PURC Studies in Energy Telecommunications Water
"Leadership in Infrastructure Policy"

# "Constructive" Lessons from the *19th PURC/World Bank International Training Program in Utility Regulation and Strategy* January 9-20, 2006

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Teachers learn from their students and students learn from each other. As in the past, the 92 participants in this training course identified the key lessons learned over the intensive two-week period. During the concluding session of the program, they shared their reactions to formal presentations and informal networking. The program, which is held twice annually in Gainesville, Florida, has evolved over the years to keep pace with changing industry conditions, and maturing regulatory commissions. For example, this year, PURC distributed questions from the Regulatory Body of Knowledge www.regulationbodyofknowledge.org at the start of three days: answers were posted the next day. Participants had the opportunity to check their understanding of key concepts. For the first time, PURC also distributed a CD containing most of the material (PowerPoints and readings) from the binders. In addition, sessions on leadership and organizational design have been expanded in recognition of the role these issues play in complementing technical skills. Professionals need more than technical training; they must also understand how their interactions with others affect overall organizational performance and regulatory oversight.

## Thirty Lessons Learned: Parallels with Construction

The lessons shared by attendees at the January 2006 course are presented in the order they were suggested rather than according to the topical outline of the course. A number of the participant observations involved "constructing" a solid platform for infrastructure reform—so I developed some parallels that (hopefully) shed light on issues. In other cases, the comments applied specifically to the design of training programs—there were no analogies with contractors for such observations. We hope that the annotated list promotes further discussion among all those involved in these important sectors. PURC's staff appreciates the dedication and energy exhibited by participants in the 19th Training Program. Regulatory and infrastructure issues are universal not unique.

1. **Reform is Difficult.** *Reform is a complex process:* A contractor responsible for monitoring the construction of a building faces the same types of complexities as a regulator: the customer, the builder, and government officials must be satisfied that the resulting building meets customer needs, is financially feasible for the builder and meets rules related to zoning and construction safety. From the standpoint of developing regulatory institutions and appropriate market structures: "No one size fits all." There is no single recipe for successful infrastructure reform: each nation must develop its own strategy and priorities. Nevertheless, fundamental principles of good governance and regulatory effectiveness can guide decision-makers.

2. **Trade-offs are inevitable.** *Regulation is multidimensional:* The design and construction of a building requires that many issues be addressed. Regulation raises even more sets of trade-offs: important issues include rate levels that yield financial sustainability, rate design that reflects cost of service, incentives for cost-containment, and targets for service quality and network expansion. Thus, regulation requires multiple sets of skills.

3. **Regulation influences outcomes.** *Regulatory processes and policies have significant impacts on sector performance:* One way to evaluate the effectiveness of regulation is to examine sector trends (in prices, costs, quality, and network expansion). If houses built by a contractor keep falling down, the blame should not be placed solely on the builder for using poor material or on the customer for not monitoring the construction. The contractor's job is to ensure that the final product meets the design specifications. The regulator's job is to implement public policy to improve infrastructure performance.

4. **Continuing Education.** *Case studies and cross-country comparisons provide key lessons:* Carefully prepared studies can provide fresh perspectives for those engaged in infrastructure reform. The "not invented here" syndrome results in policy-makers ignoring valuable insights that can provide stronger foundations for policy development. Like building contractors who learn lessons from others, regulators need to seek knowledge about the impacts of alternative policies from other nations. This understanding can improve the effectiveness of regulatory authorities in a country. No one has all the answers. In fact, we learn from one another by sharing our questions.

5. **Transparency.** *Honesty and fairness promote public confidence:* A contractor monitors bidding procedures to ensure that materials are obtained at least cost and that building components meet agreed upon specifications. The contractor promotes transparency. The details of regulatory regimes differ across countries, but citizens everywhere want to have public officials who are honest and make decisions that are balanced and fair. Without transparent decision-making, citizen participation, and professionalism at regulatory agencies, those authorities will not have legitimacy in the eyes of the public.

6. **Extraordinary Requirements for Start-ups.** *New organizations have special needs:* A newly formed contracting firm (like a new regulatory commission) has to recruit a strong team of professionals, establish credibility with a wide variety of stakeholders, and create processes that are cost effective. A key task is to establish a track record of sound decisions. Another task involves communicating the reasoning (and supporting data) behind those decisions. The process anchors the decision in the facts of the case: this process promotes predictability, leading to greater credibility within the investment community.

7. **Go Outside the Organization.** *Networking is valuable:* Complex decision-environments bring issues to regulators (and contractors) on an ongoing basis. Many regional associations serve as clearinghouses for studies and reports. They give people a chance to expand their professional education. Such interactions provide opportunities to mentor and to learn from others. Regional associations of regulators serve the same purpose as associations of contractors or builders: they provide opportunities for gaining greater expertise. One country cannot copy the laws and approaches used by others, but policy-makers need not make decisions in a vacuum. Similarly, networking *within* a regulatory agency can be an important source of information for professionals.

8. **Transportation.** *Transportation is an infrastructure sector and warrants attention.* Surface and marine transport require points of inter-modal contact—including ports and rail/truck linkages. Government ministries and newly-formed regulatory commissions are beginning to develop a sensible division of labor for monitoring this component of national infrastructure. This observation has no clear parallel for contractors.

9. **Citizen Participation as a Tool.** *Public consultation is important if sector objectives are to be correctly prioritized.* A contractor has to fully understand what the customer wants. After all, the customer is paying for the building or home (and should understand the consequences of financial constraints). Size, features, and completion date are just three factors affecting the ultimate

construction cost. Similarly, regulatory agencies need to engage the public in the process: gaining input from current (and future) customers regarding their willingness to pay for the output level and the quality of service.

10. **Communication as a Tool.** *A successful reform process requires communication and citizen education.* A contractor not only listens to the customer, but explains why some features are not feasible within customer-imposed budget limitations. Similarly, in the context of infrastructure reform, citizen participation is a two-way street. The regulator needs to devote time and resources to getting its message out to the populace. "Pie in the sky" promises by politicians need to be confronted with facts and reality-checks.

11. **Autonomy as a Foundation.** *Independence means being insulated from political pressures.* A building is only as strong as its foundation. Public perceptions of regulatory autonomy affect citizen confidence in the quality of regulatory decisions. Distance from both government ministries and the operator is essential if regulatory decisions are to be based on merit rather than the influence of politically powerful actors. Of course, complete political independence is unrealistic: infrastructure is an important contributor to national growth and access to networks has significant symbolic meaning. In addition, complete independence would be counterproductive, since that would imply a lack of accountability.

12. **Incentives as Scaffolding.** *The role of incentives in promoting good performance cannot be overemphasized.* A contractor should help the customer design contracts with the builder so that cost containment and high quality are rewarded. The contractor then must monitor performance, facilitating the enforcement of the contract. A regulator plays a similar role: creating incentive mechanisms through rate of return procedures, price caps, or hybrid schemes. Without such scaffolding, nothing can be constructed in a cost-effective manner.

13. **Professionals and Specialists.** *Specialists can assist in identifying issues and managing issues.* No contractor can perform his or her responsibilities without a team of specialists. No regulator can be effective without input from lawyers, engineers, economists, managers, and others. Regulators realize that no one has a detailed map for improving sector performance. However, continuing professional development can help staff recognize key signposts and provide them with tools for examining the implications of alternative routes to the destination.

14. **Manage Expectations.** *Citizens have high expectations regarding access to infrastructure at low prices.* A contractor mediates among the customer, the builder, and government agencies responsible for ensuring that rules are followed. His (or her) expertise provides credibility when pointing out inconsistencies in stakeholder expectations. Similarly, citizens expect high levels of service, but they are seldom aware of the costs. Since past policies have not always been well targeted, one task for regulators is to explain recent trends in performance. The long time horizons for infrastructure investments require credible commitments to policies—so regulatory decisions do need to be insulated from day-to-day political considerations.

*15.* **Technical Skills are Necessary but not Sufficient.** *Good regulation goes beyond applying technical expertise.* The observations about continuing education should not be interpreted as supporting only the acquisition of technical expertise. Contractors know that negotiation strategies and interpersonal skills can mean the difference between a successful and unsuccessful project. Similarly, regulatory agencies need professionals familiar with techniques for estimating the cost of capital and for designing sound incentive mechanisms. However, they also need the "soft" skills of generalists who can manage teams and bring people together. They can ensure that decisions are based on fundamental principles and reflect "common sense".

16. **Address Global Forces.** *The world is "smaller" than it was three decades ago.* This statement means that what happens on the other continents can have implications for private and public investment and for international trade. The Asian financial crisis and the Argentinean devaluation illustrate how rapidly problems in one region or country can translate into reductions in capital flows to other regions. Decision-makers need to track global developments if their policies and procedures are to reflect best-practice.

17. **Seek Diversity.** *We learn from others who have different experiences.* In the context of the PURC/World Bank International Training Course, this comment was basically a thank-you to speakers who shared their regulatory and consulting experiences with the group. However, the point underscores the value of listening to those with different professional backgrounds and national experiences. The lessons drawn from their stories provide valuable insights into ways we can all be more effective.

18. **We Make mistakes.** *Fortunately, mistakes lead to learning.* That learning can be choked off if the process does not air potential blunders or oversights. Reviewing the consequences of past decisions allows a contractor to gain insights into how to improve performance. The same applies to a regulator: critiques of previous strategies enable us to better understand how past information and analyses affected sector performance.

19. **Regulation of SOEs presents challenges.** *Regulation of publicly owned firms differs from regulation of privately owned utilities.* Again, this observation has no obvious parallel with building contractors. Rather, it underscores the difficulty of one arm of government regulating another. The SOE is likely to be a politically powerful incumbent, even when its performance has not been strong. Often SOEs are operated to provide jobs to particular groups rather than to deliver services in a cost-effective manner. Benchmarking represents one way to identify relative performance.

20. **You get what you pay for.** *Regulatory agencies require levels of expertise comparable to that available to utilities.* That means that salary levels must be commensurate if the agency is to attract qualified professionals. If a contractor pays its staff half of what the builder pays its staff, the builder has a strategic advantage is dealing with the entity that is supposed to be monitoring its activities. The same applies to a regulatory commission.

21. **New Profession.** *Regulation is becoming a profession that combines an understanding of engineering, law, accounting, and economics.* Organizations in emerging markets are likely to find those skills in short supply. A rate review requires multiple skills: the decision-maker must be able to understand the logic and chains of reasoning behind various arguments in the context of rate reviews.

22. **Knowledge is Power.** *Information is a key element in a rate review.* The term information asymmetry applies to situations where one party has a deeper understanding of key issues (or parameters) than the other. The latter is at a disadvantage in negotiating performance targets. Benchmarking can be an important tool for making comparisons and establishing incentives. Performance trends over time and relative performance across comparable firms provide valuable information for establishing targets and rewarding managers.

23. **Learning is a contact sport.** *Course participants should produce case studies that can be made available to PURC alumni.* Again, this suggestion is designed to add to the resources available to course attendees. "Contact" need not be physical, but via networking and the sharing of information. Such sharing can reduce information asymmetries. The contacts made at the PURC/World Bank course become new friends: colleagues who can support one another in carrying out very challenging tasks in their home countries.

24. **Single vs. Multiple-Sector Agencies.** *To what extent is sector specialization necessary for an organization to be effective?* This question seeks to determine whether there is an international consensus on the scope of the regulatory agency's sector coverage. There is no simple answer to this question. In some nations, cost-effective regulation requires that professional staff be available to work on issues facing several sectors, such as cost of capital. The sequence of infrastructure reform in neighboring nations might have resulted in agencies that only regulate a single sector. Both regulatory designs can be made to work.

25. **Cross-Sector Lessons.** *Some infrastructure network issues are common across sectors, so broad experience can be useful.* One advantage of having a staff familiar with issues in number industries is that issues faced at one point of time in one industry can arise in other industries later on. Thus, grappling with new technologies in the context of telecommunications may lead to insights regarding service innovations emerging in other industries.

*26.* **Cross-Country Lessons.** *Decisions are made in a country-specific context, but these may have relevance beyond cultural and legal constraints and the stage of national development.* Care must be taken when translating experiences in one nation to widely applicable principles. Nevertheless, widening ones' perspective is an important step in identifying a broad range of potential policy initiatives.

27. **"Believing is Seeing".** *Public perceptions (images) matter.* We recall the oft-used phrase "Seeing is believing," but beliefs also shape what we observe. In this way, we often see what we expect to see. Expectations are like blinders on a team of horses—limiting their vision. Thus, a contractor will be sensitive how its actions influence customers' perceptions. Similarly, regulators must appreciate citizen perceptions of the fairness of the regulatory process.

28. **Consensus means giving something up.** *All-party settlements represent one way to achieve compromises.* To increase the probability that stakeholders will accept a ruling, the process must be timely, transparent, and viewed as reflecting the legitimate concerns of all parties. Whether handled via alternative dispute resolution procedures or a regulatory hearing, a rule-making process involves a number of steps. Ultimately, the decision must be clear, concise and definitive, so all affected parties understand the factors supporting the decision and the weights given to expected performance outcomes.

29. **Organizations require Leaders and Managers.** Technical and managerial skills are necessary for an organization to effectively confront new issues. Each person on the professional staff can be a leader, within technical teams or in the context of anticipating issues likely to arise in a rate case. Externally, leaders engage stakeholders in an adaptive process that recognizes the sources of change in the sector and help affected groups confront the key issues.

30. **Moving from good to excellent.** *"The course gets more than a passing grade!"* The PURC staff recognizes that there are many options for regulatory training. The competitive pressure leads us to continually evaluate our offerings and to develop cases and materials that make sessions both interesting and useful. The desire for continuous improvement is also present in regulatory agencies around the world. We want each participant to grade us "A+", recognizing that attendee brings a different set of skills, attitudes, and needs to the program. The course evaluations confirmed our view that the two week program continues to be well-received. Thanks to all the participants: you were an outstanding group.

**Concluding Observations from PURC:**

Mark Jamison and I were asked to contribute to a survey that attempted to identify the most important topics that cut across sectors and regions. Below are several topics we identified, based on our work with international regulators. The list is included here to spark discussion about these issues.

**1. Credibility of new regulatory regimes**: *Have the commissions been able to create confidence among key stakeholders that the rules are designed to improve sector performance and not to reward politically powerful groups?* This means that media leaders and professionals understand the role of regulators in implementing public policy. The design and legal basis for the regulatory agency is one element affecting credibility. Key reasons for establishing regulatory agencies include the need to address opportunistic behavior (by government and operators), to limit the exercise of market power, and to deal with information asymmetries. The design and role of the regulatory agency has a significant impact on the regulator's success in dealing with these issues.

**2. Financial sustainability of infrastructure suppliers**: *Are the public and/or private suppliers able to maintain and operate current assets and to expand systems to meet stated public policy objectives?* Capital attraction via legislative appropriations, development banks and private markets remains a crucial issue for electricity and for water/wastewater. Telecommunications seems to have unique advantages (innovations and consumer willingness to pay) that make capital less an issue for these suppliers. Price level (and structure) and service quality are two important elements to consider here.

**3. Mis-priced inputs:** *To what extent are political and regulatory leaders willing to address the long-term consequences of over- (or under-)utilization of some resources?* Telecommunications has spectrum issues, electricity has siting and environmental issues, and water has water resource management problems. In addition, for public firms, the cost of capital may be too low (or too high in some cases). Unique events in a particular region (such as currency devaluation) may trigger capital market responses that result in generalized increases in the cost of capital, when the "true" risks are much more nation-specific. Regulation also affects the cost of capital: price/revenue caps, rate of return, and methodologies used to estimate the cost of capital vary across sectors, but the fundamental need to attract capital so that service can expand and improve is crucial in all sectors. Finally, if there are poor incentives for managers, there will be inappropriate payments to this key input of the regulated firm (leading to poor sector performance).

**4. Growth and infrastructure:** *What is the relationship between infrastructure and national growth?* Some analysts seem to make a supply-push argument, with infrastructure being a catalyst for growth. Others emphasize the demand for services (consumer valuations) as the key driver for network expansion. We need a better understanding of the factors driving development. Perhaps the institutional elements most conducive to growth also are the ones that promote investments in infrastructure (longer time horizons for decision-makers and citizen confidence in the economic system).

**5. Division of labor among various stakeholders:** *What are the legitimate roles for the legislative, judicial, and executive branches of government, sector regulators, infrastructure suppliers, local and international NGOs, the press, consumer advocates, and academia in developing, implementing, and evaluating infrastructure sector performance?* In emerging markets, a number of stakeholders vie for power. Promoting a serious national discussion on infrastructure policy and sector performance requires that these stakeholders be brought together to identify the ways each can contribute to improving performance, while avoiding self-serving rent-seeking. Ultimately, leadership needs to emerge from several of these groups if infrastructure is to become a high priority for emerging markets.

**6. Leadership in regulation***: How can people with significant responsibility be equipped to provide leadership?* The regulator is in a precarious position: On the one hand, independence decreases the political power of otherwise powerful players and regulators only have limited authority. On the other hand, the regulator is a key player in the infrastructure sector and her role cannot be marginalized. The practice of regulation affects policy even if the regulator is to have no formal policy role. Regulators need adaptive leadership skills if they are to thrive in this system.

**7. Efficient pricing, including for services to the poor:** *To what extent can prices be consistent with what one would expect to observe in a well-functioning competitive market?* Poor regulatory policies lead to operators making decisions that lower consumer welfare and customers making inefficient purchasing decisions. In addition, the economy does not grow to its potential, and the preferred market structure may be difficult to maintain. Finally, developing targeted subsidies for groups that would otherwise be un-served is important for social cohesion.

**8. Identifying efficient market structures:** *How can those developing and implementing infrastructure policy create market structures that promote cost containment, service quality improvement, and the introduction of valued new products?* Operators make strategic decisions based on their perceptions of how potential rivals, government, and customers will respond. This is important for market design (e.g., electricity), bidding for contracts (e.g., water concessions or management contracts), and innovation (e.g., telecoms). Good sector performance involves value creation. Ultimately, policymakers need to direct managerial effort toward expanding the pie—the scope of services and customers-- rather than to increasing the share of a fixed amount going to a stakeholder: zero sum games can promote behavior that dissipates value.