

JOINT ELECTRICITY REGULATORY COMMISSION FOR MANIPUR AND MIZORAM
TBL Bhawan, 2nd to 5th Floor, Peter's Street,
E-18, Khatla Aizawl-796001, Mizoram

Petition No.02 of 2016

In the matter of

Determination of Tariff for Rooftop Solar Plants in Manipur

And

Manipur Renewable energy Development Agency (hereinafter referred to as "MANIREDA")

Present

Mr. R.K. Kishore Singh

Chairperson

ORDER

1. Background

1.1 The Manipur Renewable Energy Development Agency (here in after referred to as "MANIREDA" or Petitioner has filed Petition on 25.05.2016, under Section 62 and Section 86 (i) of Electricity Act, 2003 read with Section 8 of Joint Electricity Regulatory Commission for Manipur and Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010 dated 31.05.2010 and the Joint Electricity Regulatory Commission for Manipur and Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) (First Amendment Regulation, 2014) dated 08.08.2014 for determination of tariff for Solar Roof Top Plants of capacity 1 kW to 500 kW.

The Commission on preliminary analysis admitted the Petition on 19.07.2016.

1.2 Manipur Grid Interactive Rooftop Solar Photo-voltaic (SPV) Power Policy 2014

1.2.1 Government of Manipur has notified "Manipur Grid Interactive Rooftop Solar Photovoltaic (SPV) Power Policy 2014" according to which the eligible consumers of

the distribution licensee, who are having sufficient space on the rooftop of their buildings, shall be entitled to install solar rooftop projects either under gross metering arrangements or net metering arrangement.

Provided that eligible consumers availing net metering shall not be allowed to apply for gross metering with the same premises.

1.2.2 Third party is also eligible for installation of rooftop power plants by entering into a lease agreement with the consumer of the premises.

1.2.3 Applicable Subsidy

The Ministry of New and Renewable Energy (MNRE) GOI is providing Central Financial Assistance (CFA) upto 30% of benchmark cost for all types of residential buildings for General categories states and upto 70% for North Eastern states. Similar CFA is also available for schools, health institutions including municipal colleges and hospitals, universities educational institutions and other social sectors such as welfare homes, NGOs, training institutions, orphanages, etc.

No CFA is applicable for Govt./PSU buildings, Govt. institutions, private / commercial / industrial buildings.

1.2.4 Capacity of Solar Rooftop project

The eligible consumers / third party shall install project of minimum capacity of 1 kW upto a maximum of 500 kW with/without battery backup support.

1.2.5 Metering system

All the equipment to be installed like solar PV panels, inverters, synchronizers, MPPT, batteries, transformers, cables, junction boxes, etc shall be as per specified Indian / IEC standards. MSPDCL shall install / seal tested bidirectional (export / import) or separate export and import energy meters for all solar PV projects. The same could be purchased by plant owner or provided by MSPDCL at pre-notified rates. The meters should be as per CEA and BIS specifications only.

1.3 Manipur Renewable Energy Development Agency

Manipur Renewable Energy Development Agency (MANIREDA) is an autonomous Government Agency under the department of power, Government of Manipur setup for promoting renewable energy sources in the State. MANIREDA has filed the Petition with regard to determining tariffs for solar rooftop projects with capacity of 1 kW to 500 kW in the State.

1.4 Commission Order determining Tariff for Solar projects

The Commission issued the order dated 05.01.2015 for determination of generic levelised generation tariff for various renewable energy sources including Solar PV for FY 2014-15 under Regulation 8 of JERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2010 dated 31.05.2010 and first amendment to the Regulation, 2014 dated 05.08.2014. These Regulations provide for terms and conditions and procedure including various technical norms for determination of tariff for various categories of Renewable Energy Generating Stations including Solar P.V.

The tariff determination in the order is for megawatt size solar power PV projects.

1.5 Current Petition of MANIREDA

Since the tariff determined by the Commission in its order dated 5th January, 2015 is for megawatt size plant and the norms for determination of tariff for megawatt size solar projects are different from norms for smaller size (kW Scale) solar rooftop projects, MANIREDA has filed the current petition for determination of tariff for 1 kW to 500 kW roof top solar PV projects.

1.6 Admission of the Current Petition

Under the circumstances explained by MANIREDA the Commission admitted the Petition for determination of generic tariff for 1 KW to 500 KW solar rooftop projects and directed the MANIREDA to publish its application in an abridged form to ensure public participation.

The public notice inviting objections/suggestions from its stakeholder on the Petition filed by it was published by MANIREDA in the following newspapers.

Sl. No.	Name of the Newspaper	Language	Date of Publication
1	HUIYENLAMPAO	Manipuri	27.07.2016
2	The Sangari Express	English	27.07.2016

The Petitioner has also placed the notice on the website inviting objections/suggestions on its Petition.

The interested parties/stakeholders were asked to file their objections/suggestions within twenty days from the date of publication of the notice.

The MANIREDA/Commission received the objections/suggestions from two persons viz. Mr.Radha Krishna Adhikari and Mr. The ThouchomJotinsingh.

1.7 Public Hearing Process

The Commission has examined the objections/suggestions received and fixed the date for public hearing on 26.09.2016 at Hotel Classic Regency Hall, Imphal and published the date of public hearing in the following newspapers.

Sl. No.	Name of NEWS paper	Language	Date of Publication
1	Poknamphar	Manipuri	23.09.2016
2	IMPHAL Express	English	26.09.2016

A communication was also sent to the objectors to take part in the Public hearing process for presenting their views in person before the Commission.

The names of those who filed their objections and the objectors who participated in the public hearing for presenting their objections are given in Annexure -I.

A short note on the main issues raised by the objectors in their written submissions and also in the public hearing in respect of the Petition along with response of MANIREDA, reply of MSPDCL and the Commission's Views on the responses are briefly given in **Chapter – 3.**

1.8 Order

In exercise of the power vested under section 62 read with section 64 of the Act and Regulation 8 of JERC (M&M) (Terms and Conditions for Tariff Determination from Renewable Energy Sources), Regulations 2010 and other enabling provisions in the behalf the Commission issues the order determining generic tariff for solar roof top projects of capacity of 1 kW to 8kW, above 8kW to 50 kW, above 50kW to 150 kW, above 150kW to 500kW and above 500 kW upto 1 MW in the State of Manipur.

1.9 Contents of the Order

This order is divided into four Chapters as detailed below:

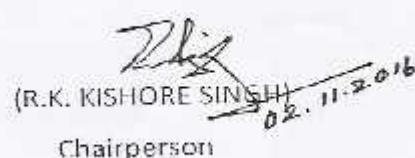
The **First Chapter** provides back ground of the Petitioner, admission of the Petition and details of Public Hearing Process.

The **Second Chapter** provides summary of MANIREDA Petition

The **Third Chapter** provides Brief account of Public Hearing Process, including objections raised by Stakeholders, response of MANIREDA, reply of MSPDCL and Commission's views on the same.

The **Fourth Chapter** provides Analysis of the Petition and determination of generic tariff for solar roof top installations of capacity 1 kW to 500 kW and above 500 kW upto 1 MW.

- 1.10** The MANIREDA should ensure implementation of the order from the effective date after issuance of a public notice in such font size which is clearly visible in two daily newspapers having wide circulation in the state within a week and compliance of the same shall be submitted to the Commission
- 1.11** This order shall be effective with immediate effect and shall remain inforce till next Rooftop Solar tariff order is issued by the Commission.



(R.K. KISHORE SINGH)
02.11.2016
Chairperson

Place:Aizawl

Date: 02.11.2016

CHAPTER 2: Summary of Tariff Proposal for Rooftop solar plants of capacity 1kW to 500 kW

2.1 Tariff proposal

The MANIREDA has proposed the levelised Tariff for solar rooftop projects of capacity 1 kW to 500 kW as detailed in the Table below:

Table 2.1: Tariff for solar rooftop projects proposed by MANIREDA

Sl. No.	Category	Levelised Tariff (Rs./kWh)
1	Without subsidy	9.50
2	With 70% subsidy	4.41

The worksheet for the above assumed Tariff is as detailed in the Table below:

Table 2.2: Worksheet

Sl. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Tariff Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	kW	1
			Capacity Utilization Factor	%	19
			Deration Factor	%	0.00
			Useful life	Years	25
2	Project Cost	CapitalCost/MW	Benchmark cost by MNRE	Rs./kW	75000
			Cost without subsidy benefit	Rs./kW	82000
			Cost considering 70% subsidy on 75000/-	Rs./kW	29500
3	Sources of Fund		Tariff Period	Years	25
			Debt: Equity		
			Debt	%	70
			Equity	%	30
			Total Debt amount	Rs.	20650
			Total Equity amount	Rs.	8850
			Debt Component		
			Loan amount	Rs.	20650
			Moratorium Period	Years	0
			Repayment Period (incl. moratorium)	Years	12
			Interest Rate	%	12.76
			Equity Component		
			Equity amount	Rs.	8850
			Return on Equity for first 10 years	% p.a.	20.34
			RoE period	Years	10
			Return on Equity 11 th year onwards	% p.a.	24.47
			Weighted avg. of RoE	%	22.82

Sl. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Tariff Parameter
			Discount Rate	%	10.64
4	Financial Assumptions	<u>Fiscal Assumptions</u>			
			Income tax (from 11 th to 20 th)	%	34.61
			MAT Rate (for first year)	%	21.34
			80 IA benefits	Yes/No	Yes
		<u>Depreciation</u>			
			Depreciation Rate for first 12 years	%	5.83
			Depreciation Rate 13 th year onwards	%	1.54
5	Working capital				
		O&M charges		Months	1
		Receivable from debtors		Months	2
		Maintenance and spares		%	15.00
		Interest on Working Capital		%	13.26
6	Operation & Maintenance				
		Power plant (First year)		Rs.	1640
		Total O&M Expenses Escalation		%	5.72

2.2 Prayer

The Petitioner has prayed the following to the Commission:

- 1) To kindly admit this Petition and grant an opportunity in person before Hon'ble Commission during hearing on the above matter
- 2) To determine solar rooftop tariff for projects size from 1 kW to 500 kW on the power injected into the grid for FY 2016-17, as per cost plus basis regime as outlined in this Petition.
- 3) To kindly exempt payment of petition filing fees
- 4) To condone any inadvertent omissions/ errors/ short comings and permit Petitioner to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date.

CHAPTER 3: Brief outline of objections raised, response of MANIREDA and the Commission's Views

3.1 Introduction

On admitting the petition of MANIREDA for fixation of levilised tariff for solar rooftop power plants, the Commission directed the MANIREDA to make available the copies of petition to general public, post the petition on their website and also publish the same in newspapers in abridged form and invite comments / suggestions / objections from them. Two written objections were received from

1. Sri. Radha Krishna Adhikari and
2. Sri. ThokchomJotin Singh

3.2 Public Hearing

In order to ensure transparency in the process of determination of levislised tariff, as envisaged in the electricity act 2003, public hearing was held at Hotel Classic Regency hall, Imphal on 29.09.2016 from 1 Pm to 3 PM. During the public hearing those who submitted objections in writing and the participants from general public were given an opportunity to offer their views on the petition filed by MANIREDA for fixation of levelised tariff for solar rooftop plants in Manipur state. The list of stake holders and officers who attended the public hearing is given in Annexure I. the officers of MANIREDA who attended the public hearing have responded on the issues raised by the objectors.

3.3 Proceedings of public hearing

Objection : 1 & 2

Name of the Objectors

1. Sri. Radha Krishna Adhikari and
2. Sri. ThokchomJotin Singh

The submission is as follows:-

Levelised tariff plan in the category of "With Subsidy" (upto 70% of benchmark cost of Rs.75, 000/-KW) is very low. The tariff should be increased to Rs, 6.0/kWh or

Rs.5.42/kWh so that people do not get problem and difficulties in repaying bank loans.

The basis of claims is given below:

1. Per Unit (KW) rate = Rs. 4.41
2. As per solar installation of Manipur MNRE 1 KW will generate 4.1 units per day.
i.e, $4.1 \times 30 \times 4.41 = 542.43$ rupees per month.
3. Lowest bidder in the empanelment of channel partner rate is 99000 per KW.
Out of which 70% of 75000(base rate of MNRE) i.e. Rs. 52500/- is the subsidy. So customer have to pay Rs. 46500.
4. Taking into Account the customer has taken loan of rupees 46500 at 12% interest from bank for 10 years. From SBI EMI calculator customer has to pay Rs. 667.14 per month. Customer also has to pay EMI of 540.341(equal to power generated by 1 KW plant in a month) if he takes loan for 198 months (16.5 Years).
5. To get his investment back in 10 years X (KW rate) \times 4.1x30=667.14
 $123x = 667.14$ per month
 $x = 667.14/123 = 5.4239$

Thus to get 10% rate of return per annum the rate should be rupees 5.4239 per unit.

6. Another 50 paisa for load shedding and outage etc. Since there is an average of 1-2 hours load shedding per day in Imphal.
7. There should also be compensation from Power Department for load shedding in day time.
8. Investor may not last 25 years due to various factors.
9. Power Department will not be at lost in long run. In next 5 years unit rate will go up to 8 – 10 Rupees. But the agreement for Rs.5.4239 /KW will be for 25 years.

Objection : 3

Name of the Objector: Sri. ThokchomSuraj Singh

The submission during Public hearing is as follows:

1. Public Sector Banks in Manipur are not ready to finance the solar roof systems.
2. Socio Economic Condition of the people of Manipur is poor.

3. Return on investment from Solar Rooftop is at par with investment rates at the Banks & Post offices.

Minister of finance, Department of Financial service in its letter dated November 19, 2014 has advised the CMDs of all public sector banks to support financing of solar roof top systems as a part of home loan. RBI also, in its letter dated April 23, 2015 has informed all the scheduled commercial banks that renewable energy has been identified as a priority sector lending.

Banks have been advised to support and promote financing of solar roof top systems. Banks should also focus in priority sector lending where renewable energy i.e. solar energy is also included. Banks in Manipur are not ready to cooperate if any house owner approaches them for financing of solar rooftop systems although they have been provided advisory and necessary instructions.

Secondly, I want to say that the report of the Expert Group to measure poverty headed by C. Rangarajan submitted to the Government in June 2014 says Manipur has Second highest proportion of poor people below poverty line at 46.7%.

Thirdly, I want to place a sample calculation. Let us consider a 2KW solar rooftop systems.

System Costs (Rs.)	Subsidy available (Rs.)	Beneficiary Contribution (Rs.)	Unit/day	Unit/Month	Levelised Tariff (Rs.)	Revenue /month(Rs.)
240000	105500	135000	06	180	4.41	793

This beneficiary contribution if Rs. 135000/- if invested in banks @7% interest per annum will give Rs. 787/- per month. Similarly, if this amount Rs. 135000/- is invested in post office @ 7.9% interest per annum will give Rs. 889/- per month.

The revenue generated per month from solar rooftop systems and the revenue calculated per month from the banks and the post offices interest rates are in the same range.

So, the levelised tariff @Rs. 4.41/- is not attractive and viable considering all the above points. I am suggesting the generic levelised tariff at Rs. 6/-(Six).

Objection : 4

Name of the Objector: M/s Mangal sustainable solutions (P) Ltd

The submission is as follows:

Higher Capital Costs:

The transportation cost for materials to Manipur is very high, because of the distance from the manufacturers of the components. This results in much higher capital cost for rooftop solar projects, when compared to other states. The rates calculated by MANIREDA, that of Rs. 4.41 &Rs. 9.50, have been arrived at by assuming the cost of Rs. 82/Wp to be ideal, whereas the lowest price bid from among the RESCO companies stood at Rs. 99/Wp. Request your kind office to take note of this pricing, to ensure that customers get positive payback on their investment on rooftop solar in a reasonable time frame.

Less Solar Irradiance:

In Manipur, the solar irradiance is also lesser than most other states. This is a major factor, when coupled with the fact that Manipur sees many cloudy and rainy days throughout the year, that results in lesser power generated per installed capacity when compared to other states like Madhya Pradesh, Karnataka, Gujarat, Maharashtra, Rajasthan, etc. this means, the payback period for solar installations in our state will be significantly longer when compared to other states.

Finance cost for solar rooftop:

Most customers will try to get bank finance for the solar rooftop installations at their premises and the average interest for the same will be about 12%. This is also another added cost that should also be accounted for, over and above the actual project cost.

Power cuts by DISCOMs:

Solar rooftop installation doesn't generate any revenue for the customer in case there is a power cut from the DISCOM. This is a loss for the customer, because of no

fault of theirs, and it further increases the payback time for the rooftop solar installations.

Inflation:

The savings/return expected from the investment on the rooftop project should also look at the earnings that inflation during the payback period will offset.

Socio Economic Conditions in Manipur:

Manipur suffers from frequent bands and blockades, which also increases the cost and time for installation of solar rooftop projects and the same impacts the RESCOs as well as end customers negatively. I request your kind office to please consider this very important, Manipur specific, factor as well.

I would like to state that customers will only go for rooftop solar only if it is seen as a good investment for them, especially when compared to other investment options. The existing feedback tariffs worked out by assuming a price of Rs. 82/Wp is certainly not very attractive to potential customers, because of the reasons shared above.

To ensure that MANIREDA, along with the RESCOs, meet the target by the PMO and the MNRE for rooftop installations in the state, we have to ensure widespread adoption of solar rooftop projects, which seems almost impossible without a more reasonable tariff when compared to Rs. 4.41/kWh and Rs. 9.50/kWh, for with and without Subsidy respectively.

Therefore, through this submission, I humble request your kind office to please look into this matter and arrive at a feed-in tariff for solar rooftop projects in Manipur, which will help popularise solar rooftop installations in Manipur.

Response of MANIREDA:

The prima focus concern raised by the objectors is against the benchmark capital cost of Rs. 82000/kW proposed in the petition. We would like to humbly submit that we had filed the petition after benchmarking the capital cost approved by other

Regulatory Commissions and incorporating an extra burden owing to transportation cost.

However, subsequent to filing the petition (on 17th May 2016), MANIREDA had conducted a national level tender process (last date of submission was 11th July, 2016) for empanelment of channel partners for setting up solar rooftop systems. As part of the evaluation MANIREDA received eight (8) technically qualified bids from interested channel partners. The lowest capital cost bid of Rs. 99000/kW for solar rooftop capacity sizes from 1 kW to 5 kW was discovered as part of the empanelment process.

Considering the fact that nearly 80% of the load in Manipur in the consumer category of 1kW to 5 kW, there is need to especially promote solar rooftops within these capacity sizes.

In view of the above, MANIREDA would like to submit that tariff may be determined under two separate categories i.e., from 1kW to 5 kW at a benchmark cost of Rs. 99000/kW and more than 5 kW with a benchmark cost of Rs. 82000/kW as proposed under our petition.

Concurrence of MSPDCL:

MSPDCL who will finally purchase solar rooftop power has given concurrence to the proposal made by MANIREDA. On the issues raised by M/s Mangal Sustainable Solutions (P) Ltd during the public hearing related to possible difficulties of injecting solar energy into the grid if distribution network is non-functional nor healthy due to rain/storm etc., the MSPDCL has stated that the difficulties of injection of solar energy into the grid arises depending on two factors:

- i. Wide voltage fluctuation.
- ii. No power in the grid due to planned or unplanned breakdowns.

In both the cases above DISCOM will try to increase the health of the Distribution by Upgrading the Transmission / Distribution Capacity and by strengthening the Infrastructure, restricting to unavoidable plan / unplanned shutdowns etc.

Commissions Observations:

Out of the four objectors, two objectors have requested to fix the tariff at Rs. 6/kWh and one objector requested for a tariff of Rs. 5.42/kWh while the fourth objector requested a reasonable tariff.

Chapter 4: Analysis of Capital Cost and Determination of Levelised Tariff for Solar Roof Top Plants

4.1 Analysis and Decisions

The levelised tariff for Rooftop Solar PV Projects is discussed below:

4.2 Capital Cost

Petitioner's Submission

The Petitioner has submitted that in the Tariff Order dated 5th January, 2015, the Commission had approved a capital cost of Rs 691 lakhs/MW for solar PV projects in the state to be commissioned in FY 2014-15. This capital cost was fixed in line with capital cost approved for solar PV projects, by CERC in generic tariff Order for FY 2014-15. However, the approved capital cost is not appropriate to the kilowatt-scale rooftop projects in the state. One of the major differences affecting the normalized cost of kilowatt-scale photovoltaic power plants compared to megawatt-scale plants is the cost of inverters and other equipment and accessories which are higher than comparable cost for MW size solar projects. Therefore, the capital cost approved by the Commission does not represent the capital cost for kW size solar rooftop projects. Besides, with regard to the approachability, Manipur is situated in a difficult terrain and bringing plant and machinery for smaller project would be even costlier, the fact which need to be taken into account while considering capital cost of the solar projects in the Manipur.

The Petitioner has also submitted that the weighted average capital cost discovered through bidding undertaken by Solar Energy Corporation of India for implementation of 24 MW grid connected rooftop solar PV projects (Phase IV-Part 2-Part A, dated 16th July 2015) for various states in the eastern region is as tabulated below:

Regulatory Commission	Capacity in kW	Weighted average Unit rate (Rs/Wp)
West Bengal	375	75
Jharkhand	187.50	79.80
Odisha	375	74.60

The Petitioner has further submitted that the benchmark capital cost for solar rooftop projects as fixed by MNRE is Rs 75/Wp. Considering that cost of transporting solar rooftop plant and machinery in Manipur is significantly higher than the national average and almost account for 10-15% of the total hardware cost, the actual capital cost for setting solar rooftop project in Manipur is comparatively higher than the national benchmark cost of Rs 75/Wp. The capital cost for solar rooftop projects in Manipur is estimated at Rs 82000/kW. The various cost heads are tabulated below:

Cost Head	Cost (Rs'000/kW)
Solar module cost	36
Invertor cost	10
Mounting structure	7
Balance of systems (transformers, wiring, meters etc.)	6
Transportation and insurance cost	9
Installation cost including civil and electrical works	6
Contingency at 3%	3
Taxes	6
Total cost	82

The Petitioner also submitted that apart from the capital cost discussed above, there is separate cost component of agency charges which account for 11.75% of the total cost estimate. The same are levied by the Govt. of Manipur under Office Memorandum dated October 26, 2013. The agency charges are levied on the works undertaken through government agencies. Therefore any solar rooftop installation work undertaken by government agencies will have to pay 11.75% on the total estimated cost of Rs 82000/kW. Accordingly, the Petitioner requested to approve the benchmark capital cost for solar rooftop projects as Rs 82000/kW and any agency charges should be pass through at actuals.

The MANIREDA in its letter no 66/1/2015 TP(SPV)/MANIREDA dated 26.09.2016 has stated that the tariff may be determined under two separate categories i.e. from 1 to 5 kW at a benchmark cost of Rs. 99000/kW and more than 5 kW with a benchmark costs of Rs. 82000/kW. To a query, the MANIREDA in its letter no 66/1/2015/TP(SPV)MANIREDA dated 01.10.2016 has stated that it is difficult to

provide breakup details for capital cost such as cost of modules, invertors, structures other balancing materials etc and furnished revised capital cost as follows:

1-5 kW	:	Rs. 99000 / kW
Above 5 kW upto 10 kW	:	Rs. 94000 / kW
Above 10 kW upto 50 kW	:	Rs. 89000 / kW
Above 50 kW upto 100 kW	:	Rs. 84000 / kW
Above 100 kW upto 300 kW	:	Rs. 82000 / kW
Above 300 kW upto 500 kW	:	Rs. 79000 / kW

Thus the maximum size is limited for 500 kW. Further the MANIREDA also requested to fix tariff with 30% subsidy at Rs. 7.31/kWh.

Commission's Analysis

The Commission in its order dated 5th January, 2015 while determining the generic levelised generation tariff for Solar PV based Power Projects for FY 2014-15 has considered the capital cost as Rs. 691 Lakhs/MW which was in line with that considered by CERC in its suo-moto order 15th May 2014 while determining the normative capital cost for Solar PV Projects for FY 2014-15. Later on, CERC has determined the benchmark capital cost norm for Solar PV Power Projects at Rs. 605.85 Lakhs/MW for FY 2015-16 in its order dated 31st March, 2015 and further determined the benchmark capital cost at Rs. 530.02 Lakhs/MW for FY 2016-17 in its order dated 23rd March, 2016.

The Petitioner, MANIREDA, has proposed the capital cost Rs. 82000/kW (i.e. Rs. 820 Lakhs/MW) in its petition for determination of generic levelised tariff for solar rooftop PV projects of capacity 1 to 500 kW.

The Commission acknowledges the submission of the Petitioner that the approved capital cost for MW-scale solar PV projects is not appropriate to the kilowatt-scale rooftop solar PV projects and also one of the major differences affecting the cost of kilowatt scale solar PV power plants compared to MW-scale solar PV power plants is the cost of invertors and other equipment and accessories which are found to be on

higher side. Hence, the Commission considers it appropriate to determine the capital cost for rooftop solar PV projects of kWh capacity keeping in view the size and nature of solar PV projects, the benchmark capital cost norm determined by CERC in its latest order and the suggestions of the stakeholders.

During the presentation given by MANIREDA dated 26.09.2016 considering capital cost at Rs. 82000/ kW. The summary of the proposed tariff is furnished as follows:

Without subsidy	:	Rs. 9.50 / kWh
With 70% subsidy	:	Rs. 4.41 / kWh
With 30% subsidy	:	Rs. 7.31 / kWh

But as per the Govt. of Manipur Tariff Policy 2014 and the guide lines issued by MNRE determine of subsidy to the state of Manipur is 70% only. There is no provision for 30% subsidy. Further there is no correlation between the revised capital cost now furnished by MANIREDA in their letter dated 01.10.2016 and the proposed tariffs.

Further during public hearing held on 26.09.2016, no objector has requested to revise the capital cost but the objectors have only requested to raise the tariff to Rs. 6.00 /kWh or Rs.5.42 / kWh (with 70% subsidy) to get reasonable return.

Since, the petitioner has projected the capital cost component wise, the Commission also analyses the capital cost component wise. The major components of the solar PV system are PV modules, Invertors, mounting structures, balance of system (cables, distribution boards, protection equipment, transformers etc.)

The component-wise capital cost proposed by the petitioner, considered by the CERC and now approved by the Commission are discussed in the paragraphs herein as follows:

1. PV Modules

CERC in its order dated 23rd March, 2016 has considered the PV Modules Cost as Rs. 328.39 Lakhs/MW (i.e., Rs. 32839/kW) which includes module degradation of 0.5% on yearly basis. The Petitioner has proposed the cost at Rs. 36000/kW.

Solar PV Modules would be needed to generate reliable power over a period of 25 years and so the module prices need to be considered from Tier-I manufacturers who give performance warranty of panel output (W_p) capacity to be >=90% of design nominal power after 10 years and >=80% of design nominal power after 25 years. Crystalline Silicon PV Panels are more efficient and therefore best suited to installations like rooftops where space is a constraint.

As per the information collected from vendors, the cost of PV module would be around Rs. 30-45/Watt (for Bulk transactions) and around Rs. 40/Watt (at Retail price) depending on quality and the size of order. **The Commission considers the cost of PV Modules including yearly degradation cost as detailed below:**

Particulars	1 to 8 KW	8 to 50 KW	50 to 150 KW	150 to 500 KW	500 KW to 3 MW
PV Modules cost (Rs./kW)	39000	38000	37000	36000	35000

2. Inverters

Inverters represent the second major equipment cost in Solar PV Projects. The Petitioner has proposed the inverter cost of Rs. 10000/KW. CERC has considered the Power conditioning unit cost at Rs. 35 Lakh/MW (i.e., at Rs. 3500/KW) which includes an additional cost of Rs. 5 Lakh/MW for requisite replacement of inverter parts or upgrade of inverter in its order dated 23rd March, 2016. The life of the inverter is about 12 to 13 years and hence requires replacement or requires replacement of certain parts. Generally, larger size Central Inverters /Power Conditioning Units will be installed for large scale (MW scale) ground mounted solar PV Projects which provides low installed cost per Kilowatt whereas smaller size multiple inverters will be provided for rooftop solar PV Plants which cost per Kilowatt will be on higher side.

It is noted that the price of inverter varies from Rs. 5000/- to Rs. 15000/- per kW depending on brand, specifications and order size.

The Commission considers that String Inverters will be provided upto 500 kW capacity and Power Conditioning Units will be provided for capacity above 500 KW.

The Commission considers the cost of inverter/ Power Conditioning Units which includes replacement, repairs or upgrade etc., as detailed below:

Particulars	1 to 8KW	8 to 50KW	50 to 150KW	150 to 500KW	500KW to 3 MW
Inverters (Rs./KW)	10000	9000	8000	7000	6000

3. Mounting Structure

CERC, assuming the maximum requirement of 50 tons/MW and previous price of finished structures at Rs. 70000/ton, has considered the cost of mounting structure at Rs. 35 Lakh/MW (i.e., Rs. 3500/kW). The Petitioner has projected Rs. 7000/KW for mounting structure. There need not be so much difference in the cost. However, considering that more panels may have to be provided owing to installation of smaller size PV panels and also as these materials have to be procured in small quantity in retail market for KW-scale solar plants, the cost may be higher when compared to large scale procurement required for MW-scale solar projects. **Hence, the Commission considers the cost of mounting structures for rooftop solar PV Projects at Rs. 6000/kW considering requirement of about 80 kg/kW upto 50 kW capacity and Rs. 5000/kW for above 50 kW upto 500 kW capacity and at Rs. 4000/kW for capacity above 500 kW.**

4. Balance of System

Balance of system components consist of junction boxes, D.C and A.C Cables, Control Panels, Meters, Earthing, Lightning Protection, etc. CERC has considered some of these components under Civil and General Works and some items at evacuation cost upto interconnection point. The Petitioner has proposed Rs. 6000/kW for this item. **Hence, the Commission considers the cost of Balance of System at Rs. 6000/kW as proposed by the Petitioner for solar power plants.**

Accordingly, the Commission considers the cost of Balance of System as given below:

Particulars	1 to 8 KW	8 to 50 KW	50 to 150 KW	150 to 500KW	500 KW to 3MW
Balance of System (Rs./kW)	6000	6000	6000	6000	6000

5. Installation Cost

The Petitioner has proposed installation cost including civil and electrical works at Rs. 6000/kW. CERC has considered civil and general works at Rs. 35 Lakh/MW (i.e. Rs. 3500/kW) and some of the electrical works and evaluation cost in its order dated 23rd March, 2016. Some of the civil works such as levelling the land, boundary walls, approach roads are not necessary for rooftop solar PV Plants. **The Commission considers the civil and general works at Rs. 2000/kW and electrical works for installation testing and commissioning at Rs. 3000/kW. Thus, the Commission considers the installation cost at Rs. 5000/kW.**

6. Transportation and Insurance

The Petitioner has submitted that Manipur is situated at a difficult terrain and so bringing plant and machinery for smaller projects would be costlier. The Petitioner has further submitted that considering the cost of transporting solar rooftop plant and machinery in Manipur is significantly higher than the national average cost and almost account for 10 to 15% of the total hardware cost. **The Commission acknowledges the same and hence approves 15% of total hardware cost towards transportation and insurance expenses.**

7. Other Expenses

The Petitioner has proposed contingency at 3% and taxes at about 9%. **The Commission considers these items as proposed by the Petitioner.**

8. Agency Charges

The Petitioner has submitted that apart from the capital cost proposed in the Petition, there is a separate cost component of agency charges which account for 11.75% of the total cost estimate. The same was levied by the Government of Manipur under Office Memorandum dated 26th October, 2013. The agency charges are levied on the works undertaken through Government agencies. Therefore, any rooftop solar installation work undertaken by Government agencies will have to pay 11.75% on the total estimated cost of Rs. 82000/kW and so any agency charges should be pass through at actuals.

As requested by the Petitioner, the Commission approves that any agency charges actually incurred shall be pass through at actuals subject to specific approval by the Commission.

9. Overall Capital Cost

As discussed in the above paragraphs, the capital cost for rooftop solar PV Projects for FY 2016-17 shall be as detailed below:

Sl. No.	Particulars	1 to 8 KW	8 to 50 KW	50 to 150 KW	150 to 500 KW	500 KW to 1 MW
1	Solar Modules	39000	38000	37000	36000	35000
2	Inverters	10000	9000	8000	7000	6000
3	Mounting Structures	6000	6000	5000	5000	4000
4	Balance of System	6000	6000	6000	6000	6000
5	Installation	5000	5000	5000	5000	5000
6	Transportation at 15%	9200	8700	8400	8300	7700
7	Contingency at 3%	1800	1700	1700	1600	1500
8	Taxes at 9%	5500	5200	5000	4800	4600
9	Total Cost*	82500	79600	76100	73700	69800

* After rounding to the nearest hundred.

Note: Transportation charges, Taxes and Contingency charges are worked out on items 1 to 4

The Commission, thus, approves the capital cost for rooftop solar PV Projects as below:

a)	1 to 8 KW	Rs. 82500/KW
b)	Above 8 KW and upto 50 KW	Rs. 79600/KW
c)	Above 50 KW and upto 150 KW	Rs. 76100/KW
d)	Above 150 KW and upto 500 KW	Rs. 73700/KW
e)	Above 500 KW and upto 1000 KW	Rs. 69800/KW

4.3 Capacity Utilisation Factor

Petitioner's Submission

The Petitioner has submitted that Capacity Utilisation Factor (CUF) represents important parameters that influence the economics of solar rooftop projects. Based on the Capacity Utilisation Factor adopted by CERC and most of the State Electricity Regulatory Commission, the Petitioner has proposed normative Capacity Utilisation Factor of 19% for Solar PV Projects including Rooftop Projects.

Commission's decision

As per data published by MNRE, the Capacity Utilisation Factor for solar PV Plants considered by CERC and most of the SERCs in the country is 19%. **Since the Tariff is being determined on generic basis and not location basis the Commission decides to adopt the single Capacity Utilisation Factor for the entire state at 19% for Solar Roof Top and Solar PV Plants.**

4.4 Debt: Equity Ratio

Petitioner's Submission

The Petitioner has submitted that Debt: Equity of 70:30 as per sub-Regulation (1) Regulation 13 of JERC Tariff Regulations.

Commission's decision

In terms of JERC Regulations, 2010 the Commission approves Debt: Equity Ratio of 70:30 for solar roof top plants.

4.5 Depreciation

Petitioner's Submission

The Petitioner has submitted that considering the Debt service obligation of 70% of the Capital cost and repayment period of 12 years, the annual debt service obligation works out to 5.83%. The Petitioner has requested to consider the depreciation rate in line with CERC regulation at the rate of 5.83% for first 12 years and the remaining depreciation amount spread over the remaining useful life.

Commission's decision

The Commission considers 5.83% for first 12 years to provide adequate depreciation to meet the loans repayment and annual depreciation of 1.54% for the balance period over 12 years.

Considering debt tenure at 12 years, the Commission decides to allow depreciation at 5.83% for the first 12 years and at 1.54% for the balance 13 years on the capital cost of the project.

4.6 Operation and Maintenance Expenses

Petitioner's Submission

The Petitioner has submitted that O&M Cost incurred for Solar PV Plant is towards the activities including cleaning of PV Panels, unscheduled maintenance at solar panels and associated labour and material cost. Based on the normative O&M cost approved by various SERCs the Petitioner has claimed Rs. 1640/kW towards O&M expenses with escalation of 5.72% per annum.

Commission's decision

The Commission in its regulations of 2010 issued 31st July, 2010 indicated the O&M expenses shall be at 11 Lakh/MW or Rs. 1100/kW as normative O&M expenses at the beginning of the Control Period with escalation of 5.72% per annum.

The Commission in its Tariff Order dated 5th January, 2015 approved O&M costs at Rs. 12.30 Lakhs/MW for FY 2014-15. Considering the escalation at 5.72% the Commission considers the O&M costs at Rs. 1300/kW for FY 2015-16 based on the approved cost of Rs. 12.30 Lakhs/MW for FY 2014-15 in the Tariff Order dated 5th January, 2015.

Accordingly, the Commission considers Rs. 13.75 lakhs/MW or Rs. 1375/kW for FY 2016-17 with an escalation of 5.72% per annum.

4.7 Interest on Debt

Petitioner's Submission

Petitioner has submitted that CERC under its RE Tariff Regulations has specified norm for interest on debt at average SBI Base Rate for first 6 months for the previous year plus 300 basis points.

Accordingly, the average base rate prevalent for 6 months of the FY 2015-16 has been considered for computation of applicable interest rate. The average SBI Base Rate of first 6 months was 9.77%. Therefore, the interest rate for FY 2015-16 is worked out to 12.77% (i.e. 9.77) plus 300 basis points and requested for approval of

normative interest rate at 12.77% and the loan tenure of 12 years for determination of tariff.

Commission's decision

The Commission consider the loan repayment tenure of 12 years and the interest rate at 12.76% being the average SBI base rate for first six months during FY 2015-16 which is about 9.76% plus 300 basis points, which is in line with the rate approved by CERC in its RE Tariff Regulation and also by most of the SERCs.

4.8 Interest on Working Capital

Petitioner's Submission

The Petitioners has submitted the working capital requirement for solar PV as below:

- O&M expenses for one month.
- Receivable – requirement to 2 months of energy charges for sale of electricity calculated on the normative CUF.
- Maintenance spare at 15% Operation and Maintenance Expenses

Interest on working capital shall be interest rate equivalent to the average State Bank Rate prevalent during the first 6 months of the previous year plus 350 basis points.

The Petitioner has accordingly proposed the interest rate on working capital at 13.27% (i.e. 9.77+3.50=13.27%).

The Petitioner has requested the Commission to approve the interest rate on working capital at 13.27%.

Commission's decision

The average SBI Base Rate during first months of previous years is worked out to 9.76% and with the 350 Basis points, the interest rate is worked out to 13.26% and the same is considered by the Commission for calculating the interest on working capital.

4.9 Return on Equity

Petitioner's Submission

The Petitioner has submitted the following on RoE;

- (i) Commission has specified return on equity in its Tariff Order dated 5th January, 2015.
 - (a) 20% per annum for first 10 years and
 - (b) 24% per annum for the 11th year onwards
- (ii) CERC in its RE Tariff Regulations has also specified norm for return on equity at 20% for first 10 years followed by 24% from the 11th year onwards.

Similar provisions with regard to RoE of 20% pre-tax for the first 10 years followed by 24% from the 11th year onwards are also approved by some other SERCs.

Commission's decision

Based on the decisions of CERC and other SERCs and by the Commission in its Tariff Order of January, 2015, the Commission considers the RoE as follows:

- (i) **20% for the first 10 years**
- (ii) **24% from the 11th year onwards**

4.10 Discount Factor

Petitioner's Submission

The Petitioner has submitted that the discount factor considered for the purpose of levelised tariff computation is equal to the post tax weighted average cost of the capital on the basis of normative debt: equity ratio (70:30) specified in the Regulations. Considering the normative debt equity ratio and weighted average of the post-tax rates for interest and equity component, the discount factor is calculated. Interest Rate considered for the loan component (i.e., 70%) of capital cost is 12.77% (as explained earlier). For equity component (i.e., 30%) rate of Return on Equity (RoE) considered at Post Tax RoE of 16% considered. The discount factor derived by this method for all technology is 10.65% i.e., $((12.77\% \times 0.70 \times (1 - 34.61\%)) + (16\% \times 0.30))$

Commission's decision

The Commission notes that the financing of capital cost is in the debt equity ratio of 70:30 respectively. Considering cost of debt and cost of equity, it is considered that the weighted average cost of capital employed is appropriate for determining the discount factor.

Since, the Commission has allowed the actual tax paid by the Generator as a pass through annually limited to the amount of equity considered in this Order, the computation of discount factor does not include the tax component.

Hence, considering 70% of the capital cost at 12.76% interest and 30% of equity at 16% of RoE, the Commission decides to allow discount factor of 13.73% [(12.76% X 0.7) + (16% X 0.3)].

4.11 Other Issues

1. Metering

As per clause 5.1 of JERC for M&M (Metering for grid connected renewable energy) Regulations 2016, the distribution licensee shall provide net or gross metering arrangement to any eligible consumer or third party owner as long as the total capacity (in MW) does not exceed the target capacity for the annual renewable purchase obligation (RPO) requirement determined by the Commission from time to time.

Provided that initially a total maximum cumulative capacity of 10 MW in respect of grid connected solar energy system shall be allowed under net and gross metering, on yearly basis until reviewed by the Commission, in the area of supply of the distribution licensee.

Individual households, industries, offices, commercial establishments, institutions, residential complexes etc. will be eligible for project capacity of minimum 1 kW upto maximum of 1 MW with/without battery backup support. Consumers will generate solar power for self-consumption and can feed excess power into the grid through a bi-directional export and import meter of power separately.

Provided further that the rooftop solar projects of rating higher than 500 kW can be considered by Distribution licensee only if the distribution system stays stable.

2. Penalty and Compensation

In case of failure of net metering system, the provisions of penalty or compensation shall be as per the provisions of the Standards of Performance Regulations for Distribution Licensee.

4.12 MNRE Subsidy

MNRE in its notification dated 4th March 2016, has notified subsidy benefit to an extent of 70% of benchmark capital cost for grid connected solar rooftop projects installed in the Northeast. The subsidy benefit is only limited to residential, health / educational institutions and other social sector such as welfare houses, NGOs, training institutions, Orphanages, etc. and no subsidy is provided to Govt. / PSU buildings / institutions, commercial and industrial buildings. The MANIREDA in its letter no 66/1/2015/TP (SPV) / MANIREDA dated 01.10.2016 has stated that the MNRE, GoI has sanctioned total capacity of 3.40 MW grid connected rooftop solar to MANIREDA with 30% capital subsidy for government buildings. Therefore, separate tariffs are approved for entities availing subsidy and not availing subsidy.

4.13 Tariff

Based on the above assumptions, the levelised tariff (feed-in-tariff) for solar rooftop projects with and without subsidy determined and approved by the Commission are furnished in the table below:

Sl. No.	Category	Unit	1 kW to 8 kW	Above 8 kW to 50 kW	Above 50 kW to 150 kW	Above 150 kW to 500 kW	Above 500 kW to 1 MW
1	Without Subsidy	Rs./kWh	9.39	9.11	8.77	8.53	8.15
2	With 70% Subsidy	Rs./kWh	5.35	5.21	5.04	4.92	4.73
3	With 30% Subsidy	Rs./kWh	7.66	7.44	7.17	6.99	6.68

***** vide Corrigendum dt 07.11.2016.**

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**JOINT ELECTRICITY REGULATORY COMMISSION
FOR MANIPUR AND MIZORAM
AIZAWL: :: MIZORAM**

**ATTENDANCE LIST ON
PUBLIC HEARING ON PETITION SUBMITTED BY MANIREDA FOR
DETERMINATION OF GENERIC LEVELLISED TARIFF
FOR SOLAR ROOFTOP PROJECTS**

Date & Time : 26th September, 2016 (Monday) from 01:00 p.m. to 03:00 p.m.

Venue : Hotel Classic, Regency Hall, imphal.

Sl. No.	N a m e	D e s i g n a t i o n
1.	R.K. Kishore Singh	Chairperson,JERC (M&M)
2.	LalchharlianaPachuau	Chief (Engg.),JERC (M&M)
3.	H. Thanthiang	Assistant Chief (Engg.),JERC (M&M)
4.	L. Manglem Singh	Director, MANIREDA
5.	Y. Satyanarayana	Consultant, ASCI
6.	R. Sudhan	MD, MSPDCL & Member Secretary, MANIREDA
7.	K. Jila Singh	GM, MSPDCL
8.	BhagyashreeLaishram	US, Power Department, Govt. of Manipur
9.	AsemRanginaChanu	S.O., Power Department, Govt. of Manipur
10.	I. Sarat Singh	DGM (Com-Tariff),MSPDCL
11.	Th. Sundaraj Singh	A.M. (EC-II),MSPDCL
12.	N. Purnima	Dy. Manager,MSPDCL
13.	BabitaThangjam	Scientific Officer,MANIREDA
14.	Ng. Chittaranjan Singh	Scientific Officer,MANIREDA
15.	Th. Suraj Singh	Representative,Geentanjali Solar
16.	S. Devaleirhar Singh	M.D., Mangoal Sustainable Solutions Pvt. Ltd.
17.	RadhakrishnaAdhikari	BamonLeikai, Imphal
18.	Th. Jiten Singh	KongpalKongkhamLeikai
19.	Th. Kirankumar	JS (Power),Govt. of Manipur
20.	Th. Aton Singh	GM (planning),MSPDCL
21.	L. Joychandra Singh	GM, MSPDCL

22.	Nirmala	Reporter, Sangai express
23.	M. Kasuajit	Chief Reporter,HueiyenLanpao
24.	Netraj	Reporter,Ichel Express
25.	Premananda	Reporter,NaharolgiThoudang
26.	Leet	Reporter,Imphal Free Press
27.	G. Gagar	ISTV News
28.	Th. Premchand	Senior Reporter,Poknapham
29.	O. Imo Singh	Reporter,ISTV News
30.	T. Bishwajit	Sub Editor,
31.	Premchand	Reporter,Impact TV
32.	Subash	Cameraman,Impact TV

ABSTRACT

Manipur Solar Roof Top Levelized Tariffs

I Levelized Tariff for Different ranges

Range	1-8 kW	above 8-50 kW	above 50-150 kW	above 150-500 kW	above 500 kW - 1 MW
Capital Cost (Rs. Thousands)	82.50	79.60	76.10	73.70	69.80
Without Subsidy					
Levelized Tariff (Rs./kWh)	9.39	9.11	8.77	8.53	8.15
With 70% Subsidy					
Levelized Tariff (Rs./kWh)	5.35	5.21	5.04	4.92	4.73
With 30% Subsidy					
Levelized Tariff (Rs./kWh)	7.66	7.44	7.17	6.99	6.68

Range : 1 - 8 kW		Capacity : 1 kW	
Sl. No.	Particulars	Unit	
1	Capital Cost	Rs. Thousands	82.50
2	Equity @ 30% CC	Rs. Thousands	24.75
3	Loan @ 70% CC	Rs. Thousands	57.75
Sl. No.	Units Generation	Unit	Year-->
1	Installed Capacity	kW	1 1
2	Gross Generation	kWh	1660 1660
3	Net Generation	kWh	1660 1660
Interest on working capital			
Sl. No.	Particulars/Years	Unit	Year-->
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands	1.38 1.45 1.54 1.62 1.72 1.82 1.92 2.03 2.15 2.27 2.40 2.54 2.68 2.83 3.00 3.17 3.35 3.54 3.74 3.96 4.18 4.42 4.67 4.94 5.22
2	1 month O&M expenses	Rs. Thousands	0.11 0.12 0.13 0.14 0.14 0.15 0.16 0.17 0.18 0.19 0.20 0.21 0.22 0.24 0.25 0.26 0.28 0.29 0.31 0.33 0.35 0.37 0.39 0.41 0.44
3	Maintenance spares	Rs. Thousands	0.21 0.22 0.23 0.24 0.26 0.27 0.29 0.3 0.32 0.34 0.36 0.38 0.4 0.43 0.45 0.48 0.5 0.53 0.56 0.59 0.63 0.66 0.7 0.74 0.78
4	2 months Receivables	Rs. Thousands	3.11 3.02 2.93 2.84 2.75 2.66 2.58 2.49 2.41 2.32 2.41 2.33 1.70 1.73 1.76 1.79 1.82 1.85 1.89 1.92 1.96 2.01 2.05 2.10 2.15
5	Total working capital (2+3+4)	Rs. Thousands	3.43 3.36 3.29 3.21 3.15 3.08 3.03 2.96 2.91 2.85 2.97 2.92 2.32 2.39 2.46 2.53 2.60 2.68 2.76 2.84 2.94 3.03 3.14 3.25 3.36
6	Rate of interest	%	13.26% 13.26%
7	Interest on working capital	Rs. Thousands	0.46 0.45 0.44 0.43 0.42 0.41 0.40 0.39 0.39 0.38 0.39 0.39 0.31 0.32 0.33 0.34 0.34 0.35 0.37 0.38 0.39 0.40 0.42 0.43 0.45
ARR			
Sl. No.	Particulars/Years	Unit	Year-->
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands	1.38 1.45 1.54 1.62 1.72 1.82 1.92 2.03 2.15 2.27 2.40 2.54 2.68 2.83 3.00 3.17 3.35 3.54 3.74 3.96 4.18 4.42 4.67 4.94 5.22
2	Depreciation	Rs. Thousands	4.81 4.81
3	Interest & finance charges@12.76%	Rs. Thousands	7.06 6.45 5.83 5.22 4.61 3.99 3.38 2.76 2.15 1.54 0.92 0.31 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
4	interest on working capital	Rs. Thousands	0.46 0.45 0.44 0.43 0.42 0.41 0.40 0.39 0.39 0.38 0.39 0.39 0.31 0.32 0.33 0.34 0.34 0.35 0.37 0.38 0.39 0.40 0.42 0.43 0.45
5	Return on equity	Rs. Thousands	4.95 4.95 4.95 4.95 4.95 4.95 4.95 4.95 4.95 4.95 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94 5.94
6	Total	Rs. Thousands	18.66 18.11 17.57 17.03 16.50 15.98 15.46 14.94 14.44 13.94 14.46 13.98 10.20 10.36 10.54 10.72 10.90 11.10 11.32 11.55 11.78 12.03 12.31 12.58 12.89
Levalised Tariff corresponding to useful life			
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff
1	O&M expenses	Rs/kWh	0.83 0.88 0.93 0.98 1.03 1.09 1.16 1.22 1.29 1.37 1.44 1.53 1.61 1.71 1.80 1.91 2.02 2.13 2.25 2.38 2.52 2.66 2.82 2.98 3.15
2	Depreciation	Rs/kWh	2.90 2.90
3	Interest & finance charges	Rs/kWh	4.25 3.88 3.51 3.14 2.77 2.40 2.03 1.66 1.29 0.92 0.55 0.18 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
4	interest on working capital	Rs/kWh	0.28 0.27 0.27 0.26 0.25 0.25 0.24 0.23 0.23 0.23 0.23 0.23 0.19 0.19 0.20 0.20 0.20 0.21 0.22 0.23 0.23 0.24 0.25 0.26 0.27 0.28 0.29
5	Return on equity	Rs/kWh	2.98 2.98 2.98 2.98 2.98 2.98 2.98 2.98 2.98 2.98 3.58 3.58 3.58 3.58 3.58 3.58 3.58 3.58 3.58 3.58 3.58 3.58 3.58 3.58 3.58 3.58 3.58
6	Total Tariff	Rs/kWh	11.24 10.91 10.58 10.26 9.94 9.62 9.31 9.00 8.70 8.40 8.71 8.42 6.15 6.24 6.35 6.46 6.57 6.69 6.82 6.96 7.10 7.25 7.41 7.58 7.76
7	Discount Factor @13.73% Interest Rate	No.	7.95 1 0.879 0.773 0.680 0.598 0.526 0.462 0.406 0.357 0.314 0.276 0.243 0.214 0.188 0.165 0.145 0.128 0.112 0.099 0.087 0.076 0.067 0.059 0.052 0.046
8	Discounted Tariff	Rs/kWh	74.70 11.24 9.59 8.18 6.98 5.94 5.06 4.30 3.66 3.11 2.64 2.41 2.05 1.31 1.17 1.05 0.94 0.84 0.75 0.67 0.60 0.54 0.49 0.44 0.39 0.35
9	Levalized Tariff	Rs/kWh	9.39

	Range : Above 8 - 50 kW																												
Capacity : 1 kW																													
Sl. No.	Particulars	Unit																											
1	Capital Cost	Rs. Thousands	79.60																										
2	Equity @ 30% CC	Rs. Thousands	23.88																										
3	Loan @ 70% CC	Rs. Thousands	55.72																										
Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660			
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660			
Interest on working capital																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	1 month O&M expenses	Rs. Thousands		0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.44	
3	Maintenance spares	Rs. Thousands		0.21	0.22	0.23	0.24	0.26	0.27	0.29	0.3	0.32	0.34	0.36	0.38	0.4	0.43	0.45	0.48	0.5	0.53	0.56	0.59	0.63	0.66	0.7	0.74	0.78	
4	2 months Receivables	Rs. Thousands		3.01	2.92	2.83	2.75	2.66	2.58	2.50	2.42	2.34	2.26	2.34	2.26	1.66	1.68	1.71	1.74	1.77	1.81	1.84	1.88	1.92	1.96	2.01	2.05	2.10	
5	Total working capital (2+3+4)	Rs. Thousands		3.33	3.26	3.19	3.12	3.07	3.00	2.95	2.88	2.83	2.79	2.90	2.86	2.28	2.35	2.41	2.49	2.55	2.63	2.72	2.80	2.90	2.99	3.10	3.21	3.32	
6	Rate of interest	%		13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%			
7	Interest on working capital	Rs. Thousands		0.44	0.43	0.42	0.41	0.41	0.40	0.39	0.38	0.38	0.37	0.38	0.38	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.40	0.41	0.42		
ARR																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	Depreciation	Rs. Thousands		4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64		
3	Interest & finance charges@12.76%	Rs. Thousands		6.81	6.22	5.63	5.04	4.44	3.85	3.26	2.67	2.07	1.48	0.89	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs. Thousands		0.44	0.43	0.42	0.41	0.41	0.40	0.39	0.38	0.38	0.37	0.38	0.38	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.40	0.41	0.42	0.44	
5	Return on equity	Rs. Thousands		4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78		
6	Total	Rs. Thousands		18.05	17.52	17.00	16.49	15.99	15.48	14.99	14.49	14.02	13.54	14.04	13.58	9.94	10.10	10.27	10.45	10.65	10.85	11.06	11.28	11.52	11.78	12.04	12.32	12.62	
Levalised Tariff corresponding to useful life																													
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses	Rs/kWh		0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15	
2	Depreciation	Rs/kWh		2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80		
3	Interest & finance charges	Rs/kWh		4.10	3.75	3.39	3.03	2.68	2.32	1.96	1.61	1.25	0.89	0.54	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs/kWh		0.27	0.26	0.25	0.25	0.25	0.24	0.23	0.23	0.22	0.23	0.23	0.18	0.19	0.19	0.20	0.20	0.21	0.22	0.22	0.23	0.24	0.25	0.27			
5	Return on equity	Rs/kWh		2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45		
6	Total Tariff	Rs/kWh		10.87	10.56	10.24	9.93	9.63	9.33	9.03	8.73	8.44	8.15	8.46	8.18	5.99	6.08	6.19	6.30	6.41	6.53	6.66	6.80	6.94	7.10	7.25	7.42		
7	Discount Factor @13.73% Interest Rate	No.		7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046
8	Discounted Tariff	Rs/kWh		72.42	10.87	9.28	7.92	6.75	5.76	4.90	4.17	3.55	3.02	2.56	2.34	1.99	1.28	1.14	1.02	0.91	0.82	0.73	0.66	0.59	0.53	0.48	0.43	0.38	0.35
9	Levalized Tariff	Rs/kWh		9.11																									

Range : Above 50 - 150 kW																													
Capacity : 1 kW																													
Sl. No.	Particulars	Unit																											
1	Capital Cost	Rs. Thousands																											
2	Equity @ 30% CC	Rs. Thousands																											
3	Loan @ 70% CC	Rs. Thousands																											
Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	
Interest on working capital																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	1 month O&M expenses	Rs. Thousands		0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.44	
3	Maintenance spares	Rs. Thousands		0.21	0.22	0.23	0.24	0.26	0.27	0.29	0.3	0.32	0.34	0.36	0.38	0.4	0.43	0.45	0.48	0.5	0.53	0.56	0.59	0.63	0.66	0.7	0.74	0.78	
4	2 months Receivables	Rs. Thousands		2.89	2.80	2.72	2.64	2.56	2.48	2.40	2.33	2.25	2.17	2.26	2.18	1.61	1.63	1.66	1.69	1.72	1.76	1.79	1.83	1.87	1.91	1.95	2.00	2.05	
5	Total working capital (2+3+4)	Rs. Thousands		3.21	3.15	3.08	3.02	2.96	2.90	2.85	2.79	2.75	2.70	2.82	2.78	2.23	2.30	2.36	2.43	2.50	2.58	2.66	2.75	2.85	2.94	3.04	3.15	3.27	
6	Rate of interest	%		13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%		
7	Interest on working capital	Rs. Thousands		0.43	0.42	0.41	0.40	0.39	0.38	0.38	0.37	0.36	0.36	0.37	0.37	0.30	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.38	0.39	0.40	0.42	0.43	
ARR																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	Depreciation	Rs. Thousands		4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44		
3	Interest & finance charges@12.76%	Rs. Thousands		6.51	5.95	5.38	4.81	4.25	3.68	3.12	2.55	1.98	1.42	0.85	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs. Thousands		0.43	0.42	0.41	0.40	0.39	0.38	0.38	0.37	0.36	0.36	0.37	0.37	0.30	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.38	0.39	0.40	0.42	0.43	
5	Return on equity	Rs. Thousands		4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57		
6	Total	Rs. Thousands		17.32	16.82	16.33	15.84	15.36	14.88	14.42	13.95	13.49	13.05	13.53	13.10	9.63	9.78	9.96	10.14	10.33	10.53	10.74	10.97	11.21	11.46	11.73	12.01	12.31	
Levalised Tariff corresponding to useful life																													
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses	Rs/kWh		0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15	
2	Depreciation	Rs/kWh		2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67		
3	Interest & finance charges	Rs/kWh		3.92	3.58	3.24	2.90	2.56	2.22	1.88	1.54	1.19	0.85	0.51	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
4	interest on working capital	Rs/kWh		0.26	0.25	0.25	0.24	0.23	0.23	0.23	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.24	0.25		
5	Return on equity	Rs/kWh		2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75			
6	Total Tariff	Rs/kWh		10.43	10.13	9.84	9.54	9.25	8.96	8.69	8.40	8.13	7.86	8.15	7.89	5.80	5.89	6.00	6.11	6.22	6.34	6.47	6.61	6.76	6.91	7.06	7.24	7.41	
7	Discount Factor @13.73% Interest Rate	No.		7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046
8	Discounted Tariff	Rs/kWh		69.70	10.43	8.91	7.61	6.49	5.53	4.71	4.01	3.41	2.90	2.47	2.25	1.92	1.24	1.11	0.99	0.89	0.79	0.71	0.64	0.57	0.52	0.46	0.42	0.38	0.34
9	Levalized Tariff	Rs/kWh		8.77																									

Range : Above 150 - 500 kW																													
Capacity : 1 kW																													
Sl. No.	Particulars	Unit																											
1	Capital Cost	Rs. Thousands																											
2	Equity @ 30% CC	Rs. Thousands																											
3	Loan @ 70% CC	Rs. Thousands																											
Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	
Interest on working capital																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	1 month O&M expenses	Rs. Thousands		0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.44	
3	Maintenance spares	Rs. Thousands		0.21	0.22	0.23	0.24	0.26	0.27	0.29	0.3	0.32	0.34	0.36	0.38	0.4	0.43	0.45	0.48	0.5	0.53	0.56	0.59	0.63	0.66	0.7	0.74	0.78	
4	2 months Receivables	Rs. Thousands		2.80	2.72	2.64	2.57	2.49	2.41	2.34	2.26	2.19	2.12	2.20	2.13	1.57	1.60	1.62	1.65	1.69	1.72	1.76	1.79	1.83	1.87	1.92	1.97	2.02	
5	Total working capital (2+3+4)	Rs. Thousands		3.13	3.06	3.00	2.94	2.89	2.83	2.79	2.73	2.69	2.65	2.76	2.72	2.19	2.26	2.32	2.40	2.47	2.55	2.63	2.71	2.81	2.90	3.01	3.12	3.23	
6	Rate of interest	%		13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%		
7	Interest on working capital	Rs. Thousands		0.41	0.41	0.40	0.39	0.38	0.38	0.37	0.36	0.36	0.35	0.37	0.36	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.40	0.41	0.43	
ARR																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	Depreciation	Rs. Thousands		4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	
3	Interest & finance charges@12.76%	Rs. Thousands		6.31	5.76	5.21	4.66	4.11	3.57	3.02	2.47	1.92	1.37	0.82	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs. Thousands		0.41	0.41	0.40	0.39	0.38	0.38	0.37	0.36	0.36	0.35	0.37	0.36	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.40	0.41	0.43	
5	Return on equity	Rs. Thousands		4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31
6	Total	Rs. Thousands		16.81	16.34	15.87	15.40	14.93	14.48	14.03	13.58	13.14	12.71	13.19	12.77	9.41	9.58	9.75	9.93	10.12	10.32	10.53	10.76	10.99	11.24	11.52	11.79	12.10	
Levalised Tariff corresponding to useful life																													
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses	Rs/kWh		0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15	
2	Depreciation	Rs/kWh		2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	
3	Interest & finance charges	Rs/kWh		3.80	3.47	3.14	2.81	2.48	2.15	1.82	1.49	1.16	0.83	0.50	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs/kWh		0.25	0.25	0.24	0.23	0.23	0.23	0.22	0.22	0.21	0.22	0.22	0.17	0.18	0.19	0.20	0.20	0.21	0.22	0.22	0.23	0.24	0.25	0.26			
5	Return on equity	Rs/kWh		2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	
6	Total Tariff	Rs/kWh		10.13	9.84	9.56	9.27	8.99	8.72	8.45	8.18	7.92	7.66	7.95	7.69	5.67	5.77	5.87	5.98	6.10	6.22	6.35	6.48	6.62	6.77	6.94	7.10	7.29	
7	Discount Factor @13.73% Interest Rate	No.		7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046
8	Discounted Tariff	Rs/kWh		67.83	10.13	8.66	7.39	6.30	5.38	4.58	3.90	3.32	2.83	2.40	2.20	1.87	1.21	1.08	0.97	0.87	0.78	0.70	0.63	0.56	0.51	0.45	0.37	0.33	
9	Levalized Tariff	Rs/kWh		8.53																									

Range : Above 500 kW - 1 MW																													
Capacity : 1 kW																													
Sl. No.	Particulars	Unit																											
1	Capital Cost	Rs. Thousands																											
2	Equity @ 30% CC	Rs. Thousands																											
3	Loan @ 70% CC	Rs. Thousands																											
Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660		
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660		
Interest on working capital																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	1 month O&M expenses	Rs. Thousands		0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.44	
3	Maintenance spares	Rs. Thousands		0.21	0.22	0.23	0.24	0.26	0.27	0.29	0.3	0.32	0.34	0.36	0.38	0.4	0.43	0.45	0.48	0.5	0.53	0.56	0.59	0.63	0.66	0.7	0.74	0.78	
4	2 months Receivables	Rs. Thousands		2.67	2.59	2.52	2.44	2.37	2.30	2.23	2.16	2.09	2.03	2.10	2.04	2.15	1.54	1.57	1.60	1.63	1.66	1.70	1.73	1.78	1.82	1.86	1.91	1.96	
5	Total working capital (2+3+4)	Rs. Thousands		2.99	2.93	2.88	2.82	2.78	2.72	2.68	2.63	2.59	2.56	2.66	2.63	2.13	2.20	2.27	2.34	2.41	2.49	2.57	2.65	2.75	2.85	2.95	3.06	3.17	
6	Rate of interest	%		13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%		
7	Interest on working capital	Rs. Thousands		0.40	0.39	0.38	0.37	0.37	0.36	0.36	0.35	0.34	0.34	0.35	0.35	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.37	0.38	0.39	0.41	0.42	
ARR																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	Depreciation	Rs. Thousands		4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07		
3	Interest & finance charges@12.76%	Rs. Thousands		5.97	5.46	4.94	4.42	3.90	3.38	2.86	2.34	1.82	1.30	0.78	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs. Thousands		0.40	0.39	0.38	0.37	0.37	0.36	0.36	0.35	0.34	0.34	0.35	0.35	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.37	0.38	0.39	0.41	0.42	
5	Return on equity	Rs. Thousands		4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19	5.03	5.03	5.03	5.03	5.03	5.03	5.03	5.03	5.03	5.03	5.03	5.03	5.03	
6	Total	Rs. Thousands		16.01	15.56	15.11	14.67	14.24	13.81	13.39	12.97	12.56	12.16	12.62	12.24	9.06	9.22	9.40	9.58	9.77	9.97	10.18	10.41	10.65	10.90	11.17	11.45	11.75	
Levalised Tariff corresponding to useful life																													
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses	Rs/kWh		0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15	
2	Depreciation	Rs/kWh		2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45		
3	Interest & finance charges	Rs/kWh		3.60	3.29	2.97	2.66	2.35	2.03	1.72	1.41	1.10	0.78	0.47	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs/kWh		0.24	0.23	0.23	0.22	0.22	0.22	0.21	0.20	0.20	0.21	0.17	0.17	0.18	0.19	0.19	0.20	0.20	0.21	0.22	0.23	0.23	0.25	0.25			
5	Return on equity	Rs/kWh		2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03			
6	Total Tariff	Rs/kWh		9.64	9.37	9.10	8.84	8.58	8.32	8.07	7.82	7.57	7.33	7.60	7.37	5.46	5.56	5.66	5.77	5.88	6.01	6.13	6.27	6.42	6.57	6.73	6.90	7.08	
7	Discount Factor @13.73% Interest Rate	No.		7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046
8	Discounted Tariff	Rs/kWh		64.79	9.64	8.24	7.04	6.01	5.13	4.37	3.73	3.18	2.70	2.30	2.10	1.79	1.17	1.04	0.93	0.84	0.75	0.67	0.61	0.54	0.49	0.40	0.36	0.32	
9	Levalized Tariff	Rs/kWh		8.15																									

Range : 1 - 8 kW (70% Subsidy)																													
Capacity : 1 kW																													
Sl. No.	Particulars	Unit	With 70% Subsidy																										
1	Capital Cost	Rs. Thousands	82.50	57.75																									
2	Equity @ 30% CC	Rs. Thousands	24.75	7.43																									
3	Loan @ 70% CC	Rs. Thousands	57.75	17.33																									
Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660		
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660		
Interest on working capital				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	1 month O&M expenses	Rs. Thousands		0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.44	
3	Maintenance spares	Rs. Thousands		0.21	0.22	0.23	0.24	0.26	0.27	0.29	0.3	0.32	0.34	0.36	0.38	0.4	0.43	0.45	0.48	0.5	0.53	0.56	0.59	0.63	0.66	0.7	0.74	0.78	
4	2 months Receivables	Rs. Thousands		1.94	1.85	1.76	1.67	1.59	1.50	1.41	1.33	1.24	1.16	1.13	1.05	0.84	0.87	0.89	0.93	0.96	0.99	1.03	1.06	1.10	1.15	1.19	1.24	1.29	
5	Total working capital (2+3+4)	Rs. Thousands		2.27	2.19	2.12	2.05	1.99	1.92	1.86	1.80	1.74	1.69	1.64	1.46	1.53	1.59	1.67	1.74	1.82	1.90	1.98	2.08	2.17	2.28	2.39	2.50		
6	Rate of interest	%		13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%		
7	Interest on working capital	Rs. Thousands		0.30	0.29	0.28	0.27	0.26	0.25	0.25	0.24	0.23	0.22	0.22	0.22	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.28	0.29	0.30	0.32	0.33	
ARR				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	Depreciation	Rs. Thousands		1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	
3	Interest & finance charges@12.76%	Rs. Thousands		7.06	6.45	5.83	5.22	4.61	3.99	3.38	2.76	2.15	1.54	0.92	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	interest on working capital	Rs. Thousands		0.30	0.29	0.28	0.27	0.26	0.25	0.25	0.24	0.23	0.22	0.22	0.22	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.28	0.29	0.30	0.32	0.33	
5	Return on equity	Rs. Thousands		1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	
6	Total	Rs. Thousands		11.66	11.12	10.58	10.04	9.51	8.99	8.48	7.96	7.45	6.95	6.76	6.29	5.03	5.20	5.37	5.55	5.74	5.94	6.16	6.38	6.63	6.87	7.14	7.43	7.72	
Levalised Tariff corresponding to useful life				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses	Rs/kWh		0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15	
2	Depreciation	Rs/kWh		0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	
3	Interest & finance charges	Rs/kWh		4.25	3.88	3.51	3.14	2.77	2.40	2.03	1.66	1.29	0.92	0.55	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	interest on working capital	Rs/kWh		0.18	0.17	0.17	0.16	0.16	0.15	0.15	0.14	0.14	0.13	0.13	0.13	0.12	0.13	0.14	0.14	0.14	0.15	0.16	0.17	0.17	0.18	0.19	0.20		
5	Return on equity	Rs/kWh		0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89		
6	Total Tariff	Rs/kWh		7.03	6.70	6.37	6.05	5.73	5.41	5.11	4.80	4.49	4.19	4.07	3.79	3.03	3.13	3.23	3.34	3.46	3.58	3.71	3.84	3.99	4.14	4.30	4.47	4.65	
7	Discount Factor @13.73% Interest Rate	No.		7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046
8	Discounted Tariff	Rs/kWh		42.58	7.03	5.89	4.93	4.11	3.42	2.84	2.36	1.95	1.60	1.32	1.13	0.92	0.65	0.59	0.53	0.49	0.44	0.40	0.37	0.33	0.30	0.28	0.25	0.23	0.21
9	Levalized Tariff	Rs/kWh		5.35																									

Range : Above 8 - 50 kW (70% Subsidy)																																														
Capacity : 1 kW																																														
Sl. No.	Particulars	Unit			With 70% Subsidy																																									
1	Capital Cost	Rs. Thousands	79.60	55.72	23.88																																									
2	Equity @ 30% CC	Rs. Thousands	23.88		7.16																																									
3	Loan @ 70% CC	Rs. Thousands	55.72		16.72																																									
Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25																		
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																			
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660																				
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660																				
Interest on working capital																																														
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25																		
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22																		
2	1 month O&M expenses	Rs. Thousands		0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.44																		
3	Maintenance spares	Rs. Thousands		0.21	0.22	0.23	0.24	0.26	0.27	0.29	0.3	0.32	0.34	0.36	0.38	0.4	0.43	0.45	0.48	0.5	0.53	0.56	0.59	0.63	0.66	0.7	0.74	0.78																		
4	2 months Receivables	Rs. Thousands		1.88	1.80	1.71	1.63	1.54	1.46	1.37	1.29	1.21	1.13	1.10	1.03	0.83	0.85	0.88	0.91	0.94	0.98	1.01	1.05	1.09	1.13	1.18	1.22	1.27																		
5	Total working capital (2+3+4)	Rs. Thousands		2.21	2.14	2.07	2.00	1.94	1.88	1.82	1.76	1.71	1.66	1.66	1.62	1.45	1.52	1.58	1.66	1.72	1.80	1.89	1.97	2.07	2.16	2.27	2.38	2.49																		
6	Rate of interest	%		13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%																				
7	Interest on working capital	Rs. Thousands		0.29	0.28	0.27	0.27	0.26	0.25	0.24	0.23	0.23	0.22	0.22	0.21	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.29	0.30	0.31	0.33																		
ARR																																														
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25																		
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22																		
2	Depreciation	Rs. Thousands		1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37																		
3	Interest & finance charges@12.76%	Rs. Thousands		6.81	6.22	5.63	5.04	4.44	3.85	3.26	2.67	2.07	1.48	0.89	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																		
4	interest on working capital	Rs. Thousands		0.29	0.28	0.27	0.27	0.26	0.25	0.24	0.23	0.23	0.22	0.21	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.29	0.30	0.31	0.33																			
5	Return on equity	Rs. Thousands		1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43																			
6	Total	Rs. Thousands		11.30	10.78	10.26	9.76	9.25	8.74	8.24	7.75	7.27	6.79	6.26	6.15	4.96	5.12	5.29	5.47	5.67	5.87	6.08	6.30	6.54	6.80	7.06	7.34	7.64																		
Levalised Tariff corresponding to useful life																																														
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25																		
1	O&M expenses	Rs/kWh		0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15																		
2	Depreciation	Rs/kWh		0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84																			
3	Interest & finance charges	Rs/kWh		4.10	3.75	3.39	3.03	2.68	2.32	1.96	1.61	1.25	0.89	0.54	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																		
4	interest on working capital	Rs/kWh		0.17	0.17	0.16	0.16	0.16	0.15	0.14	0.14	0.14	0.13	0.13	0.11	0.12	0.13	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20																				
5	Return on equity	Rs/kWh		0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86																				
6	Total Tariff	Rs/kWh		6.81	6.49	6.18	5.88	5.57	5.27	4.97	4.67	4.38	4.09	3.99	3.71	2.99	3.08	3.19	3.30	3.41	3.53	3.66	3.80	3.94	4.10	4.25	4.42	4.60																		
7	Discount Factor @13.73% Interest Rate	No.		7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046																	
8	Discounted Tariff	Rs/kWh		41.45	6.81	5.71	4.78	4.00	3.33	2.77	2.29	1.90	1.57	1.29	1.10	0.90	0.64	0.58	0.53	0.48	0.44	0.40	0.36	0.33	0.30	0.27	0.25	0.23	0.21																	
9	Levalized Tariff	Rs/kWh		5.21																																										

Range : Above 50 - 150 kW (70% Subsidy)																													
Capacity : 1 kW																													
Sl. No.	Particulars	Unit	With 70% Subsidy																										
1	Capital Cost	Rs. Thousands	76.10	53.27	22.83																								
2	Equity @ 30% CC	Rs. Thousands	22.83		6.85																								
3	Loan @ 70% CC	Rs. Thousands	53.27		15.98																								
Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660		
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660		
Interest on working capital																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	1 month O&M expenses	Rs. Thousands		0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.44	
3	Maintenance spares	Rs. Thousands		0.21	0.22	0.23	0.24	0.26	0.27	0.29	0.3	0.32	0.34	0.36	0.38	0.4	0.43	0.45	0.48	0.5	0.53	0.56	0.59	0.63	0.66	0.7	0.74	0.78	
4	2 months Receivables	Rs. Thousands		1.81	1.73	1.65	1.57	1.49	1.41	1.33	1.25	1.17	1.10	1.07	1.00	0.81	0.84	0.87	0.90	0.93	0.96	1.00	1.04	1.07	1.12	1.16	1.21	1.26	
5	Total working capital (2+3+4)	Rs. Thousands		2.14	2.07	2.01	1.94	1.89	1.83	1.78	1.72	1.67	1.63	1.63	1.59	1.43	1.50	1.57	1.64	1.71	1.79	1.87	1.95	2.05	2.14	2.25	2.36	2.47	
6	Rate of interest	%		13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%		
7	Interest on working capital	Rs. Thousands		0.28	0.27	0.27	0.26	0.25	0.24	0.24	0.23	0.22	0.22	0.21	0.21	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.33	
ARR																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	Depreciation	Rs. Thousands		1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	
3	Interest & finance charges@12.76%	Rs. Thousands		6.51	5.95	5.38	4.81	4.25	3.68	3.12	2.55	1.98	1.42	0.85	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs. Thousands		0.28	0.27	0.27	0.26	0.25	0.24	0.24	0.23	0.22	0.22	0.21	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.33		
5	Return on equity	Rs. Thousands		1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64		
6	Total	Rs. Thousands		10.87	10.37	9.89	9.40	8.92	8.44	7.98	7.51	7.05	6.61	6.44	6.00	4.87	5.03	5.20	5.38	5.57	5.78	5.99	6.21	6.45	6.70	6.97	7.25	7.55	
Levalised Tariff corresponding to useful life																													
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses	Rs/kWh		0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15	
2	Depreciation	Rs/kWh		0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	
3	Interest & finance charges	Rs/kWh		3.92	3.58	3.24	2.90	2.56	2.22	1.88	1.54	1.19	0.85	0.51	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs/kWh		0.17	0.16	0.16	0.16	0.15	0.14	0.14	0.14	0.13	0.13	0.13	0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20				
5	Return on equity	Rs/kWh		0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99		
6	Total Tariff	Rs/kWh		6.55	6.25	5.96	5.66	5.37	5.08	4.80	4.52	4.25	3.98	3.88	3.62	2.93	3.03	3.13	3.24	3.36	3.48	3.61	3.74	3.88	4.03	4.20	4.37	4.55	
7	Discount Factor @13.73% Interest Rate	No.		7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046
8	Discounted Tariff	Rs/kWh		40.09	6.55	5.49	4.61	3.85	3.21	2.67	2.22	1.84	1.52	1.25	1.07	0.88	0.63	0.57	0.52	0.47	0.43	0.39	0.36	0.32	0.30	0.27	0.25	0.23	
9	Levalized Tariff	Rs/kWh		5.04																									

Range : Above 150 - 500 kW (70% Subsidy)			
Capacity : 1 kW			
Sl. No.	Particulars	Unit	With 70% Subsidy
1	Capital Cost	Rs. Thousands	73.70 51.59 22.11
2	Equity @ 30% CC	Rs. Thousands	22.11 6.63
3	Loan @ 70% CC	Rs. Thousands	51.59 15.48

Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660		
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660		

Interest on working capital	
Sl. No.	Particulars/Years
1	O&M expenses@Rs.1375/kW & Escalation @5.72%
2	1 month O&M expenses
3	Maintenance spares
4	2 months Receivables
5	Total working capital (2+3+4)
6	Rate of interest %
7	Interest on working capital

ARR	
Sl. No.	Particulars/Years
1	O&M expenses@Rs.1375/kW & Escalation @5.72%
2	Depreciation
3	Interest & finance charges@12.76%
4	interest on working capital
5	Return on equity
6	Total

Levalised Tariff corresponding to useful life																												
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	O&M expenses	Rs/kWh	0.83 0.88 0.93 0.98 1.03 1.09 1.16 1.22 1.29 1.37 1.44 1.53 1.61 1.71 1.80 1.91 2.02 2.13 2.25 2.38 2.52 2.66 2.82 2.98 3.15																									
2	Depreciation	Rs/kWh	0.78 0.78																									
3	Interest & finance charges	Rs/kWh	3.80 3.47 3.14 2.81 2.48 2.15 1.82 1.49 1.16 0.83 0.50 0.17 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																									
4	interest on working capital	Rs/kWh	0.17 0.16 0.16 0.15 0.15 0.14 0.14 0.13 0.13 0.13 0.13 0.11 0.12 0.13 0.13 0.13 0.14 0.15 0.16 0.16 0.17 0.18 0.19 0.20 0.21 0.22 0.23																									
5	Return on equity	Rs/kWh	0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96																									
6	Total Tariff	Rs/kWh	6.37 6.08 5.80 5.51 5.24 4.96 4.69 4.42 4.16 3.89 3.80 3.55 2.89 2.99 3.10 3.20 3.31 3.44 3.57 3.70 3.85 4.00 4.16 4.33 4.51																									
7	Discount Factor @13.73% Interest Rate	No.	7.95 1 0.879 0.773 0.680 0.598 0.526 0.462 0.406 0.357 0.314 0.276 0.243 0.214 0.188 0.165 0.145 0.128 0.112 0.099 0.087 0.076 0.067 0.059 0.052 0.046																									
8	Discounted Tariff	Rs/kWh	39.15 6.37 5.35 4.48 3.75 3.13 2.61 2.17 1.80 1.49 1.22 1.05 0.86 0.62 0.56 0.51 0.47 0.42 0.39 0.35 0.32 0.29 0.27 0.25 0.22 0.21																									
9	Levalized Tariff	Rs/kWh	4.92																									

Range : Above 500 kW - 1 MW (70% Subsidy)		Capacity : 1 kW	
Sl. No.	Particulars	Unit	With 70% Subsidy
1	Capital Cost	Rs. Thousands	69.80 48.86 20.94
2	Equity @ 30% CC	Rs. Thousands	20.94 6.28
3	Loan @ 70% CC	Rs. Thousands	48.86 14.66
Sl. No.	Units Generation	Unit	Year--> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
1	Installed Capacity	kW	1 1
2	Gross Generation	kWh	1660 1660
3	Net Generation	kWh	1660 1660
Interest on working capital			
Sl. No.	Particulars/Years	Unit	Year--> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands	1.38 1.45 1.54 1.62 1.72 1.82 1.92 2.03 2.15 2.27 2.40 2.54 2.68 2.83 3.00 3.17 3.35 3.54 3.74 3.96 4.18 4.42 4.67 4.94 5.22
2	1 month O&M expenses	Rs. Thousands	0.11 0.12 0.13 0.14 0.14 0.15 0.16 0.17 0.18 0.19 0.20 0.21 0.22 0.24 0.25 0.26 0.28 0.29 0.31 0.33 0.35 0.37 0.39 0.41 0.44
3	Maintenance spares	Rs. Thousands	0.21 0.22 0.23 0.24 0.26 0.27 0.29 0.3 0.32 0.34 0.36 0.38 0.4 0.43 0.45 0.48 0.5 0.53 0.56 0.59 0.63 0.66 0.7 0.74 0.78
4	2 months Receivables	Rs. Thousands	1.68 1.61 1.53 1.46 1.39 1.32 1.25 1.18 1.11 1.04 1.02 0.96 0.78 0.81 0.84 0.87 0.90 0.93 0.97 1.01 1.05 1.09 1.13 1.18 1.23
5	Total working capital (2+3+4)	Rs. Thousands	2.01 1.95 1.89 1.84 1.79 1.74 1.70 1.65 1.61 1.57 1.58 1.55 1.41 1.48 1.54 1.61 1.68 1.76 1.84 1.93 2.03 2.12 2.22 2.33 2.44
6	Rate of interest	%	13.26% 13.26%
7	Interest on working capital	Rs. Thousands	0.27 0.26 0.25 0.24 0.24 0.23 0.23 0.22 0.21 0.21 0.21 0.21 0.19 0.20 0.20 0.21 0.22 0.23 0.24 0.26 0.27 0.28 0.29 0.31 0.32
ARR			
Sl. No.	Particulars/Years	Unit	Year--> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands	1.38 1.45 1.54 1.62 1.72 1.82 1.92 2.03 2.15 2.27 2.40 2.54 2.68 2.83 3.00 3.17 3.35 3.54 3.74 3.96 4.18 4.42 4.67 4.94 5.22
2	Depreciation	Rs. Thousands	1.22 1.22 1.22 1.22 1.22 1.22 1.22 1.22 1.22 1.22 1.22 1.22 1.22 1.22 0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.32
3	Interest & finance charges@12.76%	Rs. Thousands	5.97 5.46 4.94 4.42 3.90 3.38 2.86 2.34 1.82 1.30 0.78 0.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
4	interest on working capital	Rs. Thousands	0.27 0.26 0.25 0.24 0.24 0.23 0.23 0.22 0.21 0.21 0.21 0.21 0.19 0.20 0.20 0.21 0.22 0.23 0.24 0.26 0.27 0.28 0.29 0.31 0.32
5	Return on equity	Rs. Thousands	1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.51 1.51 1.51 1.51 1.51 1.51 1.51 1.51 1.51 1.51 1.51 1.51
6	Total	Rs. Thousands	10.10 9.65 9.20 8.76 8.33 7.90 7.48 7.06 6.65 6.25 6.12 5.73 4.70 4.86 5.03 5.21 5.40 5.60 5.81 6.05 6.28 6.53 6.79 7.08 7.38
Levalised Tariff corresponding to useful life			
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
1	O&M expenses	Rs/kWh	0.83 0.88 0.93 0.98 1.03 1.09 1.16 1.22 1.29 1.37 1.44 1.53 1.61 1.71 1.80 1.91 2.02 2.13 2.25 2.38 2.52 2.66 2.82 2.98 3.15
2	Depreciation	Rs/kWh	0.74 0.74 0.74 0.74 0.74 0.74 0.74 0.74 0.74 0.74 0.74 0.74 0.74 0.74 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19
3	Interest & finance charges	Rs/kWh	3.60 3.29 2.97 2.66 2.35 2.03 1.72 1.41 1.10 0.78 0.47 0.16 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
4	interest on working capital	Rs/kWh	0.16 0.16 0.15 0.14 0.14 0.14 0.13 0.13 0.13 0.13 0.11 0.12 0.12 0.13 0.14 0.14 0.16 0.17 0.17 0.19 0.19 0.19 0.19 0.19
5	Return on equity	Rs/kWh	0.76 0.76 0.76 0.76 0.76 0.76 0.76 0.76 0.76 0.76 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
6	Total Tariff	Rs/kWh	6.08 5.81 5.54 5.28 5.02 4.76 4.51 4.26 4.01 3.77 3.68 3.45 2.83 2.93 3.03 3.14 3.25 3.37 3.50 3.64 3.78 3.93 4.09 4.27 4.44
7	Discount Factor @13.73% Interest Rate	No.	7.95 1 0.879 0.773 0.680 0.598 0.526 0.462 0.406 0.357 0.314 0.276 0.243 0.214 0.188 0.165 0.145 0.128 0.112 0.099 0.087 0.076 0.067 0.059 0.052 0.046
8	Discounted Tariff	Rs/kWh	37.63 6.08 5.11 4.28 3.59 3.00 2.50 2.08 1.73 1.43 1.18 1.02 0.84 0.60 0.55 0.50 0.46 0.42 0.38 0.35 0.32 0.29 0.26 0.24 0.22 0.20
9	Levalized Tariff	Rs/kWh	4.73

Range : 1 - 8 kW (30% Subsidy)																													
Capacity : 1 kW																													
Sl. No.	Particulars	Unit	With 30% Subsidy																										
1	Capital Cost	Rs. Thousands	82.50	24.75																									
2	Equity @ 30% CC	Rs. Thousands	24.75	17.33																									
3	Loan @ 70% CC	Rs. Thousands	57.75	40.43																									
Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	
Interest on working capital				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	1 month O&M expenses	Rs. Thousands		0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.44	
3	Maintenance spares	Rs. Thousands		0.21	0.22	0.23	0.24	0.26	0.27	0.29	0.3	0.32	0.34	0.36	0.38	0.4	0.43	0.45	0.48	0.5	0.53	0.56	0.59	0.63	0.66	0.7	0.74	0.78	
4	2 months Receivables	Rs. Thousands		2.61	2.52	2.43	2.34	2.25	2.16	2.08	1.99	1.91	1.82	1.86	1.78	1.33	1.36	1.39	1.42	1.45	1.48	1.52	1.56	1.59	1.64	1.68	1.73	1.78	
5	Total working capital (2+3+4)	Rs. Thousands		2.93	2.86	2.79	2.71	2.65	2.58	2.53	2.46	2.41	2.35	2.42	2.37	1.95	2.02	2.09	2.16	2.23	2.31	2.39	2.48	2.57	2.67	2.77	2.88	2.99	
6	Rate of interest	%		13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%		
7	Interest on working capital	Rs. Thousands		0.39	0.38	0.37	0.36	0.35	0.34	0.34	0.33	0.32	0.31	0.32	0.31	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.37	0.38	0.40	
ARR				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	Depreciation	Rs. Thousands		3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
3	Interest & finance charges@12.76%	Rs. Thousands		7.06	6.45	5.83	5.22	4.61	3.99	3.38	2.76	2.15	1.54	0.92	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs. Thousands		0.39	0.38	0.37	0.36	0.35	0.34	0.34	0.33	0.32	0.31	0.32	0.31	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.37	0.38	0.40	
5	Return on equity	Rs. Thousands		3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	
6	Total	Rs. Thousands		15.66	15.11	14.57	14.04	13.51	12.98	12.47	11.95	11.45	10.95	11.16	10.68	7.99	8.15	8.32	8.50	8.70	8.90	9.11	9.33	9.57	9.82	10.09	10.37	10.67	
Levalised Tariff corresponding to useful life				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses	Rs/kWh		0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15	
2	Depreciation	Rs/kWh		2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
3	Interest & finance charges	Rs/kWh		4.25	3.88	3.51	3.14	2.77	2.40	2.03	1.66	1.29	0.92	0.55	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs/kWh		0.23	0.23	0.22	0.22	0.21	0.20	0.20	0.20	0.19	0.19	0.19	0.16	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20	0.21	0.22	0.23	0.24		
5	Return on equity	Rs/kWh		2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	
6	Total Tariff	Rs/kWh		9.43	9.10	8.78	8.46	8.14	7.82	7.51	7.20	6.90	6.59	6.73	6.43	4.81	4.91	5.01	5.12	5.24	5.36	5.49	5.62	5.77	5.92	6.08	6.25	6.43	
7	Discount Factor @13.73% Interest Rate	No.		7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046
8	Discounted Tariff	Rs/kWh		60.93	9.43	8.01	6.79	5.75	4.86	4.11	3.47	2.93	2.46	2.07	1.86	1.56	1.03	0.92	0.83	0.74	0.67	0.60	0.54	0.49	0.44	0.40	0.36	0.32	0.29
9	Levalized Tariff	Rs/kWh		7.66																									

Range : Above 8 - 50 kW (30% Subsidy)																													
Capacity : 1 kW																													
Sl. No.	Particulars	Unit	With 30% Subsidy																										
1	Capital Cost	Rs. Thousands	79.60	23.88	55.72																								
2	Equity @ 30% CC	Rs. Thousands	23.88		16.72																								
3	Loan @ 70% CC	Rs. Thousands	55.72		39.00																								
Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660			
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660			
Interest on working capital																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	1 month O&M expenses	Rs. Thousands		0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.44	
3	Maintenance spares	Rs. Thousands		0.21	0.22	0.23	0.24	0.26	0.27	0.29	0.3	0.32	0.34	0.36	0.38	0.4	0.43	0.45	0.48	0.5	0.53	0.56	0.59	0.63	0.66	0.7	0.74	0.78	
4	2 months Receivables	Rs. Thousands		2.53	2.44	2.35	2.27	2.18	2.10	2.02	1.93	1.85	1.78	1.81	1.73	1.30	1.33	1.36	1.39	1.42	1.45	1.49	1.52	1.57	1.61	1.65	1.70	1.75	
5	Total working capital (2+3+4)	Rs. Thousands		2.85	2.78	2.71	2.64	2.59	2.52	2.47	2.40	2.35	2.30	2.37	2.32	1.93	1.99	2.06	2.13	2.20	2.28	2.36	2.44	2.54	2.64	2.74	2.85	2.96	
6	Rate of interest	%		13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%		
7	Interest on working capital	Rs. Thousands		0.38	0.37	0.36	0.35	0.34	0.33	0.33	0.32	0.31	0.31	0.31	0.31	0.26	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.36	0.38	0.39	
ARR																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	Depreciation	Rs. Thousands		3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
3	Interest & finance charges@12.76%	Rs. Thousands		6.81	6.22	5.63	5.04	4.44	3.85	3.26	2.67	2.07	1.48	0.89	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	interest on working capital	Rs. Thousands		0.38	0.37	0.36	0.35	0.34	0.33	0.33	0.32	0.31	0.31	0.31	0.31	0.26	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.36	0.38	0.39	
5	Return on equity	Rs. Thousands		3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01
6	Total	Rs. Thousands		15.16	14.64	14.12	13.60	13.09	12.59	12.10	11.61	11.12	10.65	10.86	10.40	7.81	7.96	8.14	8.32	8.51	8.71	8.92	9.15	9.39	9.64	9.90	10.19	10.48	
Levalised Tariff corresponding to useful life																													
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses	Rs/kWh		0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15	
2	Depreciation	Rs/kWh		1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
3	Interest & finance charges	Rs/kWh		4.10	3.75	3.39	3.03	2.68	2.32	1.96	1.61	1.25	0.89	0.54	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs/kWh		0.23	0.22	0.22	0.21	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.19	0.16	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.21	0.22	0.23	0.24		
5	Return on equity	Rs/kWh		2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	
6	Total Tariff	Rs/kWh		9.13	8.82	8.50	8.19	7.89	7.58	7.29	6.99	6.70	6.42	6.54	6.27	4.70	4.80	4.90	5.01	5.13	5.25	5.37	5.51	5.66	5.81	5.97	6.14	6.32	
7	Discount Factor @13.73% Interest Rate	No.		7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046
8	Discounted Tariff	Rs/kWh		59.15	9.13	7.75	6.57	5.57	4.71	3.99	3.37	2.84	2.39	2.02	1.81	1.52	1.00	0.90	0.81	0.73	0.65	0.59	0.53	0.48	0.43	0.39	0.35	0.32	0.29
9	Levalized Tariff	Rs/kWh		7.44																									

Range : Above 50 - 150 kW (30% Subsidy)				
Capacity : 1 kW				
Sl. No.	Particulars	Unit	With 30% Subsidy	
1	Capital Cost	Rs. Thousands	76.10	22.83
2	Equity @ 30% CC	Rs. Thousands	22.83	15.98
3	Loan @ 70% CC	Rs. Thousands	53.27	37.29

Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	

Interest on working capital		
Sl. No.	Particulars/Years	Unit
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands
2	1 month O&M expenses	Rs. Thousands
3	Maintenance spares	Rs. Thousands
4	2 months Receivables	Rs. Thousands
5	Total working capital (2+3+4)	Rs. Thousands
6	Rate of interest	%
7	Interest on working capital	Rs. Thousands

ARR		
Sl. No.	Particulars/Years	Unit
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands
2	Depreciation	Rs. Thousands
3	Interest & finance charges@12.76%	Rs. Thousands
4	interest on working capital	Rs. Thousands
5	Return on equity	Rs. Thousands
6	Total	Rs. Thousands

Levalised Tariff corresponding to useful life																												
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	O&M expenses	Rs/kWh	0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15	
2	Depreciation	Rs/kWh	1.87	1.87	1.87	1.87	1.87	1.88	1.88	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	
3	Interest & finance charges	Rs/kWh	3.92	3.58	3.24	2.90	2.56	2.22	1.88	1.54	1.19	0.85	0.51	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	interest on working capital	Rs/kWh	0.22	0.22	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.19	0.18	0.15	0.16	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20	0.22	0.22	0.23	0.23	
5	Return on equity	Rs/kWh	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	
6	Total Tariff	Rs/kWh	8.77	8.47	8.17	7.88	7.59	7.30	7.02	6.74	6.46	6.20	6.32	6.06	4.57	4.67	4.77	4.88	5.00	5.12	5.25	5.38	5.52	5.67	5.84	6.00	6.19	
7	Discount Factor @13.73% Interest Rate	No.	7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046
8	Discounted Tariff	Rs/kWh	57.01	8.77	7.45	6.32	5.36	4.54	3.84	3.25	2.74	2.31	1.95	1.75	1.47	0.98	0.88	0.79	0.71	0.64	0.57	0.52	0.47	0.42	0.38	0.34	0.31	0.28
9	Levalized Tariff	Rs/kWh	7.17																									

Range : Above 150 - 500 kW (30% Subsidy)				
Capacity : 1 kW				
Sl. No.	Particulars	Unit	With 30% Subsidy	
1	Capital Cost	Rs. Thousands	73.70	22.11 51.59
2	Equity @ 30% CC	Rs. Thousands	22.11	15.48
3	Loan @ 70% CC	Rs. Thousands	51.59	36.11
Sl. No.	Units Generation	Unit	Year-->	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
1	Installed Capacity	kW		1 1
2	Gross Generation	kWh		1660 1660
3	Net Generation	kWh		1660 1660
Interest on working capital				
Sl. No.	Particulars/Years	Unit	Year-->	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38 1.45 1.54 1.62 1.72 1.82 1.92 2.03 2.15 2.27 2.40 2.54 2.68 2.83 3.00 3.17 3.35 3.54 3.74 3.96 4.18 4.42 4.67 4.94 5.22
2	1 month O&M expenses	Rs. Thousands		0.11 0.12 0.13 0.14 0.14 0.15 0.16 0.17 0.18 0.19 0.20 0.21 0.22 0.24 0.25 0.26 0.28 0.29 0.31 0.33 0.35 0.37 0.39 0.41 0.44
3	Maintenance spares	Rs. Thousands		0.21 0.22 0.23 0.24 0.26 0.27 0.29 0.3 0.32 0.34 0.36 0.38 0.4 0.43 0.45 0.48 0.5 0.53 0.56 0.59 0.63 0.66 0.7 0.74 0.78
4	2 months Receivables	Rs. Thousands		2.36 2.28 2.20 2.12 2.04 1.97 1.89 1.82 1.74 1.67 1.71 1.64 1.24 1.27 1.29 1.29 1.32 1.36 1.39 1.43 1.46 1.50 1.55 1.59 1.64 1.69
5	Total working capital (2+3+4)	Rs. Thousands		2.68 2.62 2.56 2.50 2.45 2.39 2.34 2.29 2.24 2.20 2.27 2.23 1.86 1.93 1.99 2.07 2.14 2.21 2.30 2.38 2.48 2.57 2.68 2.79 2.90
6	Rate of interest	%		13.26% 13.26%
7	Interest on working capital	Rs. Thousands		0.36 0.35 0.34 0.33 0.32 0.32 0.31 0.30 0.30 0.29 0.30 0.30 0.25 0.26 0.26 0.27 0.28 0.29 0.30 0.32 0.33 0.34 0.36 0.37 0.38
ARR				
Sl. No.	Particulars/Years	Unit	Year-->	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38 1.45 1.54 1.62 1.72 1.82 1.92 2.03 2.15 2.27 2.40 2.54 2.68 2.83 3.00 3.17 3.35 3.54 3.74 3.96 4.18 4.42 4.67 4.94 5.22
2	Depreciation	Rs. Thousands		3.01 3.01 3.01 3.01 3.01 3.01 3.01 3.01 3.01 3.01 3.01 3.01 0.79 0.79 0.79 0.79 0.79 0.79 0.79 0.79 0.79 0.79 0.79 0.79 0.79
3	Interest & finance charges@12.76%	Rs. Thousands		6.31 5.76 5.21 4.66 4.11 3.57 3.02 2.47 1.92 1.37 0.82 0.27 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
4	interest on working capital	Rs. Thousands		0.36 0.35 0.34 0.33 0.32 0.32 0.31 0.30 0.30 0.29 0.30 0.30 0.25 0.26 0.26 0.27 0.28 0.29 0.30 0.32 0.33 0.34 0.36 0.37 0.38
5	Return on equity	Rs. Thousands		3.10 3.10 3.10 3.10 3.10 3.10 3.10 3.10 3.10 3.10 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71 3.71
6	Total	Rs. Thousands		14.15 13.67 13.19 12.72 12.26 11.80 11.35 10.90 10.47 10.03 10.24 9.83 7.44 7.60 7.76 7.95 8.14 8.34 8.55 8.79 9.02 9.27 9.54 9.82 10.11
Levalised Tariff corresponding to useful life				
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
1	O&M expenses	Rs/kWh		0.83 0.88 0.93 0.98 1.03 1.09 1.16 1.22 1.29 1.37 1.44 1.53 1.61 1.71 1.80 1.91 2.02 2.13 2.25 2.38 2.52 2.66 2.82 2.98 3.15
2	Depreciation	Rs/kWh		1.81 1.81 1.81 1.81 1.81 1.81 1.81 1.81 1.81 1.81 1.81 1.81 0.48 0.48 0.48 0.48 0.48 0.48 0.48 0.48 0.48 0.48 0.48 0.48 0.48
3	Interest & finance charges	Rs/kWh		3.80 3.47 3.14 2.81 2.48 2.15 1.82 1.49 1.16 0.83 0.50 0.17 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
4	interest on working capital	Rs/kWh		0.22 0.21 0.20 0.20 0.19 0.19 0.18 0.18 0.17 0.18 0.18 0.15 0.16 0.16 0.16 0.17 0.17 0.17 0.18 0.19 0.20 0.20 0.22 0.23
5	Return on equity	Rs/kWh		1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 2.24 2.24 2.24 2.24 2.24 2.24 2.24 2.24 2.24 2.24 2.24 2.24 2.24 2.24
6	Total Tariff	Rs/kWh		8.52 8.23 7.95 7.66 7.38 7.11 6.84 6.57 6.31 6.04 6.17 5.92 4.48 4.58 4.68 4.79 4.90 5.02 5.15 5.29 5.43 5.58 5.75 5.92 6.09
7	Discount Factor @13.73% Interest Rate	No.	7.95 1	0.879 0.773 0.680 0.598 0.526 0.462 0.406 0.357 0.314 0.276 0.243 0.214 0.188 0.165 0.145 0.128 0.112 0.099 0.087 0.076 0.067 0.059 0.052 0.046
8	Discounted Tariff	Rs/kWh		55.54 8.52 7.24 6.14 5.21 4.41 3.74 3.16 2.67 2.25 1.90 1.70 1.44 0.96 0.86 0.77 0.69 0.63 0.56 0.51 0.46 0.41 0.37 0.34 0.31 0.28
9	Levalized Tariff	Rs/kWh		6.99

Range : Above 500 kW - 1 MW (30% Subsidy)																													
Capacity : 1 kW																													
Sl. No.	Particulars	Unit	With 30% Subsidy																										
1	Capital Cost	Rs. Thousands	69.80	20.94	48.86																								
2	Equity @ 30% CC	Rs. Thousands	20.94		14.66																								
3	Loan @ 70% CC	Rs. Thousands	48.86		34.20																								
Sl. No.	Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	Installed Capacity	kW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
2	Gross Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660			
3	Net Generation	kWh		1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660	1660			
Interest on working capital																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	1 month O&M expenses	Rs. Thousands		0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.24	0.25	0.26	0.28	0.29	0.31	0.33	0.35	0.37	0.39	0.41	0.44	
3	Maintenance spares	Rs. Thousands		0.21	0.22	0.23	0.24	0.26	0.27	0.29	0.3	0.32	0.34	0.36	0.38	0.4	0.43	0.45	0.48	0.5	0.53	0.56	0.59	0.63	0.66	0.7	0.74	0.78	
4	2 months Receivables	Rs. Thousands		2.24	2.17	2.10	2.02	1.95	1.88	1.81	1.74	1.67	1.60	1.64	1.58	1.20	1.23	1.25	1.28	1.32	1.35	1.39	1.42	1.46	1.51	1.55	1.60	1.65	
5	Total working capital (2+3+4)	Rs. Thousands		2.57	2.51	2.46	2.40	2.35	2.30	2.26	2.21	2.17	2.13	2.20	2.17	1.82	1.89	1.95	2.03	2.10	2.18	2.26	2.34	2.53	2.64	2.75	2.86		
6	Rate of interest	%		13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%	13.26%		
7	Interest on working capital	Rs. Thousands		0.34	0.33	0.33	0.32	0.31	0.31	0.30	0.29	0.29	0.28	0.29	0.29	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.36	0.38	
ARR																													
Sl. No.	Particulars/Years	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses@Rs.1375/kW & Escalation @5.72%	Rs. Thousands		1.38	1.45	1.54	1.62	1.72	1.82	1.92	2.03	2.15	2.27	2.40	2.54	2.68	2.83	3.00	3.17	3.35	3.54	3.74	3.96	4.18	4.42	4.67	4.94	5.22	
2	Depreciation	Rs. Thousands		2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
3	Interest & finance charges@12.76%	Rs. Thousands		5.97	5.46	4.94	4.42	3.90	3.38	2.86	2.34	1.82	1.30	0.78	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs. Thousands		0.34	0.33	0.33	0.32	0.31	0.31	0.30	0.29	0.29	0.28	0.29	0.29	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.36	0.38	
5	Return on equity	Rs. Thousands		2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	
6	Total	Rs. Thousands		13.47	13.02	12.58	12.14	11.70	11.28	10.86	10.44	10.03	9.69	9.83	9.45	7.19	7.35	7.53	7.71	7.90	8.10	8.31	8.54	8.77	9.03	9.30	9.57	9.88	
Levalised Tariff corresponding to useful life																													
Sl. No.	Per Unit Cost of Generation	Unit	Total/ Lev Tariff	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	O&M expenses	Rs/kWh		0.83	0.88	0.93	0.98	1.03	1.09	1.16	1.22	1.29	1.37	1.44	1.53	1.61	1.71	1.80	1.91	2.02	2.13	2.25	2.38	2.52	2.66	2.82	2.98	3.15	
2	Depreciation	Rs/kWh		1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
3	Interest & finance charges	Rs/kWh		3.60	3.29	2.97	2.66	2.35	2.03	1.72	1.41	1.10	0.78	0.47	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	interest on working capital	Rs/kWh		0.20	0.20	0.20	0.19	0.19	0.18	0.17	0.17	0.17	0.17	0.17	0.14	0.15	0.16	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.21	0.22	0.23		
5	Return on equity	Rs/kWh		1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	
6	Total Tariff	Rs/kWh		8.11	7.84	7.58	7.31	7.05	6.80	6.54	6.29	6.04	5.80	5.92	5.69	4.33	4.43	4.53	4.64	4.76	4.88	5.01	5.14	5.28	5.44	5.60	5.77	5.95	
7	Discount Factor @13.73% Interest Rate	No.		7.95	1	0.879	0.773	0.680	0.598	0.526	0.462	0.406	0.357	0.314	0.276	0.243	0.214	0.188	0.165	0.145	0.128	0.112	0.099	0.087	0.076	0.067	0.059	0.052	0.046
8	Discounted Tariff	Rs/kWh		53.15	8.11	6.90	5.86	4.97	4.21	3.57	3.02	2.55	2.16	1.82	1.64	1.38	0.93	0.83	0.75	0.67	0.61	0.55	0.49	0.45	0.40	0.37	0.33	0.30	0.27
9	Levalized Tariff	Rs/kWh		6.68																									