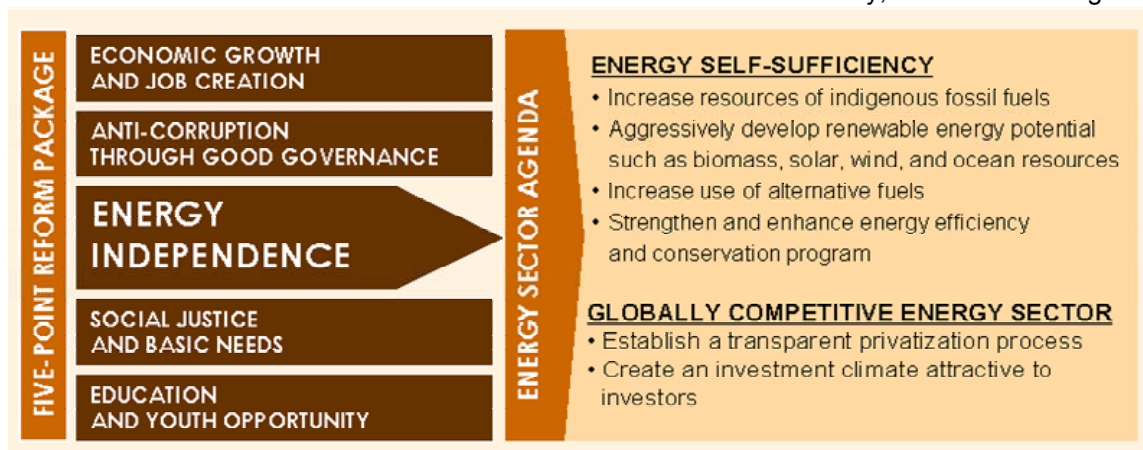


Chapter I OVERVIEW

The 2007 Philippine Energy Plan (PEP) Update is an affirmation of the state's commitment to pursue the energy independence agenda under the Government's Five-Point Reform Package. The energy sector's agenda focuses on attaining a sustainable 60.0 percent energy self-sufficiency beyond 2010 and promoting a globally competitive energy sector. The first objective is anchored on the effective implementation of the following goals: (a) accelerating the exploration; development and utilization of indigenous energy resources; (b) intensifying renewable energy resource development; (c) increasing the use of alternative fuels; and, (d) enhancing energy efficiency and conservation. On the other hand, the continuing reforms in the power sector as well as the downstream oil and gas industries will pave the way in realizing a globally competitive Philippine energy sector.

Figure 1. FRAMEWORK OF THE PEP 2007 UPDATE



Those energy goals and the corresponding strategies support the Medium-Term Philippine Development Plan (2005-2010) and the Medium-Term Public Investment Program. The PEP is also consistent with international agreements such as the 2002 Johannesburg Summit and the 2000 UN Millennium Development Goals, specifically in addressing poverty, and ensuring environmental sustainability.

The Update takes stock of the energy sector's accomplishments in 2006 vis-à-vis the targets set in the 2006 PEP Update as Reference Plan. It also evaluates the extent to which the sector has responded to the challenges that have hindered the effective implementation of the plans and programs as identified in the Reference Plan. On the bases of these actual

assessments, adjustments in targets and desired timelines were made in the Plan Framework. Indigenous fossil fuels and renewable energy were discussed based on geographical clustering under the Super Regions to highlight each cluster-region's energy resources potentials. Likewise, the current update takes into consideration the impact of recent energy developments, i.e., the landmark passage in January 2007 of Republic Act (R.A.) 9367 or the "*Biofuels Act of 2006*", renewed interest in the upstream development sector through the Philippine Energy Contracting Round (PECR), commitments to regional frameworks such as the ASEAN Plan of Action for Energy Cooperation (2004-2009) and the ASEAN initiative to move forward the harmonization of biofuel standards.

Over the planning horizon, the Update's overall energy and power demand forecasts of annual growth rates are 3.3 percent and 5.2 percent, respectively. Essentially, it will also be guided by the same policy

directions, planning horizon, sets of assumptions and sectoral plans and programs with due consideration to gender sensitive approaches. Some modifications, however, will include the amount of oil displacement resulting from the mandatory biofuels blend starting in

May 2007 for biodiesel and two years after for bioethanol. In the power sector, the list of indicative and committed projects has been revised. The line-up of transmission projects has also been updated consistent with the rulings of the Energy Regulatory Commission (ERC).

The highlights of the sector's performance are as follows:

- The country posted an energy self-sufficiency level of 55.6 percent in 2006. Among renewable energy resources, geothermal contributed the biggest share of indigenous energy of about 9.0 million tones of oil equivalent (MTOE) or 23.2 percent of the total primary energy mix, which is a slight improvement over its 2005 share of 21.6 percent. This is due to an

increase of 5.7 percent in geothermal production. The share of imported fuels such as oil gradually declined in view of reduced consumption of oil in both power and non-power applications.

- Towards attaining the 60.0 percent primary energy self-sufficiency level by 2010, the Department of Energy (DOE) continued to promote intensive upstream exploration and development through the PECR. As of end 2006, there were 28 oil and gas service contracts (SCs) currently operating. Twenty-two of these SCs were granted in the period of 2004-2006. There are also 38 existing Coal Operating Contracts (COCs).
- The promulgation of the Biofuels Act of 2006 is expected to reduce the country's dependence on imported fuels over the long term by mandating the graduated use of biodiesel and bioethanol nationwide. Subsequently, in May 2007, the law's Implementing Rules and Regulations (IRR) was approved following a series of nationwide public consultations. Meanwhile, investments came in the form of infrastructure facilities to support the widespread dissemination of biofuels such as the launching of the Biofuels Center in Quezon City in February 2006.
- In power generation, the country's self-sufficiency level rose to 66.0 percent in 2006 from the 65.0 percent level in 2005. Natural gas provided the largest contribution of 16,366 gigawatt-hours (GWh) or 29.0 percent of the total power generation while coal accounted for 27.0 percent. The 2.9 percent decrease on the use of natural gas in 2006 level was due to the 25-day scheduled maintenance of the Malampaya Gas-to-Power project while the slight increase in power generation from coal-fired power plant came from the commercial operation of the 210-megawatt (MW) Mindanao coal power plant.
- The DOE continued to ensure the reliability of energy supply through the installation of new power plants and uprating of existing power projects. In the last months of 2006, the commissioning of the 210-MW Mindanao coal-fired power plant located in Villanueva, Misamis Oriental brought significant improvement in the power supply in the grid. To further boost this effort is the ongoing capacity uprating of Units 1 and 2 of Agus 6 Hydroelectric Power Plants. In February 2007, the Philippine National Oil Company-Energy Development Corporation (PNOC-EDC) inaugurated the 49.4-MW Northern Negros Geothermal Power Plant located in Bago City, Negros Occidental, adding to the capacity of the Visayas Grid.
- To counter the effects of intermittent increase in the price of oil to the country's economy, the DOE remained vigilant in ensuring consumer protection and healthy competition among the industry players. As a safety net, the DOE issued and implemented for a six-month period (June to November 2006) Executive Order (E.O.) 527 *"Temporarily Modifying the Rates of Import Duty on Crude Petroleum Oils and Refined Petroleum products Under Section 104 of the Tariff and Custom Code of 1978 as Amended"*. Likewise, various oil players offered price discounts for diesel sold at the pump nationwide for the public transport sector.
- For 2006, the energy conservation efforts of the government generated energy savings of about 0.88 MTOE with equivalent carbon dioxide (CO₂) emission avoidance of 2.1 million metric tons (MMMT). This included savings accounted from the energy management activities conducted by DOE such as the *spot check* program of government agencies nationwide mandated by Administrative Order (A.O.) 126, the continuing energy standards and labeling program, and the conduct of energy audit of various commercial and industrial entities.
- The Wholesale Electricity Spot Market (WESM) started commercial operation in Luzon in June 2006 signaling an important phase in promoting open access in accordance with the Electric Power Industry Reform Act (EPIRA) of 2001.
- The government's continuing efforts to privatize the National Power Corporation's (NPC) generation and transmission assets made significant headway with the successful bid-out of the 112-MW Pantabangan-Masiway Hydroelectric Plant in Nueva Ecija in September 2006, the 360-MW Magat Hydroelectric Plant in Ramon Isabela in December and the 600-MW Masinloc coal-fired plant in Zambales in July 2007. This resulted in a 24.8 percent privatization level.
- The DOE has energized over 95.0 percent barangay of the country during the third quarter of 2007. Based on 2005 Census, only 1,894 barangays remain to be energized to achieve 100 percent barangay electrification as committed in the ten-point legacy agenda of the Arroyo Administration.
- To provide timely, reliable and accurate energy data and information for the Department and its stakeholders, the Energy Information Management Program (EIMP) had been implemented under the theme, *"One Database, One System, One DOE"*. The EIMP entails four Cs strategy, namely:

Centralization, Computerization, Connectivity and Collaboration.

Way Forward

- Given the severe impact of climate-altering greenhouse gas emissions and skyrocketing crude oil prices, the DOE has started a reassessment of nuclear energy as a long-term power option for the country. This reassessment also considers that many of our Asian and ASEAN neighbors are using or will use nuclear power to provide them with cheaper and more reliable electricity, making them even more economically competitive. Ultimately, the decision to tap nuclear power will have to be undertaken in a rational, informed and transparent manner. This requires consultation not only with all local stakeholders but with recent international partners such as the International Atomic Energy Agency (IAEA), ASEAN and others.

To prepare for this eventuality, however, the training of nuclear scientists and experts who can help policy makers and authorities need to start immediately. Towards this end, the DOE in collaboration with the Department of Science and Technology (DOST)-Philippine Nuclear Research Institute (PNRI) and the University of the Philippines College of Science are preparing a long-term nuclear technology manpower development program.

- An ongoing review of the government's privatization of its generation and transmission assets is aimed at responding to the various market needs and requirements with due consideration to timeliness and transparency. The Power Sector Assets and Liabilities Management Corp. (PSALM) is set to launch more aggressive marketing efforts with the goal of increasing the existing 24.8 percent privatization level to 50.0 percent by end-2007 and 70.0 percent by end-2008¹.
- In its continuing effort to ensure energy supply security, institute market reforms, and promote consumer welfare and protection, the DOE will re-file with the 14th Congress the following legislative measures:
 - **Renewable Energy Bill** to promote the development, utilization and commercialization of renewable energy resources such as geothermal, hydropower, wind, solar and ocean.

Private sector participation will also be encouraged through the granting of additional fiscal and non-fiscal incentives;

- **Natural Gas Bill** to create favorable conditions for the establishment of the downstream natural gas industry by providing the necessary regulatory and non-regulatory measures, as well as the granting of additional fiscal and non-fiscal incentives that will encourage greater investments in the industry;
- **Liquefied Petroleum Gas (LPG) Bill** to provide monitoring and supervisory framework for the LPG industry, as well as address unfair trade practices which include under-refilling, unauthorized or illegal refilling, use of unbranded cylinders, use of unsafe and dilapidated cylinders, among others. Likewise, the DOE will be given additional powers to develop and implement a comprehensive program that will promote national consciousness on safety requirements and proper use of LPG including provision of appropriate penalties for violators;
- **Energy Conservation Bill** to institutionalize energy conservation and enhance the efficient use of energy in the country. The bill will also revitalize and strengthen the energy conservation programs developed such as the nationwide energy monitoring program, product labeling, energy efficiency promotion, etc.; and
- **TransCo Franchise Bill** to grant the National Transmission Company (TransCo) an assignable franchise to construct, install, operate and maintain a transmission system and the grid nationwide for a period of 50 years. It will also provide conveyance or transmission of electricity through the high-voltage backbone system of interconnected transmission lines, substation and related facilities, grid connections and ancillary services.

¹ As of end 2007, actual privatization level reached 42.7 percent with the successful bidding of Calaca and Ambuklao-Binga power plants during the last quarter of 2007.