Wednesday, 29 June
Building 3, EPRI Campus

7:00 a.m. – 8:00 a.m.
Breakfast (EPRI Cafeteria)

7:00 a.m. – 5:00 p.m.
Speaker/Conference Check-in (Lobby, Building 3, EPRI Campus)

8:00 a.m. – 5:00 p.m.
Vendor Exhibit

Session 5A – GENERATION
POW16-003: Disturbance Observer-Based Multi-Model Predictive Control with Application to Superheated Temperature System
POW16-010: Model Predictive Control for Increased Steam Turbine Operational Flexibility
POW16-016: Calibration Best Practices – Optimal Testing Parameters
POW16-030: An Android Based Smart Isolation and Anti-Misoperation System
POW16-033: Shift Operation in a Pilot-Scale Oxy-Fuel Combustion Furnace

Session 5B – FOSSIL
POW16-007: Deaerator Water Level Control Techniques in Supercritical Power Plants
POW16-009: Control of Feedwater Flow for the Coal-Fired Power Plant Combination of Two Circulating Fluidized Bed Combustion Boilers and One 1,000 MW Steam Turbine
POW16-015: NSRs & Clean Power Plan Efficiency Improvements
POW16-018: Master Control System for Taean Integrated Gasification Combined Cycle (IGCC)
POW16-038: Developments in Simulation-Based Training in Power Plant Dynamics, Control Structure, and Tuning

Session 5C – CYBERSECURITY
EPRI – Decentralized End Point Hardware Based Cybersecurity for Secure Remote Access within Power Generation and Distribution
POW16-012: How Machine Learning is Revolutionizing the Cybersecurity Landscape
POW16-011: Deterministic Security, Deterministic ROI – Utilizing Data Diodes to Protect Power Plants
POW16-029: Intelligent Monitoring and Control: Essential Guidance for Critical Infrastructure Security
Panel Debate

Session 5D – NUCLEAR
POW16-002: Krsko Emergency Control Room – Isolator System
POW16-023: Aging Assessments of 40-Year-Old Nuclear Power Plant Cables
POW16-061: Applicability of IEC61508 to the Nuclear Power Generation Industry
POW16-071: IEEE Std. 1012 and NEI 96-07, Appendix D – Strange Bedfellows?

9:45 a.m. – 10:00 a.m.
Break

11:30 a.m. – 1:30 p.m.
Lunch (EPRI Cafeteria)
Vendor Exhibits and Networking

1:30 p.m. – 5:00 p.m.
Sessions

Session 6A – GENERATION
POW16-005: Machine Learning and Cognitive FingerprintingTM Delivers Next Generation Analytics to Improve Safety, Performance, and Reliability in Today’s Modern Wind Turbines
POW16-034: The Scalability of Diagnostics and Prognostics Algorithms to Big Data Settings
POW16-046: Monitoring and Diagnosing Unit Transformers Using Advanced Pattern Recognition and Case-Based Reasoning
Thursday, 30 June

Building 3, EPRI Campus

7:00 a.m. – 8:00 a.m.
Breakfast (EPRI Cafeteria)

7:00 a.m. – 12:00 p.m.
Speaker/Conference Check-in (Lobby, Building 3, EPRI Campus)

8:00 a.m. – 1:00 p.m.
Exhibitor Showcase

8:00 a.m. – 11:30 a.m.
Sessions

Session 7A – GENERATION

POW16-019: The Research of the False Level Phenomenon in the Boiler Drums Water Level
POW16-022: Boiler Drum Water Level Instrument Configuration Best Practices
POW16-035: A Differential Pressure Multipoint Anti-Blockage Gas Flow Sensor System
POW16-048: Sensor Network Design Algorithm for Power Plant Efficiency Maximization and its Application
POW16-051: Temperature Field Monitoring in a Small Mimic Boiler Using Optically Generated Acoustic Waves

Session 7B – FOSSIL

POW16-054: Optimal Sensor Placement for Fault Diagnosis in an Integrated Gasification Combined Cycle Plant
POW16-055: Distributed Sensor Placement for Condition Monitoring by Using a Novel EKF-GA Approach
POW16-042: A Hybrid Simulation Software for Transient Analysis of PV Impacts in Distribution Networks
POW16-052: Integration and Control of Solar PV Plants – Present and Future

Session 6B – FOSSIL

POW16-039: Using a Validated Dynamic Model to Develop and Test Solutions for a Severe MFT Furnace Pressure Excursion
POW16-043: Cascade IMC-PID Control of Superheated Steam Temperature Based on Closed-Loop Identification in the Frequency Domain
POW16-044: Biomimetic Approach to Control of Energy Systems
POW16-047: Two-Degrees-of-Freedom Controller Application in Thermal Power Plant
POW16-040: The Use of Simulation to Optimize Equipment Selection and Sizing

Session 6C – EMERGING TECHNOLOGIES

POW16-013: Keeping the Operator in Focus: Building on the Four Pillars of Operator Effectiveness
POW16-060: Patch Theory: Robustness/Performance Enhancement of Power Plant PID Control Clusters Through Analytical Design
POW16-025: Recurrent Neural Network Application to a Fuel Cell Turbine Hybrid Power System
POW16-064: Multi-Input Output Control Strategy for Gas Turbine Hybrids

Session 6D – RENEWABLE & DISTRIBUTED GENERATION

POW16-001: IMC-PID Controller Design for Turbine Control Loop Based on Closed-Loop Identification
POW16-008: High Fidelity Model-Based, Simulation and Control of Solar Thermal Photovoltaic Parabolic Through Tracking System
POW16-017: Neuroevolution of a Hybrid Fuel Cell Power Plant Simulator Using NEAT
POW16-020: Control Solutions for Molten Salt Tower Concentrated Solar Plant
POW16-027: Operating PV with Integrated Battery Energy Storage System During Unbalanced Fault Conditions
Technical Program

Session 7C – CYBERSECURITY

POW16-031: Top Three Considerations for Acing Your ICS Cybersecurity Report Card
POW16-014: The Art & Science of Obtaining Funding for ICS Security Projects
POW16-041: CyberSquirrel Commando Squad

Session 7D – NUCLEAR

POW16-028: Thermal Flow Sensors for Future Nuclear Power Applications
POW16-057: Online Monitoring of Manual Valves Using Wireless Valve Position Indication Sensors
POW16-063: Advanced Human-System Interfaces for New Nuclear Power Plants
POW16-007: New EPRI Guideline on Preventing or Limiting Digital System
POW16-072: Human Factors Engineering Guidelines for Nuclear Power Plant Control Room and Other Human System Interfaces

11:30 a.m. – 1:00 p.m.
Lunch and Exhibitor Showcase

1:00 p.m. – 5:00 p.m.
Exhibit Breakdown

1:00 p.m. – 5:00 p.m.
Sessions

Session 8A – GENERATION

POW16-037: Overcoming Common Objections to High Performance HMI Migration
POW16-045: Application of Model Predictive Control (MPC) to Improve Steam Temperature Control on a Pulverized-Coal Unit
POW16-056: An Ant Foraging Behavior Approach to Condition Monitoring of Power Generation Plants
POW16-058: Control Rooms Based on Video Display Unit Implemented with HFE Methodology
POW16-059: Case Study of Economic Benefits with Online Performance Optimization at Power Plants

Session 8B – CYBERSECURITY

POW16-069: Solving the ICS Operations Tech and Information Tech Barriers
POW16-006: Convergence of Cybersecurity and Engineered Layers of Protection: Cyber-Physical Integration for the Modern Plant
POW16-036: Protecting Multiple Control System Platforms: Does Standardization Even Exist?
POW16-026: From the Newspaper to the Network: How Well Chronicled Cyber-Attacks Can Damage Nation’s Utilities
Session Developer Debate Topic: Patching an ICS

Session 8C–EMERGING TECHNOLOGIES

POW16-004: Phasor Measurement Units Traceable Type Acceptance Testing in Compliance with IEEE C37.118.1a
POW16-062: Imaging a High Temperature Gas-Solid Flow Using ECVT sensors
POW16-065: Wireless Battery-Free Microwave Acoustic Sensors for Harsh Environment Power Plant Applications
POW16-068: Microwave and Photonics Sensors for in Situ Monitoring in Harsh Environment
POW16-070: Optical Fiber Sensor Research at Virginia Tech

Session 8D – RENEWABLE & DISTRIBUTED GENERATION

POW16-042: A Hybrid Simulation Software for Transient Analysis of PV Impacts in Distribution Networks
POW16-052: Integration and Control of Solar PV Plants – Present and Future

Friday, 1 July
Building 3, EPRI Campus

8:30 a.m. – 10:00 a.m.
ISA POWID Executive Committee Meeting

10:00 a.m. – 12:00 p.m.
ISA POWID Symposium 2017 Committee Meeting