Chapter 14

Philippines Country Report

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CHAPTER 14

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1. Background

1.1. Socio-economic

The Philippines, officially known as The Republic of the Philippines, with Manila as its capital city is an archipelago comprising of 7,107 islands. The country is located in the midst of Southeast Asia's main water bodies namely, the South China Sea, Philippine Sea, Sulu Sea, and Celebes Sea.

In 2012, the Philippine economy posted a 6.6 growth from 3.9 percent in 2011. The growth of the economy was largely due to the increase in the services sector which posted a annual growth of 7.7 percent. The industrial sector grew by 6.5 percent from its 2.5 percent gowth in the previous year. The increase in the industrial was driven by the growth in the construction business which grow double digit up to 14.4 percent. Meanwhile, Agriculture, Hunting, Forestry and Fishing posted a 2.7 percent. Gross domestic product (GDP) per capita of the country was US$1,400 per person in 2010.

1.2. Policy

The Department of Energy (DOE) of the Philippines is taking its long-term interest in adopting the use of clean, green and sustainable sources of energy in its energy security strategy. The country’s long-term national energy plan makes sure

that immediate need for energy is met while making sure that it will cause least damage to people and the environment. Notwithstanding the fact that fossil fuels contribute significantly to the country's energy and electricity needs in view of its cost and reliability, the 60.0 percent energy self-sufficiency level target of the country aims to harness indigenous energy. In particular, renewable energy sources like geothermal, wind, biomass, ocean and alternative fuels like biofuels and compressed natural gas (CNG), are seen to augment the country's energy requirement.

Another key component in the country's strategy on energy security is the need to take hold of the opportunities in energy efficiency and conservation. The launching of the National Energy Efficiency and Conservation Program (NEECP) in August 2004, is an evidence of the energy sector's commitment to continuously work in the development and promotion of new technologies and the practice of good energy habits in the household, business and transport sector. In line with the NEECP, the DOE has an energy saving goal of 10.0 percent energy savings on the total annual energy demand. The DOE will continue to exert better efforts to minimize demand for energy brought about by the country's economic growth by taking the lead in increasing public interest on the use of energy-efficient technologies and conservation practices. The government's energy efficiency and conservation campaign will maximize opportunities in the different economic sectors.

As the DOE walks the path towards energy development, it will continue to implement reforms in the power and downstream oil industries as they both affect socially sensitive issues such as pricing environment in electricity and petroleum.

Below are updates on some of the DOE's plans and programs:

Renewable Energy (RE)

The passage of Republic Act No. 9513 or Renewable Energy Act of 2008 establishes policy and program framework to advance RE resources and technologies, and increase their utilization. On June 14, 2011 the Government unveiled the National Renewable Energy Program (NREP) or the "Green Energy Roadmap" of the Philippines. The NREP is anchored on the DOE's Energy Reform Agenda, which aims to ensure greater energy supply security for the country. It establishes a policy

and program framework for the promotion of renewable energy and a roadmap to guide efforts in realizing the market penetration targets of each renewable energy resource in the country. The roadmap is targeting 15,304 MW installed RE capacity by 2030. The NREP also provides for policy mechanisms to support the implementation of the RE Act. These policy mechanisms include: Renewable Portfolio Standards (RPS), Feed-in Tariff (FIT), Green Energy Option Program and Net-Metering for Renewable Energy.

The RPS sets the minimum percentage of generation from eligible RE resources, provided by the generators, distribution utilities and electric suppliers. Initially, an installation target of 760 megawatts (MW) from RE is set for the first three (3) years from 2013 to 2015 broken down as follows: biomass (250 MW), run-of-river hydro (250 MW), solar (50 MW), wind (200 MW) and ocean (10 MW).

On the other hand, the FIT provides guaranteed payments on a fixed rate per kWh for RE generation excluding generation for own use. On 27 July 2012, the Energy Regulatory Commission (ERC) approved the initial FIT rates which will apply to generation from renewable energy (RE) sources, particularly, run-of-river hydro, biomass, wind, and solar. Approved FIT rates for biomass, hydropower, solar and wind are 6.63 PhP[1], 5.90 PhP, 9.68 PhP and 8.53 PhP per kilowatt-hour (kWh). Currently, there is no FIT rate for ocean energy since further study and more data analysis must be first undertaken.

Alternative Fuels for Transport

Biofuels

The DOE is aggressively implementing Republic Act No. 9367 or the Biofuels Act of 2006. The law intends to tap the country's indigenous agricultural resources as potential feedstock for biofuels.

The mandatory 1.0 percent biodiesel blend in all diesel fuel sold in the country in May 2007 was increased to 2.0 percent in February 2009 on a voluntary basis. On the other hand, the country now enjoys an accelerated use of E10 (10.0) bioethanol blend as supplied by most of our gasoline retailers.

[1] Philippine Peso.

To serve the technical requirements for biofuels program and ensure its continuous research and development, the DOE provided counterpart funding of PhP 50 million for the establishment of a vehicle testing facility located at the Department of Mechanical Engineering Laboratory, University of the Philippines in Diliman, Quezon City. Roundtable discussions with stakeholders on technical verification and relevance of emerging biofuel technologies also forms part of the DOE's initiatives on research and development.

Compressed Natural Gas (CNG)

Currently, there are 61 compressed natural gas (CNG) buses in the Philippines, of which 41 are commercially running. The CNG buses are plying the Manila-Batangas-Laguna routes. In addition there are 20 CNG buses that had completed technical evaluation and testing. As of June 2012, seven (7) bus operators have been accredited for CNG bus operation. The CNG Mother-refueling Station and the Daughter Station are operating in Batangas and Biñan, Laguna, respectively.

Auto-LPG

In terms of using LPG as an alternative fuel for transport, over 119,052 taxis nationwide were now running on LPG which is complemented by 219 auto-LPG dispensing stations. To date, 31 auto-LPG conversion shops with Philippine National Standard (PNS) licenses are being monitored by the DOE to ensure safe operation and standards compliant conversion of gasoline fed motor vehicles to auto-LPG.

In support of the Auto-LPG program of the government, the Development Bank of the Philippines (DBP) has included auto-LPG initiative in its "Clean Alternative Transport Fuel Financing Program," which provides reasonable financing package for auto-LPG related activities such as acquisition of auto-LPG vehicles. The LTFRB also extended the number of years of franchise for taxis that converted to auto-LPG by two (2) years. These schemes promoted large scale conversion of taxi fleets and encourage new player participation in the program.

E-Vehicle

To date, 623 of various types of electric vehicles (EV) are being demonstrated in various cities and municipalities (Makati, Taguig, Mandaluyong, Quezon, Puerto Princesa, Davao and Surigao del Norte) of the country. The E-vehicle program is one of the government's initiative towards sustainable, energy efficient and low-carbon transport future. In relation to the E-vehicle Program, the DOE launched in January 2012 its "Bright Now! Do Right. Be Bright. Go E-trike!" design-an-electric tricycle contest to encourage and promote the creativity and innovativeness of young Filipinos in crafting the Philippine version of the so called "Green Vehicle."

Barangay Electrification

Rural electrification has been one of the government's priority thrust. The goal is to achieve total barangay[2] electrification by end of 2010. As of August 2012, the country's total electrification level has reached 99.98 percent with 41,965 barangays already with access to electricity out of the 41,974 (formerly 41,980) barangays. Given the importance of electricity in the economic development of the country, the electrification program of the government is being extended up to household level. The government is targeting to achieve 90.0 percent household electrification by 2017.

As of 30 December 2011, household electrification level stands at 70.2 percent. This means that out of the 20.5 million households, 14.4 million are with electricity connection[3].

1.3. Energy

The country's total primary energy supply in 2011 reached 39.8[4] million tons of oil equivalent (Mtoe). Oil accounted for 32.0 percent of the total energy supply followed by geothermal which comprised 21.5 percent. Total production reached 23.7 Mtoe bringing energy self-sufficiency level of the country at 60.0 percent.

[2]Filipino term for a village, district or ward and is the smallest administrative division in the Philippines.
[3] Total number of households is based on 2010 Census.
[4] Energy Balance Table of the Philippines as of February 2013.

Meanwhile, the country's total electricity generation in 2011 reached 69.2 terawatt-hours (TWh). Coal-fired power plants remain the major resource for power generation with an installed capacity of 4,917 megawatt (MW). Coal comprised more than 36.0 percent or 25.3 TWh of the total electricity requirement of the country. Meanwhile, natural gas-fired power plants accounts for more than 29.8 percent or 20.6 TWh. Natural gas resource provides for more than 41.0 percent of the total electricity requirement of Luzon grid. Currently, the country has 3 existing natural gas power plants with a combined installed capacity of 2,861 MW. On the other hand, the combined share of renewable energy to the total power generation mix was 29.0 percent.

2. Modelling Assumptions

Two scenarios were developed to assess the energy savings potential of the country. The Business As Usual (BAU) scenario serves as the reference case in the projection of the energy demand and carbon dioxide (CO_2) of the energy sector. The BAU incorporates the existing energy policies, plans and programs of the Philippine government relating to the energy sector which are being implemented and will be pursued within the forecast period. The virtue of this scenario rests on assessing the effects of such measures which may evolve either as a consequence of need (energy security) or the commercialization of energy technologies (economics) given the interaction of market forces. On the other hand, the Alternative Policy Scenario (APS) will test the impact of possible policy interventions in terms of possible utilization of efficient and environment-friendly technologies to the future energy use together with its corresponding CO_2 emission.

Gross domestic product (GDP) is assumed to grow at an annual rate of 5.7 percent for the period 2010-2035. The growth rates are consistent with the projections of National Economic Development Authority (NEDA) and the Development Budget Coordination Committee (DBCC).

The population of the country is expected to grow at the rate of 1.6 percent yearly for the period 2010-2035. Population growth is based on the adjusted 2000 Census-based medium population projections using the results of the 2007 census of

population including the population level of 93.34 million for 2010.

As part of the government's initiatives to ensure security of energy supply and at the same time to conserve the environment and promote green technology, the targets set under the National Renewable Energy Program were incorporated in the model to test its impact in the total primary energy supply. The NREP lays down the foundation for developing the country's renewable energy resources, stimulating investments in the RE sector, developing technologies, and providing the impetus for national and local renewable. The NREP sets out indicative interim targets for the delivery of renewable energy within the timeframe of 2011 to 2030.

Meanwhile, the intensified development and utilization of alternative fuels for transport is seen as a continuing strategy to reduce the country's dependence on imported oil. It also cushions the impact of highly volatile petroleum prices on the economy as well as assisting in promoting clean and environment-friendly energy sources. The major alternative fuels being promoted are biofuels which include biodiesel (cocomethyl esther) and bioethanol, autogas (LPG as transportation fuel), compressed natural gas (CNG), and electric vehicles. A roadmap on electric vehicle is now being prepared by the Government to identify action plans and measures related to electric vehicles in the country.

Further, the energy saving goals of 10.0 percent reduction of annual final energy demand of the country will be achieved through a range of measures including intensified energy utilization management programs in the commercial and industrial sectors, power plants and distribution utilities as well as the continuous use of alternative fuels and technologies. The information and education campaign being conducted by the Department of Energy (DOE) as well as the "Palit Ilaw[5]" Program also contributes to the energy saving goals. In the residential and commercial sectors, the utilization of more efficient electrical appliance is projected to induce savings. Energy labelling and rating on major electrical appliance will help consumer to choose more efficient electrical products.

[5] Filipino term for "change lamps" wherein the DOE distributes CFL lamps for free to consumers in exchange of their existing incandescent bulbs.

3. Outlook Results

3.1. Business as Usual Scenario (BAU)

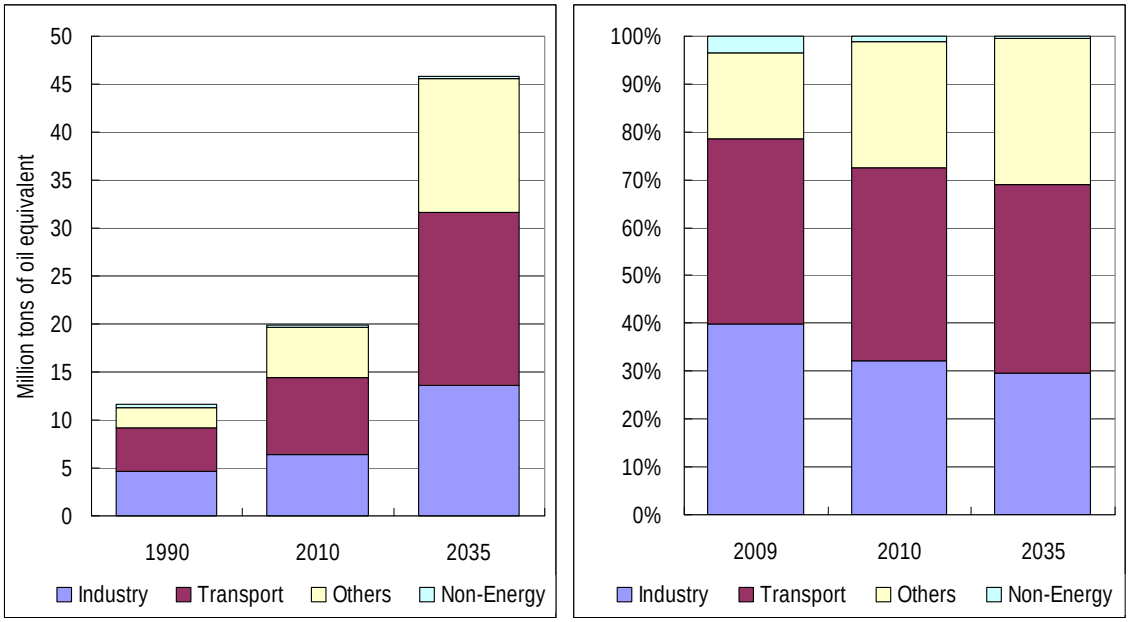
Total Final Energy Demand

Total Final Energy Consumption by Sector

The Philippines' final energy demand grew from 11.6 Mtoe in 1990 to 19.9 Mtoe in 2010 at an average annual growth rate of 3.2 percent. Over the period 1990-2010 energy demand in the other (residential/commercial) sector grew the fastest at 4.7 percent per year followed by the transport sector with average growth of 2.9 percent per year. The industrial sector grew by 1.6 percent per year.

Final energy demand is expected to grow at an annual average rate of 3.4 percent in the BAU scenario over the period 2010-2035. This is due to increasing activities in all sectors with the residential/commercial (other) sector growing the fastest at 4.0 percent per year. On the other hand, transport and industrial sector are expected to grow at an average rate of 3.3 and 3.1 percent per year, respectively.

Figure 14-1: Final Energy Demand by Sector, BAU



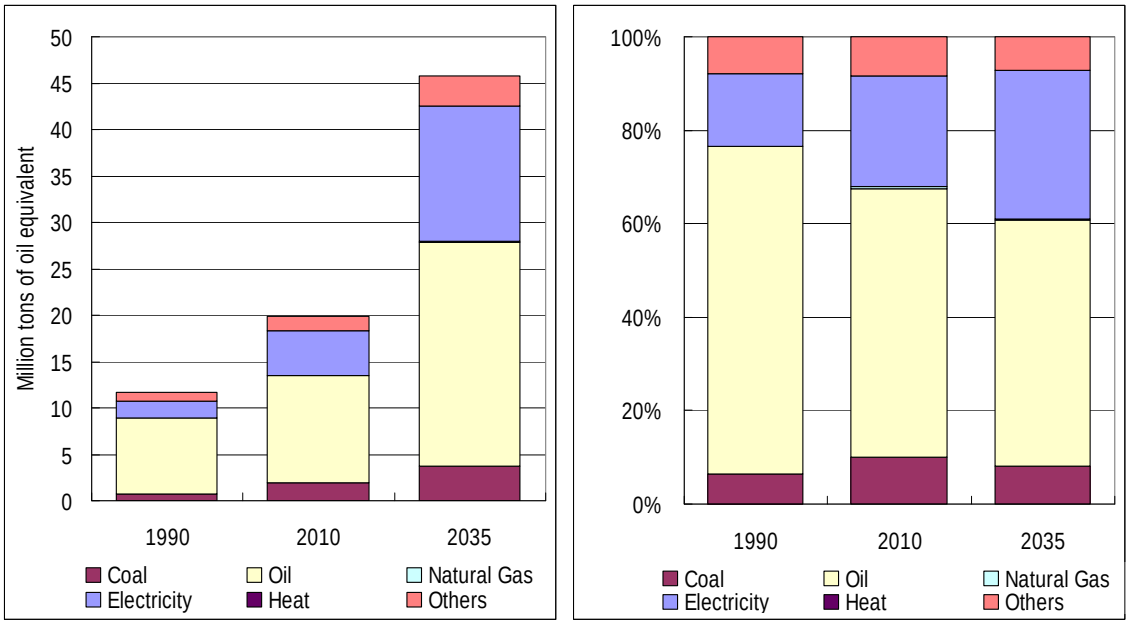
More than 40.0 percent of the country's end-use energy requirement is being consumed in the transport sector. This trend will continue throughout the planning

period. On the other hand, more than 30.0 percent of the total final energy demand will be used in the industrial sector while the rest will be utilized by the remaining sectors (Others and Non-energy). By 2035, demand in the residential and commercial (Others) sector will overtake the demand in the industrial sector due to the growing commercial establishments and business as well as the growing needs of the household.

Total Final Energy Demand by Fuel

In terms of fuel, electricity demand is projected to grow the fastest at an average rate of 4.6 percent per year followed by natural gas at an average rate of 3.4 percent. Natural gas is used in industry and transport. Oil which is mainly used for transport is expected to grow at an average rate of 3.0 percent per year from 2010 to 2035. Demand for coal will grow at an average annual rate of 2.5 percent over the same period. Bulk of the end-use demand for coal is use in the cement industry.

Figure 14-2: Final Energy Consumption by Fuel, BAU



On a per fuel basis, oil was the most consumed fuel with a share of 70.0 percent in 1990 which decreased to 57.5 percent in 2010. Demand for oil will further decreased up to around 52.0 percent by end of 2035 due to the used of other alternative fuel especially in the transport sector. Currently, the country has an

existing policy provided under the Biofuel's law which mandates the use of biofuel blend in diesel and gasoline fuels. This is aside from other alternative fuels used in the transport sector like, compressed natural gas, auto-LPG and e-vehicles. The reduction in oil demand is also attributed to the government's mandate to reduce oil consumption by 10.0 percent on all government offices.

Electricity is the second most consumed fuel for end-use. The share of electricity demand will increase from 15.7 percent in 1990 to 23.9 percent in 2010. The share of electricity will continuously increase, so that by the end of 2035, its share will be around 32.0 percent of the total final energy demand. The increasing share of electricity may be attributed to the increasing demand in the end-use sectors, industry, commercial, residential sector, transport, specifically, e-vehicle, expansion of Light Rail transit (LRT) and Metro Rail Transit (MRT) and others.

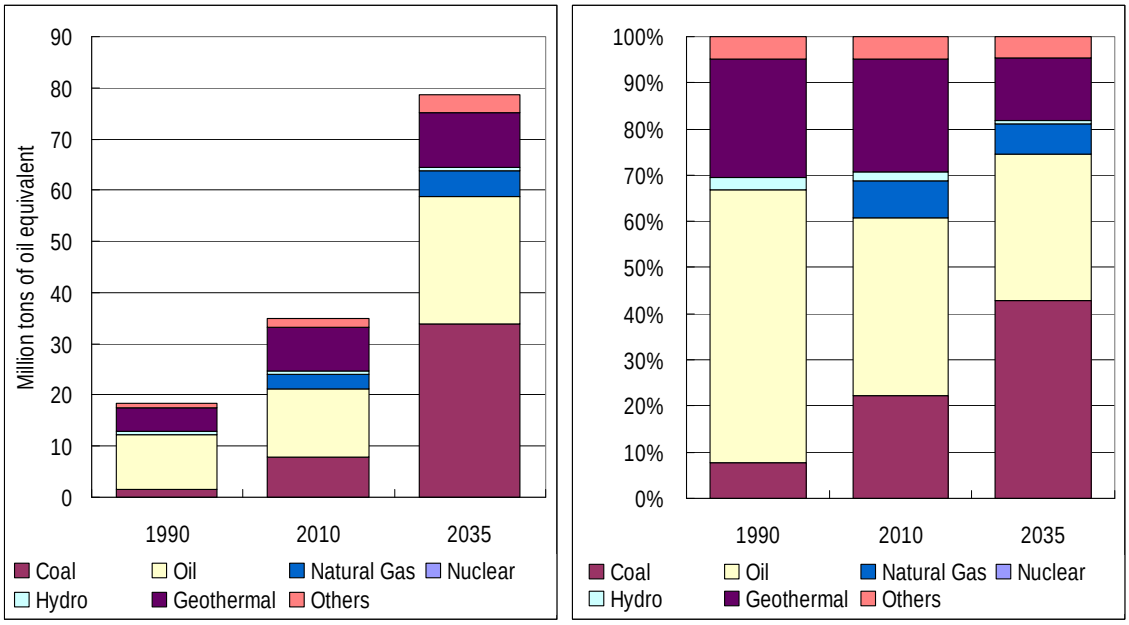
Total Primary Energy Demand by Fuel

Primary energy consumption in the Philippines grew at an annual average rate of 3.2 percent, from 18.4 Mtoe in 1990 to 34.9 Mtoe in 2010. Among the major energy sources, consumption of coal grew the fastest at 8.8 percent per year followed by geothermal and others (other renewable energy), both at 3.0 percent per year. Hydro grew only at an average annual rate of 1.1 percent and oil at 2.5 percent per year.

For the period 2010 to 2035, the country's primary energy demand is expected to increase by 3.3 percent per year from 34.9 Mtoe in 2010 to 78.7 Mtoe in 2035. Demand for all major energy sources is projected to increase with coal use growing the fastest at 6.1 percent per year. Natural gas is also expected to expand with a growth rate of 2.3 percent per year during the same period.

Oil will account for the largest share on the total energy supply of the country but with decreasing share 58.9 percent in 1990 to 38.5 percent in 2010. By 2035, majority or 43.0 percent of the country's energy requirement will be sourced from coal. Coal will be largely used for power generation. Combined share of renewable energy comprised 19.0 percent of the total energy supply.

Figure 14-3: Primary Energy Demand by Sector, BAU



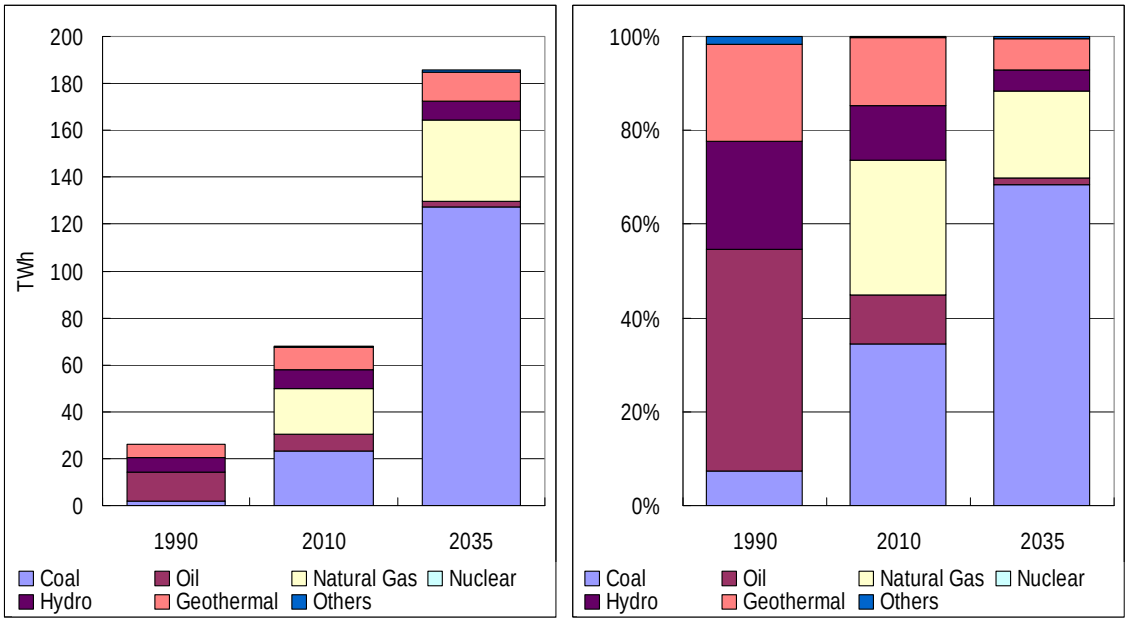
Power Generation

Total power generation in 2010 reached 67.7 terawatt-hours (TWh), more than double of the country's level in 1990. Power generation is expected to increase by 4.1 percent yearly. Other fuels (solar and wind) is expected to increase an average rate of 10.4 percent followed by coal for power generation is expected to increase at an average rate of 7.0 percent per year. Natural gas for power generation is expected to increase by 2.3 percent per year. Hydro and geothermal are also expected to grow at an average annual rate of 0.3 and 0.9 percent, respectively. Alternatively, oil will have a decreasing trend of 4.2 percent.

In 2010, coal comprised bulk of the country's power generation mix having a share 34.4 percent followed by natural gas having a share of more than 28.0 percent. Oil, which is the country's primary source of electricity in 1990 decreases it share from more than 47.2 percent share to only more than 10 percent in 2010. This trend will continue up to 2035. By end of 2035, the share of renewable energy for power generation will be around 12.0 percent.

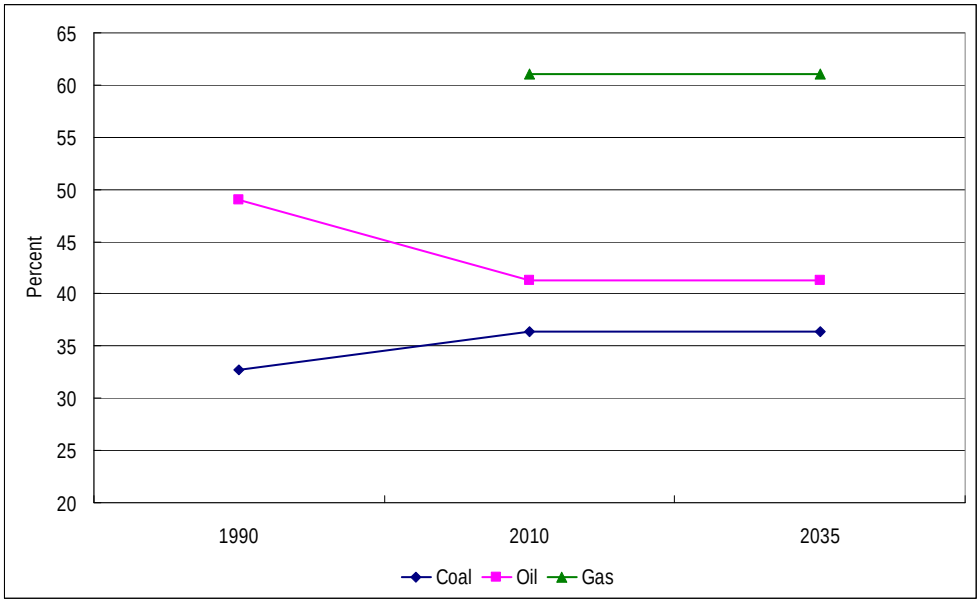
Between the periods 2010 to 2035, most of fuel for power generation will be supplied by coal at around 70.0 percent. On the other hand, natural gas will grow by 3.0 percent per year maintaining its share to the total power generation mix at more than 18.0 percent.

Figure 14-4: Power Generation by Fuel, BAU



Thermal efficiency is a factor that determines the generation output that will be produced by its power plant. For this study, thermal efficiencies of each plant were determined through the so called "process efficiency" of each power plant. Process efficiency is computed by dividing fuel output over fuel input multiplied by 100. Under the BAU, thermal efficiencies of coal, oil and natural gas under the BAU is projected to be maintained for the planning period. Coal thermal efficiency is set at more than 36.0 percent, while oil is at around 40.0 percent. Meanwhile, natural gas thermal efficiency is set at more than 60.0 or 61.0 percent. Natural gas for power generation only started in the Philippines in the late 1990s.

Figure 14-5: Thermal Efficiency by Fuel, BAU

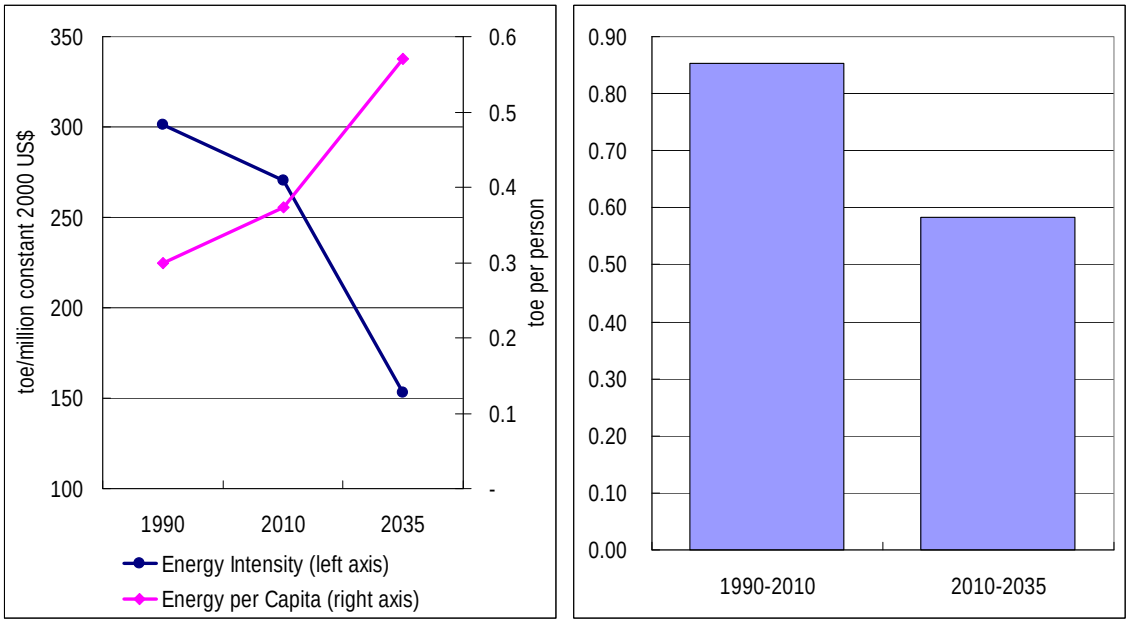


Energy Indicators

Under the BAU, energy intensity of the country tends to decrease at a rate of 2.2 percent for the period 2010 to 2035. Energy intensity is the ratio of total primary energy over GDP. Energy intensity improvement for the period 2010 to 2035 will result to about 43.0 percent. The improvement in intensity is due to the government's efforts in promoting energy conservation and efficiency in the different sectors of the economy. Meanwhile, energy per capita has an increasing trend from 0.30 toe in 1990 to 0.37 toe in 2010. The increasing trend will continue until 2035, where energy per capita will increase to 0.6 toe. The increasing trend is due to the improvement in the living standard and income of people.

Relatedly, for the period 1990-2010, elasticity of energy demand stood at 0.9 or less than 1.0, indicating an efficient use of energy. Energy elasticity is the relationship between changes in the primary energy demand and the changes in GDP. Meanwhile, energy elasticity for the period 2010-2035 would be approximately 0.6 indicating a more efficient use of energy resources and technology.

Figure 14-6: Energy Intensity, Energy Per Capita and Energy Elasticity



3.2. Energy Savings and CO_2 Reduction Potential

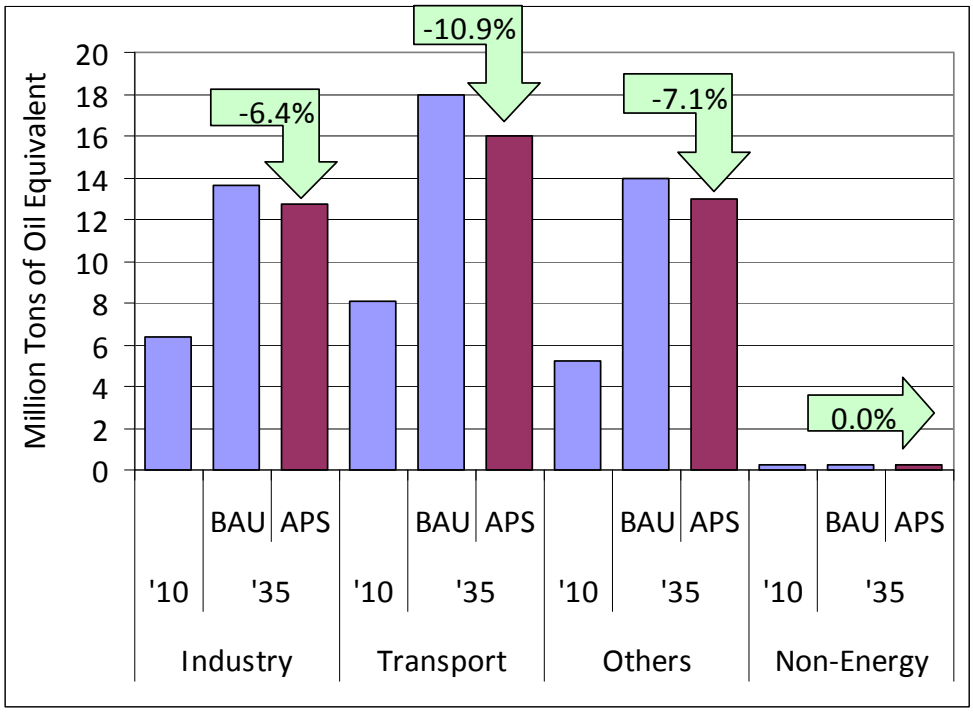
Total Final Energy Demand

In the APS, final energy demand is projected to increase at a slower average rate of 3.0 per year compared with BAU scenario of 3.4 percent. Energy demand under APS will reach 42.0 Mtoe in 2035; this is 8.3 percent lower than the BAU.

On a sectoral basis, most of the reduction will come from the transport sector which will decease by almost 11.0 percent. Reduction of demand of the transport sector may be attributed to the energy sector's efforts on energy efficiency and conservation, which include among others, the use of alternative fuels in the transport sector and the energy sector's campaign related to energy efficiency and conservation, specifically in the transport sector. Also, demand in the other sectors (residential and commercial) will be lower compared to the BAU. Amount of savings under the APS case will be around 1.0 Mtoe or 7.1 from 13.6 Mtoe in the BAU to 12.7 Mtoe in the APS. Gains under the other sector may be attributed to the government's energy information and education campaign as well as the energy labelling program which is mostly on technological improvements in basic household appliances and lighting products. The energy labelling program ensures that consumers have the information they need to make the right decision when they

purchase these household appliances and lighting fixtures. The government is now on its way expand the scope of appliances and lighting products to be covered by energy standards and labelling. Meanwhile, the industrial sector is projected to grow at an average annual growth rate of 2.8 percent. The projected savings from the industrial sector will be more than 6.0 percent compared to BAU (Figure 14-7).

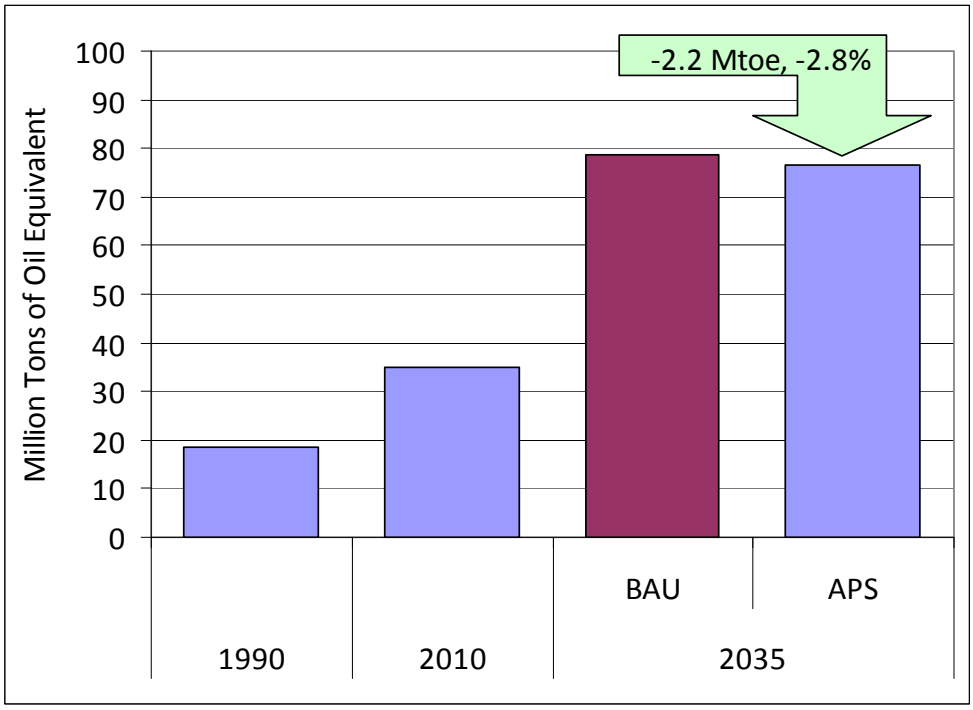
Figure 14-7: Final Energy Consumption by Sector, BAU and APS



Primary Energy Supply

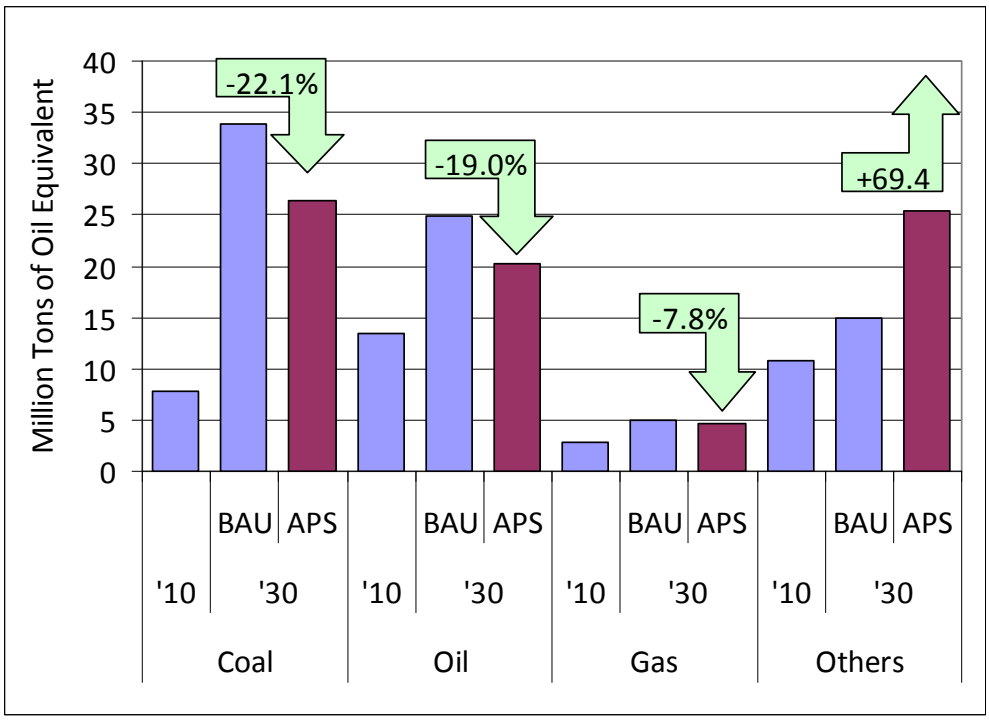
In the APS, primary energy supply is projected to increase at an annual average rate of 3.2 percent increasing from 34.9 Mtoe in 2010 to 76.5 Mtoe in 2035. For the period 2010-2035, although coal accounts for the largest share of 34.4 percent in the total primary supply by 2035, its average annual growth rate would be lower at 5.0 percent as compared to the 6.1 percent growth in the BAU. Natural gas consumption will grow at an average annual growth rate of 2.2 percent while oil will temper its growth from 2.5 percent in the BAU to 1.6 percent in the APS.

Figure 14-8: Evolution of Primary Energy Supply, BAU and APS



The share of renewable energy sources such as hydro, geothermal and "others" (including solar, wind, biomass and biofuels) is expected to reach more than 33.0 percent by 2035, which is more than 14.1 percent higher than the BAU. The full operation of the policy mechanisms under the Renewable Energy Law will further expand the contribution of renewable in the total primary energy supply mix.

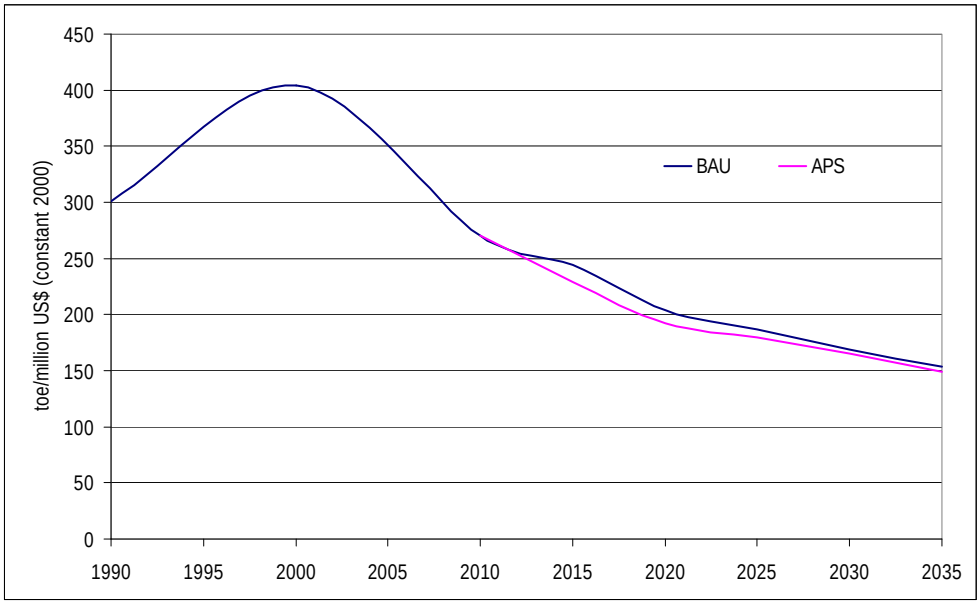
Figure 14-9: Total Primary Energy Supply, BAU and APS



Energy Indicators

Compared to the BAU scenario, energy intensity in 2035 under the APS will be around 45.0 percent lower from the 2010 level. Energy intensity reduction under the APS is 2.0 percentage points lower than the 43.0 percent intensity reduction in the BAU. The improvement in intensity is due to the government's efforts in promoting energy conservation and efficiency in the different sectors of the economy. Meanwhile, energy per capita in 2035 will be 1.7 percent lower compared to BAU.

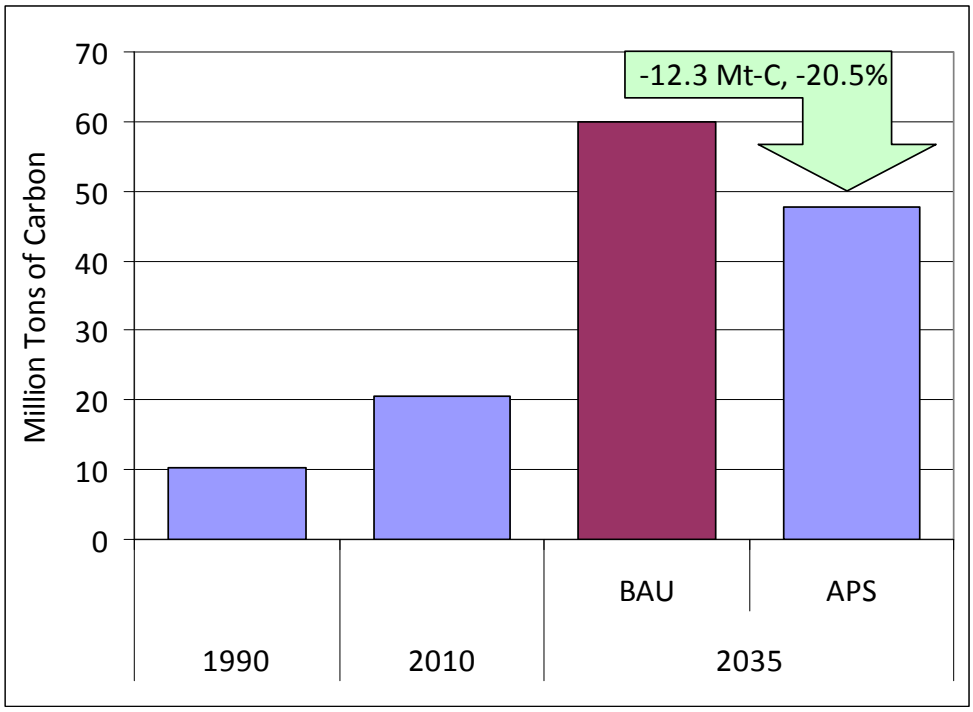
Figure 14-11: CO_2 Emission from Energy Consumption, BAU and APS



CO_2 Reduction Potential

CO_2 emissions from energy consumption are projected to increase by 3.3 percent per year under the APS from 4.4 percent growth under BAU. CO_2 emission reduction is expected to be around 12.3 million metric ton of carbon (Mt-C) which is 20.5 percent lower than the BAU. The decrease in CO_2 indicates that the energy saving goals, action plans and policies in the promotion of renewable energy together with the switch to more efficient and less carbon intensive technologies will be effective in reducing CO_2 emissions in the APS. (Figure 14-11)

Figure 14-11: CO_2 Emission from Energy Consumption, BAU and APS



4. Implications and Policy Recommendations

In 2035 total final energy savings of 3.8 Mtoe could be achieved in the APS relative to the BAU. This is equivalent to 8.3 percent reduction in total final energy consumption, around 3.0 percent reduction in the primary energy demand, and 20.5% reduction in CO_2 emission.

Energy intensity improvement under the APS will reach 45.0 percent by 2035. This means implementation of energy plans and programs in energy efficiency and conservation of the government; responses to surging oil prices and their inflationary effects on the prices of basic commodities; and changing economic structure of the country to rely more on its service sector rather more than on energy intensive industries will reduce energy intensity by 45.0 by year 2035 (2010 level as base year). This is consistent with the Asia-Pacific Economic Cooperation's (APEC) target to reduce APEC's aggregate energy intensity (energy demand per unit of gross domestic product - GDP) by forty-five (45%) percent by 2035 with 2005 as the base year.

Improvement in the energy intensity of the Philippines to 2035 is expected to be driven in part by the country's changing economic structure to rely more on its service sector rather than on energy intensive industries. In addition, energy per capita consumption by 2035 is expected to be 0.55 toe/person which is 1.7 percent lower than the BAU level of 0.57 toe/person.

In response to the result of the study, the government should pursue its programs and projects that will further increase and enhance the utilization of indigenous, clean and efficient alternative fuels. The full implementation of the Renewable Energy Act of 2008 to expand the utilization and development of indigenous energy such as geothermal, hydro solar, wind and others will not only promote the use of clean energy but will also lessen country's need for energy imports. The FIT, RPS and other policy mechanism provided under the law will boost the utilization of RE.

Moreover, the use of alternative fuels such as CNG, autogas (LPG for transportation), biofuels and electric vehicles for transport will reduce the effects of continuous increases in the prices of crude oil in the world market as well as reduce greenhouse gas emissions. The governments efforts in the promotion of alternative fuels in the transport sector will help not only reduce energy requirement but will also lessen emission coming from the transport sector.

Special attention should also be given to the industrial sector since it is the second largest consuming end-use sector of the economy and is growing almost at the same rate as the transport sector and could have high potential energy savings.

Furthermore, the country must set a quantitative sectoral energy savings target for easy evaluation and monitoring. To institutionalize energy efficiency and conservation, incentives towards greater participation is needed. Currently, the Philippines has a specific quantitative energy saving requirement as provided under Administrative Order (AO) No. 110, "Directing the Institutionalization of a Government Energy Management Program". The AO requires the reduction of at least ten percent (10%) in the cost of the consumption of fuel and electricity among others in the government. This can be duplicated or expanded to other sectors if there is an existing energy conservation law which will require strict regulation and implementation.

Finally, there is a need to pass the Energy Conservation Law to realize the targets

set by the government. The Law will institutionalize energy conservation and enhance the efficient use of energy in the country.

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