

# Technology Innovation Project



*Project Brief*

## TIP 416: CEATI – Hydropower Operations and Planning Interest Group (HOPIG)

### Context

Although hydraulic generation has evolved through many decades of technological change and environmental regulation, it continues to demonstrate an enviable track record of outstanding performance. It now operates in a world of unparalleled change with new paradigms which include: the competitive pressures of deregulation; increasing consumer reliance on hydropower's relative low cost and greenhouse gas emission-free source of energy; high stakeholder expectations; and ever increasing investor, government and public scrutiny. Many of the changes and challenges facing the industry such as climate variability and greenhouse gas emissions are beyond the control but impact the hydropower water manager.

The long term strategic direction of this group will be to develop new and innovative technological approaches and options to support the role of the water manager in managing and enhancing the underlying fundamental value of the industry, and to provide a knowledge-based leading edge technological resource to assist the hydropower industry in meeting its many new challenges.

### Topics & Issues

- Watershed Management
- Meteorology and Hydrology
- Data Acquisition, Validation and Dissemination
- Hydraulics and Hydraulic Structures
- Planning, Operation and Risk Management
- Hydropower Operation and Environmental Concerns
- Waterways and Public Safety

### Annual Activities

- 2 Meetings
- 1-2 Workshops
- 5-7 Conference Calls
- Weekly Information Exchange

### Why It Matters

Membership provides a forum to network with industry peers and share of common concerns related to the Topics and Issues outlined in this interest group.

Comparing best practices and sharing problem solving methods with the membership helps BPA develop an independent perspective of its performance and enables a culture of continuous improvement. This is specifically identified in BPA-sponsored CEATI Projects 410 and 432 ([see next page](#))

Finally, collaboration leverages BPA's investment by providing access to results from many large projects that BPA could not support alone.

### Goals and Objectives

The goal of CEATI's HOPIG is to develop and make available cost effective water management expertise, tools, and leading edge technology through collaboration across a wide community of knowledgeable participants including utilities, independent power producers, government and other agencies.

Through membership BPA is able to develop benchmarking and best practices that can be used to evaluate the scope for improvement for members in areas related to the Topics and Issues of this interest group.

### About CEATI

The Centre for Energy Advancement through Technological Innovation (CEATI) is a user-driven organization committed to providing technology solutions to its electrical utility participants. Together, they collaborate and act jointly to advance the industry through sharing and developing practical and applicable knowledge.



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**Project Start Date:** January 2020  
**Project End Date:** December 2020

### Links

[www.ceati.com/HOPIG](http://www.ceati.com/HOPIG)

### Current HOPIG Projects

#### T182700 0433

##### **Technology Review: Streamflow Assessment Toolkit for Changing Conditions**

Bonneville Power Administration is a sponsor of this project. The objective is to develop numeric analysis tools, customized to the hydropower industry, to answer a variety of specific questions based on streamflow time series.

#### T182700 0432

##### **Review and Recommendation of Hydrologic Forecast Verification Strategies and Methods**

This project provides a verification framework that can be implemented on hydrologic parameters at a variety of levels of sophistication. This framework can accommodate long-term ad hoc verification as well as near-real-time verification that can assist in operational timeframes.

#### T072700 0410

##### **Technology Review: Benchmarking Water Management Business Process**

Bonneville Power Administration is a sponsor of this Project. This study has three main objectives:

- Identify the array of institutional hydropower operations and planning frameworks within which utilities operate;
- Identify the approaches and measures taken within each jurisdiction by a utility for integrated water resource management as related to hydropower generation; and
- Provide a means to identify areas of commonality.

### Leverage

BPA's contributions are leveraged at a ratio of 30:1

This annual membership provides BPA access to reports and results of several HOPIG projects.

### For More Information Contact:

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