

# **When Incentives Are Not Enough**

*A Study on How the Philippine Government Can Attract  
Foreign Investments in Renewable Power*

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Master Thesis in MSc in International Business

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This thesis was written as a part of the Master of Science in Economics and Business Administration program - Major in International Business. Neither the institution, nor the advisor is responsible for the theories and methods used, or the results and conclusions drawn, through the approval of this thesis.

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## Acknowledgements

*Writing this thesis would not have been possible without the help and support of the following people to whom I am deeply grateful. First of all, I would like to thank my parents, who have supported me ever since and in all things especially with regard to my studies back home and abroad. Thank you to my other family members: Kuya Hardy, Ate Kats, Bianca, Eric, Yayi, Chloe and PJ, who have always been my inspiration. Thank you to JC, who has supported, encouraged and understood me during these trying times. I would also like to thank Mr. Vince Perez, who have given me the inspiration to push through with my topic; Dr. Asther Sajid and his assistant Ms. Edith Sabas, for allowing me to attend the Energy Summit workshop in ADB; Dr. Michael Clancy and his team, for enthusiastically facilitating the handing out of questionnaires to energy investors; Mr. Ray Cunningham, for his very cooperative assistance to my thesis; all the people who agreed to be interviewed for my thesis, for their time and generosity; my friends, for their care and support all these years; and Professor Gregory Corcos, for his interest and support for this work despite the novelty of my topic. My sincerest gratitude goes to all of you. Of course, thank you also to God, who made all things possible and who deserves all the glory.*

## **Abstract**

In order to face the rising fuel costs that drive high electricity rates in the country, plus the problem of climate change as well as the government's goal to be self-sufficient in energy supply, the Philippines should invest more in renewable energy. However, for lack of sufficient financial resources as well as advanced R&D and technology in renewable power, the country will rely mostly on foreign firms for these types of investments.

This study was geared, therefore, into looking for ways on how the Philippine government can make the country attractive to foreign direct investments (FDIs) in renewable energy.

In principle, the Philippines should be attractive to renewable power investors because of its abundant renewable resources, high electricity demand, attractive tariffs, and available fiscal and non-fiscal incentives. However, research, interviews and surveys revealed that incentives are not enough to entice these foreign investors to the country. What is needed is for the government to ensure a stable business climate and streamlined process for opening a business in order to reduce the cost of doing business in the country. Furthermore, it should expedite the passage of the Renewable Energy Bill into law to manifest a mandatory support to and promotion of the use of renewable energy in the country.

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## List of Acronyms

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
DU	Distribution Utility
EPIRA	Electric Power Industry Reform Act
ERB	Energy Regulatory Board
ERC	Energy Regulatory Commission
EU	European Union
EVAT	Expanded Value Added Tax
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IPP	Independent Power Producer
MW	Megawatt
NEA	National Electrification Administration
NPC	National Power Corporation
OECD	Organisation for Economic Co-operation and Development
PPA	Purchase Power Agreement
PSALM	Power Sector Assets and Liabilities Management Corporation
RA	Republic Act
RE	Renewable Energy

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RPS	Renewable Portfolio Standard
UN	United Nations
UNCTAD	United Nations Conference on Trade Development
UNEP	United Nations Environment Programme
US	United States
VAT	Value Added Tax
WESM	Wholesale Electricity Spot Market



## Methodology

The method to gather data is mainly interviews/questionnaires conducted with foreign investors and major players in the industry. These data and information were collected and analyzed together with others that were gathered from the web, libraries, newspapers, workshops and the like, in order to come up with recommendations on how the government can make the Philippines attractive to foreign investments on renewable energy.

The interviews were conducted with the following resource persons:

- Mr. Vince Perez – former Energy Secretary of the Philippines and current President and CEO of Alternenergy (January 2008)
- Dr. Peter Lee U – Assistant Professor and Dean, School of Economics, University of Asia and the Pacific (24 January 2008)
- Mr. Fortunato Sibayan – Officer-in-Charge of the Renewable Energy Management Division of the Department of Energy (7 February 2008)
- Dr. Asther Sajid – consultant to the Department of Energy (9 February 2008)
- Ms. Irma C. Exconde – Assistant Director of the Electric Power Industry Management Bureau of the Department of Energy (5 March 2008)
- Atty. Saturnino Juan – Executive Director of the Energy Regulatory Commission (13 March 2008)
- Mr. Ray Cunningham – responsible for acquisition opportunities and for developing new renewable resource projects for CalEnergy International Ltd (15 March 2008)
- Mr. Melburgo Chu – Vice-President for Hydro Generation of the National Power Corporation (17 March 2008)
- Mr. Alfonso Alba – Assistant Manager for Business Development, European Chamber of Commerce in the Philippines (18 March 2008)
- Mr. Torbjørn Elliot Kikerby-Garstad - SN Power Project Director for Asia (19 March 2008)

The questionnaires were sent out to energy investors with the help of the Dr. Michael Clancy, president of the Philippines Business Leaders Forum, Inc. (associated with the Economic Intelligence Unit), who distributed the same to about 36 companies, of which, seven replied. They are:

- Alternergy
- Chevron
- CalEnergy
- Philcarbon
- Quezon Power
- SN Power
- Trans-Asia Power

The workshops/seminars I attended about renewable energy or the power industry were the following:

- Philippine Energy Summit 2008 “\$100 per Barrel: Crisis or Opportunity?” – Department of Energy (29 Jan – 2 Feb 2008)
- Opportunities Abound: Prospects for Renewable Energy – American Chamber of Commerce in the Philippines (29 February 2008)
- Competition, Lower Prices in Electricity – Asian Institute of Management (11 March 2008)

## 1. Statement of the Problem

With the continuous surge in oil and other fossil-based fuel prices, plus the emerging problem of climate change, renewable power seems to be the answer to these pressing problems. For lack of sufficient financial capital and advanced technology in renewable power plants, the Philippines may need to turn to foreign investors for these much-needed projects.

Renewable power investments are increasing around the world but the Philippines, despite its existing fiscal and non-fiscal incentives, is not getting a lot of these investments into the country. For this reason, this paper attempts to answer this question: *How can the Philippine government attract foreign direct investments or FDIs in renewable energy?*

## 2. Rationale for the Study

### 2.1 Why renewable energy in the Philippines

#### 2.1.1 High electricity rates

When early this year the oil price reached \$100 a barrel, the world became more alarmed that one of its most vital commodities was not getting any cheaper and may not be able to meet its growing needs. Because of this, it refocused itself to look into other possible sources of energy that may not be as expensive or at least not as scarce and limited as fossil fuels to avoid the same hike which happened to the oil price because of tight supply versus increasing demand.

This phenomenon gravely affected the oil importing countries including the Philippines which imports substantially all of its oil requirements (See Table 1).

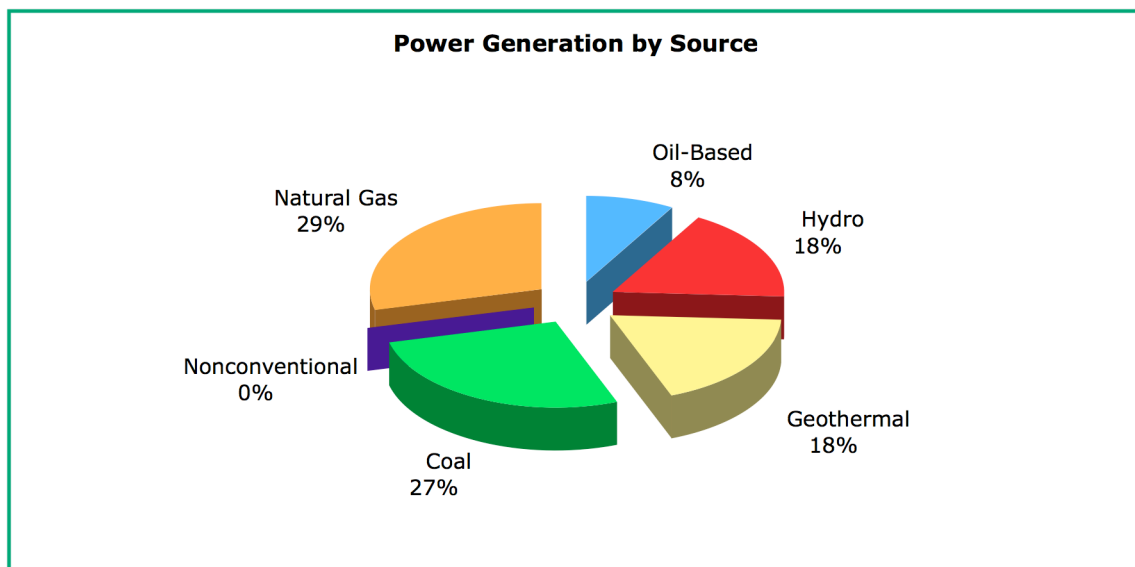
**Table 1. Philippines Energy Data: Petroleum**

<b>Philippines Energy Data</b>	2000	2001	2002	2003	2004	2005	2006
<b>Petroleum (Thousand Barrels per Day)</b>							
<b>Total Oil Production</b> (Production of crude oil including lease condensate, natural gas plant liquids, and other liquids, and refinery processing gain (loss). Negative value indicates refinery processing loss.)	-0.4	7.8	10.4	14.1	24.3	24.3	24.3
<b>Crude Oil Production</b> (Includes lease condensate.)	1.1	8.5	9.9	13.8	25	25	25
<b>Consumption</b> (Consumption of petroleum products and direct combustion of crude oil.)	352.8	346.9	337.8	332.6	337.2	340	340
<b>Net Exports/Imports(-)</b> (Net Exports = Total Oil Production-Consumption. Negative numbers are Net Imports.)	-353.2	-339	-327.3	-318.5	-312.9	-315.7	-315.7
<b>Total Oil Exports to U.S.</b> (Total crude oil and petroleum products. Data through 2006 is currently available.)	NA	NA	NA	NA	NA	0	NA
<b>Refinery Capacity</b> (Crude oil distillation capacity as of January 1. Sources: U.S. data from EIA; Other countries from Oil & Gas Journal.)	401	419.5	419.5	419.5	333	333	333
<b>Proved Reserves</b> (Billion Barrels) (As of January 1. Sources: U.S. data from EIA; Other countries from Oil & Gas Journal.)	0.3	0.3	0.2	0.2	0.2	0.2	0.1

Source: Energy Information Administration / International Energy Outlook

Oil is used not only in transportation but in the generation of energy as well. Although as of 2006, the country is said to be generating only 8% (Figure 1) of its power from oil-based plants, the other bulk (56%) of its energy power source comes from coal and natural gas.

**Figure 1. Power Generation by Source**



Source: Department of Energy

Coal is another commodity that is “popular” because of its importance as an alternate energy source for oil. However, like oil, its prices are surging in the world market because of increasing demand. Even China, which used to be a net exporter of oil has now become a net importer when in the mid-2007, it started buying its coal requirements overseas.

Natural gas, on the other hand, has a historical price tie up with oil. A study showed that the relationship between oil and gas price over the years is about 7.5:1. Although the price of oil is still significantly higher than the price of natural gas – mainly because a barrel of oil produces 6 times the energy of an equivalent amount of natural gas - a hike in oil price will lead to increases in natural gas prices as well.

These incidents aggravate the fact that currently, the Philippines follows Cambodia as having the highest electricity cost in Southeast Asia. Because of this, foreign manufacturing

companies which established their production plants in the country are slowly moving out to a cheaper destination in the region. And this costs the country capital outflows as well as jobs for many Filipinos.

Although renewable energy power plants are more expensive to build compared with the conventional ones, the operating or marginal costs are substantially lower (since wind, water or solar energy are technically free). Hence with the proper financing, electricity from these energy sources will be cheaper in the long run.

One might argue that the price of electricity is based on the average costs of all power plants owned by the generation company. Currently, the biggest one is the government-owned National Power Corporation or NPC, which controls a majority of these plants. Hence, additional renewable energy plants will have minimal impact on the price of electricity. However, these power plants are already being sold to private investors. Moreover, with the introduction of the Wholesale Electricity Spot Market (WESM) as well as the upcoming “open-access” policy wherein consumers are given the choice to pick the source of energy from which they want their electricity to be generated, the lower cost of certain power plants will be felt more in the electricity market. The open access policy will be implemented as soon as 70% of the government-owned power plants have been privatized. As of October 17, 2007, 43% were already sold to private investors.

### **2.1.2 Climate Change**

Much has already been said about climate change as well as the adverse contribution of fossil fuels (coal, oil and natural gas) to the environment. Because of this, worldwide concern has spawned initiatives in reducing carbon dioxide emissions through efficient use of energy as well as utilization of alternative energy sources. For example, Australia spearheaded the Earth Hour wherein for one hour during a specified day, supporters of the event will turn off all their lights in order to conserve energy thereby reducing carbon dioxide emissions, which is believed to have led to global warming. On a wider scale, the United Nations included in its Millennium Development Goals that countries should find and make use of alternative sources of energy that are not harmful to the environment.

Because of this, the Philippines cannot turn a deaf ear but instead find ways to contribute to helping reduce pollution by utilizing renewables like wind, water and solar energy.

### 2.1.3 Self-sufficiency

As mentioned above, the Philippines relies on import for practically all its oil (and coal) consumption. Consequently, the country is highly susceptible to volatility in fossil fuel prices as well as foreign currency exchange risks. In order to shield the country from these unfavorable circumstances, the government aims to achieve 60% energy self-sufficiency by 2030 (Ang 2008). Since the country has very minimal and insignificant oil and coal production, but abundant renewable energy sources, it can reach this goal by encouraging investors to build renewable energy power plants.

Moreover, being an archipelago, the Philippines has many off-grid and sparsely populated areas that would be prohibitively impractical to connect to existing transmission lines. Hence, renewable energy plants such as mini-hydro as well as solar panels may be the most feasible way to provide electricity to households in these vicinities.

**Figure 2. Map of the Philippines**



Source: [www.geology.com](http://www.geology.com)

## 2.2 Why FDIs?

By its nature, renewable power plants entail a huge amount of capital (Perez 2008). In developing countries like the Philippines whose GDP per capita is just over US\$ 1,000 (among the lowest 25%), there are not so many local private investors who can afford this. Moreover, advanced R&D resources required to develop renewable energy technologies are again lacking or at least not sufficient in the Philippines. The government cannot also be depended on to invest in these operations as they have other priorities (especially on poverty and other social issues) on which to spend their minimal budget. As a matter of fact, the Philippine government is in the process of selling its generation plants to raise capital in order to settle the government-owned National Power Corporation's debts as well as to improve the electricity supply in the country at more affordable prices.

Given these reasons, the country would need foreign investors to inject financial capital as well as the necessary advanced renewable energy technology in the Philippines.



### 3. Theory: What makes a country attractive to FDIs?

A successful firm wishing to enter foreign markets can do so in three ways: exporting, contractual entry mode (such as licensing and franchising among others), and investment entry mode (joint venture, acquisition, greenfield, and the like). The amount of company resources – financial, physical, human, etc - committed to the new venture, as well as the risk involved, increases from the first to the third mode of entry. When we speak of foreign direct investments (FDI), we refer to the third category of entry mode.

FDI flows have increased over the years. Data from the UNCTAD shows that in the last decade, world FDI inflows and outflows have almost doubled in size (see Table 2). This is a sign of strong economic performance in many parts of the world (UNCTAD 2007).

**Table 2. FDI Flows, by Selected Region, 1995 - 2006**

Region/economy	FDI inflows							FDI outflows						
	1995-2000 (Annual average)	2001	2002	2003	2004	2005	2006	1995-2000 (Annual average)	2001	2002	2003	2004	2005	2006
Developed economies	543.9	609.0	442.3	361.2	418.9	590.3	857.5	638.5	662.2	488.2	504.0	746.0	706.7	1 022.7
Europe	326.2	392.7	314.6	277.1	209.2	495.0	566.4	450.6	454.5	280.0	308.5	394.5	691.2	668.7
European Union	312.9	381.6	307.3	256.7	204.2	486.4	531.0	421.3	435.0	265.7	286.7	359.9	608.8	572.4
Japan	4.6	6.2	9.2	6.3	7.8	2.8	- 6.5	25.1	38.3	32.3	28.8	31.0	45.8	50.3
United States	169.7	159.5	74.5	53.1	135.8	101.0	175.4	125.9	124.9	134.9	129.4	258.0	- 27.7	216.6
Other developed countries	43.3	50.6	44.0	24.6	66.0	- 8.5	122.2	36.9	44.5	40.9	37.3	62.6	- 2.5	87.1
Developing economies	188.0	212.0	166.3	178.7	283.0	314.3	379.1	74.3	80.6	47.9	45.4	117.3	115.9	174.4
Africa	9.0	20.0	13.6	18.7	18.0	29.6	35.5	2.4	- 3.0	0.3	1.3	2.1	2.3	8.2
Latin America and the Caribbean	72.6	78.5	54.3	44.7	94.3	75.5	83.8	21.1	36.5	12.1	21.6	27.8	35.7	49.1
Asia and Oceania	106.3	113.6	98.4	115.3	170.7	209.1	259.8	50.8	47.1	35.4	22.4	87.5	77.8	117.1
Asia	105.8	113.5	98.3	115.0	170.0	208.7	259.4	50.8	47.1	35.4	22.4	87.5	77.7	117.1
West Asia	3.3	7.2	5.6	12.4	20.8	41.6	59.9	0.8	- 1.1	1.5	- 2.3	8.1	13.4	14.1
East Asia	70.7	79.1	67.7	72.7	106.3	116.3	125.8	39.6	26.1	27.6	17.4	62.9	49.8	74.1
China	41.8	46.9	52.7	53.5	60.6	72.4	69.5	2.0	6.9	2.5	2.9	5.5	12.3	16.1
South Asia	3.9	6.4	7.0	5.5	7.6	9.9	22.3	0.2	1.4	1.7	1.9	2.2	2.6	9.8
South-East Asia	27.9	20.7	18.0	24.5	35.2	41.1	51.5	10.2	20.7	4.7	5.3	14.2	11.9	19.1
Oceania	0.5	0.1	0.1	0.3	0.7	0.4	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.0
South-East Europe and CIS	8.8	11.5	13.4	24.2	40.3	41.2	69.3	2.0	2.7	4.7	10.7	14.0	14.6	18.7
South-East Europe	2.7	4.3	4.3	8.4	13.4	15.1	26.3	0.1	0.1	0.6	0.2	0.2	0.6	0.6
CIS	6.1	7.3	9.1	15.8	26.9	26.0	42.9	1.9	2.5	4.1	10.6	13.8	14.0	18.1
World	740.7	832.6	622.0	564.1	742.1	945.6	1 305.9	714.8	745.5	540.7	560.1	877.3	837.2	1 215.8
Memorandum: percentage share in world FDI flows														
Developed economies	73.4	73.2	71.1	64.0	56.4	62.4	65.7	89.3	88.8	90.3	90.0	85.0	84.4	84.1
Developing economies	25.4	25.5	26.7	31.7	38.1	33.2	29.0	10.4	10.8	8.9	8.1	13.4	13.8	14.3
South-East Europe and CIS	1.2	1.4	2.2	4.3	5.4	4.4	5.3	0.3	0.4	0.9	1.9	1.6	1.7	1.5

Source: UNCTAD, *World Investment Report 2007: Transnational Corporations, Extractive Industries and Development*, annex table B.1 and FDI/TNC database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).

However, because of the substantial amount of resources and high risk involved, not all firms are ready for this type of entry mode.

In 1977, John H. Dunning established three conditions that will determine whether or not a company would engage in foreign direct investment. For this, we have the famous OLI framework, which stands for the three factors: Ownership Advantage (firm-specific), Location Advantage (country-specific) and Internationalization Advantage. Among the three, this paper is most interested in the second factor (location advantage) in that it determines what conditions make a country attractive to renewable power investments.

Before going into the detail of these location advantages, first, it is important to know the motives or drivers behind the internationalization of these foreign firms. These drivers will likewise determine where the firm will locate outside of their home country. Dunning (1993) identifies four main motives why firms internationalize. These are: market-seeking, resource-seeking, efficiency-seeking, and strategic-asset seeking motives.

Market-seeking motives will drive the firm to enter foreign nations with a substantial market size or growing demand for their product or service. This is especially true when home market is already saturated.

Resource-seeking motives will move the firm to invest in foreign countries with resources which are either cheaper than or does not exist at all in their home country.

Efficiency-seeking motives will entice the firm to locate in countries with different factor endowments, cultures, institutional frameworks, and economic environment, which could translate to benefits such as, lower costs or risks.

On the other hand, strategic-asset seeking motives will drive the company to locate in countries with advanced know-how and technology to acquire or develop their strategic-assets.

After knowing why firms go abroad, the next question is “Where do they go?” To answer this, the second factor in the OLI framework mentioned earlier will help us. In other words, firms need to know the location advantages of target countries in order to decide in which market they will invest. We call these advantages, country determinants. Below are host country determinants that guide foreign investors in successfully choosing where to locate their foreign operations (Barba-Navaretti, et al 2004).

### 3.1 Gravity relationship

The so-called “gravity” relationship pertains to the closeness between two markets which may be in terms of the income or GDP of each country; geography, location or border; and language or culture. A possible host country that has “gravity pulls” as mentioned above, may be attractive to a nearby foreign direct investor. Hence, a large portion of world FDI takes place in neighboring countries. Examples of these types of investments are the following: intra-EU FDI, US investments in Canada and Mexico, EU investments in Central and Eastern Europe, and Japanese investments in Asian countries.

### 3.2 Trade costs

Trade costs may include transport costs, distance, and trade policy barriers. They are very important determinants of FDI. High trade costs naturally discourage FDIs as they decrease firm profits.

### 3.3 Size of the market

Especially for market-seeking FDIs, the size of the foreign market matters a lot in the firm’s investing decision. A large existing or potential market is appealing to foreign investors. As can be seen in Table 2 above, the US and the EU dominate the recipients of FDI flows. Since FDI entail a huge amount of fixed costs, foreign investors are attracted to big markets wherein sales could support or recover this substantial amount of overhead.

### 3.4 Factor cost differentials

FDIs take place in countries with different factor endowments and factor costs. The surge in North/South regional investments – such as between the US and Mexico or between the EU and Central and Eastern European countries - in the 1990s can be explained by this theory. The recent gushing of multinationals to China for the production of their goods also confirms this phenomenon. Hence, countries that have abundant factor endowments and lower factor costs are attractive to foreign investors.

### 3.5 Tax differentials and policies

Countries that provide generous incentives such as direct subsidies, tax rebates, and other policies favorable to FDIs may be attractive to foreign investors. This is because these measures reduce fixed or operating costs of setting up a foreign subsidiary in the host country. However, these benefits have to be considered along with other factors such as those already mentioned above. Hence, a developing country may not be successful in attracting FDIs by merely granting fiscal or non-fiscal incentives without addressing structural constraints.

### 3.6 Other Factors

Other factors that make a potential host country attractive are adequate infrastructure, (low or reasonable) cost of doing business, and economic, political, and social stability (UNCTAD 1998).

In a more specific study made on power generation companies, Standard & Poor's DRI classified the factors that affect foreign investment in power generation into three general

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categories: (1) market opportunities, (2) business climate, and (3) technology advantages (Intorcio 2000).

Market opportunities are assessed in terms of the following characteristics of the market:

- Annual demand growth
- (Energy) capacity additions required
- Percentage of capacity additions expected to be met by independent power producers or IPPs
- Relative competitiveness of the electricity industry
- Enforceability of private and government contracts
- Environmental regulations
- Import regulations
- Infrastructure disruption or shortages
- Relative electricity prices

The above market opportunities must be complemented by a favorable investment climate in order to attract foreign investments. DRI has established seven factors that impact the business climate for power generation investment. These are (in no particular order):

- Revenue and repatriation risks
- Ownership of business and equities by non-residents
- Real currency depreciation
- Factor costs
- Domestic political risk
- Inflation
- Interest rate

Finally, there should be technology advantages in terms of costs and fuel diversity in order to entice foreign investments. The former (technology cost advantage) mainly refers to the investing company's competitive advantage in terms of its technology in comparison with those already existing in the target country. The latter means the presence of a diverse fuel mix which makes the country less vulnerable to environmental risks.

For renewable power firms, we add the following random characteristics that foreign companies look for in target countries (Ernst & Young 2006).

- Abundant renewable natural resources (and resource quality e.g. wind speed and sun index)
- Off-take price and length of purchase power agreements or PPAs
- Access to finance; grant/soft loan availability
- Connectivity to grids (except for solar which is good for isolated grids)
- Tax climate
- Project size
- Cost of import (since most of the technology – machineries and equipment will be imported from abroad)

## **4. Analysis and Findings**

### **4.1 Country Assessment (The Philippines)**

#### **4.1.1 Economy**

The Philippines is a developing country in the Asia Pacific region, in particular, Southeast Asia. It has been progressive in the region in terms of liberalizing the economy and privatizing state-owned firms. Its economy is mainly driven by private sector-led growth.

Over the last five years, it has experienced its highest GDP growth rates in more than two decades, averaging 5.8%. Last year, it registered an annual GDP growth of 7.3% - the highest in over thirty years. Core inflation rate was low and fairly stable, averaging at 2.8% in the same year while headline inflation was 3.9% (base year was 2000). However, due to the continuous increase in oil and food prices, inflation skyrocketed to 9.6% in May this year.

In January 2008, Moody's upgraded its rating of the Philippines from stable to positive. Nevertheless, the country still has to face many challenges such as the oil and food price hike, rice supply shortage, high electricity costs, proliferating poverty and inequality between the rich and the poor, and fiscal imbalance.

GDP growth is driven by the services sector on the supply side and personal consumption on the demand side.

In 2006, GDP per capita was \$ 1, 175. This was higher than Indonesia's \$ 983 but lower than Thailand's \$ 2, 549.

### **4.1.2 Government**

The Philippines has a democratic form of government. It is moderately stable but over the years, people have demonstrated a number of times to oust the president because of alleged corruption in the government. In the country's history, two presidents were removed from their post due to protests from people who clamored on the streets in huge rallies or demonstrations known as "People Power".

#### ***Corruption***

Corruption is a pressing problem and is adversely affecting the way of conducting business in the Philippines. The World Bank listed various grand corruption cases in the country in which no senior government official or private-sector perpetrator had been convicted. This is because corruption is technically difficult to prove especially by the local courts who may not have the financial, human and technical capability to handle these cases.

On the contrary, the World Bank finds this governance in the Philippines paradoxical. It says that "In spite of a strong civil society presence, an open media, and highly capable individuals working in public administration, most governance indicators in the Philippines have fallen substantially over the last decade and are also lower than the average for middle income East Asian economies." (World Bank 2006)

#### ***The Supreme Court and contracts***

When asked in an interview for this study about the problems he encountered in the Philippines, Ray Cunningham (Business Development Manager of CalEnergy) – an American investor - has expressed concern about a provision in the Constitution (the fundamental law of the country) which gives the Supreme Court the power to abnegate a contract – e.g. when the contract is onerous and therefore not beneficial to the Philippines. Usually, the role of the court is to resolve a dispute. Because of this, there is a need to develop deep relationships with government agencies. Of course, this would entail additional



cost to the company. On the other hand, the investor may avail of a political risk insurance to cover the company against this kind of risk but such insurance is very expensive, amounting to about 2% of the company's assets to buy a policy per year. (Cunningham 2008)

### *Unstable policies or regulatory framework*

Based on interviews conducted and questionnaires given to some foreign power companies in the Philippines, the following were found to be troublesome and disconcerting to foreign investors: corruption in government, excessive bureaucracy, and non-predictability or instability of government policies, among others. Regarding the latest issue, recent news has it that foreign chambers of commerce in the Philippines have jointly expressed their concern over the government's recent proposal to review and perhaps amend contracts with "take or pay" provision entered into by the government with IPPs. (Apparently, the "take or pay" provision, which obliges one party to pay for any generated electricity that has not been used or purchased by the end consumer, is one reason that power rates from Meralco - a major distribution utility in Metro Manila - continues to soar; hence, hurting many businesses in the country.) On the other hand, these contracts are critical to power companies as they guarantee a stream of revenues, which is essential to recover huge capital investments and pay off enormous debts. For these foreign investors, the government's move "will cast doubt on the stability of policies and regulatory rules, and on the integrity of investment promotion programs in the Philippines." (Avendaño and Domingo 2008)

This concern was shared by a foreign investor (interviewed for this study) in the Philippines who expressed dissatisfaction over the government's "lack of respect for [its] promise" when it considered to remove the tax holiday from certain types of foreign investments in the country. Apparently, these incentives had been taken into account in the bidding of privatized power plants. For this reason, the said change in policy may lead to reduction in expected profits by the firm.

### 4.1.3 Business Environment

The Philippine economy is open to international investors and the government is encouraging the influx of foreign investments in the country. A lot of measures were done by the government such as granting of incentives and setting-up of special economic zones to promote the country to foreign investors. Nevertheless, the business climate in the Philippines is not as favorable to most foreign investors as with other neighboring countries. Asian Development Bank (ADB) data show that the total capital formation or investments in the Philippines have been stagnant since 2002, with annual investment growth rate averaging zero from 2002 to 2006. In contrast, our ASEAN neighbors were averaging annual investment growth rates of 3% to 20% per year (Habito 2008).

The World Economic Forum's Global Competitiveness Report 2007-2008 ranks the Philippines at 71<sup>st</sup> place over 131 countries. According to the report, the country gains its strength from its large market size which is on top 24 in domestic market size and 25 in foreign market size. However, its ranking is dragged down by four key factors: labor market inefficiency (primarily because of the severe brain drain problem, little flexibility in determining wages and high firing costs), poor quality of its public and private institutions (including low public trust on politicians, excessive red tape, and high business costs of terrorism, among others), poor quality of transportation and communication infrastructures, and poor health of workers and primary education.

The excessive red tape or bureaucracy has been detrimental to achieving a low cost of business in the country. This also led some businesses to unfavorable practices such as bribery, which is not very conducive to doing business in the country. A foreign investor in the Philippines sadly remarked, "If you don't pay, things halt<sup>1</sup>."

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<sup>1</sup> Survey answer from Chevron.

#### 4.1.4 People

The Filipinos are a mix of different cultures because of the country's history of being colonized by both the West: Americans and Spaniards, and East: Japanese, as well as the influx of Chinese immigrants in the country. The educational system was adopted from the Americans while religion was greatly influenced by the Spaniards. Many customs that are still being practiced in the country were derived from both Spanish and American cultures. Because of the exposure of the Filipinos to these foreigners, they are very welcoming and adaptable to foreign people and ways of doing things.

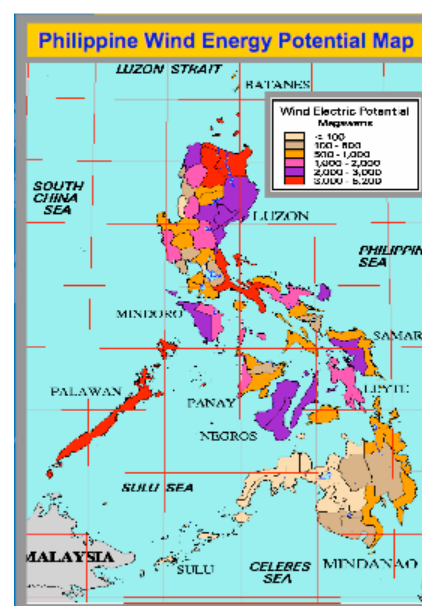
According to the World Bank, the Philippines can draw upon its human resource for its development due to a relatively educated populace with proficiency in English, plentiful managerial and entrepreneurial talent, and global demand for the labor force, as confirmed by a huge number of Filipino overseas workers totalling to about 8 million, or 25% of the active workforce in the country.

However, despite these, the Philippines need to improve on its absorptive capacity to assimilate new knowledge in order to benefit from multinational investments spillovers. According to UNESCO, the Philippines R&D in 2002-2003 was only 0.15 percent of GDP (down from 0.25 in the 1990s). This figure is below the average for its per capita income (World Bank 2008).

#### 4.1.5 Natural Resources

The Philippines is gifted with rich natural sources for renewable energy such as wind, solar, geothermal, hydro and biomass; these resources are located throughout the archipelago. Currently, the Philippines is the second largest geothermal gas producer in the world – i.e. next to the United States. And with the opening of the 25 MW wind farm in Ilocos Norte (a

Figure 3. Wind Energy Potential Map



Source: Department of Energy

province in the main island of Luzon), the country became Southeast Asia's first major wind power producer (Perez 2006).

Among developing countries, the Philippines is one of those that are considered to have high potential for renewable power resources, as seen in Table 3.

**Table 3. Emerging Countries with Potential Renewable Power Resources**

Country	Wind	Geothermal	Small Hydro	Biomass	Remarks
Argentina	★		★		
Brazil	★		★	★	High potential
Cambodia			★		
Chile	★	★			
China	★	★	★	★	High potential
Costa Rica	★	★	★		High potential
El Salvador		★	★		
Guatemala		★	★		
India	★	★	★	★	High potential
Indonesia	★	★	★		High potential
Kenya	★	★			
Laos			★		
Malaysia			★		
México	★	★			
Mongolia	★				
New Zealand	★	★	★		High potential
Nicaragua		★	★		
Panamá	★		★		
<b>Philippines</b>	★	★	★	★	<b>High potential</b>
S. Africa	★				
Sri Lanka	★		★		
Thailand				★	
Turkey	★	★	★		High potential
Vietnam		★	★	★	High potential

Source: Perez, *Renewable Power in Emerging Countries: A Business Case for Investing in Renewable Power in Emerging Countries*, table 12.

The utilization of these potential energy reserves is still low thereby providing a window of opportunities for prospective investors. (See Table 4)

**Table 4. Renewable Energy Resource Reserves and Development**

RE Resource	Potential (in MW)		Utilization (in MW)
	Theoretical	Technical	
Wind	76,000	7,404	25
Hydro			
<i>Large and small</i>		11,223	3,253
<i>Mini</i>		1,847	89
<i>Micro</i>		27	0.56
Solar		5.1kWh/m <sup>2</sup> /day	1
Geothermal		2,600	1,932

Source: Perez, *Renewable Power in Emerging Countries: A Business Case for Investing in Renewable Power in Emerging Countries*, table L.1.

#### 4.1.6 Power Industry

The power industry in the Philippines is divided into three major sectors: generation, transmission and distribution. Generation companies are those that produce electricity from energy sources such as fossil fuel, geothermal, hydro energy and the like. The transmission sector is the one responsible for setting up transmission lines to bring the generated electricity from the generators to the distribution utilities (DU) who make the electricity available to end users such as business enterprises and private households.

Picture 1. Magat Hydroelectric Generation



Source: National Power Corporation

Generation used to be a monopoly of the government-owned National Power Corporation or NPC until the issuance of Executive Order No. 215 in 1989, which opened the generation sector to private investors. At present, a number of independent power producers or IPPs generate and sell electricity to NPC and other customers.

The NPC is the sole transmission company, transmitting electricity to distributors and large industrial customers, and responsible for constructing the transmission grid highway that connects the main islands in the country.

Distribution of electricity to end-consumer is performed by investor-owned electric utilities, principally by the Manila Electric Company (Meralco) – the sole distributor in Metro Manila, a few local government-owned utilities and numerous electric cooperatives which sell to households and commercial enterprises located within their franchise areas. These electric cooperatives may seek financial and technical assistance from the National Electrification Administration (NEA).

The overall policy direction for the energy industry is set by the Department of Energy (DOE).

### ***Electricity rates***

Electricity rates in the country are exorbitant, being the second highest in Southeast Asia. This makes the country less competitive to foreign investors in the region.

Retail rates are being regulated by the Energy Regulatory Board (ERB). Approved rates are based on generation costs, operational and maintenance costs, other costs such as system losses plus an approved profit margin or return on capital. Since NPC still owns the majority of power plants in the country, its generation costs are a big factor in the determination of retail rates to end customers. NPC, in the past, has entered into power purchase agreements or PPAs with a number of IPPs. These PPAs mandate the government-owned firm to buy electricity produced by the IPPs even if it were not consumed by the end user. This “take-or-pay” provision increases the cost of the NPC – consequently, the generation cost to DUs. In addition, the generation cost passed on by NPC is not based on the type of power plant that supplies the electricity to a DU. The generation cost is determined by averaging the total cost of all the plants (fuel-based and renewable alike) of the company. Because of this, increases in the prices of oil, coal and natural gas, etc...consequently affect the retail rates even if the source of electricity is from hydro energy for instance.

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Hence, the NPC has a strong market power in the wholesale cost. This is not beneficial to end users or customers, however, power generation companies may find the high tariff (due to high costs incurred by NPC) attractive to doing business in the country.

Aside from the cost of fuel and take-or-pay provision in NPC contracts with IPPs, Atty. Francisco Juan, Energy Regulatory Commission (ERC) Executive Director,<sup>2</sup> sites the topography of the country as well as the policy on total electrification as other reasons why the Philippines has high electricity rates. Since the country is an archipelago, it would at times need submarine cables - which are very expensive - to transmit energy from one island to another. Also, because of the government's goal to electrify all households, the electrification of remote areas would require putting up additional networks and the cost of this will be shared by all customers of the DU even if they are not in the remote area which usually is occupied by poor communities. This is called the missionary electrification project.

Looking at the above, renewable energy may help in decreasing the electricity rates in the long-term because of its lower operational cost (raw materials such as solar, wind and hydro energy are practically free), and ability to service off-grid areas. Because of the latter, remote areas need not be connected to transmission lines that are located in far-off islands. This will in turn - aside from providing electricity to many poor households - reduce the electricity rates of existing customers who used to shoulder the additional cost of electrifying off-grid areas.

### *Privatization of the NPC*

In order to encourage greater competition and attract more private players in the power industry, reforms were made in the industry. Mainly, the NPC was privatized and the company's generation and transmission assets were put on sale to private investors, foreign and local alike. This move was done

**Picture 2. Masinloc Coal-Fired Thermal Power Plant.**  
Privatized on 26 July 2007.



Source: National Power Corporation

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<sup>2</sup> Interview at ERC on 13 March 2008.

with the hope that a more competitive power industry will bring in lower rates and more efficient delivery of power supply to end-users. Another reason for the privatization of the NPC is for the firm to be able to pay-off the debts that it incurred mainly from the PPAs with IPPs.

There were 30 power plants with about 4,300 MW rated capacity that were put on sale by the government since 2001. As of October 2007, only 43% or a rated capacity of 1,850 MW were sold. (See Table 5 for a complete listing of plants for sale.)



**Table 5. NPC Power Plants for Sale (Status as of October 2007)**

NPC Power Plants for Sale  
(Status as of 17 October 2007)

<b>Name</b>	<b>Type</b>	<b>Rated Capacity (in MW)</b>
<b>Luzon and Visayas</b>		
<i>Ambuklao-Binga</i>	<i>Hydro</i>	175.0 *
Amlan	Hydro	0.8
Angat	Hydro	246.0
Bacman	Geothermal	150.0
<i>Barit</i>	<i>Hydro</i>	1.8 *
Bohol	Diesel	22.0
<i>Calaca</i>	<i>Coal</i>	600.0 *
<i>Cawayan</i>	<i>Hydro</i>	0.4 *
Limay	Diesel / Bunker	620.0
<i>Loboc</i>	<i>Hydro</i>	1.2 *
<i>Magat</i>	<i>Hydro</i>	360.0 *
Makban	Geothermal	410.0
<i>Masinloc</i>	<i>Coal</i>	600.0 *
Navotas I / II	Diesel	310.0
Palinpinon	Geothermal	192.5
Panay 1 & 3	Diesel	146.5
<i>Pantabangan-Masiway</i>	<i>Hydro</i>	112.0 *
Tiwi	Geothermal	275.0
Tongonan	Geothermal	112.5
Subtotal		4,335.7
* Total privatized		1,850.4
%		43%
<b>Mindanao</b>		
Iligan I & II	Diesel / Bunker	114
<i>Talomo</i>	<i>Hydro</i>	3.5 *
<i>Agusan</i>	<i>Hydro</i>	1.6 *
<b>Others (Decommissioned or Retired Plants)</b>		
Aplaya	Diesel / Bunker	108.0
Bataan Thermal	Bunker	225.0
Cebu II	Diesel / Bunker	54.0
General Santos	Diesel / Bunker	22.3
Manila Thermal/Tegen	Bunker	200.0
Sucac Thermal	Bunker	850.0
Grand Total		5,914.1

\*Sold (privatized)

Note: The privatization level target is applicable only to plants in Luzon and Visayas

Source: PSALM

## *Renewable Energy*

Currently, the government, through the DOE, is encouraging the use of renewables in its energy portfolio mix. As of 2002, the installed capacity for renewable energy is around 4,449 MW (Table 6). The goal of the government is to increase this capacity by 100% by 2013. This is also in line with the government's aim to be 60% energy self-sufficient by 2030 - i.e. to be not so reliant on import for its energy use.

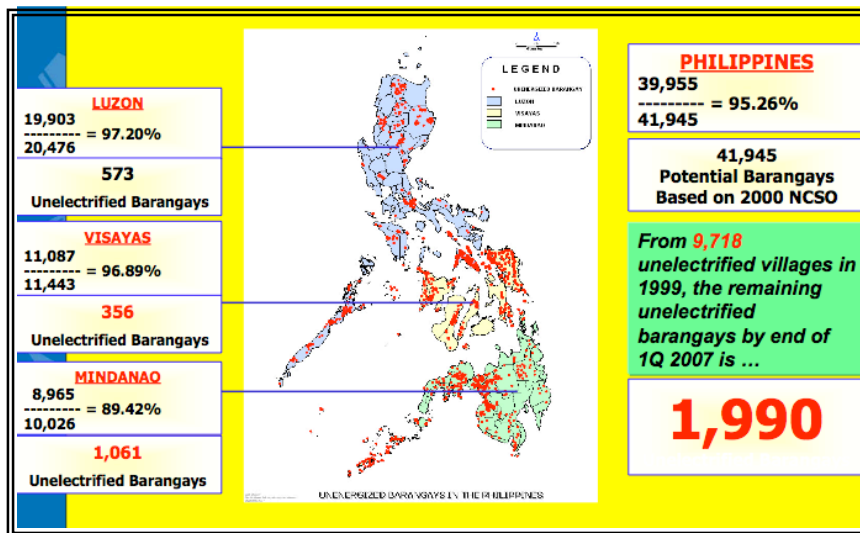
**Table 6. Installed RE Generating Capacity (in MW)**

<b>Resource</b>	<b>Installed Capacity as of 2002</b>	<b>Target Additional Capacity</b>	<b>Target Installed Capacity by 2013</b>
Geothermal	1,931	1,200	3,131
Hydro	2,518	2,950	5,468
Wind	-	417	417
Biomass, Solar & Ocean	-	131	131
<b>Total</b>	<b>4,449</b>	<b>4,698</b>	<b>9,147</b>

*Source: Renewable Energy Policy Framework. Department of Energy.*

Another aim of the government that is related to the promotion of renewable energy is the electrification of rural households in the country. As of March 2007, 1,990 *barangays* (smallest unit of local governments) in the rural areas still do not have access to electricity (Figure 4). This provides a sizeable market for renewable power investors.

**Figure 4. Unelectrified Barangays in the Philippines**



Source: Department of Energy

In order to promote investments in renewable energy, the Philippine government has formulated some fiscal and non-fiscal incentives. Particularly, there are several laws that are renewable-energy-friendly. The Geothermal Act (Presidential Decree No. 1442), Mini-Hydro Act (R.A. No. 7156), and Executive Order 232 grant incentives for the exploration and development of geothermal resources, hydro resources, and ocean, solar and wind resources, respectively. The Electric Power Industry Reform Act (EPIRA) in 2001, on the other hand, gives priority dispatch, in the wholesale electricity spot market, to power that has been generated from renewable energy sources; while the Expanded VAT (EVAT) Law promulgated in May 2005 exempts renewable electricity sales from the 12% VAT.

Aside from these laws that are already in place, a Renewable Energy (RE) Bill has been passed in the House of Representatives and is now being reviewed in the Senate for passage into law. The RE bill proposes certain measures and schemes to improve the renewable power investment climate in the Philippines. Besides these fiscal and non-fiscal incentives, the bill provides for the setting up of a Renewable Portfolio Standard (RPS) - similar to that of Thailand - which will require generation companies to source a certain amount of electric power from renewable sources. (RPS is common in the United States, a number of EU countries such as Belgium, Italy, Sweden, and UK, as well as in Australia, Canada, India, and Japan. Most of these RPS policies require renewable power shares in the range of 5% to

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20% by year 2010 or 2012 (Perez 2006)). It also creates a Renewable Energy Trust Fund that will be used mainly to enhance the development, utilization and promotion of renewable energy.

## 4.2 Attracting renewable power FDIs

The Philippines is a relatively attractive country for renewable power investments, primarily because of the following characteristics: abundant renewable power resources (*factor endowment advantage*), attractive tariffs, high power demand (*large size of the market*), and isolated grids (Perez 2006).

On top of these, the fiscal and non-fiscal incentives (*policies that can reduce costs*) apparently also enhance the investor-drawing capability of the renewable power industry in the country.

As mentioned above, the government aims to double the renewable energy installed capacity in the country of 4,449 MW as of December 2002 by 2013. As of December 2006 – almost midway through the planned period - RE installed capacity has increased to only 5,261 MW or by merely 811 MW (or 18%).

Despite the inherent attractiveness, such as abundant renewable power resources, of the country, as well as the measures that the government has done to promote renewable investments in terms of fiscal and non-fiscal incentives, it seems that the country is not attracting enough renewable power investments to reach its goal. What seems to be the problem? Are there not enough venturers out there who are willing to engage in these types of investments? Or is the Philippines simply not attractive enough to lure renewable power investments to the country?

In 2006, sustainable energy investments worldwide increased from US\$ 27.5 billion in 2004 to US\$ 70.9 or a rise by 158%. This trend was expected to continue upward in 2007 with forecasted investments of about US\$ 85 billion. The investments were flowing mainly to the US, EU and other OECD countries mainly because of the innovation environment and supportive regulations in the US, and higher awareness of climate change and role of

renewable energy, as well as generous incentives in the EU. Increase in investments is also significant in developing countries with China and India leading the growth. However, most of these investments were financed domestically, in line with their energy independence goals (UNEP 2007).

Hence, we can say that there were - and still are - plentiful of renewable power venturers out there that the Philippines can tap in order to lure them to the country. However, the existing promotion schemes or incentives are not very successful in inducing these kinds of investments into the country. What then could boost the attractiveness of the Philippines to renewable power investments?

First of all, let's see how the Philippines fare as an investment destination country. Based on the country assessment above, the Philippines provides a window of opportunity for foreign investors because of its market size, openness to trade and growing economy; however, poor infrastructures, high cost of doing business, corrupt practices and unstable policies, among others, make the country not very appealing to foreign investors.

Looking at the needs of the market, interviews/questionnaires reveal that foreign investors in renewable power have some common criteria in choosing an investee country. These are economic, political, and contractual stability, [low] cost of doing business, stable regulatory frameworks and political environment that is free from corruption. Other criteria mentioned are abundant natural resource, [quality of] infrastructure, renewable policy framework, strong demand, human resource, functional and viable legal and banking system, among others.

Basing from the above, the Philippine government has a lot of work to do in order to make the country an attractive destination of renewable power investments.

However, for want of resources such as time, skill and money, not all of the above can be addressed by the government immediately. Hence, I would like to propose the priority action steps that the government may take to attract renewable power investments to the country.

### **4.2.1 Setting the foundation**

First of all, the government should continue to improve not only the quantity but also and more importantly the quality of its infrastructures (World Bank 2008). Although this is not a priority criterion of renewable power investors, improving the infrastructure will be beneficial or appealing not only to renewable power investors but also to foreign investors in general. Secondly, the government should be earnest in its goal to fight against corruption. This can be done by appointing individuals who have a track record of integrity in work aside from the much-needed competence in doing the job. Since not all government officials are appointed – most are voted in positions - the government should improve the system or process in approving projects and disbursing budgets or public funds to avoid corruption from taking place.

Once there is a political environment that is free from corruption, foreign investors will be more “at ease” in doing business in the country. Of course, eliminating corruption is not an overnight process. It would take a while, since it involves changing not only systems but mindsets as well. Nevertheless, the initiative to do so is already a light at the end of the tunnel that foreign investors can look forward to.

### **4.2.2 Passing the Renewable Energy (RE) Bill**

Having a “corrupt-free” environment already in the making, the Philippine government can now start talking with foreign investors. It can already show them a law that promotes renewable energy and at the same time, contains a package of fiscal and non-fiscal incentives to benefit such types of investments.

Since investments in renewable power plants are characterized by huge capital requirements – hence, high risks - government support will indeed be helpful if not necessary to boost both the investors’ and financiers’ confidence that their sizeable investments will be generating a desirable return.

It is worth noting that policies to promote renewable energy have sprouted all over the world. By 2007, at least 60 countries—37 developed and transition countries, and 23 developing countries—have some type of policy to promote power generation from renewables (REN 21 2007).

As mentioned previously, the Renewable Energy Bill is already under deliberation in the Senate (as of this writing). Hence, the government should consider prioritizing the passage of this Bill into law in order to attract the necessary investments in renewable power into the country.

### **4.2.3 Establishing a one-stop shop to minimize excessive bureaucracy**

As mentioned above, about the Philippine business climate, one complaint disclosed in the interviews/surveys of renewable power investors is the need to “pay” to get things going. Aside from the fact that it is a sad reality, this shows a glaring defect in how to conduct businesses in the Philippines.

The World Bank also acknowledges this fact when it ranked the Philippines among the lowest - at number 133 among 178 countries - for “ease in doing business”. Because of this, the government needs to work on lowering the cost of doing business in the country. This can be done by streamlining the processes of opening and closing a business in order to avoid excessive bureaucracy, which sometimes lead to unfortunate practices such as bribery.

One option is to set-up a one-stop shop which prospective investors can approach for inquiries about investing in renewable power; at the same time – once they have decided to invest in the Philippines – this one-stop shop can be the venue to obtain all the necessary approvals and documents, and undergo the necessary procedures for opening such business in the country. The one-stop shop shall provide vital information such as, on top of the requirements of setting up a renewable power project in the country, the incentives as well as the financing options available to renewable power investors. This will not only facilitate the opening of such businesses in the country, but will also lure investors, especially because of the financing options on hand which are particularly important to renewable power

investments relying mostly on debt for its capital requirements - about 70% of capital is debt-financed (Perez 2006).

In order to do have these financing options, the government can tie-up with or seek the help of international organizations such as the World Bank or ADB, or provide incentives to commercial banks or other financial institutions which will offer financing for such types of investments.

Since setting up the one-stop shop entails cost that may not be afforded by the government with its limited budget, it can apply for a loan or grant from ADB which has available funds for renewable energy projects.

#### **4.2.4 Ensuring consistent and stable policies or incentives**

To have available policies and incentives that support and promote renewables is not enough. Such policies and incentives should be consistent with related policies as well as stable so that they can be a solid ground for sound decision-making. If policies are expected to change over time, investors will not be able to predict with reasonableness the outcome or profitability of their intended business venture.

A common problem that was encountered by some renewable power investors in the Philippines is the non-predictability of government policies or unstable regulatory frameworks. Recently, news of removing the tax holidays on some investments has alarmed a renewable power investor in the Philippines. According to Mr. Kikerby-Garstad, Project Director for SN Power (a Norwegian firm) Asia, although the tax incentive was not the primary reason for going to the Philippines, their company took this into account when determining the bidding price for a power plant that was being privatized. Had they known that they will not be able to avail fully of the tax incentives initially promised by the government, they could have appropriately adjusted their bidding price. Consequently, the removal of the tax holiday could mean lower expected profits for firms such as SN Power.



For the above reasons, the government should ensure that renewable power policies and incentives are consistent with related policies (such as those of natural resources') and that they are not expected to change for the given effectivity period.

## 5. Conclusion

One of the advantages of renewable energy, aside from its being environment-friendly, is that it has minimal operational cost - because of its very cheap or practically *free* raw material: wind, water, solar energy, etc...- compared to fossil fuels which are limited in supply and subject to high volatile prices. Because of this, having renewable power in the energy mix will eventually drive down the price of electricity to end consumers in the long run due to lower generation costs that would be passed on to distribution utility firms.

Renewable power may not only lower the rates of electricity in the Philippines. It can also achieve the government's goal to be less dependent on imported fuels and be more self-sufficient in energy supply. Moreover, renewable power is the answer to the pressing concern about climate change.

Having said these, attracting renewable power investments to the country is a vital concern of the government. This is because of the country's lack of financial resources as well advancement in RE technology; hence, the need to turn overseas for these much-needed investments.

As found from the study, attracting FDIs to the country is not only a matter of looking for the right incentives that suit investors' preferences. This option may have worked for the EU; but only because of the higher awareness of climate change, more mature renewable energy industry, as well as more favorable and stable investment climate in that region. For the Philippines, whose country competitiveness is lagging behind many countries (ranked 71 out of 131 countries), incentives are not enough to induce these types of investments into the country. Besides, looking at the investors' criteria for choosing an investee country, incentives are not a priority to them. They are eyeing for stability and predictability in the government, economy and regulations. The reason for this is the high risk that they are taking for putting up highly capital-intensive project and acquiring a huge amount of debt (about 70% of the capital). A reasonably stable if not assured revenue stream over the life of the asset (about 25 years) is, therefore, very important not only to the investors but also to those who will finance the project as well.

In fact, the government has attempted to come up with a number of fiscal and non-fiscal incentives to lure renewable power investments in the country. However, these incentives apparently cannot substitute for the high cost of doing business, poor infrastructure, corruption in government, and the like. Removing these barriers is crucial in order to make the country more appealing to foreign investors in renewable power. On top of it, ensuring consistent and stable policies gives confidence and predictability in running business operations in the Philippines.

Countries with similar situation as the Philippines can learn from its experience. As SN Power Project Manager for Asia puts it, “incentives are more of a teaser”, but they are not the deciding factor when the basic needs of renewable power investors are not yet in place.

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