

Grid School 2010

In this transformative period for the nation's electric power delivery infrastructure, the Institute of Public Utilities at Michigan State University in collaboration with MSU's College of Engineering and Argonne National Laboratory is pleased to present Grid School on March 8-12, 2010 in Richmond, Virginia. This timely program is open to the public and private sectors and will be especially relevant to the economic regulatory policy community, as well as to energy and environmental regulators. The underlying goal of the course is to improve regulatory capacity for grid-related policy development and decision-making at all government levels in support of innovation, efficiency, and environmental goals. The program is designed to be responsive to policy mandates and infrastructure investments associated with the Energy Independence and Security Act and the American Recovery and Reinvestment Act (ARRA). Grid School will provide an intensive, interdisciplinary, and interactive educational and professional networking experience. The program will be objective and rigorous, and taught by knowledgeable academic faculty and technical experts. Attendees will receive a certificate of participation; IPU can also help arrange continuing education credits.

Who Should Attend

This program is designed for members of the federal and state regulatory policy community, including commissioners and staff members of the public utility commissions, energy and environmental agency staff, legislative staff, consumer advocates, utility personnel (public and private), engineers, planners, investors, analysts, consultants, attorneys, and others interested in learning about the electricity grid from qualified experts.

Lead Program Faculty

Mr. Guenter Conzelmann, Director of the Center for Energy, Environmental, and Economic Systems Analysis at Argonne National Laboratory. His work focuses on supporting government and industry decision-making through advanced modeling and analysis to address strategic energy and environmental issues, as well as training and knowledge transfer. Mr. Conzelmann is also Argonne's program lead for wind and solar integration issues.

Mr. Vladimir Koritarov, Deputy Director of the Center for Energy, Environmental, and Economic Systems Analysis at Argonne National Laboratory. He specializes in the analysis of power system development options, modeling of hydroelectric and irrigation systems, hydro-thermal coordination, reliability and production cost analysis, marginal cost calculation, risk analysis, and electric sector deregulation and privatization issues.

Dr. Joydeep Mitra, Associate Professor of Electrical and Computer Engineering, Michigan State University. His research interests include power system reliability and security, and distributed and renewable energy resource planning. He is a senior member of the IEEE and contributes to the Power and Energy Society, the Industrial Applications Society, and the Standards Association.

Dr. Kenneth Rose, Senior Fellow at the Institute of Public Utilities. He is a nationally recognized expert in the structure, economics, and regulation of U.S. electricity markets. Dr. Rose's areas of expertise include electricity market restructuring, market power, and market monitoring. Other research interests include competitive bidding for power supply, regulatory treatment of uneconomic costs, Clean Air Act implementation, environmental externalities, and emissions trading.

Mr. Thomas Veselka, Energy Systems Engineer in the National and International Studies Section at Argonne National Laboratory. He has managed and provided technical support for projects related to electric utility systems and the environment. Mr. Veselka builds optimization and simulation tools and is currently a member of a multi-disciplinary team that developed an agent based modeling system to simulate the complex adaptive behavior of participants in deregulated electricity markets.

Preliminary Curriculum

SUNDAY

5:30-7:00

Welcome Registration & Reception

MONDAY

7:00-8:30

GETTING SMART ABOUT THE SMART GRID

Continental Breakfast (provided each morning)

8:30-10:00

Role of the Grid in Meeting U.S. Energy Needs and Portfolio Goals

10:30-12:00

Introduction to Grid Infrastructure: Transmission, Distribution, Micro

12:00-1:30

Lunch (on your own each day)

1:30-3:00

Making the Grid "Smarter": Technical and Economic Factors

3:30-5:00

Smart Meters, Demand Response, and Efficiency

5:00-5:45

Wrap-up Discussion

TUESDAY

8:30-10:00

FORECASTING, PLANNING, AND STANDARDS

Forecasting Electricity "Demands and Supplies"

10:30-12:00

Load Management and Evolving Load Profiles

1:30-3:00

Generation Capacity Expansion and System Interconnections

3:30-5:00

Standards, Planning, Operability, Reliability, and Scalability

5:00-5:45

Wrap-up Discussion

WEDNESDAY

8:30-10:00

MARKETS, COSTS, AND REGULATION

Electricity Markets, Pricing, and Economic Performance

10:30-12:00

Federal and State Jurisdiction, Coordination, and Siting

1:30-3:00

Cost-Effectiveness and Cost Allocation

3:30-5:00

Regulatory Review, Incentives, and Responsiveness

5:00-5:45

Wrap-up Discussion

THURSDAY

8:30-10:00

POWER MODELING AND RESOURCE INTEGRATION

Modeling Generation Capacity Expansion Investment Decisions

10:30-12:00

Simulating Power System Operations

1:30-3:00

Integrating Traditional, Variable, Renewable, Distributed, and

Demand-Response Resources

3:30-5:00

Energy Storage Technologies and Implementation Issues

5:30-7:30

Special Reception

FRIDAY

8:30-9:30

FINANCING, INTEROPERABILITY, AND TRANSPORTATION

Financing and the Cost of Capital for Electricity Grid Projects

9:30-10:45

Policies and Protocols for Interoperability, Cyber-Security and

Resilience

10:45-12:00

Energy for Transportation and Development in Plug-in Vehicles

12:00-12:30

Wrap-up Discussion

Registration

Fees: Course fees (\$845 for the public sector and \$995 for the private sector) includes program materials for all sessions, daily continental breakfast and refreshment breaks, and the evening receptions. Participants are invited to attend a welcome reception on Sunday from 5:30 to 7:00, where they can pick up course materials and meet the faculty. Registration and check-in are also provided on Monday. Cancellations less than 3 weeks prior to a program may result in a \$150 cancellation fee; cancellations less than one week prior to a program will be billed at full cost. Substitutions are accepted at any time. Casual to business casual attire is appropriate, including a sweater or jacket (the meeting rooms can be cool). **Register online (ipu.msu.edu) or by mail or fax (517.355.1854)**

Location

Grid School will take place at the Omni Richmond Hotel. Guests will enjoy superb business amenities accented with touches of rich American history and the most elegant of guest accommodations, with views of the James River and great places to eat nearby. **Omni Richmond:** 100 S 12th Street, Richmond, VA 23219, 804.344.7000 (www.omnihotels.com)

INSTITUTE OF PUBLIC UTILITIES
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Please visit ipu.msu.edu for
program details and updates

MICHIGAN STATE UNIVERSITY

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gridschool10

GRID SCHOOL
RICHMOND, VIRGINIA
MARCH 8-12.2010

*an education program for the
regulatory policy community*

MICHIGAN STATE
UNIVERSITY