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**Electricity Reform in the Philippines
and the Prospects of Competition**

by

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Abstract

The electric power industry reform act in the Philippines has for its main objective the introduction of competition and effective regulation to reduce costs of electric power at retail. Background of high electricity costs is linked to the politics of energy and the structural problems that have arisen in the management of the electricity sector. The features of the reform law are explained. The law relies on international experience in the design of competition and regulation in the electricity sector. The law seeks to introduce a competitive industry structure in the energy generation field but recognizes monopoly regulation in relation to the ownership of transmission and the franchising of local area electricity distribution. Issues related to competition, regulation, and privatization are discussed. Although the new industrial framework could lead to cost reductions through competition, some issues connected with cross-ownership of power generating companies with the retail distribution monopolies opens up the danger of market power being exercised that is at the expense of consumers. The next stage of privatization if realized promises to help strengthen fiscal performance.

Key words: Electricity industry, utilities regulation, competition in regulated industries, privatization, Philippine economy

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Introduction

The paper under discussion, Villamejor-Mendoza (2002), provides a legal and regulatory evolution of public policy concerning the generation and distribution of electricity. Somewhere in the long discussion of the history of the electricity sector, it got lost in some of the politics of the energy sector. The paper ends with the recent adoption of the electricity reform law, but it stops short of the analysis of the why the costs of electric power in the country are high and what competition could do to help reduce power costs.

The discontinuity of Philippine economic history bridging the Marcos period and the succeeding period after the restoration of the old political order would have been more smooth and less disastrous if Mrs. Aquino, as president and successful challenger to Marcos, had managed the energy sector well.

But on this front, Mrs. Aquino as president made fundamental mistakes that led to the mismanagement of the energy sector. She scuttled the commissioning of the nuclear power plant, a project that was ready for generating electricity, and which cost above US\$2 billion to build. As a result, the plant produced zero electricity output, despite the huge investments (an infinite ICOR!). This project was to continue the energy diversification program of the government to reduce reliance on petroleum supply – an outcome of the energy shocks of the 1970s – and to add capacity as well as replace part of the aging energy plants. The other mistake that was undertaken was the abolition of the energy department that led to the departure of a major set of technicians who were critical in bringing the energy sector to the prime position that it enjoyed during the Marcos period.

Institutional memory and technical capacity – two important elements in continuity – were disrupted seriously. The energy development program under Marcos was acclaimed as a model of adjustment of the power sector during the 1970s in light of the major dependence of the country on petroleum-based energy generation before the energy crisis. This judgment came from various multilateral and bilateral institutions that had the opportunity to review it then and supported with technical and economic assistance. That program was designed to reconfigure the level of energy dependence from imported petroleum to a wide variety of domestic and various fuel input sources.

These two major disruptions were the significant causes of the power blackouts and their severity that bedeviled the nation two years later during the presidency of Mrs. Aquino and which took Fidel Ramos the first four of his 6 years as president eventually to solve. Eventually, the same energy program that was scuttled became the basis of the long run program. But by then the short-range discontinuity had taken its toll and had set back Philippine development. This episode further aggravated the effects of the debt crisis that hit the nation resulting from the

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political turbulence after 1983 when the nation was plunged into economic and political crisis. These developments are not intrinsically related to the topic of the meeting and are discussed elsewhere in Sicat (2002).

Competition in electricity: the target of reforms

Since the topic of this session is competition in the electricity industry, it becomes essential to explain the nature of electricity reforms being undertaken in the Philippine electricity sector.

The electric power industry reform act (EPIRA), Republic Act 9136, was passed on June 8, 2001. The features of this reform were crafted during the presidency of Fidel Ramos. The bill took a period of 7 years of legislative debate to get it through. It languished in Congressional committees under relative neglect during the short presidency of Joseph Estrada, but it was passed finally a few months after Gloria Macapagal Arroyo's presidency. Essentially the reform act puts the Philippines in the forefront of a new framework that opens the way for competition in electricity generation and distribution.

The idea behind the electric power industry reform is to stimulate competition by allowing various mechanisms for the exercise of independent production of energy. It also empowers the users of energy by creating points of competition in the purchase of power. It also creates clear-cut regulatory mandates.

Before an analysis of the provisions of the new law is discussed, it is important to provide a background to the nature of the problem in a Philippine context. This would require a review of the structure of the industry before the law was enacted and to discuss the various issues that were critical to the shaping of the reform process.

Innovations in electricity regulation that have proved successful in a few countries presented themselves as models for a new framework for regulation and competition. Reforms in Chile and in Argentina provided directions concerning the self-financing of the utilities and, later, the unbundling of the highly integrated power sector into generation, transmission, wholesale and retail distribution. Privatization of the power companies was tried in these countries, with good results. From Argentina, the idea of auctioning companies and providing for spot markets in electricity services was introduced. British experience in reform for natural monopoly regulation of transmission and distribution and competitive framework for generation and supply were also used. Relevant experience in Australia, too, was studied, especially in the context of unbundling of various services and the promotion of competition. As the final stage of legislation was taking place, the lessons from the California deregulation of power became clear. That model provided some hard lessons on the inefficiencies of artificial restrictions in the market, especially those that prevented market capacity from expanding. See Abrenica and Ables (2001), various World Bank public policy notes -- Abdala and Chambouleyron (1999), Besant-Jones (1996), Peter Lalor and Garcia (1996) -- and Newbery (1999).

Motivations behind the electric power industry reform act (EPIRA)

The Philippines awoke from the electricity crisis of the early 1990s with one of the highest power costs in Asia, next only to Japan. This was seen as a significant factor in reducing the country's international competitiveness in tradable goods.

Whether or not that power crisis had taken place, there were other factors pushing for inevitable reforms of the electricity industry as part of the economic reform agenda. The need to move towards improved efficiency of the electric power industry would be at stake. Technological changes in the power industry and innovations in the regulatory frameworks for

utilities have made possible various forms of simulating competitive behavior among market participants. There is room therefore for major efficiency gains.

The model of state provision of electricity production through the National Power Corporation as the vertically integrated producer of power designed for sale up to the point of wholesale had been questioned by the apparent successful implementation in other countries of new regulatory and industry competition trends. There was also major discontent about the retail distribution aspects of the industry that is based on private sector delivery. This also needed major reforms to improve not only efficiency. Aside from the relatively high power costs sold, ex-transmission level to the utilities, the private distributors were a major source of high power costs. Indeed, a proper unbundling of various power costs would make the components of the electricity tariff more subject to transparency in pricing.

Moreover, the NPC being the largest public enterprise in the country had become a threat to the fiscal position of the national government. The NPC was subject to many of the common ailments of public enterprises every where – excessive public employment, relatively low productivity, and political interference in its decisions. Because of this lack of genuine business autonomy, its cash position was always threatened. Cost recovery of operations through requests for increase in electricity tariffs had been periodically postponed for political reasons (it was always never timely, etc.). The result was that its cash generations to cover operations were periodically inadequate. To seek financial relief, it often turned to the national government. Since the national government is strapped for funds, too, the NPC often had to rely on foreign debts to cover these deficits as well as to finance its investment activities.

In short, these external debts are adding to the contingent fiscal deficit. Although these are essentially off-budget, they threaten the fiscal position of the national government. The problems of this type, germane to the operational cash shortages of government corporations of which the NPC contributes the highest level of cash shortages as a percent of GDP, are discussed in Sicat and Abdula (2002).

Effects of the power crisis on electricity industry structure and costs

When the system of private independent power producers (IPPs) was introduced in the late 1980s (Executive Order 215, 1987), NPC remained as the sole buyer of generated power. This system of independent power producers did not produce sufficient private response. The problem was that the NPC as owner of the transmission system had market power over the private power producers because of its control of the transmission grid and its refusal to price that openly.

Even as the power generation monopoly was being reduced, residual market power of NPC was exercised in its ownership of the transmission grid. Investors in the power sector took issue with this NPC monopsony position, claiming that the benchmark price used for power purchases was not fair or transparent. Moreover, the size of the private generating capacity that was allowed to independent power producers was restricted to what could be mere suppliers of peak-load demand. Private suppliers, by virtue of these capacity limitations, were therefore prevented from becoming base-load suppliers.

The power crisis forced a change in these arrangements and caused a major liberalization of the Build-Operate-and-Transfer (BOT) financing area. The electricity power crisis act of 1993 (RA 7648) and the expanded BOT financing law (RA 7718 in 1994) eliminated the restrictions on the size of generating facilities. The self-generation of power by the public utilities was allowed. Power consumers that had requirements of at least 100 megawatts were allowed to directly connect to the NPC transmission grid. The latter was a feature resisted by the electric utilities because this meant that they could lose their prime clients in their franchise area.

A major effect of the liberalized BOT financing was strong private sector response and it led to the quick expansion of capacity. Many new independent power producers came to the field in expanding the amount of generated electricity capacity.

There were three types of BOT-financed projects. The first of these were under the earlier BOT financing law. They were small scale plants designed to supplement the old generating plants that were then identified.

The second of the BOT-financed projects consisted of stop-gap measures as the severity of the power crisis became a fact. These BOT projects took advantage of the revised financing law. They were also small scale. They were contracted at crisis stage levels in which the NPC guaranteed the purchase of output at contracted capacity even if it should happen that capacity was not needed. Many of these were in the nature of power barges, which could be transferred from their old locations in countries where they remained simply as peak-load support to existing power grids. They were moved and transferred to the Philippines. As power of greater reliability and at cheaper costs became available, the government would find these contracts exorbitant in costs and would raise the overall costs of power.

The third power projects, mostly those coming on stream after 1994, are large scale IPPs in excess of 100 megawatts in scale. These were more efficient power plants producing electricity at lower unit costs. Table 5 of Villamejor-Mendoza (pp. 54-56)

The electricity generation and distribution industry

The power industry in the Philippines consists (today) of 17 power private franchise utilities, 118 rural electric cooperatives, and 7 municipal utilities.

Private utilities

Of the private utilities, three companies account for 90 percent of the total customer base, although the power requirements are not to this extent. MERALCO – the franchise in Metro Manila – accounts for 79.5 percent of this customer base. Visayas Electric for 6.5 percent, and Davao Light and Power 4.2 percent.

MERALCO's off-take in 1998 of 22,000 GWH from NPC power generation represented about 60 percent of total generation. The next largest buyer Visayas Electric buys 1,000 GWH or 27 percent of total generation. Davao Light and Power buys 900 GWH, or 24 percent of total NPC generation.

But some of the new generation of IPPs is partly owned by the private utilities. These utilities are now beginning to buy part of their requirements from their own IPPs. This means a future loss of sale of the NPC from its own system. A further outcome of this system is that as the transfer of purchases to other IPPs happen, NPC's supply of excess power increases (so long as there is no increase in demand). Therefore, the losses of NPC from guaranteed purchase agreements become actual, even if no power was in fact generated.

For instance, MERALCO has now contracted 2,268 MW from four other IPPs, one of which is First Gas Power Corporation whose plant (with a generation of 1,500 MW) is to be put in service by 2004. The Lopez group that controls MERALCO has interest in three IPP generation plants. The other utilities also have associated IPPs.

Rural electric cooperatives

The rural electric cooperatives are a different problem by themselves. They form the bulwark of the government's rural electrification program that started during the 1970s. The coverage of rural electrification has continued to expand in the nation. In fact, this program is partly

missionary and developmental in context – to bring to the nation the benefits of electrification – and also institution building program.

The electric cooperatives have developed a problem uniquely of their own. They borrowed heavily from the National Electrification Program at long term soft loans for the expansion of their retail service area and for capacity building. Over time, due to the nature of their clientele and expanse of their distribution (low income rural folks and high distribution costs) and the problems inherent in cooperative management, the rural electric cooperatives developed their own structural problems that needed to be addressed separately. The government recently made accommodations to forgive the part of the enormous debts accumulated by the electric cooperatives. This means that the NEA will be saddled by these debts that, eventually, will have to be absorbed by the treasury to give NEA continued lease of life.

As far as the NPC is concerned, the rural electric cooperatives have also been a source of revenue losses. Unpaid power consumption has been a major source of irritations between the NPC and the rural electric cooperatives. Problems of these institutions are more akin to the developmental and institutional issues of supporting new opportunities for rural communities, and are intrinsically less connected with the main problems of the NPC. However, there are communities where the rural electric cooperative is the main electric utility provider, and from that viewpoint, some of the problems encountered from NPC's viewpoint are similar to the industry problems encountered with small public utilities (discussed later, below in connection with system losses).

Transmission grid

These retail distributors are served by three sets of transmission grids – Luzon, Visayas, and Mindanao.

In 1998, the Luzon-Visayas grid was unified through the cable linking Leyte (in the Visayas) to Luzon mainland. And the Mindanao island grid is programmed for connection to the Visayas grid between Leyte and Surigao (in Mindanao) in 2004, thereby creating a national transmission grid. Because of its archipelagic position and its isolation from other islands, the Philippines has no means of importing power from other countries, unlike countries that share a common land boundary or short waterway distance.

The transmission system for electricity is critical to the efficient distribution of power and the economic treatment of its value is vital to the reform law. Of course, this is not so in the case of the local franchise area where the investments in transmission lines become the responsibility of the franchise holder. The unification of the grid is essential in the distribution of excess power to areas where there is excess demand.

Analyzing the high cost of electricity

There are four principal sources of high electricity costs. Unfortunately, because of the highly bundled tariff pricing, it is not possible to assign exactly where the worst offense is occurring. And no direct data are available. Until competitive pressures are put on all areas where the source of high costs occur, that black box will remain a mystery and the effects will be a high deadweight burden on the nation. Through the removal of these sources of cost burdens where efficiency of the prime agents are being adjusted by behavioral inducements from competition, it would not be possible to realize these.

The sources of high electricity prices could be: (1) high generation costs; (2) monopoly power at (a) generating level; (b) retail level; (3) power losses; and (4) management efficiency and high leverage of power companies, including the NPC.

High generation costs

High generation costs can be partly due to technology of power generation, to changes in raw material costs, and to contractual obligations. Many observers, and even the NPC, attribute the high cost of contracts that were signed during the power crisis as the main culprit for high generation costs. This partly accounts for this problem. It has led NPC to buy out some of the very high cost power contracts and also to call for re-negotiation of existing ones.

There are also other costs. In fact, it is well known that power generation from petroleum based feedstock are volatile largely because of the changes in petroleum prices in the world market. As a net importer of petroleum, this volatility is transferred to the cost of power somehow. The outcome of the long run program of reconfiguring energy dependence has yielded results in terms of diversification of fuel sources. This diversification has stabilized only a minor part of the supply sourcing and material pricing of the fuel feeds.

For instance, in 2000, the primary electricity generation mix was based on 25 percent geothermal source, 38 percent coal, 16 percent hydroelectric, 21 percent oil based and 1 percent natural gas. The Energy Department (2001) estimates that the total energy dependence of the country on imported fuel at 55 percent of total needs. With the coming into the picture of the new power plant that uses the Malampaya natural gas fields, an additional --- MW of electricity will be generated, and the generation mix will be derived 30 percent from natural gas, 17 geothermal, coal 34 percent, and 13 percent hydro. At that point, the energy dependence on imports will be reduced towards 50 percent.

In fact, domestic energy exploration has led not only to discoveries of petroleum (minor) and natural gas (relatively large and still promising) but also to the harnessing of generous supplies of geothermal energy of which there was zero usage as late as the 1970s. The Philippines has become one of the principal exploiters of geothermal energy. With the advent of new technologies that depend on other sources of energy, the prospects of reducing that external dependence are higher. Among these technologies that are not yet commercially available are certainly important components of the future in energy: solar, wind, and wave power. But these investments require high levels of foreign direct investments.

The discoveries of fossil-based fuels and geothermal energy have only helped to stabilize the supply of feedstock for energy generation but not the price of power. These discoveries have not significantly reduced the cost of power production. Generation contracts for energy are linked to price formula related to world energy prices and are therefore in dollar terms. There is also a high foreign exchange cost to these generation contracts because they significantly involve foreign direct investments and loans.

Monopoly power: the state sector

The main argument for the NPC to become the producer and seller of wholesale electricity is based on the old argument for state ownership of natural monopolies. It was also the main reason used for the takeover of the power generation in the electricity industry during the 1970s. The return to private generation of power is the result, in part, of the world wide trend towards private sector provision of utilities, with the demise of the infallibility of the state as a manager and provider of these services. This, of course, began with the moves to privatize many state-owned operations, an experience which has found enormous adherence because it has, from results of the early experiments, restored economic efficiency in the management of public utilities.

With respect to power setting, NPC's bulk tariff pricing is based on a pricing policy based on an 8 percent rate of return. Since NPC is a government corporation, the application of

this rate of return calculation has not in fact been fully put in practice. Over a prolonged period, rate base calibration of the rate of return had been held captive by political resistance and delays in decision-making. In fact, the covenant for most of the foreign loans derived from multilateral development institutions has been based on this rate of return. Often, it was the condition for loan tranche releases that enabled the adjustments.

The issue of monopoly power for power generation by the state sector hardly is an issue however. A more important reason for the obscure character of the pricing principles is the bundling of the tariff and the inefficiency in the operation of the NPC. Because of the vertical integration of the state power sector, there are areas of cross-subsidies that happen. Also, major assets are not priced according to their efficiency returns from their contribution to the overall operations. With respect to inefficiency, political and other issues often held back adjustments even when the need for tariff adjustments would help improve the financial conditions of the NPC.

There are different types of power generation technologies. Some of them produce cheaper electric power than other technologies. Now that different IPPs are in existence with different types of relative economic efficiency, averaging costs would not necessarily be a good means of determining the lowest possible generation costs.

A long time problem in Philippine power tariff pricing policy has been the complaint of people in Mindanao who had benefited from cheap and reliable hydroelectric power projects in the past from high power costs that were averaged to the cost of producing electricity in Luzon and Visayas. Therefore, they had complained about subsidizing power users of Manila. The cross-subsidies have also been in various types of services to different consumers – as between residential, commercial and industrial users and as between rural vs. urban users, or as between cooperatives and privately operated franchises of public utilities.

Part of the other cost of bundling is how to assign the returns to power transmission lines. Under a policy of single tariff pricing policy, transmission and generation costs get mixed and efficient operations are not encouraged to flourish in relation to other types of more costly operations. Under an unbundled kind of pricing setup, it would be possible to allocate costs to different aspects of the production and distribution of energy so that costs become more transparent in nature.

Monopoly power: the private utilities sector

The real danger of the use of market power arises from its exercise by the private retail distribution monopoly. The cost of NPC power (a bundled price including transmission costs) is the basic tariff from which additional costs allowed can be included. Regulation allows for charging system losses, operating and maintenance expenses and an allowable 8 percent rate of return. Market power could be exercised through the charges that are allowed for operating expenses. Under the pre-EPIRA setup, the cost of power bought from NPC is clear. The only potential source then of markups would be reflected on those charges for which there could be adjustments.

The margins over the average NPC tariff in 1998 are presented in Table 1, for MERALCO and for average distribution utilities. MERALCO's margins, although considered to be high, are much lower than for all the other distribution utilities. Luzon distribution utilities has an average of 81 percent over the NPC off-take price, Visayas 74 percent; and Mindanao 115 percent.

A variety of reasons account for these disparities. The Energy Regulatory Board (ERB) allows all "acceptable" expenses. Including amortization of loans from the NEA (in the case of

rural electric cooperatives) and loans from the capital market in the case of the private utilities. System losses (to be discussed next) are also allowed for inclusion, and the amounts of these losses could simply be due to inefficiency.

Charges falling under loan amortizations and purchases of supplies, as well as operational expenses could be causes of cost-padding. Of course, an aspect of the governance issue in public utilities is the possibility of regulatory capture, a topic that could be surmised as important in view of the national problems that often take on center stage in criticisms of the current social currents.

Firm level inefficiencies

System losses are quite high. The overall system losses of the various firms are shown in Table 2. Part A of the table summarizes the four biggest private utilities and their system losses. On the average, the system losses from within the franchise area transmission and distribution amounting to 19 percent are high in relation to system losses recorded (from Villamejor-Mendoza's table 10) in Singapore (3.39 percent), South Korea (5.26 percent), Malaysia (8.88 percent), Thailand (9.65 percent) and Indonesia (12.47 percent).

For more acute comparison, MERALCO's system losses are twice as much those of South Korea's average. Compared to Thailand's average, they are 18 percent more, and with respect to Malaysia's 28 percent. The only consolation is that they are 10 percent less than the national system loss of Indonesia. But Indonesia's system losses are much less than the national average for NPC.

The three biggest utilities account for 90 percent of the customers, the total systems losses are accounted for by these main utilities. A weighted average of system losses by customer levels indicate that the system losses are as close to those of MERALCO's and these two other utilities. Using the purchases of each of these utilities from NPC, the system losses when weighted by the average linked to those purchases.

The small utilities and the electric cooperatives account for a major part of the main system losses. The median observations for the public utilities with the highest system losses are 12.6 percent of gross generation consumed. The range of the high loss companies is up to 32.6 percent. The average system losses for rural cooperatives (see Part C of table) are 18.9 percent of gross generation consumed for the Luzon cooperatives. The average system losses for cooperatives overall is only slightly smaller at 16.9 percent compared to the national average for the private utilities. All these are simple averages. Taking into account the system losses weighted by either share of customers or by purchases from NPC, however, the simple average would tend to have be smaller.

These system losses are far from tolerable. They are the worst in the region, and they reflect enormous inefficiencies.

Management inefficiencies and high leverage ratio

The economic inefficiencies observed in terms of system losses are symptomatic of poor management and other problems. One characteristic of the electric power utilities is that many of them are undercapitalized. As a result, they are highly indebted. The servicing of their liabilities are part of the allowed expenses. These naturally raise the cost of power at the user end. System losses are also part of the costs that are allowed as part of the charges.

The Energy Regulation Board (ERB) has been too generous for allowing system losses and high debts as part of the costs that can be passed on. These costs are capped but at 14 percent system losses allowed, for instance, these are high burdens passed on to the consumer.

In fact, the electric power charges have been at the heart of recent public discussions because of the presence of automatic charges. The electricity billings have not been adjusted to the rate of return recovery as mandated. ERB had allowed automatic billings of borrowing amortization of existing obligations, including those that are refunded to the NPC as part of its recovery. A power price adjustment (PPA) is automatically attached to the billings that represents an adjustment on the bill to compensate for the cost of servicing the liabilities of the power companies.

The PPA is sensitive to the peso exchange rate. Any deterioration of the peso exchange rate raises the servicing costs and is reflected on the PPA. As a result, even though the rate base had not been adjusted, there is an automatic price adjustment that is happening covering basically the foreign exchange liabilities. Most of these liabilities are a recovery of the debts of the NPC that is added to the bill. Thus, the MERALCO monthly bill contains part of the recovery.

Recovering some of the debt obligations of the NPC are related to the PPA adjustment. This only takes care of the servicing of the debt, not the increase in any costs that might be tied up with normal operations of the NPC. However, when the government reduces the PPA, the potential impact could be on further raising the cash shortage of the NPC that might be needed to service its debt. If this leads to a higher operational deficit, in the next stage it could raise the external financing needs of the NPC.

In addition to this problem, the private utilities might have other debt liabilities that it has to pay for which additional costs can be recovered through the increase of the tariff charges by the utility. This kind of problem has to be broken by a major reform.

This complex of problems is the reform that is being addressed by the EPIRA.

Features of EPIRA

The electricity power industry reform introduces many features of recent international experience in regulatory and competition reform in the power industry.

The power generation and supply sector would be transformed into a competitive segment, with prices to be determined essentially by competition and by threat of contestable markets of new industry participants. To do this, the assets of the NPC, including its IPP contracts, would have to be privatized. For this purpose several generating companies will be created as independent clusters that can offer electricity and generate supply. The local area electricity distribution and the transmission of electricity are treated as natural monopolies. They are subject to regulation by the new Energy Regulatory Commission (ERC). Retail rates for distribution utilities are to be identified and unbundled as between transmission and distribution wheeling charges.

It is not clear exactly how far the privatization of NPC will go. NPC could remain as a substantial generating company competing with the other IPPs. That could make the NPC a strategic player and competitor in the market. Under competition from other power plants, NPC would be forced to become leaner.

A national Transmission Company (Transco) is to be set up as a state monopoly, to be wholly owned initially by the Power Sector Asset and Liabilities Management Corporation (PSALM). Transco would eventually be privatized. In preparation for eventual privatization, a bill has been filed in Congress to grant a public franchise to Transco. (News on September 4, 2002 reported that the House has approved the Transco bill. It is now awaiting approval in the Senate, whereupon some reconciliation of the two approved bills would have to be threshed out prior to final approval.)

The award would either be through direct sale or a concession contract and will be undertaken through an open competitive bidding. PSALM is likewise to manage the orderly sale, disposition and privatization of NPC assets, with the objective of liquidating all NPC financial obligations and stranded contract costs in the best possible manner. It takes ownership of all existing NPC assets, liabilities and IPP contracts and other disposable assets, including its outstanding obligations and other debts. (The privatization of Transco and other NPC assets promises to be a major source of revenues for the government. Previous experience with privatization of the water system and other state assets had yielded enormous fiscal boon to the fiscal position of the government during the mid-1990s.)

The electricity market will operate principally through bilateral contracts between distribution companies and generating companies. But the contracts market will be assisted by the mandatory existence of a spot market for wholesale electricity. This market would serve as a guide for identifying and setting the price of actual variations in the contracts between buyers and sellers of electricity.

The distribution monopoly is allowed to own interests in IPPs up to 30 percent of the area grid and up to 25 percent of the national system. This means that it can purchase also some of its requirements from the IPPs that it owns. In terms of bilateral contracts, the distribution utilities are limited from buying more than 50 percent of their total requirements from an associated firm engaged in generation.

A regulatory body, the ERC, is tasked with the promotion of competition, encouragement of market development, ensuring customer choice and penalizing abuse of market power. In this context, it is to administer a tariff-setting mechanism that is flexible. Open access for customers with peak demand of at least one MW to provide contestable market for the end-user. This initial level could be brought down to 750 KW after a lapse of two years of the law and that threshold is subject to further review until it reaches household demand level.

NPC's sunk costs, or "stranded" debt and contract costs, will be directly assumed by the national government to a maximum amount of 200 billion pesos. Actual stranded costs are higher, and as the government tries to reduce the net billings on PPAs that are due to NPC, the cash deficits of NPC will rise, thereby raising the fiscal debt obligation of the Treasury. Stranded costs would be recovered through the sale of assets when the privatization of NPC assets begins in earnest. Privatization of assets would include generation assets, real estate, including other disposable assets, like current IPP contracts. However, part of the generation assets in Mindanao (Agus and Pulangui complexes) are excluded from this privatization until such time as Congress has designed a strategy in consultation with PSALM.

Electric cooperatives are given the option to convert into either stock cooperative (under the Cooperatives Development Authority law) or stock corporation (corporation code). A five-year grace period is to be observed before open access can be availed of by them. They will be given concessional terms in acquiring subtransmission lines for their areas. A program of condonation of their liabilities is part of the provisions of EPIRA.

NPC is to continue missionary electrification program through a special program. Missionary electrification is to be funded from revenues from the sale of missionary areas and from universal charge.

Gradual phaseout of cross-subsidies is to be implemented in a period not exceeding three years from the setting up of the universal charge. Period of removal of cross-subsidies could be extended to a maximum of one year to mitigate their impact.

A major provision is the review of all power purchase agreements under the IPPs financed under the BOT financing law. An inter-agency committee of the government has been

setup to immediately review existing IPP contracts. The committee is allowed to file action or initiate appropriate action for contracts that are found to be "grossly disadvantageous or onerous to the government." The committee will recommend that the arbitration clauses in the IPPs be invoked where its finds

Further comments

The EPIRA is a milestone in pushing the reform of the electricity sector. Major provisions are designed to improve the structure of the power generation industry and the design, which includes competition or threat of it through contestable markets. The unbundling of tariffs would help to put pressure on the reduction of power costs and make its components subject to greater market challenge by the participants in the electricity market.

Regulation issues

The deregulation of the industry and the introduction of competing generating plants could help to help de-politicize the electricity industry. This has happened in the energy fuel sector. Since deregulation in 1995, expansion of investment and greater variability of pricing has been introduced. The battle for changes in the price of gasoline and other fuels moved away from the political arena into normal business of life. Prices now could be adjusted without as much as causing public outrage and protests. This compared to past experience whenever the ERB was faced with petitions for price increases to adjust the cost of fuel.

The regulatory split between the ERC and the Department of Energy is important. It provides transparency and credibility to the regulatory framework.

ERC is given the task of issuing generation certificates, supply licenses, and issue operational rules that govern the activities of the market player. This increases transparency. The license issued to new market players spells out the rights and obligations of the holders. The principle behind these rights and obligations is that they can be defended or enforced in the courts. This is a feature found to be more workable in the context of English model of reform, as it does not depend on the obscure interpretation of highly prescriptive legislation on market behavior. Philippine courts appear to be less prepared to deal with economic interpretations of economic behavior as they would be if the rules, procedures, rights of parties are clearly delineated.

On the other hand, the Department of Energy would be responsible for overall policy-making and for guiding the direction of reforms. This separates rule and policy promulgation from the implementation side.

Privatization of NPC assets

The sale of NPC assets promises to be a big event for the government. This could generate revenues for the government and remove NPC from the list of state companies that provide it with a fiscal problem. Privatization is likely to come in two parts. The most important in the sequence is how to deal with the electricity Transmission Company that is organized as a monopoly and which is a target of privatization. PSALM, the company created to own the financial assets of NPC, is already in place under EPIRA. It owns the generating assets and the transmission lines.

Once Transco's franchise to undertake transmission business is approved by Congress, the transmission lines could be unbundled from the NPC assets. This would permit a partial sale of the assets. The intention is for the government to control the transmission utility but to bid the minority share to strategic investors with experience in the electricity transmission business. This

means that foreign direct investment would be attracted to participate as a strategic minority. From recent discussion of this point, it seems that there are already a number of potential direct investors that are interested.

Early privatization experience has been successful. The Philippine National Oil Company (PNOC), once created as a fully owned national oil state enterprise, was privatized in 1994 partially. The Saudi Arabian National Oil Company won the bid to become the buyer of the strategic minority share block. The has continued to be a vital segment of the energy industry. Its financial position no longer poses a fiscal issue to the government compared to the problems of the past. The water privatization of 1995 was undertaken successfully, with an improvement of water service and even expansion of the service as noticeable major impacts. The service area of the Metropolitan Manila water service was divided into two concessions and two concessionaires won the bid to run the assets of the system. The private concessionaires were required to have substantive foreign strategic partners with strong experience in the running of such public utilities. In both cases, the local investors tied up with strategic foreign partners before submitting their bids. The winning bidders for the two concessions (chosen in a single bidding process in which pre-qualification of the potential concessionaires was a very important part of the procedure) involved such foreign companies. Each of the winning concessionaires had a tie up, respectively, one with a French company and the other a British.

But as important would be the potential sale of assets in the energy generation field. Here the issue is how far will the NPC divest from energy generation. EPIRA did not tell NPC to fully divest. What appears from this would be the evolving policy of letting NPC own some generation companies. This would mean that it could effectively play a role in competing with the other generating companies, partly to assure that there is a lead role for the government in potential market power when the public interest is threatened by excessive prices that could obtain from bilateral contracts. Part of this role could also be played in the evolution of the wholesale market. Some of the IPP contracts of NPC could also be sources of lucrative sale.

Cross-ownership

The problem of share cross-ownership provision involving IPPs and private distribution utilities will present a contentious point in the future. To promote a clear-cut separation of production and distribution of electricity, the original bill insisted on a prohibition of cross-ownership. Cross-ownership up to 25 percent of the national generation system and 30 percent for a particular area grid, e.g., the Luzon grid, was succeeded as an amendment to the bill as a result of the lobby of the private distribution interests. The lobby of the private distribution utilities, principally that of MERALCO, succeeded in getting the Senate version involving cross-ownership provisions, to be adopted.

This is a loophole in the competition aspects of the law. The likelihood of abuse of interlocking holdings of the IPPs relates to the possibility of tunneling profits from the retail distributor to the power generator. Monopoly power could be gained at the power generating end if it becomes relatively large for the grid or the relevant franchise area.

The proper check against this possibility is through the monitoring of costs by different public utilities. Within the presence of several distribution franchises, a strong and competent regulatory body could monitor costs comparatively since its mandate would be across a spectrum of retail distributors who would be buying their power from different IPPs. The amount of these types of purchases from related IPPs are capped by limits placed in the law (not more than 50 percent of total demand). Moreover, not more than 90 percent of total demand could be negotiated in the form of bilateral supply arrangements with IPPs during the first five years when

the wholesale spot market is put into effect. In short, some checks on the exercise of monopoly power of the retail distributor could be exercised even by the operation of the market.

However, long-term supply contracts with IPPs are still open to sweetheart deals that create hidden profits for the beneficial owners of the retail distributor that owns the IPPs. MERALCO, for instance, is already under some criticisms for its long-term supply purchase arrangements with its associated IPPs. The charge is that the net price at which it is getting its power is exorbitant in relation to the power that NPC sells to it.

Conclusion

The recent electric power industry reform law promises to be an important law that would restructure the whole electric power industry in the country. The regulation aspects inevitable introduces an unbundling of the cost structure of the industry. The industry regulators would be empowered to supervise a clearer monitoring of costs of electricity providers. The generating companies could undertake bilateral contracts with distribution companies. The assurance of competition of the power generating companies would be buttressed by the presence of the wholesale spot market.

Recent developments on this front suggests that the government is encouraged sufficiently from its early experience of a limited spot market arrangement that it would like to establish the full wholesale spot market without undertaking the pilot market that it had earlier thought necessary.

The need for developing a strong and competent regulatory commission is a challenge. But with the existence of a spot market and the presence of competition among generating companies of the power producers, the competitive market will likely help to strengthen the regulatory commission. The presence of contestable power generation markets will open that market to other players with low costs of production because the power industry is subject to technological changes, including those that use alternative sources of energy.

There are other factors that strengthen the demand for a competent regulatory commission. Some of the most active NGOs criticizing the performance of the government are the consumer watch groups related to the electric power pricing. Moreover, the Philippine press is one of the most free in the world, sometimes to the collective embarrassment of many Filipinos, because it loves to be negative about a lot of things.

Another cause for optimism is through an evaluation of the first phase of energy deregulation in the country. This first phase of that deregulation was the reform of fuel price pricing. When the government decided to tie the price of petroleum to the competitive market price in Singapore and freed the oil companies from the price regulations of the energy board, the pricing of gasoline and other energy products became effectively de-politicized. The outcome was the increase in foreign direct investments in the distribution of fuel products. New investments also had come to the service industries selling gasoline all across the Philippines. This phenomenon has happened only within the last six years.

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Table 1. Disparity in Purchase Price of Power with Retail Power Rates

RETAIL UTILITY DISTRIBUTOR	NPC		Retail Power Rates				Difference = Retail -	
	Average Selling	Residential	Industrial	Street Lighting	Average	Peso/KWH	Percent of NPC price	
MERALCO	2.6987	4.1608	4.1538	3.6400	2.4804	3.9982	1.2995	48.15%
Luzon RECs	2.8272	5.1300	5.1853	5.1997	5.0466	5.1188	2.2916	81.06%
Visayas RECs	2.5840	4.5312	4.5742	4.6289	4.4970	4.4850	1.9010	73.57%
Mindanao RECs	1.5500	3.3375	3.3878	3.3831	3.3319	3.3372	1.7872	115.30%

RECs => Distribution utilities, including and mainly rural electric cooperatives

Source: Abrenica and Ables (2001), derived by them from Tables 4 and 5 of G. Delgado (1999).

