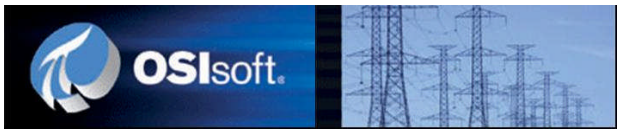
# PI T&D Users Group Meeting Agenda

**Atlanta Marriott Suites Midtown**
**Atlanta, Georgia**
**September 10-12, 2008**




## The PI System: An Enterprise Infrastructure

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| **Wednesday, September 10** | | |
| 09:00 – 11:00 | **Control Center Tour (GSOC-Georgia Systems Operations Corporation)** | |
| 12:00 – 13:00 | **Registration and Lunch Reception** | |
| 13:00 – 13:05 | **Welcome** | T&D Users Group Committee |
| 13:05 – 13:35 | **PI T&D Users Group Community: Past, Present and Future** | Randy Rhodes, PacifiCorp<br>Ann Moore, OSIsoft |
| 13:35 – 14:05 | **PI System and Technology Roadmap** | Jay Lakumb, OSIsoft |
| 14:05 – 14:20 | **Break** | |
| 14:20 – 15:35 | **Panel#1: A Day in the Life of Dispatchers/Operators** | Dag Reppen, SRP (Lead)<br>• Tom Keyser/Ron Lavan, PJM<br>• Fred Goolsby, Duke Energy<br>• Ernest Castillo, CPS Energy |
| 15:35 – 16:50 | **Panel#2: A Day in the Life of Planners/Engineers** | Ann Moore, OSIsoft (Lead)<br>• Steve Lathrop, PacifiCorp<br>• Mark Thomas, Entergy<br>• Glenn Pritchard, Exelon and Lee Melville, Enspiria |
| 16:50 – 17:00 | **Partner Introduction** | Business Partners |
| 17:00 – 21:00 | **Vendor/Partner Exhibition/Hospitality** | |
| **Thursday, September 11** | | |
| 07:30 – 08:30 | **Breakfast Special Topic Discussion - AMI/AMR and Smart Grid** | All Attendees<br>• Andrew Bordine, Consumers Energy |
| 08:30 – 08:35 | **Agenda Review** | Randy Rhodes, PacifiCorp |
| 08:35 – 09:50 | **Panel#3: A Day in the Life of System Administrators/Support Staff/Application Developers/CIP Security Officers** | Bruce McCamant, Triencon (Lead)<br>• Bryan Owen, OSIsoft<br>• Ernest Castillo, CPS Energy<br>• Oncor/Jeff Edwards, Triencon |
| 09:50 – 10:10 | **Break** | |
| 10:10 – 11:30 | **Panel#4: A Day in the Life of Management/Executives** | Randy Rhodes, PacifiCorp (Lead)<br>• Jeff Southern, GSOC<br>• Western Power-Australia/ Michael Saucier, Transpara |
| 11:30 – 12:00 | **Q&A for All Panels** | All Panelists |
| 12:00 – 13:00 | **Lunch** | |
| 13:05 – 14:15 | **T&D Users Group Updates** | OSIsoft and Committee |
| 14:15 – 14:45 | **Break** | |
| 14:45 – 16:45 | **T&D User Group Roundtable** | All |

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|---|---|---|
| 16:45 – 17:00 | **Closing** | Randy Rhodes, PacifiCorp<br>Ann Moore, OSIsoft |
| 18:00 – 21:00 | **OSIsoft-Sponsored Offsite Dinner/Social (Fuego Spanish Grill)** www.fuegocafe.com<br>(walking distance, two blocks from the hotel) | |
| | **Friday, September 12** | |
| 07:30 – 08:30 | **Breakfast** | |
| 08:30 – 12:00<br>(parallel) | **Training Session A: AF (Analysis Framework)** – Laurent Garrigues, Product Manager, OSIsoft<br>**Training Session B: PI Security and NERC CIP** – Bryan Owen, Cyber Security Manager, OSIsoft | |
| 12:00 – 13:00 | **Lunch** | |

# SESSION DETAILS

**PI T&D Users Group Community: Past, Present and Future**

This presentation will review the T&D users group past history and how and why the T&D users group has transformed to SIG (Strategic Influence Group), give an update of our present T&D activities and projects, and describe our future needs and opportunities.

**PI System and Technology Roadmap**

Jay Lakumb, OSIsoft Product Manager and T&D Liaison, will describe how the PI System will evolve with each release, from the Servers, to the Analytics, to the Visuals. He will also discuss what users can expect in the next few months with upcoming releases of PI products.

**Panel#1: A Day in the Life of Dispatchers/Operators**

PI Visualization and Analysis at PJM Interconnection
Tom Keyser, Power Director, and Ron Lavan, Operations Planning Engineer, will provide a brief description of PJM and provide an overview of how PJM uses PI for visualization and analysis. The benefits of using various PI ProcessBook, PI RtWebParts, and PI DataLink sheets in maintaining the reliability of the PJM RTO will be highlighted.

Duke Energy is using PI to make Distribution SCADA information available across the company
Duke Energy is continuing to build out its Distribution SCADA infrastructure. The Distribution SCADA network is segregated and access is tightly controlled. Duke is using PI as the SCADA archives and has developed a WEB application to get the data widely available throughout the Company. We call this application the OCB (Oil Circuit Breaker) dashboard because its original intent was to be a single location that Distribution Operators could use to view important information from across the company, including Distribution breaker status. A brief live demo of the application will show that it has grown beyond its original scope.

CPS Energy PI for situational intelligence
CPS Energy installed its PI system in August of 2007. Ernest Castillo, SCADA Engineer, will share how CPS Energy has utilized PI in its efforts to provide enhanced visualization and situational intelligence to its system operators and support staff.

**Panel#2: A Day in the Life of Planners/Engineers**

PI for PacifiCorp Planning Engineer
It's all about COINCIDENCE! Area Planning at PacifiCorp has taken a quantum leap in confidence and accuracy since the debut of our T&D OSIsoft PI System in 2003. Using time-stamped- and coincident data we can:

- Analyze system coincident peak loads
- Determine non-metered asset loads
- Verify SCADA accuracy
- 'Sweat the Assets' with confidence
- Perform accurate voltage analysis
- Perform hi-level Power Quality analysis
- Identify mal-functioning equipment
- Use real-time, accurate information to better support Operations

OSIsoft PI is the #1 tool in PacifiCorp Planning Engineer's toolbox.

Entergy Synchrophasor Wide Area Measurement/Monitoring System
Over the past several years Entergy has been installing PMUs across the grid network to provide situational awareness of the state of not only Entergy's transmission system across Mississippi, Louisiana, Arkansas, and portions of East Texas, but also the state of connected utilities. This presentation outlines the system architecture and real time computations of on-line stability analyses as well as the enhanced 3-D Geospatial visualization and advanced alerting. A pre-recorded video demo of Entergy's live WAMS system will be shown during the presentation. Entergy's PI-based WAMS with innovative technology to monitor its transmission

systems was recognized and the company received Utility Automation & Engineering T&D magazine's "2007 Project of the Year Award", at the 2008 DistribuTECH in February, Tampa, Florida.

PECO using PI and AMR data to enhance Distribution
PECO are using the PI system to model their low voltage distribution network and store hourly interval data for several thousand central city service locations. Quality audits of this network connectivity were performed to ensure dependable aggregation of customer load to a common transformer or secondary main. Deployment of a PI ProcessBook interface has provided the ability for PECO users to view load information over any timeframe. Daily reports have been developed to highlight mains/transformers that are experiencing overload or abnormal changes in load. This implementation drives toward efficient identification of assets at risk. Specifics of how the PI ACE, ProcessBook, Module Database and VB tools were combined to provide TLM functionality will be discussed.

**Panel#3: A Day in the Life of System Administrators/Support Staff/Application Developers/CIP Security Officers**

Security is everyone's responsibility
For a day in the life of administrators, support staff, developers and security officers this may represent considerable loss of productivity. Bryan will discuss trends in electronic security perimeter architecture that has impact on overall functionality and serviceability.

CPS Energy IT Monitor Implementation
Ernest Castillo, SCADA Engineer at CPS Energy, will give an overview of the implementation of IT Monitor, which was installed in March, 2008. He will share CPS Energy's experiences and upcoming plans.

NERC CIP model into PI AF
Jeff Edwards, VP of Systems at Triencon Services, is currently serving in a lead role in the Oncor SmartGrid project. As part of implementing both PI and IT Monitor in the project, Jeff has begun development of an application using PI data made available via WMI (Windows Management Instrumentation) to apply towards a NERC CIP model for Cyber Security integrated into PI AF.

**Panel#4: A Day in the Life of Managers/Executives**

Georgia System Operations PI Executive Dashboards
At Georgia System Operations, we are responsible for the reliable and efficient operation of the assets owned by our sister companies, Georgia Transmission Corporation and Oglethorpe Power Corporation. It is very important to make the Executive Management team of all 3 corporations aware of power system conditions at a moment's notice. We currently use PI-ProcessBook displays or what we call Executive Dashboards. This enables management to see real-time and historical views of Key Performance Indicators (KPIs) such as frequency, demand, weather, and system resources. This gives them a high-level view of system conditions right from their desktop.

KPIs on the Fly: Western Power Adopts New System Demand Initiatives
Over the course of the last year – and in an effort towards continued productivity improvements and cost savings – Western Power armed hundreds of their employees with role-based, real-time PI System data via mobile devices and traditional web displays. Now, everyone from frontline SCADA support staff, System Controllers, Operations Engineers and Managers have access to accurate operational information, pulled from multiple data sources, exactly when and where they need it, which more often than not, is out in the field. This presentation will discuss the role of on-demand KPIs in Western Power's demand response, asset management and enterprise mobility initiatives, including: tracking SAIDI and CAIDI reliability indices; supporting operational SCADA; real-time trending for monitoring asset performance against limits; and real-time alerting for monitoring generation fuel mix and contribution of wind generation to system total generation.

**Thursday Breakfast Special Topic Discussion: AMI and Smart Grid**

On May 5, 2008, OSIsoft announced two new products for Advanced Metering Infrastructure (AMI) and Smart Grid initiatives: "PI Smart Connectors" and "PI Business Gateways." OSIsoft is making it possible to interface PI with metering systems (AMI) to unify, validate, rationalize, store and synchronize metering data at speeds necessary for next-generation grid management applications. At this special breakfast session, users will learn about these new OSIsoft initiatives. Attendees can also share their utilities' own strategies for leveraging PI infrastructure for AMI and Smart Grid initiatives. Andrew Bordine, Smart Grid Enablement, from Consumers Energy, will share with us about their AMI and Smart Grid pilot project.

**T&D Users Group Updates and Roundtable**

We will review the background of the T&D Users Group Committee including the member and company roles. We will take a look at how T&D industry business drivers are affecting PI products roadmap. Finally, we will review some new features and additions of the T&D SharePoint Extranet site (i.e. CBM WebParts demo/sandbox and Tool Gallery video WebParts viewer, etc.) The group will have the opportunity to speak up to address any T&D issues and exchange information and concerns.

**Training Session A: AF 2.0 (Analysis Framework)**

Find what T&D industry has been looking for: AF 2.0 helps you organize and structure your information and create a metadata environment which is scalable and interoperable for your enterprise assets and models. PI Notifications is a configurable alerting platform which leverages PI and AF to notify the users when operational excursions occur.

Course outline:

- What is AF 2.0?
- The value of AF and PI Notifications
- Live demonstrations
    - AF (using the practical T&D asset models/templates, i.e. AMI scenarios)
    - PI Notifications (using the practical T&D examples, i.e. CBM-Condition Based Maintenance)
- Backwards compatibility and migration path
- What's coming next

**Training Session B: PI Security and NERC CIP**

Is your PI System a critical cyber asset? Is PI subject to CFATS, CFR21 Part 11, FDCC, NERC CIP, NEI 04-04, SarbOx…if not today, perhaps tomorrow? Be secure and answer YES!

What is the 'gold' standard for securing PI? This special training session describes PI security best practices in a NERC CIP regulated environment. Configuration examples, references and demonstration of security related tools are provided where applicable and as time allows.

Course outline:

- Introduction
    - OSIsoft approach to cyber security
    - PI system threat model and vulnerability overview
    - Defense in depth recommendations
    - NERC guideline for connection to business systems
- PI Security Best Practices and NERC CIP
    - (CIP-005) Electronic Security Perimeter
        - PI system architecture
        - Access control and monitoring
    - (CIP-007) System security management
        - PI change management recommendations
        - Attack surface reduction
        - Security patch management
        - Malware prevention
        - PI account management
        - Security status – IT monitoring interfaces
        - PI aware security assessment tools
    - (CIP-009) Recovery Plans
        - PI Backup and Restore Strategy
- Signup to receive "PI Security Best Practices" training certificate