



# INTERNATIONAL METROLOGY COOPERATION IN SUPPORT OF ENERGY & ENVIRONMENT

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**SEPTEMBER 7, 2017, 2:30 PM**

**HOTEL SHERATON MIRAMAR  
ROOM EL PALMAR**

**PANEL DISCUSSION WITH  
TECHNICAL AND POLICY EXPERTS**

Registration at [www.energia.gob.cl/ecpa](http://www.energia.gob.cl/ecpa)

# Concept Note

Latin America and the Caribbean are aware of the need to accelerate and intensify the actions and investments necessary for a sustainable, low-carbon future. Meeting these needs will require the concerted action of OAS Member States to increase energy efficiency, expand the use of renewable energies, advance measurement infrastructure for alternative energies, and improve air quality and greenhouse gas measurements. The management of energy in all forms, from hydrocarbons to electricity and renewables to clean energy, will require accurate and reliable measurements that enable the interoperability of systems and technologies overseen by industry, government and non-government organizations.

Developing the Western Hemisphere's alternative energy sector and improving air quality requires adequate metrology (or measurement science) infrastructure, traceability, calibration and measurement capabilities, and adherence to internationally recognized measurement standards.

The proposed panel discussion will address specific examples of efforts underway to support energy and environment-related measurement challenges in Brazil, Mexico, Panama and United States.

# General Information

## Objective

To raise awareness among high-level government officials and technical stakeholders of the value of metrology in improving measurement capabilities supporting the development of sustainable energy technologies and low carbon growth in the Americas.

## General Content

Panelists from the Western Hemisphere will share examples of how measurement science supports renewable energy and environmental initiatives. The panel will be followed by an open discussion of on-going national and regional efforts that demonstrate the importance of accurate and reliable measurements in support of energy and environmental initiatives, and the economic benefits of an accurate and reliable measurement infrastructure.

## Targeted Audience

The side event will target high level government officials and senior staff members including energy, environment, science and technology agencies, national metrology institutes, standardization and accreditation institutions, regulators and policy- and law makers, and universities.

# Overview of Topics

Dr. Gregory Kyriazis from Brazil's National Institute of Metrology, Quality and Technology (INMETRO) and Dr. Gerald J. FitzPatrick from United States' National Institute of Standards and Technology (NIST) will showcase their country experiences in the process of modernizing the grid, which is commonly known as smart grids. They will cover how these developments are enabling the high penetration of renewable energy resources, electric vehicles, smart appliances, and other intelligent and efficient end-user equipment.

Smart grids are made possible by adoption of technologies that include advanced sensors known as Phasor Measurement Units (PMUs). These PMUs devices allow synchronized real-time measurements of multiple remote measurement points on the grid, providing power systems with a new level of reliability and efficiency. The panelists will describe how measurement science and research in measurements and standards is providing the foundation needed to accelerate widespread adoption of smart grid devices. Dr. Fitzpatrick will also cover approaches to assessing the monetary and non-monetary benefits of deployments of PMUs being developed by the North American Synchrophasor Initiative (NASPI).

Dr. Victor Lizardi, Director General at Mexico's National Metrology Center (CENAM) will address the role of National Metrology Institutes (NMIs) in facing recent global challenges of energy sustainability and environmental related issues. A better energy future and environmental legacy may be afforded by advancing the knowledge of physical, biological, chemical changes occurring in the environment, and addressing new challenges with the development of advanced measurement methods. This is a challenge that NMIs should undertake along with the international scientific community by means of a sound collaboration. Dr. Lizardi's presentation will address these issues and will present the Mexican NMI experience, its interactions with the Ministries of Energy and the Environment, the National Standardization and Accreditation bodies and the scientific community, in specific themes as oil and gas, electricity, LEDs, solar and wind energy, land (e.g. Minamata Convention, etc.), water and greenhouse gases (GHG).

Finally, Mr. Victor Carlos Urrutia (TBC); Secretary of Energy of Panamá, will present the 2015-2050 Panamá Energy Plan, which includes the implementation of a Program for Rational and Efficient Use of Energy (UREE) and a long-term plan to reach 70% of energy produced from Renewable sources. In order to enable the implementation of these plans, the National Secretary of Energy needs to work in aspects such as the creation of Energy Efficiency Indexes and regulations, compliance and validation with support of accredited Conformity Assessment bodies & the National Metrology Institute. A new generation of competent professionals & metrologists will be needed to guarantee the methods, accuracy & performance of all the measurement equipment used throughout the chain of generation, transmission & distribution energy companies and all the secondary laboratories that are in the region, because now the energy used in one country is not necessarily produced in that country.

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**National Institute of  
Standards and Technology**  
U.S. Department of Commerce





# AGENDA

- 2:30 PM- 2:35 PM WELCOME REMARKS
- 2:35 PM -2:45 PM TOPIC INTRODUCTION BY  
MODERATOR
- 2:45 PM-3:45 PM PANELIST PRESENTATIONS
- 3:45 PM-4:25 AM QUESTIONS FOR PANELISTS  
BY MODERATOR AND  
AUDIENCE
- 4:25 PM- 4:30PM CLOSING REMARKS