PUBLIC UTILITY RESEARCH CENTER
WARRINGTON COLLEGE of BUSINESS

Key Lessons from the 43rd PURC/World Bank International Training Program on Utility Regulation and Strategy

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Teachers learn from their students, and students learn from each other. As in the past, the 68 participants from 20 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. Some of the elaborations on the points identified by participants are drawn from Key Lessons from previous course deliveries. I take full responsibility for errors of interpretation in this summary of *Key Lessons.*

Sandy

1. **Search and Scan International Practice:** We observe successes and failures around the world, which provide us with 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 sectors require 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, as established under applicable laws.

2. **Align Current Practice with Best Practice:** Then go beyond current approaches and consider what *Next Practice* might be. 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 that is 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.

3. **Network with Peers:** Sharing with peers can be instructive. If regulators fight fires, they need appropriate fire-fighting equipment. Given the importance of sound, defensible decisions, agency professionals must utilize appropriate tools related to finance, operations, and incentives. Networking with other regulatory commissions is one way to strengthen the analytical foundations of an agency. Advanced tools are not a guarantee of good decisions, but they enable the implications of different demand and cost scenarios to be better understood. Then risks can be allocated in a manner that promotes their mitigation. The same principles apply to operators.

4. **Take a Broad Perspective:** Telecommunications is a particularly dynamic sector with convergence and disruptive innovations in ICT. New technologies present particular problems (and opportunities) for regulators and operators. 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."

5. **Utilize Benchmarking:** Benchmarking infrastructure operators is an important tool regulators have for promoting efficiency (via incentives based on feasible targets) and for making price comparisons across regions and countries. In addition, managers need to utilize Key Performance Indicators in the designing incentives and rewarding high performance. 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 firms with weak performance provides citizens with a basis for pressuring owners of privately owned utilities; also, local politicians now have a rationale for replacing managers of poor-performing state-owned enterprises.

6. **Consider Public-Private Partnerships (PPP):** Those individuals involved in developing and implementing public policy towards infrastructure should consider the strengths and limitations of PPPs for bringing funding, risk-mitigation, managerial talent,

and project development to the table. There is no single "fix" for any problem. For example, 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. 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, including PPP. If the regulatory process is transparent, stakeholders (including political leaders) will understand the decisions of infrastructure sector agencies.

7. **Devise Cost Allocations with Care:** Understanding cost-causation helps us link prices to opportunity costs. That promotes efficient price signals. Of course, decision-makers must take affordability and other pricing objectives into account. For example, perceptions of fairness might be supported by fully allocated costs—though such formulae have their own problems. Basically, there is no simple way to determine prices across customer groups and over time, but the implications of different approaches do need to be recognized by those proposing and establishing prices.

8. **Recognize the need for Multidisciplinary Skills:** On the job, regulators seem to be fighting fires that erupt in different areas. Thus, regulation requires many activities going on simultaneously. Good decisions require substantial information, along with collaboration among professionals from multiple disciplines. Of course, legal mandates must be followed, which requires commissions to act within the law, recognizing the importance of deadlines and communicating in a clear and transparent manner. Professionals do not work in silos: leaders recognize the importance of different skill sets and utilize input from others. 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."

9. **Identify the Factors entering Price Reviews:** 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.]

10. **Facilitate Stakeholder Participation:** incorporate their concerns. Consider the use of "All-Party Settlements" in which the diverse stakeholders develop a plan that works for all the parties involved in the rate case. In addition, accept criticism gracefully and respond thoughtfully to questions. Regulators will be criticized, so they are obligated to provide clear justifications for decisions at the time of announcement. Then, decisions can be defended on the basis of evidence and coherent business plans. Stakeholders may not like all the features of a particular decision, but at least they will understand the rationale behind the ruling. If decisions can create win-win outcomes, then it is easier to get buy-in from stakeholders for reform initiatives. Greater efficiency in the sector means that more resources can be devoted to poverty alleviation and other objectives, without creating new fiscal burdens. While more politicians have run on platforms of fairness rather than efficiency, the latter deserves to be highlighted when evaluating regulatory performance.

11. **Develop Incentives for Efficiency:** X-factors are incorporated into price caps to capture expected efficiency improvements (as noted above). Incentives for efficiency improvement need to be carefully designed—if the hurdle is too easy, the operator is rewarded for minimal performance! If the hurdle is too high, the operator can be placed in financial distress, leading to reductions in maintenance which reduce the efficiency of the operator over the long term. Benchmarking is one tool that can help decision-makers identify realistic goals.

12. **Find Counterparts in other nations:** We are not alone. Other regulators and managers are addressing similar issues using fresh, innovative approaches (i.e. how to address non-technical losses in electricity and water). 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.

13. **Promote Continuous Learning:** Learn from the mistakes and successes of others: gain new points of view through workshops and exercises reflecting actual cases. There is no single recipe for improving infrastructure performance. Regulation is not cut and dry; it requires broad perspectives that draw upon many disciplines, including accounting, engineering, public administration, finance, economics, and law. Individuals tend to wear blinders, but teams can bring multiple perspectives to challenging issues. There is no single approach to regulation that works everywhere: "One size does not fit all." The enabling legislation, the judicial system, national income, and investment climate all affect opportunities facing operators. However, the same regulatory principles apply in most situations: institutions, ideas, information, incentives, and individuals (leadership) matter.

14. **Identify the Objectives for Infrastructure Stakeholders:** Operators and regulators have similar objectives, related to the sustainability and improvement of service delivery. Regulation can facilitate sustainable development that makes infrastructure *Available, Accessible*, and *Affordable*. Water, energy, telecommunications, and transportation impact the everyday lives of all citizens. Poor performance by suppliers damages the social and economic fabric of a nation. That means regulations seek credibility in the eyes of other groups (investors, government ministries, development banks), legitimacy in the eyes of citizens (acceptance of decisions), and efficiency (reducing waste, expanding access, and improving service quality)

15. **Communicate with Stakeholders to promote mutual understanding and stable relationships:** No stakeholder group is likely to be fully satisfied by a regulatory decision. Regulation is a delicate balancing act, requiring that operators provide information and consumer preferences are articulated and respected. Government ministries develop policies and identify funding sources: political leaders, too, are accountable to other stakeholders for their actions. When implementing the law, government agencies investigate problems, issue rules, and implement decisions that impose benefits and costs on affected stakeholders. The oversight process creates conflicts whether the *status quo* is changed or not. A decision not to change the rules, affecting firms and other government entities, still benefits some stakeholders while denying potential benefits to others. Conflict resolution strategies utilized by regulatory and other agencies have implications for the perceived legitimacy of the decisions and their impacts on sector performance. Legitimacy, in turn, depends on both the process by which decisions are reached and the substance of those decisions. Thus, accountability, transparency, procedural fairness, impartiality, and professionalism are features that can reduce conflict and contribute to the public acceptance of regulatory rulings.

16. **Prioritize Sector Objectives:** Decision-makers in infrastructure sectors face challenges. One issue involves defining and prioritizing sector objectives. 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. With scarce resources, the timing and extent of investments and improved operations depends on project funding and operational efficiency

17. **Recognize Information Asymmetries**: Infrastructure managers have more information than regulators. Regulators and policymakers have only limited information about firms' commercial activities and opportunities for cost containment. The design of regulatory institutions and incentives needs to recognize this information problem–utilizing competitive markets where feasible and benchmarking when necessary. Furthermore, regulators need to avoid micro-management given their limited information.

18. **Improve your Negotiation skills:** 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. "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.

19. **Follow Pricing Principles:** Identifying cost causation and social obligations are both central to rate-making. Bonbright's principles underscore the need to be clear about objectives and then to determine rate levels and rate structures that that promote those objects. Pricing is both an art and a science. For example, if 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 might have done 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.

20. **Become Politically Aware without Becoming Political:** Dealing with political pressure can be a challenge, so agencies must seek some independence (autonomy) so they are

somewhat insulated from politics. Good regulation is transparent, accountable, and independent. It is tempting to use the power of the state to assist particular groups. However, the groups that often benefit are not the truly needy but the politically powerful. Sometimes, policymakers can achieve consensus regarding assistance for legitimate social programs. In such situations, these should be targeted carefully and evaluated on a regular basis to ensure that the purposes of the program are being achieved. If key issues are not appropriately identified and communicated, each party will try to gain public attention through unrealistic promises and the strategic presentation of information. Such activity creates a lot of noise in the system: "Weak regulation is like a swimming pool: all the splashing goes on in the shallow end."

21. **Draw upon International Experience**: Regulatory commissions need to be perceived as independent from all stakeholders, including consumers, service providers, and politicians. The government sets sector priorities and the agency implements these policies – ensuring some insulation from those with short time horizons. The long-term financial sustainability of operators requires that assets be maintained and operated in an efficient manner, consumers pay their bills, and performance improves over time. These objectives can conflict with the short-term interests of particular stakeholder groups. Daniel Carpenter, in *The Forging of Bureaucratic Autonomy* (2001, Princeton Univ. 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."

22. **Develop Leadership skills:** Mark Jamison, PURC director, and Araceli Castaneda, PURC assistant director, wrote a recent PURC Working Paper entitled *Reset for Regulation: Leadership for a Time of Constant Change*. The paper reminds us to develop three perspectives: "The first is to focus on next practices, not best practices. Best practice is about following in someone else's footsteps, whereas next practice is about going into areas where no one has gone before. The second is focusing on why rather than focus on what. Asking "What should we do next?" emphasizes practice, whereas asking "Why have certain practices been successful?" searches for underlying needs and context. The third juxtaposition is between leading and leadership. A leader provides direction, which is proper when the right direction is known. In contrast, *leadership* mobilizes people to tackle difficult and often ambiguous problems and circumstances.

23. **Improve Your Financial Skills:** An understanding of key financial indicators is important for those managing operations and for regulators monitoring corporate performance. 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.

24. **Promote Internal Capacity Building:** Continuous updating and expanding skills needs to be incorporated into organizational budgets. Regulation is difficult, but capacity building helps the agency address emerging problems. Training equips professionals with the tools they need to analyze complicated issues and implement public policy. An agency that values professional development encourages staff to attend courses and obtain advanced degrees. However, expertise is necessary but not sufficient for sound decisions. While technical skills related to finance, accounting, and engineering are necessary to document the reasons for a decision, "soft" skills (like negotiation, communication, and political sensitivity) are also essential. "Soft" does not mean "easy" or "unimportant." Finally, commissioners need to know enough to not be intimidated by specialists. "Experts should be on tap, not on top." (Winston Churchill)

25. **Promote Transparency:** Perceptions of an organization's ethical standing are crucial for citizen confidence that the system is designed to deliver good outcomes rather than to provide powerful stakeholders with additional resources and privileges. 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. Transparency is one way to make facts available.

26. **Participate in External Capacity Building Programs:** Good training should go <u>beyond</u> lectures, to putting newly acquired technical and non-technical skills into use (through exercises and group discussions). 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.

Concluding Observations

Here are seven elements that (in my opinion) are necessary for strong regulatory performance:

Information—*Information matters*: the collection and authentication of data is necessary to identify trends, understand current patterns of performance, and determine realistic targets for utilities; technical skills and on-going capacity-building can support such initiatives.

Institutions—*Organizations matter*: the sector regulatory commission is one component of the regulatory (and governance) system, which includes the legislature, courts, utilities, unions, and the laws that establish roles and responsibilities for these institutions; inter-institutional collaboration is essential for improved sector performance.

Incentives—*Incentives matter:* decision-makers behave in accordance with payoffs associated with different outcomes; every regulatory rule rewards or penalizes actions affecting utility performance.

Interests—*Stakeholders matter:* many groups are affected by infrastructure; they need to be able to participate in the regulatory system so their concerns and perspectives can be taken into consideration.

Ideas—*Ideas matter*: each of us brings a conceptual framework to our decisions; new perspectives can serve as catalysts for activities that improve the operation and financial sustainability of water utilities.

Ideals—*Values matter*: when we are clear about our objectives and communicate those priorities to stakeholders, the resulting dialogue can clarify our goals and promote greater consensus regarding sector objectives.

Individuals—*People matter*: ultimately, leadership is essential for improved sector performance; no matter how dysfunctional or inefficient current arrangements are, someone is benefiting from them—which implies that overcoming institutional inertia requires strong leadership.

Policies are not self-implementing. They require leadership. Some of the leaders who will make a difference in their nation's economic and social growth participated in the PURC Training Program. Hopefully, the discussions equipped them to be more effective when they returned to their nations—to continue the ***initiatives*** identified during their stay at the University of Florida.

Additional Resources

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!

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.

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