entura Hydro Tasmania | The power of natural thinking

COURSE DURATION

5 days

LOCATION

- Tasmania, Australia (includes site visits)
- Client site as negotiated

HYDROPOWER DEVELOPMENT

Hydropower development involves a long process of assessing technical, commercial, environmental and social aspects, including understanding risks and opportunities for sustainable outcomes.

This course explores the full project development cycle from site identification to operations and provides participants with an understanding of the key development risks and issues associated with hydro power development.

The course offers full access to Entura's detailed practical knowledge of hydro power development, which is backed up by almost 100 years of experience in water operations as part of Hydro Tasmania, Australia's largest hydropower operator and water manager.

The course material is derived from Entura's experience that began with some of the first hydro power facilities in Australia and continues with our current activities and service to major investors and developers throughout the Asia-Pacific.

After completing the course, participants will have a strong understanding of hydro power development issues from site selection to operation, enabling them to undertake important roles associated with project oversight, investment analysis and due diligence, project assessment for planning approval, licensing and for other non-technical hydro power development roles.

COURSE CONTENT

INTRODUCTION TO HYDROPOWER

- Understanding hydropower – how power is generated
- Water to wire – elements of a hydropower scheme
- Project life-cycle – an introduction

RISK ASSESSMENT PROCESS

- Understanding importance of risk and certainty
- Overview of key risks:
  - resource (hydrology – flow/head, data quality)
  - engineering (geology, topography, construction)
  - environmental and social safeguards
  - project economics and project optimisation.

COMMERCIAL ISSUES

- Project development models and issues
- Tender procurement models

OPERATIONAL ISSUES

- Operation and maintenance planning
- Dam safety and emergency response plan
- Stakeholder management
- Environmental compliance.

PARTICIPANT PROFILE

- Junior engineers
- Non-technical professionals (typically government, funding agencies, financial institutions, or NGOs)

LEARNING OBJECTIVES

To provide participants with:

- a general understanding of hydropower technical aspects
- an understanding of the hydropower development project life-cycle
- an understanding of technical, commercial, environmental, and social risks and the process for increasing certainty and reducing risk during the development process.

LEARNING METHODS

- Lectures
- Case studies
- Site visits
- Discussions/assignments/workshops

COURSE PROVIDERS

Entura's lecturers include:

- accredited training professionals
- technical specialists and professionals with extensive experience and qualifications in the hydropower industry.

CUSTOMISATION

This course can be customised to suit particular regional or organisational emphasis or to match existing capability or skill level of participants.

CLEAN ENERGY AND WATER INSTITUTE

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