



# Hydrology for hydro power design

Course duration

**2 days**

Location

- Tasmania, Australia
- Client site as negotiated
- Web-based delivery possible

Hydropower systems encompass the structures and equipment that convert the force of falling water to electricity, 'water to wire'.

Our extensive hydro power and water management experience has led to the accumulation of expert knowledge that we now offer to our clients.

This course focuses on understanding the hydrological analyses required for hydropower design and explores the technical and environmental challenges.

The practical aspects draw on Entura's working knowledge and expertise, which is backed up by almost 100 years of experience in developing and operating power and water infrastructure as part of Hydro Tasmania, Australia's largest renewable energy producer.

After completing the course, participants will have a good understanding of the purpose, processes and methods, and issues in hydrological analyses for hydro power scheme design.

## Course content

### Power from water

- General requirements of hydropower schemes
- Hydrologic data inputs
- Estimation of inflows
- Energy modelling
- Optimisation of operating rules
- Storage sizing
- Fit for purpose analyses

### Dam safety

- Estimation of flood events
- Flood frequency estimation
- Design floods for spillway sizing
- Design floods for diversion infrastructure

### Environmental issues

- Environmental flows
- Sedimentation
- Climate change

## Participant profile

- Junior hydrologists
- Engineers
- Middle to senior management with project management or oversight responsibilities

## Learning objectives

To provide participants with a high level understanding of the hydrological analyses required for design of hydro power schemes

## Learning methods

- Lectures
- Case studies
- Discussions/assignments

## Course providers

Entura's lecturers include:

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

## Customisation

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



### Course Director

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