

MEETING THE ENERGY NEEDS OF LAGOS STATE

Keynote Speech of

Secretary Angelo T. Reyes

Department of Energy

Republic of the Philippines

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His Excellency, President Umaru Musa Yar'Adua – Chief of State and Head of Government, Federal Republic of Nigeria

The Honorable Babatunde Raji Fashola, Executive Governor of Lagos State

The Honorable Mrs. Sarah Bisi Sosan, Deputy Governor of Lagos State

Ministers of Energy

The Honorable Fatima Balaraba Ibrahim, Minister of State (Power)

The Honorable H. Odein Ajumogobia, SAN, Minister of State (Petroleum)

The Honorable Odusina Olatunde Emmanuel, Minister of State (Gas)

The Honorable (Engr.) S.M. Mahmood, Permanent Secretary (Petroleum & Gas)

The Honorable (Dr.) Abdullahi Aliyu, Permanent Secretary (Power sector)

Discussants

Mr. Jide Sanwo-olu, Hon. Commissioner for Establishment and Training, Lagos State

Engr. Joseph Makoju, Special Adviser to the President (Electric Power)

Mazi Sam Oluwabunwa, President, Neimeth International Pharmaceuticals Plc/Chairman, Nigerian Economic Summit Group (NESG)

Mr. Wale Tinubu, MD/CEO Oando Group

Mr. China Onyemelukwe, MD Zenith Capital Ltd.

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Honorable Ministers of Energy, prime movers of Lagos State development, distinguished discussants, honored guests, ladies and gentlemen:

It is a great honor for me to be here at an exciting time in the history of your state and your young nation. The Federal Republic of Nigeria finds itself at the cusp of an economic take-off as it completes its transition to civilian democratic rule under the reform-oriented leadership of His Excellency, President Umaru Musa Yar'Adua.

The fact that your gross domestic product grew by over six percent last year is testament to the determination of the Nigerian government to create the proper environment for a diversified and truly market-driven economy. While GDP growth had been spurred

largely by high-priced crude oil exports, the administration's focus on infrastructure-building is clearly reflected in its 2008 budget and its thrust toward developing stronger public-private partnerships in this area. Clearly, you would need a robust energy platform to support this development trajectory.

With more than 70 percent of commercial and industrial action occurring here at Lagos, much of the burden of filling the gaps in energy and other infrastructure would be borne by your State. No wonder the Honorable Governor Babatunde Fashola calls the Lagos State 2008 budget a "Great Leap Budget"—with no less than US\$50 billion earmarked for urgent infrastructure development. The Governor envisions Lagos State as a Centre of Excellence and is shepherding its dynamic transformation through people-oriented programs targeted mainly at fighting poverty and ushering in prosperity.

In the Governor's words: "Lagosians...have great expectation that the state stands at the threshold of a new era of peace, progress, prosperity and security largely through the radical modernization of our infrastructure. The present administration has adopted, as a major policy thrust, the instrument of public private partnerships and exploring its opportunities towards the delivery of social goods and services to the people of Lagos State."

From this general appreciation of the development trajectory of the Lagos State Government, I can see clear parallels with what we are trying to do in the Philippine energy sector in the context of our medium-term socio-economic plan. Through my presentation and our discussions today, I hope that we can discern lessons from the Philippine experience that can be useful for your own energy programming.

But, before that, let us first scan certain baseline information that show fundamental differences between our two countries.

From the first table, we can see that the Philippines has only one-third the land area of Nigeria but two-thirds the size of your national population. This means that Nigeria has half the population density of our archipelago. The Lagos urban area, on the other hand, is slightly larger than our national capital region of Metro Manila but has only around two-thirds its population density.

Both our countries have young populations—and it is quite amazing to note that the median age of Nigerians is below 19 years. This means that our economies will be under sustained pressure to provide employment and other opportunities to new entrants to the labor force year after year. The healthy GDP growth posted by both countries last year is a positive sign in this regard. The fact that Nigeria's electricity production and consumption are roughly 40 percent of Philippine levels at this point indicates the tremendous upside that your country can unleash, once more parts of Nigeria are energized.

As you well know, your country's greatest strength has also become your biggest vulnerability. As the largest oil producer in Africa and 11th largest in the world, Nigeria has become dependent on petroleum for 95% of your export revenues and more than half of your energy consumption. By contrast, as you see from the table, Philippine oil reserves and oil production constitute a mere 0.4 percent and 1 percent of Nigerian levels, respectively. As I will show later in my presentation, rising oil prices are forcing us to accelerate our renewable energy program.

The picture is basically the same when it comes to natural gas. Philippine reserves and production amount to little more than two percent and 13 percent of Nigerian levels, respectively. In the face of your country's vast wealth in oil and natural gas, which together account for over 90 percent of Nigeria's energy consumption, the challenge on your end is to pursue diversification in terms not just of economic activity but of your energy mix as well.

With that comparative perspective, let me now give you an overview of what we are trying to achieve in the Philippine energy and power sectors.

Our country's socio-economic roadmap is spelled out in the Medium-Term Philippine Development Plan, covering the period 2006-2010. It is focused on the goal of reducing poverty through job creation and enterprise. It spells out a number of very specific targets:

- GDP growth accelerating to 7-8% by the years 2009 and 2010
- An investment to GDP ratio nearing 28% by 2010
- Exports exceeding \$50 billion by 2006
- A balanced budget by 2010
- Annual job creation exceeding 1.7 million jobs by 2009; and
- Poverty incidence reduced to below 20% by 2009, in keeping with the country's commitments to the Millennium Development Goals of the United Nations.

The development plan is fleshed out in the form of a five-point reform agenda, which includes energy as a fundamental track.

Reform in the Philippine energy sector centers on two areas: attaining energy independence by 2010 and restructuring the power sub-sector in accordance with the provisions of the Electric Power Industry Reform Act (EPIRA) of 2001. The first aims for 60% self-sufficiency in energy needs by 2010; the second is geared toward attaining fair and reasonable power rates that would benefit consumers and make our industries competitive in the world market. It should be noted here that the Philippines has among the highest power rates in Asia due primarily to guarantees that the government gave independent power producers who came to the country's rescue during a severe power crisis in the 1990s.

The path toward energy independence rests on a five-point strategy:

- We will accelerate the exploration and development of our indigenous oil and gas resources.
- We will aggressively develop our renewable energy potentials.
- We will increase the use of alternative fuels.
- We will enhance our energy efficiency and conservation programs; and
- We will form strategic alliances with other countries for energy complementation and technology exchange.

The DOE will continue to promote and further draw investments through the Philippine Energy Contracting Rounds. The guidelines are being reviewed to ensure their effectiveness in promoting investments.

We are pushing for more investments to further utilize our local energy resources such as oil, gas and coal, which could also provide additional development income for the local community and to the whole country as well.

Like you, we will be promoting collaborative public-private sector partnerships in this area. In addition, we will streamline the permitting and licensing process by strengthening coordination and working agreements with government agencies, local governments and NGOs to facilitate the issuance of approvals, permits, certificates, clearances and the implementation of work programs of the Service Contractors.

To further improve the country's energy options, the DOE will increase the use of renewable energy and alternative fuels to increase their contribution to the overall energy mix.

The DOE will work with Congress in pushing for the passage of the Renewable Energy Bill which is seen as the major policy action to ensure sustainable development of renewable energy.

On the other hand, the implementation of the National Biofuels Act and the Natural Gas Vehicle Program for Public Transport will reduce our dependence on imported oil and will eventually bring savings for the economy.

Under the National Biofuels Program, the DOE will issue guidelines for registration and accreditation of biofuel producers, as well as initiate the conduct of a study on potential feedstock for biofuels.

We have made progress in our bioethanol and biodiesel programs. Current production is geared toward fulfilling the present mandate of 1% biodiesel-blend, even as we can cater up to 3% blend. We have even been exporting our excess production of coconut methyl ester (biodiesel). To sidestep the food vs. fuel debate, we are studying the use of non-food biofuel feedstock, such as jatropha for biodiesel and sweet sorghum for bioethanol. Our

PNOC-Alternative Fuels Corporation aims to take the lead in jatropha research and development efforts in the ASEAN region.

By 2025, the Program envisions about 5,000 buses running on compressed natural gas (CNG).

To promote investment opportunities in the renewable and alternative energy sources, a one-stop-shop for sustainable energy projects will be created which will involve the codification of RE standards, creation of a Renewable Energy and Alternative Energy knowledge center and the development of a monitoring and auditing system in cooperation with civil society.

Another major policy thrust of the government is its enhanced energy efficiency and conservation program. With pressing global issues such as high energy prices and climate change, an immediate and strategic intervention such as energy efficiency and conservation, has to be put in place.

Another priority program is the Palit-Ilaw Program which encourages the use of Compact Fluorescent Lamps (CFLs). The DOE is working for the calibrated phase-out of incandescent bulbs within one year in favor of the more efficient CFLs. This is to achieve reduction in national energy consumption and greenhouse gas emissions as well.

A proposed legislation has been drafted regarding the phasing out of incandescent lamps by 2010.

Of these strategic tracks, let me dwell a bit on our push for renewable energy (RE). The government is facilitating the transition of our energy sector to a sustainable system by developing renewable energy as a viable and competitive fuel option. The shift from fossil fuels to renewable forms of energy is the key element in ensuring the success of this transition.

Fortunately, geographic circumstance has made the Philippines a potential center of renewable energy development. Our location within the Pacific “ring of fire” accounts for the abundance of geothermal resources which already account for a significant share of our energy generation capacity. As a mountainous archipelago, we are gifted with a lot of coastal areas that can draw energy from the wind and the ocean, as well as plentiful sites for vari-sized hydro applications. As a tropical nation, we enjoy nearly year-round sunlight that can be tapped for energy as well. And with a sizeable agricultural sector, we can harness a lot of farm waste that can be converted into energy.

Under the government’s Renewable Energy Policy Framework, the DOE has set two long-term goals: to increase RE-based capacity by 100 percent within the next 10 years; and to increase non-power contribution to the energy mix by 10 million barrels of fuel oil equivalent in the next 10 years.

In striving to achieve these goals, our country aspires to:

- be the Number 1 geothermal energy producer in the world
- be the Number 1 wind energy producer in Southeast Asia
- double hydro capacity by 2013; and
- expand contribution of biomass, solar and ocean energy to about 131 megawatts

In terms of installed capacity, cumulative RE-based capacity is foreseen to reach 9,147 MW by 2013, an increase of more than 100 percent from its 2002 level. This corresponds to an additional 4,698 MW of RE-fueled power plants which need to be commissioned within the 10-year period.

Of the 1,227 megawatts in RE installations targeted from 2004 to 2007, 81.35% was actually installed. There remains a balance of 3,699.79 MW in target RE installations in the next five years.

The next matrix shows the installed capacity mix from 2004 to 2007. In 2007, 35% of the total installed capacity of over 6,000 MW came from power plants fueled by renewable energy, primarily hydro and geothermal.

The Philippine power sector has gradually veered away from dependence on imported oil-based generation. For instance in 2001, the country was using 21% of its supply requirement from oil-based generation facilities. In 2006 to 2007, this figure went down to below 10%.

This has led to increased energy self-sufficiency for power generation from 41% in 2001 to 65% and 66% in 2006 and 2007. This is due largely to the contribution of the natural gas source from Malampaya.

Over the past six years, the Philippines has been building a competitive power market. Significant progress has been made in pursuit of the mandate to restructure and privatize the Philippine electric power industry. Certain fundamentals prescribed by the Electric Power Industry Reform Act (EPIRA) are already in place. These include:

- the unbundling of rates among generation, transmission, distribution and related services;
- the removal of cross subsidies in generation, transmission and distribution and within different customer classifications to reflect the true cost of providing service;
- commercial operation of the Wholesale Electricity Spot Market (WESM) in Luzon since June 2006 and possibly the launch of the WESM in Visayas in the near future;
- the privatization of 1,856 MW of generating assets, bringing the industry closer to the 70% requirement for open access;

- the award of the 25-year TransCo Concession Contract for a bid price of 3.95 billion US dollars;
- the prospective transfer of the National Power Corporation's contracted output to Independent Power Producer Administrators through bid tenders starting August this year.

In addition, we are moving toward total village electrification, with the attainment of 96.57% electrification level at the *barangay* (village) level.

We have successfully implemented private sector participation in rural and missionary areas for purposes of providing adequate and sustainable electricity services to far-flung communities nationwide.

Significant transmission assets of the government have also been disposed.

Meanwhile, generation assets continue to be privatized according to schedule.

The power supply remains stable to support the economic expansion of the country. In 2007, the total system peak demand was recorded at 8,986 MW. The table on the left also shows peak demand on each of the three major island grids of Luzon, Visayas and Mindanao.

In terms of type of power plants, the table on the right shows a balanced mix, even as plants running on fossil fuels like coal continue to dominate.

Here is an illustrative guide to opportunities for new investors as well as for capacity planners in the Philippine power sector. Capacity additions are presented in a range which is simulated based on low and high demand forecasts.

For Luzon, the grid requires a cumulative capacity of 1,950 MW from 2011 to 2014. So far, committed projects cover 606.3 MW, while the indicative power projects reach 3,188 MW.

The Visayas grid requires 820 MW from 2010 to 2014, to adequately serve the projected demand including the reserve requirements. The aggregate capacity of committed projects is 566 MW, which would all be coming on stream by 2010. Meanwhile, total indicative power projects run up to 333 MW.

The recent delay in two projects flag a potential void in supply that could make the system unstable during the peak months. To avert a possible power crisis in the Visayas in 2009, the government may push for aggressive demand side management, and the interim use of back-up generators or the lease of peaking plants.

The Mindanao grid requires 950 MW additional capacity from 2009 to 2014. So far, one hydro project with a capacity of 42.5 MW and one geothermal project with capacity of 50 MW are committed to be on stream by 2009 and 2010, respectively. Total indicative power projects cover 735.5 MW.

All in all, total committed capacity is 1,266.8 MW, while the total indicative power project is 4,256.5 MW.

As we mark the strides we have achieved in carrying out the sector's reform agenda, we are focused on overcoming the challenges that remain. These include:

- Making our electricity rate more affordable and competitive, particularly for big industrial consumers fighting it out in the global marketplace;
- Providing adequate and reliable supply of electricity, whenever and wherever, by installing the infrastructure needed to support power development in the country;
- Creating an environment conducive to private sector investments by ensuring a level playing field for the public and private sectors; and
- Moving toward a power generation mix that would not exacerbate the global problem of climate change.

To make our electricity prices reasonable and affordable, we have outlined the following thrusts:

- Pursue full privatization of the remaining NPC assets and contracted energy outputs
- Accelerate implementation of open access and retail competition; to start in economic zones
- Ensure better targeting of subsidies for the poor and facilitating industry competitiveness
- Carry out demand side management programs
- Intensify public sector involvement in the reform process.

For energy to be truly relevant in development, it should impact on the quality of life of as many people as possible. Hence, we are reiterating the DOE's intention to achieve 100% village electrification by next year and to bring the effort down to the household level by, among others, expanding private sector participation in reaching out to the hinterlands.

To maintain an environment conducive to private investments, our thrusts are to:

- Ensure sufficient, stable and accessible energy supply meeting quality and safety standards
- Provide a level-playing field in the conduct of business
- Encourage investment in efficient and economic modes of energy marketing and distribution

- Underscore strategic energy infrastructure-building
- Create market-based incentives

In moving toward a power generation mix that would not exacerbate the global problem of climate change, we intend to

- Promote private sector investment in green power generation
- Carry out aggressive demand side management across sectors
- Support the campaign to promote climate change awareness and action.

From the foregoing, you may have noted certain similarities in the energy situation in our two countries. Among these could be:

- High energy costs and tariff structure
- Uneven distribution of energy infrastructure
- Thirst for investment
- Potentially volatile peace and order situation
- Inefficiencies in generation, transmission and distribution
- Policy gaps
- Environmental and climate change considerations
- Reliability and security of power supply

You may find comfort in the fact that—even with our headstart in energy planning and policy and structural reform—we in the Philippines are still grappling with many of these issues and concerns.

Your checklist of key challenges—ranging from dealing with a poor billing and collection culture to the rehabilitation and expansion of transmission and distribution networks—is quite daunting. It would be presumptuous of me to think that I have a deep enough appreciation of your energy situation to prescribe even an approach to a solution.

Perhaps the best I can do at this point, apart from sharing aspects of the Philippine experience, is to offer a friendly reminder. This being an Olympic year, it might be fitting to couch this reminder in sporting terms. In the anxiety to catch up on development, the sense of urgency can be double-edged. On one hand, it can keep our creative juices flowing at a high level. On the other hand, it can push us to rash courses of action. If there is anything I've learned from my relatively young stint in this sector, it is that much of the interventions in energy are long term in nature.

Perhaps it would be prudent to always imagine ourselves running a marathon, not a sprint. We should always have a good mental picture of the long road ahead, plan the race, and run at our pace. To do otherwise would run the risk of stumbling long before the finish line. In the case of investments in energy, such a stumble could be extremely expensive—not just in terms of money but of morale as well.

The continent of Africa has long been known for its long-distance runners; so, I have no doubt that you understand what I am trying to convey. Just put yourselves in the shoes of your great marathon champion, Abbas Mohammed, and run a smart race.

Thank you very much and good day to you all.