

## REGULATORY TRAINING DAY

### TUESDAY 20 MARCH 2018

#### OBJECTIVE

The International Committee of the World Forum on Energy Regulation (WFER VII) has set up a Regulatory Training Day (RTD) to be part of this platform. The initiative will be held on March 20th, 2018; before the conference opening.

The objective of this Regulatory Training Day (RTD) is to provide a space where recognized experts from different regulatory bodies can train and share knowledge with new senior staff and new commissioners on basic topics of regulation. The program will consist on three concurrent courses held on March 20th, 2018. The topics of the courses are:

1. The basics of economic regulation and regulatory institutions.
2. The basics of electricity regulation.
3. The basics of gas market regulation.

Each course will be divided in four modules. A diploma will be issued only to participants that attend to four modules, regardless of the topic.

#### TARGET AUDIENCE

The RTD is open to anyone who want's the opportunity to refresh or learn from the available concepts, and regulators.

## TRAINING 1.

### THE BASICS OF ECONOMIC REGULATION AND REGULATORY INSTITUTIONS

Time	Session
08:30-08:45	Registration
08:45-09:00	Welcome & Introductions
09:00-10:30	<p><b>Session 1.1- Why regulation?</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>• The role of governments and why regulation is needed?</li> <li>• Basics of markets, competition, monopolies, dominant firms</li> <li>• The role of regulators</li> <li>• Regulating natural monopolies</li> <li>• The broader role of regulation in markets</li> </ul> <p><b>Instructor:</b> <b>Raymond Gorman</b>, Chairman, New Brunswick Energy &amp; Utilities Board</p>
10:30- 11:00	Coffee Break
11:00-12:30	<p><b>Session 1.2- Basics of Regulation in Network Industries</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>• Cost of service regulation</li> <li>• Price cap and incentive regulation</li> <li>• Information asymmetry</li> <li>• Regulatory systems and accounts</li> <li>• Performance evaluation of utilities</li> </ul> <p><b>Instructor:</b> <b>Annegret Groebel</b>, Vice-President, CEER &amp; German Regulatory for Electricity, Gas, Telecommunications, Post, and Railway</p>
12:30-14:00	Lunch Provided
14:00-15:30	<p><b>Session 1.3- Regulatory Institutions: Design and Performance</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>• How regulators are structured?</li> <li>• Independence of regulators: technical, financial, decision making</li> <li>• The main regulatory functions and performance evaluation</li> <li>• Planning and operations of regulatory institutions</li> </ul> <p><b>Instructor:</b> <b>Diane Burman</b>, Commissioner, New York State Public Service Commission</p>
15:30-17:00	<p><b>Session 1.4- World Architecture of Regulatory Associations</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>• The first regulator association: NARUC in North America</li> <li>• Regional associations and their members</li> <li>• What is ICER and what we do?</li> <li>• How to get involved?</li> </ul> <p><b>Instructor:</b> <b>Annegret Groebel</b>, Vice-President, CEER &amp; German Regulatory for Electricity, Gas, Telecommunications, Post, and Railway</p>

## TRAINING 2.

### THE BASICS OF ELECTRICITY REGULATION

Time	Session
08:30-08:45	Registration
08:45-09:00	Welcome & Introductions
09:00-10:30	<p><b>Session 2.1: The Basics of the Electricity Industry</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>• Quick overview on the historical development of the power industry</li> <li>• The development of generation technologies, fuels, costs, recent trends</li> <li>• Transmission, Distribution, and Retail</li> <li>• The basic electricity laws</li> <li>• Keeping the lights on: controlling the grid</li> </ul> <p><b>Instructor:</b> <b>Jorge Vasconcelos</b>, Former Chairman, Portugal Energy Services Regulatory Entity</p>
10:30- 11:00	Coffee Break
11:00-12:30	<p><b>Session 2.2: Electricity Industry Structures: Competition and Regulation</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>• The structure of the power industry: from vertical integration to unbundling</li> <li>• The traditional vertically integrated model</li> <li>• Single buyer models</li> <li>• Wholesale competition models: vertical and horizontal unbundles models</li> <li>• The basics of wholesale markets</li> <li>• The basics of network access and regulation: price and quality</li> </ul> <p><b>Instructor:</b> <b>Jean-Michel Glachant</b>, Director, Florence School of Regulation</p>
12:30-14:00	Lunch Provided
14:00-15:30	<p><b>Session 2.3: Wholesale Market Design: The Basics</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>• Capital and variable costs of generation technologies</li> <li>• Marginal cost of generation and nodal prices</li> <li>• Cost vs Price Based market</li> <li>• Financial Transmission Rights</li> <li>• The supply adequacy dilemma: capacity market, and energy only markets</li> </ul> <p><b>Instructor:</b> <b>Marcelino Madrigal</b>, Commissioner, Mexico's Energy Regulatory Commission &amp; ICER Electricity VWG-Chairman</p>
15:30-17:00	<p><b>Session 2.4: Electrification and Renewable Energy Markets</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>• Environmental impacts of generation technologies and the role of the power sector on global emissions</li> <li>• Policy mechanisms for decarbonisation in the power sector: quota, price mechanisms, auctions</li> <li>• Access to electricity in developing countries, regulation of electricity access</li> <li>• New technologies, business, and regulatory models for grid and off-grid solutions</li> </ul> <p><b>Instructor:</b> <b>Ignacio Perez-Arriaga</b>, Professor IIT Universidad Pontificia Comillas and MIT &amp; Former Commissioner, Spanish National Electric Regulatory Commission</p>

## TRAINING 3.

### THE BASICS OF GAS MARKET REGULATION

Time	Session
08:30-08:45	Registration
08:45-09:00	Welcome & Introductions
09:00-10:30	<p><b>Session 3.1: The Natural Gas Industry</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>Natural gas supply and demand worldwide</li> <li>The natural gas industry basics: production, processing, transport, storage, retail</li> <li>Gas industry structure: regulated supply, competition, single suppliers, others</li> <li>Natural gas production, transport costs</li> <li>Compressed natural gas, LNG, and other transport technologies</li> <li>Cost structure basics</li> </ul> <p><b>Instructor:</b> Andrew Place, Vice Chairman, Pennsylvania Public Utilities Commission</p>
10:30- 11:00	Coffee Break
11:00-12:30	<p><b>Session 3.2: Open Access and Rates in the Gas Industry</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>Basics of open access to transport and distribution infrastructure</li> <li>Basics of gas transport and distribution pricing</li> <li>LNG technologies and access regulation: international trends</li> <li>Gas system operation, grid codes and integrated system operations</li> </ul> <p><b>Instructor:</b> Clara Poletti, Head of the Regulation Department, The Regulatory Authority for Electricity Gas and Water, Milan, Italy</p>
12:30-14:00	Lunch Provided
14:00-15:30	<p><b>Session 3.3: Natural Gas Supply Security Regulations</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>Natural gas supply security policies in different countries</li> <li>Different measures and metrics of gas supply security</li> <li>Regulatory responses to gas supply security policy implementation: international experience, cost of strategic reserve, who bears the cost of storage mandates, others</li> <li>Examples of regulatory approaches to gas security: storage, diversification, others</li> </ul> <p><b>Instructor:</b> Bruno Liebhaber, Director General, Centre on Regulation in Europe (CERRE)</p>
15:30-17:00	<p><b>Session 3.4: LPG Market Development Regulation</b></p> <p>Contents:</p> <ul style="list-style-type: none"> <li>The use of LPG world wide</li> <li>LPG production, storage, distribution and retail</li> <li>Wholesale pricing of LPG and access to infrastructure</li> <li>Developing LPG markets in developing countries for fuel substitution</li> </ul> <p><b>Instructor:</b> Susana I. Cazorla, ICER-Vice Chairwoman &amp; Head of the LPG Unit, Mexico's Energy Regulatory Commission</p>