Project Summary

Project Background
Pakistan is facing acute shortage of electricity generation. The gap between demand and supply is increasing year after year. The problem is compounded by an unreliable grid and high T&D losses. In such a scenario, local generation and distribution of power is becoming an increasing popular option in areas farther from the main grid. The community of Ahmadabad in the Hunza valley of Pakistan is one such example. The Ahmadabad Power Production Public Limited (APPPL) is a community based power production company. It currently holds and operates a mini hydropower project in Ahmadabad and sells the power to the energy deficit communities of Ahmadabad and the surrounding villages, in Hunza. It intends to refurbish its existing facilities and construct new hydropower projects in the locality. For this purpose, INTEGRATION has entered into an Engineering, Procurement and Construction (EPC) Agreement with the company and is also investing in the project.

Project Objectives
The objectives of the project are to:
- Refurbish/replace the E&M equipment and optimize the design of civil structures of existing mini hydropower, and
- Construct new power stations in cascade to increase the power production and to meet the increased community demand of the surrounding villages/settlements and productive uses.

Project Results
The EPC contract is expected to produce the following results:
- refurbishment/replacement of faulty E&M equipment
- optimization of the design of civil structures of existing mini hydropower
- construction of a new power station in cascade to better use the stream water of village Ahmadabad Hunza
- development of a sustainable O&M strategy and its implementation

Furthermore, INTEGRATION will also be investing in the projects by financing the refurbishment and construction activities in the form of equity purchase and provision of loan.

Services Provided
The overall services include design, construction, performance of start-up and testing, and development of the operation manual(s) for the facilities. More specifically the engagement will include the provision of the following services:
- Topographic survey
- Technical support to measure the stream flow and analysis of hydrological data for optimal design of power stations
- Hydraulic and structural design and preparation of drawings of Intake Structures, Settling Basin, Fore-bay, Penstock, Tail Race
- Design and specifications of electromechanical equipment and transmission line to connect the two powerhouses
- Perform all the procurements, sub contracts, performance supervision of subcontractors and suppliers
- Quality control and quality assurance of Civil, E&M and T&D construction, including Test running and commissioning of the facility
- Define O&M procedures and prepare relevant documentation
- Provide all training to the Operators for sustainable operation of the plants
- Provide design, engineering, materials, work forces needed to perform the Acceptance Tests

INTEGRATION
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Pakistan
Refurbishment and Construction of Hydropower Projects in Ahmadabad

Client
Ahmadabad Power Production Public Limited

Duration
06/2015 - 06/2016

Personnel
- 1 internat. STE (1 PM, Hydropower Expert)
- 1 national LTE (3 PM, Hydropower Expert)
- 1 national LTE (3 PM, Electromechanical Expert)
- Pool of national STE (6 PM, Technicians)