

Reservoir System Modeling Technologies Conference

February 21-22, 2012 Portland, Oregon

General Announcement

The Bonneville Power Administration is hosting a Reservoir System Modeling Technologies Conference to discuss state-of-the-art computational methods, simulation techniques, uncertainty analysis, and data display methods as they pertain to reservoir system modeling and operational planning.

About the Conference

The 31 federally-owned hydro projects on the Columbia and Snake Rivers and tributaries, along with the many non-federal projects, play a major role in the ecological and economic well-being of the Pacific Northwest. The operation of these projects balance multiple purposes including flood control, fish and wildlife, power, irrigation, navigation and recreation. As such, comprehensive analytical tools are vital to support decision makers responsible for managing this important resource.

The operational world of the Federal Columbia River Power System is much different now than when much of the current modeling capability was developed. Increased non-power constraints associated with Endangered Species Act obligations and additional variability associated with variable demand and generating resources, wind generation, balancing reserve obligations, and market conditions has consumed much of the system's operational flexibility and significantly increased uncertainty.

The ability to evaluate the future operation of the system under different streamflow and load scenarios is a major challenge for short-term modeling. While tools exist to evaluate and plan the operation of this vast reservoir network, operating it computationally efficient and producing feasible, high-resolution results while considering uncertainty remains a challenge.

Call for Abstracts

BPA is now accepting abstracts for oral presentations. We invite those in the engineering, mathematics, computational science and related communities to discuss state-of-the-art methods that can be brought to bear on the modeling challenges facing water management agencies. The three main topics, as they pertain to reservoir system operations, include:

- Computational methods and simulation techniques
 - Simulation and optimization algorithms
 - Ensemble techniques
 - Stochastic methods
- Uncertainty and risk analysis
 - Evaluating risk of meeting operational objectives
 - Quantifying operational flexibility
 - Contingency management
- Information and data display methods
 - Data and result visualization
 - Effective summary and display of ensemble data

Please submit your abstracts electronically to Operations Research Analyst Steve Barton at sbbarton@bpa.gov. The deadline for submissions is December 31, 2011.



Conference Location

The conference will be February 21 and 22, 2012 at the Doubletree by Hilton Hotel in Portland, Oregon. (1000 NE Multnomah Street, 503-281-6111).

Registration

To register for this conference, please send an email to Steve Barton at sbbarton@bpa.gov including your name, affiliation, address, phone number, and email address. Space is limited, therefore invited and confirmed presenters will have preference and other attendees will be confirmed as space permits. There is no fee to participate or attend this conference. Presenters and attendees are responsible for their own travel and accommodations.