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**JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION,  
RANCHI**

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**(DETERMINATION OF TARIFF FOR PROCUREMENT OF POWER FROM WIND  
ELECTRIC GENERATORS)**

**REGULATIONS, 2010**

**NOTIFICATION  
The 23<sup>rd</sup> June, 2010**

No. 27 -- In exercise of the powers conferred by Section 86 (1) (a), (b) and (c) read with (e), Section 61(a to h), and Section 62 (1) of the Electricity Act 2003 and all other powers enabling it in this behalf, the Jharkhand State Electricity Regulatory Commission hereby makes the following Regulation, namely:

**A1: SHORT TITLE, COMMENCEMENT AND INTERPRETATION**

- 1.1 This Regulation may be called the 'Jharkhand State Electricity Regulatory Commission (Determination of tariff for procurement of power from wind electric generators) Regulations, 2010'.
- 1.2 These Regulations shall extend to the whole state of Jharkhand
- 1.3 These Regulations shall come into force on the date of its publication in the Jharkhand Gazette

## **A2: DEFINITION**

2.1 In this Regulation unless the context otherwise requires:

- (a) “Act” means the Electricity Act, 2003 and subsequent amendment thereof;
- (b) “Capital cost” means the cost inclusive of all capital work including plant and machinery, civil work, erection and commissioning, financing and interest during construction;
- (c) “CERC” means The Central Electricity Regulatory Commission referred to in subsection (1) of section 76;
- (d) “Control Period” means the period during which the norms for determination of tariff specified in these regulations shall remain valid;
- (e) “Day” means a continuous period starting at 00.00 hours and ending at 24.00 hours;
- (f) “Distribution Licensee or Discom” means a Licensee authorised to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;
- (g) “Extra High Voltage (EHV)” means the voltage, which exceeds 33,000 volts subject, however, to the percentage variation allowed under the Indian Electricity Rules, 1956;
- (h) “Grid” means interconnected network of transmission lines, distribution lines and sub-stations at EHV and HV level;
- (i) “Grid Code” shall mean the JSERC (State Grid Code), Regulations, 2008 & its amendment from time to time;
- (j) “High Voltage (HV)” means the voltage higher than 650 volts but which does not exceed 33,000 volts 50 cycles under normal conditions subject, however, to the percentage variation allowed under the Indian Electricity Rules, 1956;
- (k) “Infrastructure cost” means the cost of auxiliaries, cost of land, site development charges and other civil works, transportation charges, cost of evacuation upto interconnection point;
- (l) “Inter-connection Point” means interface point of wind electric generating station with the transmission system or distribution system, as the case may be;
- (m) “JSERC or Commission” means the Jharkhand State Electricity Regulatory Commission;

- (n) “MNRE” means the Ministry of New and Renewable Energy of the Government of India;
- (o) “Month” means a continuous period of one month commencing from 00.00 hours on the first day of the month and ending at 24.00 hours on last day of the month;
- (p) “NLDC” means the Centre established under sub-section (1) of Section 26 of the Act;
- (q) “Non-firm power” means the power generated from renewable sources, the hourly variation of which is dependent upon nature’s phenomenon like sun, cloud, wind, etc., that cannot be accurately predicted;
- (r) “Operation and maintenance expenses” or “O&M expenses” means the expenditure incurred on operation and maintenance of the project, or part thereof , and includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads;
- (s) “Project” means a generating station or the evacuation system up to interconnection point, as the case may be;
- (t) “Regional Load Despatch Centre (RLDC) “means the Centre established under sub-section (1) of Section 27 of the Act;
- (u) “Regional .Power Committee (RPC)” means a Committee established by resolution by the Central Government for a specific region for facilitating the integrated operation of the power systems in that region;
- (v) “RPC Secretariat” means the Secretariat of the RPC;
- (w) “Schedule” denote the injection schedule in MW (in case of generator) or drawl schedule in MW (in case of consumer) provided by generator/consumer to the SLDC (in case of connected to transmission network) or to the Distribution Licensee (in case of connected to distribution network) in a manner as specified in this code;
- (x) “SERCs” means State Electricity Regulatory Commissions;
- (y) “State Load Despatch Centre(SLDC)” means the the Centre established under subsection (1) of Section 31 of the Act;
- (z) “State” means the State of Jharkhand;
- (aa) “State Transmission Utility (STU)” means the Board or the Government Company specified as such by the State Government under sub-section (1) of section 39 of the Act;

- (bb) “Tariff period” means the period for which tariff is to be determined by the Commission on the basis of norms specified under these Regulations;
- (cc) “Useful Life” in relation to a unit of a generating station for a wind energy project including evacuation system shall mean 25 years from the date of commercial operation (COD);
- (dd) “Year” means a financial year.

2.2 All other expressions used herein although not specifically defined herein, but defined in the Act, shall have the meaning assigned to them in the Act. The other expressions used herein but not specifically defined in this regulation or in the Act but defined under any law passed by the parliament applicable to electricity industry in the State shall have the meaning assigned to them in such law. Subject to the above the expression used herein but not specifically defined in this regulation or in the Act, or any law passed by the parliament shall have the meaning as is generally assigned in the electricity industry.

### **A3: APPLICABILITY OF THE ORDER**

- 3.1 These Regulations shall be applicable to all wind electric generation projects in the state commissioned on or after the date of issue of this order and intended for sale of electricity to the Distribution Licensees within the state.
- 3.2 The control period will start from the date of publication of these regulations in the Jharkhand Gazette and will extend upto 31.03.2013. The tariff decided in a particular control period shall apply to all projects which come up within the control period.

### **A4: DETERMINANTS OF TARIFF**

- 4.1 Wind electric generation projects feeding to the grid would require tariff at which Distribution Licensees would procure power from these plants. Determination of tariff by the Commission would also facilitate signing of power purchase agreement between developer and Distribution Licensee.
- 4.2 To accelerate investment in wind electric generation projects for supply to the grid in the state, an appropriate tariff mechanism is the key requirement. In this regard, the Commission views that:
  - (a) The tariff mechanism must meet the needs of investors as well as Distribution Licensees
  - (b) Renewable power may become unviable at market determined prices. On the other hand, cost-plus tariffs would provide greater surety to investors without affecting retail tariffs significantly (as renewable energy would only be a small fraction of the energy sold by the Distribution Licensee).
- 4.3 Wind power projects are eligible to receive benefits under the Clean Development Mechanism (CDM) of the United Nations Framework Convention on Climate Change (UNFCCC). In order to encourage investment in the wind power projects, the Commission has not considered CDM as one of the parameters for tariff determination.

#### **Tariff Principle**

- 4.4 While deciding the tariff for power purchase by Distribution Licensee from renewable sources, the Commission has considered the principles and methodologies specified by:
  - (a) Central Electricity Regulatory Commission
  - (b) National Electricity Policy
  - (c) National Tariff Policy
  - (d) Forum of Regulators (FOR)

(e) Central and State Governments

- 4.5 Two-part tariff is generally adopted when the variable component is significant. In the case of wind electric generation project, wind is the motive force hence variable cost of generation is negligible. Further any variation in operation and maintenance cost can be taken care by adoption of suitable parameters. Hence single part tariff has been considered by the Commission for wind electric generation projects.
- 4.6 The process of project specific tariff fixation is cumbersome and time consuming whereas the generalised tariff mechanism provides incentive to the investors for use of most efficient equipment to maximise returns and for selecting the most efficient site, hence the Commission has considered generalised tariff mechanism in these regulations.
- 4.7 The Commission has adopted the cost-plus approach towards tariff determination instead of adopting front loaded or back loaded tariff structure so as to balance the requirements of various stakeholders.
- 4.8 The tariff determination process as considered by the Commission for wind electric generation project is based on a levelled basis for the Tariff period. For the purpose of levelled tariff computation, the discount factor equivalent to weighted average cost of capital shall be considered and the levelisation shall be carried out for the Useful life of the project while Tariff shall be specified for the period equivalent to Tariff period.

**Components of tariff**

- 4.9 Tariff determination under the cost-plus approach requires assumptions on the following parameters:
- (a) Capital cost;
  - (b) Capacity utilization factor;
  - (c) Debt-equity ratio;
  - (d) Term of loan and Interest on long term debt;
  - (e) Depreciation;
  - (f) Operation and Maintenance expenses;
  - (g) Working capital requirement and interest on working capital;
  - (h) Return on equity.
- 4.10 The subsequent sections detail the terms and conditions of various components set by the Commission for determination of tariff from wind energy.

## Capital cost

- 4.11 The Commission observes that the capital cost of the wind electric generation projects is dependent on factors such technology, capacity of plant and its location, hence a reasonable project cost shall have to be considered on a uniform basis for all wind projects for tariff determination along with an indexation formula.
- 4.12 The Commission notes that as per the information published by MNRE, there is significant progress in development of technology in respect of wind energy that has resulted in higher capacity machines with large rotor diameter and higher hub height. MNRE has stated that the cost could fall as a result of economies of scale due to expansion of market. The Commission, therefore, is of the view that it would be reasonable to adopt a project cost of Rs. 5.15 Crs. per MW including infrastructure cost during the first year of the control period (2009-10) for determination of tariff in accordance with the CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009.
- 4.13 The capital cost of wind generation projects shall be revised over the control period with changes in Wholesale Price Index (WPI) for steel and electrical machinery based on the following indexation formula.

Capital cost for n<sup>th</sup> year,  $CC_{(n)} = P\&M_{(n)} * (1+F_1+F_2+F_3)$

Plant & Machinery cost for nth year,  $P\&M_{(n)} = P\&M_{(0)} * (1+d_{(n)})$

$d_{(n)} = [a * \{(SI_{(n-1)}/SI_{(0)})-1\} + b * \{(EI_{(n-1)}/EI_{(0)})-1\}] / (a+b)$

Where,

$PM_{(0)}$  = Plant & Machinery cost for the base year

$d_{(n)}$  = Capital cost indexation factor for year (n) of Control Period

$SI_{(n-1)}$  = Average WPI Steel Index prevalent for fiscal year (n-1) of the Control Period

$SI_{(0)}$  = Average WPI Steel Index prevalent for calendar year (0) at the beginning of the Control Period

$EI_{(n-1)}$  = Average WPI Electrical Machinery Index prevalent for fiscal year (n-1) of the Control Period

$EI_{(0)}$  = Average WPI Electrical Machinery Index prevalent for calendar year (0) of the Control Period

a = Constant to be determined by the Commission from time to time for weightage to Steel Index, (in default it is 0.70)

b = Constant to be determined by the Commission from time to time for weightage to Electrical Machinery Index, (in default it is 0.30)

F<sub>1</sub> = Factor for Land and Civil work (0.10)

F<sub>2</sub> = Factor for Erection and Commissioning (0.09)

F<sub>3</sub> = Factor for Interest During Construction and Financing Cost (0.14)

### **Capacity utilization factor**

- 4.1 The Capacity utilization factor (CUF) for wind electric generator depends on several factors such as wind velocity, air density, power law index, capacity and performance of the machines, age of the machines, height of the hub, and length of the blade.
- 4.2 The Commission has observed that Wind Resources Assessment department of Centre for Wind Energy Technology (C-WET) has established two wind monitoring stations Shakhwapani (Gumal district) and Metrmeta (Simdega district) in the state. Although the wind power density for the state of Jharkhand has not been clearly assessed the Commission has considered CUF of 20% considering the wind power density of 200-250 W/sq.mtr at 50 mtr hub height, which shall be suitably revised based on the availability of wind resource assessment data at the potential site.
- 4.3 The Commission has analysed that certain states have provided provisions for derating of the wind turbines resulting from reduction in availability of wind and ageing of machines, after a certain period of operation. The Commission has however not considered any derating factor in these regulations in accordance with the CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009.

### **Life of plant**

- 4.4 The SERCs in various other states have adopted a plant life of 20 years for tariff determination purpose. The Commission has however considered the plant life as 25 years in accordance with the CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009.

### **Debt equity ratio**

- 4.5 Clause 5.3(b) of the National Tariff Policy stipulates a debt-equity ratio of 70:30 for financing of power projects. JSERC (Terms and Conditions for determination of Thermal generation tariff), Regulations 2004 notified by the Commission also provide a normative debt-equity ratio of 70:30 for Generating Company. Moreover, when the equity employed is more than 30%, the amount of equity for the purpose for determining the tariff will be limited to 30% only. However, in case the equity employed is less than 30%, the actual equity employed is to be considered.
- 4.6 Accordingly, the Commission has considered a debt-equity ratio of 70:30 in line with the provisions provided by most of the SERCs and CERC in the various Tariff regulations.

### **Term of loan and Interest on long term debt**

- 4.7 The Commission has considered the term of loan for determination of tariff as 10 years.



- 4.8 Notwithstanding any moratorium period availed for the wind electric generation project, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.
- 4.9 The Commission has considered the normative interest rate on long term loan as average long term prime lending rate (LTPLR) of State Bank of India (SBI) prevalent during the previous year plus 150 basis points. The repayment of the loan has been considered from the first year of commercial operation of the project.

#### **Depreciation**

- 4.10 In order to facilitate the loan repayment by the developers within a period of 10 years, the Commission has provided depreciation rate of 7% for the first 10 years and 1.33% for the remaining 15 years of the total plant life considered as 25 years.

#### **Operation and Maintenance expenses**

- 4.11 The O&M expenses adopted by other SERCs are based on the O&M expenditure as a percentage of the capital cost with annual escalation. CERC in (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 has specified Rs 6.50 lakhs/MW as the O&M cost for FY09-10, with an annual escalation of 5.72% over the tariff period.
- 4.12 The Commission in accordance with the norms for O&M expenses as per the CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 specifies Rs 6.50 lakhs/MW as the O&M cost for FY09-10, with an annual escalation of 5.72% over the Control period. The annual escalation will be reviewed at the end of the Control period.

#### **Working capital requirement and interest on working capital**

- 4.13 The following norms for working capital have been considered by the Commission:
- (a) Operation & Maintenance expenses for one month;
  - (b) Receivables equivalent to 2 months of energy charges for sale of electricity calculated on the normative CUF;
  - (c) Maintenance spare @ 15% of operation and maintenance expenses
- 4.14 An interest rate which is 100 basis points above the average short-term prime lending rate (STPLR) of State Bank of India (SBI) during the previous year has been considered for calculation of interest on working capital.

#### **Return on equity**

- 4.15 Return on equity considered by the Commission in these Regulations shall be as under:
- (a) Pre-tax 19% per annum for the first 10 years;
  - (b) Pre-tax 24% per annum from 11th years onwards.

- 4.16 The cost parameters considered by the Commission to determine tariff for power generated from wind electric generation projects are summarized in the table below:

**Table 1: Cost parameters considered by Commission for tariff determination**

Parameters	Values
Capital cost (Rs Cr/MW)	5.15
Capacity Utilization Factor	20%
Useful life /Life of the machine	25 years
Debt: equity ratio	70:30
Loan repayment period	10 years
Interest on loan	SBI LTPLR + 1.50%
Interest on Working Capital	SBI STPLR + 1%
O&M expenses	Rs. 6.50 Lakhs /MW with annual escalation in O&M cost @ 5.72%
Depreciation	1 to 10 yrs – 7% 11 to 25 yrs – 1.33%
Residual value	10% of capital cost
Return on equity (pre-tax)	19% - for first 10 yrs, 24% - from 11th yr to 25 yr

## **A5: OTHER TERMS AND CONDITIONS**

### **Wheeling**

- 5.1 To promote investment in wind generation projects and encourage third party sale and Captive Power Plants, a 50% discount on wheeling charges and other surcharge on wheeling charges applicable to conventional form of generation shall be applicable for wind generation projects in Jharkhand.

### **Scheduling**

- 5.2 The wind electric generation projects shall be shall be treated as 'MUST RUN' power plants and shall not be subjected to 'merit order despatch' principles.
- 5.3 However, System operator may instruct the wind generator to back down generation on consideration of grid security or safety of any equipment or personnel is endangered and wind generator shall comply with the same. For this, Data Acquisition System facility shall be provided for transfer of information to concerned SLDC and RLDC.
- (i) SLDC/RLDC may direct a wind farm to curtail its VAr drawl/injection in case the security of grid or safety of any equipment or personnel is endangered.
  - (ii) During the wind generator start-up, the wind generator shall ensure that the reactive power drawl (inrush currents incase of induction generators) shall not affect the grid performance.
- 5.4 The SLDC shall take into account the Wind Energy forecasting to meet the active and reactive power requirement.
- 5.5 With effect from 1.1.2011 scheduling of wind power generation plants would have to be done for the purpose of UI where the sum of generation capacity of such plants connected at the connection point to the transmission or distribution system is 10 MW and above and connection point is 33 KV and above, and where PPA has not yet been signed. For capacity and voltage level below this, as well as for old wind farms (A wind farm is collection of wind turbine generators that are connected to a common connection point) it could be mutually decided between the Wind Generator and the transmission or distribution utility, as the case may be, if there is no existing contractual agreement to the contrary. The schedule by such wind power generating stations supplying interstate power under long-term access and medium-term and short-term open access may be revised by giving advance notice to SLDC/RLDC, as the case may be. Such revisions by wind power generating stations shall be effective from 6<sup>th</sup> time block, the first being the time-block in which notice was given. There may be maximum of 8 revisions for each 3 hour time slot starting from 00:00 hours during the day.
- 5.6 Concerned RLDC and SLDC shall maintain the record of schedule from renewable power generating stations based on wind from the point of view of grid security. While scheduling generating stations in a region, system operator shall aim at utilizing available wind energy fully.

- 5.7 The wind generators shall be responsible for forecasting their generation upto an accuracy of 70%. Therefore, if the actual generation is beyond +/- 30% of the schedule, wind generator would have to bear the UI charges. For actual generation within +/- 30% of the schedule, no UI would be payable/receivable by Generator, The host state, shall bear the UI charges for this variation, i.e within +/- 30%. However, the UI charges borne by the host State due to the wind generation, shall be shared among all the States of the country in the ratio of their peak demands in the previous month based on the data published by CEA, in the form of a regulatory charge known as the Renewable Regulatory Charge operated through the Renewable Regulatory Fund (RRF). This provision shall be applicable with effect from 1.1.2011, for new wind farms with collective capacity of 10 MW and above connected at connection point of 33 KV level and above, and who have not signed any PPA with states or others as on the date of coming into force of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010.
- 5.8 A maximum generation of 150% of the schedule only, would be allowed in a time block, for injection by wind, from the grid security point of view. For any generation above 150% of schedule, if grid security is not affected by the generation above 150%, the only charge payable to the wind energy generator would be the UI charge applicable corresponding to 50- 50.02 HZ.

### **Outage planning**

- 5.9 Annual outage plan shall be prepared in advance for the financial year by the RPC Secretariat in consultation with NLDC and RLDC and reviewed during the year on quarterly and Monthly basis. The outage planning of wind generator and its associated evacuation network shall be planned to extract maximum power from these renewable sources of energy. Outage of wind generator should be planned, if required during the lean wind season.

### **Reactive power supply**

- 5.10 Due to the inherent characteristics, most of the wind electric generators are prone to draw reactive power from the grid in case adequate power factor correction is not provided.
- 5.11 The charges for KVARh consumption from the grid shall be 10 paise per kVARh upto 10% of active power supplied & 25 paise per kVARh above 10%.
- 5.12 Reactive energy charges shall be paid by the developer to the Distribution Licensees in whose area the wind electric generation project is located.

### **Metering and billing**

- 5.13 The metering and communication arrangements shall be provided in accordance with the JSERC (Open Access in Intra-State Transmission and Distribution) Regulations, 2005 and subsequent amendments thereof, Grid Code and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 in consultation with Distribution Licensee/State Transmission Utility. The periodicity of testing, checking, calibration etc., will be governed by the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 and regulations issued by the Commission from time to time in this regard.

- 5.14 Main and Check Meters shall have facility to communicate its reading to State Load Dispatch Centre on real time basis or otherwise as may be specified by the Commission.
- 5.15 Meter reading shall be taken as per the procedure devised by the Distribution Licensee/State Load Despatch Centre. The term 'Meter' shall include Current transformers, voltage/potential transformers, wiring between them and meter box/panel etc.
- 5.16 Billing of the metered energy shall be carried out on a monthly basis.

### **Payment mechanism**

- 5.17 The Commission prescribes a settlement period of 30 days from the date of presentation of the bill for the net energy sold after deducting the charges for start up power and reactive power to the concerned Distribution Licensee where the power is injected, in order to ensure that the generating company has an assurance of cash inflow for the energy delivered to the grid.
- 5.18 In case of delay beyond the 30 days payment period, the Distribution Licensee shall pay a late payment surcharge at the rate of 1.25% per month to the generating company.
- 5.19 In case the Distribution Licensee makes the payment within 15 days from the date of presentation of bills by the generating company, a rebate of 1% billed amount shall be allowed by the generating company.
- 5.20 In case where payments of bills of the generating company are made through letter of credit, a rebate of 2% shall be allowed to the Distribution Licensee.

### **Third party sale**

- 5.21 In case of default in payment for more than three months continuously by the Distribution Licensee, the generating company can sell power to the third party.
- 5.22 In those cases where the developer has an existing arrangement for third party supply or for captive consumption and in case the generating company desires to terminate the agreement with third party and to supply to the Distribution Licensee, the Distribution Licensee with the prior permission of the Commission, shall purchase the power at the rate as determined by the Commission in these regulations.

### **Start up power**

- 5.23 The wind electric generator shall be entitled to draw start up power from the Distribution Licensee's network. The drawal of energy by the generator during the start up from the Distribution Licensee shall be adjusted against the generated energy.

### **Drawing of power during shut down**

- 5.24 The wind electric generator shall be entitled to draw power from the Distribution Licensee's network during shutdown period of its plant or other emergencies. The energy consumed shall be billed at the temporary rate applicable to HT Industrial category. The drawal by the wind electric generator shall not normally exceed 10% of the MW capacity it delivers to the Distribution licensee.

## **Banking**

- 5.25 Jharkhand does not have a Renewable Policy as yet to deal with this issue. But it is recommended that facility for 100% banking of generated power is allowed on the condition that banked power will not be returned by more than a fixed quantity at one time.
- 5.26 Utilities should facilitate banking through proper arrangement so that power banked during off-peak period is not drawn during peak season.

## **Minimum Purchase Requirement**

- 5.27 Under the provisions of the National Tariff Policy, the Commission is required to fix a minimum percentage for purchase of energy from renewable sources. The target set under the Renewable Purchase Obligation (RPO) helps boost the confidence of investors as it offers an assured market for renewable energy.
- 5.28 Ideally, there should be technology wise procurement target so that all renewable energy technologies get an equal opportunity to grow. As in the present circumstances renewable energy technologies cannot compete with other technologies, due to higher cost of generation. It is important in the given context that all renewable energy technologies are assigned with some procurement target thereby offering a level playing field.
- 5.29 The Commission has not specified the procurement target for wind energy specifically in this control period taking into consideration the fact that wind resource assessment has not been completed in the state. The Commission may prescribe the procurement target for wind energy once the wind resource assessment data for the state is available. However the Commission has specified the procurement target for Non-solar, which also includes wind energy in the Jharkhand State Electricity Regulatory Commission (Renewable purchase obligation and its compliance) Regulations, 2010.

## **Evacuation Infrastructure**

- 5.30 The State Transmission Utility (STU) shall bear 100% of the cost of evacuation infrastructure.

## **Sharing of CDM benefits**

- 5.31 The proceeds of carbon credit from the approved CDM projects shall be shared between the generating company and concerned beneficiaries in the following manner:
- (a) 100% of the gross proceeds on account of CDM benefit to be retained by the project developer in the first year after the date of commercial operation of the generating station ;
  - (b) In the second year, the share of the beneficiaries shall be 10% which shall be progressively increased by 10% every year till it reaches 50%, where after the proceeds shall be shared in equal proportion, by the generating company and the beneficiaries.

### **Incentive by Central government**

5.32 MNRE has implemented Generation Based Incentives (GBI) scheme for Grid Interactive Wind Power Projects. The incentive that is sanctioned by the Union Government to enhance the availability of power to the grid shall be taken into account for those projects that qualify under the GBI scheme, at the time of fixing tariff from such projects by the Commission.

### **Financial benefits**

5.33 The Department of Industries, Government of Jharkhand notified the Industrial Policy in the year 2001. The policy delineates enabling policies and incentives promoting industrial investment in the state. The policy states that exploitation and development of non-conventional sources of power, such as geothermal energy, biomass based power, solar power, wind power etc. to generate power locally and provide it in the remote areas will be encouraged. The Government shall accord "Industrial Status" to such non-conventional sources of power generating units, which also would be allowed to wheel energy.

5.34 According to the policy:

- (a) All renewable energy based power generation projects in Jharkhand are entitled for exemption of electricity duty for 10 years from the date of commissioning of the project.
- (b) Renewable energy based power generation projects in Jharkhand are exempted from open access charges.
- (c) If government land is available, land use permission will be given to the power producer for duration of 30 years or project life whichever is less for a token land premium per year. If the power producer purchases private land for the project, then they will be eligible to get exemption of 50% on stamp duty.
- (d) Non-conventional energy equipment and other items related to the equipment will be exempted from commercial tax.
- (e) All renewable energy based power plants in Jharkhand will be given the status of industry and will be entitled to get all benefits available for industrial units.

### **Single Window Clearance**

5.35 The Industrial Policy, 2001 also suggests for an effective Single Window system to be established at the district level, the Industrial Area Development Authority Level and at the Directorate level to ensure timely disposal of various pending matters at such levels.

5.36 The Commission observes that renewable energy developers lose significant amount of time in getting approvals and clearances from various departments and authorities. The Commission also observes that there is requirement of a practical and implementable single window clearance arrangement within the state and suggests the State Government to facilitate such provision in Jharkhand.

**Tariff period**

5.37 The tariff period of wind electric generation projects shall be thirteen (13) years. The tariff determined as per these regulations shall be applicable for wind electric generation projects, only for a duration of thirteen (13) years.

**A6: POWER TO REMOVE DIFFICULTIES**

6.1 In case of any difficulty in giving effect to any of the provisions of this Regulation, the Commission may by general or special order, issue appropriate directions to Generators, Transmission Licensee(s), Distribution Licensee(s) etc., to take suitable action, not being inconsistent with the provisions of the Act, which appear to the Commission to be necessary or expedient for the purpose of removing the difficulty.

6.2 The generators, Licensees may make an application to the Commission and seek suitable orders to remove any difficulties that may arise in implementation of these regulations.

**A7: POWER TO AMEND**

7.1 The Commission may from time to time add, vary, alter, suspend, modify, amend or repeal any provisions of this Regulation.

**A8: SAVINGS**

8.1 Nothing in these Regulations shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary to meet the ends of justice or to prevent abuses of the process of the Commission.

8.2 Nothing in this Regulations shall bar the Commission from adopting in conformity with the provisions of the Act a procedure, which is at variance with any of the provisions of these Regulations, if the Commission, in view of the special circumstances of a matter or class of matters and for reasons to be recorded in writing, deems it necessary or expedient for dealing with such a matter or class of matters.

8.3 Nothing in these Regulations shall, expressly or impliedly, bar the Commission dealing with any matter or exercising any power under the Act for which no Regulations or Regulations have been framed, and the Commission may deal with such matters, powers and functions in a manner it thinks fit.

**(By order of the Commission)**

**(A.K. Mehta)**

**Secretary**

**Jharkhand State Electricity Regulatory Commission**