



HYDROPOWER SHORT COURSE

17-18 February 2016

ARC - Institute for Agricultural Engineering, Pretoria

Course description

Energy is the lifeblood of worldwide economic and social development. When considering the current status of global energy shortages and the emphasis on reducing CO₂ emissions, the adoption of alternative energy generation methods at all levels of the South African economy can play an important role. Renewable energy technologies are without a doubt the means to support future economic development and satisfy energy demands.

Although South Africa is known not to be particularly endowed with the best hydropower conditions as elsewhere in Africa and the world, there are hydropower opportunities that can be developed within existing water infrastructure (such as dams, canals, transfer schemes, water treatment works, waste water treatment works, water distribution systems and bulk pipelines).

This hydropower short course aims to contribute to sustainable development of hydropower resources. Participants will be provided with updated knowledge of the fundamentals of hydropower resource development. Both theoretical and practical issues will allow attendees to effectively identify and manage the development of these energy resources (conventional and unconventional). The presenters have successfully analysed and developed hydropower plants and want to share these experiences with others.

Main topics

- Resource assessment for hydro power development
- Existing developments and potential in South Africa
- Features of a hydropower scheme
- Hydropower options
- Turbine technologies
- Legislative and regulatory requirements in SA
- Benefits (Financial, social, environmental)

What will you learn?

Course attendees will gain:

- A detailed understanding of hydropower and where schemes can successfully be installed.
- A clear appreciation of all the activities required to create a sustainable scheme.
- The ability to judge which aspects you can do yourself and know the nature of assistance you need from others.
- An understanding of how to estimate the costs and income.
- Differentiate and define the skills required to undertake a hydro power project.

Target group

The short course is aimed at engineers and technicians from consulting firms, government departments, water user associations, local authorities, water utilities, private entrepreneurs, and enthusiastic renewable energy developers.

Course cost: R3500 per person