



# Power Systems Engineering Research Center

## Industrial Advisory Board Meeting

May 14 - 16, 2008

Iowa State University in Ames, Iowa

The [Power Systems Engineering Research Center \(PSERC\)](#) is a university-industry collaboration focusing on research and education needs in the electric power industry. Its Industrial Advisory Board (IAB), composed of PSERC's industry members, meets twice per year with PSERC researchers and students to conduct Center business, and to engage in discussions about the Center's research and education activities. This is a stimulating meeting with presentations on research projects, discussions of research ideas, and conversations on current issues facing the electric power industry.

### Objectives

The objectives of this IAB meeting are to:

- Promote interaction among researchers, industry members, and students
- Communicate the status of current PSERC research projects and education activities
- Present research results and discuss ideas for new research projects.

### Attendees

The IAB meeting is attended by PSERC university researchers, industrial members, students and invited guests. Individuals from companies that are considering PSERC membership are invited to contact [PSERC](#) about attending.

### Meeting Highlights

Highlights of this meeting include:

- Presentations and posters on PSERC research projects
- Student presentations
- IAB closed business meeting, and Stem Committee and project meetings

Our speakers from industry and academia bring a wealth of experience in the electric power industry. With times for formal and informal discussions, this meeting provides an excellent opportunity for networking as well as for information gathering and dissemination.

### Orientation Session

Everyone is invited to attend the PSERC orientation session on Wednesday afternoon, May 14. Our invited guests will also have the opportunity to meet one-on-one with a university researcher after the poster session on Thursday afternoon to learn more about PSERC.

# IAB Meeting Agenda

## Wednesday, May 14, Scheman Center, Room 171-179

- Before 3:00      **Project Team Meetings** (You will be contacted by the project leader if a meeting is going to be held.)
- 3:00 - 3:30      **PSERC Orientation**
- 3:30 - 4:45      **T&D Technologies Stem Committee Meeting**
- 4:45 - 6:00      **Systems Stem Committee Meeting**
- 6:00 - 7:15      **Reception**
- 7:15 - 8:30      **Markets Stem Committee Meeting**

## Thursday, May 15, Scheman Center, Room 171-179

- 7:30 - 8:00 a.m.      **Registration and Continental Breakfast**
- 8:00 - 8:15      **Welcome to Iowa State University**  
Mark Kushner, Dean of Iowa State University's College of Engineering
- 8:15 - 8:45      **Director's Comments**  
Vijay Vittal, PSERC Director, Arizona State University
- 8:45 - 10:15      **PSERC Research Presentations:**
- Detection, Prevention and Mitigation of Cascading Events (S-29)**  
Mladen Kezunovic (Texas A&M), Mani Venkatasubramanian (Project Leader, Washington State) and Vijay Vittal
- Operational Defense of Power System Cascading Outages (S-26)**  
Siddhartha Khaitan, (Ph.D. Candidate, Iowa State) and Jim McCalley (Task Leader in Project S-26 entitled "Risk of Cascading Outages," Iowa State)
- Reactive Power Planning against Voltage Collapse with Respect to Undesirable Component Protection (S-28)**  
Venkataramana Ajarapu (Project Leader, Iowa State), Sakis Meliopoulos (Georgia Tech)
- 10:15 - 10:30      **Break**
- 10:30 - 12:00      **PSERC Research Presentations:**
- Transient Testing of Protective Relays: Study of Benefits and Methodology (T-30)**  
Ward Jewell (Wichita State), Mladen Kezunovic (Project Leader) and Sakis Meliopoulos
- Power System Fault Location**  
Mladen Kezunovic (CTC Project Leader)
- Tools for Assessment of Bidding into Electricity Auctions (M-15)**  
Steve Puller (Project Leader, Texas A&M) and Ross Baldick (Univ. of Texas at Austin)
- 12:00 - 1:00      **Lunch**

**Thursday, May 15 (continued), Scheman Center, Room 171-179**

- 1:00 - 2:00      **PSERC Research Presentations:**
- Modeling the Impact of Carbon Regulation on Electric Power: The Role of a Super-OPF (CERTS Project)**  
                  Dan Shawhan (Ph.D. Candidate, Cornell University)
- Economic Impact of Transmission Enhancement Projects (M-14)**  
                  Shmuel Oren (Project Leader, Univ. of California at Berkeley) and George Gross (Univ. of Illinois - Urbana/Champaign)
- 2:00 - 3:30      **Poster Session** with Discussions on On-Going Projects
- 3:30 - 5:30      **Closed IAB Meeting**
- 6:00 - 8:30      **Dinner** (Arun Somani, Chair of Iowa State University's Electrical and Computer Engineering will welcome everyone.)

**Friday, May 16, Scheman Center, Room 171-179**

- 7:30 - 8:00      **Continental Breakfast**
- 8:00 - 8:30      **Feedback from IAB Business Meeting**
- 8:30 - 9:30      **Invited Presentation:**
- Interchange Distribution Calculator (IDC) for Transmission Congestion Management: Implementation and Challenges**  
                  Carlos Gonzalez-Perez, Director, Interconnection Reliability Systems  
                  José Medina, Director of Advanced Systems and Application Development  
                  Open Access Technology International, Inc.
- PSERC Research Presentation:**
- Digital Protection System Using Optical Instrument Transformers and Digital Relays Interconnected by an IEC 61850-9.2 Digital Process Bus (T-29)**  
                  George Karady and Mladen Kezunovic (Project Leader)
- 9:30 - 9:45      **Break**
- 9:45 - 10:45     **PSERC Research Presentations:**
- Integration of Single-Phase Microgrids**  
                  Sandeep Bala (Ph.D. Candidate, Power Electronics, University of Wisconsin-Madison)
- Agent Modeling for Integrated Power System, Power and Fuel Market Simulation (M-13)**  
                  Anjan Bose, Chen-Ching Liu (Project Leader) and Judy Cardell
- 10:45            **IAB Meeting Adjourns**
- 11:00 - 12:00   **Executive Committee Meeting for University Site Directors**

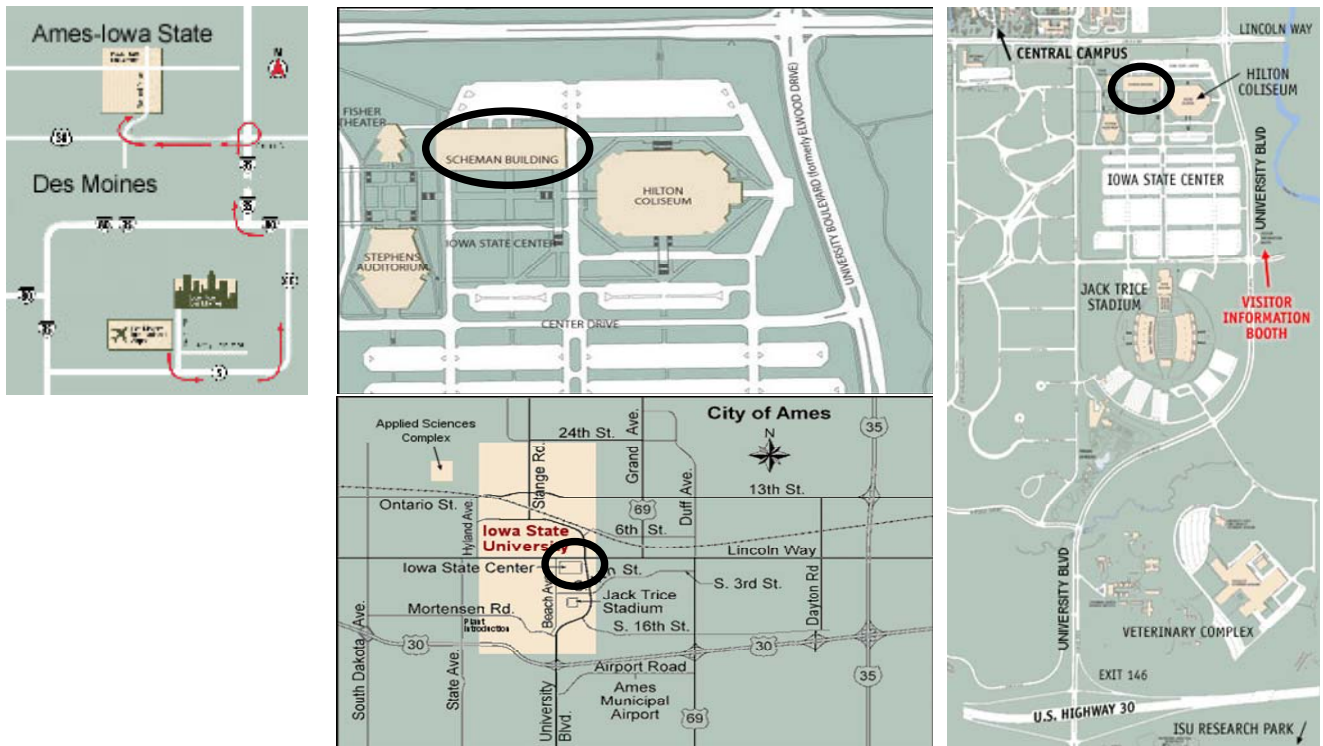
# Information for Planning Your Attendance at the IAB Meeting

**General Meeting and Registration Location:** The meeting will be held on the campus of Iowa State University in Ames, Iowa, in the Scheman Center, near the intersection of University Blvd and Lincoln Way (see maps below). You can park on the north side of the Center. Parking is free!

**Directions to campus** ( [www.iastate.edu/visitors/directions.shtml](http://www.iastate.edu/visitors/directions.shtml) ): From the Des Moines International Airport, drive south on Fleur Dr. to State Road 5. Take SR 5 East. The road name changes to US 65 and heads north. Exit to Interstate 80 West. Continue for about two miles to Interstate 35 North. Drive north on I-35 for about 30 miles. When you near Ames, exit west on Hwy 30, which is Exit 111B.

- If you want to go to the Country Inns & Suites Hotel, drive 0.5 miles on Hwy 30 to the first exit, which is Dayton Ave. or Exit 150, turn right off the ramp, and then take a quick right onto SE 16<sup>th</sup> St. Drive 0.4 miles to the hotel.
- If you want to go to Scheman Center, after exiting onto Hwy 30, drive about four miles to the third exit, which is University Blvd (used to be called Elwood Dr) or Exit 146. Exit north, following the curves, eventually traveling past the Jack Trice Stadium. Turn left (west) on the unsigned Center Drive (which is two streets after the stadium and the first street south of Lincoln Way - so if you find yourself at Lincoln Way, you've gone too far). Take the first right into the drive on the east side of the Hilton Coliseum. Drive around to the north side of the Coliseum. There you will see a parking lot. The Scheman Building is at the far west end of that lot, so park as far west as you can to minimize your walking distance. Call Jim McCalley at 515-460-5244 if you get lost.

Campus map: <http://www.fpm.iastate.edu/maps/>



**Hotel** (Make your room reservation no later than April 20.)

Hotel lodging is 3.5 miles from the Scheman Center. Lodging will be at:

**Country Inns & Suites**

2605 SE 16th Street , Ames IA 50010

Reservations: (888) 201-1746

US Toll Free; Local Telephone: (515) 233-3935 Fax: (515) 233-1515

Email: [cx\\_ames@countryinns.com](mailto:cx_ames@countryinns.com)

We recommend that you call the hotel directly to make your reservation. The room rate is \$89 for singles and doubles. When your call, indicate that your group name is "PSERC." The hotel website is [www.countryinns.com/amesia](http://www.countryinns.com/amesia).

The hotel is located at the intersection of SE 16<sup>th</sup> St and Dayton Ave, on the north side of Hwy 30, just west of I-35. The distance from the hotel and Scheman Center is about 3.5 miles. Vans will be available for transporting guests between the hotel and Scheman Center, but only for mornings and evenings. Parking is also available by the Scheman Center.

**Transportation**

You can fly into the Des Moines airport where it is best to [rent a car](#), although it is technically possible to [hire ground transportation](#) for over \$100 one-way.

**Registration** (Register by April 21)

The registration fee is \$180 for all IAB members, faculty, staff and invited attendees. The fee is waived for students. The fee covers the continental breakfasts, breaks, receptions, dinner and materials. There is a \$40 charge for your dinner guest on Thursday night. You can pay by check or by credit card. The registration form can be downloaded from the [PSERC website](#).

**Additional Information**

Attire for meeting is business casual. Wireless internet service will be available for everyone. For logistical questions and requests, contact Stephanie Drake at 515-294-8057 or [sdrake@iastate.edu](mailto:sdrake@iastate.edu). If you have general questions about registration, contact Theresa Herr at 480-965-1643 or [Theresa.Herr@asu.edu](mailto:Theresa.Herr@asu.edu). For information about the meeting agenda or PSERC, please contact Dennis Ray, PSERC Executive Director, at 608-265-3808 or [djray@engr.wisc.edu](mailto:djray@engr.wisc.edu).