Key Lessons from the
31st PURC/World Bank International Training Program on
Utility Regulation and Strategy
January 9-20, 2012

Annotated by Sanford V. Berg, University of Florida

Teachers learn from their students, and students learn from each other. As in the past, the 66 participants from 22 nations in this training course identified the key lessons learned over the two-week period. During the concluding session of the program, they shared their reactions to formal presentations and informal networking. The PURC team appreciated the dedication and energy exhibited by participants: attendees brought insight and understanding to the sessions and shared their ideas with all of us.

Note that while most of the key lessons refer to regulatory agencies and to those developing infrastructure reforms, the principles apply to operators as well. Organizations face the same challenges: creating a sustainable infrastructure system where all stakeholders have confidence in the integrity of the process and have a shared vision of improved infrastructure performance.

As PURC's Director, Mark Jamison, observed: "Many of the lessons tend to be strategic rather than technical in nature – suggesting that many of the important ideas involve how regulators, representatives from government ministries, infrastructure managers, and consumer advocates need to 'get on the balcony'." Intentionally stepping back from the "give and take" of regulation allows leaders to see how various stakeholders limit or promote reform. We hope that the annotated list of lessons stimulates further discussion among those involved in these important sectors. I take full responsibility for errors of interpretation in this summary of key lessons.

Sandy

1. **Benchmarking infrastructure utilities is an important tool regulators have for promoting efficiency (via incentives based on feasible targets) and for making price comparisons across regions and countries.** Without benchmarking, cost of service regulation would only enshrine high costs in high prices. Price caps that reduce prices for inefficient firms punish customers who will now receive poor service and punish unserved citizens, since less funding is available for network expansion. Thus, identifying high performance infrastructure operators singles them out as ones who will not waste donor funds. Identifying utilities with weak performance provides citizens with a basis for pressuring owners of privately owned utilities and local politicians to replace poor managers of state-owned enterprises.

2. **Processes make a difference: infrastructure regulators and operators need to develop negotiation and public communication capabilities.** All those affected by infrastructure should be clear about their objectives and the processes used to meet those goals. Regulators need to work with stakeholders to educate those affected by price, quality, and network coverage. In some cases, all-party settlements can serve as an alternative to hearing-type procedures. The press represents one vehicle communicating with those groups interested in infrastructure performance. Issues to be aired outside and within organizations. Communication is an essential part of transparency. Note, the question is not "Should there be regulation?" Rather, policy-makers should ask, "What are the limits to regulation as an institution for addressing infrastructure issues? What are the alternative arrangements?" There is solid empirical evidence that a good regulatory system improves sector performance. This point needs to be communicated to different external stakeholders.

3. **Capacity building is essential if support staffs are to have technical skills and motivation to develop evidence-based recommendations.** The most dangerous "knowledge" is a principle or idea that is actually false. When we think we understand something, but actually do not, then we are likely to push forward without a solid grounding in reality. All of us are susceptible to excessive confidence in our own understanding of the way things work. That is one reason why open discussions and thoughtful debate are necessary within any organization. When conflicting ideas are not openly discussed, decisions are likely to be based on inaccurate information and/or inappropriate methodologies.

4. **There is no single "fix" for any problem.** Maps might provide travelers with information about ways to reach a particular destination, but the actual route will depend on topography, traffic congestion in current routes, and weather. Similarly, regulators and managers will have a number of alternative ways to address infrastructure issues. Best practice regulatory institutions need to take a more active role in educating the public and in communicating sector developments to all stakeholders. It is said that "the fewer the facts, the stronger the opinion." One way to reduce the divisive role of rhetoric is to introduce information about the costs and benefits of different policy options. If the regulatory process is transparent, stakeholders (including political leaders) will understand the decisions of infrastructure sector agencies.

5. **Decision-makers still have a long way to go before social and economic goals can be reached.** It is easy to think that we have made great progress, when we are unaware of what regulators or managers in other countries are doing. Sometimes we think that we have fully addressed an issue, and then we learn from others that some <u>very</u> creative approaches are being implemented elsewhere. Agencies and operators must be in a continuous state of learning. Maintaining consistency with past decisions and yet having

the flexibility to deal with new situations (or crises) require carefully balancing predictability with adaptability: all the while, learning from our mistakes and from the mistakes of others.

6. **Understanding the positions of all stakeholders is essential for reaching balanced and informed decisions.** Decisions always are made in a particular context, where the political, economic, and social environment sets the stage for moving forward. Sometimes, goals or targets are not feasible if political constraints on price are rigid. It is better to be clear about what is possible. Targets should be set based on reality, not rhetoric. Otherwise, stakeholders become anchored to positions that are totally infeasible or inconsistent with reality. Leaders must think, plan, and act strategically. That means taking into account the reactions of all stakeholders and continually strengthening the internal skills of their agencies. Infrastructure concepts and regulatory strategies have to "fit" the local situation. Concepts and principles can apply across nations, but the unique national settings (traditions, legal mandates, and public perceptions) require tailoring principles of autonomy, participation, and transparency to the national context.

7. **Teams can play an important role in investigating issues.** No single skill set is adequate for addressing infrastructure issues. Engineers, lawyers, economists, accountants, and specialists from other disciplines can be brought together to tackle complex issues. The sharing of knowledge represents an important activity within and between organizations. Formal training (like courses offered at PURC) represents one setting for sharing ideas and experiences. Each organization needs a system that helps professionals be more intentional about seeking and sharing knowledge.

8. **Regulation is not divorced from politics, but it should not be married to politics either.** One lesson emphasized in PURC training courses is that "regulators need to think politically without being political." Given the social importance of access to infrastructure, those involved in making the regulatory system work cannot ignore politics. "Independent" regulatory agencies are not fully autonomous: they are accountable to legislative, executive, and judicial authorities. They must fulfill the requirements of the law or the decree that established the agency, and decisions are subject to judicial appeals—ensuring that the agency follows due process. Being accountable to other institutions does not mean that regulatory agencies must support a particular political party: ideally, agencies should be insulated from day-to-day political meddling (including patronage requests). Nevertheless, regulatory leaders cannot ignore the political climate in a nation.

9. **Infrastructure sectors are different, but network industries share <u>common problems</u>.** Sector regulators can benefit from lessons learned in other sectors. Regulatory networking yields lessons related to constructing sustainable public-private partnerships, dealing with emerging technologies, addressing the needs of stakeholders,

or applying methodologies to analyzing costs or the impacts of subsidies. Both multisector and single-sector agencies face challenges. The former can utilize professionals across several sectors and may be able to better balance the influence of politically powerful sector interests. The latter are likely to have specialized staff who can tackle sector-specific issues. Both types of agencies will still have to collaborate with other governmental agencies (addressing environmental discharges, spectrum allocation, and water resource allocation, for example).

10. **Each nation is different, but each shares <u>common problems</u>.** Predictability and transparency are two elements lacking in many regulatory jurisdictions. An agency needs to be consistent in both its process and in the substance of its decisions. Transparency implies clear rules and functions that give operators confidence in the professionalism of those providing oversight. The public is seldom fully aware of current infrastructure policies and rules.

11. **Regulators are key components of a nation's regulatory system: implementing policies that promote universal service.** Targeted subsidies are to be preferred to prices that are below cost for all consumers. Artificially low prices harm those without service: delaying them access to the network is the same as denying them access to the network. The reference website, www.regulationbodyofknowledge.org, answers 12 Frequently Asked Questions addressing topics associated with social pricing and rural issues, including: "Do higher income customers benefit more from subsidies than do poorer customers?" And "To what extent does service quality need to be the same for high- and low-cost areas?"

12. **The rate-setting process can apply a number of alternative approaches: rate of return (ROR), price caps, and hybrids (including performance-based rate-making, PBR).** All such plans create incentives affecting cost containment, service quality, and network expansion. ROR (also called cost of service regulation) is a regulatory method that provides the utility with the opportunity to recover prudently incurred costs, including a fair return on investment. This mechanism limits the profit (and loss) a company can earn on its investment. Regulatory lag and special incentive plans are often used to offset the disincentive to minimize costs under this mechanism. A price cap formula is a precise expression denoting the constraint facing a firm over the period of a price control. An example of a simple version of the formula would be RPI-X+K+Q, where the terms reflect adjustments for retail price inflation, productivity, network expansion, and improved quality of service. In practice, the formal representation of the formula can be quite complicated, especially when there are different constraints on particular baskets of commodities. All the plans start with initial prices based on a formula for determining "revenue requirements." The different methodologies then diverge, depending on how often the prices are revisited and how the prices are set for

succeeding periods. [Portions extracted from the Glossary for the Body of Knowledge on Infrastructure Regulation.]

13. **Networking with colleagues from around the world provides participants with insights about how to implement "best practice" in their home countries.** No nation has "all" the answers, but the process of sharing ideas and experiences leads to ways to promote professionalism, improve regulatory processes, and develop better decisions. Networking within the regulatory community and among operators represents a mechanism for disseminating best practice. For example, regional regulatory associations act as clearinghouses for studies and reports. They promote capacity building through conferences and technical workshops. Regional working groups for operators serve a similar function, facilitating the exchange of ideas across national boundaries. Learning from counterparts around the world represents one way to strengthen organizational performance.

14. **Training yields both useful and interesting ideas.** The former are directly relevant to specific tasks faced by individuals: working with colleagues, applying yardstick comparisons (benchmarking), or developing incentives for state-owned enterprises. The latter may be inappropriate for specific situations where legal mandates, information, or a public consensus are lacking. However, situations (and job descriptions) change, so some concepts can turn out to be very valuable for organizational or personal development. Capacity building never ends. Organizational recruitment and retention depend on creating a culture of continuous improvement. The Body of Knowledge on Infrastructure Regulation at www.regulationbodyofknowledge.org provides one set of resources for internal training programs and for addressing frequently asked questions.

15. **Many citizens do not understand the importance of financial sustainability for network expansion and good quality service.** Terms like weighted average cost of capital (WACC), cash flows, operating expenses, and net present value are not typically discussed around the dinner table, yet these financial terms are central to sound regulation. Helping the public understand the implications of excessively low prices is a challenge, but one that needs to be addressed by regulators, public officials, and managers. Thus, "neutral" or balanced decisions will tend to focus on substantive issues, weighing the consequences of alternative rules in terms of national priorities (as reflected in legislation). A regulatory process that adheres to schedules and results in timely decisions is important. However, substance (attention to consequences) and public communication are even more important.

16. **PURC training helps operators understand and appreciate the role of regulation in promoting good performance (including service quality) and providing legitimacy for price changes.** Regulators and operators need not be adversaries: they share a common objective—expansion of the network and improved operating performance.

Other stakeholders, like government ministries, unserved customers, suppliers of capital (both public and private), and potential entrants, all have roles to play in determining the success of the sector. In addition, delays are not neutral with respect to impacts. Special interests favoring the status quo (over reform) are content with current poor performance. They do not want regulatory leaders who set goals, implement programs, and evaluate the impacts of decisions.

17. **Negotiation skills are important for regulators and operators.** Technical skills are necessary but not sufficient for strong sector performance. Agencies and operators need professionals with leadership skills, experience in negotiation, and proficiency in communication. Regulators often serve as mediators when complex issues arise. As was underscored by Robert Thomas: "soft" does not mean "easy" or "unimportant." Negotiation and mediation skills are valuable in the regulatory process. That means being able to assess the situation, know your own wants and needs (BATNA—best alternative to a negotiated agreement), identify the interests of stakeholders (substantive, process, relationship, and principles), and set strong goals.

18. **Carefully dealing with the press is important, especially in a crisis situation.** Without good press relations, media coverage will be biased; citizens and politicians will not support needed reforms. Daniel Carpenter in *The Forging of Bureaucratic Autonomy* (2001, Princeton University Press) stated:

    > Bureaucratic autonomy . . . emerges not from fiat but from legitimacy. It occurs when political authorities see it in their interest to defer to agency action, or when they find it too problematic to restrict it. They defer to the agency because (1) failure to do so would forfeit the publicly recognized benefits of agency capacity, and/or (2) the agency can build coalitions around its innovations that make it costly for politicians to resist them. These coalitions are part of the agency's reputation; reputations are not ethereal but are embedded in network-based coalitions.

    Without public understanding of infrastructure issues, regulators will have difficulty establishing favorable reputations.

19. **There is no single recipe for regulation, although there are menus that regulators can adopt and adapt.** There is no single approach to regulation that works everywhere. "One size does *not* fit all." The enabling legislation, judicial system, national income, and investment climate all affect the opportunities facing operators. However, the same regulatory principles apply in most circumstances. Regulatory systems should promote credibility (with investors and government sources of financial support), legitimacy (so consumers feel protected from monopoly prices and from poor service), transparency (so participants know the rationale for decisions), and efficiency in the delivery of service (so valuable resources are not wasted through mismanagement or political interference).

20. **Good communication is as important as good technical decisions.** The resolution of infrastructure problems requires many disciplines, including law and engineering. However, technical jargon can get in the way of good communication, especially when conveying information to the public. For example, economics reminds us about the opportunity costs of making particular decisions, where these costs reflect the legal, financial, and technological constraints facing decision-makers. When writing a press release, instead of using technical terminology, like opportunity costs, the press release should focus on "costs." "Soft skills" like creativity and communication are tools needed by regulators and operators.

21. **For relatively new commissioners who have been making regulatory decisions based on common sense, training helps them understand technical material (jargon) in a more complete way.** Thus, future guidance (via rules) will be better informed. In addition, PURC training courses give commissioners greater confidence in the application of basic processes, while stimulating a further demand for continual learning. Throughout the program, speakers and participants have noted that there is no ideal way to regulate. The legal structure and other aspects of the institutional context limit what a regulator can do in any particular nation. However, it is useful to conduct a strategic analysis of the organization's strengths, weaknesses, opportunities, and threats (SWOT). Reviewing the situation helps leaders of the organization shape the institutional constraints in ways that can increase the likelihood that sector performance will improve.

22. **A 2004 participant who is now a regulator in a different sector appreciates the new material in the course.** He has noted that capital-intensive network industries share many common problems: cases and exercises on the different production technologies, demand patterns, and market structures provide much food for thought. For example, when price is initially far below cost, citizens will perceive private participation as the reason prices go up. The resulting citizen unrest reflects several failures. First, the concessionaires may have unrealistic expectations regarding cash flows. Second, the government tends to do a poor job of educating citizens regarding the implications of the status quo. Prices that are below cost and national budget constraints would have led to slow growth in coverage and continued low-quality service. Political promises often establish unrealistic citizen expectations: the result is disappointment for all stakeholders, including elected officials. Regulators can contribute to universal access by promoting more efficient arrangements for infrastructure service delivery and by grounding citizen expectations in reality.

23. **Holding managers accountable for weak performance is only possible if data on trends and best practice are widely available for analysis.** Speakers in the training program have underscored the importance of data collection, verification, and analysis. Without sound regulation, long-term investments will not be made: decision-makers are likely to conclude that there are no payoffs to those taking on the risks and

responsibilities for new programs. Similarly, outlays for short-term maintenance and quality improvements will not be available if citizens are unable to perceive clear performance enhancements: they will fight price increases that provide necessary cash flows to operators. Thus, without benchmarking, neither managers nor citizens have a basis for changing behavior or developing realistic expectations.

24. **Political interference is "inevitable."** However, as has been noted, regulators should try to distance themselves from rhetoric, patronage, and non-transparent interference. Genuine and sustainable reform requires identifying allies and opponents. Karen Johnson, former General Manager of Gainesville Regional Utilities, noted that "Within the most dysfunctional system, someone is benefitting from the status quo." Thus, changing current institutional arrangements requires a number of groups to take on those who benefit from low levels of infrastructure performance—whether that is a political group benefitting from a patronage system, a group of workers benefitting from rigid work rules, managers using excessive discretion, or particular customers benefitting from prices below cost.

25. **It is important to establish clear priorities and goals.** There are many potential policy objectives, but not all can be given equal weight. The weights depend on current levels of performance, the particular sector, and citizen attitudes. Seeking input from all stakeholders is beneficial. All the groups affected by a regulatory decision need to be able to participate in the process: providing information, identifying concerns, and learning about the consequences of different scenarios. No one has all the information that may be required for sound regulatory rulings, so seeking that information is crucial to the process. *All Party Settlements* represent one way to engage those affected by decisions and obtain a consensus. When groups have some ownership of an acceptable package, they are more likely to implement the decision.

26. **Case studies can help people see how questions are addressed in different settings.** As Ralph Waldo Emerson said, "People only see what they are prepared to see." Past experiences place blinders on us. Researchers call this confirmatory bias. We tend to discount or misinterpret facts that are inconsistent with our own world view. Cases from other nations remind us that we all wear blinders and need to interact with others to better understand our own situation. A wise person once said: "Don't believe everything you believe."

27. **Relationships are central: communication involves both "speaking" and "listening."** Cultivate opportunities for engaging the public in discussions. Citizen input represents an important source of information and a forum for educating key groups. Hearings provide one format for obtaining opinions—though the weight given to some concerns will depend on the financial sustainability of current prices. Note that autonomy is earned over time, not "granted." The creation of a regulatory system results in some groups

losing the authority they had previously exercised. By demonstrating professionalism and impartiality, the new "player" can earn legitimacy. Full independence is impossible since agencies must be accountable to stakeholders.

28. **We realize how little we know.** While the U.S. regulatory approach is not an ideal model for developing nations, it provides useful lessons for other nations. Both developed and developing nations face common problems—in measuring and in implementing policy when politically powerful stakeholders influence policy. Answers to issues/problems are available, but finding them requires technical and strategic activity by the regulator. No one should re-invent the wheel. Networking with others who may have faced similar problems can lead to solutions. Of course, serious problems are seldom "solved," but they can be managed intelligently.

29. **We also become hopeful when we learn success stories for the regulation of SOEs and private operators.** Existing legislation enables some activities and limits activities as well. In some cases, agencies are excessively constrained by current laws such as when they lack access to data. Regulators should work to increase the resources available for decision-making, including access to information, appropriate levels of staffing, and effective tools for reaching decisions (such as standard systems of accounting and benchmarking studies).

30. **The news media play an important role in each country.** This fact means that regulators and operators must develop strategies for dealing with the press. Regulatory systems need to be understood by citizens. Public education becomes one task for the agency. Technical jargon gets in the way of public understanding. While the news media may highlight what is sensational, reporters and editors are aware of the crucial role of infrastructure in society's well-being.

31. **Access to data is central for evaluating trends, identifying current high performers, and establishing feasible performance targets.** To develop improved benchmarking procedures, countries should share data through regional regulatory networks. Without reasonable comparators, yardstick comparisons cannot be made. For example, the International Benchmarking Network for Water and Sanitation Utilities (IBNET), http://www.ib-net.org/, contains benchmarking information (and techniques) for water and sanitation utilities. The website provides guidance on indicators (including definitions) and shows how to conduct peer group performance comparisons.

32. **Behavior that is appropriate in one nation may be perceived as unethical in another.** Standards for open meetings, negotiations, and hiring are not universal. Nevertheless, as Ken Kernaghan and John Langford note in their book, *The Responsible Public Servant*, potential conflicts of interest arise with self-dealing, accepting benefits, influence peddling, using employer information or property for private advantage, using

confidential (proprietary) information, outside employment, and post-employment activities.

33. **New technologies present particular problems (and opportunities) for regulators.** In some cases, as with mobile telephony and the radio spectrum, the introduction of competition changes the role of the regulator (but does not necessarily cause its demise!) Similarly, changes in economies of scale and scope alter the corporate landscape. The legal structures supporting the creation and on-going operation of regulatory institutions differ widely around the world. However, the problems faced by agencies are similar everywhere: obtaining appropriate information, developing appropriate incentives for good performance, implementing rules, communicating to all stakeholders, and evaluating past decisions. "We learn from our mistakes; it is even better to learn from the mistakes of others."

34. **Regulation can improve sector performance if pitfalls are avoided.** However, the regulatory agency is only part of the "regulatory system" which includes the laws, stakeholder attitudes, appeal procedures, citizen expectations, and political stability or instability. The job of the regulator can be viewed as balancing the interests of consumers, operators, and government. Stakeholders have legitimate concerns: some citizens may not be receiving service, the financial sustainability of operators may be problematic, and elected political leaders have concerns regarding regional development or may seek low prices for current customers. It has been said that "the role of the regulator is to disappoint all stakeholders equally."

35. **Multiple skills are needed at regulatory commissions and corporations.** Professionals with training in any specialty need to be able to participate in teams. That means professionals in agencies and operators cannot work in silos. The organizational structures must encourage cross-training and respect for related fields. When dealing with complex infrastructure issues, we all could benefit from a little humility. Technical skills are necessary but not sufficient for regulatory effectiveness. Agencies that operate in silos lose the synergies that could be drawn upon through interdisciplinary task forces. Leaders in the agency must also cultivate leadership skills that enable them to deal with all stakeholders. The development of professional staff members requires opportunities for updating their skills. In addition, leaders should seek ways to become less isolated. Mechanisms for listening to one another should be identified and utilized. Bureaucracies can become comfortable: leaders can become insulated from the real issues. To recruit talented professionals requires salaries commensurate with the job requirements. Retaining outstanding staff requires that professionals feel valued and are actually rewarded for their job performance. An annual Award for Excellence represents one way to recognize outstanding contributions to the agency's mission. Becoming a regulator should not require a person to "take a vow of poverty."

36. **We observe successes and failures around the world, which provide opportunities to learn from the past.** Since infrastructure is so important for economic growth and social cohesion, public policy generally attempts to promote network expansion. The sector requires significant capital investments, so decision-makers need to prioritize their objectives and carefully define the problems they face. Companies, ministries, and regulators all shape the way issues are defined and addressed in the regulatory process.

37. **Market reform is not an end in itself but a means to improve sector performance.** For example, in some countries, reforming the wholesale market is a key to promoting efficiency, both in terms of operations and new investments. Regulators should be viewed as implementing policy since developing and articulating policy is the responsibility of the key political leaders in the executive branch and the legislature. However, regulators often have expertise lacking in other branches of government. Thus, regulatory reports and public meetings provide platforms for identifying issues and the implications of alternative approaches to resolving those issues. Similarly, operators can take initiative in reforming internal processes and external rules affecting their performance.

Finally, "Nobody can do everything.
Everybody can do something,
And together we can change the world."

Links to a few resources (from Sandy's Selections at the PURC website):

Africa's Power Infrastructure: Investment, Integration, Efficiency by Anton Eberhard, et al., The World Bank 2011. This resource includes over 300 pages on problems and potential of electricity in Africa—including time series data that provide cross-national comparisons.

Consumer Participation in Infrastructure Regulation: Evidence from the East Asia and Pacific Region by Elisa Muzzini, The World Bank, Working Paper No. 66, 2005. This paper draws on results of a survey questionnaire conducted among 45 infrastructure regulators in the East Asia and Pacific (EAP) region. It finds that EAP regulators have successfully begun to involve consumers in the regulatory process.

Tariff Setting Guidelines: A Reduced Discretion Approach for Regulators of Water and Sanitation Services by Chris Shugart and Ian Alexander, The World Bank and PPIAF, Working Paper No. 8, 2009. The objective of this paper is to prepare a set of sound, well-specified guidelines that can be used by regulators to improve the predictability and transparency of the tariff-setting and adjustment process and thus reduce uncertainty.

The World Bank PPP in Infrastructure Resource Center for Contracts, Laws, and Regulation website. This website is designed for government officials, lawyers, and project managers who are involved in the planning, design, and legal structuring of infrastructure projects, especially projects with private sector participation.

International Benchmarking of Infrastructure Performance in the Southern African Customs Union Countries by Zelijko Bogetic and J. Fedderke, The World Bank, Policy Research Working Paper 3987, 2006. This paper provides the first, systematic benchmarking of infrastructure performance in the SACU countries in four major sectors.

An Analysis of Independent Power Projects in Africa: Understanding Development and Investment Outcomes by Katharine Nawaal Gratwick and Anton Eberhard, *Development Policy Review*, 26(3): 309-338, 2008. This document provides a valuable overview of IPPs.

Reforming Power Markets in Developing Countries: What Have We Learned? by John E. Besant-Jones, The World Bank Group and the Energy and Mining Sector Board, Discussion Paper No. 19., 2006. Another helpful resource on the power sector, this paper is a sourcebook of some 240 references that study international experiences in power market reforms. The author was a featured presenter at the 24th PURC/World Bank International Training Program on Utility Regulation and Strategy.

Handbook for Evaluating Infrastructure Regulatory Systems by Ashley C. Brown, Jon Stern, and Bernard Tenenbaum, The World Bank, 2006. This volume provides an overview of why, what, and how to evaluate regulatory systems. A CLASSIC!

Check out other web-links at www.purc.ufl.edu and at www.regulationbodyofknowledge.org.