Project Summary

Project Background
Hydropower is one of the main sources of power generation in Pakistan. While the country struggles with continued power shortages, the need for development of new hydro projects and proper maintenance of existing ones becomes ever more important. WAPDA, the main public utility entity responsible for operating large hydropower projects, faces serious shortage of engineers with adequate training to carry out the required tasks.

Its existing training facility, Hydel Training Centre (HTC) established in 1977 at Mangla, suffers from obsolete equipment and lab. Moreover, there is a need for Training the Trainers (ToT) at WAPDA to equip them with the recent developments in hydropower technology and international best practices. It is therefore envisioned to establish a new Hydropower Training Institute (HPTI) at Mangla with state-of-the-art facilities in hydropower and a business model that should allow the institute to operate independently.

Project Objectives
The overall goal of the programme is to provide up-to-date trainings to engineers and technical staff from WPADA and the operators from both public (from public companies and from provinces) and private (from independent power producers) sector while ensuring cost recovery for the new HPTI. To achieve this, the overall programme comprises of 3 components: (i) Construction of new building, (ii) Procurement of equipment, and (iii) Recruitment of training specialist for remodeling training courses.

The scope of this consultancy services comprise component 2 and 3 with the specific objective to achieve a modernization of the curriculum of the HPTI and to develop students’ skills and strengthen capacity of public and private hydropower plant operators in Pakistan.

Project Results
The project aims to meet the following results:
- Review and redesign of hydropower curriculum on various topics (e.g. feasibility study, design, construction, O&M, dam/powerhouse rehabilitation)
- Build expertise at WAPDA on various aspects of Hydropower planning, design and operation provided
- Training of Trainers for WAPDA staff, both in-house (at Mangla HPTI) and abroad (in Germany) to enable WAPDA’s trainers to design and implement future training programs autonomously
- Development of HPTI’s capacity to indicative 500 students per year (out of which, 200 should be from outside WAPDA)
- Establish affiliations with national universities, bachelor/graduate programs, and initiate partnerships with international training centres

Services Provided
Task 1 – Support to WAPDA/HPTI on procurement of training equipment and software for the new institute:
Review cost and budget requirements, review technical specifications, identify main suppliers, finalize list of equipment, prepare procurement plan and bidding documents, assist in bidding, evaluation, negotiation and awarding process, and assist WAPDA/HPTI in reception and installation of equipment, testing and take over procedures.

Task 2 – Design of an Action and Business Plan based on the Road Map:
Conduct interviews at various institutions, organizations, review all related documents and reports, conduct need assessment on new business plan, training strategy, partnerships, targeted capacity of centre, targeted students’ profile, planned budget, relevance of lab equipment and software, conduct SWOT analysis, prepare revised Action Plan based on revised Road Map, prepare a business plan, and draft ToRs for an accountant and legal consultant.

Task 3 – Training of Trainers (ToT) and development of new curriculum:
Develop 4 training programs comprising of at least 20 Modules (on refurbishment and rehabilitation, O&M, planning/business plan, procurement and construction, environmental and social aspects), conduct ToT courses at HPTI Mangla and at VOITH training institute in Germany and develop new curriculum for the training programs.

Task 4 – Developing HPTI partnerships:
Assist WAPDA/HPTI in administrative procedure to establish affiliations with other WAPDA training centres and national universities, assist in creation of bachelor/graduate programs, and in initiation of partnerships with selected international training centres.

Pakistan

Modernization of Training Courses and Procurement of Training Equipment for Hydropower Training Institute (HPTI) Mangla

Client
Pakistan Water and Power Development Authority (WAPDA)

Duration
10/02/2018 - 31/12/2018

Personnel
- 4 internat. STE (5 PM, Team Leader; 5 PM, Mechanical Engineer; 5 PM, Electrical Engineer; 4 PM, Civil Engineer)
- 1 national STE (3 PM, Contract/Procurement Specialist)
- Pool of internat. and national STE (5 PM)