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The World Bank

Third World Forum on Energy Regulation

October 11, 2006

Washington, D.C. – Omni Shoreham Hotel

Thank you, Commissioner Smith. It is a great pleasure to be here and I very much appreciate the Forum's invitation to speak to you this morning. Usually, when I give speeches, I have to get on an airplane and travel half way around the world. So last night, it was a special treat for me to sleep in my own bed and then travel here this morning in a 10 minute taxi ride up from the World Bank offices.

As I said, I'm very happy to be with you today and to speak to you about energy regulation and some of our views on the subject. It was once said that governments around the world perform three principal functions: they tax, they spend and they regulate. *And of these three functions, regulation is the least understood.* This is an important issue for us: we make loans in energy sectors around the world and the success or failure of these loans often depends critically on the regulatory environment in each country.

Since you are the world's energy leading regulators, you obviously know much more about the subject than I do. Therefore, I don't think that it would be very useful for me to try to explore the subtleties of economic regulation of energy. However, it might be helpful to you if I use my time this morning to give you an outsider's perspective on three issues relating to economic regulation that concern us at the World Bank.

I'd like to speak with you this morning about three issues:

- First, regulatory governance
- Second, regulation and corruption, and
- Third, regulation and the environment

In talking about these three topics, I'll tell you a little bit about our work, the work of some of your fellow regulators that has really impressed us, and regulatory issues that we think need to be explored a bit further.

I. Regulatory Governance

Let me turn first to **regulatory governance**. To avoid confusion, I should say right away that I use this term to mean the laws, processes and procedures created by one or more government regulatory entities as well as the resources and information that are available to these entities. *In other words, regulatory governance is the "how" of regulation.* It is our view that very little will be accomplished by any regulatory system unless you have good regulatory governance. We also believe that good regulatory governance can – and usually does - take different forms. It is *not* a case of "one size fitting all."

Regulatory governance is important because more than 200 infrastructure regulatory entities have been created in developing countries over the last 15 years. In most cases,

the principal reason for these systems was to promote and support sustainable long-term economic and legal commitments by both governments and investors. It was thought that by providing credible commitments on both sides, investors would have better economic incentives to make new investments that would benefit customers. The need for new energy and other infrastructure investments is enormous in the countries where we work. Sadly, I think, despite these good intentions, most objective observers would agree that this outcome of a credible regulatory system has not always been realized. And often the failure is the result of a gap between what is written in law and what happens in practice.

Well, what do you do when there is a significant difference between design and implementation? Obviously, there is a need for further changes because no one wants to be stuck with a system that is not working as planned. But it is often very difficult to get further reforms. A new regulatory system quickly creates vested political and economic interests that are opposed to any further changes. In our view, there is little hope of getting any serious and sustainable "second generation" reforms for newly created regulatory systems unless there is some way to get objective and public evaluations of how these systems have actually performed. And then we need recommendations on how the systems need to be changed.

You can think of such regulatory evaluations as something like a periodic physical examination. Just as you would go to a medical doctor for a health checkup, it is increasingly clear to us that new economic regulatory systems would also benefit from checkups in the form of periodic evaluations.

We have just finished a major project in this area called the "Handbook For Evaluating Infrastructure Regulatory Systems." The handbook was written by Ashley Brown of Harvard University, Jon Stern of the London Business School and Bernard Tenenbaum and Defne Gencer of the World Bank staff. The handbook provides step-by-step guidance and sample documents to perform quick, mid-level, and in-depth evaluations of existing regulatory systems.

I would like to highlight two parts of the handbook that I think will be of interest to you. First, the handbook provides a detailed checklist of specific actions that you can use to put into operation the "independent regulator model". There are also arguments you can use with your minister or President to convince them that that this is a path worth taking. Second, in situations where it is simply not realistic to adopt the independent regulator model (or some other best practices), the handbook presents a number of examples of transitional or hybrid regulatory arrangements, such as regulatory contracts, contracting out of regulatory functions, strong advisory regulators and regulatory partial risk guarantees. These can be used to "jump start" a new regulatory system.

The other recent publication, called the "Body of Knowledge on Utility Regulation" might also be of special interest to you. It was prepared by a group of universities led by the University of Florida with financial assistance from our own Public-Private Infrastructure Advisory Facility. It provides a lot of general and specific information about regulatory issues that you have to deal with on a day-to-day basis. And I should

add that it is very "user friendly" because it is available through the Internet … and it is free.

II Regulation and Corruption

Let me turn now to regulation and corruption. For many years, the Bank was either silent about corruption or we used euphemisms such as "rent seeking" or "informal micro-privatization." This has now changed. Dealing with corruption is now an important component of our work. In fact, it was a major topic of discussion at our annual meeting last month in Singapore.

Corruption matters because on world wide basis, it has been estimated that fraud in the power sector costs consumers billions of dollars. A 2005 Transparency International survey of electricity consumers in South Asian countries found that nearly two-thirds of the surveyed consumers felt that their local utility was corrupt. And in Nigeria, a recent survey conducted by the government's anti-corruption agency found that Nigerian citizens felt that the national power company and the police were the two most corrupt institutions in the country.

I'm sure that none of this is news to you, but you still might reasonably ask: What does this have to do with me as the energy regulator? And my general answer is that you are in a unique position. You are in a unique position, because through your general practices and specific decisions, you can help to restore people's trust in their institutions and make it more difficult for corruption to be practiced in the power sector. Of course, this is a very general statement so let me give you some specific examples.

Regulatory Processes and Corruption

The first example relates to how you function as a regulator, specifically your processes and procedures. (This is what I referred to earlier as regulatory governance.) Consumers and investors need to have confidence that you are balancing their interests with those of investors and that you have an open mind on the issues that you have to decide. Well, how do you create and maintain that confidence?

One way is to emphasize transparency in your proceedings and in your decisions: hold public hearings, issue proposed rulemaking so that consumers and investors know what you are thinking. And then, when you finally make the decision, be clear about the evidence that you looked at and, even more importantly, the reasons for your decisions.

In addition, your written decisions should be widely disseminated and there shouldn't be any secret decisions on the side. Finally, you should encourage consumer organizations to get actively involved in your proceedings. When the Prime Minister or the Energy Minister start to ask whether your regulatory agency really serves a useful function, consumers can potentially be your single best allies…but only if they know what you are doing and you have given them a genuine opportunity to participate.

Quality of Service Regulation and Corruption

A second example of how you can restore trust in institutions and fight corruption relates to what the Bank calls "performance monitoring". This is usually referred to as "quality of service monitoring" by regulators. We know that corruption leads to bad quality of service, both technical and commercial. When money is siphoned off by corrupt individuals, less is available for maintaining and operating the system. So your very first step should be to shine a bright light on utility performance in both the technical and commercial dimensions.

Of course, just reporting on bad performance doesn't necessarily eliminate it. But once a monitoring system is in place, it can be followed by a system of explicit rewards and penalties based on phased-in benchmarks that will make it more difficult to pursue corruption. And if you are granting major tariff increases (as many of you will have to do), you also need to convince consumers that they are getting something useful in return for higher tariffs. The best place to start is by monitoring the quality of service.

Power Purchase Agreements and Corruption

A third example of ways to renew trust in institutions relates to Independent Power Producers) and Power Purchase Agreements. As I am sure you know, PPAs have been highly controversial in many developing countries. There have been allegations of major corruption in PPAs in countries such as the Philippines, Indonesia, Guatemala, Tanzania and India, and others. In some of these countries, it appears that the PPAs were negotiated by government officials and private generation companies and then essentially handed over to the state-owned utilities as "done deals". As a general rule, regulators were not involved or they were kept on the periphery of these transactions.

Now, things are changing. Many of the new regulatory laws often explicitly require that the regulator make a "before-the-fact" review of such purchases to determine whether the purchases are "economical" and "efficient." But this is easier said than done. PPAs are often complex documents that run to more than 100 pages and which contain both price terms and risk allocations. They may be written in legalistic language that obscures the real extent of the commitments and risk exposure for the purchaser, and which also hinders efforts to compare these terms with benchmarks to see if they are fair and reasonable.

And obviously the task becomes even more difficult if the regulator is required to review many applications for generation licenses and the associated PPAs. Therefore, I was very impressed to learn about the pro-active approach in Nigeria that was announced by Chairman Ransome Owan during his speech on Monday afternoon. As I understand it, the Nigerian commission will soon be asking for comments on a prototype of a standard questionnaire. This will allow it to benchmark both the price and non-price terms of these numerous PPAs for new fossil-fuel power plants. Then, using the answers to this

questionnaire, the Commission will develop tables that will allow side-by-side comparisons of the key price and non-price elements of the PPAs.

We think that this is the first time that such a comprehensive and objective approach to benchmarking both the average purchase price and the allocation of risks in PPAs has been tried by an electricity regulatory commission. The motivation for this approach is to allow the Nigerian commission to make determinations as to whether particular PPAs are economical. Performing these comparisons, however, and making them public will also reduce the potential for corruption. It will help to improve the bargaining position of buyers, such as state-owned utilities and ministries of power, who are often unfamiliar with the terms and conditions of PPAs because they don't make these purchases very often. And, finally, it will help electricity consumers because ultimately they will have to pay the bills.

The Nigerian Electricity Regulatory Commission should be congratulated for taking this major initiative and I am pleased that the World Bank could be of some assistance. We look forward to seeing this proposed rule. I hope that electricity regulators form other countries will consider joining them in this pioneering effort. If more of you join this effort, you have the potential to create a database of information on PPAs that could be used by regulators and government officials around the world.

III Economic Regulation and Environmental Goals

Let me close by talking briefly about economic regulation and environmental goals. I would not be surprised if your initial reaction is:

> "Wait a second … we are the economic regulators, not the environmental regulators. It is government that decides on environmental policies and then our environmental regulator implements these policies. So are you sure you are talking to the right audience?"

Well, it is generally true that economic regulators generally do not set overall environmental policies or the specific environmental standards that forge these general policies.

But, having said this, **I still strongly believe that you and your fellow economic regulators are on the front lines to ensure that your country's environmental policies are applied to regulated energy enterprises both in a fair and efficient manner.** Let me give you two short, specific examples of regulatory actions and decisions that are critical for the success of your government's environmental goals.

The first relates to renewable energy and the second involves energy efficiency. I might add that these are two areas of deep concern for the World Bank. In fact, as a lending organization, we have committed to a 20% annual increase in our new renewable energy and energy efficiency commitments between 2005 and 2009, and so far we have gone

beyond that commitment in each year. You can see that we have more than just casual interest in what you do.

Let's take the case of renewable energy. For example, suppose that your government has decided as a matter of national environmental policy that 15% of all new grid-based, electricity generation must come from renewable energy sources. Once your government has made such a policy decision, it seems to me that your job as the economic regulator is to decide how to support this goal at the lowest cost through specific regulatory actions. And this requires regulatory decisions on a number of fronts:

> Should the target be achieved through mandatory purchase requirements imposed on distribution companies, or should it be achieved with above-market purchase tariffs paid to all renewable generators? Or perhaps through competitive tender systems limited to renewable generators?
>
> And if these mechanisms produce higher costs for electricity, what is the regulatory mechanism for passing these costs on to consumers? Should the costs be passed through to all consumers or just to certain categories of consumers?
>
> And, then, suppose that the renewable generator earns a carbon credit: who should benefit from these credits—the generator? Its customers? A combination of the two? Should the generator be rewarded for the time and effort involved in seeking and obtaining the carbon credit, or should the value of the credit be passed onto consumers through lower tariffs?

Similar issues exist for energy efficiency. For example:

> How can the regulator create an incentive for a traditional seller of electricity to promote energy efficiency in consumption rather than just trying to maximize electricity sales?
>
> How can energy efficiency concerns be designed and implemented as part of an electrification project that provides electricity to consumers who have never had access to reliable and less costly supplies of electricity?
>
> How can consumers be encouraged to accept accurate and reliable meters where such meters do not exist?

I believe that all of us need to work together to think through the answers to these and other key regulatory implementation issues in a systematic way.

Conclusion

I would like to close by offering my sincere congratulations to NARUC for all the time and effort that it has put into organizing this workshop. I am especially pleased that NARUC and its Program Advisory Committee have devoted a lot of attention to the

special needs of energy regulators from developing countries. I encourage you to continue this effort to ensure that this Forum is equally relevant to the needs of regulators from both developed and developing countries, and those that are in transition. I am sure that this would further your goal of encouraging energy regulators to learn from each other's experiences.

Ladies and gentlemen, thank you for your kind attention.