



INDIAN WIND POWER ASSOCIATION (Northern Region Council)

Date 31.07.2018

To,
The Hon'ble Secretary
Central Electricity Regulatory Commission (CERC)
3 rd & 4 th Floor, Chanderlok Building, 36,
Janpath, New Delhi- 110001

Subject : Indian Wind Power Association (IWPA) submission in the matter of Terms and Conditions of Tariff for the tariff period commencing from 1st April, 2019.

Dear Sir,

At the outset, we extend our gratitude to this Hon'ble Ministry for inviting the stakeholder's comments/objections in the matter of Indian Wind Power Association (IWPA) submission in the matter of proposed amendments in Tariff Policy, 2016 – regarding.

We would like to introduce our self as the Indian Wind Power Association (IWPA), an Association of wind power developers and investor of India and was set up in 1996 as a non-profit organization under the Tamil Nadu Societies Registration Act, 1975. Started with 37 members, the Association is now having 1100 members spread all over India. Since its inception, IWPA has been working towards removing barriers to wind power development and creation of an enabling regulatory and policy environment for better investments in the sector.

The Association is working closely with several national industry bodies such as the Indian Renewable Energy Development Agency, Ministry of New and Renewable Energy, Ministry of Power, Ministry of Environment, Confederation of Indian Industry, State Utilities, State Electricity Regulatory Commission etc.

IWPA (Northern Region Council) hereby enclosing its comment/objections on the Indian Wind Power Association (IWPA) in the matter of Terms and Conditions of Tariff for the tariff period commencing from 1st April, 2019 and request this Hon'ble Ministry to kindly consider the same before finalizing the consultation paper.

35 (1.5)
Northern Regional Council: 513-514, World Trade Center, Barakhamba Road, New Delhi-11001
Phone No. 011-23417044
Fax No. 011-41528590

**IWPA's comments and suggestions on consultation paper on
"TERMS AND CONDITIONS OF TARIFF REGULATIONS" for tariff period 1.4.2019 to 31.3.2024**

Sl. No.	Proposal in the Consultation Paper	Suggestions by IWPA
1	<p>5.7.2 When the share of renewable generation is low in the grid, the renewable generation may get exemption from scheduling and regulations, as the variations can be met from other source of generation. But as the share of renewable generation increases in the grid, the distribution companies may require to regulate its supply. In case of likely regulation of supply of the renewable generation, the entire tariff of the renewable generation (which is of the nature of fixed cost) is compared with the marginal cost of the other generation (excluding the fixed cost component), for merit order. Therefore, the tariff structure of renewable generation poses specific challenges in operation and for merit order considerations.</p>	<p>At the end of 2017-18, RE penetration is around 20% in terms of installation and it is only around 8% in terms of energy. Even with the targeted growth of 175 GW by 2022, the RE penetration will not reach 20% in terms of energy since future growth will be more of solar power which has a lesser CUF than the wind power. Unlike conventional generation where the fuel is saved if not generated, in Wind and Solar power, the entire energy to be generated will be wasted unless it is harnessed when wind blows or sun shines. That is the reason why the Grid Codes of Honourable Central and State Commissions provided "must run" status to wind and solar power and exempted from the "merit order despatch". Therefore, this special status shall be maintained to achieve the targeted growth of RE power during the tariff period. If at all, it has to be brought under the merit order, it may be done if the RE penetration reaches more than 50%, that too within the competing "same type of renewable power".</p> <p>Honourable CERC had so far issued separate "Terms and Conditions of Tariff Regulation" for RE power. Adequate focus has not been given in this consultative paper for RE power. Hence, separate consultative paper on "Terms and Conditions of Tariff Regulations" for RE power may be issued.</p>
2	<p>7.1.2 The existing tariff structure are as under: III. Feed-in Tariff structure for Renewable Generation: -</p> <p style="padding-left: 40px;">a) Feed-in Tariff structure comprising fixed charges of the renewable generation project.</p>	<p>Almost all the States are procuring the RE power (solar and wind power) through competitive bidding process under Section 63 of the Electricity Act 2003. Hence, this assumption of "Feed-in-Tariff" will be applicable only to small WEGs whose total capacity is less than 25 MW.</p>

Sl. No.	Proposal in the Consultation Paper	Suggestions by IWPA
3	<p>7.6.1 The feed-in tariff structure does not offer the advantage of economic efficiency. Further, the feed-in structure has its limitations.</p> <p>a) In case of regulation of supply of the renewable generation, it may not be possible to compensate generators with some minimum charges.</p> <p>b) For merit order operation, the entire tariff of the renewable generation (which is of the nature of fixed cost) is to be compared with the marginal cost of the other generation (excluding the fixed cost component).</p> <p>c) In case of bundling renewable generation with conventional power generation at the ex-bus of generating station, it may be difficult to combine the tariff as feed-in-tariff structure is a single part tariff and conventional generation has two part tariff structure.</p>	<p>“Feed-in-Tariff” will be applicable only to small WEGs whose total capacity is less than 25 MW. RE power cannot be brought under merit order dispatch for the reasons discussed hereinbefore. If at all, it should be compared for merit order when the RE penetration is considerably high, it should be compared within the same type of RE power. Such a high penetration is not envisaged during the proposed tariff period.</p>
4	<p>7.6.2 The tariff structure of the renewable generation may be rationalized. Options for Regulatory framework</p> <p>7.6.3 There can be two part tariff structure for renewable generation covered under Section 62 of the Act, which comprises fixed component (debt service obligations and depreciation) and variable component (equal to marginal cost i.e. O&M expenses and return on equity) - fixed component as feed-in-tariff (FIT) and variable component equal to capacity augmentation such as storage or back up supply tariff.</p>	<p>All the costs like O&M, RoE, etc. have to be incurred whether the wind mill runs or not. Therefore, every cost / parameter associated with wind turbine is a fixed cost. The cost related to all type of present storage may also be considered as fixed cost. If the capacity augmentation is considered from conventional power for back up supply, then that tariff may be segregated into fixed and variable components and added to the corresponding fixed cost of RE power.</p>
5	<p>11. Capital Cost</p> <p>11.1 The approval of Capital Cost is the most critical aspect of tariff determination. Capital cost is considered as the base for determination of return on investment. The existing regulations allow capital cost for the new projects (to be commissioned in the control period) based on the expenditure incurred as on date of commercial operation (COD), duly certified by the Auditors after prudence check. For the existing projects, the capital cost admitted by the Commission during the preceding tariff periods is considered along with additional capitalization during the control period after due diligence.</p>	<p>Since the present trend of wind power purchase by distribution licensee is through competitive bidding process, this FIT to be determined will be applicable only to small WEGs or Solar Plants. Capital cost of such small projects cannot be compared with large projects which can participate in the bidding process. Commission may continue to fix Capital cost for such small projects linking it to escalation prices of constituent materials used for making the generating (steel, Aluminium etc.) machinery.</p>

Sl. No.	Proposal in the Consultation Paper	Suggestions by IWPA
	<p>11.2 During the control period 2004-09, the capital cost was determined based on the actual cost as per the balance sheet of the regulated entities. From the control period 2009-14, the Commission switched over to the methodology of determination of capital cost based on the projected capital expenditure. This enabled the generating companies or transmission licensees to file their tariff application prior to commissioning of the project. The undischarged liabilities were not included in the projected/actual capital expenditure for the purpose of capitalization.</p> <p>11.4 The principles of tariff determination as per the Act mandate balancing of consumer's interest while allowing reasonable cost to the generator. The capital cost has a direct correlation with the cost of value chain of fixed charges and therefore the Commission always endeavours to allow capital cost after prudence check. The Tariff Policy, 2016 stipulates that the Appropriate Commission would evolve benchmark of capital cost as reference to allow reasonable capital cost to the generators or transmission licensees.</p>	
6	<p>13. Financial Parameters</p> <p>13.1 The performance based cost of service approach, a combination of actual cost and normative parameters has been evolved for the Tariff regulations. Components like return on equity, operation & maintenance expenses and interest on working capital have been specified on normative basis whereas cost of debt has been allowed based on actual rate of interest on normative debt. The normative parameters are expected to induce operational and financial efficiency. While continuing with the hybrid approach, more weightage may be provided for normative parameters to induce greater efficiency during operation as well as in development phase.</p>	<p>For the reasons discussed hereinbefore, for small RE projects, the Commission may continue to follow the methods used in the past tariff periods for the determination of Financial Parameters for the future period also.</p>
7	<p>14. Depreciation</p> <p>14.1 Depreciation is a major component of the annual fixed cost. Para 5.8.2 of the National Electricity Policy, 2006 provided that “depreciation reserve is created so as to fully meet the debt service obligation.” The regulatory principle evolved over time stipulates that there should be enough cash flow available to meet the repayment obligations of the generating company or transmission licensee during first 12 years of operation. The depreciation rate</p>	<p>Generally, depreciation is done by the SERCs based on life of the period with some residual value. But 70% of the loan is recovered by the lending institutions within the loan period of 10 to 12 years. Therefore, depreciation may be calculated based on the loan repayment period.</p>

Sl. No.	Proposal in the Consultation Paper	Suggestions by IWPA
	<p>has been considered based on the above principle. The Tariff Policy, 2016 stipulates that the Central Commission may notify the rates of depreciation in respect of generation and transmission assets and the rates so notified would be applicable for the purpose of tariffs as well as accounting.</p> <p>14.2 The depreciation depends on three factors viz. rate base which includes subsequent additions also, method of depreciation and useful life.</p>	
8	<p>16. Debt:Equity Ratio Options for Regulatory framework</p> <p>16.1 The capital cost for generation and transmission projects commissioned after 1.4.2019 is considered to be financed through a debt equity ratio of 70:30. Further, it is provided that if the actual equity deployed is more than 30% of the capital cost, the equity in excess of 30% shall be treated as normative loan whereas if the equity deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff. The above provision in Tariff Regulations is consistent with the principles laid down in the Revised Tariff Policy 2016.</p> <p>16.2 Some of the utilities in private sector operate with a very high financial leverage. Also, it is observed that financial institutions are willing to extend finance upto debt equity ratio of 80:20 depending on the credit appraisal of the utilities. When demand for capacity addition is low, maintaining debt:equity of 70:30 may need review.</p> <p>16.4 For future investments, modify the normative debt-equity ratio of 80:20 in respect of new plants, where financial closure is yet to be achieved.</p>	The present practice of Debt:Equity Ratio of 70:30 may be continued.
9	<p>17. Return on Investment</p> <p>17.2 Section 61 (d) of the Electricity Act, 2003 and Para 5.11 (a) of Tariff Policy 2016 have laid down broad guiding principles for determination of rate of return. These have mandated to maintain a balance between the interests of consumers and need for</p>	Fixed rate of return on equity which is followed presently may be continued for the future also. Differential additional return on equity for the different size of generating plants considering the requirement of different grade of transmission system and substations may be considered.

Sl. No.	Proposal in the Consultation Paper	Suggestions by IWPA
	<p>investments while laying down the rate of return. It is stipulated that the rate of return should be determined based on the assessment of overall risk and prevalent cost of capital. Further, it should lead to generation of reasonable surplus and attract investment for the growth of the sector. As per the Tariff Policy, the Commission may adopt either Return on Equity (RoE) or Return on Capital Employed (RoCE) approach for providing the return to the investors.</p> <p>17.3 Over a period of time, allowing fixed rate of return on equity has evolved as an acceptable approach and the same has been followed by most of the State Electricity Regulatory Commissions. The RoE approach has been widely accepted by investors in the sector.</p>	
10	<p>18. Rate of Return on Equity Options for Regulatory Framework</p> <p>18.6 According to CEA, the capacity addition is no more a major challenge and adequate installed capacity (along with currently under installation) exists to meet the demand for the next 8-10 years. Therefore, there is market dynamics which favors reduction of rate of return. However, any such reduction will have negative impact on the equity already invested in the existing and under construction projects, creating further financial stress on such projects. Different rate of return for new projects (where financial closure is yet to be achieved), may be thought of, with different rates for generation and transmission projects.</p> <p>18.7 (a) Review the rate of return on equity considering the present market expectations and risk perception of power sector for new projects;</p> <p>(b) Have different rates of return for generation and transmission sector and within the generation and transmission segment, have different rates of return for existing and new projects;</p> <p>(c) Have different rates of return for thermal and hydro projects with additional incentives to storage based hydro generating projects;</p>	<p>Fixed rate on return of equity which is followed presently may be continued for the future also. Differential additional return on equity for the different size of generating plant considering the requirement of different grade of transmission system and substations may be considered.</p>

Sl. No.	Proposal in the Consultation Paper	Suggestions by IWPA
	<p>(d) In respect of Hydro sector, as it experiences geological surprises leading to delays, the rate of return can be bifurcated into two parts. The first component can be assured whereas the second component is linked to timely completion of the project;</p> <p>(e) Continue with pre-tax return on equity or switch to post tax Return on equity;</p> <p>(f) Have differential additional return on equity for different unit size for generating station, different line length in case of the transmission system and different size of substation;</p> <p>(g) Reduction of return on equity in case of delay of the project;</p>	
11	<p>19. Cost of Debt</p> <p>19.1 Cost of debt is the cost incurred by the utility in the form of interest payments and upfront fee for raising finances through debt. As per the prevailing Tariff Regulations, the weighted average interest rate calculated on the basis of actual loan portfolio of the utility is considered as the cost of debt. The cost of debt thus arrived at is applied on the normative outstanding loan to compute the annual interest expenses of the utility which is given a pass through in the tariff. This approach does not provide incentive to the utility to lower the cost of borrowings, as even higher rates are given as pass through in tariff.</p> <p>19.2 Clause (d) of para 5.11 of Tariff Policy, 2016 has stipulated that the utilities should be encouraged and suitably incentivized to restructure their debt for bringing down the tariff. The Tariff Regulations for 2014-19 has provided that the regulated entities shall make every effort to refinance the loan to lower the interest costs. And for this purpose, while the costs associated with refinancing shall be borne by the beneficiaries, the savings on interest shall be shared between the beneficiaries and the utilities in the ratio of 2:1.</p>	<p>Presently, the interest rate is assumed based on MCLR rate of SBI as applicable for one year borrowing only. For Wind Projects, the loan tenure is generally 10 years. Hence, the MCLR rate cannot be applied for the entire tenure. Considering this tariff determination for projects less than 25 MW, which will be established only by MSMEs, it is difficult for them to get very low interest rates compared to highly rated large corporate. In case of 10-years or above borrowing, the rate quoted by SBI or any other bank / financial institutions are different. Additionally, the term loan for the project funding always carries a higher rate of interest and the same presently is not less than 12% per annum for SME segment Industry/Entrepreneur. The Commission may consider the interest rates accordingly for the future period.</p>

Sl. No.	Proposal in the Consultation Paper	Suggestions by IWPA
	<p>Options for Regulatory Framework</p> <p>19.4 While allowing the cost of debt as pass through, options available for regulatory framework are either to consider normative cost of debt based on market parameters or actual cost of debt based on loan portfolio. As the tariff is determined for multi-year period and cost of debt varies based on changing market conditions, linking cost of debt to market parameters such as MCLR & G-sec will bring a degree of unpredictability. The regulatory approach evolved so far has been to allow the cost of debt based on actual loan portfolio. This does not incentivize the developers to restructure the loan portfolio to reduce the cost of debt. The current incentive structure may need review to encourage developers to go for reduction of cost of debt.</p> <p>19.5 (a) Continue with existing approach of allowing cost of debt based on actual weighted average rate of interest and normative loan, or to switch to normative cost of debt and differential cost of debt for the new transmission and generation projects; b) Review of the existing incentives for restructuring or refinancing of debt; c) Link reasonableness of cost of debt with reference to certain benchmark viz. RBI policy repo rate or 10 year Government Bond yield and have frequency of resetting normative cost of debt;</p>	
12	<p>20. Interest on Working Capital (IOWC)</p> <p>Options for Regulatory Framework</p> <p>20.3(a) Assuming that internal resources will not be available for meeting working capital requirement and short-term funding has to be obtained from banking institutions for working capital, whose interest liability has to be borne by the regulated entity, IWC based on the cash credit was followed during previous tariff period. Same approach can be followed or change can be made.</p> <p>(b) As stock of fuel is considered for working capital, a fresh benchmark may be fixed or actual stock of fuel may be taken.</p>	<p>IOWC based on cash credit which is followed in the earlier period may be continued.</p> <p>Working capital could be worked out considering actual availability taking into account the balancing power for renewables. It should not be worked out based on target availability</p>

Sl. No.	Proposal in the Consultation Paper	Suggestions by IWPA
	<p>(c) While working out requirement of working capital, maintenance spares are also accounted for. Since O&M expenses also cover a part of maintenance spares expenditure, a view may be taken as regards some percentage, say, 15% maintenance spares being made part of working capital or O&M expenses.</p> <p>(d) Maintenance spares in IWC which is also a part of O&M expenses results in higher IWC for new hydro plants with time and cost overrun. For old hydro stations, the higher O&M expenses due to higher number of employees also yield higher cost for "Maintenance Spares" in IWC. Therefore, option could be to de-link "Maintenance Spares" in IWC from O&M expenses.</p> <p>(e) In view of increasing renewable penetration and continued low demand, the plant load factor of thermal generating stations is expected to be low. As per the present regulatory framework, the normative working capital has been provided considering target availability. In case of wide variation between the plant load factor and the plant availability factor, the normative approach of linking working capital with "target availability" can be reviewed.</p>	
13	<p>21. Operation and Maintenance (O&M) expenses</p> <p>Options for Regulatory Framework</p> <p>21.7 (a) Review the escalation factor for determining O&M cost based on WPI & CPI indexation as they do not capture unexpected expenditure;</p> <p>(b) Address the impact of installation of pollution control system and mandatory use of treated sewage water by thermal plant on O&M cost.</p> <p>(c) Review of O&M cost based on the percentage of Capital Expenditure (CC) for new hydro projects;</p> <p>(d) Review of O&M expenses of plants being operated continuously at low level (e.g. gas, Naptha and R-LNG based plants).</p> <p>(e) Rationalization of O&M expenses in case of the addition of components like the bays or</p>	<p>As for as wind power projects are considered, the actual O&M cost is around 2.25% of Capital cost. The O&M cost bench marking may be done accordingly.</p>

Sl. No.	Proposal in the Consultation Paper	Suggestions by IWPA
	<p>transformer or transmission lines of transmission system and review of the multiplying factor in case of addition of units in existing stations;</p> <p>(f) Have separate norms for O&M expenses on the basis of vintage of generating station and the transmission system.</p> <p>(g) Treatment of income from other business (e.g. telecom business) while arriving at the O&M cost.</p>	
14	<p>30. Late Payment Surcharge & Rebate</p> <p>30.1 The present regulatory framework provides for late payment surcharge at the rate of 1.50% per month for delay in payment beyond a period of 60 days from the date of billing. In view of the introduction of MCLR, the rate of late payment surcharge may need to be reviewed. One option is to add some premium over and above MCLR.</p> <p>30.2 Further, as per the existing regulations, the rebate is provided if payment is made within 2 days of presentation of the bill. Valid mode of presentation of bill, (email, physical copy etc.), authorised signatory, definition of two days (working days or including holidays) may need elaboration.</p>	<p>The existing practice of paying interest rate of 1.5% per month may be continued.</p>
15	<p>32. Standardization of Billing Process</p> <p>32.1 Presently, generating companies and the transmission licensees are following different practice for raising bills on the basis of tariff order. In order to avoid possible disputes in billing, it need to be consider as to whether standardization of billing process including formats, verification and timeline etc. may be done.</p> <p>32.2 Some of the States are imposing electricity duty on the actual auxiliary consumption which may be higher or lower than the normative auxiliary consumption. Such electricity duty is passed on to the beneficiaries along with the monthly bill. Whether electricity duty is to be linked with actual auxiliary consumption or normative consumption or lower of the two, may need to be specified.</p>	<p>Standardisation of billing is already in place after introduction of GST and it is a welcoming option.</p>

Sl. No.	Proposal in the Consultation Paper	Suggestions by IWPA
16	<p>36. Energy Storage System</p> <p>36.1 Deployment of grid storage is at a nascent stage and there is no policy or regulatory framework as regards storage. However, its importance is well recognized. The need of grid level battery storage cannot be undermined in areas such as frequency regulation, renewable generation, generation shift etc. In this respect, a staff paper was circulated on January, 2017 underlining the need of energy storage system and various options for its uses.</p> <p>36.5 The annual fixed charges of energy storage system may be determined separately as per pre-specified operational and financial norms by the Commission. The energy storage at generation level would be used for storage of generation output. The supplier may use it for optimization of the generation dispatch specific to their designated beneficiaries within the power purchase agreement. The generating stations may use it to avoid the flexible operations due to frequent regulations. The specific operational procedure can be devised for generation level grid storage.</p> <p>36.6 The annual fixed charges of the storage facility can be determined based on ramping rate, auxiliary consumption, Return on Equity (ROE), Interest on Loan, Depreciation, Operation & Maintenance cost and Interest on Working Capital.</p>	<p>Life of the battery depends upon the number of Charge/discharge cycles in a given time. Hence, life depends on the type of usage such as for frequency regulation or energy shift or generation optimisation.</p> <p>However, the entire cost of the storage system may be treated as fixed cost and added to the fixed cost of the RE power.</p>