



Project Completion Report MICRO HYDRO POWER CHANNEL July 25, 2013 - November 30, 2013



- Annexure-1: PCR
- Annexure-2: Project Pictures
- Annexure-3: Phase wise Household List



1. PROJECT SUMMARY:

Phullawai is a small village with a population of 7, 500 people and a literacy rate below 10%. The 2010 floods caused severe damages to the village's irrigation, electricity, and water-supply systems and the area now lacks basic health, energy and education facilities. Due to severe weather conditions, the village is disconnected from surrounding areas for three months annually and amongst other development needs, the need for electricity is urgent.

After baseline survey and proposal submission ADP supported SDO for rehabilitation of the Hydro Power Project generating total 75 KW. Through rehabilitation of the hydropower plant over 300 households are provided electricity (7,500 individuals). Electricity is provided to schools, vocational centers and households thereby improving educational outcomes of the students in this remote village and helping the youth learn income generation skills. The project aided in reduction of deforestation in the area as the residents are currently dependent on firewood for lighting their houses.

2. PROJECT DESCRIPTION:

- ★ The project is located in Phullawai Union Council Gurase, Tehsil Sharda, District Neelum, Azad Kashmir.
- ★ Total beneficiaries households are 300.
- ★ Project consists of rehabilitation of whole project (i.e power Channel, Forebay, overflow tank, fitting of pipes, machinery fitting, Protection wall etc.).
- ★ Two Turbines & electric generators of 25 KW & 50 KW are fitted and now the total capacity is 75 KW.
- ★ Income from the project is expected Rs. 56,000 while the operating expenses are Rs. 34,300

PROJECT COST:

ADP Share (44%)	Rs. 1,000,000 /=
SDO Share (36 %)	Rs. 826,779 /=
Community Share (21 %)	Rs. 472,065 /=
Total actual Project Cost:	Rs. 2,298,844 /=

PROJECT DURATION:

July 29, 2013 to November 20, 2013

3. Implementation Methodology:

A construction committee is formed consisting of community activists and SDO management to supervise, monitor and ensure quality during the construction work. The Procurement committee has managed all the procurement of quality and cost effective material. A brief of activities of construction of Hydro Power is in following;

- Procurement of Construction Material and Machinery**
- Transportation of Material to Site**



- ❖ Cement and gabion wires are transported from Muzaffarabad AJK.
- ☑ Sand, crush and stone (for filling) is arranged locally. Toyota Jeeps are used for jeep-able track while donkeys are used to transport the material from link road to site.
- ☑ **Excavation, Soling Stone, Blasting, Laying of Lean Concrete, Pouring of Foundation Concrete, Laying of Form Work Slab and Curing of Hydro Channel,**
- ☑ **Gabion Wall is constructed for 20 Ft area of power channel.**
- ☑ Skilled and un-skilled labour is arranged by the Construction Committee and CCB Bala Seri from Local Community.
- ☑ Excavation, steal work, plastering of Forebay (8x8x5).
- ☑ Penstock pipe (85ft+85ft) fitting in Forebay of both turbines.
- ☑ Overflow tank is constructed
- ☑ Pipes (32 ft) are fitted in overflow tank.
- ☑ Machinery maintenance done
- ☑ Foundation of machinery completed.
- ☑ Machinery (Turbine & generator) of 25 KW & 50 KW is fitted in the machinery house
- ☑ 10 poles are fitted in the hilliest areas.

4. BENEFICIARIES DATA:

Direct Beneficiaries

No. of HHs	Male	Female	Children	TOTAL
300	1,560	1,755	585	3,900

Indirect Beneficiaries

Description	Strength Est
Jamia Masjid Bala Seri	150
Masjid Machuk Muhalla	75
Majid Bahrin	85
Madrassa Ashatul Quran Bala Seri	350
Madrassat-ul-Banat Bala Seri	150
Govt. Primary Girls School Bala Seri	100
Govt. Boys Girls School Bala Seri	275
Widows / Orphans	120

5. PROJECT IMPACTS:

- ☑ 300 families are getting better electricity now, among them 50 Families are from the venerable and remote access area.
- ☑ 4 Masajids, 3 Madaris and 19 Widows/Orphans are provided free electricity.
- ☑ The students are now getting light to study in night hours; which will improve their educational skills and ultimately this will improve literacy rate.
- ☑ People can now work late at night specially the women can knitting, Sewing Cloths can make the hand-made things in evening.
- ☑ Community is now using low voltage iron /electronics / electric appliances.



- Community is well aware about current affairs and country news through using radios and TVs
- Deforestation will be reduce through saving of the firewood, lightwood.

6. IMPACTS ON WOMEN AND CHILDRENS

This proposed project will prove beneficial mainly for women and children's. In these areas continuous supply of electricity remains always a big problem. To provide continuous electricity rehabilitation of this power channel is very much necessary. Through rehabilitation of this project women's of the area can work on their sewing machines to earn some money to meet their daily expenditures.

Another most important benefit of this project is that it will surely prove beneficial for students. Through continuous supply of electric power students can study in late hours.

7. FUTURE SUSTAINABILITY PLAN:

A local committee is formed which is responsible to monitor the proper availability of Light to beneficiaries and timely maintenance of the Hydro Power. While an experienced Electrician is already appointed operate and proper care of it. The staff is trained in O/M methods as a part of sustainability of the project. Staff is responsible to issue the electricity bills to all beneficiaries at the end of every month. The monthly bill is increased to Rs. 200 per households and Rs. 300 for Schools, which is decided in the last meeting of Committee. For future repair cost, the savings from the Project will be collected in SDO Pool Fund maintained in Azad Jammu Kashmir Bank. This saving will be utilized for future O/M activities. SDO has made an Agreement with a Hydro Power Technician to provide free services for any future major repairs, while SDO will provide the material.

8. PROJECT COST

Activity	Unit Type	Unit No	Unit Cost	Total Estimated Cost	ADP Share	SDO Share	Community Share
PROGRAM COST							
Machinery Cost							
Turbine 50 KW maintenance	No	1	65,000	65,000		65,000	
Turbine 25 KW maintenance	No	1	28,000	28,000		28,000	
Steel Pole	No	10	18,500	185,000		185,000	
Transmission Line with D-Shakle Insulators	Meter	1,100	71	78,100		78,100	
CIVIL WORK							
Power Channel Cost				1,573,551	786,776	314,710	472,065
Forebay Cost				176,026	176,026		
Over Flow Cost				50,168	37,199	12,969	
Total Program Cost				2,155,844	1,000,000	683,779	472,065
Human Resource & Operational Cost							

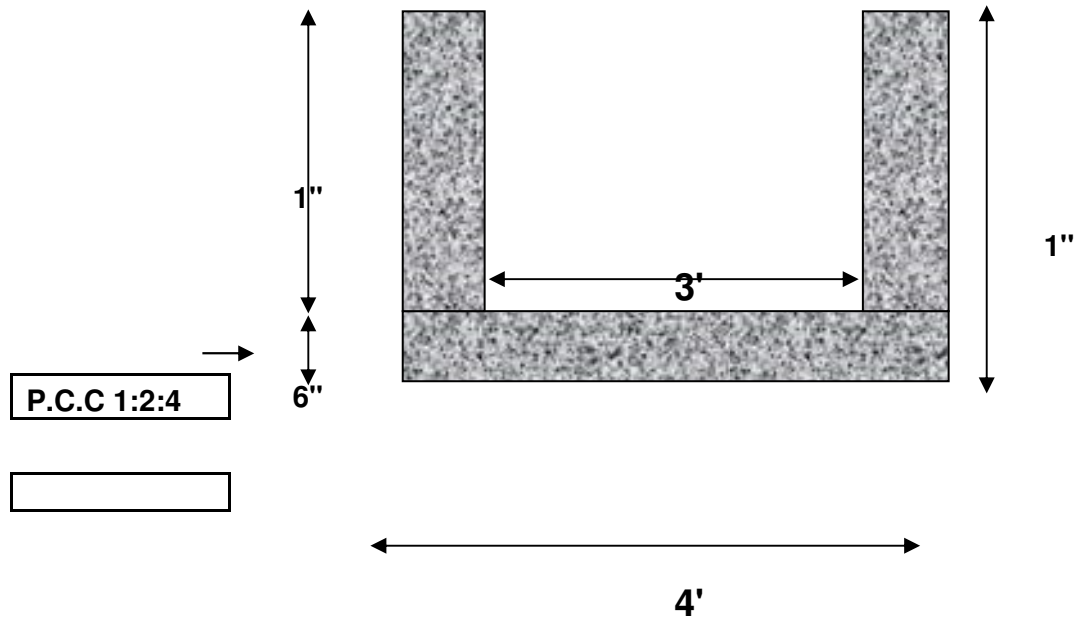


Asst Field Engineer (01)	months	3	25,000	75,000		75,000	
Time Cost of Field Coordinator	months	4	10,000	40,000		40,000	
Field Implementation Cost (Travel, Communication etc)	months	4	7,000	28,000		28,000	
Total HR & Operational Cost				143,000		143,000	
TOTAL PROJECT COST (PKR)				2,298,844	1,000,000	826,779	472,065

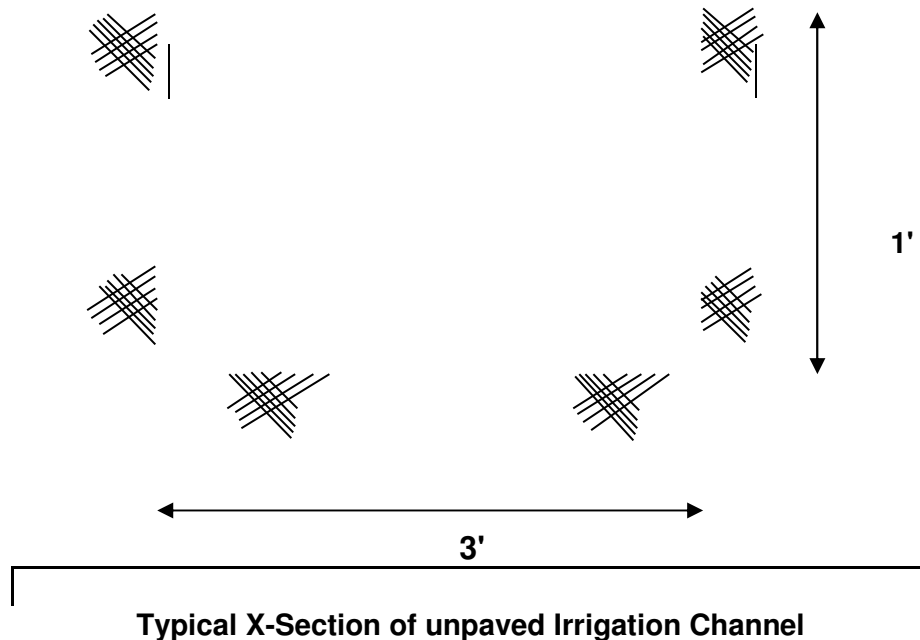
9. CHALLENGES

- 1) Harsh weather:** We started the work in July but due to heavy rains in July & August the work was slowed down. In September there was un-expecting snow falling, even in this year the crops are badly affected. SDO team has arranged the chemicals which helped in plastering and concrete.
- 2) Communication gap:** The communication gap was remained a challenge between the field team and the head office Program team. That's why many times due to no communication Chief Executive and Asst Program Officer have to travel. SDO management has decided to arrange an official Satellite Phone for communication.

10. DESIGN:



Typical X-Section of Channel



Typical X-Section of unpaved Irrigation Channel