

RAJASTHAN ELECTRICITY REGULATORY COMMISSION, JAIPUR

In the matter of determination of generic tariff for sale of electricity from wind power plants in the state to Distribution Licensee getting commissioned during FY 2014-15.

Coram:

1. Shri Vishvanath Hiremath, Chairman
2. Shri S.Dhawan, Member
3. Shri Vinod Pandya, Member

Date of hearing: 3.07.2014
Date of Order: 16.07.2014

Order

1. The Commission has notified RERC (Terms and Conditions for Determination of Tariff for Renewable Energy Sources- Wind and Solar energy) Regulations, 2014 on 24.02.2014 (hereinafter called as RERC RE Tariff Regulations, 2014). As per regulation 7(1) of the RERC RE Tariff Regulations, 2014, Commission may determine generic tariff on Suo-Motu basis at the beginning of each year of the control period for wind power plants for which principles and norms have been specified under these Regulations.
2. Commission based on the benchmark capital cost for wind power plants for FY 2014-15 and performance parameters contained in the RERC RE Tariff Regulations, 2014 had prepared the draft order for the generic tariff for the wind power plants getting commissioned during FY 2014-15 and the same was issued for inviting comments/suggestions from the stakeholders.

3. Public notices were published in the following newspapers on the dates mentioned against each inviting comments/suggestions from the stakeholders on the draft order:

Rajasthan Patrika: 30.05.2014

Rastradoot: 30.05.2014

The Times of India: 31.05.2014

Public notices along with the draft order were also placed on the Commission's website.

4. The last date for submission of comments/suggestions by the stakeholders/public was 20.06.2014.
5. Hearing on the draft order was held on 03.07.2014. The Stakeholders who offered their suggestions/comments are mentioned at Annexure-III.
6. Commission has considered the comments/suggestions received from the stakeholders through their written submission as well as submissions made during the hearing. The present regulatory exercise is limited to determination of generic tariff based on the parameters contained in RERC RE Tariff Regulations, 2014. The comments/suggestions of the stakeholders received on parameters such as capital cost, O&M Expenses and its escalation, interest on long term loan and working capital, working capital requirement (receivables of debtors), CUF and deration, auxiliary consumption and CDM benefit are already incorporated in the RERC RE Tariff Regulations, 2014 and this order has to follow the provisions of Regulations in respect of above mentioned parameters.

7. The summary of the comments and views expressed by the stakeholders is placed as Annexure-IV.
8. Commission, through this order, is determining the tariff for wind power plants on Suo-Motu basis based on the parameters specified in the Regulations and duly taking note of the suggestions/comments of the stakeholders on the draft order circulated.
9. The comments/suggestions have been broadly grouped and summarized as under:
 - (1) Surcharge on MAT/Income Tax Rate;
 - (2) HD Benefit;
 - (3) Tariff Levellisation;
 - (4) Discount Rate; and
 - (5) Calculation sheets.
10. The above issues and Commission's analysis/decision thereon have been dealt in the following paras:

(1) Surcharge on MAT/Income Tax Rate

11. Commission in the draft order for the purpose of grossing up the base rate of return on equity provided under regulation 15(3) of RERC RE Tariff Regulations 2014, has considered the MAT rate of 20.01% (= 18.50% MAT rate+5% surcharge + 3% cess) for first year and a MAT rate of 19.06% (= 18.5% MAT rate + 3% cess) has been considered for remaining 9 years of the first 10 years. For remaining 15 years of plant life (also equal to useful life), the normal tax rate of 30.90% (= 30% tax rate + 3% cess) has been applied for grossing up of the base rate of Return on Equity. Similarly, for determination of levellised benefit of higher depreciation also, Commission has considered tax rate of

32.45%(=30% tax rate+5% surcharge+3% cess) for the first year and 30.90%(= 30% tax rate+ 3% cess) for subsequent years.

12. Stakeholders have requested that surcharge may also be considered in MAT/Income Tax rates for entire useful life of the project instead of considering only for the first year. It has also been pointed out that regulation 15(3) of RERC RE Tariff Regulations, 2014 also does not provide for such methodology. Abolition of surcharge was based on an announcement then made in the Union Budget to phase out the surcharge in due course which has not materialised. Further, it is also requested that previous practice of considering surcharge for the first year only is not relevant with new Regulations.
13. Some of the stakeholders have also requested to consider the surcharge of 10% in place of 5% in line with Union Budget 2013 declaration.

Commission's views/decision

14. As regards suggestions relating to consideration of surcharge in MAT/Income Tax for entire useful life of the projects, it is stated that Commission on 16.07.2009 had determined levellised tariff, based on the methodology of considering surcharge for the first year only for wind power plants commissioned during FY 2009-10. Thereafter, applying the indexation mechanism stipulated at regulation 85 of the RERC Tariff Regulations 2009, Commission determined the tariff for FY 2010-11 on 31.03.2010. M/s Indian Wind Power Association & M/s Enercon (India) Limited filed petition No. RERC-220,221/10 under removal of difficulties in the tariff regulations and to review the order dated 31.03.2010 regarding wind power plants as regards applicability of surcharge. This was disposed of by the Commission vide order dated 06.08.2010 without modifying the earlier tariff determined on account of change in surcharge on MAT. This Order was challenged before the

APTEL, where, among other things, the issue of surcharge on MAT was raised before the Hon'ble APTEL in the matter of *M/s Enercon (India) Limited and Indian Wind Power Association (Rajasthan State Council) vs. Rajasthan Electricity Regulatory Commission, Jaipur and Ors. reported in 2011 ELR (APTEL) 0987*. The specific issue raised before the Hon'ble APTEL was that the Commission has committed error in not taking into account the surcharge on MAT for 2nd to 10th year and on income tax for eleventh to 20th year. Similarly, it was also argued that the impact of effective rate of corporate tax on calculating accelerated depreciation benefit was to be considered with surcharge and cess from first year to twentieth year. Hon'ble APTEL was of the view that *"if surcharge on MAT is to be allowed for 2nd to 20th Year in the case of the Appellant then the project developers who commissioned wind power plants in FY 2009-10 will be discriminated against. Since the levelised Tariff is not subject to true up and the amount of surcharge varies from year to year, noticeably by decrease, it is not possible for the Commission to consider surcharge of MAT from 2nd to 20th year"*. The Commission in the present order also has determined the levelised tariff based on the methodology upheld by the Hon'ble APTEL for FY 2011-12, FY 2012-13 and FY 2013-14. Therefore, Commission considers it appropriate that no change is required as far as levy of surcharge is concerned.

15. As regards the suggestion received for increasing the surcharge from 5% considered in the draft order to 10%, Commission observes that as per the Income Tax Act, 10% surcharge is applicable in case of domestic companies if their net income exceeds ₹ 10 Crores. It may be mentioned that capacity of the most of wind power plants supplying power to the State Discoms is small where total net annual income of such plants relevant for levelised tariff would be less than ₹ 10 Crores. Therefore, these would not be subjected to surcharge rate of 10%. In light of above, Commission has retained the surcharge rate of 5% in the computations of generic tariff.

(2) Higher Depreciation Benefit

16. In the draft order, for determining higher depreciation benefit, the book depreciation rate 5.28% has been compared with the depreciation rate as per income tax rate i.e. 15% of the written down value.
17. However, some of the stakeholders have submitted that for determining levelled higher depreciation benefit, instead of book depreciation rate of 5.28%, the depreciation rate of 5.83% for 12 years and 1.54% thereafter may be considered. It has been further submitted that consideration of book depreciation and depreciation as per income tax is relevant for determining MAT but is not appropriate for determination of higher depreciation benefit. It has been further said that the depreciation rate considered for tariff determination is legitimate amount due to generating company as per regulations and the income tax saved due to depreciation provided higher than it is the benefit. As such, for determination of levelled benefit of higher depreciation instead of taking book depreciation of 5.28%, the depreciation rate considered for determining tariff (i.e. 5.83% for 12 years and 1.54% thereafter) may be used.

Commission's views/decision

18. Commission observes that as per Schedule-II of the Companies Act 2013, the Companies, where useful lives or residual value are prescribed by a regulatory authority constituted under an act of the Parliament or by the Central Government, shall use depreciation rates or useful lives and residual values prescribed by the relevant authority. Commission at regulation 14(2) of the RERC RE Tariff Regulations 2014 has prescribed that:

“Depreciation per annum shall be based on ‘Differential Depreciation Approach’ over the loan period beyond the loan tenure over the useful life computed on ‘Straight Line Method’.

The depreciation rate for the first 12 years of the Tariff Period shall be 5.83% of the Capital Cost per annum and the remaining depreciation shall be spread over the remaining useful life of the project from the 13th year onwards."

In view of the above, Commission considers it appropriate that for the purpose of assessing levelled benefit of higher depreciation, the depreciation rate specified under RERC RE Tariff Regulations 2014 may be taken i.e. 5.83% of the capital cost per annum for 12 years and the remaining depreciation spread over the remaining useful life of the project from the 13th year onwards be considered, instead of 5.28% considered in the draft order.

(3) Tariff Levellisation

19. Commission in the levelled tariff computations, discounted the year wise calculated tariff. However, some of the stakeholders have submitted that levelled tariff is a uniform tariff which gives revenue stream whose NPV (Net Present Value) shall be the same as the NPV of revenue stream of year wise calculated tariff. It has been further submitted that the normative annual generation from wind power plants would not be the same during the entire life due to de-ration and on account of this, levelled tariff shall have to be worked out by discounting of revenue stream as well as generation.

Commission's views/decision

20. Commission agrees with the suggestion of the stakeholders. The levelled tariff has now been worked out by discounting the revenue stream and generation separately and now the NPV of the revenue stream with levelled tariff is same as the NPV of revenue stream of year wise calculated tariff stream.

(4) Discount Rate

21. As per regulation 9(2) of the RERC RE Tariff Regulations 2014, for the purpose of levellised tariff computation, the latest available discount factor notified by CERC for the purpose of bid evaluation and payment at the time of issuance of the tariff order for the relevant year shall be considered. Some of the stakeholders submitted that CERC vide their order dated 21.02.2014 on Petition no. 002/SM/2014, has decided to discontinue the notification of escalation rates for evaluation of bids with effect from 1.04.2014. CERC in their latest Notification No. Eco-1/2014-CERC dated 7.04.2014, has not notified discount rate for evaluation of bids. It would be relevant to review the above provision as contained in the Tariff Regulations and Commission may consider specifying a discount rate based on cost of capital (say by applying RoE and interest rate respectively on normative equity and debt). Till above provision is amended by following the prescribed procedure, discount rate of 13.10% may be considered provisionally.

Commission's views/decision

22. The discounting rate of 13.10 % notified by CERC vide their notification dated 7.10.2013 was valid upto 31.03.2014 i.e. immediately before the commencement of the FY 2014-15. The tariff determined through this order would be applicable for entire FY 2014-15. In view of the same, Commission has considered a discount rate of 13.10% for determination of generic tariff for the wind power plants getting commissioned during FY 2014-15 and suggestion of the stakeholders in this regard for plants getting commissioned during FY 2014-15 is not accepted. However, for generic tariff for plants which would be getting commissioned during the subsequent years of the present control period, a view would be taken separately.

(5) Calculation sheets

23. In the tariff computation sheets, Commission considered income tax rate of 30.90% for 11th year onwards whereas in the computation of levelled benefit of higher depreciation, Commission has considered income tax rate of 32.45% for the first year and 30.90% for 11th year onwards. One of the stakeholders has pointed out that in the calculation of HD benefit, income tax rate considered is 32.45% as per the note 3 for the first year whereas in item no. 4 of financial assumptions, it is mentioned as 30.90%.

Commission's views/decision

24. Commission has considered income tax rate of 30.90% for grossing up of the base rate of RoE from 11th year onwards whereas in the calculations of levelled benefit of higher depreciation income tax rate of 32.45% has been considered for the first year and income tax rate of 30.90% for subsequent years. In light of Commission's views expressed in the earlier paras no change is required. However, further clarity has been provided in the financial assumption sheet and computation sheet of levelled benefit of higher depreciation.

The levelled generic tariff for wind power plants getting commissioned during FY 2014-15:

25. The levelled generic tariff for wind power plants, getting commissioned during FY 2014-15, has been discussed below:

Useful Life

26. The regulation 2(22) of RERC RE Tariff Regulations 2014 provide for a useful life of 25 years for wind power plants and accordingly, for computation of generic tariff, a useful life of 25 years has been considered.

Tariff Period

27. The RERC RE Tariff Regulations, 2014 at regulation 5, specify that the tariff determined for the wind power plants getting commissioned during the control period, shall continue to be applicable for entire duration of the tariff period as stipulated in regulation 6 of the Regulations, which is 25 years for wind power plants.

Tariff Structure, Tariff Design and Levelled Tariff

28. As per regulation 8 of RERC RE Tariff Regulations, 2014, the tariff for wind power plants shall be a single part tariff consisting of following fixed cost components:
- (a) Operation and Maintenance (O&M) Expenses;
 - (b) Depreciation;
 - (c) Interest on long-term loans;
 - (d) Interest on Working Capital; and
 - (e) Return on Equity.
29. As per regulation 9 of the RERC RE Tariff Regulations, 2014, the generic tariff for wind power plants shall be determined on levelled basis for the tariff period and that for the purpose of levelled tariff determination, the latest available discount factor notified by CERC for the purpose of bid evaluation and payment at the time of issuance of the tariff order for the relevant year shall be considered. Therefore, the discount factor of 13.10% has been considered as per the notification dated 7.10.2013 of CERC.

Capital Cost

30. Commission at regulation 22(2) of RERC RE Tariff Regulations, 2014 has specified a normative Capital cost of ₹ 565 Lakh/MW inclusive of ₹ 25 Lakh/MW towards the cost of transmission system including pooling station upto the interconnection point, and this ₹ 25 Lakh/MW also

includes ₹ 2 Lakh/MW for grid connectivity charges payable to Transmission licensee. Accordingly, the Capital cost of ₹ 565 Lakh/MW has been considered in the tariff computations.

Debt-Equity Ratio

31. The Debt-Equity ratio of 70:30 as envisaged at regulation 15 of RERC RE Tariff Regulations, 2014, has been taken for working out the debt and equity components of normative capital cost for determination of levellised generic tariff.

Capacity Utilisation Factor (CUF) & de-ration in CUF

32. Regulation 24(1) of RERC RE Tariff Regulations, 2014 provides for CUF of 21% for Jaisalmer, Jodhpur and Barmer districts and 20% for other districts. Further, regulation 24(2) of the said Regulations also stipulates a de-ration of 1.25% from 6th, 10th, 14th & 18th year in the above CUFs. Accordingly, CUFs along with de-ration have been taken.

Operation & Maintenance (O&M) Expenses

33. Normative O&M expenses have been taken as ₹ 7.87 Lakh/MW for wind power plants for FY 2014-15 in accordance with regulation 25(1) of RERC RE Tariff regulations, 2014 and have been escalated at the rate of 5.85% per annum over the tariff period for computation of the levellised tariff as per the regulation 25(2) of the RERC RE Tariff Regulations, 2014.

Depreciation

34. In accordance with regulation 14 of the RERC RE Tariff Regulations, 2014, the rate of the depreciation for the first 12 years has been considered as 5.83% of the capital cost per annum and from 13th year onwards, the remaining depreciable value has been spread over the balance useful life of the wind power plant and transmission line as the case may be.

Interest rate on long term loan

35. In accordance with sub-regulation (1) of regulation 13 of the RERC RE Tariff Regulations, 2014, the loan tenure of 12 years has been considered for the purpose of determination of generic tariff for wind power plants. Sub-regulation (2) of regulation 13 of the said Regulations further provides for the interest rate on long term loans as 300 basis points higher than the average State Bank of India (SBI) base rate prevalent during first six months of the year previous to the relevant year.
36. Accordingly, the average SBI base rate prevalent during first six months of the year FY 2013-14 has been considered for computation of applicable interest rate, as shown in the table below:

Table-1: Average SBI base rate during first six months of FY 2013-14

<i>Period from</i>	<i>Period to</i>	<i>Base rate</i>	<i>No. of days</i>
<i>1.04.2013</i>	<i>18.09.2013</i>	<i>9.70%</i>	<i>171</i>
<i>19.09.2013</i>	<i>30.09.2013</i>	<i>9.80%</i>	<i>12</i>
<i>Average SBI Base rate for FY 2013-14</i>		<i>9.71%</i>	<i>183</i>

(Source:<http://in.reuters.com/article/2013/11/29/india-int-base-idINL4N0JE2ES20131129>)

37. In terms of the above, the interest rate of 12.71% (=9.71%+3.00%) has been used for computation of interest on long term loan in generic tariff computations, treating loan as 70% of the capital cost.

Interest on working capital requirement

38. For the purpose of working capital requirement, the composition of working capital has been taken as per regulation 16(1) of the RERC RE Tariff Regulations, 2014.
39. In accordance with regulation 16(2) of RERC RE Tariff Regulations, 2014, the interest rate on working capital for wind power plants has been taken as 250 basis points higher than the average of SBI Base rate prevalent during first six months of FY 13-14, which works out to be 12.21% (=9.71%+2.50%). Accordingly, a rate of 12.21% has been taken as interest rate on working capital requirements.

Return on Equity

40. Regulation 15(2) of the RERC RE Tariff Regulations, 2014 provides for 16% Return on Equity on equity base of 30% determined in accordance with regulation 12 of the said Regulations. As per regulation 15(3) of the RERC RE Tariff regulations, 2014, Return on Equity has been computed by grossing up the base rate of 16% with tax rate equivalent to Minimum alternate Tax (MAT) for first 10 years from COD and normal tax rate for remaining years of the project life. In line with the practice followed during the previous control period, the MAT rate of 20.01% (= 18.50% MAT rate+5% surcharge + 3% education cess) has been considered for first year and a MAT rate of 19.06% (= 18.5% MAT rate + 3% education cess) has been considered for remaining 9 years of the first 10 years. For remaining 15 years of plant life (also equal to useful life), the normal tax rate of 30.90% (= 30% tax rate + 3% education cess) has been applied for grossing up of the base rate of Return on Equity.

Subsidy or incentive by the Central Government, including Higher Depreciation benefit

41. As per the regulation 21 of the RERC RE Tariff regulations, 2014, the Commission shall take into consideration any incentive or subsidy or benefit available from Central or State Government, including

accelerated or higher depreciation benefit, if availed by the generating company, for the renewable energy power plants while determining the tariff under these Regulations. Further, the Generation Based Incentive/Tariff Subsidy, if allowed by the Central/ State Govt. would be governed by the terms and conditions of such scheme.

42. For the purpose of determining higher depreciation benefit, as dealt earlier, the depreciation as per the Regulations (5.83% for 12 years and 1.54% for the remaining useful life)(as also allowed under the Companies Act,2013) has been compared with depreciation rate as per Income Tax rate i.e. 15% of the written down value where vide Gol Notification No. 15/2012 (F. No. 149/21/2010-SO (TPL)] S.O.694 (E) dated 30.03.2012, depreciation has been restricted to 15% for wind power plants installed after 31.03.2012. However, in addition to this, an additional depreciation of 20% has been allowed to the wind power projects during the first year in an amendment in the Finance Act, 2012. In this computation, the capitalization has been considered during the second half of the fiscal year, as provided at regulation 21 of the RERC RE Tariff Regulations, 2014. The energy available in the second half of the year has been taken as 30% of annual generation as has been considered in the earlier Tariff orders of the Control period 2009-2014 as the energy availability from wind power plant in the second half of the year is much lower than the first half i.e. during April to September 70% and 30% in the second half of the year. The levellised generic tariff has been worked out considering both the situations viz. if higher depreciation benefit is availed and if not availed.

Levellised Tariff

43. The levellised tariff has been determined for the useful life of the wind power plants i.e. for 25 years. Therefore, PPA should be for 25 years.

44. In light of the above position, the levelled generic tariff for wind power plants getting commissioned during FY 2014-15 has been determined as under:

Table-2: Tariff for wind power plants getting commissioned during FY 14-15

S. No.	Particulars	Tariff (₹/kWh) if higher depreciation benefit is not availed	Tariff (₹/kWh) if higher depreciation benefit is availed
1	2	3	4
1	Wind Power Plants located in Jaisalmer, Jodhpur & Barmer districts	5.64	5.31
2	Wind Power Plants located in districts other than Jaisalmer, Jodhpur & Barmer districts.	5.93	5.57

45. For wind power plant claiming the higher tariff worked out as above for projects not availing higher depreciation benefit, Commission considers it appropriate to lay down modalities as under:

- (1) The PPA should include an undertaking of the wind power generator that higher depreciation benefit would not be availed for the generating plant/unit.
- (2) The first bill raised by the wind power generator shall be accompanied by an undertaking that higher depreciation benefit shall not be claimed. Based on this, the applicable tariff would be allowed.
- (3) The claims of energy charges as per applicable tariff may be entertained based on the said undertaking upto the due date of filing of Income Tax Return of the relevant financial year. This would mean 30th September, 2014 for payment for the financial

year 13-14 and for the first six months (upto 30th September) of financial year 14-15 and so on.

- (4) After filing of Income Tax Return a certificate from a Chartered Accountant (CA) that higher depreciation has not been claimed would have to be submitted or in the alternative a copy of Income Tax Return filed with Income Tax Department wherein higher depreciation has not been claimed along with verification of Tax Consultant may be furnished.
 - (5) As Income Tax Return is required to be filed in the next year, the payment of amount corresponding to non-availment of higher depreciation in respect of energy supplied in the month of October onwards of the financial year following the financial year of commissioning of the plant would be made only after the said certificate/copy of Income Tax Return is furnished.
 - (6) For the energy supplied in the months of October onwards, the methodology as given in sub-paras (4) & (5) above be followed.
46. Commission also considers it appropriate that undertaking of the wind power generator in PPA saying that benefit of higher depreciation would not be claimed should also include an undertaking that in case it is found that benefit of higher depreciation has been claimed, as per third proviso to regulation 21 of the RERC RE Tariff Regulations, 2014, the distribution licensee shall be entitled to recover the amount wrongly claimed by the power generator along with penal charges @ 1.50% per month calculated on daily basis.
47. Similarly, annual undertaking would need to be furnished if CDM benefit is not availed. However, if CDM benefit is availed, it would have to be shared between the distribution licensee and generating company as envisaged in regulation 20 of the RE RERC Tariff Regulations, 2014.

48. The metering arrangement shall be as per regulation 37 of the RERC RE Tariff Regulations, 2014.
49. Commission in exercise of its power conferred under Section 62 read with Section 64 of the Electricity Act 2003 and RERC RE Tariff Regulations, 2014 determines the Tariff of wind power plants as detailed in Annexure-I and Annexure-II.
50. The above Tariff is applicable for the wind power plants commissioned on or after 1.04.2014 and shall be in force till 31.03.2015.
51. Copy of this order may be sent to the State Government, Central Electricity Authority (CEA), Rajasthan Renewable Energy Corporation Ltd (RREC), Distribution Licensees and all stakeholders.

(Vinod Pandya)
Member

(S.Dhawan)
Member

(Vishvanath Hiremath)
Chairman

Levelised Tariff (Rs/kWh) without HD	5.6433
Levelised Tariff (Rs/kWh) without HD (Rounding off)	5.64
Higher Depreciation benefit (Rs/kWh)	0.3373
Levelised Tariff (Rs/kWh) with HD	5.3060
Levelised Tariff (Rs/kWh) with HD (Rounding off)	5.31
Case Select	Option 1

S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Base Case
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1
			CUF	%	21%
			Deration factor	%	1.25
			Life of Transmission system	Years	35
			Life of Power Plant	Years	25
2	Project Cost	Capital Cost/MW	inc Land,Trans &Connectivity charges (Rs 2 Lacs)	Rs Lakh/MW	565
		Project Cost	Power Plant Cost including connectivity charges	Rs Lakh/MW	540
		Tranmssion line Cost		Rs Lakh/MW	25
3	Sources of Funds	Debt: Equity	Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs Lakh	395.50
			Total Equity Amount	Rs Lakh	170
		Funding Options-1 (Domestic Loan Source-1)	Loan Amount	Rs Lakh	395.5
			Moratorium Period	years	0
			Intrest Rate	%	12.71%
			Loan repayment per annum	Rs Lakh	32.96
Funding Options-2 (Equity Finance)	Equity amount	Rs Lakh	170		
	Return on Equity	% p.a	16.00%		
	Discount Rate (As per CERC Notification 7.10.2013)		13.10%		
4	Financial Assumptions	Fiscal Assumptions	Income Tax (for yr-11 to yr-25)	%	30.90%
			MAT Rate (for yr-1)	%	20.01%
			MAT Rate (for yr-2 to yr-10)	%	19.06%
			80 IA benefits	Yes/No	Yes
			Higher Depreciation benefit	Rs/kWh	0.34
		Depreciation	Depreciation Rate(power plant)	%	5.83%
			Depreciation Rate(Transmission)	%	5.83%
			Years for 5.83% rate		12
5	Working Capital Requirement	O&M Charges		Months	1
		Maintenance Spare	(% of O&M expenses)	%	15%
		Receivables for Debtors		Months	1.5
		Intrest On Working Capital		%	12.21%
6	Operation & Maintenance Expenses (2014-15)	power plant	Rs Lakh/MW	Rs Lakh/MW	7.09
		Transmission lines	Rs Lakh/MW	Rs Lakh/MW	0.78
		Total O&M Expenses	Rs Lakh/MW	Rs Lakh/MW	7.87
		Total O & M Expenses Escalation		%	5.85%
		Months of Operations		MU	12
		Working Hours/Day		Hrs	24
		No. of Days		Days	365
		Total No. of Hours		Hrs	8760

TARIFF FOR WIND POWER PLANTS LOCATED IN JAISALMER, BARMER & JODHPUR DISTRICTS

Annexure-I contd...

1 0.884 0.782 0.691 0.611 0.540 0.478 0.422 0.374 0.330 0.292 0.258 0.228 0.202 0.178 0.158 0.140 0.123 0.109 0.096 0.085 0.075 0.067 0.059 0.052

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
Deration in capacity	%		0%	0%	0%	0%	0%	1.25%	1.25%	1.25%	1.25%	2.50%	2.50%	2.50%	2.50%	3.75%	3.75%	3.75%	3.75%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Installed Capacity	MW		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
Generation	MU		1.84	1.84	1.84	1.84	1.84	1.82	1.82	1.82	1.82	1.79	1.79	1.79	1.79	1.77	1.77	1.77	1.77	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75

Cost of 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	
O&M Expenses	Rs Lakh		7.87	8.33	8.82	9.33	9.88	10.46	11.07	11.72	12.40	13.13	13.90	14.71	15.57	16.48	17.44	18.46	19.54	20.69	21.90	23.18	24.54	25.97	27.49	29.10	30.80	
Depreciation	Rs Lakh		32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71
Interest on term loan	Rs Lakh		48.16	43.97	39.78	35.60	31.41	27.22	23.03	18.85	14.66	10.47	6.28	2.09	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
Interest on working Capital	Rs Lakh		2.13	2.08	2.04	2.00	1.96	1.92	1.88	1.84	1.81	1.77	1.83	1.80	1.43	1.48	1.52	1.56	1.61	1.66	1.72	1.77	1.83	1.90	1.96	2.04	2.11	
Return on Equity	Rs Lakh		33.90	33.50	33.50	33.50	33.50	33.50	33.50	33.50	33.50	33.50	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25
Total Cost of generation	Rs Lakh		125.00	120.83	117.08	113.37	109.69	106.04	102.42	98.85	95.31	91.82	89.20	86.79	84.96	83.91	83.62	83.98	84.91	86.37	88.37	90.91	94.03	97.74	102.04	106.94	112.44	118.54
Per unit Cost of generation	Rs/kWh		6.80	6.57	6.36	6.16	5.96	5.84	5.64	5.44	5.25	5.12	5.25	5.06	3.62	3.72	3.78	3.84	3.90	4.02	4.10	4.17	4.25	4.34	4.43	4.53	4.63	

Levellised Tariff (Rs/kWh) 5.64 25 years

Note(s):

- 1.Levelised tariff has been worked out by carrying out levelisation over 25 years and with normative debt equity ratio (70:30).
2. Figures may not tally exactly on account of rounding of .

TARIFF FOR WIND POWER PLANTS LOCATED IN JAISALMER,BARMER & JODHPUR DISTRICTS

Determination of Higher Depreciation Benefit for Wind Power Projects

Annexure-I contd...

Depreciation amount	90%
Book Depreciation rate	5.83%
Tax Depreciation rate	15%
Additional depreciation rate applicable during first year	20%
Income Tax	32.45% 30.90% (yr-2 onwards)
Capital Cost	565.00 Rs Lakh/MW

Year(s)-->	Unit	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	
Depreciation	%	2.92%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	
Depreciation	Rs Lacs	16.47	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71
Higher Depreciation Benefit																											
Opening balance	%	100.00%	82.50%	61.88%	52.59%	44.70%	38.00%	32.30%	27.45%	23.34%	19.84%	16.86%	14.33%	12.18%	10.35%	8.80%	7.48%	6.36%	5.41%	4.59%	3.91%	3.32%	2.82%	2.40%	2.04%	1.73%	
Allowed during the year	%	17.50%	20.63%	9.28%	7.89%	6.71%	5.70%	4.84%	4.12%	3.50%	2.98%	2.53%	2.15%	1.83%	1.55%	1.32%	1.12%	0.95%	0.81%	0.69%	0.59%	0.50%	0.42%	0.36%	0.31%	0.26%	
Closing	%	82.50%	61.88%	52.59%	44.70%	38.00%	32.30%	27.45%	23.34%	19.84%	16.86%	14.33%	12.18%	10.35%	8.80%	7.48%	6.36%	5.41%	4.59%	3.91%	3.32%	2.82%	2.40%	2.04%	1.73%	1.47%	
Higher depreciation	Rs Lacs	98.88	116.53	52.44	44.57	37.89	32.20	27.37	23.27	19.78	16.81	14.29	12.15	10.32	8.78	7.46	6.34	5.39	4.58	3.89	3.31	2.81	2.39	2.03	1.73	1.47	
Net depreciation benefit	Rs Lacs	82.41	83.59	19.50	11.63	4.95	(0.74)	(5.57)	(9.67)	(13.16)	(16.13)	(18.65)	(20.79)	1.61	0.07	(1.25)	(2.37)	(3.32)	(4.13)	(4.82)	(5.40)	(5.90)	(6.32)	(6.68)	(6.98)	(7.24)	
Tax Benefit	Rs Lacs	26.74	25.83	6.03	3.59	1.53	(0.23)	(1.72)	(2.99)	(4.07)	(4.98)	(5.76)	(6.43)	0.50	0.02	(0.39)	(0.73)	(1.03)	(1.28)	(1.49)	(1.67)	(1.82)	(1.95)	(2.06)	(2.16)	(2.24)	
Discounted Tax Benefit	Rs Lacs	26.74	24.33	5.02	2.65	1.00	(0.13)	(0.88)	(1.35)	(1.62)	(1.75)	(1.79)	(1.77)	0.12	0.00	(0.07)	(0.12)	(0.15)	(0.17)	(0.17)	(0.17)	(0.17)	(0.16)	(0.15)	(0.14)	(0.12)	
Levelised tax benefit	Rs Lacs	5.62																									
Energy Generation	MU	0.55	1.84	1.84	1.84	1.84	1.82	1.82	1.82	1.82	1.79	1.79	1.79	1.79	1.77	1.77	1.77	1.77	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	
Discounted Generation	MU	0.55	1.73	1.53	1.35	1.20	1.05	0.92	0.82	0.72	0.63	0.56	0.49	0.44	0.38	0.34	0.30	0.26	0.23	0.20	0.18	0.16	0.14	0.12	0.11	0.10	
Levelised generation	MU	1.67																									
Per Unit Benefit	Rs/kWh	4.84	1.40	0.33	0.20	0.08	(0.01)	(0.09)	(0.16)	(0.22)	(0.28)	(0.32)	(0.36)	0.03	0.00	(0.02)	(0.04)	(0.06)	(0.07)	(0.09)	(0.10)	(0.10)	(0.11)	(0.12)	(0.12)	(0.13)	
Discount Factor		1.00	0.88	0.78	0.69	0.61	0.54	0.48	0.42	0.37	0.33	0.29	0.26	0.23	0.20	0.18	0.16	0.14	0.12	0.11	0.10	0.09	0.08	0.07	0.06	0.05	
Applicable Discount Factor		1.00	0.94	0.83	0.74	0.65	0.58	0.51	0.45	0.40	0.35	0.31	0.28	0.24	0.22	0.19	0.17	0.15	0.13	0.12	0.10	0.09	0.08	0.07	0.06	0.06	
Levelised ITAX benefit	Rs/kWh	0.3373																									

Note(s):

1. In the above calculations, depreciation for the first year has been considered as 17.50% (= 50% of (15%+20%)) as per CERC methodology
2. Generation for the first year has been considered as 30% of the normative generation for the second half of the financial year.
3. For working out Tax benefit, income tax rate for the first year has been considered as 32.45% and 30.90% has been considered for remaining useful life.
4. Figures may not tally exactly on account of rounding off .

Levelised Tariff (Rs/kWh) without HD	5.9255
Levelised Tariff (Rs/kWh) without HD (Rounding off)	5.93
Higher Depreciation benefit (Rs/kWh)	0.3542
Levelised Tariff (Rs/kWh) with HD	5.5713
Levelised Tariff (Rs/kWh) with HD (Rounding off)	5.57
Case Select	Option 2

S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Base Case	
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1	
			CUF	%	20%	
			Deration factor	%	1.25	
			Life of Transmission system	Years	35	
			Life of Power Plant	Years	25	
2	Project Cost	Capital Cost/MW Project Cost	inc Land,Trans &Connectivity charges (Rs 2 Lacs)	Rs Lakh/MW	565	
			Power Plant Cost including connectivity charges	Rs Lakh/MW	540	
			Tranmssion line Cost	Rs Lakh/MW	25	
3	Sources of Funds	Debt: Equity	Debt	%	70%	
			Equity	%	30%	
			Total Debt Amount	Rs Lakh	395.50	
			Total Equity Amount	Rs Lakh	170	
			Funding Options-1 (Domestic Loan Source-1)	Loan Amount	Rs Lakh	395.5
				Moratorium Period	years	0
				Intrest Rate	%	12.71%
				Loan repayment per annum	Rs Lakh	32.96
			Funding Options-2 (Equity Finance)	Equity amount	Rs Lakh	170
				Return on Equity	% p.a	16.00%
Discount Rate (As per CERC Notification 7.10.2013)		13.10%				
4	Financial Assumptions	Fiscal Assumptions	Income Tax (for yr-11 to yr-25)	%	30.90%	
			MAT Rate (for yr-1)	%	20.01%	
			MAT Rate (for yr-2 to yr-10)	%	19.06%	
			80 IA benefits	Yes/No	Yes	
			Higher Depreciation benefit	Rs/kWh	0.35	
			Depreciation	Depreciation Rate(power plant)	%	5.83%
				Depreciation Rate(Transmission)	%	5.83%
				Years for 5.83% rate		12
5	Working Capital Requirement	O&M Charges Maintenance Spare Receivables for Debtors Intrest On Working Capital	(% of O&M expenses)	Months	1	
				%	15%	
				Months	1.5	
				%	12.21%	
6	Operation & Maintenance Expenses (2014-15)	power plant Transmission lines Total O&M Expenses Total O & M Expenses Escalation	Rs Lakh/MW	Rs Lakh/MW	7.09	
			Rs Lakh/MW	Rs Lakh/MW	0.78	
			Rs Lakh/MW	Rs Lakh/MW	7.87	
				%	5.85%	
		Months of Operations Working Hours/Day No. of Days Total No. of Hours		MU	12	
				Hrs	24	
				Days	365	
				Hrs	8760	

TARIFF FOR WIND POWER PLANTS LOCATED IN DISTRICTS OTHER THAN JAISALMER, BARMER & JODHPUR

Annexure-II contd...

1 0.884 0.782 0.691 0.611 0.540 0.478 0.422 0.374 0.330 0.292 0.258 0.228 0.202 0.178 0.158 0.140 0.123 0.109 0.096 0.085 0.075 0.067 0.059 0.052

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
Deration in capacity	%		0%	0%	0%	0%	0%	1.25%	1.25%	1.25%	1.25%	2.50%	2.50%	2.50%	2.50%	3.75%	3.75%	3.75%	3.75%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Installed Capacity	MW		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
Generation	MU		1.75	1.75	1.75	1.75	1.75	1.73	1.73	1.73	1.73	1.71	1.71	1.71	1.71	1.69	1.69	1.69	1.69	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66

Cost of 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
O&M Expenses	Rs Lakh		7.87	8.33	8.82	9.33	9.88	10.46	11.07	11.72	12.40	13.13	13.90	14.71	15.57	16.48	17.44	18.46	19.54	20.69	21.90	23.18	24.54	25.97	27.49	29.10	30.80
Depreciation	Rs Lakh		32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71
Interest on term loan	Rs Lakh		48.16	43.97	39.78	35.60	31.41	27.22	23.03	18.85	14.66	10.47	6.28	2.09	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
Interest on working Capital	Rs Lakh		2.13	2.08	2.04	2.00	1.96	1.92	1.88	1.84	1.81	1.77	1.83	1.80	1.43	1.48	1.52	1.56	1.61	1.66	1.72	1.77	1.83	1.90	1.96	2.04	2.11
Return on Equity	Rs Lakh		33.90	33.50	33.50	33.50	33.50	33.50	33.50	33.50	33.50	33.50	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25	39.25
Total Cost of generation	Rs Lakh		125.00	120.83	117.08	113.37	109.69	106.04	102.42	98.85	95.31	91.82	94.20	90.79	64.96	65.91	66.92	67.98	69.11	70.31	71.57	72.91	74.33	75.82	77.41	79.09	80.87
Per unit Cost of generation	Rs/kWh		7.13	6.90	6.68	6.47	6.26	6.13	5.92	5.71	5.51	5.38	5.51	5.32	3.80	3.91	3.97	4.03	4.10	4.22	4.30	4.38	4.47	4.56	4.65	4.75	4.86

Levellised Tariff (Rs/kWh) 5.93 25 years

Note(s):

- 1.Levelised tariff has been worked out by carrying out levelisation over 25 years and with normative debt equity ratio (70:30).
2. Figures may not tally exactly on account of rounding of .

TARIFF FOR WIND POWER PLANTS LOCATED IN DISTRICTS OTHER THAN JAISALMER,BARMER & JODHPUR

Determination of Higher Depreciation Benefit for Wind Power Projects

Annexure-II contd...

Depreciation amount	90%
Book Depreciation rate	5.83%
Tax Depreciation rate	15%
Additional depreciation rate applicable during first year	20%
Income Tax	32.45% 30.90% (yr-2 onwards)
Capital Cost	565.00 Rs Lakh/MW

Year(s)-->	Unit	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
Depreciation	%	2.92%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	5.83%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%	1.54%
Depreciation	Rs Lacs	16.47	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71	8.71
Higher Depreciation Benefit																										
Opening balance	%	100.00%	82.50%	61.88%	52.59%	44.70%	38.00%	32.30%	27.45%	23.34%	19.84%	16.86%	14.33%	12.18%	10.35%	8.80%	7.48%	6.36%	5.41%	4.59%	3.91%	3.32%	2.82%	2.40%	2.04%	1.73%
Allowed during the year	%	17.50%	20.63%	9.28%	7.89%	6.71%	5.70%	4.84%	4.12%	3.50%	2.98%	2.53%	2.15%	1.83%	1.55%	1.32%	1.12%	0.95%	0.81%	0.69%	0.59%	0.50%	0.42%	0.36%	0.31%	0.26%
Closing	%	82.50%	61.88%	52.59%	44.70%	38.00%	32.30%	27.45%	23.34%	19.84%	16.86%	14.33%	12.18%	10.35%	8.80%	7.48%	6.36%	5.41%	4.59%	3.91%	3.32%	2.82%	2.40%	2.04%	1.73%	1.47%
Higher depreciation	Rs Lacs	98.88	116.53	52.44	44.57	37.89	32.20	27.37	23.27	19.78	16.81	14.29	12.15	10.32	8.78	7.46	6.34	5.39	4.58	3.89	3.31	2.81	2.39	2.03	1.73	1.47
Net depreciation benefit	Rs Lacs	82.41	83.59	19.50	11.63	4.95	(0.74)	(5.57)	(9.67)	(13.16)	(16.13)	(18.65)	(20.79)	1.61	0.07	(1.25)	(2.37)	(3.32)	(4.13)	(4.82)	(5.40)	(5.90)	(6.32)	(6.68)	(6.98)	(7.24)
Tax Benefit	Rs Lacs	26.74	25.83	6.03	3.59	1.53	(0.23)	(1.72)	(2.99)	(4.07)	(4.98)	(5.76)	(6.43)	0.50	0.02	(0.39)	(0.73)	(1.03)	(1.28)	(1.49)	(1.67)	(1.82)	(1.95)	(2.06)	(2.16)	(2.24)
Discounted Tax Benefit	Rs Lacs	26.74	24.33	5.02	2.65	1.00	(0.13)	(0.88)	(1.35)	(1.62)	(1.75)	(1.79)	(1.77)	0.12	0.00	(0.07)	(0.12)	(0.15)	(0.17)	(0.17)	(0.17)	(0.17)	(0.16)	(0.15)	(0.14)	(0.12)
Levelised tax benefit	Rs Lacs	5.62																								
Energy Generation	MU	0.53	1.75	1.75	1.75	1.75	1.73	1.73	1.73	1.73	1.71	1.71	1.71	1.71	1.69	1.69	1.69	1.69	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66
Discounted Generation	MU	0.53	1.65	1.46	1.29	1.14	1.00	0.88	0.78	0.69	0.60	0.53	0.47	0.42	0.36	0.32	0.28	0.25	0.22	0.19	0.17	0.15	0.13	0.12	0.10	0.09
Levelised generation	MU	1.59																								
Per Unit Benefit	Rs/kWh	5.09	1.47	0.34	0.21	0.09	(0.01)	(0.10)	(0.17)	(0.24)	(0.29)	(0.34)	(0.38)	0.03	0.00	(0.02)	(0.04)	(0.06)	(0.08)	(0.09)	(0.10)	(0.11)	(0.12)	(0.12)	(0.13)	(0.13)
Discount Factor		1.00	0.88	0.78	0.69	0.61	0.54	0.48	0.42	0.37	0.33	0.29	0.26	0.23	0.20	0.18	0.16	0.14	0.12	0.11	0.10	0.09	0.08	0.07	0.06	0.05
Applicable Discount Factor		1.00	0.94	0.83	0.74	0.65	0.58	0.51	0.45	0.40	0.35	0.31	0.28	0.24	0.22	0.19	0.17	0.15	0.13	0.12	0.10	0.09	0.08	0.07	0.06	0.06
Levelised ITAX benefit	Rs/kWh	0.3542																								

Note(s):

1. In the above calculations, depreciation for the first year has been considered as 17.50%(= 50% of (15%+20%)) as per CERC methodology
2. Generation for the first year has been considered as 30% of the normative generation for the second half of the financial year.
3. For working out Tax benefit, income tax rate for the first year has been considered as 32.45% and 30.90% has been considered for remaining useful life.
4. Figures may not tally exactly on account of rounding off .

List of stakeholders from which suggestions/comments received

1. Sh. Shanti Prasad
2. M/s Rudraksh Energy
3. M/s Sri Maruti Wind Park (I) Pvt. Ltd.
4. M/s Wind World (India) Limited
5. M/s Mytrah Energy (India) Limited
6. Indian Wind Power Association
7. M/s INOX Renewables
8. M/s ReGen Powertech Pvt. Ltd.
9. M/s JVVNL
10. Indian Wind Energy Association (InWEA)
11. Indian Wind Turbine Manufacturers Association (IWTMA)
12. M/s Green Infra Limited
13. M/s IL & FS Energy Development Company Limited.

Summary of suggestions/comments

S.No.	Name of Stakeholders	Issue	Comments/Suggestions
1	Sh. Shanti Prasad	<p>Minimum Alternate Tax(MAT)/Tax rates</p> <p>Tariff levellisation</p> <p>Higher Depreciation(HD) benefit</p>	<p>MAT rate and income tax for the first year are inclusive of surcharge and cess (i.e. 20.01% and 32.45% respectively) but for subsequent years, they have been considered without surcharge. Regulation 19(3) of RERC RE Tariff Regulations 2014 do not provide for such methodology. Abolition of surcharge, based on an announcement then made in Union Budget to phase out the surcharge in due course, has not materialized</p> <p>Levellers Tariff gives revenue stream for which NPV (net present value) is the same as the NPV of revenue stream arising from year wise calculated tariff. The annual generation is not same during the entire life. The determination of levellers tariff will require discounting revenue stream as well as generation. Discounting of benefit and generation has been done for the determination of levellers benefit of higher depreciation while it has not been done so for levellers tariff.</p> <p>The consideration of book depreciation and depreciation as per Indian Tax Act is relevant for determining MAT but not appropriate to determine higher depreciation benefit. For determining the levellers benefit, instead of book depreciation of 5.28%, the depreciation rate 5.83% for 12 years and 1.54% thereafter may be considered.</p>

S.No.	Name of Stakeholders	Issue	Comments/Suggestions
		Discount Rate	CERC has decided to discontinue the notification of discounting rate for evaluation of bids w.e.f. 1.04.2014, thus, no discount rate is available as per CERC's latest notification and considering discount rate of 13.10%, notified earlier, does not appear to be as per regulation. Provision may be reviewed, till then discount rate of 13.10% may be considered provisionally.
2	M/s Rudraksh Energy	<p>Higher Depreciation benefit Calculation sheets</p> <p>Calculation sheet</p> <p>Return on Equity (RoE)</p> <p>Capacity Utilisation Factor (CUF)</p>	<p>In determination of Higher depreciation benefit, the book depreciation of 5.28% has been considered whereas the rate of depreciation for the first 12 years i.e. 5.83% and balance spread over the useful life, in accordance with regulation 14 of RERC RE Tariff Regulation 2014 should be considered.</p> <p>Further, in calculation of HD Benefit, as per note 3, income tax rate considered is 32.45% for the first year, whereas, in item no. 4 of the financial assumptions, the rate is mentioned as 30.90%.</p> <p>Surcharge for second year and onwards may be considered as surcharge has not been abolished so far.</p> <p>Actual CUF achieved in Jaisalmer, Barmer and Jodhpur is lower than CUF of 21% considered. Situation needs to be analysed for which RREC be directed to collect the data of wind power projects and analyse the reasons, since this has a bearing on financial health of the projects.</p>

S.No.	Name of Stakeholders	Issue	Comments/Suggestions
3	M/s Sri Maruti Wind Park (I) Pvt. Ltd.	<p>Capital Cost</p> <p>O&M Cost for Wind Energy plant</p> <p>Auxiliary Consumption</p> <p>RoE</p> <p>Income Tax/MAT surcharge</p> <p>Interest on</p>	<p>Capital Cost for Wind Energy Projects be revised to ₹ 650 Lakh/MW on account of:</p> <ul style="list-style-type: none"> a. increase in material equipment, transformer, land cost etc., b. EHV power evacuation is generally 25 to 60 kms away c. Good wind sites already exhausted d. Forecast and scheduling activities have lead to increase in capital cost by around ₹ 40 Lakh/MW <p>O&M cost be considered ₹ 20 Lakh/MW and annual escalation rate should be reflective of actual price due to higher WPI and increased manpower cost. Commission may also include insurance charges @ 1.5% of capital cost in O&M cost.</p> <p>Auxiliary consumption of 1% may be considered as during low wind period, WEG consumes only the power from the grid for start up and considering consumption by balance of plant and low wind speed period consumption.</p> <p>RoE should be considered as per CERC norm for post tax returns of 16% i.e.</p> <ul style="list-style-type: none"> i. Pre-tax 20% per annum for the first 10 years, and ii. Pre-tax 24% pre-annum from the 11th year onwards. <p>Surcharge in the Income tax/MAT may be included in the calculation of RoE from 2nd year onwards.</p> <p>IWC should be considered similar</p>

S.No.	Name of Stakeholders	Issue	Comments/Suggestions
		Working Capital(IWC)	to CERC norm i.e. 13.21% (SBI base rate + 350 basis points).
4	M/s Wind World (India) Limited	<p>MAT and Income Tax Rate</p> <p>Deration</p> <p>HD benefit</p> <p>Levelling of tariffs</p>	<p>MAT/Income Tax (including surcharge, cess etc.) is the Govt. Tax and does not constitute revenue to generating company, therefore, not considering the same would indirectly reduce the admissible return on equity to generator and is in contravention with regulation 15(3) of RERC RE Tariff Regulation 2014. Surcharge on MAT and Income Tax for entire project life may be considered while determining the generic levellised tariff for FY 2014-15 so as to protect the interest of the generator by ensuring the ROE specified in its RERC RE Tariff Regulations 2014.</p> <p>De-ration of 1.25% of CUF from 22nd year onwards may be considered and the regulation 24 (2) may be amended accordingly after following the due process.</p> <p>The benefit of higher depreciation should have been workout with respect to depreciation rate considered for determining tariff (i.e. 5.83% for 12 years and 1.54% thereafter) instead of book depreciation.</p> <p>Levelling tariff gives revenue stream for which NPV (Net Present Value) is the same as the NPV of revenue stream of calculated year-wise tariff. The normative generation from wind power plant will not be the same during the entire life due to de-ration.</p>

S.No.	Name of Stakeholders	Issue	Comments/Suggestions
			Levellised tariff shall have to be worked out by discounting of revenue stream as well as generation which has also been done for determination of levellisation of benefit of higher depreciation.
5	Mytrah Energy (India) Ltd.	<p>Capital cost</p> <p>Interest on Term Loan</p> <p>Loan Tenure and Depreciation</p> <p>Consideration of Surcharge in MAT</p>	<p>A normative capital cost of Rs. 600 lakhs/MW may be considered for FY 2014-15 while determining the tariff as the same is in line with the capital cost considered by CERC, other SERCs and IREDA.</p> <p>The prevailing SBI base rate may be considered instead of taking the weighted average of base rate prevalent during the first six months in order to arrive at interest on loan component and further, a spread of 350 basis points in place of 300 basis points for arriving at the interest on term loan percentage and 400 basis point for interest on working capital may be considered. Since under the current environment, most of the projects are able to achieve financial closures at an interest rate of 13.50% to 14.00% on account of the delayed payment from Rajasthan DISCOMS for the electricity supplied to them, a Moratorium period of one year for term loan repayment may be considered in the cost sheet and the tariff may be re-determined accordingly.</p> <p>A loan tenure of 10 years may be considered and accordingly, the depreciation rate may be considered as 7% for the first 10 years and balance may be spread throughout the useful life of the project.</p> <p>A Surcharge @ 10% and education-case @ 3% on MAT as</p>

S.No.	Name of Stakeholders	Issue	Comments/Suggestions
		rate and Corporate Tax	well as on Corporate Tax for entire project life may be considered for the new control period.
6	Indian wind Power Association	<p>MAT and Income tax rates</p> <p>Levellisation of tariffs</p> <p>HD Benefit</p>	<p>Regulation 19(3) does not provide for considering income tax and MAT differently for first year and for subsequent years and considering MAT and Income Tax without surcharge is not as per Regulations. Further, phasing out of surcharge has not materialized till date.</p> <p>Levellised tariff gives revenue stream which NPV (net present value) is the same as the NPV of revenue stream of calculated year wise tariff. The normative annual generation from wind power plant will not be the same during the entire life due to deration. On this account, levellised tariff shall have to be worked out by discounting of revenue stream as well as generation.</p> <p>The depreciation rate considered for tariff determination is legitimate amount due to generating company as per regulations and any income tax thereon, is part of tariff. Benefit of higher depreciation should, therefore, be for the depreciation beyond this. As such instead of book depreciation of 5.28%, depreciation should have been workout out with respect to depreciation rate considered for determining tariff (i.e. 5.83% for 12 years and 1.54% thereafter)</p> <p>On the objection of stakeholders, deration of earlier regulations has been restored but the principle of</p>

S.No.	Name of Stakeholders	Issue	Comments/Suggestions
		Deration	1.25% duration every 4 th year has not been considered beyond 20 th year. Deration of 1.25% may be specified for 22 nd year in the Regulations after following the due process.
7	M/s Inox Renewables Ltd.	Capital Cost Interest rate on long term loan	The capital cost of ₹ 565 Lakh/MW may be increased as across all the states of India, the cost of land including private land has gone up in the range of ₹ 5 to 10 lakhs. Central Commission has fixed a capital cost of ₹ 603 Lakhs/MW for all wind zones for the FY 2014-15, the capital cost may be revised to at least ₹ 583 Lakhs/MW accordingly. The specified interest rate of 12.71% for long term loan is rarely available in the market and because of varying risk perceptions of financial institutions, the average interested rate for long term loan is more than 13%.
8	M/s ReGen Powertech Pvt. Ltd.	Minimum Alternative Tax (MAT) and Income Tax Rate Deration	Surcharge on MAT and Income Tax may be considered for the entire project life while determining the generic levelled tariff for FY 2014-15 so as to protect the interest of the generator by ensuring the ROE specified in its RERC RE Tariff Regulations 2014. Commission may consider Deration of 1.25% of CUF from 22 nd year onwards and amend the Regulation 24 (2) accordingly after following the due process.
9	Jaipur Vidyut Vitran Nigam Ltd. (JVNL)	Capital Utilization Factor (CUF)	CUF for wind based power plants may be determined on the basis of identifying the Annual Mean Wind Power density for all zones for the state of Rajasthan as the same methodology has been considered by the CERC in its

S.No.	Name of Stakeholders	Issue	Comments/Suggestions
		<p>Operation and Maintenance (O&M) Expenses</p> <p>Working Capital Receivables for Debtors</p>	<p>tariff order while determining generic levelled generation tariff for FY 2014-15.</p> <p>The escalation norm for O&M expenses may be revised from 5.83% to 5.72%, which is in line with what has been considered by the CERC and also by the Gujarat State Electricity Regulatory Commission.</p> <p>The generators have monthly billing cycles, hence the receivables to Debtors be revised to one month from one and half month being considered by the Commission.</p>
10	Indian Wind Energy Association(InWEA)	Tariff proposal	The draft order is published is in accordance with the RERC (Terms and Conditions for Tariff determination of Tariff for RE sources – wind and Solar) Regulations, 2014. The final wind tariff order may be issued as soon as possible with the direction to the distribution utilities to sign the pending PPA's timely, as the first quarter of the FY 2014-15 is already completed. Further, in future, the final tariff orders may be issued before the commencement of the year which would help the planning process for wind projects.
11	Indian Wind Turbine Manufacturers Association(IWTMA)	Tariff Proposal	IWTMA is satisfied with the contents of proposed tariff order
12	M/s Green Infra Limited	Capital cost	Capital cost for wind projects should be revised to ₹ 7.25 Crore/MW in view of the higher hub height (in turn increasing the transporting cost), high land cost, land development charges and long transmission lines (more than 15-20 kms) and ROW issues involved in implementing the projects.

S.No.	Name of Stakeholders	Issue	Comments/Suggestions
		Capacity Utilization Factor (CUF) & de-ration in CUF	Good quality sites have all been exhausted even in state of Rajasthan and only sites with relatively low wind potential are available. CUF of such projects should be assumed at 19%.
		O&M Expenses	Capital cost and O & M cost norms need to be increased due to mandatory scheduling requirement and associated commercial mechanism, rupee devaluation, increase in land cost and additional cost required for compliance of recently notified CEA technical Regulation to control harmonics, DC current filter, and active & reactive power supply during low voltage. O&M cost should be raised to at least Rs. 10.50 Lakhs/MW
		Interest rate on long term loan	The revised Base Rate of SBI at 10% p.a., effective from 7.11.2013, plus 350 basis points, which equals to 13.50% may be considered for determination of interest on long term loan in line with the CERC RE Tariff Regulations 2012.
		Interest on working capital requirement	The revised Base Rate of SBI at 10% p.a., effective from 7.11.2013, plus 350 basis points, which equals to 13.50% may be considered as per the CERC RE Tariff Regulations 2012.
		Return on Equity (MAT & Normal Tax Rate)	Tax factor may be determined considering effective tax rate which is increased from 32.45% to 33.99% due to increase in surcharge from 5% to 10% in Union Budget 2013. Surcharge of 10% may be considered for 9 years of the first 10 years calculation & also for remaining 15 years of

S.No.	Name of Stakeholders	Issue	Comments/Suggestions
		Return on Equity CDM Benefits	plant life on normal rate of tax of 30.09% may be considered. Accordingly, MAT to be considered as 20.9% RoE should be considered as 20% for initial 12 years and 24% for 13 th year upto the useful life of the plant. 100% CDM benefits may be provided to developer.
13	M/s IL&FS Energy Development Company Ltd.	Minimum Alternate Tax (MAT) & Corporate Income Tax for determining RoE.	Surcharge of 10% may be considered to be applicable for the useful life of the project as also done by CERC in its Tariff Order dated 15.05.2014.