th percentile of that range would be used as the regulatory WACC to calculate for the return on capital. Following this method, a regulatory WACC of **14.347%** was computed.

Forecasted Regulatory WACC						
	New			Old		
Parameters	Low	Mid	High	Low	Mid	High
Gearing (Debt) Ratio	45%	40%	35%	45%	40%	35%
Equity Ratio	55%	60%	65%	55%	60%	65%
Debt to Equity	0.82	0.67	0.54	0.82	0.67	0.54
Asset Beta	0.13	0.35	0.57	0.28	0.50	0.72
Risk Free Rate	3.55%	3.80%	4.05%	4.07%	4.32%	4.57%
Country Risk Premium (excluding FX Risk)	1.25%	1.50%	1.75%	1.21%	1.46%	1.71%
Risk Free Rate used in WACC	**6.08%**	**6.75%**	**7.43%**	**8.80%**	**9.80%**	**10.79%**
Debt Margin	2.00%	2.50%	3.00%	2.00%	2.50%	3.00%
Cost of Debt	**8.08%**	**9.25%**	**10.43%**	**10.80%**	**12.30%**	**13.79%**
Market Risk Premium (Developed Country) MRP	9.40%	9.40%	9.40%	6.00%	6.00%	6.00%
Corporate Tax Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inflation Rate (PH)	2.93%	3.78%	4.63%	4.54%	5.39%	6.24%
Inflation Rate (USA)	1.70%	2.10%	2.50%	1.19%	1.59%	1.99%
Cost of Equity	**8.26%**	**12.24%**	**15.70%**	**11.81%**	**14.78%**	**17.45%**
Vanilla WACC (Nominal)	8.18%	11.04%	13.86%	11.36%	13.79%	16.17%
WACC set as 75th percentile of suggested range		**12.437%**			**14.970%**	

Source: *Philippine Dealing & Exchange Corp, Thomson Reuters, Team estimates*

Risk-free Rate

The main considerations with regards to the risk-fee rate comprise of the method to be used--the direct or indirect method--and the tenor of the bond. Using the direct method to estimate, the 60-day moving average yield of Philippines peso bond were as follows:

Phil Bond Yields - Direct Method			
Date	**5 Yr**	**10 Yr**	**20 Yr**
10/23/2013	3.0875	3.4812	3.8083
30 day	3.3814	3.7154	3.8516
60 day	3.4246	3.6955	3.8048
90 day	3.2049	3.5686	3.7872

Source: *Philippine Dealing & Exchange Corp*

The indirect method is computed by using a formula found in the regulatory paper. This takes the risk-rate of the US market using the direct method which is converted to the risk-free rate in Philippine context by using the respective CPIs of each country as well as a Country Risk Premium (CRP).

$$R_f = \left[\frac{1 + R_{fUSA}}{1 + i_{CPI\ USA}}\right] * (1 + i_{CPI}) * (1 + CRP) - 1$$

Where:
R_f = risk free rate estimated for the Philippines using an indirect method
R_{fUSA} = risk free rate estimated in the USA using a direct method
$i_{CPI\ USA}$ = inflation rate estimated for the USA
i_{CPI} = inflation rate estimated for the Philippines
CRP =country risk premium expected by investors for investing in the Philippines, which does not include any adjustment for exchange rate risk

As the name implies, the indirect method tries to estimate the risk-free rate of the Philippines by extrapolating it from a foreign country and then adjusting possible economic differences such as inflation and a specific country risk premium.

US Bond Yields - Direct Method			
Date	**5 Yr**	**10 Yr**	**20 Yr**
10/23/2013	1.3000	2.5100	3.2900
30 day	1.4039	2.6526	3.4096
60 day	1.5198	2.7412	3.4743
90 day	1.4957	2.7212	3.4622

Source: *US Department of Treasury website*

The country risk premium is calculated by comparing two USD denominated bonds. The first bond is a USD denominated bond issued by the United States Government, but sold in the Philippines. The second bond is a USD denominated bond issued by the Philippine Government sold in the Philippines as well. The difference in yields is the CRP.

Computation of Risk-Free Rate	Forecasted		Old ERC
	10-year tenor	20-year tenor	20-year tenor2
Risk free rate (USA)	2.74%	3.47%	4.32%
Inflation (USA)	2.10%	2.10%	1.59%
Inflation (PH)	3.78%	3.78%	5.39%
Country Risk Premium	1.24%	1.50%	1.46%
Indirect Risk free rate (PH)	**5.73%**	**6.75%**	**9.80%**
Direct Risk free rate (PH)	3.64%	3.99%	4.32%

Source: *Philippine Dealing & Exchange Corp, Thomson Reuters, Team estimates*

After gathering the needed data, the indirect method formula is applied to get the risk-free rate. During the last approval of the most recent regulatory period, the ERC argued that using the indirect method was a more fair depiction of the economic situation of the Philippines at that time. Specifically, the ERC argued the following:

> *"…The analysis suggests there are properties of Philippines Treasury Bonds which lead to yields that are lower than can be observed from an independent market source. Given the concern over the slow unwinding of the GFC and the rising concern in the market over the slow recovery of the USA economy, concerns over sovereign risk in Europe and concerns over the threat of a breakout of inflation in the global market, the ERC shall continue to use the indirect measure of the risk-free rate in the Philippines…" (Source: ERC Case No. 2010-069 WACC)*

As such, the same method was employed to compute for the expected risk-free rate for the upcoming regulatory period.

Equity Beta
The beta for the regulatory choose of equity was derived from a pure-play method that extracted the asset beta of similar companies from various international markets. These companies were the same list of companies as provided by the ERC. Using the same data sources and methodologies as the ERC, an equity beta of 0.3498 was calculated.

Market Premium
Using studies from various experts, the ERC decided on a market premium of 6% in previous regulatory periods. The market premium for the upcoming regulatory period was derived by checking the same sources that the ERC had used to estimate, including experts such as Aswath Damodaran. A local study using 26 years of Philippine market data was also used. As such, a market premium of 9.34% was applied. A cost of equity of -12.24% was calculated based on the prescribed ERC methods.

Cost of Debt
Using a designated margin spread of 2.5% over the risk-free rate, the expected cost of debt for the next regulatory period is 9.25%.

Applying the regulatory capital structure of 40% debt and 60% equity, a regulatory WACC of 12.437% was calculated. It is important to take note that the ERC had used bonds with a 20-year tenor as the reference rate for its risk-free rate. The regulatory department believes that such tenor would be a more fair representative of the true economic situation facing the company because of two reasons. First, the 10-year tenor bonds (as well as other shorter term bonds) would be affected by various economic socks such as quantitative easing, thus abnormally carrying a lower yield. Second, the 20- year tenor bonds are also reflective of the economic life of the primary electrical utility assets.

Appendix 15: Methodology for Selecting Peers

Local Comparables
The companies from the Electricity, Energy, Power & Water sub-sector of the Philippine Stock Exchange (PSE) were used as the initial pool for the selection of MER's appropriate peers. These companies were then reduced by leaving only companies than mostly invested in the electrical industry. This left three relevant companies: AboitizPower, Energy Development Corporation, and First Gen Corporation.

Company	Market Capitalization
MER	304,992,909,573.00
AP	242,833,942,131.00
FGEN	93,937,500,000.00
EDC	44,269,105,042.12

Source: *Philippine Stock Exchange website*

FGEN and EDC both have a much smaller size as compared to MER which can be observed from its market capitalization. Furthermore, both companies are mostly engaged in power generation, with little or no business in distribution. In contrast, AP owns both power generation and distribution utilities which are the same lines of business as MER. As such, AP was selected as the most appropriate local peer of MER in the country.

Regional Comparables
Power Grid Corporation (India), Korean Electric Power Company (Korean), Tokyo Electric Power Company (Japan), and Tenaga Nasional Berhad (Malaysia) are state-owned utilities all over Asia. Other utilities in Southeast Asia are also state-owned such as Indonesia, Thailand, and Vietnam. On the other hand, China Light & Power (Hong Kong) and Power Assets Holdings (Hong Kong) are privately owned vertically integrated utilities.

It is more relevant for Meralco to use **trailing** data because its investments in power generation will not become apparent from a one or two-year estimation. Meralco shows the largest 5-year EPS growth out of all its peers. This is reflective of Meralco's strong performance in the distribution business. We are confident that Meralco can bring that success to its investments in power generation. This relative analysis reinforces our buy recommendation on Meralco.

Company	EV/EBITDA	Historical	P/E Current	P/E Historical	EPS 5-YR	PEG 5YR
Power Grid Corp.	9.40	10.60	11.10	18.10	20.90	0.87
Korean Electric	8.80	10.10	0.00	0.00	-13.90	-
China Light & Power Hldg	11.30	12.00	17.70	16.20	-4.80	(3.38)
Tenaga Nasional Berhad	7.40	11.80	13.30	12.00	11.50	1.04
Power Assets Hldg	18.60	16.20	12.80	14.40	5.50	2.62
Tokyo Electric	9.60	10.10	5.00	22.70	-9.90	(2.29)
Manila Electric Co.	8.10	11.60	16.30	23.90	32.10	0.74

Source: *Thomson Reuters*

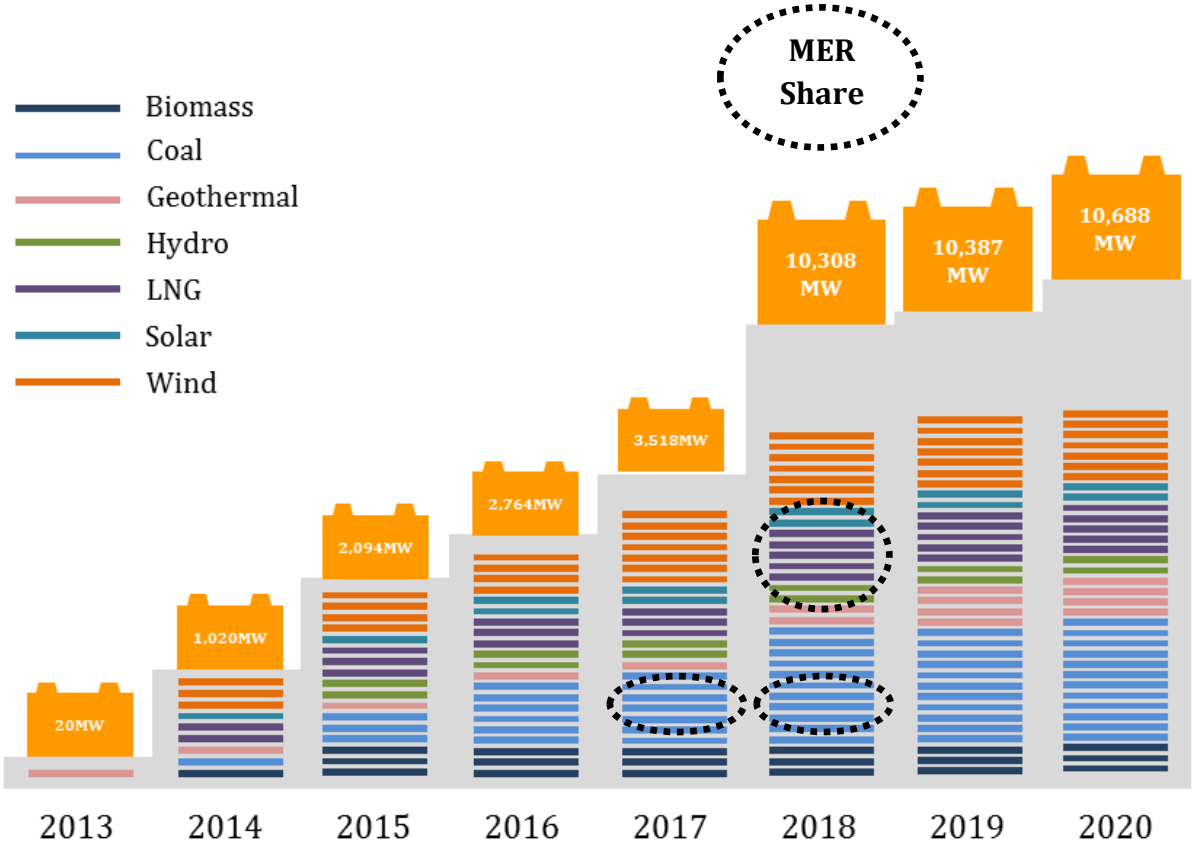
Appendix 16: Department of Energy: Power Projects Until 2020

To address the lack of supply in the Philippine energy industry, private and public companies have investments or are undertaking feasibility studies on building the following plants by 2020. The Department of Energy has released the list of projects that are currently in the pipeline, segregated below by year of commissioning and power plant type.

MER has committed to building two coal plants, to be operated starting 2017 and 2018. These are Quezon Power 2 and RP Energy respectively. Quezon Power 2 is set to have a gross capacity of 500 MW. This project will be built together with Electricity Generating Public Company Ltd. MER's effective ownership interest is around 47.0-51.0%.

RP Energy is set to have a gross capacity of 600 MW. MER's partners in this venture are AboitizPower (PSE: AP) and Taiwan Corporation. Effective ownership interest of MER is 47.0%.

Also part of MER's share below is a 1,700 MW LNG-fired power plant in Batangas and another 1500 MW LNG-fired power plant in Quezon. Target construction for these plants is optimistically set to 2018. MER is currently conducting feasibility studies regarding these plants.



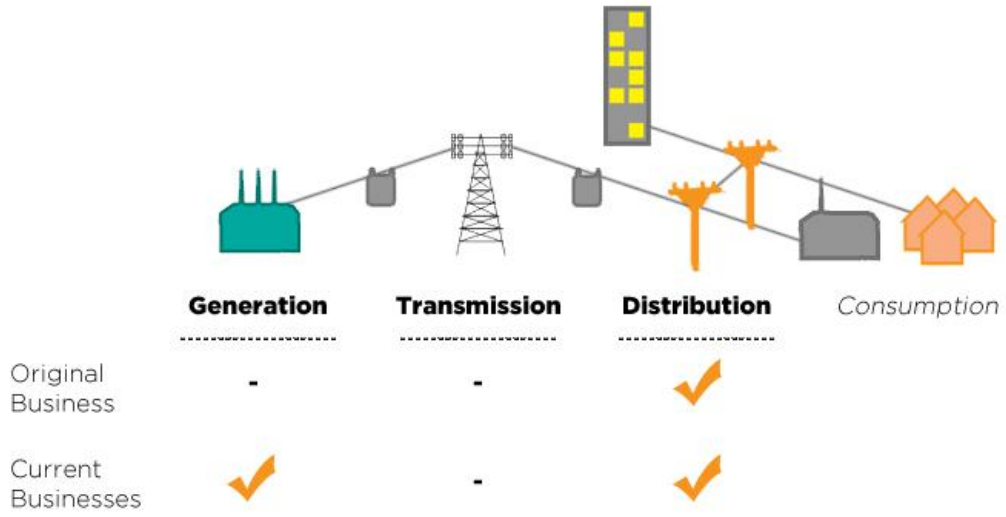
Appendix 17: Electricity Distribution Business Model (PBR vs. RORB)

In 2004, the ERC transitioned from the Return on Rate Base System (RORB) to the Performance Based Regulation (PBR) system for distribution-related charges to customers. Under this new regime, DUs are allowed to recover the "just and reasonable costs of service and earn a fair rate of return on its investment". Through this system, the distribution-related charges that DUs can charge customers over a four-year regulatory period are based on projected revenues subject to the approval of the ERC. Rewards or penalties in the form of tariff adjustments are given based on the DU's ability to meet certain performance targets set by the ERC on aspects such as the average duration of power outages, average time of restoration of electricity to customers, and average time to respond to customer calls. The implementation prescribed four entry points for privately owned DUs, with MERALCO, Cagayan Electric and Power Co, and Dagupan Electric Co. being the first to participate in 2005.

	RORB	PBR
Return Cap	12%	Regulatory WACC
Asset Base	Sound Value	Optimized Depreciated Replacement Cost and Working Capital
OPEX and CAPEX Approval	Based on Historical expenditures	Includes projected expenditures for the succeeding regulatory period
Income Taxes	Not Recoverable	Recoverable through MAP Adjustment factor
Rewards or Penalty System	None	Rewards or penalties are given based on performance targets
Revenue Requirement	Total of Distribution, Transmission, and Generation	Distribution and Retail Only
Regulation	Unpredictable length of time for hearings and review. Time lag for electricity prices against costs incurred.	Time-bound review. Less delays are expected.
Frequency of Rate Review	As Requested	Every 4 years
Cost Recovery	Actual Costs only	Price Cap (MAP) includes adjustment factors (inflation, efficiency, etc.)

Source: *ERC Presentation to VECO September 2009*

Appendix 18: PH Electricity Value Chain



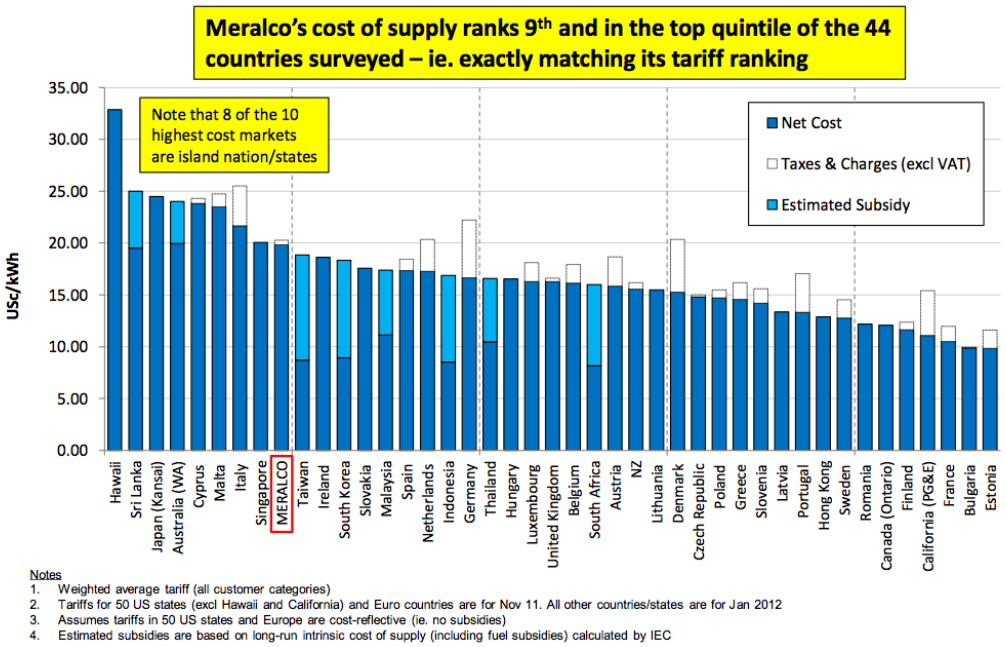
Under the Retail Competition and Open Access, customers with monthly average peak demand of one MW or higher may choose their electricity retailer of choice. This retailer is the party which will serve as the middleman between the customer and power generator.

Under this new scheme, MER may participate as a retailer under MPower, but still remains as the exclusive distributor. Effectively, MER will not lose revenue from distribution in case it is not chosen as a retailer. However, it will gain additional income if it is otherwise chosen.

Appendix 19: Cost of Electricity in the Philippines

During 2012, MER commissioned the International Energy Consultants to prepare a study on MER's regulated tariffs with other markets worldwide. Key results of the study were reported by Managing Director John Morris.

The results of the study showed that as of the beginning of 2012, the Philippines had the 2nd highest electricity rates in the region, and the 9th highest among 44 international markets.



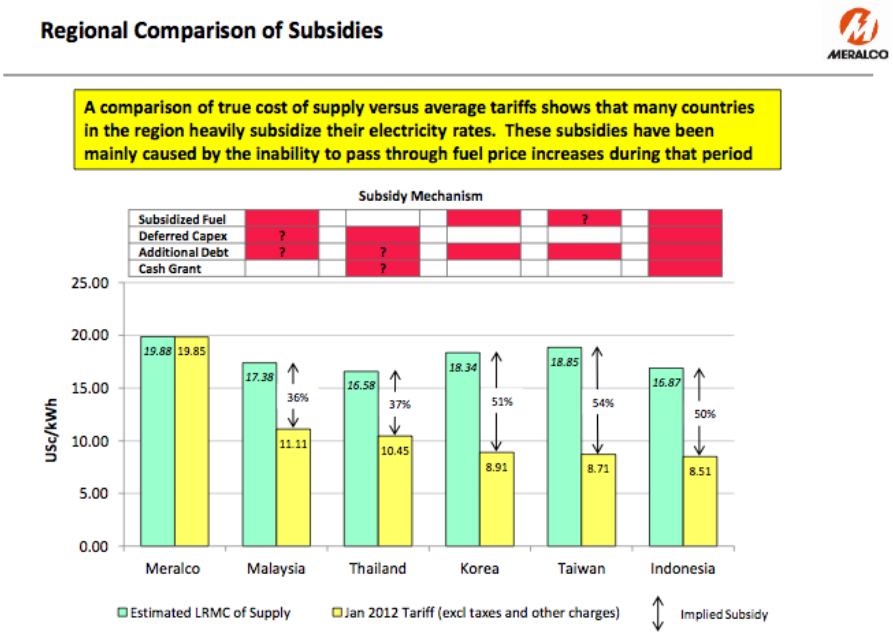
Source: *International Energy Consultants Study, Slide directly lifted from IEC presentation to MER*

Three reasons explain why Philippine electricity is relatively expensive:

1. No Government Subsidy

In the region, Thailand, Indonesia, Malaysia, Korea, and Taiwan all charge lower rates due to government subsidies, which can range to up to 50% of the costs. Such subsidies include freezing tariffs, selling fuel below market rates, and allowing the government to shoulder business losses.

> *Despite lower rates charged to customers, the IEC believes that subsidizing the cost of electricity through lower tariffs is ultimately unsustainable in the long run. Once subsidies are removed, the countries are likely to experience extreme price shocks. Adding back the subsidies to the tariff puts the cost of electricity at par with MER.*



Source: *International Energy Consultants Study, Slide directly lifted from IEC presentation to MER*

2. Higher Costs of Supply

Huge dependence on fossil fuels, coupled with the lack of natural reserves drives the cost of energy upwards. These imported fuels are subject to price volatility of international market rates.

The lack of a unified grid across all regions in the Philippines is a fundamental cost multiplier. In theory, a larger grid would result in lower prices as the total costs can be spread out among more customers. Creating an interconnected grid to unify the thousands of islands across Luzon, Visayas, and Mindanao is almost impossible. It is worth noting that 8 of the 10 highest cost markets were island nations.

It must be noted that the Generation Charge (which includes cost of fuel) are pass-through charges and thus, are revenue-neutral to MER.

3. Low Reserve Margin

When major plants are down, additional plants need to operate in order to satisfy the demand. Setting up and maintaining these additional plants results in additional costs. A higher reserve margin brings a higher total cost of supply.

Conclusions:

- **a.** Very little of the actual tariff is within MER control
- **b.** Monthly variations are driven by global fuel and currency market forces in the generation business
- ***c.*** *Based on a comparison of MER tariff and intrinsic cost of supply in Luzon and rates in other markets, the IEC judges MER's rates to be* ***fair and reasonable***

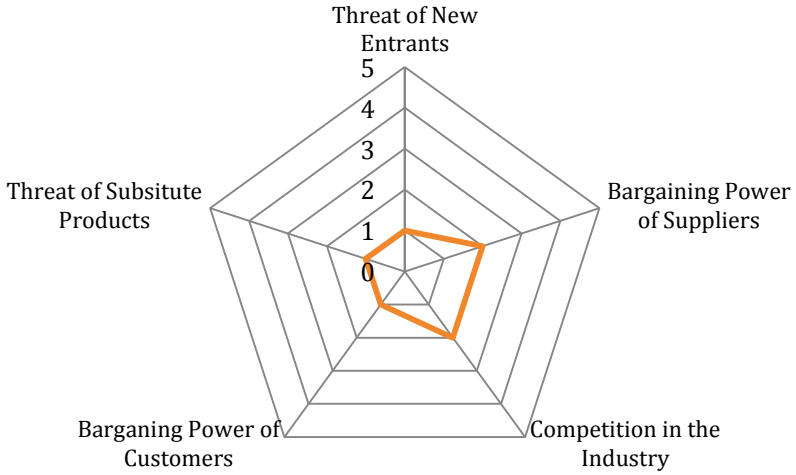
Recommendations:

- **a.** Lower barriers to allow new generation capacity to enter the market
- **b.** Ensure IPP access to long-term, large-scale PPAs with creditworthy off-takers

Sources:
Regional Comparison of Retail Electricity Tariffs. (2012). Recovered on November 11, 2013 from http://www.meralco.com.ph/pdf/newsandupdates/2012/NW04812a_link.pdf
Visconti, Katherine. (2012) Philippine Electricity Prices to Stay High. Recovered on November 11, 2013 from http://www.rappler.com/business/10737-electricity-prices-in-ph-likely-to-stay-high-in-the-short-term

Appendix 20: Porter's Five Forces Analysis

Five Forces Analysis on MER's Core Distribution Business



LEGEND

0	No threat to the business
1	Insignificant threat to the business
2	Low threat to the business
3	Moderate threat to the business
4	Significant threat to the business
5	High threat to the business

Threat of New Entrants | INSIGNIFICANT
Congress grants distribution utilities in the Philippines. Although the license will expire by 2028, it is highly probable that such license will be renewed. The huge capital investment required to set up its own infrastructure serves as a significant barrier to entry. In the unlikely event of non-renewal, ownership of all distribution assets will remain with MERALCO and be subject to rental of the new distribution utility. These significant barriers to entry are the basis for our **INSIGNIFICANT** assessment of the threat of new entrants.

Threat of Substitute Products | INSIGNIFICANT
As was stated, MER is by regulation the sole distributor of electricity in its franchised area. This franchise area has a total land area of 9,337 square kilometers, while only 3% of the whole Philippines contribute 46% to Philippine GDP. With no other alternative but to use MER's distribution network, we assess the threat of substitutes to be **INSIGNIFICANT.**

Bargaining Power of Customers | INSIGNIFICANT
With customers in MERALCO's franchise area having no other choice in their distribution utility, they pose a low threat to MERALCO and have no direct effect in determining the price of providing the service. However, under Performance Based Regulation, one determinant of the tariff is quality of service, which effectively pressures the company to constantly improve its distribution system. With net system losses at an all-time low at 6.71% (as of 3Q13) and the gradual implementation of the Smart Grid project, the company is able to uphold its promise of unparalleled customer service. With customers having no choice but to use MER's distribution network, we assess the bargaining power of customers to be **INSIGNIFICANT.**

Bargaining Power of Suppliers | LOW
MER enters into competitively priced Power Supply Agreements with power generators to ensure adequate supply of electricity to be distributed to satisfy the demand in the franchise area. However, as mandated by the PBR regime, the distribution utility shall not generate a profit nor incur a loss on purchased power, as all such costs shall be passed on to the final consumer. A low degree of differentiation of inputs, high concentration of supplier to firm ratio, and the inability of these generation companies to forward vertically integrate are key determinants in our **LOW** assessment of the bargaining power of suppliers.

Competitive Rivalry within the industry | LOW
A major shift in the industry occurred as the Philippines began its transition into the Retail Competition and Open Access regime. "Contestable Customers" with average monthly consumption of 1 MW and above may choose their respective electricity supplier, allowing them to tailor their consumption to fit their specific needs. While customers may select a supplier other than MERALCO, ultimately, their electricity will still pass through the company's distribution system. Similarly, MER is protected from the lost revenue from the supply charge by no longer incurring the corresponding cost to supply the customer. Additional margins can now be earned from the generation charge sold through its own RES, MPower. The Open Access regime, while granting the customers the freedom to choose a new supplier, does not prove to be significantly detrimental to MER. Despite the existence of an open market and additional competitors, MER still remains a dominant force in the industry. We assess the threat of competition as **LOW.**

Sources: Team analysis

Appendix 21: MER Key Management Personnel

Board of Directors

Director	Position	Held Since	Affiliates/Other Work
Manuel V. Pangilinan	Director and Chairman	Chairman since May 29, 2012 Director since May 26, 2009 (President and CEO from July 1, 2010 to May 28, 2012)	• Chairman of Philippine Long Distance Telephone Company*, Smart Communications, Inc., Metro Pacific Investments Corporation*, Beacon Electric Asset Holdings, Inc., Philippine Communications and Energy Ventures, Inc., Landco Pacific Corporation, Davao Doctors, Inc., Riverside Medical Center, Inc., Our Lady of Lourdes Hospital, Asian Hospital, Inc., Maynilad Water Services Corporation, Mediaquest, Inc., Associated Broadcasting Corporation (TV5), Philex Mining Corporation*, and Manila North Tollways Corporation • Chief Executive Officer and Managing Director of First Pacific Company Limited • Co-Chairman of the US-Philippines Business Society • Chairman of the Board of Trustees of San Beda College • Former member of the Board of Overseers of The Wharton School, University of Pennsylvania and former Chairman of the Board of Trustees of the Ateneo de Manila University • Procter & Gamble Fellow in the Wharton School of Finance and Commerce
Ramon S. Ang	Director and Vice Chairman	Since February 1, 2009	• Vice Chairman, President, and Chief Operating Officer of San Miguel Corporation* • Chairman and Chief Executive Officer of Petron Corporation*, Petron Marketing Corporation and SMC Global Power Holdings Corporation • President and Chief Operating Officer of PAL Holdings, Inc.* and Philippine Airlines, Inc. • Vice Chairman of Ginebra San Miguel, Inc.*, San Miguel Pure Foods Company, Inc., and San Miguel Yamamura Haiphong Glass Co. Limited (Vietnam) • Chairman and President of San Miguel Properties, Inc., San Miguel Energy Corporation, SMC Consolidated Power Corporation, San Miguel Electric Corporation, San Miguel Energy Corporation, SMC Consolidated Power Corporation, SMC Power Generation Corporation, SMC PowerGen Inc. and Cyber Bay Corporation*. • Chairman of San Miguel Brewery, Inc.* and Liberty Telecoms Holdings Inc.* • Director of Philweb Corporation*, Air Philippines Corporation, and other subsidiaries and affiliates of the San Miguel Group of Companies in the Philippines and Southeast Asia
Oscar S. Reyes	Director, President, and CEO	Director since July 1, 2010 President and CEO since May 29, 2012 (Chief Operating Officer from July 1, 2010 to May 28, 2012)	• Member of the Advisory Board of Philippine Long Distance Telephone Company* and of the Board of Directors of the Bank of the Philippine Islands*, Manila Water Company, Inc.*, Ayala Land, Inc.*, Smart Communications, Inc., Pepsi Cola Products Philippines, Inc.*, Sun Life Financial Phils., Inc., Basic Energy Corporation* and Alcorn Gold Resources Corporation • President of Meralco PowerGen Corporation • Chairman of Meralco Industrial Engineering Services Corporation (MIESCOR), CIS Bayad Center, Inc., Meralco Energy, Inc., Redondo Peninsula Energy, Inc. and Link Edge, Inc. • Member of the Board of Trustees of One Meralco Foundation, Inc., Pilipinas Shell Foundation, Inc., SGV Foundation, Inc., and El Nido Foundation, Inc. • Former Country Chairman of the Shell Companies in the Philippines
Atty. Ray C. Espinosa	Director	Since May 26, 2009	• President and Chief Executive Officer of Mediaquest Holdings, Inc., ABC Development Corporation (TV5), Mediascape, Inc. (Cignal TV), Nation Broadcasting Corporation, and other subsidiaries of Mediaquest Holdings Inc. • Member of the Board of Directors of Meralco PowerGen Corporation, Beacon Electric Asset Holdsings, Inc., Philippine Long Distance Telephone Company*, Metro Pacific Investments Corporation*, Lepanto Consolidated Mining Corporation* and Wolfpac Mobile, Inc., and Vice Chairman of Philweb Corporation*
Jose Ma. K. Lim	Director	Since May 29, 2012	• President and Chief Executive Officer of Metro Pacific Investments Corporation* • Chairman of Davao Doctors Hospital and Riverside Medical Center in Bacolod City • Member of the Board of Directors of Meralco PowerGen Corporation, Beacon Electric Asset Holdings, Inc., Metro Pacific Tollways Corporation, Manila North Tollways Corporation, Tollways Management Corporation, Maynilad Water Services, Inc., Medical Doctors, Inc., Cardinal Santos Medical Center, Our Lady of Lourdes Hospital and Asian Hospital • Founding Member and Treasurer of the Shareholders Association of the Philippines

Director	Position	Held Since	Affiliates/Other Work
Manuel M. Lopez	Director	Director since April 14, 1986 Chairman and CEO from July 1, 2001 to June 30, 2010 Chairman from July 1, 2010 to May 28, 2012	• Philippine Ambassador to Japan • Chairman and CEO of Lopez Holdings Corporation* • Chairman of Indra Philippines, Inc., Bayan Telecommunications, Inc., Bayan Telecommunications Holdings Corporation, Rockwell Land Corporation*, and Rockwell Leisure Club • Vice Chairman of First Philippine Holdings Corporation* • Member of the Board of Directors of ABS-CBN Corporation*, ABS-CBN Holdings Corporation*, Sky Cable Corporation and First Philippine Realty Corporation • President of Eugenio Lopez Foundation, Inc.
Atty. Estelito P. Mendoza	Director	Since February 1, 2009	• Managing Partner of Estelito P. Mendoza and Associates • Member of the Board of Directors of San Miguel Corporation*, Petron Corporation*, Philippine National Bank*, and Philippine Airlines, Inc. • "Leading Individual in Dispute Resolution" as listed by the following directories and journals: "The Asia Pacific Legal 500", Chambers of Asia" and "Which Lawyer?" • Former Solicitor General, Minister of Justice, Member of the Batasang Pambansa, Provincial Governor of Pampanga, Chairman of the Sixth (Legal) Committee, 31st Session of the UN General Assembly and the Special Committee on the Charter of the United Nations and the Strengthening of the Role of the Organization
Justice Artemio Panganiban	Independent Director	Since May 27, 2009	• Independent Director of Petron Corporation*, Bank of the Philippine Islands*, First Philippine Holdings Corporation*, Metro Pacific Investments Corporation*, Metro Pacific Tollways Corporation, Robinsons Land Corporation*, GMA Network, Inc.*, GMA Holdings, Inc.*, and Asian Terminals, Inc.* • Independent Adviser of Philippine Long Distance Telephone Company • Director of Jollibee Foods Corporation • Senior Adviser of Metropolitan Bank and Trust Company • Chairman of the Board of Advisers of Metrobank Foundation • Former Chief Justice of the Supreme Court of the Philippines, Chairperson of the Presidential Electoral Tribunal, Judicial and Bar Council and Philippine Judicial Academy
Vicente L. Panlilio	Director	Since June 28, 2010 (Independent Director from May 27, 2008 to May 25, 2010)	• Member of the Board of Directors of San Fernando Electric Light and Power Company and Bank of Commerce • Former Director of the Philippine Stock Exchange*, the Philippine Dealing Exchange Corporation, Equitable PCIBank and the Philippine National Bank • Former Chief Operating Officer and member of the Advisory Board of Far East Bank and Trust Company
Eric O. Recto	Director	Since June 28, 2010	• Chairman of the Philippine Bank of Communications* • President of Petron Corporation* • Vice Chairman of Alphaland Corporation*, Atok Big Wedge Co., Inc.* and Philweb Corporation* • Member of the Board of Directors of San Miguel Corporation* • President and Director of Top Frontier Investment Holdings, Inc., ISM Communications Corporation* and Q-Tech Alliance Holdings, Inc.
Pedro E. Roxas	Independent Director	Since May 25, 2010	• Chairman, President and Chief Executive Officer of Roxas and Company, Inc.* • Chairman and President of Roxaco Land Corporation • Chairman of Roxas Holdings, Inc.*, Central Azucarera de la Carlota, Inc., Roxol Bioenergy Corporation, Club Punta Fuego, Inc. and Fuego Land Corporation • Member of the Board of Directors of Philippine Long Distance Telephone Company*, BDO Private Bank and Brightnote Assets Corporation

*Publicly listed companies

Corporate Officers

Officer	Position	Affiliates and Description
Ricardo V. Buencamino	Senior Executive Vice President Head, Networks	• Vice Chairman of General Electric Philippines Meter and Instrument Company, Inc. • Member of the Board of Directors of Clark Electric Distribution Corporation, Meralco Energy, Inc., Calamba Aero Power Corporation and Atimonan Land Ventures Development Corporation
Roberto R. Almazora	Senior Vice President, Head, Retail Electricity Supplier	• Member of the Board of Directors of Indra Philippines, Inc. • Trustee of the University of the Philippines Alumni Engineers
Alfredo S. Panlilio	Senior Vice President Head, Customer Retail Services and Corporate Communications	• Member of the Board of CIS Bayad Center Inc., Corporate Information Solutions Inc. Meralco Energy Inc, Miescorrail,Inc., Radius Telecoms Inc.
Ramon B. Segismundo	Senior Vice President Head, Human Resources and Corporate Services	• Vice-Chairman and Governor of the Philippine Basketball Association (PBA) • Board of Directors MIESCOR
Rafael L. Andrada	First Vice President, Treasurer Head, Investment Management	• Member of the Board of Directors CIS Bayad Center • Treasurer of Clark Electric Distribution Corporation
Ivanna G. De La Pena	First Vice President Head, Regulatory Management Office	• Member of the Board of Directors Clark Electric Distribution Corporation
Marthyn S. Cuan	Vice President Cheif Information Officer	• Member of the Board of Directors of Radius Telecoms • Vice-President and founding member of IdeaSpace Foundation
Aaron A. Domingo	Executive Vice President and General Manager, Meralco PowerGen Corporation	• Member of the Board of Directors of GMR Energy (Singapore)
Betty C. Siy-Yap	Senior Vice President Chief Finance Officer	• Member of the Board of Directors of Republic Surety and Insurance Company Inc, MIESCOR, CIS Bayad Center
Ruben B. Benosa	First Vice President Head, Corporate Logistics Officer	• Chairman of Meralco Financial Servics Corporation • Member of the Board of Directors of Miescorrail, Inc.
Atty. William S. Pamintuan	First Vice President Deputy General Counsel Assistant Corporate Secretary	• Corporate Secretary of Meralco PowerGen Corporation
Raymond B. Ravelo	Vice President Head, Corporate Business Strategy	• President/Chief Executive Officer and Member of the Board of Directors of Radius Telecoms Inc. • Former McKinsey and Company Washington DC office
Atty. Simeon Ken R. Ferrer	Corporate Secretary	• Member of the Board of Directors and Corporate Secretay of Habibi Cove Realty Corporation • Senior Partner of SyCip Salazar Hernandez & Gatmaitan

Source: *MER Annual Report, 2012*

Appendix 22: MER Management Awards

2013

PSE Bell Award
Top Local Corporate Governance Practitioner, Institute of Corporate Directors
Asian Human Capital Awards
Platts Top Global Energy Company Award for being the 42nd in Asia and 149th Globally
Corporate Governance Asia
Asia's Best CEO (Philippines) - Oscar S. Reyes
Asia's Best CFO (Philippines) - Betty C. Siy-Yap
Best Investor Relations Company in the Philippines
Best Investor Relations Professional in the Philippines - Rafael L. Andrada
Best Corporate Social Responsibility - Jeffrey O. Tarayao
Asia's Icon on Corporate Governance
FinanceAsia
Most Committed to a Strong Dividend Policy - Top 4

2012

Personnel Management Association of the Philippines (PMAP)
2012 Employer of the Year

Asia CEO
2012 Top Employer Organization
Executive Leadership Team of the Year Finalist
Technology Leadership Team of the Year Finalist

Corporate Governance Asia
Asia's Best CFO (Investor Relations) - Rafael Andrada
Best Investor Relations Company in the Philippines
Best Corporate Social Responsibility
Best in Asia on Corporate Governance

Institute of Corporate Directors
Silver Award for 2011 Corporate Governance Scorecard for Publicly-Listed Companies (PLCs)

Anvil Award of Excellence
The Meralco Twitter Typhoon Response
Meralco Liwanag Park: A Memorable and Delightful Christmas Experience

Anvil Award of Merit
Enabling Growth, Enabling Hope: Meralco and One Meralco Foundation Unified 2011 Annual Report
Energizing Public Schools in Isla Verde
Isla Verde School Electrification Community Launch
The Meralco Community Electrification Program Community Launches
Meralco Offers Time-Of-Use Rates to Boost SME Businesses
Conquering New Heights: Achieving Leadership Commitment and Collaboration

Quill Award of Excellence
5773 Powering Up to Success: One Vision, Shared Goals
Learning Summit: Promoting a Culture of Learning and Empowerment
Meralco Power Up Forum
Strengthening Partnerships with Meralco"s Customer Choice Program (CCP)
The Meralco Channel Partnership Program-Efficient Management of Customer Relationships in a Manpower-Challenged Structure
Communicating One Meralco Foundation Initiatives via the News Media
Energizing Public Schools in Isla Verde
Meralco Basketboys Program
One Meralco Makabayan Volunteerism Program
Transforming Communities through the Meralco Community Electrification Program
Meralco and One Meralco Foundation Unified 2011 Annual Reports
Business Book Summaries: Learning in a NutshellMeralco Managed Services

Quill Award of Merit
The Meralco Website: An Information Hub for the Customers
Enhancing and Sustaining Meralco's Employee Engagement (The Pulse Survey)
The 2nd Philippine Electric Vehicle Summit 2012
Meralco Liwanag Park

Quill Finalist
Adapting to Change (A2C): Empowering Employees to Cope with Work Transitions
Conquering New Heights: Achieving Leadership Commitment and Collaboration
Meralco Offers Time-of-Use Rates to Boost SME Businesses
Meralco's Customer Conversion Program for Companies Producing Their Own Electricity
Pasiklaban ng Finance sa Review ng Standards (PFRS): Enhancing the Learning of PFRS Through Games
Revving Up to Achieve a Culture of Excellence
Isla Verde School Electrification Community Launch
Maliwanag and Pasko Employees Treat for Children
Ione Meralco Makabayan Volunteerism Program Launch
The Meralco Community Electrification Program Community Launches
The Meralco Customer Segments AVP: Partners for Progress
Meralco and One Meralco Foundation Unified 2011 Annual Reports

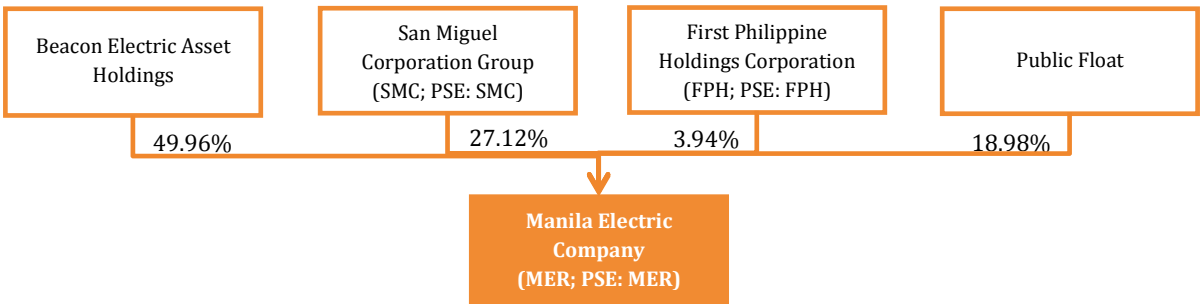
Quill Nominee
Meralco Managed Services
Business Book Summaries: Learning in a Nutshell
Meralco and One Meralco Foundation Unified 2011 Annual Reports

Quill Special Award - Company of the Year
Meralco as 1st runner up
One Meralco Foundation as nominee

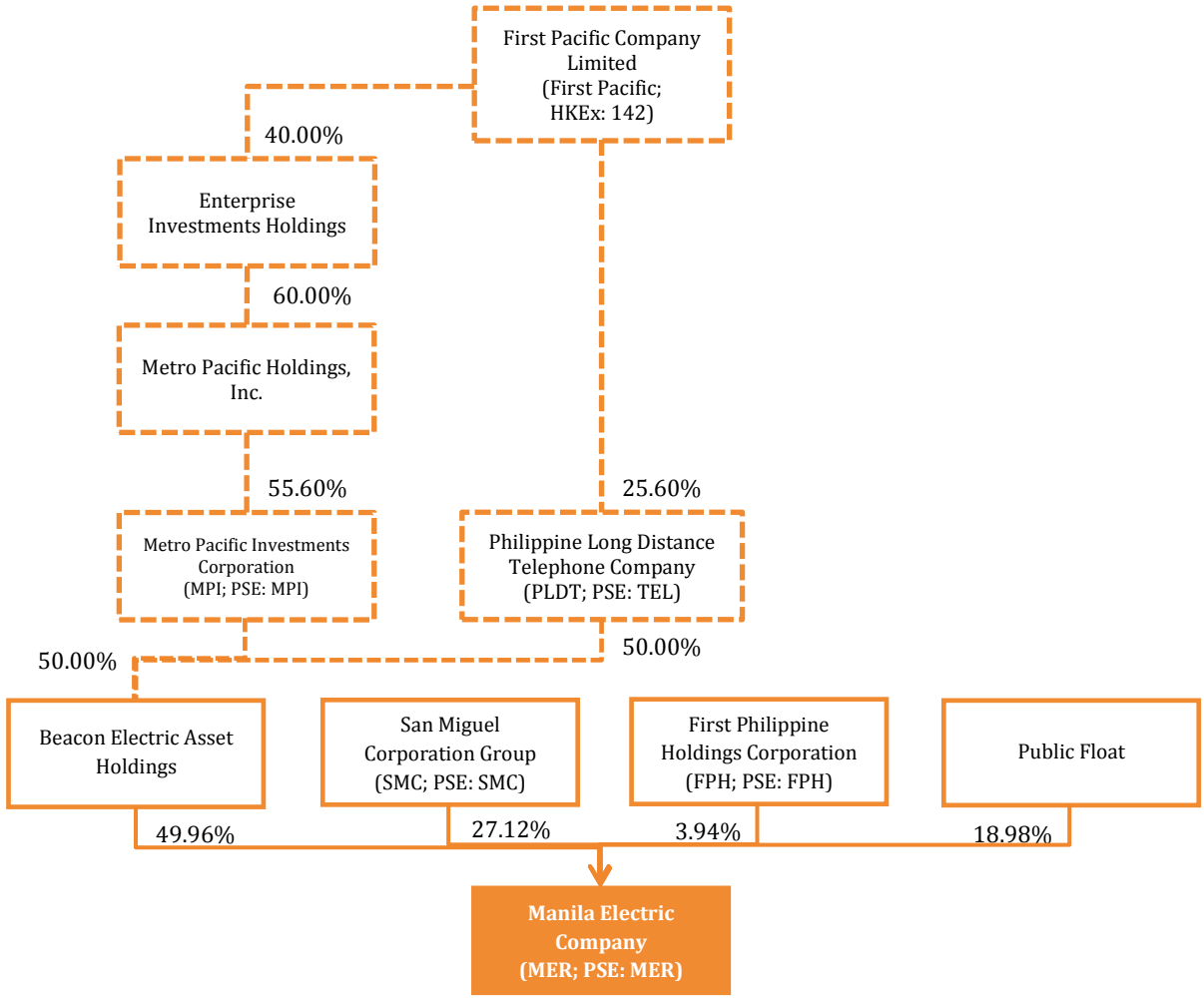
Source: *MER website*

Appendix 23: MER Ownership Structure

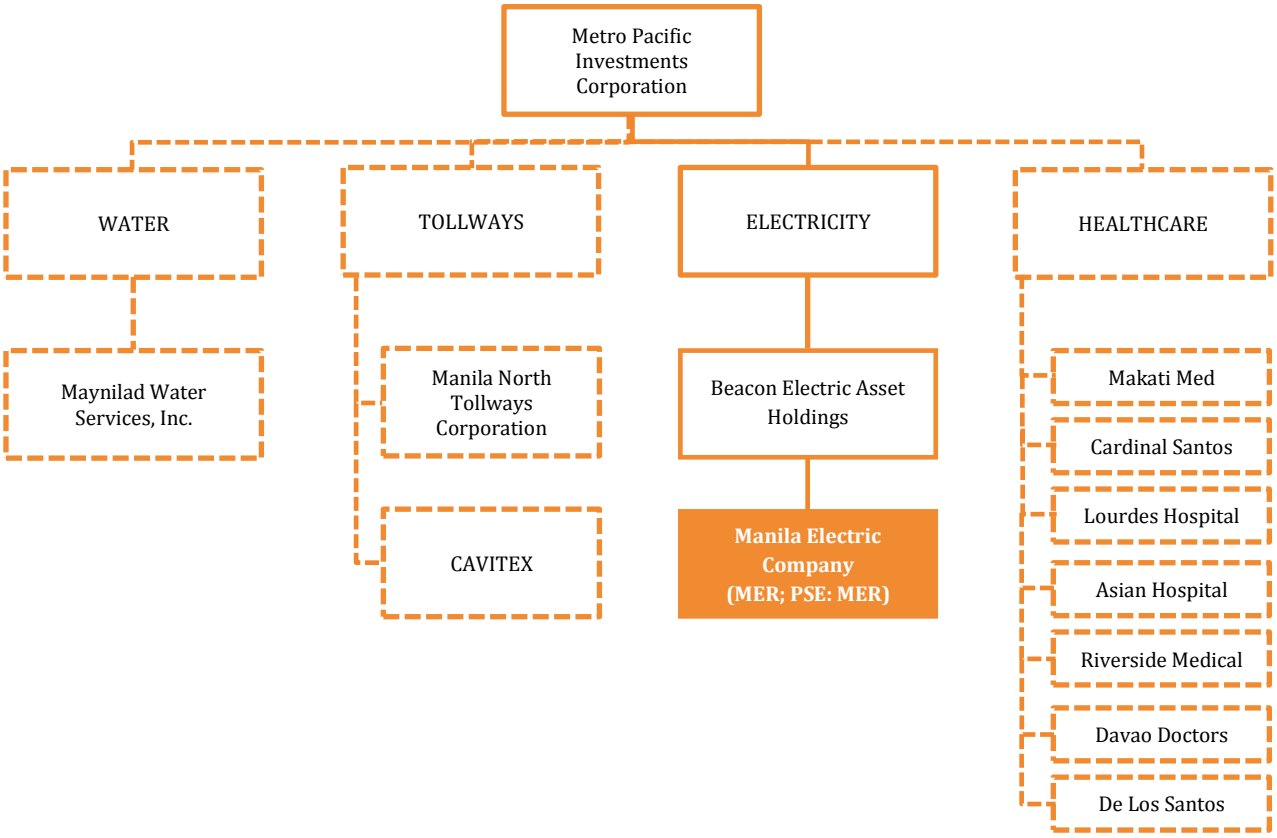
A. Ownership Structure



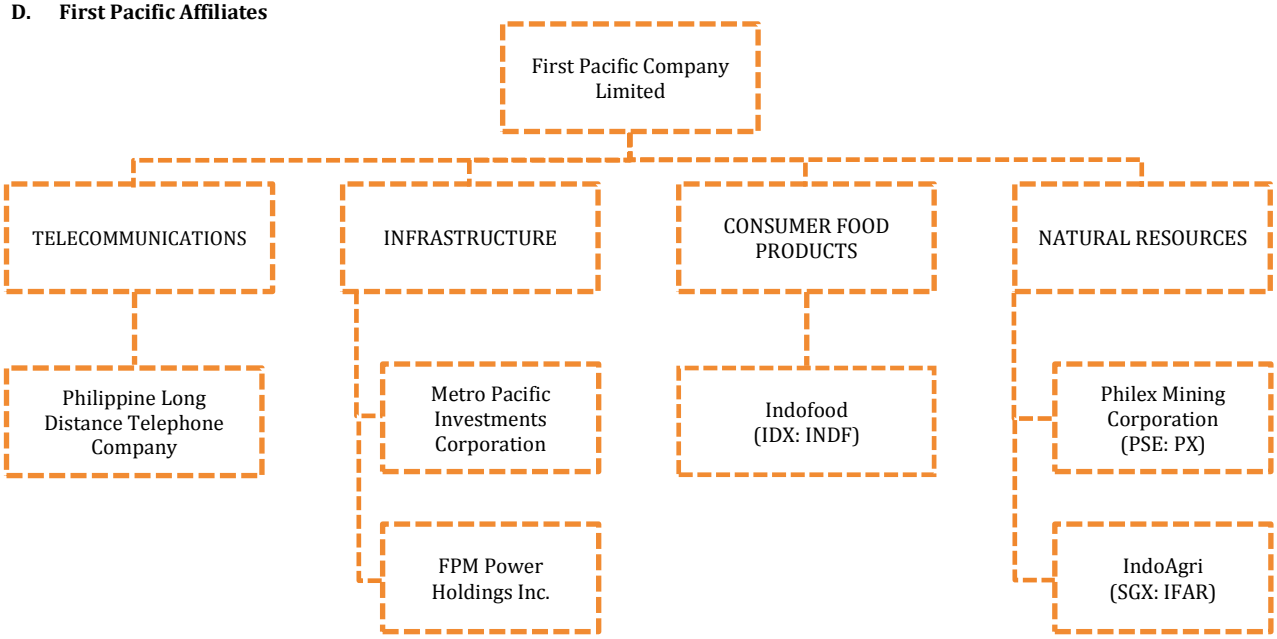
B. Connection to First Pacific Company Limited



C. Metro Pacific Investments Corporation Subsidiaries and Affiliates



D. First Pacific Affiliates



E. Company Profiles of MPI, First Pacific and MER Affiliates

First Pacific Company Limited (First Pacific; HKEx: 142)
First Pacific is a Hong Kong-based investment management and holding company with various operations located in Asia. Its principal investments focus on the following industries: telecommunications, infrastructure, consumer food products, and natural resources. Its Managing Director and CEO is Manuel V. Pangilinan.

Source: *First Pacific website*

First Philippine Holdings Corporation (FPH; PSE: FPH)
FPH manages businesses in energy, real estate, manufacturing, construction and energy services. FPH's energy subsidiary, First Gen Corporation, is the country's leading clean and renewable energy producer, with power plants that use geothermal, hydro, and natural gas for fuel. FPH also manages the world's largest integrated geothermal power producer, Energy Development Corporation. FPH's Chairman and CEO is Federico R. Lopez.

Source: *FPH website*

Maynilad Water Services, Inc. (Maynilad)
Maynilad is the exclusive water and wastewater services provider for the West Zone of the greater Metro Manila area. Its President and CEO is Ricky Vargas.

Source: *Maynilad website*

Metro Pacific Investments Corporation (MPI; PSE: MPI)
MPI is an investment management and holding company focused the following industries: water, tollways, electricity, and healthcare. MPI currently has the largest hospital network listed in the PSE. The company's Chairman is Manuel V. Pangilinan.

Source: *First Pac website, MPI website*

Philex Mining Corporation (Philex; PSE: PX)
Philex is primarily engaged in large-scale exploration, development, and utilization of mineral resources. Its Chairman is Manuel V. Pangilinan.

Source: *Philex website*

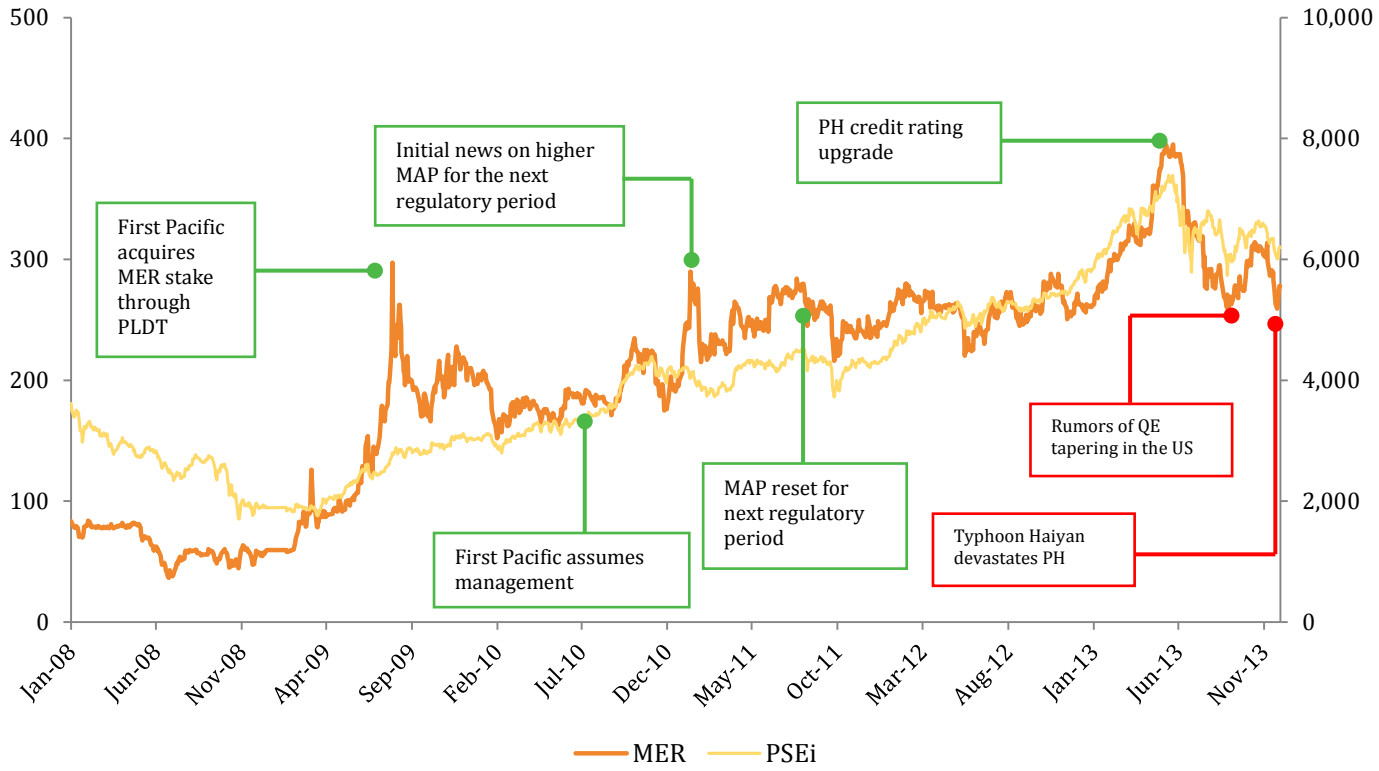
Philippine Long Distance Telephone Company (PLDT; PSE: TEL; NYSE: PHI)
PLDT is the leading telecommunications service provider in the Philippines. It offers diversified telecommunications services across fiber optic backbone and wireless, fixed line, broadband, and satellite networks. PLDT's Chairman is Manuel V. Pangilinan

Source: *PLDT website, First Pacific website*

San Miguel Corporation (SMC; PSE: SMC)
SMC is the Philippine's largest beverage, food and packaging company. SMC has a diverse investment portfolio, with businesses operating in various industries: fuel and oil infrastructures, packaging, properties, power and energy, and aviation. Its Chairman and CEO is Eduardo M. Cojuanco, Jr.

Source: *SMC website*

Appendix 24: MER Share Prices against PSEi

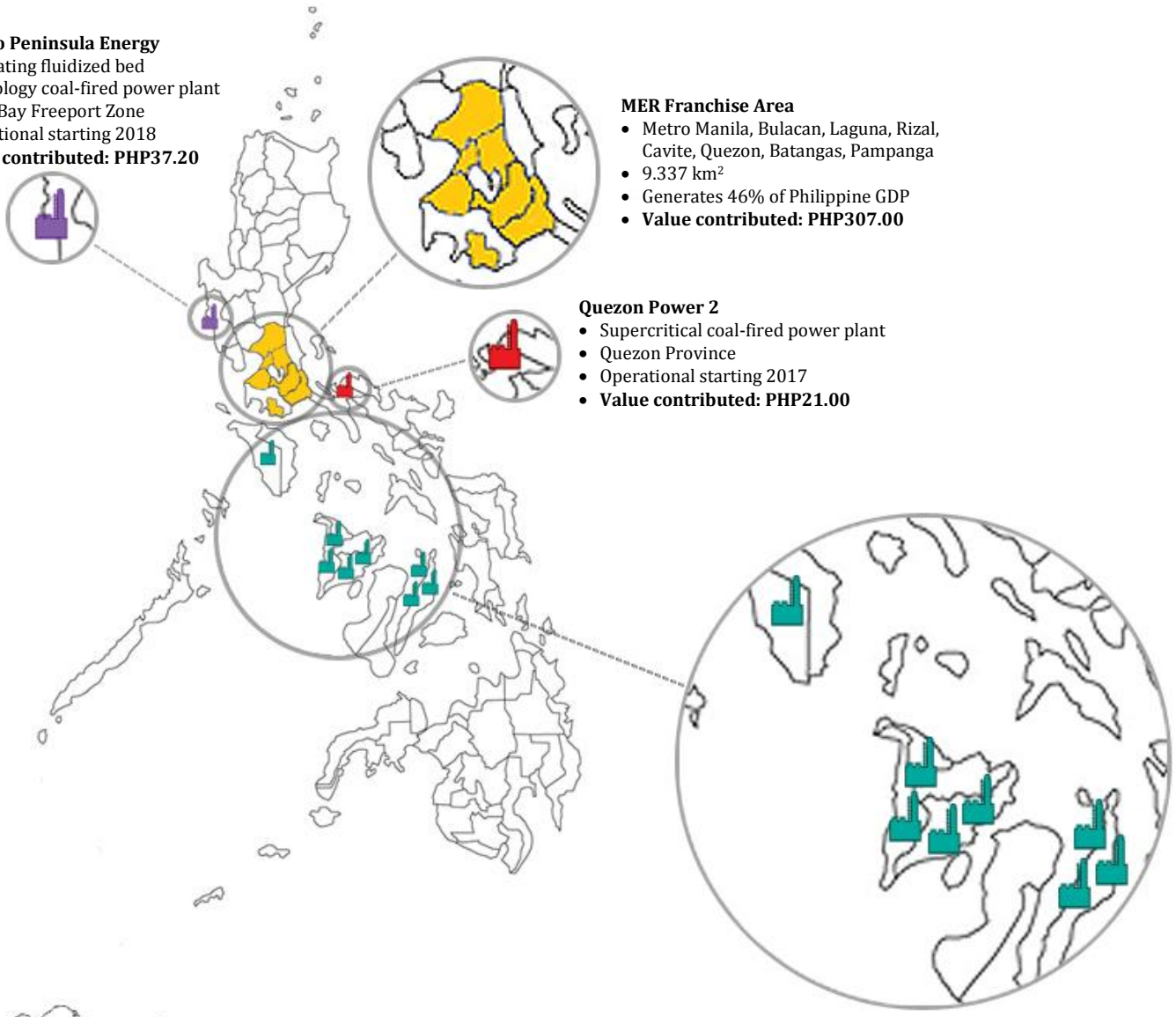


Appendix 25: MER Generation Projects and Respective Ownership Levels

	Pacific Light	RP Energy	Quezon Power2	Global Business Power
Type	LNG-fired Power Plant	Circulating Fluidized Bed Coal-fired Power Plant	Supercritical Coal-fired Power Plant	Portfolio of coal and diesel
Installed Capacity	2x400MW	2x300MW	460MW	665MW
Location	Jurong Island, Singapore	Subic Bay Freeport Zone, Philippines	Quezon Province, Philippines	Quezon Province, Philippines
MERALCO Ownership	28%	47%	Currently 49%, Up to 51%	20%
Partners	First Pacific, Petronas	Aboitiz Power, Taiwan Cogeneration	Electricity Generating Public Company Ltd.	-
Expected COD	2014	2018	2017	Already in operation
EP Contractors	Siemens and Samsung C&T Corporation	Still to be awarded	Still to be awarded	-
Off-take Contract	Combination of vesting contracts, retail contracts and merchant	Bilateral Contracts with MERALCO	Bilateral Contracts with MERALCO	Power Supply Agreements

Appendix 26: MER Franchise Area and Locations of Power Plants

Redondo Peninsula Energy
- Circulating fluidized bed technology coal-fired power plant
- Subic Bay Freeport Zone
- Operational starting 2018
- **Value contributed: PHP37.20**



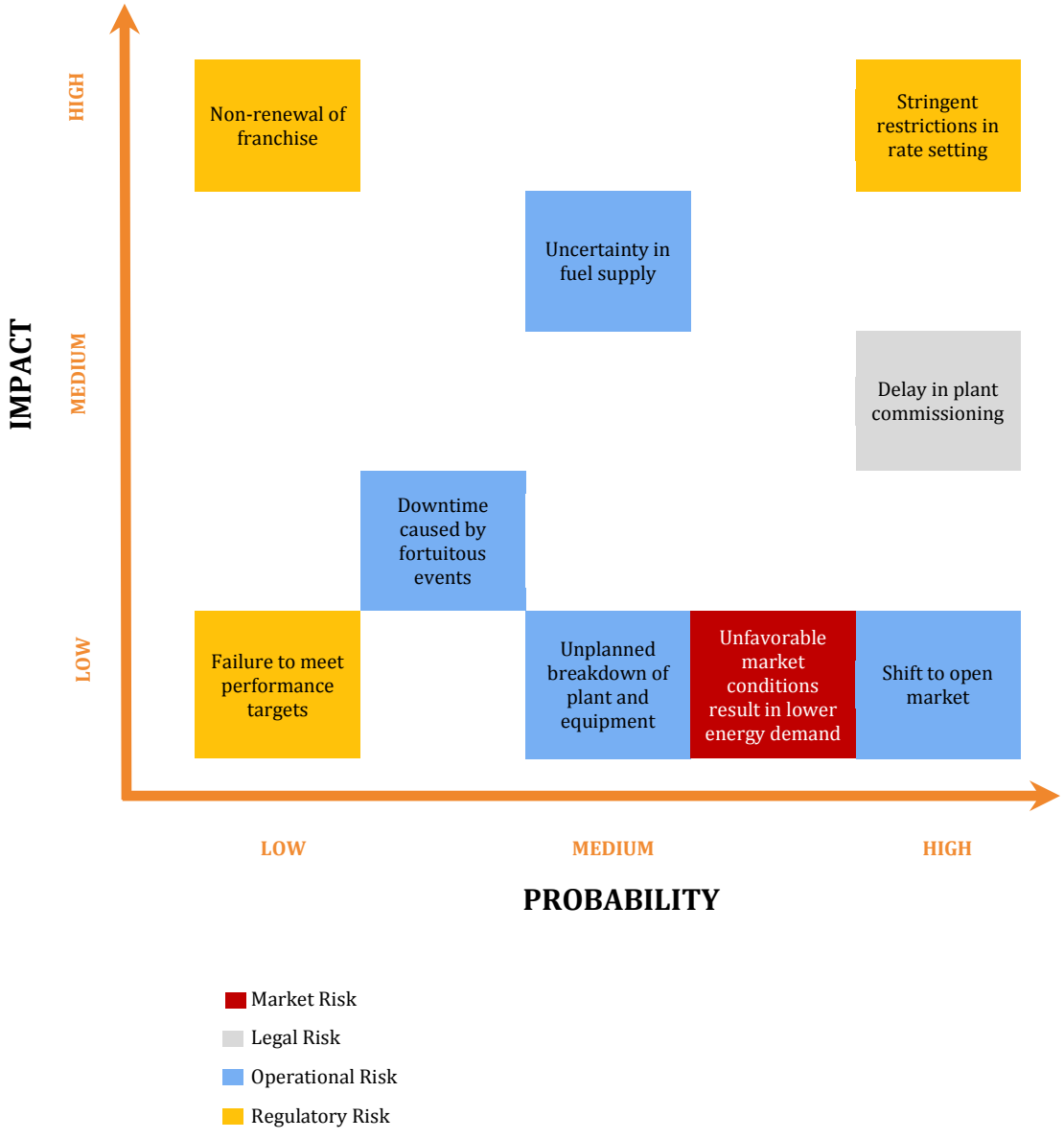
MER Franchise Area
- Metro Manila, Bulacan, Laguna, Rizal, Cavite, Quezon, Batangas, Pampanga
- 9.337 km^2
- Generates 46% of Philippine GDP
- **Value contributed: PHP307.00**

Quezon Power 2
- Supercritical coal-fired power plant
- Quezon Province
- Operational starting 2017
- **Value contributed: PHP21.00**

Global Business Power
- Portfolio of coal and diesel-fired power plants
- Mindoro, Luzon and Cebu, Visayas
- Already operational
- **Value contributed: PHP8.40**

PacificLight Power Pte Ltd
- LNG-fired power plant
- Jurong Island, Singapore
- Operational starting 2014
- **Value contributed: PHP23.80**

Appendix 27: Risk Matrix



Appendix 28: Salient Points on Retail Competition and Open Access

Key Points	Summary
Definition of RCOA	RCOA refers to the provision of electricity to a Contestable Customer (CC) by suppliers through open access, allowing any qualified person the use of transmission, and/or distribution system and associated facilities subject to the payment of transmission and/or distribution retail wheeling rates duly approved by the Energy Regulatory Commission (ERC)
Definition of Contestable Customers	CCs are electricity end-users, having a monthly average consumption of at least 1 Megawatt, who have a choice of a supplier of electricity, as may be determined by the ERC. All CCs are mandated to shift to open access in accordance with Electric Power Industry Reform Act (EPIRA)
Definition of RES	RES refers to any person or entity authorized by the ERC to sell, broker, market or aggregate electricity to CCs while LRES refers to the non-regulated business segment of the Distribution Utility (DU) authorized by the ERC to supply electricity to the CCs within the DU's franchise area only, or persons authorized by appropriate entities to supply electricity within their respective economic zones.
Changes brought about by RCOA	*Before:* DUs procure energy on behalf of all its customers and delivers the energy through its distribution wires. *After:* Competing RES will do the buying and selling of electricity, and have the DU deliver the energy for them through the DU's existing distribution wires. The customer will have the power to choose its electricity source from RES/LRES, thereby getting the best deal in terms of price and value for money
Selecting a RES	A licensed RES may now market its services to customers. However, customers are encouraged to consider more than one offer to maximize their opportunity in getting the best deal. Once the customer has decided on a particular RES, the two parties shall enter into a Retail Supply Contract (RSC). CC must make sure that their RES has a valid RES license issued by the ERC
Failure to select an RES	The customer may opt to enter into a contract with the Supplier of Last Resort (SOLR) or it will be physically disconnected, which will leave the customer without electricity until in contracts with a RES or the SOLR. CC seeks an SOLR that shall provide back-up supply of electricity in any of the following cases: • CC fails to choose an RES • CC is not able to find an RES that is willing to serve him • The same rule shall apply to the customer if its contract with an RES expires and it does not renew or contract with a new RES
Necessary Documents	A CC must be provided a copy of Disclosure Statement which contains all details of the RES' offer, applicable fees and charges, promos, and other value added services, and an original copy of the RSC.
RES Prices	Under RCOA, RES may now earn a margin on generation charge. The Local RES retail rate is a competitive rate, meaning it is not regulated by the ERC. Prices of electricity to be charged by the Local RES may be similar to a regulated rate of a DU, or a rate similar to other RES.
Fees from CCs	Pass-through charges which include transmission charges, system loss charges, lifeline rate subsidy, local franchise tax, business tax, senior citizen discounts, over/under recoveries on pass-through charges, universal charge and other ERC-approved charges shall be collected from the CC (in accordance with ERC Resolution No. 16, Series of 2009). These fees will be collected from the CCs by the RES and remitted to the respective
Provision for non-compliance	Section 13 of the Transitory Rules for the Implementation of Open Access and Retail Competition states that: "The ERC shall impose the appropriate fines and penalties for any violation or non-compliance with these Rules pursuant to the 'Guidelines to Govern the Imposition of Administrative Sanctions in the Form of Fines and Penalties Pursuant to Section 46 of R.A. 9136, as amended."
Relationship with DU after selecting a different RES	No. The Code of Conduct for Competitive Retail Market Participants directs the DU to provide fair and non-discriminatory access to its facilities and regulated services, and no preferential treatment should be given to its Local RES or any other affiliate company. The essence of open access is for a transmission service provider and distribution utility to allow any entity the use of its facilities and the availment of its services. Violation of the said rules shall be dealt with accordingly by the ERC
Arrangement between DU, RES, and NGCP	The RES will transact with the DU on behalf of the contestable customer for the Distribution Wheeling Service. The DU shall be responsible for procuring and charging for Transmission Wheeling Service on behalf of the contestable customers that are connected to the distribution network. The RES will handle the provision of billing, settlement and collection services in behalf of its customers. (Wheeling is a technical term for the delivery of electricity through the facilities of NGCP and DUs)
Open Access and Retail Competition Setup	**a. DU and RES** The relationship between a DU and a RES would be defined by the Distribution Wheeling Service Agreement (DWSA). Prior to the EPIRA, the DWSA was between the DU and the CC. The RES would be entering into the DWSA on behalf of the CC. The RES would be billed by the DU for wheeling service, which in turn would be passed through charge by the RES to the CC. **b. CC and DU** The relationship between a CC and a DU would be defined by the Connection Agreement (CA). There would be a one-time fee based on the facilities that were connected to and the materials used in the process of connecting the CC to the DU lines. The relationship would be limited to this. Should the CC be disconnected for any reason and request for reconnection, a reconnection fee would again be charged on the same basis.

Sources: *Frequently Asked Questions. Buy Your Electircity.com.ph. Retrieved from <http://www.buyyourelectricity.com.ph/i-faqs.htm> Module III: RCOA Fundamentals. Wholesale Electricity Spot Market Presentation Transitory Rules for the Initial Implementation of Open Access and Retail Competition promulgated by the Energy Regulatory Commission*

Appendix 29: Glossary

Sachet Pricing Technique – A pricing strategy used to provide an affordable alternative to low-income customers

Gross Capacity – Installed capacity of a power plant in terms of Megawatts

ERC RDWR – Energy Regulatory Commission Rules for setting Distribution Wheeling Rates.

Annual Revenue Requirement – Total amount of revenue a DU is allowed to receive per year. This is determined by summing all of the Primary Building Blocks

Primary Building Blocks - Financial Building Blocks which will form the basis of calculating the ARR for a Regulated Distribution System: (1) Operating and maintenance expenditure; (2) taxes other than corporate income tax; (3) regulatory depreciation; (4) return on capital; and (5) corporate income tax

Regulatory Asset Base - Those assets employed by a Regulated Entity to provide efficient Regulated Distribution Services. It covers the Regulated Distribution System assets as well as the Non-system Assets required to support the delivery of Regulated Distribution Services.

Regulatory Depreciation - The depreciation calculated in respect of the Regulatory Asset Base as described in Section 4.10 (ERC RDWR), being one of the building blocks which forms the basis for calculating the annual revenue requirement for a Regulated Distribution System.

Regulatory WACC - The weighted average cost of capital established for the purposes of the performance based regulation of Regulated Entities in accordance with section 4.11 (ERC RDWR).

Performance Indicators *(S-Factor)*

- System average interruption frequency index (SAIFI). A measure of the average number of sustained planned and unplanned service interruptions experienced per customer over the measurement period.
- Planned customer average interruption duration index (CAIDI). A measure of the average duration of planned sustained service interruptions over the measurement period.
- System average interruption duration index (SAIDI). A measure of the average duration of sustained planned and unplanned service interruptions for all customers over the measurement period.
- Voltage regulation. A measure of the probability of Distribution System voltage levels falling outside the boundaries prescribed in the Distribution Code.
- System losses. An indication of total losses on a Regulated Distribution System, including technical and non-technical losses (but excluding administrative losses).

GSL – Guaranteed Service Levels

- GSL 1: Customer experiencing accumulative duration of sustained service interruptions in a Regulatory Year that exceeds the threshold
- GSL 2: Customer experiencing a total number of sustained interruption in a Regulatory Year that exceeds the threshold
- GSL 3: Restoration of supply to a customer after a fault on the secondary distribution network taking longer that the threshold time
- GSL 4: Connection not provided on the day agreed with the customer

Peak Demand – An instance where demand for energy is high. This is usually associated with peak hours during a certain time of day when demand is at its highest.

Heat Rate – Measure of efficiency of a power plant. It is the relationship between the input and output of a plant.

Degradation Factor – Gradual decrease of plant output due to wear and tear.

Fuel Mass Energy Balancing Method – Scientific method for converting heat to energy; A bottom-up approach in determining the required amount of input for a specific output amount.

Household Final Consumption Expenditure (HFCE) – an income account of a country that represents consumer spending.

Energy Sales – Volume of energy sold to customers

Appendix 30: References

[1] Meralco, 2012 Corporate Annual Report (2012).
[2] RA No. 9209: An Act Granting The Manila Electric Company a Franchise (9 Jun 2003).
[3] Meralco, *op. cit.*
[4] Andrada, Rafael L., Closed Door Consultation, (5 Nov 2013).
[5] Meralco, *op. cit.*
[6] RA No. 9136: Electric Power Industry Reform Act (2001).
[7] Energy Regulatory Commission, Rules for Setting Distribution Wheeling Rates for Privately Owned Distribution Utilities Entering Performance Based Regulation (Second and Later Entry Points) (2006).
[8] Meralco, *op. cit.*
[9] Ibid.
[10] Andrada, *op. cit.*
[11] Ibid.
[12] Ibid.
[13] RA No. 9136, *op. cit.*
[14] Meralco, 3rd Quarter Investors' Briefing Report (2013).
[15] Andrada, *op. cit.*
[16] Ibid.
[17] Andrada, Rafael L., Large Group Presentation (2013).
[18] Meralco, 2012 Corporate Annual Report (2012).
[19] Francisco, Rosemarie and Erik dela Cruz, "San Miguel sells stake in Manila Electric for around $2 billion," 30 Sep 2013, Thomson Reuters, 5 Nov 2013 <www.reuters.com>.
[20] Andrada, Rafael L., Closed Door Consultation, (5 Nov 2013).
[21] Meralco, 2011 Corporate Annual Report (2011).
[22] Meralco, 2012 Annual Corporate Governance Report (2013).
[23] Meralco, 2012 Corporate Annual Report (2012).
[24] Ibid.
[25] De Ocampo, Roberto F., The Philippine Economy 2014: Fearless Forecast, (2013).
[26] Ibid.
[27] National Statistical Coordination Board, Philippines, Phil. Economy posts 7% GDP growth in Q3 2013, (2013).
[28] Burgorio, Maricel E., "BPO Revenues to exceed remittances in 5 years, Monetary board official says," 23 Oct 2013, Interaksyon, 14 Nov 2013 <www.interaksyon.com>.
[29] National Statistical Coordination Board, Philippines, GNI and GDP by Expenditure Share (2013).
[30] Banco De Oro, Investors' Briefing (21 Oct 2013).
[31] International Monetary Fund, October 2013 World Economic Outlook, (2013).
[32] Banco De Oro, *op. cit.*
[33] Ibid.
[34] Department of Energy, Power Development Plan 2009 – 2030, (n.d.).
[35] RA No. 9209, *op. cit.*
[36] Department of Energy, *op. cit.*
[37] RA No. 9136, *op. cit.*
[38] Andrada, Rafael L., Closed Door Consultation, (5 Nov 2013).
[39] Ibid.
[40] Ibid.
[41] RA No. 9136, *op. cit.*
[42] Andrada, Rafael L., Closed Door Consultation, (5 Nov 2013).
[43] Energy Regulatory Commission, *op. cit.*
[44] Flores, Alena S., "MERALCO unit still keen on LNG facility," 21 Oct 2013, Manila Standard Today, 12 Nov 2013 <manilastandardtoday.com>.
[45] Meralco, 3rd Quarter Investors' Briefing Report (2013).
[46] Department of Energy, *op. cit.*
[47] First Pacific Company Limited, 2013 Half Year Results, (2013).
[48] Meralco, 2012 Corporate Annual Report (2012).
[49] Meralco, 3rd Quarter Investors' Briefing Report (2013).
[50] RA No. 9136, *op. cit.*
[51] Meralco, 4th Quarter Investors' Briefing Report (2012).
[52] Meralco, 2012 Corporate Annual Report (2012).
[53] Energy Regulatory Commission, *op. cit.*
[54] Supreme Court, G.R. No. 141314, (9 Apr 2003).
[55] Energy Regulatory Commission, Case No. 2010-069: Performance Based Regulation Third Regulatory Period WACC, (2011).
[56] Ybanez, Roy, Rates of Return on Financial Assets in the Philippines, 1987-2012 (Lecture), (2012).
[57] Andrada, Rafael L., Closed Door Consultation, (5 Nov 2013).
[58] SFG Consulting, Estimation of the Regulated Profit Margin for Electricity Retailers in New South Wales, (New South Wales, 2013).
[59] Energy Regulatory Commission, *op. cit.*
[60] Asian Development Bank, ADB Asian Bonds Online, 15 Nov 2013 <asianbondsonline.adb.org>.
[61] YBanez, *op. cit.*
[62] TLI-ERC Case No. 2012-035: In the matter of the application for approval of the Power Supply Agreement between Manila Electric Co. and Therma Luzon Inc., (21 Dec 2012).
[63] First Pacific Company Limited, *op. cit.*
[64] TLI, *op. cit.*
[65] First Pacific Company Limited, *op. cit.*
[66] TLI, *op. cit.*
[67] Andrada, Rafael L., Closed Door Consultation, (5 Nov 2013).
[68] Rajput, R. K., Power System Engineering, New Delhi: Laxmi Publications Ltd (2006).
[69] SKM (Singapore) Pte. Ltd., Review of vesting contract parameters for 2013 and 2014 - Final Report, 11 (30 Sep 2012).
[70] Ibid.
[71] International Monetary Fund, *op. cit.*
[72] Thomson Reuters Eikon, Equity Database (2013).
[73] Damodaran, Aswath, Damodaran Online, 2013, 2 Nov 2013 <people.stern.nyu.edu/~adamodar/>.
[74] Thomson Reuters, *op. cit.*
[75] Energy Regulatory Commission, *op. cit.*
[76] Meralco, 3rd Quarter Investors' Briefing Report (2013).
[77] Aboitiz, Executing Strategy, 2012 Corporate Annual Report (2012).
[78] Meralco, 4th Quarter Investors' Briefing Report (2012).
[79] Meralco, 2012 Corporate Annual Report (2012).
[80] Ibid.
[81] Ibid.
[82] Energy Regulatory Commission, *op. cit.*
[83] Credit Suisse, 2013 Global Outlook: Commodities, (2012).

Disclosures:

Ownership and material conflicts of interest:
The author(s), or a member of their household, of this report does not hold a financial interest in the securities of this company. The author(s), or a member of their household, of this report does not know of the existence of any conflicts of interest that might bias the content or publication of this report.

Receipt of compensation:
Compensation of the author(s) of this report is not based on investment banking revenue.

Position as a officer or director:
The author(s), or a member of their household, does not serve as an officer, director or advisory board member of the subject company.

Market making:
The author(s) does not act as a market maker in the subject company's securities.

Disclaimer:
The information set forth herein has been obtained or derived from sources generally available to the public and believed by the author(s) to be reliable, but the author(s) does not make any representation or warranty, express or implied, as to its accuracy or completeness. The information is not intended to be used as the basis of any investment decisions by any person or entity. This information does not constitute investment advice, nor is it an offer or a solicitation of an offer to buy or sell any security. This report should not be considered to be a recommendation by any individual affiliated with CFA Philippines, CFA Institute or the CFA Institute Research Challenge with regard to this company's stock.

CFA Institute Research Challenge