

# Small Hydro Power Projects – Rate of power purchase

Comments/Suggestions

By

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## Procurement from Renewables ...1

- We understand importance of power procurement from renewables.
  - We would have to incur some additional costs to make them competitive with conventional power in the long term.
    - But incremental costs recovered from consumers should be utilised in the best possible manner.
  - Need for an integrated and holistic approach
- è Unfortunately, the Commission's approach has been ad hoc so far.

## Procurement from Renewables ...2

- Previous orders by MERC giving a preferential treatment to renewables

MERC Order	MW	MU	1st year tariff Rs/kWh	Yearly cost to utilities Rs Cr
Biomass	250	1314	3.04	399
Wind	750	1314	3.50	460
Bagasse co-gen	300	2102	3.05	641
Proposed SHP	200	526	2.82	148
<b>Total</b>	<b>1500</b>	<b>5256</b>	<b>-</b>	<b>1649</b>

- Lack of long term, comprehensive and integrated approach

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## Benchmarking of capital cost ...1

- Limited sample
  - Only 2 for electromechanical (~ 48% of total cost) and 8 for civil works (~ 25% of total cost)
- Cost for higher capacity projects should be significantly lower (GoMWRD tariff proposal pg 12)

Quote

*The cost based tariff structure is sensitive towards capital cost. The present proposal is prepared considering installation of about 2-3 MW. But the same structure shall be valid for the installations up to 5 MW. For installations less than 1 MW, per MW cost shall be on higher side and on the contrary for installation more than 5 MW it shall be on lower side. Hence, such cases may be dealt with on individual basis.*

Unquote

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Prayas, Pune - Presentation on SHP tariff proposal

## Benchmarking of capital cost ...2

- Impact of MNES subsidy
  - GoMWRD and MERC tariff model do not account for correct subsidy support.
  - Other concessions such as duty exemptions etc
- As a result
  - Higher capacity projects would accrue excessive profits

## Tariff Design ...1

- Heavily front loaded tariff proposed by GoMWRD
  - Should be discouraged for optimum performance for long term
  - Increases risk of inadequate generation in later years
  - Tariff approach proposed by the Commission avoids these problems and hence is desirable

## Tariff Design ...2

- Incentivising excess generation
  - Normative CUF should be determined by the Commission and used for tariff computation
  - If units in excess of normative CUF are compensated at full tariff, every 1% increase in CUF means 2% increase in profitability
  - è A nominal incentive rate for all units generated beyond normative CUF (say, 25p/kWh)

## Tariff Design ...3

- Tariff adopted by other SERCs for SHP

Sr. No.	SERC	Tariff (Rs/kWh)	Remark
1.	KERC	2.8	Flat rate for 10 years
2.	APERC	2.3	Levelised value for 10 years excluding water royalty and IT

## Other Issues

- Real-time online metering
  - Addition of more than 50-60 SHPs in remote area
  - Difficult to monitor individually
  - Real-time metering with daily updates on website to be an integral part of the project
  - No additional burden owing to low cost of metering equipments
  - Essential measure to enhance transparency and accountability

## Prayers ...1

1. Make two different tariff structures
  - 0 – 5 MW and 5 – 25 MW
  - Tariff for higher capacity projects should be significantly lower owing to lower cost
2. Do not pay full generation tariff for excess generation beyond normative CUF
  - A nominal incentive rate (say, 25p/kWh) may be paid for excess generation

## Prayers ...2

3. Front loaded tariff as proposed by GoMWRD should be disallowed.
  - Instead, a flat rate tariff or sensibly back loaded tariff should be incorporated.
4. Online real-time metering and communication facilities should be an integral part of the project
  - Essential measure to enhance transparency and accountability.