

## Project Summary

### Location:

**District:** Yamgan

**District Center:** Garme (Tah Dah)

**Supply Area:** Garme

### Water Source:

Khork River; minimum flow > 1 m<sup>3</sup>/s

**Accessibility:** good via off road throughout the year; distance to Faizabad: 105km

### Technical Description:

The run-off the river project comprises of a 30 m wide weir of 1 m height. The water is conveyed via a 3,300 km long headrace canal to the forebay. With a gross head of 85 m and a nominal discharge of 1 m<sup>3</sup>/s the maximum capacity is about 700KW. Power requirement for District center is about 500 kW.

The power is transmitted via a 18.5 km long 20 kV transmission line and distributed via a 0.4 kV network. Houses are connected via service cable and equipped with electronic meter and RCBOs.

### Socio-Economy

- Number of population: 15,000
- Number of households: 2,940; (5.1 persons/household)
- Number of houses: 2,560 (1,15 households per house)

The Bazaar is located in the center of district and comprises of 250 shops, 2 Mosques, 2 schools, 2 offices, 3 government buildings, 1 health facilities (hospital and clinic), 1 veterinary clinics, and a number of workshops.

### Area Supplied

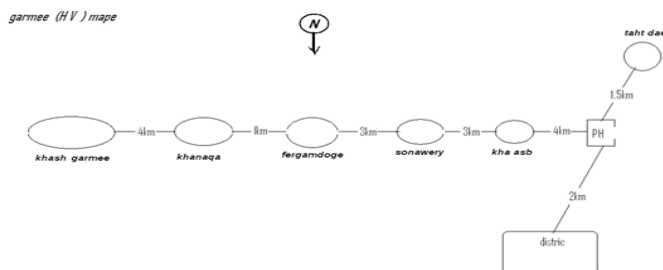
The following villages/hamlets will be connected to the supply system: Garme, Tah Dah, Kheasbe, Sonawaree, Forgamdoge, Khanaqa Khashe garmee

### Environmental Aspects

The khoork river is perennial. A fish pass is required to allow fish migration.

The project will have no negative impact to houses, land and irrigation.

### Principal Lay-Out



## Afghanistan

## Yamgan

## Hydropower Project

### Site Reconnaissance

### Project Name

Rural Electrification Concept  
Badakhshan Province

### Number of people supplied

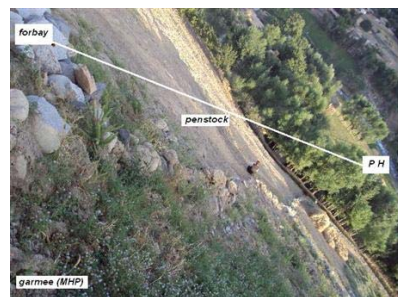
15,000 plus Bazaar

### Estimated Costs

3.5 mill US\$; 7,000 US\$/kW; 233 US\$/person

### Technical Details

<b>Turbine capacity</b>	500 kW
<b>Rated head</b>	85m
<b>Rated flow</b>	1m <sup>3</sup> /s
<b>Turbine type</b>	Pelton/Francis
<b>Planning and construction time</b>	15 months



Survey implemented by:



Department of Water Management

For the Energy Working Group  
under the PDC in Badakhshan

July 2009



**Legends**

- Load Centres
- Power House
- ↖ Intake
- Transmission line

Scale: As Shown

Renewable Energy Supply for Rural Areas (ESRA)

Rural Electrification Concept, Boddakhshan Province

Yamgan (Rheima) Hydropower Project

Google Image of the Project Area

Aerial View

INTEGRATION  
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