

DEVELOPMENT OF SMALL HYDRO POWER PROJECTS CHALLENGES AND RELATED ISSUES

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KEY PLAYERS

1. Developer
2. State Govt. Policies
3. MNES
4. Financial Institutions
5. Plant/Equipment & Manufactures
6. Consultants/Designers
7. Contractors
8. Administrative Authorities
9. Utilities
10. Local support & Socio-economic issues
11. Hon'ble Electricity Regulatory Commission

ISSUES

Site Allotments : M.O.U.

Surveys

Investigations Geology/Hydrology

Detailed Project Report

Techno Economic Clearance

Implementation Agreements

Power Purchase Agreements

- Period of Agreement
- Tariff
- O&M Expenses
- Water Royalty
- Defaults & Termination
- Deemed Generation
- Third Party Sale
- Captive use
- Wheeling & Banking Charges

Land Transfer Forest, Govt. & Private

Statutory Clearances

- Gram Panchayat
- Pollution Control Board/Environment
- Irrigation & Public Health
- Fisheries
- Wild Life
- Essentiality Certificate

Implementation Schedule**Tendering Process****Financial Closure**

- Interest
- Moratorium Period
- Repayment Period
- Equity requirement

Implementation

- Insurance
- Local Issues
- Public Relations
- Socis economic development
- Grid Connectivity
- Explosive License
- Labour Laws
- Safety measures
- Mobilisation
- Geological Surprises
- Weather risks
- Transportation issues
- Equipment Specifications
- Equipment Warranties
- Grid Connectivity
- Testing Procedures
- Commissioning

Payments**MNES Subsidy & Support****Maintenance****Insurance comprehensive including “LOP”****CASE STUDY – HANUMAN GANGA PROJECT**

While the issues stated above are to be taken for discussion during the seminar, it is extremely important for the State Government that policy on small hydro power development with the effective period for implementation should be without harming the interest of those projects where investments have been done by the developers and the financial institutions on the basis of the old policies. As per the existing norms the procedure for site allotment, respective approvals, agreements, implementation and generation is normally 4 – 5 years and as such the policies must take care of the different projects likely to be at different levels of development. Many States are adopting different procedures for allotment of the project sites but looking in small hydro power sector, to encourage a new generation of entrepreneurship and promoting local companies the project allotments should be done on MOU route as being done by the State of Himachal Pradesh. It is also a good idea to give preference to local State entrepreneurs for projects upto 3-5 MW where the local Cooperative Banks can also play a lead role for the project financing. Since “run of the river” schemes are non-polluting units, for small hydro the Pollution Control Board clearances should be given without demanding

heavy charges. The tariff for small hydro is a most important issue which must be defined clearly after taking approvals from the State Electricity Regulatory Commission as has been done by H.P.Govt. A flat levelized tariff above Rs.2.50 per Kwh is the urgent need for development of small hydro power and if required the tariffs for small hydro power can be given in the slabs upto 5MW, 15MW and above 15 MW. Since the projects are site specific, it is extremely difficult to arrive at an average capital cost and as such no normative value of ceiling can be fixed for the same and it should be left to the developer and the financial institution to look into the viability of the project on a fixed tariff basis as being done by some State Governments.

To take care of many implementation issues stated above, it will be good idea to have a active single window system and clearances are obtained by the Nodal Agencies of the State promoting the small hydro development sector. While implementation agreements are signed, it must be made mandatory for the utility, power distribution/transmission agencies to upgrade their system and grid facilities. Uttaranchal is going to be power surplus in near future should allow export of power through National Grid or State Grid points and the preference for trading licenses should be given to group of small hydro power developers to improve the viability of the project. The plant load factor shall also vary in different streams with inflow of hydrology and thus tariff should not be linked with plant load factor but an average levelized tariff of Rs. 2.50/kwh is best preposition for small hydro power sector.

RECOMMENDATIONS

1. MNES guide lines be accepted on all issues relating to Small Hydro Power Development.
2. Any new Policy on SHP by State Governments should not effect the existing Projects were investment been made by the Developer & Financial Institutions.
3. Single window system for all Govt. Clearance to obtain by the Sate Nodal Agency.
4. Transmission/State Grids be strengthened as per requirement SHP.
5. Hon'ble State Regulatory Commission to bring out separate tariff norms for Small Hydro power sector as costs and OEM expenses have different ratio for different size of Projects.
6. Single rate tariff to be fixed by draft PPA approval from State Regulatory Commission.
7. Financial Institution to consider repayment period of 10 years after construction/moratorium period.
8. For generation in the power surplus states the export of power through national grid be allowed at reasonable cost for meeting demand for different state.
9. Plant equipment suppliers should extend warranty and free service for a minimum period from date of commissioning.
10. Comprehensive Insurance Policies including LOP for SHP's