Director’s Message
By Gary Cohee

Hello once again to all of our ISA Power Industry Division (POWID) Members. The preparation of this Director’s Message for our POWID Spring 2006 Newsletter, What's Watt, takes place in early February of 2006. Our goal is to have this paper edition of our newsletter in your mailbox by tax day, April 15, or thereabouts.

By the time you will have received this newsletter the Power Industry Division Executive Committee will have had our winter meeting at ISA Headquarters, RTP, North Carolina on 28 February 2006 and a full slate of SP77 fossil power plant Standards meetings on 1–2 March 2006. This will be the second year we have gone to ISA headquarters for a winter meeting. It has been very helpful in being able to meet and work directly with ISA Headquarters Staff.

I hope you were able to attend the ISA President’s Fall Meeting and ISA EXPO 2005 Conference and Exhibition in Chicago, Illinois, held consecutively from 22–29 October. Your ISA Power Industry Division was recognized at the ISA Honors and Awards Banquet held on the evening of 24 October as ISA’s “Outstanding Division” from the ISA Industries and Sciences Department. It gave me great pleasure as your ISA Power Industry Division Director to accept this award for our Division. This was the eighth year in a row for the Power Industry Division to receive this ISA Society award. Your Power Industry Division was also recognized for this award at the ISA Joint Automation and Technology and Industry and Sciences Department Division Honors and Awards Luncheon held on the following day.

Also during the ISA Honors and Awards Banquet held on the evening of 24 October, one of our Power Industry Division Executive Committee members, Don Labbe, was recognized as an ISA Fellow. This is a very prestigious ISA Society recognition and is given to a few select individuals to acknowledge their outstanding achievements in the scientific or the engineering fields as recognized by their ISA peers. In addition to being selected as an ISA Fellow, Don was awarded the ISA E. G. Bailey Award. This award recognizes excellence in the design, development or application of instrumentation, systems, and automation in the utilities or process control industries. Congratulations Don.

I want to again, make you aware of our POWID academic scholarship. This is the “ISA Power Industry Division Robert N. Hubby Academic Scholarship.” As a Member of the ISA Power Industry Division, you annually have the opportunity to submit an application form for a student of your choice to receive an academic scholarship award. For more information please contact Michael Skoncey (mskoncey@firstenergycorp.com), POWID’s Honors & Awards Coordinator, for an application form for this scholarship award or go to POWID’s Web site www.isa.org/~powid. The applications received will be reviewed and the winning application approved by the POWID Executive Committee in the early spring of each year. The scholarship amount is anticipated to be between $3,000 and $5,000, depending upon the Division’s finances.

Our 16th Annual Joint ISA POWID/EPRI Controls and Instrumentation Conference will be held on 4–9 June 2006, at the Doubletree Hotel in San Jose, California, so mark your calendar. We have secured a $122/night rate at the hotel. Marjorie Widmeyer and Bob Webb are the ISA General Chair and ISA Program Chair, respectively. Please contact Marjorie Widmeyer (mwidme@worldnet.att.net) or Bob Webb (rcw4@ix.netcom.com) for more details. Details for this Conference can also be found on our Conference Web site at www.isa.org/powersymp.

Marjorie and Bob have put together an excellent technical program around the conference theme. A list of the Conference Session Developers and the titles of the sessions are included in the conference program information provided within this newsletter, so I will not repeat them. There are a total of nine technical sessions. In addition to the technical sessions there will be I&C training courses continued on page 2
relating to the conference theme, a POWID Honors and Awards Division Recognition Luncheon Program, SP67 Nuclear Power Plant Standards Meetings, SP77 Fossil Power Plant Standards Meetings, and an EPRI I&C User/Interest Group meeting. The Standards meetings will cover topics ranging from Nuclear Power Plant Set Points to Fossil Power Plant Simulators, Boiler Drum Level Measurements, Large Steam Turbine Controls, and SCR Controls. The EPRI User/Interest Group meeting is limited to EPRI members and contractors, all other meetings are open to all registered attendees. We also plan to have our POWID Executive Committee Meeting on the Sunday afternoon before the start of the Conference; this meeting is open to all.

I also want to mention that this will be the first year POWID has co-located the POWID/EPRI Conference with the ISA NOx Emissions and Source Monitoring Conference. This Conference will be held on Thursday, 8 June 2006 following the 16th Annual Joint ISA POWID/EPRI Controls and Instrumentation Conference.

San Jose offers a wide variety of exciting cultural, recreational, educational, and entertainment opportunities. San Jose is the Capitol of Silicon Valley. It is the third largest city in California with the best public safety record of any metropolitan area. Plan on arriving a few days early or staying a few extra days, to enjoy activities in the surrounding area. Head south to the coastal towns of Carmel and Monterey; north to San Francisco; or further north to Marin, Sonoma, Napa, and Mendocino counties with beautiful coast line, wineries, golf, and many other activities.

A little further out on the radar screen, plan on attending ISA EXPO 2006 in Houston, Texas, from 17–19 October.

In 2007 our 17th Annual Joint ISA POWID/EPRI Controls and Instrumentation Conference (50th Annual ISA POWID Conference) will be held on 10–15 June at the Sheraton Station Square Hotel, in Pittsburgh, PA. Michael Skoncey (mskoncey@firstenergycorp.com) and Allan (Zeke) Zadiraka (ajzadiraka@babcock.com) are the ISA General Chair and ISA Program Chair, respectively.

If you have any questions or suggestions, please send me an email message at garyacohee@aol.com.

Best Regards,

Gary Cohee
2005–2006 ISA Power Industry Division Director

Future ISA/POWID International Conferences:

**Joint POWID/EPRI Conferences:**
San Jose, CA.................4–9 June 2006
Pittsburgh, PA.............June 2007
Phoenix, AZ.............June 2008

**ISA Automation West 2006**
Long Beach, CA..............2–3 May 2006

**ISA EXPO 2006**
Houston, TX.................October 2006
This year’s program provides over 40 papers on the practical details of how new instrumentation and control technologies have been used to improve effectiveness of new generation systems and to upgrade the performance of older systems. Automation systems are at the heart of safe, reliable, secure, and cost effective fossil, geothermal, hydro, wind, nuclear, and other types of generation. Attendees will learn both the key roles and strategies these systems fulfill in current day power systems, and details of those applications, from the people who have done it or are researching it.

We have a variety of exciting sessions—from experiences with advanced technology successes and failures, to new experience with age-old problems such as temperature and flow measurement—all in the power industry. You can meet and learn from the leaders in the field—users, vendors and design engineers who have made it happen. There is no better way to assure your next new system, upgrade, or repair goes well than to learn from the leaders in the field that have done it before. Come and share your experiences and plans, and learn more about power plant control than you will find in any other venue.

In addition, POWID 2006 offers a large number of training courses from rudimentary to advanced, from networking and measurement uncertainty to control valves in severe service, control systems security, and nuclear setpoints. Another day or two will provide you with additional detailed knowledge from leaders in the automation field on key aspects of system design, operation, and maintenance.

Finally, for those who have experience to share, and for those who are looking to learn more about key systems, ISA SP77 (Fossil Power Plant Standards) and ISA SP67 (Nuclear Power Plant Standards) standards committee meetings provide an unparalleled opportunity to participate in the development of future informative and normative standards for the power industry. Your participation is encouraged!

For a look at the sessions, subjects and abstracts of POWID 2006, as well as the ISA SP77, ISA SP67, and other meetings setting the standard for the future of automation in the power industry, look at www.isa.org/powersymp. We look forward to meeting you in San Jose!

—Bob Webb, ISA Program Chair
## Schedule-At-A-Glance

### SUNDAY, 4 JUNE 2006
- 10:00 a.m.–Noon: ISA POWID Long Range Planning Committee Meeting
- 1:00 p.m.–5:00 p.m.: ISA POWID Executive Committee Meeting
- 1:00 p.m.–6:00 p.m.: Vendor Exhibit Setup
- 3:00 p.m.–5:00 p.m.: Conference Early Registration

### MONDAY, 5 JUNE 2006
- 6:30 a.m.–7:30 a.m.: Speaker Breakfast
- 7:00 a.m.–8:00 a.m.: Conference Registration, Vendor Exhibits, & Continental Breakfast
- 8:00 a.m.–9:00 a.m.: Welcome, Introductions and Keynote Address (Session 1)
- 8:00 a.m.–Noon: ISA SP67.04 Standard Committee Meeting
- 9:00 a.m.–Noon: Integration of Reliability, Safety, & Security (Session 2)
- Noon–2:00 p.m.: ISA POWID Awards Luncheon
- 2:00 p.m.–5:00 p.m.: Advance Control Systems (Session 3A); On-Line Equipment Condition (Session 3B)
- 5:00 p.m.–7:00 p.m.: Vendor Exhibits

### TUESDAY, 6 JUNE 2005
- 6:30 a.m.–7:30 a.m.: Speaker Breakfast
- 7:00 a.m.–8:00 a.m.: Conference Registration, Vendor Exhibits, & Continental Breakfast
- 8:00 a.m.–Noon: Experience with Advanced Control Strategies (Session 4A); Nuclear Plant Automation/Keynote (Session 4B)
- 8:00 a.m.–Noon: ISA SP67.04 Standard Committee Meeting
- Noon–1:00 p.m.: Vendor Exhibits & Luncheon
- 1:00 p.m.–3:00 p.m.: ISA SP67 Nuclear Power Plant Standards Committee Meeting
- 1:00 p.m.–5:00 p.m.: Power Plant Control Systems (Session 5A); Nuclear Plant I&C Issues (Session 5B)
- 5:00 p.m.–7:00 p.m.: Vendor Exhibits

### WEDNESDAY, 7 JUNE 2006
- 6:30 a.m.–7:30 a.m.: Speaker Breakfast
- 7:00 a.m.–8:00 a.m.: Registration, Vendor Exhibits, & Continental Breakfast
- 8:00 a.m.–Noon: Power Plant Automation (Session 6A); Power Plant Safety (Session 6B)
- 8:00 a.m.–4:00 p.m.: “Advances in Continuous Emission Monitoring (CEM) Techniques” ISA Training Seminar (SP05PC) held in conjunction with ISA’s NOx Technical Conference
- Noon–12:30 p.m.: Joint ISA POWID/EPRI Conference Critique Meeting
- Noon–1:00 p.m.: Vendor Exhibits
- 1:00 p.m.–2:30 p.m.: ISA SP77 Fossil Power Plant Standards Main Committee Meeting
- 1:00 p.m.–5:00 p.m.: “Cyber Security for Control Systems” Training Seminar
- 1:00 p.m.–5:00 p.m.: Vendor Exhibit Teardown
- 2:30 p.m.–7:00 p.m.: EPRI I&C Interest Group Meeting
- 3:00 p.m.–7:00 p.m.: Calpine’s Metcalf Energy Center Tour

### THURSDAY, 8 JUNE 2006
- 7:00 a.m.–8:00 a.m.: Continental Breakfast
- 8:00 a.m.–Noon: ISA NORCAL “Control Valve Fundamentals” Training Seminar
- 8:00 a.m.–4:00 p.m.: ISA NOx Emissions Conference
- 8:00 a.m.–4:00 p.m.: “Introduction to Boiler Control Systems” ISA Training Seminar (ES15C)
- 8:00 a.m.–4:00 p.m.: “Ethernet and TCP/IP on the Plant Floor” ISA Training Seminar (FG21C)
- 8:00 a.m.–4:00 p.m.: “Overview of Measurement and Control Fundamentals” ISA Training Seminar (FG05C)
- 8:00 a.m.–5:00 p.m.: ISA SP77.14, 77.20, 77.40, 77.41, 77.42, 77.70, 77.82 Fossil Power Plant Standards Committee Meetings
- 1:00 p.m.–5:00 p.m.: ISA NORCAL “Control Valves—Advanced Basics” Training Seminar

### FRIDAY, 9 JUNE 2006
- 7:00 a.m.–8:00 a.m.: Continental Breakfast
- 8:00 a.m.–4:00 p.m.: “Boiler Burner Management Systems—Meeting NFPA Standards” ISA Training Seminar (ES16C)
- 8:00 a.m.–4:00 p.m.: “OPC: The Windows to the World are Open” ISA Training Seminar (IC50C)
- 8:00 a.m.–4:00 p.m.: “Instrumentation Diagrams and Symbols” ISA Training Seminar (FG15C)
- 8:00 a.m.–4:00 p.m.: “Intro to Measurement Uncertainty”

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**Don’t Miss the Tour!**

Calpine’s Metcalf Energy Center • San Jose, CA
Post-Conference, Wednesday 7 June

Metcalf Energy Center, a 600 MW combined cycle plant, went into commercial operation in June 2005. It uses Siemens Gas and Steam Turbines. The tour will be on a first come first served basis, and space will be limited, so sign up early if you are interested.
2006 Conference Committee

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Join us at the 17th Annual Joint ISA POWID/EPRI Controls and Instrumentation Conference
50th Annual ISA POWID Symposium • Co-located with ISA NOx Emissions and Source Monitoring Conference 2007

A Golden Celebration of Innovations and Technologies
Visiting the Past, Examining the Present, and Looking to the Future.

10–15 June 2007 • Pittsburgh, Pennsylvania

The 17th Annual Joint ISA POWID/EPRI Controls and Instrumentation Conference will take place 10–15 June 2007 in Pittsburgh, PA. This conference will celebrate the 50th anniversary of ISA’s POWID Symposium. What better place to celebrate this occasion than the birthplace of ISA, which started in Pittsburgh in 1945? Mark these dates on next year’s calendar and join us in celebrating this important milestone. You don’t want to miss this!

Papers are encouraged on some aspect of the conference theme, “A Golden Celebration of Innovations and Technologies—Visiting the Past, Examining the Present, and Looking to the Future,” and application to some aspect of the power industry is necessary. All submissions will be reviewed and papers accepted for presentation will be published in the Conference Proceedings via CD.

• Power Plant Control Systems
• Advanced Technologies
• Fossil Plant Issues and Technologies
• Power Plant Safety
• I&C System Security
• Nuclear Plant Issues and Technologies

Submission guidelines, application, deadlines and more details may be found online at www.isa.org/powersymp.
ISA Training Seminars

Advances in Continuous Emission Monitoring (CEM) Techniques (SP05C) — Held in conjunction with NOx Technical Conference
Date: 7 June, 8:00 a.m. – 4:00 p.m.
Instructor: Jim Jahnke
Price: $395 ISA Members, $445 List
This seminar explains the new regulatory initiatives associated with application of mandated CEMs in different EPA programs. You will be able to identify the various CEM monitoring techniques associated with real-time monitoring for HCl/C12, particulate matter (PM), acid gases, total hydrocarbons (THCs), and more.

Introduction to Boiler Control Systems (ES15C)
Date: 8 June, 8:00 a.m. – 4:00 p.m.
Instructor: Jerry Gilman
Price: $395 ISA Members, $445 List
When working with boilers, regardless what process control system is used or fuel being burned, you must control five basic functions—furnace draft, drum level, feed water, fuel air, and steam temperature. This seminar will teach you what must be controlled and how the control systems operate.

Ethernet and TCP/IP on the Plant Floor (FG21C)
Date: 8 June, 8:00 a.m. – 4:00 p.m.
Instructor: Vic Wegelin
Price: $395 ISA Members, $445 List
This seminar explains both Ethernet and TCP/IP as they apply to the plant floor. Included are topics such as the various types of Ethernet, how to design cabling systems, and principles of network security. Real life examples and case histories will help you understand the truth about Ethernet and TCP/IP and how to use both effectively in your plant.

Overview of Measurement and Control Fundamentals (FG05C)
Date: 8 June, 8:00 a.m. – 4:00 p.m.
Instructor: Gerald Wilbanks
Price: $395 ISA Members, $445 List
This overview of industrial measurement and control uses a generally non-mathematical approach to give you a basis for communicating with control system professionals.

Boiler Burner Management Systems—Meeting NFPA Standards (ES16C)
Date: 9 June, 8:00 a.m. – 4:00 p.m.
Instructor: Jerry Gilman
Price: $395 ISA Members, $445 List
With emphasis in the industry on process safety, the design of Burner Management Systems is now more important than ever. This seminar provides an understanding of the boiler burner standards and why they are so critical to this industry.

OPC: The Windows to the World are Open (IC50C)
Date: 9 June, 8:00 a.m. – 4:00 p.m.
Instructor: Vic Wegelin
Price: $395 ISA Members, $445 List
Using case studies and an OPC client/server demonstration, this seminar shows you the benefits and drawbacks of using OPC in your plant, how to link diverse industrial equipment into an effective plant-wide communications network, securely share plant data on the Internet, and how to justify the economics to move to OPC.

Instrumentation Diagrams and Symbols (FG15C)
Date: 9 June, 8:00 a.m. – 4:00 p.m.
Instructor: Gerald Wilbanks
Price: $395 ISA Members, $445 List
This seminar presents the methodology for developing and applying instrument and control drawings and the ISA Standards available to assist in this effort. You will develop actual documents for a simple project to aid your understanding.

Other Seminars

Cyber Security for Control Systems
Date: 7 June, 1:00 p.m. – 5:00 p.m.
Instructor: Joe Weiss and Bob Webb
The course addresses the cyber vulnerabilities of plant control systems and presents various practical suggestions about how the security of these control systems can be enhanced today. The focus is on aspects of security unique to control systems, as distinct from the often discussed security of IT systems. Identify the major threats, then discuss the reasons that control systems are vulnerable, and review industry’s experience with various electronic breaches of security.

Control Valve Fundamentals (Part 1)
Date: 8 June, 8:00 a.m. – Noon
Instructor: Terry Molloy
Price: $95 ISA Members, $125 List
This course will cover the following:
- Why do we need Control Valves? What do they do? How do they control flow? What types of Control Valves are there and how does one decide which one to use? Control Valve Sizing, Liquid, Gas, & Steam.

Control Valves: Advanced Basics and Severe Service Applications (Part 2)
Date: 8 June, 1:00 p.m. – 5:00 p.m.
Instructor: Terry Molloy
Price: $95 ISA Members, $125 List
Control Valve Basics is a prerequisite to this course.
- Practice Sizing Problems – Liquid, Gas & Steam
- Identifying Potential Problem Applications
- Alternative Solutions – It is all about the money
- Flashing, Two-phase Flow, & Cavitation
- Velocity Control & Noise

Introduction to Measurement Uncertainty
Date: 9 June, 8:00 a.m. – 4:00 p.m.
Instructor: Ron Dieck
Price: $395 ISA Member/$445 List
Improve the applicability of business decisions based on accurate development/testing data leading to more profitability. This course is intended for those interested in improving the applicability of business decisions through a better understanding of the impact of measurement uncertainty. It is in complete harmony with the principles of the ISO and other international standards on measurement uncertainty. Included are the basics of the measurement uncertainty model and its application to improving the accuracy of business decisions based on development/test data.
Preliminary Technical Program

Monday–5 June

Morning Sessions (8:00 a.m.–Noon)

Session 1 (8:00 a.m.–9:00 a.m.)
Welcome and Introduction

Session 2 (9:00 a.m.–Noon)
Integration of Reliability, Safety and Security through Automation Systems
Session Developer: James Batug

- Independency Consideration for Burner Management and Boiler Control Systems
  Daniel Lee, ABB Inc.

- Design for Burner Control System Modernization in Fossil Power Plant
  Guadalup Madrigal, Instituto de Investigaciones Electricas

- Model Predictive Control for Combined-Cycle Startups

- Eliminating Coal Burner Pipe Flow Stoppage at Morgantown Generating Station
  Donald Andrasik, Mirant Mid-Atlantic

Noon

Awards Luncheon
Recognition of Automation System Leadership—Facilities, Organizations, and People & Luncheon Address

Afternoon Sessions (2:00 p.m.–5:00 p.m.)

Session 3A
Advanced Control Systems in the Power Industry
Session Developer: Jason Makansi

- The Role of On-line, Real-time Coal Analysis in Advanced Process Control and Optimization
  Steve Smith, MS, CoalSmith Consultants

- Using Real-time Cost of Cycling and Damage to Optimize Plant Performance
  Steve Lefton, Aptech Engineering Services Inc.

  Tim McCreary, HF Controls Corp.

- Optimizing Turbine Life Cycle Usage and Maximizing Ramp Rate
  David Runkle, LCRA, Sim Gideon Station

- DCS Integration for Intelligent Sootblowing
  Sandeep Shah, Clyde Bergemann, Inc.

Session 3B
On-Line Equipment Condition Monitoring, Diagnostics, and Prognostics
Session Developer: Brandon Rasmussen

- Early Discovery of Failing Equipment and Sensors in Power Plants Using Advanced Pattern Recognition
  Elmer Hansen, Performance Consultant Services

- Sensor Fault Detectability Measures for Autoassociative Empirical Models
  Wes Hines, University of Tennessee

- Low Cost Wireless Condition Monitoring
  Lloyd Pentecost, State of California

- Performance Improvement for Cooling Water Systems; Corrosion—The New Process Variable
  D.C. Eden, Honeywell

- Integrated Wireless Systems for Power Applications
  Peter Fuhr, RAE Systems

- Finally, Enterprise Management for the Generating Plant
  Dr. Eyai Brill and James Hawkins, P.E.

Evening (5:00 p.m.–7:00 p.m.)
Vendor Exhibits

Tuesday–6 June

Morning Session (8:00 a.m.–Noon)

Session 4A
Experience with Advanced Control Strategies in the Power Industry
Session Developer: Joseph Bentsman

- Dynamic NOx/Heat Rate Optimization
  Don Labbe, Invensys

- Advanced Control of Drum Level and Bypass Pressure on a Combined Cycle Heat Recovery Steam Generator
  John Sorge, Southern Company; Pascale Bendotti, EDF; Joe Baas, Alabama Power Company; and Cyrus Taft, EPRI I&C Center

- Robust Hybrid Control Strategy for the Boiler/Turbine Unit Full Operating Range in a Coal-Fired Power Plant
  Kai Zheng & Joseph Bentsman, University of Tennessee; Cyrus Taft, EPRI I&C Center

- New Advanced Coordinated Controller for Boiler and Turbine of Coal Fired Power Plant
  Luc Deprugney; A. Girand; S. Maurin; H. Jestin, Electricite De France

- Intelligent Sootblowing (ISB) in the Coal Fueled Electric Power Industry—EPRI Perspective
  Jeff Stallings & Rabon Johnson, EPRI I&C Center

For program updates visit www.isa.org/powersymp
• Optimization Systems—Out of Control?
  Jeff Williams, Emerson Process Controls, Inc. Nuclear Plant

• Twin-Pack Turbo-Jet Simulation Model for Control System Prototype
  Angel Martinez, Instuto De Investigaciones Electricas

**Session 4B**

**Nuclear Keynote:** Allen Howe, I&C Branch Chief NRR, Nuclear Regulatory Commission

• Nuclear Plant Automation

**Nuclear Plant Control Systems-Future Directions**
  Session Developer: Tim McCreary, HF Controls

• Use of Advanced Digital Controls in NPP Applications: A Case Study in Application to U.S. NPP Retrofits
  John Stevens, HF Controls; Chung Yangmook, Korea Hydro and Nuclear Power

• Digital Upgrade of NPP Control and Protection System
  K. Sapozhnikova R. Taymanov, I. Druzhinin

• Improving Accuracy of Forecast and Detection of Stretched-Out Operation in NPPs
  F. Marchal, Electricite De France

• The Bottom Line Benefits of Digital Field Devices in Nuclear Power Plants
  Bill Fitzgerald, Fisher Controls

**Noon**

Lunch & Vendor Exhibits

**Afternoon Sessions (1:00 p.m.–5:00 p.m.)**

**Session 5A**

Power Plant Control Systems
  Session Developer: Bill Hocking

• Intelligent Process for On-line Optimal Load Distribution Between Units in a Hydro Power Plant
  Edson Bortoni, Unifei-Federal University of Itajuba

• Virtual Instrumentation in Monitoring and Control Interface of a Wind Turbines Park
  Luis Lopez-Manrique, MS Universidad Juares

• Control Room Design—Lessons Learned
  Richard Marshall, Kansas City Power and Light; Jon Shadduck, AmerenU

• Automated Power Management Systems for Power Consumers with On-Site Generation
  Scott Manson and Shah Saurabh, Schweitzer

• Simultaneous Pressure and Level Control of a Combined Cycle Power Plant Deareator
  Miguel Delgadillo, Instituto de Investigaciones Electricas

**Session 5B**

Nuclear Plant I&C Issues in an Evolving Technical and Regulatory Environment
  Session Developer: Ray Torok

• Addressing I&C Issues for New Nuclear Plant Deployment
  Layla Sandell and Ray Torok, EPRI

• Risk-Informed Evaluations of Nuclear Power Plant Digital Upgrades and Technical Regulatory Issues
  David Blanchard, Applied Reliability

• The Functionality of Instrument Loops and How That Can Be Determined
  Robert Fredricksen, EXELON Nuclear

• Control Room and Human-System Interface Guidelines for Nuclear Power Plant Modernization Programs
  Joseph Naser, EPRI

• Human-Machine Interface Evaluation
  Rachel Vail, Washington Safety Management Solutions

• NRC: Perspective on the Evolving Technical and Regulatory Environment
  Allen Howe, I&C Branch Chief, NRR, Nuclear Regulatory Commission

**Evening (5:00 p.m.–7:00 p.m.)**

Vendor Exhibits

**Wednesday–7 June**

**Morning Session (8:00 a.m.– Noon)**

**Session 6A**

Power Plant Automation Systems Security
  Session Developer: Donald Dudenhoeffer

• Control Systems Security
  Timothy McCreary, HF Controls

• Mitigations for Security Problems Found in Control Systems Networks
  May Permann, John Hammer, and Kathy Lee, Idaho National Labs

• Top 10 Process Control System Cyber Vulnerabilities
  Bob Webb, Consultant, Joe Weiss, KEMA

• Control Systems Security
  Ron Derynck, Verano

• Survivable Wireless Ad Hoc Networks for the Power Industry
  William Miller, Maximum Control Technologies
Session 6B
Power Plant Instrumentation
Session Developer: Jeff Schleis

- Temperature Measurement Applications in Power Plants
  Ravi Jethra, Endress+Hauser

- Experiences with Ultrasound Flow Measurement in Small Hydro Power Plants
  Edson Bortoni, Unifei Federal

- Use of Multiple-Path Ultrasonic Transit-Time Flowmeter System to Optimize Thermal Power Plant Performance
  Harvey Klaer and Terry Burch, Accusonic

- Accurate Pressure Measurement for Steam Turbine Performance Testing
  Blair Chalpin, Scanivalve Corp.

- Continuous Emissions Monitoring Systems and the USEPA CFR Part 60 and CFR Part 75 Emissions Monitoring and Reporting Requirements
  Robert Sherman, Circor

- Control Tuning Strategies, Advanced Control Design and Implementation
  Miguel Delgadillo, Instituto de Investigaciones Electricas

- Dissolved Oxygen Measurement Using Luminescent Technology
  Scott Crosier, Hach Company

Noon
Lunch & Vendor Exhibits

Wednesday Afternoon

Joint ISA POWID/EPRI Conference Critique Meeting

Post Conference Activities
ISA NOx Emissions Conference and Training
(8:00 a.m.–4:00 p.m.)
Advances in Continuous Emission Monitoring (CEM) Techniques (SP05PC)

EPRI Interest Group Meeting
Tour-Calpine’s Metcalf Energy Center (see page 3)

Thursday–8 June

Post Conference Activities
ISA NOx Emissions and Source Monitoring Training and Conference

Training Seminars (8:00 a.m.–4:00 p.m.)
- Introduction to Boiler Control Systems (ES15C)
- Ethernet and TCP/IP on the Plant Floor (FG21C)
- Overview of Measurement & Control Fundamentals (FG05C)
- SP77 SP Fossil Power Plant Standards
- Control Valve Fundamentals/Severe Service Valve Applications

Friday–9 June

Post Conference Activities
ISA Training Seminars (8:00 a.m.–4:00 p.m.)
- Boiler Burner Management Systems—Meeting NFPA Standards (ES16C)
- OPC: The Windows to the World are Open (IC50C)
- Instrumentation Diagrams and Symbols (FG15C)
- Intro to Measurement Uncertainty
Top 10 Reasons to Attend
ISA EXPO 2006

10. See the newest automation and control products
9. Learn about and participate in ISA’s Standards process
8. Recognize the accomplishments of your peers at the Honors & Awards banquet
7. Attend a wide array of ISA’s Training classes
6. Meet the entrepreneurs developing the next generation of automation technology in Innovators Alley
5. Network with peers
4. Learn about groundbreaking technologies
3. Learn how to apply automation solutions
2. Develop your career
1. Set the Standard for your future

Houston: The Automation Destination
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www.isa.org/isaexpo2006
ISA Power Industry Division
Executive Meeting Minutes
25 October 2005

The 139th meeting of the ISA POWID Executive Committee was held on 25 October 2005 at the Hyatt Regency Chicago Downtown Hotel in Chicago, IL in conjunction with ISA EXPO 2005.

Attendance:

**Members Present**
- Don Christopher
- Gary Cohee
- Robert Hubby
- Don Labbe
- Daniel Lee
- Jim Olson
- David Roney
- Tom Stevenson
- Cyrus Taft
- Bob Webb
- Allan Zadiraka

**Members Absent**
- Daniel Antonellis
- Jim Batug
- Danny Crow
- Dale Evely
- Ron Hicks
- Wayne Holland
- Roger Hull
- Jason Makansi
- Gordon McFarland
- Goray Mookerjee
- Phil Reeves
- Ramesh Shankar
- Michael Skoncey
- Robert Smoak
- Bill Sotos
- Marjorie Widmeyer
- Joe Vavrek
- Denny Younie

**Others Present**
- Dean Ford
- Charlotte Clayton

Meeting called to order

Gary Cohee, ISA Power Industry Division Director, called the meeting to order at 1:26 p.m. EST.

Introduction of members and guests

Daniel Lee, POWID Secretary and Director-Elect, circulated a meeting attendance list and POWID Executive Committee roster. Director Gary Cohee requested that the attendees update the POWID roster personal information including active ISA position.

Approval of previous minutes

Revision 1 of the minutes for the Power Industry Division Executive Committee meeting held on Sunday, 5 June 2005, at the Millennium Maxwell House Hotel, TN had been distributed electronically previously to the POWID Executive Committee members and are available on the POWID Web site. Dan Lee reported that editorial comments to these minutes were received from Bob Hubby and request if the ExCom had any other comments or corrections. With no other comments or corrections, the minutes of the POWID ExCom meeting held on Sunday, 5 June 2005 were approved as amended via voice vote by the POWID ExCom members present.

Agenda additions and/or corrections

The POWID ExCom Agenda of 24 October 2005, previous disseminated by email, was also distributed before the start of this meeting by POWID Secretary/Director-Elect Daniel Lee. Director Gary Cohee asked the POWID ExCom members if there were any additions, deletions, or corrections to be made to the meeting agenda. With no comments to the agenda, the agenda was approved via voice vote by the POWID ExCom members present.

Director Staff Reports

a. Division Report

2005 Department Meeting Update—Gary reported that Gary Cohee (Director) and Dan Lee (Secretary/Director-Elect) attended the Joint A&T/I&S Department meeting held on Sunday 23 October 2005 during the ISA EXPO meeting in Chicago, IL. Gary circulated to ExCom members a copy of the director’s report that he submitted to at the A&T/I&S Department’s meeting for information. The major topics discussed during the department meeting were the results of ISAs revised marketing strategy promoting ISAs identity as “Setting the Standard for Automation” and a new Web site to make it easier to find information. Another major topic was the merger of smaller Divisions with some established Divisions and announcement of new Division Directors.

POWID was acknowledged as receiving the Outstanding Division award for the Industries and Sciences Division during the ISA Honors and Awards Ceremony, the eighth year in a row that POWID has won this award. Also, Gary reported that POWID received the Division Communications award jointly with the Analysis Division during the ISA Division Honors and Awards Luncheon on Tuesday, 25 October 2005. Gary thanked members of the ExCom for their support and contributions.

Gary reported that POWID received a Certificate of Appreciation from ISA for support of the International Student competition. Gary reported that Ron Hicks and Roger Hull were supporting the International Student competition and thus, were unable to attend the ExCom meeting. Gary acknowledged Ron and Roger’s contributions.

b. Financial Report

Roger Hull, (Treasurer) was not in attendance due to a scheduling conflict with the International Student competition, but did provide a copy of the 3rd Quarter 2005 financial statements. In his absence Gary reported that the POWID fund balance, as of the end of the third quarter, 30 September 2005, is $23,571.00. Gary noted that achievement award for Jim Batug and Don Christopher will come from the POWID reserve.

Subsequent to the POWID Division meeting, POWID has learned that the POWID Division 2006 proposed budget was approved by ISA.

Gary circulated the Symposia actual year-to-date expenses for information. For the third quarter, the actual versus budget variance is negative (-$6,502.00) due to expenses for supporting the Pittsburgh conference hotel contract. Gary expects some additional cost for the fourth quarter will be added, but expected a profit from the POWID 2005 symposium of about $20K.

Subsequent to the POWID Division meeting, POWID has learned that the POWID Division 2006 Symposium budget was approved by ISA.

ISA has not submitted an updated balance sheet for POWID Division Scholarship Endowment Fund. Per the last meeting minutes, POWID has a balance of $145,415 as of 31 December 2004.
- Jim Batug (2002 achievement award winner) endowment to come from reserve
- Don Christopher (2004 achievement award winner) endowment to come from reserve
- Jeff Williams (2005 achievement award winner) endowment will be drawn from the endowment fund

Gary reported that ISA will again offer matching funds for the Endowment funds. Gary asked for a motion to add $10K to the
by the POWID ExCom members present. Cyrus as the 2007 POWID Director Elect was approved via voice vote as the next Director Elect starting in 2007. The motion to accept and with Cyrus’s agreement, Dan made a motion to nominate Cyrus for the Elect-Elect position. However, in Dan’s conversation with Cyrus Taft, POWID procedures do not require a vote for the POWID Director Elect position. The motion to forgo any voting until contact with these individuals confirm their commitment to support POWID ExCom activities. The motion was approved via voice vote by the POWID ExCom members present.

c. Long Range Planning (LRP)
Ron Hicks (POWID LRP Committee Chair) was not in attendance due to scheduling conflicts with the International Student competition. In his absence Gary reported the POWID LRP Committee meeting was held from 10:00 a.m.–12:00 noon before the POWID ExCom meeting. The following items were discussed at the LRP Committee meeting and were brought before the POWID ExCom.
1. Mission Statement/Charter - A POWID Mission Statement/Charter was not found by ISA or among the POWID ExCom members. As this inquiry was in response to the A&T/I&S Department request, Gary forward POWID search results back to the A&T/I&S department and no further action is required.
2. Marketing Task Group: In response to the Marketing Task Group recommendation Ron Hick held a workshop session to determine how to increase conference attendance. After some discussion, the resulting conclusion was that POWID needs to clarify its value added proposition to industry.

Ron Hick is to explore profession marketing resources and or tools to support the effort to identity POWID’s value added proposition.

d. Nomination
Wayne Holland (Past Director) was not in attendance but did submit a memo regarding new nomination. Gary reported that Bob Szczerbicki and Milton Neher both agreed to resign from POWID, and that presently there are three openings on the ExCom board. Bill Soto submitted bio and recommendation for James Redmen and Tim Hurst as nuclear industry representatives. Other individuals who were mentioned as candidates were David Wade (TXU) and John Sikoria (Northern Indiana Public Service Co.). Gary opened the nomination up for discussion. It was reported that David Wade and John Sikoria have not received management approval and thus no resumes were submitted. With regard to James Redmen and Tim Hurst, the ExCom committees was not against their nomination but since the nominee or nominator were not present, the ExCom committee felt it was better to forgo any voting until contact with these individuals confirm their commitment to support POWID ExCom activities.

Dan Lee to remove Bob Szczerbicki and Milton Neher from committee roster.

Gary Cohee will send a “Thank You” card on behalf of the Executive Committee to Bob Szczerbicki and Milt Neher for their support of POWID over their many years of service.

Wayne Holland to contact these individual to confirm their willingness to participate on POWID ExCom.

Dan Lee (Director Elect) informed the ExCom members that the POWID procedures do not require a vote for the POWID Director Elect-Elect position. However, in Dan’s conversation with Cyrus Taft, and with Cyrus’s agreement, Dan made a motion to nominate Cyrus as the next Director Elect starting in 2007. The motion to accept Cyrus as the 2007 POWID Director Elect was approved via voice vote by the POWID ExCom members present.

Standards Committee Reports
a. SP67 Nuclear Power Plant Standards Committee
Bill Sotos (SP67 Chair) was not present at the POWID ExCom meeting and no report was submitted. As is SP67 committee practice, the SP67 will next meet during the POWID/EPRI 2006 conference in San Jose, CA.

b. SP77 Fossil Fuel Power Plant Standards Committee
Wayne Holland, SP77 Chair, was not present and did not submit a report. Dan Lee (Vice-Chair) reported that the SP77 committee last met on 8 June after the 2005 POWID/EPRI Conference and is scheduled to meet on Tuesday, 25 October 2005. Various sub-committees are actively reaffirming existing standards and a couple of new standards are being drafted. The agenda for the next meeting includes a review of subcommittee status, S&P board activities, liaison reports, and one old business item.

Membership Service Committee Reports
a. Honors & Awards
Mike Skoncey, POWID Honors and Awards Coordinator, was not present at the POWID ExCom meeting but did submit an Honors & Awards report. Gary reported that all nomination must be in by 10 February 2006 for processing. Nomination forms are available on the POWID web page and are being distributed with our Division newsletter.

Gary reported that the 2005 Facility award has not been awarded to Crane Station but, the tentative plan was that Mike Skoncey was going to travel to Crane Station and present the award by Jan 2006.

Gary acknowledge Don Labbe as the recipient of the 2005 ISA Fellow and the E.G. Bailey award at ISA’s fall awards banquet.

ExCom members to submit Division nominations.

Mike Skoncey to update and resubmit previous nominations for Gordon McFarland, Cyrus Taft, and Robert Smoak.

Mike Skoncey to verify if Jeff William has chosen his college for his achievement award.

b. Membership
Danny Crow, POWID Membership Coordinator, was not in attendance at the POWID Executive Committee meeting and did not submit a report. Gary reported that Dan has been given the membership database and that Danny has started to review the database content. Gary reported that POWID membership still is dropping and per ISA’s last report membership has dropped to 1,760 members.

Danny Crow will send a lettermail to find out why these members dropped their POWID membership and a lettermail welcoming new members.

Bob Hubby and Cyrus Taft requested a copy of the new membership data base to explore how to do data queries for useful information.

c. Historian
Don Christopher, POWID Historian, was in attendance at the POWID ExCom meeting and reported that he has started to review the content of POWID’s historical material. Don has created a spreadsheet for POWID’s Symposium and Conferences since 1958. Don circulated his spreadsheet for information and will expand the spreadsheet to include the achievement awards. Don found some interesting POWID facts that could be useful to promote our upcoming 50th Symposium. ExCom members acknowledge Don’s efforts to date for
Don Christopher was requested to contribute to the POWID Newsletter in 2006 to help promote POWID's 50th Symposium.

Don Christopher will review how to create image files (i.e., pdf) of the proceedings for future submittal to the web page. POWID would require ISA copyrights permission to proceed. If cost is incurred Don is to submit cost estimate for future budgets.

Roney Jones to check to see if ISA has copies of all the old POWID proceedings and to confirm if POWID has permission to create images of these proceedings.

Gary Cohee to update POWID Web site with info provided by Don Christopher.

d. Professional Development
Tom Stevenson, POWID Professional Development Coordinator, was in attendance at the POWID ExCom meeting and submitted a report. Tom reported that he is maintaining attendance records per ISA certification board requirement. Tom reported that the Certificate of Attendance (PDH) will be made available for the 2006 POWID/EPRI Conference. These certificates and the attendance list will be available during each session.

Tom attended the Certification Board Meeting as I&S representative on Saturday, 22 October 2005. Areas of interest are the apparent success of the Certified Automation Professional® (CAP) program and the fact that next year, the ability to qualify for the exam will result in a two-year technical degree plus five years experience will end and only four years degrees will qualify. Some would prefer to keep the two-year option open indefinitely. The other item discussed was the possibility of developing certificates which would focus on testing for particularly narrow areas of technology such as knowledge of particular S&P standards. This was an informal discussion and action may be requested formally at a later date.

e. Section/Division Liaison
Bob Hubby, POWID Section/Division Liaison, was in attendance at the ISA POWID ExCom meeting. Bob reported that no new activities were undertaken or required at this time.

Communication Committee Report
a. Newsletter
Dan Antonellis (POWID Newsletter Editor) was not present at the POWID Executive Committee meeting but Dan submitted a Newsletter report. Dan Lee reported that the summer 2005 Newsletter (hardcopy) was published in August 2005. Dan is working to complete the Fall Newsletter (hardcopy) and asked various ExCom members to submit their information ASAP.

b. Publicity
Joe Vavrek (Publicity Coordinator) was not in attendance at the POWID ExCom meeting, but submitted the following Publicity report after the meeting.

1. Power Magazine published our POWID supplement (Bob Hubby authored with a number of ExCom members comments) in their October issue, pp. 42, 44, and 46. Rodney Jones and ISA headquarters staff did a great job pulling this together to match Power Magazine's publishing requirements. I understand that copies of both the magazine and the supplement will be available at ISA EXPO 2005 to attendees. This I believe is a major accomplishment for POWID! All who contributed should be thanked for a job well done!

2. I have not yet made contact with Electric Light & Power, ENR, Control Engineering or Power Engineering. I plan to pursue this in the future, unless this is assigned to the Marketing Coordinator.

3. We continue to find that our Web site provides our membership with the information they find most useful; however, there still seems to be a strong preference to continue the mailing of our Newsletter and Call for Papers (even though we also provide it electronically). I suggest that we continue the mailing.

4. Periodic emails should be continued as provided by Rodney Jones at ISA headquarters. I believe these are reaching the membership, and encouraging them to access the Web site for additional information. This combination seems to be effective for us.

Cyrus Taft reported that POWER magazine informed him that the magazine is going to develop a special June 2006 issue for I&C to coincide with our June Conference. No additional information was available

Joe Vavrek to contact POWER magazine regarding the June 2006 issue to determine how to continue our joint partnership.

c. Web Page
Gary Cohee (POWID Web Page Coordinator) was present at the POWID ExCom meeting. Gary reported the link to the 2005 POWID/EPRI Nashville Conference Web page (www.isa.org/powersymp) had over 4,000 hits. This link will stay in effect for the upcoming 2006 San Jose conference and a hit counter will keep track of usage statistics. Gary reported that ISA revised the web page format; he has not fully reviewed the expected web page updates to the Division web page. Because of the new ISA web page format, Gary is a bit late in updating this web page.

Gary requested if ExCom members have any information they wanted to display to the POWID membership, then all they needed to do is send the information to Gary in electronic form, and he would post this information on the POWID web page. Gary’s e-mail address is garycohee@aol.com.

ISA/POWID Conferences
a. Nashville, TN, 5-9 June 2005
Denny Younie (General Chair) was not present, but Cyrus Taft (Program Chair) was present at the POWID ExCom meeting. No report was submitted. Cyrus reported that the conference was held without any major problems and that the attendance (approximately 212) was higher than expected.

Don Labbe (Paper Review Coordinator) reported that there were a number of papers that were not available on the CD. Since the CD was not correct, there is a possibility of the CD being recreated.

Cyrus Taft will solicit authors for late soft copies for future CDs and contact Rodney Jones regarding ISA resubmitting revised proceedings CD.

b. San Jose, CA, 4-8 June 2006
Marjorie Widmeyer (Symposium General Chair) was not present, but Bob Webb (Program Chair) was present at the POWID ExCom meeting. Bob reported that the hotel contract has been signed and an
adjustment in the number of rooms were made for the ISA NOx con-
ference and training. Bob distributed the preliminary program and
reported that he has 10 session developers. The 2006 EPRI Co-
Program Director is Brandon. Bob reported that a Keynote speaker
has been identified and agreed to present at our conference.

Bob Webb reported that there was a conflict between ISA and POWID
regarding the NOx conference because ISA wants to hold training on
Wednesday, which conflicts with the POWID Conference. Charlotte
Clayton, ISA Manager of Meetings, was in attendance during this part
of the discussion and said that the NOx training should not compete
or conflict with the last session of the POWID Symposium. The ExCom
members discussed the merits and alternative options regarding the
scheduling conflict and came to the conclusion that the best schedule
is to grant ISA permission to hold the NOx training on Wednesday.
With no further discussion, a motion to grant ISA permission to hold
the NOx training on Wednesday was made and approved via voice
vote by the POWID ExCom members present.

Don Labbe expressed concern regarding the paper submittal process
for 2006. Bob Webb is addressing this problem with multiple copies
of e-mails.

Bob Webb to obtain links to local attractions and links to hotel
reservations, for Web site.

Bob and Marge will determine the fees and hotel logistic between
the POWID Symposium and ISA NOx Conference. Marketing for
each event will be independent.

Gary Cohee to request an update for NOx MOU.

d. Pittsburgh, PA, 5–10 June 2007
Mike Skoncey (General Chair) was not present and Allan Zadiraka
(Program Chair) was present at the POWID Executive Committee
meeting. Allen had no report to present. Cyrus reported that the
2005 conference budget was sent to Mike for information.

e. Phoenix, AZ, 2008
Tom Zuvlis is confirmed as General Chair for the 2008 conference.
Program Chair is needed. Dan Lee reported that the POWID MOP
requires the General Chair to be a member of the POWID ExCom.
Presently, Tom is not an ExCom member.

Gary Cohee to contact Tom Zuvlis to see if he wants to be an
ExCom member or be Program Chair rather than General Chair.

Old Business

a. EPRI/ISA POWID Memorandum of Understanding
Gary Cohee (Director) reported that he has not seen a final EPRI/ISA
POWID Memorandum of Understanding with all parties’ signatures.

Gary Cohee to check with Roney Jones regarding status of EPRI/ISA
signatures.

b. The ISA/POWID Memorandum of Understanding
Gary Cohee reported that the MOU will be revised and signed per the
POWID agreement defined in the San Jose report (see above).

c. Conference Program Issues
Cyrus reported that he submitted his comments on program issues
but did not submit copyright transfer versus copy permit to publish a
technical paper. Cyrus’s comments were sent as feedback and no fur-
ther action is required.

New Business

No new business items were addressed at this meeting.

Next Executive Committee Meeting

The Power Industry Division Executive Committee’s next meeting is at
ISA Headquarters, Research Triangle Park NC, sometime late February
2006. Time and location will be announced later.

Subsequent to the EXCOM meeting, the next POWID EXCOM
meeting was set for 28 February to 2 March 2006.

Adjournment

A motion to adjourn was asked for by POWID Director-Elect Dan
Lee. The motion was approved by voice vote of the POWID ExCom
members present and the POWID ExCom meeting was adjourned
at 5:04 p.m., EST.
2006 Schedule

52nd Annual International Instrumentation Symposium
Sponsored by the ISA Aerospace Industries, Test Measurement, and Process Measurement & Control Divisions Division
7–11 May • Cleveland, OH
www.isa.org/IIS

Safety Division Symposium
Sponsored by the ISA Safety Division
23–24 May • Houston, TX
www.isa.org/safetysymposium

48th Annual Power Industry Conference
16th Annual Joint ISA POWID/EPRI Controls and Instrumentation Conference
4–9 June • San Jose, CA
www.isa.org/PowerSymp

For participation or exhibit opportunities contact: rjones@isa.org

ISA Division Symposia: your ticket to success
Join us for the 16th Annual Joint
ISA POWID/EPRI
Controls and Instrumentation Conference
49th Annual
ISA POWID
Symposium

4-9 June 2006 • San Jose, CA

Participate in technical sessions, training courses, a vendor exhibit area, EPRI I&C Interest Group meeting, and ISA standards meetings. Learn about effective integration of safety, security, and reliability with control systems.

www.isa.org/powersymp