

AGENDA FOR THE

EXECUTIVE EXCHANGE ON THE USE & INTEGRATION OF RENEWABLE ENERGY IN THE POWER SECTOR

October 19 – 23, 2009
Madrid, Spain

Coordinated by
UNITED STATES ENERGY ASSOCIATION (USEA)

Funded by
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)
SOUTH ASIA REGIONAL INITIATIVE FOR ENERGY (SARI/ENERGY)



USAID
FROM THE AMERICAN PEOPLE

USEA
United States Energy Association

Participants

Bangladesh

Mr. Islam Sharif
Managing Director & Chief Executive Officer
Infrastructure Development Company Limited

Dr. M. Rezwan Khan
Vice-Chancellor
United International University (UIU)
& Chairman
Organizing Committee for the First International
Conference on Development of Renewable Energy
Technologies

Bhutan

Mr. Pem Dorjee
Executive Engineer
Bhutan Electricity Authority (BEA)

Mr. Ugyen
Engineer
Renewable Energy Division
Department of Energy
Ministry of Economic Affairs

India

Dr. S. Iniyar
Professor & Director
Institute for Energy Studies
Anna University Chennai

Mr. Ankur Jain
Executive Director
Ankur Scientific Energy Technologies Pvt Ltd

Mr. Deepak Gadhia
Chairman
Gadhia Solar Energy System Private Limited

Nepal

Mr. Shiv Chandra Jha
Deputy Managing Director
Nepal Electricity Authority

Mr. Bipin Karki
Engineer
Alternative Energy Promotion Center

Pakistan

Mr. Tariq Qazi
Chief Executive Officer
National Transmission and Dispatch Company

Mr. Abdul Majid Malik
General Manager Planning
National Transmission and Dispatch Company

Sri Lanka

Mr. T.M. Herath
Additional Secretary (Tech)
Ministry of Power and Energy

Prof. Ranjith Perera
Director General
Public Utilities Commission of Sri Lanka

U.S. Energy Association

Mrs. Sarah Blanford
Senior Program Coordinator/SARI/Energy

U.S. Agency for International Development

Mr. Chinmaya Acharya
Regional Project Management Specialist &
Deputy Program Manager, SARI/Energy
USAID/India

Mr. Abdul Rasool Wardak
Country Coordinator – SARI/Energy
Office of Infrastructure Engineering and Energy
USAID/Afghanistan

Program Overview

This five-day executive exchange will focus on the integration of grid-connected renewable energy in the power sector. During the activity, South Asian delegates will visit with representatives from Spanish government agencies, market operators, utilities, and manufacturers to discuss government policies, market strategies and commercially proven renewable energy technologies to expand renewable energy deployment. Participants will discuss the technical, market, regulatory, and policy barriers of renewable grid connection and construct strategies to accelerate development. The exchange will further utility executives' and policymakers' knowledge of modern technologies, financing strategies, policies, and successful project development methodologies, to foster renewable energy uptake in their countries and create a more attractive investment climate for the renewable energy sector. The site visits will allow the participants to observe the methodologies and technologies discussed during the exchange.

Program Objectives

The objective of the executive exchange is to identify strategies for the promotion of interconnection of renewable energy and distributed generation/independent power projects into the power system.

Monday, October 19, 2009

- 8:30 am **Welcome and Opening Remarks and Participant Introductions**
Presenter: *Chinmaya Acharya, Deputy Manager for SARI/Energy & Regional Project Management Specialist, USAID/India*
- 8:45 am **Welcome and Participant Introductions**
Presenter: *Sarah Blanford, Senior Program Coordinator, U.S. Energy Association (USEA)*
- 8:50 am **Country Presentations – Overview of Renewable Energy Projects in South Asia**
Individual country presentation of ten to fifteen minutes; one presentation per country
- 10:00 am *Break*
- 10:15 am **Country Presentations – Overview of Renewable Energy Projects in South Asia (continued)**
- 12:00 pm **Policy, Incentives & Regulation for the Promotion of Renewable Energy Applications**
Presenter: **Comisión Nacional de Energía (CNE) (National Energy Commission)**
Presenters : Luis Jesus Sanchez de Tembleque, Deputy Director for Special Systems & Jose Miguel Unsion Rodriguez

The National Energy Commission (Comisión Nacional de Energía or CNE) is the regulatory body for Spain's energy systems, including the electricity market and the liquid and gaseous hydrocarbons markets. The National Energy Commission has been assigned wide-ranging functions in order to fulfill its goals and it also acts as a consultative body on energy matters to the Central State Administration and the Governments in the Autonomous Regions.

Topics:

- Policy and institutional constraints against greater use of renewable energy applications
- Feed in tariffs and other incentive programs

Tuesday, October 20, 2009

7:50 am **Depart hotel for Red Electrica de España**

9:00 am **National Grid Operator's Perspectives on Grid Connected Renewable Energy**

Presenter: Red Electrica de España

Presenters: Juan Manuel Rodriguez Garcia, Jefe del Departamento, de Organismos Internacionales DGO & Juan Francisco Alonso Llorente, Jefe del Departamento de Acceso a la Red

Red Eléctrica is responsible for the technical management of the Spanish electricity system. As the owner of 99% of Spain's high voltage power transmission grid, it is the only company that specializes in the transmission of electricity in Spain. As the operator of the Spanish power system, Red Eléctrica's principal mission is to guarantee the continuity and security of the power supply and to properly coordinate the production and transmission system, performing its functions in coordination with the operators and clients of the Iberian power market based on the principles of transparency, objectiveness and independence. Red Eléctrica also acts as the operator of the insular and extrapeninsular power systems, and as the manager of the transmission grid, Red Eléctrica acts as the sole transmissioner.

9:00 Introduction of participants

9:05 Presentation of RES integration in Spain

10:00 Visit to the Control Centre

10:50 Coffee break

11:00 Continuation of presentation or questions

12:00 End of meeting

Afternoon Site visit to Toledo PV Plant

Host: Union Fenosa

Presenter: Heiko Kleemann, Gestion DE I&D

Wednesday, October 21, 2009

8:45 am	GE Energy
9:00-09:45	GE Power & Water Introduction - Overview of the various solutions for power generation, emphasizing on renewables and the Spanish Market <i>Presenter: Fernando Ortega, Area Sales Leader Power & Water Spain & Portugal</i>
09:45-10:30	GE Wind - emphasis on Grid Integration Solutions <i>Presenter: Pedro Arsuaga, Head of Application Engineering Wind Spain</i>
10:30-11:00	Coffee break
11:00-11:45	GE Solar solutions – emphasizing of Spanish situation <i>Presenter: Fernando Ortega</i>
11:45-12:30	GE Jenbacher solutions (gas motors for use of biogases, special gases, landfill) <i>Presenter: Dieter Schmidt, Manager Competence Center, Jenbacher gas engines, Spain & Portugal</i>
12:30-14:00	Lunch (Matsuri – Lopez de Aranda, 38, 28027)
14:00-15:00	Departure from lunch and drive to Noblejas Plant
15:00-18:00	Visit Noblejas Plant (manufacturing of wind turbine generators) <i>Presenter: Joaquin del Barrio, Plant Manager</i>

Thursday, October 22, 2009

9:00 am **Utility Perspectives on Grid Connected Renewable Energy**
Presenter: IBERDROLA RENOVABLES
Presenter: Carlos Gasco, Head of Perspective

Following a period of strong international expansion, IBERDROLA established itself as one of the four largest energy companies in the world by market capitalization. IBERDROLA RENOVABLES has become a world leader of its sector. Boasting the largest base of operational renewable assets (+ 10,000 MW) and the largest portfolio of future projects in the world (+ 56,000 MW), the company has consolidated its leadership position at the head of the worldwide wind energy sector with more than 9,600 MW of installed power at the end of the first half of 2009. Furthermore, the Company has achieved production of 10,585 million Kilowatt hours (kWh), representing an increase of 23.7% over the same period last year.

- Technical integration of renewable energy into the system
- Challenges & strategies to meet environmental protection targets
- Project development & financing

- Tactics to promote of renewable energy

1:00 pm

Impacts of the Feed In System on the Electric Industry**Presenter: Unesa**

Presenters: Angel Vivar, Director of Energy Resources and Environment; Lourdes Caverro Mestre, Jefe del Departamento de Relaciones Internacionales; Aquilino Lobo Panizo

5:00 pm

Overview of Union Fenosa Renewable Energy Operations

Presenters: Dr. Eloy Álvarez Pelegrý, Director of Corporate Intelligence, GAS NATURAL SDG, S.A.; Mr. Vicente Mena, Market Intelligence, Gas Natural Group; Mr. Javier Alonso, Director of Operations, Toledo PV & Head of Technology Portfolio, Gas Natural; Mr. Rafael Gonzalez, Associate General Manager, EUFER

UNION FENOSA is an integrated international energy company with a presence across four continents. It is involved in the generation, distribution and supply of electricity, has a presence at each stage of the gas business, from exploration to the final supply to customers, and is involved in the mining business. Its activities are grouped into four main geographic areas: Spain, Mexico, Colombia and Central America and Other. The Company participates in a total installed capacity of 16,310 MW, from which the capacity attributed to the Company is 12,182 MW. This is used to supply 9.5 million electricity customers with 62 TWh of electricity.

Friday, October 23, 2009

9:00 am

Overview of Plataforma Solar de Almería & Other Photovoltaic, Wind Power, and Biomass Projects

Presenter: Centro de Investigaciones Energeticas, Medioambientales y Tecnológicas (CIEMAT) (National Research Centre for Energy, Environment and Technology) Department of Renewable Energies

Presenters: Raquel Muñoz, International Relations and Co-operation Unit and Félix J. Barrio de Miguel, Head of International Relations and Cooperation Unit

Generating knowledge and technology in the field of energy, both from renewable and conventional resources, CIEMAT carries out research development and demonstration programs in concentrating solar energy, an area in which CIEMAT may be considered a European centre of reference, as well as wind power, photovoltaic and biomass. It also studies clean fossil-fuel combustion processes and procedures for reducing or eliminating carbon dioxide emissions. It provides support and assistance to ENRESA and the Nuclear Safety Council in radioactive waste treatment and increasing facility safety. All developments are at a point near their application in the interest of society and are accompanied by socioeconomic and environmental studies, as well as global analyses of the energy processes.

The Plataforma Solar de Almería (PSA), a dependency of the Center for Energy, Environment and Technological Research (CIEMAT), is the largest center for research, development and testing of concentrating solar technologies in Europe. PSA activities

form an integral part of the CIEMAT Department of Renewable Energies as one of its lines of R&D.

11:30 am **Overview of IDAE Activities and the Present Situation of the Spanish Renewable Sector**
Presenter: IDAE - Instituto para la Diversificación y Ahorro de la Energía
(Spanish Institute for Energy Diversification and Saving)

Presenters: Felix J. Barrio de Miguel, Head of International Relations and Cooperation Unit & Enrique Soria Lascorz, Director, Renewable Energy Division

The Instituto para la Diversificación y Ahorro de la Energía (Institute for Diversification and Saving of Energy, or IDAE) is a state-owned business entity that reports to the Ministry of Industry, Tourism and Trade through the State Secretary for Energy. The two main poles guiding the institution's activity are achieving the targets set by the 2007-2012 Action Plan under the Spanish Energy Saving and Efficiency Strategy and those of the Renewable Energy Plan for 2005-2010. Thus, as well as jointly coordinating and managing the measures and funds destined for these plans in conjunction with the autonomous regions, the IDAE also runs activities to increase public knowledge and awareness, it provides technical advice, and runs and finances example technology innovation projects with potential for replication. The Institute is also highly active internationally, in the framework of various European programmes and cooperation programmes with third countries. The IDAE's strategic objectives also include running training programmes and awareness campaigns to help build a new energy model able to guarantee the quality and security of Spain's energy supply, and thereby bolster the competitiveness of the country's businesses, promote sustainability and respect for the environment.

Afternoon **Evaluation, questions and final remarks**