COMMUNITY PARTICIPATION IN SHP DEVELOPMENT

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INTRODUCTION

Access to Clean energy is one of the basic human needs. Electricity is one of the cleanest forms of energy at the consumption stage. Electricity has a positive correlation with quality of life and prosperity .In India alone, only 55% of households have access to electricity. Around 80000 villages, still needs to be electrified.

The problem today is both quantative & qualitative. The villages do not get power in sufficient quantity and the quality of power that they get is also very poor. As per the study of Planning Commission of India & UNDP, around 25 % of our country is remote & has inhospitable terrain. These areas have low load density. Laying of long transmission lines, consequent high line losses make extension of the grid and consequent price of electricity very prohibitive. Off grid solutions like wind, solar, tidal & hydropower etc can provide electricity to such areas where the grid cannot reach.

India is a beautiful country, which is capped by the mighty Crown in its North & Northwest i.e. The Great Himalayas. A large number of perennial rivers, small & big flow throughout the year in the Himalayan region. There a number of other rivers in Indian Peninsula & coastal belt. There is sufficient head and discharge to make hydropower a viable option for generating electricity.

Total hydropower potential of about 1,50,000 MW, has been identified in India. Of these around 20000 MW potential exists in small hydropower plants (Upto 25 MW). SHP's can thus be a very important off grid solution to provide clean and uninterrupted power supply to our rural masses. Since hydropower is non polluting, SHP's will not only supply power to rural and remote areas but will also bring about sustainable development in a cost effective way

KEY FACTORS (VARIABLES) FOR THE SUCCESS OF SHP'S

There are certain key factors/variables on which the success of a SHP depends. These are

- **Community Participation**
- Financial Aid
- Technology access
- Cost Factor &
- Government support

SHP Success =Function (Community Participation, Financial Aid, Technology, Cost, Govt Support)

Community participation is a primary variable and rest are secondary variables. If we have meaningful & effective community participation then other factors are automatically taken care of.

Community Participation Defined: In Simple words community participation means active & meaningful involvement of the beneficiaries in

- Project Planning,
- Project Development
- Project Implementation, its operation & maintenance

Communities lead from the

- Inception
- Identification of resources
- Designing
- Construction

Communities Invest

- Labour
- Material
- Cash

100% managed by beneficiary communities

- Operation & maintenance
- Regulations
- Management

HOW COMMUNITY PARTICIPATION CONTRIBUTES TO THE SUCCESS OF THE SHP'S:

Involvement of local people in planning, implementaion, operation & maintenance of the project takes place. When people are consulted and involved in project planning, they develop a bonding with it. They identify themselves closely with the project.

They cooperate wholeheartedly in its implementation. Cost of the project comes down when we employ local labour, utilize community assets like land. Social forces also ensure that more wealthy households bear bulk of the costs.

When the project becomes operational a large number of benefits result due to easy access to electricity. This leads to more community participation & higher number of people gets involved in it with time. This results in achieving economies of scale and reduces the cost of the SHP.

With passage of time beneficiaries start considering the asset as their own. They will properly maintain & operate it. They also pay their electricity bills in time. The SHP thus becomes cost effective in its operation & becomes financially viable.

Local capacity building takes place. As a result of which local manufacturing base develops. In some SHP's the turbines used are made locally. Use of plastic penstocks is done. This leads to production of low cost equipment, indigenization & replication of technology.

BENEFITS OF SUCCESSFUL COMMUNITY PARTICIPATION

It leads to successful implementation and running of the SHP.People get access to electricity that bring about a number of benefits

- Generation is local and consumption is local. There is little wastage of electricity due to transmission losses.
- Earlier people in villages were either unemployed due to lack of employment opportunities in rural areas or they were disguisely employed in agriculture. There has been mass migration to cities and towns. Once the electricity comes, it leads to setting up of local industry and generation of jobs in which villagers can be gainfully employed.
- Children can study in night and hence they can have better education.
- Women do not have to go to far off places to fetch firewood. They are not tired and have lots of time to take up a viable economic activity in the evening like stitching and weaving.
- Reduced use of firewood & kerosene leads to improvement in the quality of air. Incidence of respiratory diseases have come down.
- Safe drinking water for masses by help of pumpsets.
- Better irrigation and higher agriculture productivity.
- Better social cohesion and mixing up of people due to street lightning
- Lowering up of snake bites and crime against women

BARRIERS TO COMMUNITY PARTICIPATION

- Lack of awareness:
- Poor training.
- Lack of institutional support
- Lack of local capacity building
- Technology barrier
- Cost barrier

OVERCOMING BARRIERS TO COMMUNITY PARTICIPATION

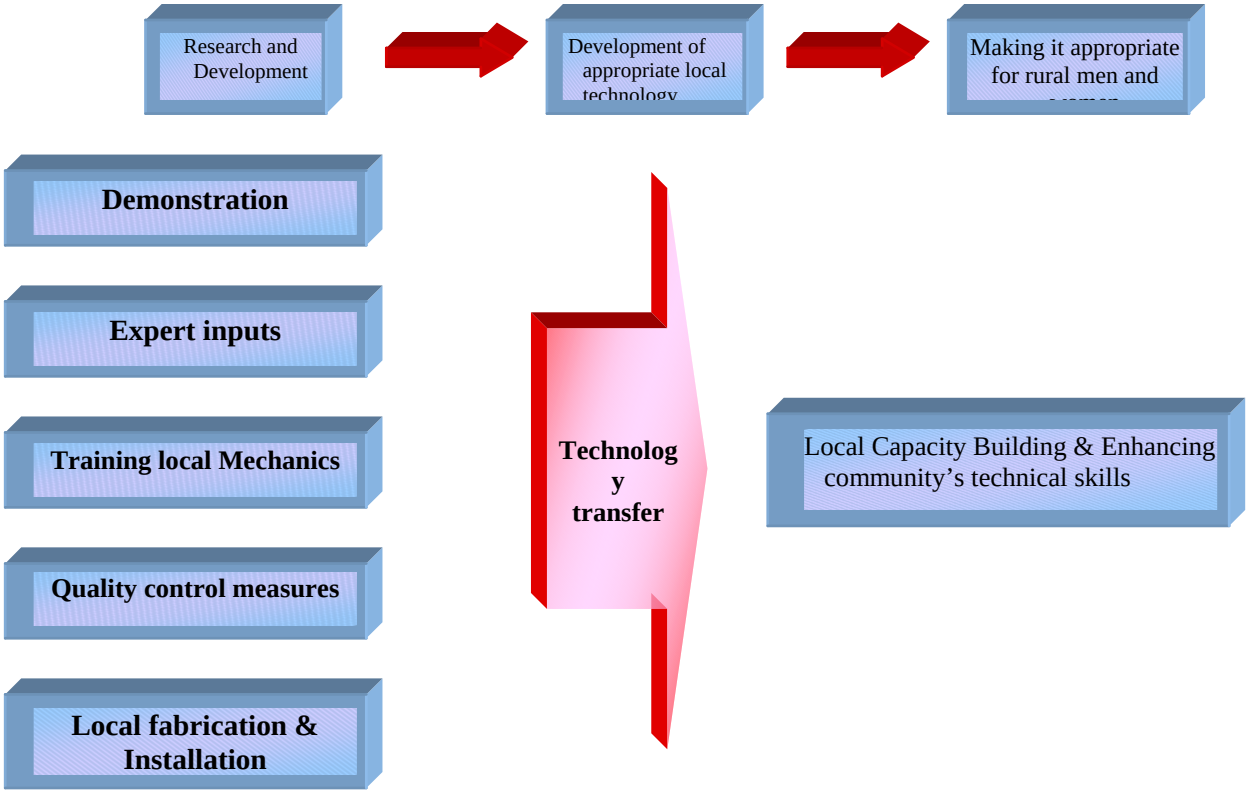
Creating Awareness:

Any development programme can be effective only when people are aware about it and the benefits that will accrue to them as a result of it. We have to use a judicious mix of awareness methods and the benefits have to be explained to local people through local medium and in a language they can easily comprehend. We can use the following methods for generating awareness

- Folk songs.
- Local theatre.
- Door to door contacts & social mobilization by NGO's.
- Use of radio, which is cheap, private & portable.
- Use of vernacular newspaper.
- Use of handouts.
- Use of television.

Overcoming the technology & cost barrier by Local Capacity building & training: There has to be a network of training institutions at grass root levels. For this we have to do extensive R&D and develop a technology that is appropriate for Local conditions. This is followed by demonstration of lab technology in the field and having a trial run to ensure that it can be successfully implemented. For this we can have a small project on a pilot basis.

The next step is local capacity building to bring the technology closer to the people.



OVERCOMING COST BARRIER

The cost can be reduced if the plant, post commissioning is run for a larger percentage of time. If the plant is run for only for domestic lighting, then plant utilization factor is low. These days to overcome cost barrier its used for meeting rural industrial load during day, domestic loads in morning and evening & for energizing farm pumpsets during night. It's also used for grinding agriculture produce and battery charging. All this leads to high plant utilization factor and brings the cost down..

Overcoming Instituonal barriers: These days international institutions like UNIDO, ADB, World bank, ICSHP etc are giving instituonal & financial support to SHP activities. Key activities of these institutions are creating awareness & local capacity building. ICHP & UNIDO operate at global, regional & subregional level. The main regions where they are concentrating are Asia, Africa & Latin America.

CASE STUDY

Thilappaly is a remote village in western Kerala. ocated along a Naranamthode, tributary of Pampa River. It's a forest reserve. The village is isolated & hilly. Most farmers are poor and marginal. They have Small land holdings. Given its isolation, grid power
cannot reach here

Prior to project, use of kerosene & fuel wood was made for lighting. Women and children walked long distances to collect firewood and fetch water. This problem was solved by setting up of a SHP providing around 200 connections. Local capacity building and community participation led to successful planning, implementation, operation & maintenance of the project.

The project is run by establishing a community committee for the project. All consumers called the General body own this SHP. This body elects a nine member executive committee, which manages the system. Three village electricians (local youths) are appointed by the general body. They are paid monthly sum of Rs 1500 each.

This community participation in the planning, implementaion, operation, maintenance & running of SHP has brought about prosperity and overall improvement in quality of life of people. The village panchayat even has a community hall with Television and a community cyber café with LAN &WAN connectivity to district headquarters.

CONCLUSION

If we ensure meaningful & effective community participation, then SHP's can be a very effective means to bring about access to electricity to remotest of areas and we can fulfill cherished dreams of our leaders to provide universal access to electricity to all by 2012.

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