

NARUC's International Programs Foundational Publications

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At NARUC, we are committed to improving the quality and effectiveness of energy regulation in the United States and around the world. Working in partnership with U.S. and international officials, NARUC's International Programs promote real improvements in the quality and effectiveness of energy regulation in foreign countries.

In support of state utility regulators working to drive meaningful change in energy sectors both at home and abroad, the following list of United States Agency for International Development (USAID) and NARUC foundational publications has been constructed to provide supplementary resources on a variety of energy regulatory topics with an emphasis on applicability to U.S. commissions.

For more information on any of these publications, please contact Ms. Erin Hammel, Senior Director of International Programs (ehammel@naruc.org).

I. Cost-Reflective Tariff Toolkit

- [Promoting Transparency and Public Participation in Energy Regulation: A Communications Primer for Utility Regulators](#)
- [Regulatory Accounting: A Primer for Utility Regulators](#)
- [A Cost of Capital and Capital Markets Primer for Utility Regulators](#)
- [Primer on Rate Design for Cost-Reflective Tariffs](#)
- [Primer on Primary Drivers of Electricity Tariffs for Utility Regulators](#)
- [Depreciation Expense: A Primer for Utility Regulators](#)
- [Primer on the Impact and Treatment of Grants, Donor Assistance, and Concessional Financing](#)
- [Primer on the Impact of Electricity Tariff Reforms on Infrastructure Investment and Economic Development](#)

The Cost-Reflective Tariff Toolkit consists of a series of primers focusing on the regulator's role in achieving just and reasonable rates. Each primer is short and practical and is meant to be used by utility regulators in order to design rates that are fair, just, and reasonable and to effectively engage the public and key stakeholders in the decision-making process. The recommendations and strategies shared in the primers are applicable to audiences in the United States and around the world.

2. Europe and Eurasia Cybersecurity Initiative Toolkit

- [Black Sea Cybersecurity Strategy Development Guide](#)
- [Cybersecurity Evaluative Framework for Black Sea Regulators](#)
- [The Utility Regulator's Role in Promoting Cybersecurity: Resilience, Risk Assessment, and Standards](#)
- [Evaluating the Prudence of Cybersecurity Investments: Guidelines for Energy Regulators](#)
- [Understanding Cybersecurity Maturity Models within the Context of Energy Regulation](#)

These publications are resources that regulators can use to help improve energy sector resilience in alignment with U.S. and international best practices and in the context of their respective priorities and needs. They were initially developed for regulators in Europe and Eurasia to reinforce their knowledge of cybersecurity solutions and preparedness in the face of ongoing threats within the energy sector. However, these publications can be used by U.S. regulators to provide detailed knowledge on international regulatory practices for strengthening energy sector cyber preparedness, implementing cybersecurity strategies, evaluating investments made in the name of cybersecurity, and more.

3. [Guidelines for Advancing Economic and Quality of Service Regulation in Africa's Electricity Sector](#)

Effective regulatory oversight is critical for attracting and maintaining private investment, increasing electricity access and reliability, and protecting consumers at all levels of society. With this in mind, this document offers concrete, context-specific insights and strategies for African electricity regulators and other key stakeholders to consider in their efforts to support robust, equitable development in the energy sector. Given the importance of economic and quality of service regulation to achieving positive regulatory outcomes, this document prioritizes these critical areas, while also addressing cross-cutting issues.

For each substantive issue addressed, it provides detailed explanations of the technical foundations, while noting common implementation challenges and providing recommendations for improving regulatory performance. While this document was originally developed for an African audience, regulators from other regions in the world can benefit by accessing detailed knowledge to international regulatory best practices on subjects such as tariff setting, conducting cost of service studies, and more.

4. Infographics

- [Markets Promote Energy Independence by Increasing Transparency and Investment](#)
- [Modernized Grids Can Increase Security Risks](#)
- [Developing Natural Gas Infrastructure and Markets](#)

These infographics are educational resources designed for energy regulators in both the United States and abroad, as they cover energy sector topics that are integral to building sustainable environments for investment and growth. Each one contains helpful information such as links to related USAID and NARUC publications and/or initiatives, steps for regulatory reform, and definitions of important terms.

5. [Roadmap for the Development of Downstream Natural Gas Markets](#)

This publication is an informative step-by-step reference for energy regulators and energy sector decision makers who are introducing liquefied natural gas (LNG) imports and subsequently overseeing regulation of nascent downstream natural gas markets. The best practices shared in the *Roadmap* are based on historical progress and current practices in the United States, making it a helpful resource for energy regulators in search of information on the foundational tenets governing the structure of well-functioning, competitive downstream natural gas sectors.

6. [A Regulator's Guide to the Use of Production Simulation Tools for Market Analysis](#)

Energy regulators in the United States and around the world are responsible for promoting the development of functioning electricity markets. This may involve detailed market studies and simulation to assess topics such as the potential impact of national or regional policy changes on market prices, cross-border exchanges, competition, and market liquidity. In this context, this document focuses on the use of market simulation tools in least cost capacity expansion, investment planning, and security constraint economic dispatch. It also describes the different types of market simulation tools that may be used, and how the associated results may be used in decision making.

7. [A Regulator's Guide to the Use of Load Flow Study Tools for Transmission Planning](#)

This document provides an overview of the application of load flow studies in the context of energy regulation, (i.e., transmission planning and assessing changes to market design). While energy regulators are usually not directly involved in network planning, they are entrusted with approving network development and investment plans, ensuring an objective and transparent approach, facilitating stakeholder engagement, and, ultimately, assessing the reasonableness of such plans. Through reading this document, energy regulators in the United States and abroad can gain awareness of the fundamental principles of load flow studies, the relevant inputs and outputs, and the appropriate approaches for interpreting the results and weighing their potential impact on network reliability and tariffs.

8. [Developing a Regulatory Guide to Reviewing, Approving, and Monitoring Ten-Year Transmission Network Development Plans](#)

This guide provides an insight into the European practice of approving ten-year network development plans (TYNDP) and defines the role of the National Regulatory Authorities in the appraisal of the structure and content of the TYNDP. The approaches and methods that it identifies can be used to provide U.S. Commissions with detailed knowledge on international regulatory practices for assessing network investment plans. Furthermore, the guide includes information on the TYNDP methodology and modeling approach, network development and planning assumptions, categorizing and reviewing projects, conducting cost-benefit assessments of projects, performing risk analysis, directing regional projects, assessing project prioritization and impacts, consulting with stakeholders and the public, making presentations to stakeholders and the public, and monitoring TYNDP implementation.

9. Revised Data Collection Templates and Common Set of Metrics and Method(s) for Establishing Performance Benchmarks

Quality of service (QoS) monitoring in the energy sector is a key element of regulatory supervision for regulators in the U.S. and around the world as it is directly linked to the regulatory authorities' core mandate of ensuring that customers receive safe and reliable electric service at just and reasonable rates/tariffs. This document presents data collection templates, a common set of metrics/indicators, and methods for establishing performance benchmarks under a unified framework. By following the framework, the expected outcome is that regulators can form a common basis for QoS treatment that enhances transparency and ultimately improves service for consumers and monitoring by regulators.

10. Electricity Market Development: Dry Run Process Model for Regulators

In order to ensure the successful implementation of competitive electricity markets, it is important to develop methodologies for designing and implementing an effective dry run process to establish a robust market operation at the initiation of the nascent markets. Conducting a dry run helps increase market stakeholders' understanding and acceptance of a new market structure, test market design assumptions and market operations, mitigate risks, and ensure a smooth go-live process. This publication provides insight into how the National Regulatory Authorities (NRAs) of Europe and Eurasia can use international regulatory best practices to plan and prepare for an introduction of live market operations and can provide U.S. Commissions with detailed knowledge on the appropriate mechanisms and tools to cope with the complexity of different market models.

11. Electricity Market Development: Market Transparency Methodology for Europe and Eurasia

Transparency is essential for the creation of efficient, liquid, and competitive wholesale markets. It allows the creation of a level playing field between market participants in accessing the information regarding fundamentals of the market, and it prevents manipulation and insider trading. This publication is designed to provide the NRAs of Europe and Eurasia with the necessary knowledge to oversee the implementation of a transparency platform and can provide U.S. Commissions with information on common transparency issues, best practices in transparency platform implementation, and insight on the European Union Transparency Regulation.

12. Regulation on the Transmission System Operator's Responsibilities During Emergency and Restoration (Template)

This emergency preparedness regulation template for the electricity sector is designed to help regulators to ensure compliance with European Union requirements, can be customized to fit country-specific needs, and contains guiding comments that incorporate regulatory best practices. By referencing this publication, U.S. commissions can gain insight on how energy regulators and utilities can assume a leadership role in emergency response and recovery efforts and communicate at a national level to deliver independent and accurate information to relevant government bodies and, in many instances, to the public.

13. East Africa Regional Uniform System of Accounts Prescribed for Public Utilities

The Uniform System of Accounts (USoA) is a regulatory accounting tool to help utilities and regulators determine tariffs and conduct tariff reviews through better understanding of the costs of power. Developed and adopted by regulators, it provides uniformity and consistency when utilities report financial information by clearly separating costs between generation, transmission, and distribution. This publication is designed to provide the public utilities of East Africa with the necessary knowledge to implement a USoA and can provide U.S. Commissions with information on how to standardize accounting, which can both strengthen the financial position of utilities and potential investors.

14. Practical Guide to the Regulatory Treatment of Mini-Grids

This publication provides clear guidance and tools for developing an enabling regulatory framework for mini-grid development, and aims to support policy makers and regulators in meeting rural electrification goals and expanding access to clean, sustainable, affordable, and reliable electricity. Regulators that have already developed a mini-grid regulatory regime can consult the guide to review and potentially adjust their current framework or one specific regulatory issue. Regulators that have not developed such a regime can use the guide as a starting point as they consider different decision points and options. Further, regulators and policy makers could also use the guide as a tool for working with donors and other development partners as they collaborate to develop a country's mini-grid sector.

How to Get Involved

Volunteer solicitations and activity calendars for international activities are sent regularly to NARUC's International News and Volunteer Solicitations mailing lists, along with news about how NARUC members are solving problems and making a difference. To sign up, please email Ms. Erin Hammel, Senior Director of International Programs (ehammel@naruc.org), and request to be added to the list(s). Both personal and work email addresses are acceptable. Regarding volunteer solicitations, an application form is included in every solicitation email sent by NARUC. It is straightforward and contains questions about relevant expertise, approach to the topic for foreign partners, relevant overseas experience, etc. Please make sure you have commission/state approval before applying. We look forward to working with you!