

Transmission, Distribution & Metering India (Enabling Smart Grid & Smart Metering)”

**Held on 10-11th November, 2010 at Silver Oak Hall, India Habitat Centre
Lodhi Road, New Delhi-110003**

Summary Record.

Council of Power Utilities (CPU) & India Core are organizing annual Conference on “Transmission, Distribution & Metering India – (Enabling Smart Grid & Smart Meters)” and have the following Sponsors

IBM (Principal Sponsor), Ramco Systems (Gold Sponsor), FERRANTI Computer System (Silver Sponsor), Crompton Greaves (Associate Sponsor), India Energy Exchange (Partner Exchange) and APGENCO, APTRANSCO, WBSETCL, PFC (Co-Sponsors).

The conference is structured in eight sessions i.e. Inauguration and plenary session and seven technical sessions.)

Shri CVJVarma, President, CPU welcomed the guest and dignitaries of plenary session. Shri Varma submitted that the renewable & alternative Resources of power is also available in the grid along with conventional power .Increasing demand of reliable power from cleaner and preferably renewable energy sources, cannot be met with present grid infrastructure. An intelligent grid system that can receive power of all qualities from all sources is the need of the time.

The dignitaries of Plenary session were Shri Anil Razdan, Former secretary (power), Shri. H.L.Bajaj, Former Member (Technical), Appellate Tribunal for Electricity Shri Ramesh Naryanan, CEO, BYPL and Shri. Jean Kowel, Secretary General, CIGRE

Mr. Tim Gresinger, Vice president, IBM, China was moderator for plenary session.

Policy, Strategy & financing- for Transmission and Distribution development

The session chairperson is Shri A.S. Bakshi, Member (P), CEA submitted an overview of INDIAN POWER SECTOR and capacity addition plan for 12th / 13th PLAN (i.e. up to (2010-17) and (2017-22) to meet peak load demand. Capacity addition during 11th plan i.e. 62,374 MW likely to be achieved against a target of 78,700 MW.

The other speakers Sh. Vivek, Partner, Infosys Technologies Ltd. submitted that growing energy demand, aging grid infrastructure, concerns over national security and global climate change have encouraged investment in a smart grid.

Shri R. Shankar , Executive Vice President, Ramco System and Sh. Reji Kumar Pillai, Former Vice president of IBM gave presentation about cloud computing, application of IT in power sector specially in DMS, Smart Meters with data storage, remote disconnect/reconnect, voltage monitoring, Substation Automation Equipment, Intelligent Electronic Devices etc.

Interoperability Standards & Next Generation Interconnectivity

Shri Arunabha Basu, VP & Head – Technology, North Delhi Power Limited chair the session and gave a presentation about Smart Grid in Distribution Sector and discuss the role of a smart grid, which enables the integration and optimization of more renewable energy (such as wind and solar) and plug-in electric vehicles, increases in the efficiency

of our network and empowers consumers to manage their energy usage and save money without compromising their lifestyle.

The other speakers in the session are Shri P.J. Patel, Chief Engineer, UGVCL, Shri Sushil Cherian, Kalkitech, Shri Pankaj Batra, Chief (Engineering), CERC and Mr. Detief Einacker, Director, Dr. Neuhaus Tele. GmbH gave presentation regarding standards for the Smart Grid, deployment of various Smart Grid elements, including smart sensors on distribution lines, smart meters in homes, and widely dispersed sources of renewable energy, MIOS – Meter inter-operability solution with objective to provide possible way forward by the metering companies so that utilities can use common IT infrastructure to gather information from meters of all makes.

Advance Metering Infrastructure, Smart Metering in Transmission & Distribution and Power Trading

Mr. Martin Hauske, Executive, Energy & Utilities Industry, IBM chaired the session and invite the speakers for their respective presentation.

The speakers of the session are **Shri Dhiraj Garg, IBM ,Shri Madhur Srivastava, Secure Meters, Shri .Somnath Chatterjee, Head – Energy Utilities & Chemicals, Capgemini India, Shri Rupender Bhatnagar, Head Utilities, SAP, Shri Joy Shah, Vice President, Holoflex Ltd.**

Advanced Metering Infrastructure (AMI) is a communication network and meters providing usage information at regular intervals (at least hourly). Using cloud computing to deliver innovation and efficiency The communications hardware, software, associated system and data management software that creates a network between advanced meters and utility business systems which allows collection and distribution of information to customers and the utilities are topics covered in this session. Power Trading is another topic which was presented by Ms. Rupa Devi Singh, MD &CEO, Power Exchange India Ltd. mentioned that Average Price of electricity Traded over exchange has come down from Rs.7.57/kWh (In 2008) to Rs. 5.73/kWh. (In 2009)and price in 2010 indicate further declining trend. She further submitted that PXIL remains committed to delivering to its participants contextual products and services on the principles of, Accessibility, Affordability, Reliability, Quality and Availability.

Smart Grid Distribution System & Initiatives in India

Shri Ramesh Naryanan, CEO, BYPL chaired the session and gave a presentation on **SMART**

METER AND ADVANCED METERING INFRASTRUCTURE and further submitted that

BYPL has made all the grids SCADA compatible, SCADA –Outage management system integration, 30 grids out of 52 are unmanned with 100 percent remote operations, all capacitor switching are done via software application.

Shri Major Singh, Chief Engineer , CEA, Shri Arindam Ghosh, KPMG and Shri Atul Agarwal, Ferranti, gave presentations about disaster management, Smart Grid Vision to digitize a largely passive network into a two-way, interactive information highway to support metering and grid monitoring and control, from demand management to “self-healing” circuits, but Smart Grid involves a large-scale investment in T&D infrastructure aimed at enabling, and improving, advanced metering, demand response, asset management, and system reliability.

Demand Side Management- A systematic approach to managing electricity use

Shri Gopal K. Saxena, Chief Executive, BSES Rajdhani Power Ltd submitted that Demand side management is systematic approach to manage electricity and to make DSM programme a

success consumer involvement is a must by reduction of load at peak & shifting/ adding load When energy is surplus . **Shri Saxena also chaired the session.**

Shri A.K. Verma, GM, UGVCL, Shri G.K.Panchal, Manager (application Engg- Energy), Secure Meters, **Dr. Chandan Chowdhury CMD**, Invigorare Solutions Ltd. are the other speakers in the session.

Shri A.K. Verma mentioned that with the implementation DSM program, UGVCL able to supply non stop power to villages, power supply to farm-sector for 8 hrs./day, establishment of Area Load Dispatch Centre and Creation of Energy Management Centre

Work Force for transmission and Distribution sector including Smart Grid Technology

Shri S.R. Sethi, Member-I, DERC chaired the session and submitted that Power system is a seamless system from generator to consumer and Transmission system and sub-transmission is the integral part of the system. As per depreciation norms, generating system and transmission system have the same life but in actual practice, transmission system is not replaced but only augmented/components replaced. Increasing the life cycle of existing grids to avoid high replacement costs of new systems is a must in the power sector.

Dr. N.S. Saxena, Former DG, NPTI submitted that there is inadequate Man Power due to **rapid expansion, ageing and retiring, scant induction**, inadequate training resources and inadequate financial resources. Other speakers in the session were **Shri S. Gupta, Sr.GM (Energy Div.)**, Feed Back Venture & **Shri K.A. Sivaram, Chitale & Chitale** , Advocates & Legal Consultant gave their presentation about various initiatives in the Indian Power Sector to move towards Smart Grid and the The Electricity Act, 2003 , The National Tariff Policy, 2006, and Foreign Direct Investment Policy respectively.

Renewable Energy Integration into the smart Grid & Environment

Sh. V.N. Choudhary, Executive Director, NTPC is the chairperson of the session submitted that increase in Renewable /alternate sources in grid , Protection standards and Control will change .Renewable & alternative Resources may be Created at remote places and Interconnected via High Cap Transmission Lines to Connect rural, mountain, and desert located population clusters

Ms. Alison Bartle, Director, Aqua Media International presented that Hydro as the leading renewable energy source . HYDRO is the only form of energy to offer multiple benefits i.e. Water supply for Irrigation, Flood control, Environmental protection and maintain a sustainable regional development .

Dr. G.S. Grewal Dy. Director, Elect. Research & Devel. Association-- “Renewable Energy: The Wind-Hydrogen Option for Remote Communities in India “, **Shri V. Shiva kumar, Engineering Officer, CPRI**—“Smart Grid and Renewable Integration” and **Shri Larry Cochrene, Microsoft** –Enabling Renewable Integration with Microsoft Smart energy Reference Architecture are the other speakers in the session are other speakers in the session and gave presentation on their respective topics.