



Power Systems Engineering Research Center

Executive Forum on Smart Grid Deployment Strategies and Business Opportunities

March 6, 2009
Hilton Austin Airport, Austin, Texas

Agenda

- 7:30 a.m.** **Continental Breakfast**
- 8:00** **Introductions and Forum Overview: Mladen Kezunovic,**
Texas A&M University
- 8:30** **Intelligent Distribution Systems of the Future**
Don Cortez, Vice President of Regulated Operations for Technology,
CenterPoint Energy
- 9:00** **Hype Cycle for Intelligent Grid Technologies**
Žarko Sumić, Vice President & Distinguished Analyst, Energy & Utilities In-
dustry Advisory Services, Gartner
- 9:30** **Observations on Investments in Smart Technologies**
Clark Gellings, Vice President of Technology, EPRI
- 10:00** **Break**
- 10:15** **Timing the Power Grid**
Damir Novosel, President and Executive Consultant, Quanta Technology LLC
- 10:45** **Perspectives on the Business Case for a Smart Grid**
Spero Mensah, Vice President, Business Strategy & Smart Grid, AREVA
T&D
Gary Rackliffe, Vice President, Smart Grid Development, ABB
- 11:30** **Preparations for the Afternoon Discussion:**
All discussions facilitated by Frank Wayno, Professor, Cornell Univ.
- 12:00** **Lunch**
- 1:00** **Answering the Key Questions**
- 2:00** **Break**
- 2:15** **Answering the Key Questions**
- 3:15-3:30** **Closing Discussion on the Next Steps**

PSERC Industry Members

ABB	American Electric Power
American Transmission Company	AREVA T&D
Arizona Public Service	Bonneville Power Administration
British Columbia Transmission Co.	California ISO
CenterPoint Energy	Duke Energy
Entergy	EPRI
Exelon	FirstEnergy
GE Energy	Institut de recherche d'Hydro-Québec (IREQ)
ISO New England	ITC Holdings
MidAmerican Energy	Midwest Independent Transmission System Operator (MISO)
National Grid USA	National Rural Electric Coop. Assn.
New York ISO	New York Power Authority
Pacific Gas and Electric	PJM Interconnection
PowerWorld Corp.	RTE
Salt River Project	Southern California Edison
Southern Company	Tennessee Valley Authority
Tri-State Generation and Transmission	U.S. Department of Energy
Western Area Power Administration	

Collaborating Universities and Site Directors

Arizona State (Jerry Heydt)	Berkeley (Shmuel Oren)	Carnegie Mellon (Marija Ilic)
Colorado School of Mines (P.K. Sen)	Cornell (Tim Mount)	Georgia Tech (Sakis Meliopoulos)
Howard University (James Momoh)	Illinois (Peter Sauer)	Iowa State (Jim McCalley)
Texas A&M (Mladen Kezunovic)	Washington State (Anjan Bose)	Wisconsin (Chris DeMarco)
	Wichita State University (Ward Jewell)	

Biographies



Don Cortez is Division Vice President of Regulated Operations Technology for CenterPoint Energy. He is responsible for creating operational efficiencies by leveraging existing and new technologies. Before this post, he was Vice President of Regulated Operations Support for CenterPoint Energy Houston Electric.

Don graduated from Texas A&M University in 1976 with a Bachelor of Science in Electrical Engineering. Upon his graduation, he was employed by Houston Lighting and Power Company, a predecessor company to CenterPoint Energy. He has worked for CenterPoint Energy for 31 years. He has held various assignments in Houston and internationally. He held executive positions in utility companies in Buenos Aires, Argentina; Cali, Columbia and Sao Paulo, Brazil. Don is on the Board of Directors for the Epilepsy Foundation of Texas, the Buffalo Bayou Partnership and the Center for the Commercialization of Electric Technologies.



Clark W. Gellings is Vice President of Technology at the Electric Power Research Institute (EPRI) and is responsible for technology strategy in areas concerning energy efficiency, demand response, renewable energy resources, and other clean technologies.

Gellings joined EPRI in 1982 progressing through a series of technical management and executive positions including five previous vice president positions. He was also chief executive officer of several EPRI's subsidiaries. Prior to joining EPRI, he spent 14 years with Public Service Electric & Gas Company. He received distinguished awards from a number of organizations, including The Illuminating Engineering Society, the Association of Energy Services Professionals, and the South African Institute of Electrical Engineers. He is a 2003 recipient of CIGRE's (International Council on Large Electric Systems) Attwood Award for notable contributions. He is currently a Member of the Board of the University of Minnesota's Center for the Development of Technology Leadership and the National Academy of Sciences Committee studying the robustness and resilience of the power delivery system.

Gellings has a Bachelor of Science in electrical engineering from Newark College of Engineering in New Jersey, a Master of Science degree in mechanical engineering from New Jersey Institute of Technology, and a Master of Management Science from the Wesley J. Howe School of Technology Management at Stevens Institute of Technology. Gellings is a registered Professional Engineer, a Fellow in the Institute of Electrical and Electronics Engineers, a Fellow in the Illuminating Engineering Society, and a Distinguished Member and President of the U.S. National Committee of CIGRE.



Dr. Spero Mensah has over 25 years of Hand-on experience on all aspects of Transmission/Distribution Network Management and Energy Market Systems (from specification, design, implementation, System commissioning, market trial to market operation and evolution). He has led the group who deployed the Market systems for several of the major US RTOs and Market Systems worldwide. He has developed a unique understanding of the challenges facing the Power industry worldwide. From 2003 to 2007, Dr. Mensah was Vice President Marketing Systems Worldwide with AREVA T&D Automation with Product Direction and overall Product Life Cycle Management responsibility. Dr Mensah is now Vice President Strategy & Partnership and responsible for Smart Grid Strategy for the Network Managements Solution.

Before joining AREVA, Dr. Mensah assumed Management position with CAE Electronics where he developed an industry benchmark Distribution Management Systems. Dr. Mensah obtained a Ph. D in Nuclear Engineering from Ecole Polytechnique, University of Montreal in 1983.



Dr. Damir Novosel is President of the Technology Division at Quanta. Prior to joining Quanta he was President of T&D Consulting at KEMA in the US. He has also held various positions in ABB including Vice President of global product management for automation products and Manager of the power systems consulting group.

Dr. Novosel has over 26 years of experience working with electric utilities and vendors. Damir has created and managed several reputable and successful organizations that developed innovative technology and industry best practices in the areas of reliability and security improvements, asset management, T&D system design and planning, and power system automation.

His work earned him international recognition and reputation and was elected IEEE Fellow. He holds 16 US and international patents. Damir published over 100 articles in Refereed Journals and Conference Proceedings in various areas of power systems. Among other articles, he co-authored a paper in IEEE Spectrum on "Getting a Grip on the Grid" and contributed to McGraw-Hill 2006 Yearbook of Science and Technology.

He is the vice-chairman of the IEEE Emerging Technologies Coordinating Committee, the past chairman of the IEEE Power System Relaying Committee (PSRC) System Protection subcommittee, and the co-chair of Performance Requirement Task Team for the North American Synchro Phasor Initiative (NASPI), large-scale activity of the North American utilities on implementation of Synchronized Phasor Measurements. He is also a member of the NASPI leadership team.



Gary Rackliffe was recently appointed to lead ABB's Smart Grid development in North America. He will be responsible for ABB's Smart Grid initiative, including the strategic partnerships and ABB's marketing and product strategies. He is transitioning from his position as VP of Marketing and Sales for the Northeast and Mid-Atlantic sales region. This position covered ABB T&D equipment, power electronic products, systems, and services for the utility, power generation, and public power customers in the region.

He has over 25 years of industry experience in both transmission and distribution and has worked for ABB for 16 years in Raleigh, NC. Gary was previously the Vice President of Strategic Marketing for the Power Products and Power Systems divisions of ABB in North America and he has also managed Marketing, Sales, and Business Development for ABB's Network Management business that provides SCADA/EMS/DMS/OMS and market systems. He directed ABB's Flexible AC Transmission Systems (FACTS) for the U.S., developed systems business for all ABB utility products and services, and managed ABB's distribution operations and planning software business in other assignments at ABB. Prior to joining ABB, Mr. Rackliffe worked at Westinghouse Electric Corporation for ten years in engineering and management positions.

Mr. Rackliffe holds BS and ME degrees in Electric Power Engineering from Rensselaer Polytechnic Institute and an MBA degree from Carnegie Mellon University.

Mr. Rackliffe is a Senior Member of IEEE, a member of the DistribuTECH advisory committee, and is a Registered Professional Engineer in the Commonwealth of Pennsylvania. He is the co-author of a book on T&D planning, and has published several technical papers.



Zarko Sumić, Ph.D., is a vice president and Distinguished Analyst in Gartner, where he provides innovative strategic and operational advice to Gartner energy clients using his extensive IT leadership and business experience. With 33 years of IT experience in academia, the energy industry and technology providers; Dr. Sumić is an established leader in applying IT in the energy industry.

Žarko joined Gartner in April 2005 with the acquisition of Meta Group. Before Meta Group, where he had worked since March 2001 as VP Energy Information Strategies, Dr. Sumić was a chief technology officer of ConneXt, an unregulated subsidiary of Puget Sound Energy, responsible for design, development and deployment of three company product lines (CIS, OMS/GIS and C&I EBPP consolidation platform). Prior to ConneXt, Dr. Sumić was a vice president of technology and product development with Tellus, responsible for all aspects of the development process and architecting applications for planning, operation, engineering and mapping needs of an electric utility. Before co-founding Tellus during his tenure as a university professor, his research interest included power system control, EMS and artificial intelligence application in utility networks design.

Žarko has a Bachelor of Science in electrical engineering from University of Split, Croatia, a Master of Science from University of Zagreb, Croatia and a Ph.D. from University of Washington, Seattle, as well as executive training in financial management and technology product management from UW and Caltech respectively.

Dr. Sumić has an extensive publishing record that includes more than 100 refereed papers and conference presentations and owns three patents in the area of artificial intelligence and Internet application to power systems. He is a Senior Member of IEEE, member of electric engineering honor society Eta Kappa Nu and was awarded Gartner Thought Leadership Award in 2006.

Discussion Facilitator



Frank Wayno is a member of the teaching faculty of the Engineering Management Program in the School of Civil and Environmental Engineering at Cornell University. In addition, he holds an administrative position as Director of Corporate Education for the Cornell Systems Engineering Program, and is an Adjunct Associate Professor in that program. Since its founding, Mr. Wayno has been an organizational advisor to the Power Systems Engineering Research Center (PSERC), helping it to overcome the operating challenges associated with becoming the largest and most complex industry-university research center in the country.

Mr. Wayno moved to the Engineering College after a 15 year career as an extension faculty member in Cornell's School of Industrial and Labor Relations, where he was both the Director of Programs for Employment and Workplace Systems (PEWS), an applied research and consulting group in the ILR School, and Executive Director of Cornell's interdisciplinary Center for Manufacturing Enterprise (CME).

Mr. Wayno came to Cornell after a varied career in industry, where he was founding partner of Powers, Wayno and Associates, a consulting firm specializing in organizational and managerial effectiveness; a corporate officer at Merrill Lynch & Co., charged with advising senior management on organizational restructuring and cultural change; and a Project Engineer in the defense industry. He is a specialist in project management; organizational design, development and change; competency-based management education; creativity and organizational innovation; strategic human resource management; small group dynamics; and cross-cultural work behavior. He holds a Ph.D. in Sociology from Princeton University and a B.S. in Engineering Physics from Cornell.

Forum Organizer



Mladen Kezunovic is a Professor at the Department of Electrical and Computer Engineering at Texas A&M University (TAMU) and holds the Eugene E. Webb Professorship. Mladen Kezunovic received the Dipl. Ing. (Diploma-Ingenieur), M.S. and Ph.D. degrees in electrical engineering in 1974, 1977 and 1980, respectively. He has been with TAMU since 1986. He worked for Westinghouse Electric in the U.S.A. as a Systems Engineer on development of the first all-digital substation in the world during 1979-1980 and for Energoinvest Company in Europe as the Technical Leader for substation automation development during 1980-86. Dr. Kezunovic provided consulting services to over 35 utilities and vendors worldwide as the Principal of TLI, Inc. He is TAMU Site Director of PSerc.

Dr. Kezunovic's special focus is on the energy issues and how they impact development of the 21st century power grid. Over the last few years he organized several events related to the smart grid issues: an NSF sponsored National Science Foundation Workshop on "Modernizing the National Grid", Texas Electric Energy Forum on "Partnership for Electricity Research", TAMU/UT sponsored Workshop on "The Role of Plug-in Hybrid Vehicles in Interfacing Electricity and Transportation Networks", and two US-China Workshops on "Responsive Control of Power Systems" and "Electric Energy for the 21st Century: Similarities in the China-US research and development needs and technology developments" held in the USA and China respectively.

Dr. Kezunovic has published more than 350 journal and conference papers, contributed to seven books or standards, and has given over 100 invited lectures, short courses and seminars around the world. He was elected a Fellow of the Institute of Electrical and Electronics Engineers (IEEE) for his contribution to "Automated Fault Analysis" and is on IEEE's Distinguished Speakers List. He is also a member of an International Organization for High Voltage Power Systems (CIGRE-Paris), and recipient of the Attwood Associate Award of the USNC of CIGRE. He is a registered Professional Engineer in the state of Texas.