

**Lessons from
PURC/World Bank International Training Program in Utility Regulation and Strategy
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Teachers learn from their students and students learn from each other. Participants in each training course identify some of the key lessons learned over the intensive two-week period. The 72 “students” in the June 2004 course shared their reactions to formal presentations and informal networking during the concluding session at the University of Florida. The lessons are presented in the order they were suggested rather than according to the topical outline of the course: (1) Market Structure Reform and Regulation of Network Industries, (2) Financial Analysis for Utility Regulation, (3) Principles and Application of Incentive Regulation, (4) Non-Price Aspects of Utility Regulation, (5) Managing the Introduction of Competition *in and for* the Market, (6) Rate Structure, and (7) Managing the Regulatory Process. We hope that the (slightly 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 16th Training Program.

1. **Regulatory issues are managed, not solved.** Infrastructure issues are complex, involving multiple stakeholders and long time horizons. Potentially destabilizing technologies and changing public expectations mean that issues are continually emerging. Thus, regulatory issues must be addressed by policy-makers who are accountable to citizens, regulators who implement policy, and network operators who are closest to emerging demands and disruptive innovations. Balancing the concerns of different stakeholders requires expertise and political acumen.
2. **Issues may seem to differ across sectors and countries, but common elements characterize many of these problems.** There is no single recipe for improving infrastructure performance. At the same time, basic principles and best practice can be applied to each concrete situation. The task facing regulators is to identify those common elements and to participate in forums that facilitate the sharing of lessons.
3. **Regulators in an individual nation are not alone.** There is a network of colleagues whose experience and expertise can be drawn upon. Regional associations are beginning to provide important opportunities for sharing lessons, information, and technical ideas. In addition, colleagues empathize with one another: those in leadership positions of responsibility become aware that others understand the difficulty of the issues under consideration.
4. **Never lose sight of your role and your goal.** Whether in the context of a complicated negotiation, a task force meeting, or a press conference announcing a decision, each stakeholder has a legitimate role to play and objectives that reflect the interests of particular groups. The role of the regulator in a new commission providing sector oversight is particularly important. Precedents are being set for the future and expectations are being created. Prioritizing regulatory objectives is particularly important since performance cannot be evaluated without clear objectives for the sector.
5. **Consumers, government, and operators all have interests that regulators must balance.** Consumers want low prices, universal service, and high quality. Political leaders set policies and priorities that give themselves visibility and leave a legacy for the nation. Public and private operators seek financial

- sustainability—through higher prices or lower costs and (with decreasing frequency) through government subsidies. Balancing these interests can resemble a juggler who must keep multiple objects from hitting the floor. Sometimes the regulator has too many items to juggle and too few hands to succeed in the tasks.
6. **Regulation affects the incentives of managers and investors.** A variety of approaches can be taken by regulators: rate-of-return regulation, price caps, or hybrids that incorporate benchmarking or sharing rules. Each approach establishes incentives for particular types of behavior and each allocates risks to market participants in different ways. The best choice for a nation will depend on its legal environment, stage of development, degree of operating efficiency, and the scope of investment needed for universal service. Each nation must choose an approach appropriate for its circumstances, while setting achievable performance targets.
 7. **“Regulators must be as wise as Solomon, as patient as Job, and have the hide of a rhinoceros.”** This quotation from a New York Public Service Commissioner outlines three of the qualities that can make a regulator effective. Certainly, expertise helps, but deeper wisdom is even more important. For example, the regulator needs to understand what is politically feasible. Similarly, stakeholders have expectations and seek opportunities to articulate their positions. Listening to and processing this information requires a great deal of patience. Finally, regulators are targets for those whose expectations are not met. They need to be prepared to face criticism and extreme political pressure.
 8. **Regulation is emerging as a coherent discipline.** Historically, government ministries have been regulators: establishing priorities for infrastructure industries and providing oversight to sector operators. Today, policy implementation is being separated from policy development in order to insulate regulation from political pressures—promoting credibility for investors (both public and private), legitimacy for citizens, and efficiency for the economy. The skills and perspectives required for sustainable regulation are beginning to be taught in universities.
 9. **Managers need to understand why the regulator asks for information.** Good regulation looks beyond short-run pricing to long-run performance. To evaluate performance, benchmarking is necessary—over time and/or across comparable firms. If regulators must base decisions on “assumptions” about what is going on, the firm is likely to face rules that do not promote win-win outcomes. On the other hand, excessive information requests place a burden on operators—raising the costs for consumers.
 10. **While regulation can be viewed in policy terms as reflecting legal constraints, it also needs to reflect economic reality.** When economic principles and the law are in conflict, sector performance is likely to be suboptimal. Thus, the underlying economic forces need to be understood by those involved in setting and implementing infrastructure policy. How can we be sure that our accounting for reality is in line with objective facts? Economic reality might be interpreted as the result of conspiracy, confusion, or complexity. We sometimes say that “Seeing is believing.” It is also true that “Believing is seeing.” Sometimes, what we expect to see is what we observe. Thus, we need to be sure to recognize the

conceptual filters that we use to understand economic forces affecting industry performance.

11. **Learning is a continuous process for both regulators and managers.** Training is a window of opportunity: with a better understanding of issues, regulators can apply sound principles to individual countries and then to regions of the world. When we limit our attention to our home nations, we wear blinders. We tend to fixate on current arrangements, the needs of powerful incumbent operators, and on existing technologies. We need to have a large window that includes a view of activities on the international scene. For a professional approach to improving sector performance, learning should never stop.
12. **Academics need to focus more on regulatory issues.** Regulatory policy can benefit from more research and expanded educational programs. As one participant noted, “All feasibility studies are feasible.” That is, studies yield conclusions based on assumptions: specify the pre-ordained conclusion, and someone can create the assumptions necessary to support that conclusion! Sound regulatory research provides one way to screen studies, so that the conclusions are, indeed, supported by sound principles, reasonable assumptions, and facts.
13. **Regulation is a “second profession” for all of those involved in the regulatory process.** Each of us brings narrow perspectives reflecting specialized knowledge to our jobs. We are lawyers, economists, engineers, accountants, and managers. We have an opportunity to build on other fields when we share ideas in a multi-disciplinary forum. The sharing of experiences helps us integrate ideas into a more comprehensive framework.
14. **Regulation is both an art and a science.** Leadership is an art—based on experience and good listening skills. Art involves creativity: most decisions require a deep awareness of political forces as well as creative problem-solving. In addition, decisions must reflect technical factors from economics, finance, engineering, and law. This field of study needs further development: the multi-disciplinary skills need to be taught at more universities. Networks obey the laws of physics, but investors pay attention to past decisions for clues regarding the timing, level and risks of future cash flows.
15. **The principles for regulation are the same across sectors, so an agency could provide oversight for multiple sectors.** Network industries tend to involve sunk investments in links and nodes, with operating expenditures affected by the volume of usage. In some situations, agencies need to coordinate their rules (as in the case of energy sector regulators and environmental regulators). Real income growth depends on dramatic increase in investments in infrastructure, but without sound environmental stewardship, network expansion can have detrimental impacts on the economy in the long run.
16. **Partnerships across countries can benefit participants.** We observe very productive regulatory links between nations and among regions of the world. Some U.S. state regulatory commissions have partnerships with newly formed commissions in other nations. In addition, new organizations such as the International Forum for Utility Regulators (IFUR), the African Forum for Utility Regulators (AFUR), the Association of Water Regulators of the Americas

- (ADERASA) and the Energy Regulators Regional Association (ERRA) actively promote best practice activities among member nations.
17. **Regulation is an important part of infrastructure policy.** While political leaders set regulatory agendas and legislatures establish laws that specify sector objectives, the reality is that implementation through regulatory rulings often involves some discretion when balancing the interests of various stakeholders. Thus, the quality of regulatory leadership and the commitment of regulatory professionals have a significant impact on sector performance. Regulatory governance and incentives ultimately create an environment that affects new investment and efficient operation of network facilities.
 18. **Some regulators are “in trouble” in the sense that the design, leadership and funding of the commission are flawed.** However, with an understanding of the fundamentals of incentive regulation, thoughtful regulators can make a difference. Local conditions and legal frameworks can hinder sound regulation, but in a number of situations, those responsible for oversight have applied benchmarking techniques with some success. In addition, regulators need to develop allies in the legislature or among stakeholders, so the flaws can be remedied.
 19. **Teaching cannot be separated from learning.** In the context of a training course, those presenting material benefit from questions and examples provided by participants. Teachers learn from their students. In addition, course participants teach one another, as they share experiences and clarify concepts for one another. A program that builds upon everyone’s expertise results in motivated students and inspired teachers. Participants and formal presenters at this particular training program demonstrated a commitment to mutual learning. The atmosphere promoted networking between individuals and new friendships across nations.

A few quotations that seem appropriate for regulators:

“Imagination is more important than knowledge.”
(Albert Einstein)

“A man travels the world over in search of what he needs and returns home to find it.”
(George Moore)

“Give us the grace to accept with serenity the things that cannot be changed, courage to change the things that should be changed, and the wisdom to know the difference.”
(Reinhold Niebuhr)