

COST BENEFIT ANALYSIS

The proposed project will be implemented by the existing Engineers of the PHED, Govt. of Manipur. The existing Engineering organization chart of the department is enclosed as Annexure. Once the said project is commissioned, the department is plan to provide about 20,000 individual domestic connections and about 20 connections for bulk supplies. The operation and maintenance of the said project once implemented will be made from the proposed revenue collecting from the consumers extended water supply from the said project by enhancing the existing tariff without discriminating the poor income group as well. The existing water tariff and propose water tariff (after implementation of the project) are enclosed as annexure. Based on this tariff, calculation of the economic sustainability of the project on the following staff pattern is shown as below.

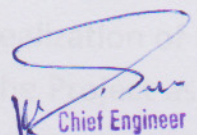
The Plant will be operated round the clock by dividing into three shifts (i) Morning shift, (ii) Evening shift and (iii) Night shift. Each shift of the treatment plant will be having 4 operators each. Three operators will be posted at the intake arrangement at Dam site (one each for the three shifts) . One Assistant Engineer and two Section Officers will be the overall in charge. In addition to supervisor two lab assistant, 2 Chowkidar and 2 Watchman are also to be engaged.

Economic Viability Calculation

Sl.N o.	Particulars	Qty		Monthly rate	Yearly Rate	Amount
1	AE	1		Rs. 35,000	Rs.420,000	Rs. 420,000
2	SO	2		Rs. 30,000	Rs.720,000	Rs. 720,000
3	Intake Staff					
	a) Morning shift	2		Rs. 17,000	Rs.408,000	Rs.408,000
	b) Evening shift	2		Rs. 17,000	Rs.408,000	Rs.408,000
	c) Night shift	2		Rs. 17,000	Rs.408,000	Rs.408,000
	d) Chowkidar	1		Rs. 15,000	Rs.180,000	Rs.180,000
4	Treatment Plant Staff					
	a) Morning shift	4		Rs. 17,000	Rs.816,000	Rs.816,000
	b) Evening shift	4		Rs. 17,000	Rs.816,000	Rs.816,000
	c) Night shift	4		Rs. 17,000	Rs.816,000	Rs.816,000
5	Supervisor	2		Rs. 22,000	Rs.528,000	Rs.528,000
6	Lab Assistant	2		Rs. 22,000	Rs.528,000	Rs.528,000
7	Helper	10		Rs. 15,000	Rs.1,800,000	Rs.1,800,000
8	Chowkidar	2		Rs. 15,000	Rs.360,000	Rs.360,000
9	Watchman	2		Rs. 15,000	Rs.360,000	Rs.360,000

Sl. No	Particulars	Qty		Monthly rate	Yearly Rate	Amount
10	Chemical					
	a) Lime	110	MT per year	Rs. 10,800 Per MT		Rs.1,188,000
	b) Alum	329	MT per year	Rs. 13,400 Per MT		Rs.4,408,600
	c) Bleaching Powder	50	MT per year	Rs. 28,350 Per MT		Rs.1,417,500
11	Electric Bill	12	Month	Rs.196,244		Rs.2,354,922
						Rs.17,937,022
12	Revenue					
	a) Household connection	2000 0	connection	Rs. 150	Rs.36,000,000	Rs.36,000,000
	b) Bulk supply	20	connection	Rs. 1,100	Rs.264,000	Rs.264,000
						Rs.36,264,000
					Saving	Rs.18,326,978

In this connection, the undersigned hereby submit that Public Health Engineering Department Manipur will undertake to bear the cost (Net present value) against the forest land to be diverted for the purpose the guide lines adopted by the Forest Department /MOEF.


 Chief Engineer
 Public Health Engineering Department
 Government of Manipur

(Mr. Sunil Singh)
 for Chief Engineer, PHED
 Govt. of Manipur
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