

Water Management Decision-Support Software

The Challenge of Knowledgeable and Valued Decisions

A Two-Day Workshop - November, 16-17, 2005 - Niagara Falls, NY, USA

Today's hydroelectric generation water managers require sophisticated information systems to support business decision-making activities. This workshop will provide participants with additional insight into the application and development of advanced DSSs in the hydroelectric industry. A decision-support system should supplement, complement, or amplify the problem solving capability of water managers. This is often accomplished by presenting meaningful information using communication technology, interactive models, raw data, documents, and personal knowledge.

Specific to the field of water management, these applications gather and present information on meteorology, hydrology, geology, topography, channel hydraulics, environmental attributes, economics, water use activities or requirements, regulatory requirements and operating limits.

This workshop will bring decision-support software developers together with hydroelectric generation water management practitioners to further the development of water management tools.



Sessions Include:

- 1) **Experiences.** Many water managers use decision-support software to understand the many complexities of managing water. Drivers that can influence a water manager's decisions include availability, pricing, revenue, competing interests, operating limits and environmental impacts. This session will focus on experiences, more or less successful, water management practitioners have had using some of today's water management decision-support software.
- 2) **Recent Developments.** As the need for more knowledgeable and valued decisions increases so does the need for improved support technology. This session will focus on recent developments in decision-support technologies. Developers will have the opportunity to demonstrate where the technology is moving and highlight new tools.
- 3) **Future Needs.** This session will focus on what water managers feel is necessary from DSS to improve their decision-making abilities. The water managers will have an opportunity to express their needs, with the hope that these needs will be considered in the development of future support tools.

- 8:00 Continental Breakfast (Provided) / Registration
- 8:30 Welcome: Robert Metcalfe, WMIG Technology Coordinator

Session 1 : Experiences

- 8:45 - 9:00 Opening Comments: Richard Mueller, NYPA
- 9:00 - 9:45 Decision Support Systems for Improved Water Resources Management and Operations
Michael Kane, Riverside Technology
Jim Cooper, Earth Satellite Corp.
- 9:45 - 10:30 BC Hydro's Integration of Commodity Risk Management and Operations Planning
Doug Smith, BC Hydro
- 10:30 - 10:45 Break
- 10:45 - 11:30 Experiences in Ice Management on the Niagara River
Peter Kowalski, Ontario Power Generation
- 11:30 - 12:15 Long-Term Planning using the SPLASH DSS
Bruce Hinton, Manitoba Hydro
- 12:15 - 1:15 Lunch (Provided)
- 1:15 - 2:00 Using a DSS to Analyze the Medium-Term Planning and Operations of the Manitoba Hydro System
Jason Westmacott, Manitoba Hydro
- 2:00 - 2:45 Using a DSS to Determine the Implications Associated with Wind-Hydro Integration
Diana Hurdowar-Castro, Synexus Global Inc.
Bill Girling, Manitoba Hydro
- 2:45 - 3:00 Break

Session 2 : Recent Developments

- 3:00 - 3:15 Opening Comments: Sam Matheson, SaskPower
- 3:15 - 4:00 The Experiences from Implementing Decision Support Technology To Address Water Management Plans In An Operational Environment
Steven McArdle, 4DM Inc.
Chris Tonkin, Ontario Power Generation
- 4:00 - 4:45 Integration of Real-Time Unit Dispatching Optimization with SCADA and AGC
Tung Van Do, Powel-MiniMax Inc.

Session 2 continues on November 17

- 6:00 - 8:00 **Cocktail Reception**
hosted by the New York Power Authority
NYPA Power Vista (Transportation Provided)



8:00 Continental Breakfast (Provided)

Session 2 : Recent Developments

- 8:30 - 9:15 Implementing Soft Constraints in Hydroelectric Decision Support Systems
Hong Gao, Powel-MiniMax Inc.
- 9:15 - 10:00 Hydro Modeling and Optimization Tools for Power System Operation and Flood Management
Vincent Balvet, SNC-Lavalin ECS
Michel Tremblay, SNC-Lavalin
- 10:00 - 10:15 Break
- 10:15 - 11:00 Hydro-Electric Generation Decision Support Systems (DSS) in Deregulated Markets
Nils Olav Tangvik, Powel ASA
- 11:00 - 11:45 The HydroMet Decision Support System (HDSS): New Applications in Operational Hydrology
Michael Eilts,
Weather Decision Technologies
- 11:45 - 12:30 Anticipated Future Developments in DSS
Franco Petrucci, Meteorological Service of Canada
- 12:30 - 1:30 Lunch (Provided)

Session 3 : Future Needs

- 1:30 - 1:45 Opening Comments: Robert Metcalfe, CEATI
- 1:45 - 2:30 Brascan Power Experience with DSS Applications
Richard St-Jean and Dale Peters, Brascan Power Corporation
- 2:30 - 4:00 Roundtable Discussion
Chaired by Robert Metcalfe, WMIG
Technology Coordinator



CEA Technologies Inc. (CEATI): Who We Are

CEA Technologies Inc. (CEATI) brings electricity industry professionals together, through focused interest groups and collaborative projects, to identify and address technical issues that are critical to their organizations. Participants can undertake projects that respond to their strategic goals at a fraction of the cost of doing so independently. The need for international breadth and inter-industry applicability in technology development is addressed through a practical, dynamic and cost-effective program.

Water Management Decision-Support Software

The Challenge of Knowledgeable and Valued Decisions

A Two-Day Workshop - November, 16-17, 2005 - Niagara Falls, NY, USA

Send your completed registration form by fax to **(514) 904-5038**.

Your Information

Name

Organization

Street Address

City, Province/State

Postal/Zip Code

E-mail

Phone

Fax

I would like to be notified of similar CEATI events.

Registration

- \$499 Attendees
- \$299 Water Management Interest Group Utilities
- \$199 Speakers

Payment Options

- VISA
- MasterCard
- American Express
- Cheque



Card No.

Expiry Date / MM/YY

Signature

Registration fees include continental breakfasts, lunches, refreshment breaks, proceedings packages and applicable taxes.

Important Notices

All prices are listed in Canadian Dollars (\$CAD).

Charges will appear as 'CEA Technologies Inc.'

We will not accept payment by cheque after October 1, 2005.

All cancellations received before October 1, 2005 will be subject to a \$100 processing fee. There will be no refunds granted after this date. Delegate substitution is permitted at no extra cost.

The workshop will be taking place at the **Holiday Inn Select**, 300 Third Street.



Hotel Accommodations

Hotel reservations can be made at:
The Holiday Inn Select
 300 Third Street, Niagara Falls, NY 14303
 Toll-Free: 1-800-HOLIDAY [4654329]

Please mention CEA Technologies when reserving to receive a preferred rate of \$57/night (+ taxes; single/double occupancy). This rate is subject to availability.

This workshop is organized with support from the participants of the CEATI Water Management Interest Group.



For more information about CEATI and the Water Management Interest Group, visit **www.ceatech.ca**.

All workshop inquiries should be directed to **workshops@ceatech.ca**.

CEA Technologies Inc. (CEATI)
 1155 Metcalfe Street, Suite 1120, Montreal, QC, Canada H3B 2V6
 Phone: (514) 866-5377 | Fax: (514) 904-5038