



International Centre
for Hydropower

AFRICA 2021



Revenue protection, infrastructure security and metering

Fundamentals of Revenue Protection and Metering

Level I Online course • 22–26 November 2021

Application deadline; 7. November 2021

Course fee – USD\$ 500

In collaboration with



ICH, collaborating with local partners to improve skills for energy sector professionals

For an electricity utility company to plan for financial sustainability, it must understand the relationship between all the activities that affect its revenue collections. In order to achieve financial sustainability, the utility needs to do proper integrated planning, by evaluating all the factors influencing revenue collections, and set appropriate targets.

The Revenue Protection, Infrastructure Security and Metering course has been developed as a comprehensive and interactive course focused on reducing revenue

leakages in electricity utility companies. The course is designed to empower people involved in day-to-day operations, including processes that impact revenue losses, with strategic direction on Revenue Protection and Infrastructure security, alongside practical interventions for planning and developing Revenue Protection solutions. The course is presented in a modular format, intended to progressively build, and sustain capacity development for effective revenue protection management and infrastructure security in a changing environment.



COURSE OBJECTIVES

The Course focuses on fundamentals of revenue protection management and infrastructure security. The course covers why Revenue Protection is a useful financial solution to revenue leakage; best practices in locating revenue losses in the Revenue Management Cycle; and the impact and value addition from smart metering to revenue protection, by utilizing data and analyzing enhanced security features within the meter to determine tampering. In addition, participants will evaluate the extent to which security of utility infrastructure can be a contributing factor in reducing revenue losses.

AT THE END OF THE COURSE, PARTICIPANTS WILL BE ABLE TO:

- Identify revenue losses in the Revenue Management Cycle
- Use SMART metering systems to quantify energy losses and analyze data
- Conduct security assessment for revenue management
- Deal with challenges that are shaping the security needs of the grid – Physical/Cyber Threats and Vulnerabilities
- Develop and apply best practices in Revenue Protection and Infrastructure Security

MAIN TOPICS

- Introduction to Revenue Protection
 - Impact on utilities
 - Losses statistics & trajectories
 - Vandalism drivers
- Understanding the regulatory framework & targets
- Operating environment and cultures
- Organizational Structures (Revenue protection and Metering)
- Revenue Cycle Management
- Stakeholder Engagement in RP management & prevention of vandalism
- Case studies & Takeaways



Operation and maintenance of hydropower facilities:

From strategy to execution

Part I Online course • 29 November - 3 December 2021

Application deadline; 10. November 2021

Course fee – USD\$ 500

Properly maintained and efficiently operated hydropower facilities can increase energy production and significantly improve income and business results. Developing robust O & M strategies and practices are key to ensuring the longevity of a hydropower facility. These strategies and practices can only be successfully implemented by personnel that are well trained and informed.

Scheduling, planning, and tracking of Operation and Maintenance work can significantly improve efficiency of O & M and production capacity

COURSE OBJECTIVE

The main objective of this training is to give the participants a thorough understanding of the concepts of operation and maintenance of hydropower plants with best practice practical examples.

Joining the course presents an opportunity to learn about maintenance planning for the short and long term thus being able to take necessary actions in due time which can significantly improve efficiency of O&M and production capacity.

The course aims to facilitate participants with the capacity to identify performance indicators that support the maintenance decision-making process, thus develop solid internal condition assessment tools so as to gain consistency within their Power plants.



MAIN TOPICS

The course will include the following topics:

- Operations and maintenance fundamentals
- Maintenance strategies – planning and scheduling
- Risk management
- HSSE – Theory and practice
- Pandemic planning – Transitioning from ERP
- Maintenance optimization
- Energy management
- Managing O & M
- Hydropower asset management
- Future of hydropower – sustainability, new technologies, standards, and standardization



TARGET GROUP

The course is aimed at Engineers and technicians with experience from and current positions in large hydro-power plants in Africa.

Technical staff, Management and those engaged in planning, implementation, and follow-up on maintenance activities in existing power plants will also benefit from this training.

Experience shows that money put into good operation and maintenance programmes results in more power production than the same amount of money put into new production capacity



Reservoir sediment management for sustainable hydropower in Africa

Part I Online course • 2–8 December 2021

Application deadline; 10. November 2021

Course fee – USD\$ 500

Africa's hydrological shifts due to climate change coupled with topography and pattern of land use are some of the issues that increase the variability in sediment transport and rates of reservoir siltation.

The build-up of sediments in reservoirs can significantly reduce storage capacity thereby affecting energy production and the reliable supply of water. Moreover, sediments can compromise the safety of the structures, damage equipment and results in significant financial consequences.

Sediment management is therefore important and rele-

vant for the sustainable use of water resources and addresses the problems of food, water, and energy insecurity.

It has become even more critical under the current Covid-19 pandemic to ensure the continued and stable supply of energy and water to vulnerable populations and essential service sectors such as hospitals.

To implement sustainable sediment management, a capacity both in terms of resources and trained manpower is essential and a priority requirement for the region.



...ICH, enhancing sustainable development of hydropower resources

COURSE OBJECTIVE

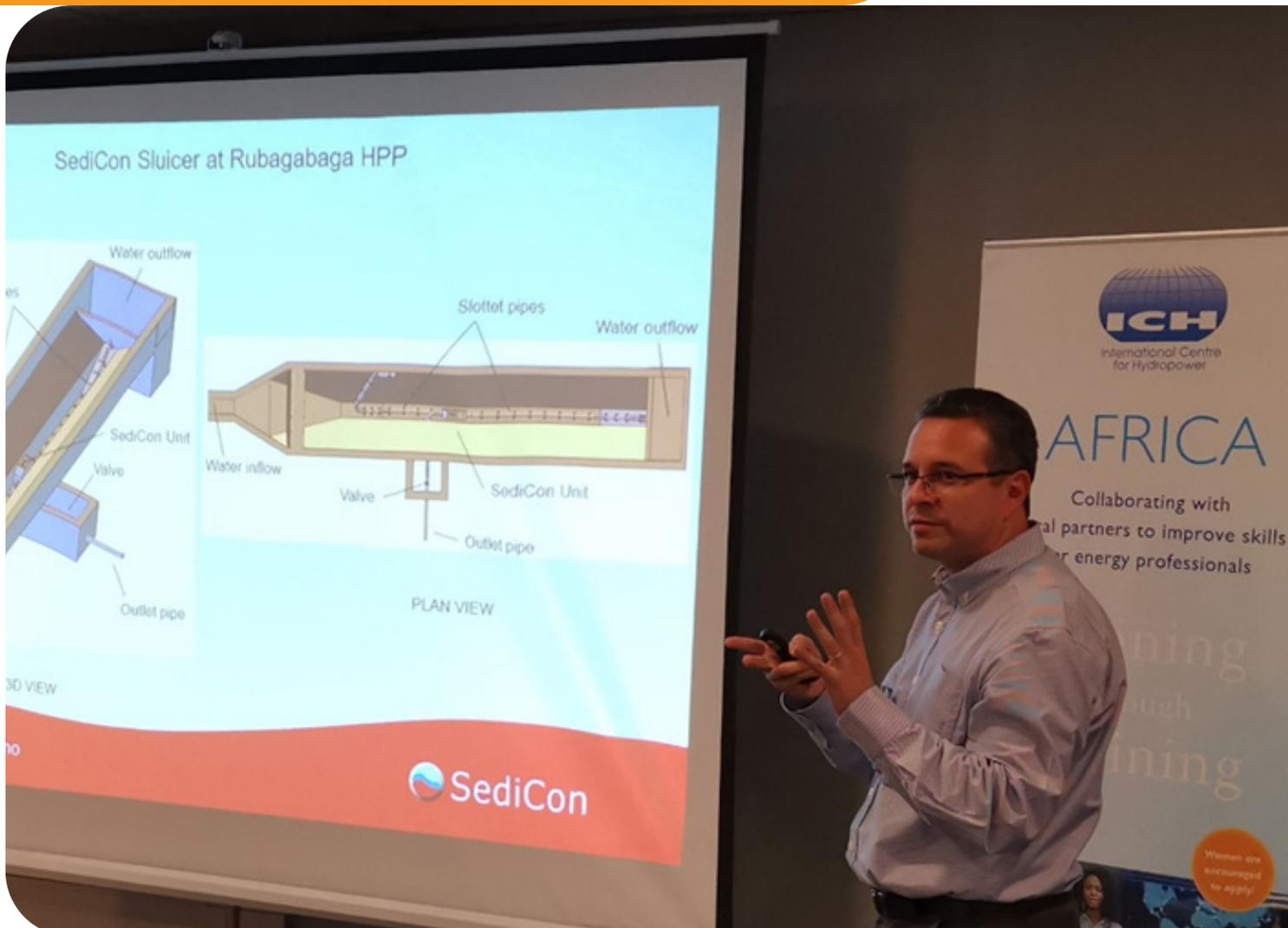
This ICH training will contribute to the ongoing efforts of mitigating the sedimentation problems of reservoirs for more sustainable uses by exploring and disseminating practical methods and strategies that are viable to apply in handling sediments in a more eco-nomically, technically and environmentally feasible way. Participants will learn practical cost-effective, innovative, technical solutions to reservoir sedimentation for optimum benefits of the water resources in Africa.

TARGET GROUP

The course is aimed at reservoir operators, government water resource and energy agencies, reservoir owners, utility managers and field level experts. Executives of power companies, ministries, and relevant private sector enterprises with reservoir operation and management responsibility will benefit from this course. The course will also be of value to engineers working in water resources planning and multipurpose projects.

MAIN TOPICS

- Focus on reservoir sedimentation; Processes and sediment load estimation
- Impact of climate change on reservoir sedimentation; A regional perspective
- Monitoring sedimentation in existing reservoirs
- Strategies for management of sediment in reservoirs; Applicability and challenges to the region
- Managing sedimentation amidst pandemics; Pandemic planning and transitioning from emergency response into long term planning
- Sediment data collection and forecasting techniques
- Socio-economic and environmental impacts of sediment management strategies



GENERAL

All lecturers and resource persons are well-known specialists within their field, and they have extensive international and regional experience. Attending the courses is an opportunity to discuss and learn about current energy sector issues related to Hydropower and other renewables together with professionals from the continent and abroad. Participants are encouraged to bring along information that can be shared about pending energy and hydro- power issues of your interest.

ADMISSION REQUIREMENTS

- A minimum of about 5 years working experience is required.
- Applicants should hold an applicable degree or possess relevant background knowledge.
- Proficiency in English is compulsory for all ICH Africa courses.
- Basic computer skills and internet access are imperative.

(Invest in your professional development. Guaranteed way to improve your performance and achieve your goals. APPLY NOW!!!)

REGISTRATION

ALL applicants MUST diligently complete the application form before submission. The application form can be accessed at the ICH website – www.ich.no Please ensure your completed application is received no later than the given deadline for each course. Notice of admission will be given shortly after the application closing date. ICH reserves the right to accept or reject any applicant based on their qualifications and experience.

COURSE FEE

The course fee includes lectures and materials for the online courses.

There is a reduced fee for ICH members. A limited number of sponsored seats are available for participants from countries prioritized by NORAD (Norwegian Agency for Development Cooperation).

Those who would like a guaranteed seat on the course should secure their own funding.

MORE INFORMATION

Information on other courses can also be found on our website: www.ich.no or by contacting carole@ich.no

Women are encouraged to apply.



