

HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION
(Determination of Generic Levelised Tariffs for Small Hydroelectric Projects under
Regulation 13 of HPERC (Promotion of Generation from Renewable Energy Sources Terms
and Conditions for Tariff Determination) Regulations 2012 Dated: 20-05-2013

Sl. No.	Description	Summary												
1.	Title	HPERC -Determination of Generic Levelised Tariffs for Small Hydroelectric Projects under Regulation 13 of HPERC (Promotion of Generation from Renewable Energy Sources Terms and Conditions for Tariff Determination) Regulations 2012 Dated: 20-05-2013												
2.	Generic Levelised Tariff	HPERC(The levelised tariffs and associated terms and conditions for various categories of small hydroelectric projects in respect of the control period (18-12-2012 to 31-3-2017) have been computed in accordance with RE Tariff Regulations 12.												
3.	Useful Life	40 years from the date of commencement of operation												
4.	Control Period or Review Period	From 18-12-2012 to 31-03-2017												
5.	Tariff Period	40 years for generic levelised tariff												
6.	Tariff Structure	Single part levelised tariff comprising of fixed Cost components: (a) Return on equity (b) Interest on loan capital (c) Depreciation (d) Interest on Working Capital (e) Operation and maintenance expenses.												
7.	Levelised Tariff	Generic tariff on levelised basis												
8.	Debt Equity Ratio	70:30												
9.	Capital Cost	<table border="1"> <thead> <tr> <th>Category</th> <th>Category of SHP</th> <th>Rs. in lakh/MW</th> </tr> </thead> <tbody> <tr> <td>(i)</td> <td>Above 100 kW to 2 MW Capacity</td> <td>780</td> </tr> <tr> <td>(ii)</td> <td>Above 2 MW to 5 MW Capacity</td> <td>750</td> </tr> <tr> <td>(iii)</td> <td>Above 5 MW to 25 MW Capacity</td> <td>700</td> </tr> </tbody> </table>	Category	Category of SHP	Rs. in lakh/MW	(i)	Above 100 kW to 2 MW Capacity	780	(ii)	Above 2 MW to 5 MW Capacity	750	(iii)	Above 5 MW to 25 MW Capacity	700
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10	Return on Equity	On the base of 30% of normative cost: (a) 19% per annum for first 10 years (b) 22% per annum from 11 th year onwards												
11	Interest on Loan	Tenure of loan 12 years Average of SBI Base rate (s) prevalent during a period of 6 months preceding the date of commencement of these regulations plus 300 basis points shall be considered as normative interest rate. For more Details Refer Regulations												
12	Interest Rate	12.875% (3% above average SBI base rate)												
13	Depreciation	Depreciation shall be worked out as under: (a) Capital Cost (for generic tariff) or the Capital Cost of the project admitted by the Commission (for project specific tariff). (b) Salvage value 10%, maximum depreciation 90% of capital cost of the asset. (c) Depreciation shall be based on "Differential Depreciation Approach", Depreciation @ 5.83% p.a. till loan is repaid. Balance depreciation to												

		<p>be spread over the residual useful life of the project on straight line method. Depreciation shall be chargeable from 1st year of operation.</p>												
14	Interest on Working Capital	<p>Working Capital Comprises (a) O&M expenses for one month (b) Receivables equivalent to 2 months of energy charges (c) Maintenance spares @ 15% of O&M expenses. The interest on working capital has been considered at average interest rate equivalent of SBI Base Rate(s) prevalent during the period of 6 months preceding the date of commencement of RE Tariff Regulations, plus 350 basis points. The annual rate of interest has been computed as 13.375%</p>												
15	O&M Expenses	<p>Normative O&M expenses for the first year of the tariff period has been computed as below. (i) above 100 kW to 2 MW Capacity - Rs.25 lakh/ MW (ii) above 2 MW to 5 MW Capacity – Rs.22 lakh / MW (iii) Above 5 MW to 25 MW Capacity – Rs.18 lakh/ MW O&M Expenses to be escalated @ 5.72% p.a. over the tariff period.</p>												
16	Subsidy or Incentive or grant/ budgetary by Centre/State Govt.	<p>Following MNRE subsidy is payable to SHPs in private sector.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Areas</th> <th>Upto 1000 kW</th> <th>Above 1 MW & upto 25 MW</th> </tr> </thead> <tbody> <tr> <td>N.E. States, J&K, H.P. & Uttrakhand (Special Category States)</td> <td>Rs.20,000 per kW</td> <td>Rs.2.00 crores for 1st MW + Rs. 30 lakh for each additional MW</td> </tr> </tbody> </table>	Areas	Upto 1000 kW	Above 1 MW & upto 25 MW	N.E. States, J&K, H.P. & Uttrakhand (Special Category States)	Rs.20,000 per kW	Rs.2.00 crores for 1 st MW + Rs. 30 lakh for each additional MW						
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17	Normative Net Saleable Energy	<p>The annual normative net salable energy at the inter connection point has been computed as under: (i) CUF 55% for all SHPs (ii) Normative auxiliary consumption and transformation losses – 0.5% of gross generation (iii) Energy losses in project line-0.7% of net generation</p>												
18	Free Power (Energy) Structure and Adjustment in Tariff for Variations	<p>The free power energy to be taken into account for any part of the tariff period to not exceed 13% which includes 12% free power to the Home State and 1% for local area development fund If free power is revised, the generic levelised tariff shall be reworked. Generic levelised tariffs for various categories of SHPs have been computed by accounting for free energy, as per following structure</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>S.No.</th> <th>Category of Small Hydro Project</th> <th>Free Power Structure</th> </tr> </thead> <tbody> <tr> <td>(I)</td> <td>Above 100 kW to 2 MW capacity</td> <td>7% for first 12years and 13% for the remaining 28 years.</td> </tr> <tr> <td>(II)</td> <td>Above 2 MW to 5 MW capacity</td> <td>7% for first 12years and 13% for the remaining 28 years.</td> </tr> <tr> <td>(III)</td> <td>Above 5 MW to 25 MW capacity</td> <td>13% for the entire tariff period of 40 years.</td> </tr> </tbody> </table> <p>For more Details refer Regulations</p>	S.No.	Category of Small Hydro Project	Free Power Structure	(I)	Above 100 kW to 2 MW capacity	7% for first 12years and 13% for the remaining 28 years.	(II)	Above 2 MW to 5 MW capacity	7% for first 12years and 13% for the remaining 28 years.	(III)	Above 5 MW to 25 MW capacity	13% for the entire tariff period of 40 years.
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19	Discount Factor	10.58%																		
20	Accelerated Depreciation Benefit	The commission shall determine two generic levelised tariffs or project specific levelised tariff one by considering accelerated depreciation and the other without it and the tariff to any RE generator shall be applicable as per Regulations For Details Refer Regulations																		
21	Generic Levelised Tariff and Associated Terms and Conditions	<p>(A) The Generic Levelised Tariffs for various categories of SHPs shall be as under:</p> <table border="1"> <thead> <tr> <th rowspan="2">Category</th> <th rowspan="2">Capacity of SHP</th> <th colspan="2">Generic levelised tariff in Rs./kWh of net salable energy</th> </tr> <tr> <th>Without accelerated depreciation</th> <th>With accelerated depreciation</th> </tr> </thead> <tbody> <tr> <td>(I)</td> <td>Above 100 kW to 2 MW</td> <td>3.34</td> <td>3.04</td> </tr> <tr> <td>(II)</td> <td>Above to 2 MW to 5 MW</td> <td>3.27</td> <td>2.98</td> </tr> <tr> <td>(III)</td> <td>Above to 5 MW to 25 MW</td> <td>3.17</td> <td>2.89</td> </tr> </tbody> </table> <p>(B) The tariff applicable as per 'A' above shall be subject to adjustments as applicable for relevant category of SHPs namely</p> <ul style="list-style-type: none"> (i) Adjustment on account of differential rate of capital subsidy and grants, budgetary support and Generation Based Incentives. (ii) Variation in free power structure – The above tariffs are subject to variation in free power structure as per the regulations. (iii) Tariff shall be subject to the RE Tariff Regulations 2012 and the order as may be issued by the Commission there under. 	Category	Capacity of SHP	Generic levelised tariff in Rs./kWh of net salable energy		Without accelerated depreciation	With accelerated depreciation	(I)	Above 100 kW to 2 MW	3.34	3.04	(II)	Above to 2 MW to 5 MW	3.27	2.98	(III)	Above to 5 MW to 25 MW	3.17	2.89
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22	Computation for Generic Levelised Tariff	The detailed computations for generic levelised tariff for SHPs under categories (I,II,III) as well as illustrations thereof are as per Appendices A,B,& C respectively in the Regulations.																		