Project Summary

Location:
District: Arghanj khwa
District Center: Woranshar
N: 37 18 815
E: 070 10 008
Elevation: 2,068 masl

Supply Area: Naw Abad

Water Source:
Dare Arghanj khwa River; minimum flow > 2 m³/s; water resources are plenty available for much larger capacities

Accessibility: good via off road throughout the year; last part through river; distance to Faizabad: 75km

Technical Description:
The run-off the river project comprises of a 50 m wide weir of 2 m height. The water is conveyed via a 1,700 km long headrace canal to the forebay. With a gross head of 40 m and a nominal discharge of 2m³/s the capacity is about 0.5 to 1 MW.
The power is transmitted via a 6 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.
Possible connection of the district center would require a 6 km long transmission line.

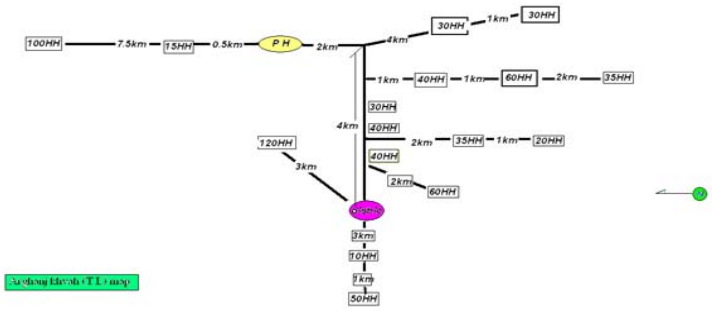
Socio-Economy
- Number of population: 21,000
- Number of households: 3,500 (6 persons/household)
- Number of houses: 2,150 (1,62 households per house)

The Bazaar is located in the center of district and comprises of 45 shops, 26 Mosques, 9 schools, 26 offices, 7 government buildings, 1 health facilities (hospital and clinic), 3 veterinary clinics, and a number of workshops.

Area Supplied
The following villages/hamlets will be connected to the supply system:
Ikewe, Dashte paheen, Wallanshare payan, Wallan share balla, Estareqe, khan aqa, etc..

Environmental Aspects
The Arghanj khwa 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

Arghanj Khaw

Hydropower Project

Site Reconnaissance

Project Name

Rural Electrification Concept
Badakhshan Province

Number of people supplied

21,000 plus Bazaar

Estimated Costs

3.75 mill US$; 7,500 US$/kW; 180 US$/person

Technical Details

Turbine capacity	500 kW
Rated head	40m
Rated flow	2m³/s
Turbine type	Francis
Planning and construction time	18 months

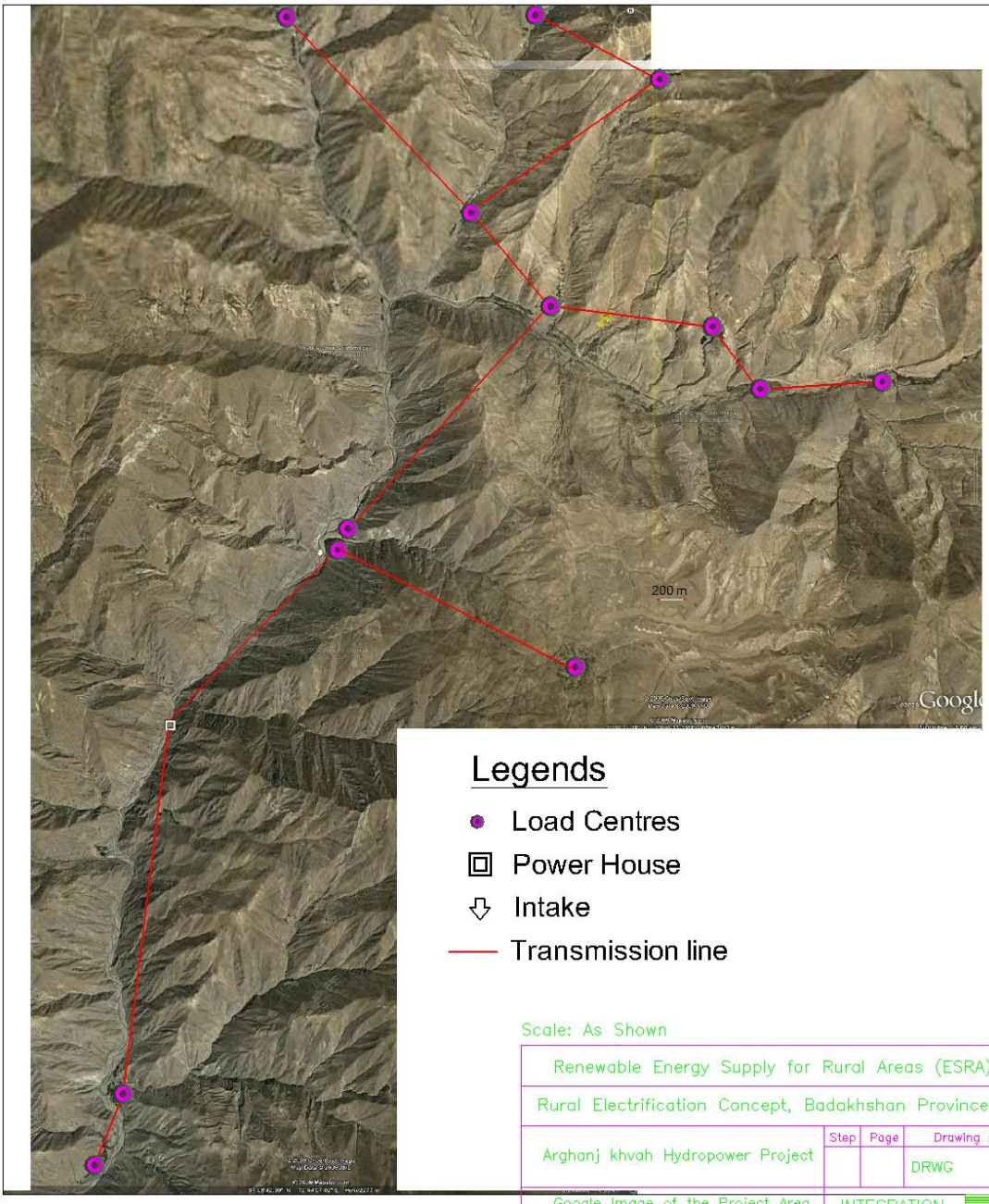
Arganshe(MHP) intake area

Survey implemented by:

COOPERATION
ISLAMIC REPUBLIC OF AFGHANISTAN
FEDERAL REPUBLIC OF GERMANY

Department of Water Management
For the Energy Working Group under the PDC in Badakhshan

August 2009



Legends

- Load Centres
- Power House
- Intake
- Transmission line

Scale: As Shown

Renewable Energy Supply for Rural Areas (ESRA)

Rural Electrification Concept, Badakhshan Province

Arghanj khvah Hydropower Project	Step	Page	Drawing no.
			DRWG

Google Image of the Project Area
Aerial View

INTEGRATION
environment & energy
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