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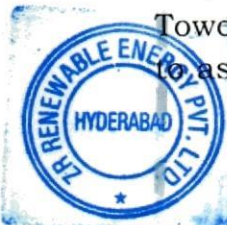
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Sl.No. 10634... Date : 26-4-2016
Sold to : N V R Sharma
S/o. N. Krishna Murthy, R/o. Hyd
For Whom : Z R Renewable Energy Pvt Ltd

P. Sandhya Rani
P. Sandhya Rani
LICENCED STAMP VENDOR
LIC. NO : 16-04-19/2013
Ren. No : 16-04-07/2016
H.No. 8-2-238, Road No.1,
Banjara Hills, Hyderabad-34 (South)
Ph No 9246274099

**POWER PURCHASE AGREEMENT
BETWEEN
SOUTHERN POWER DISTRIBUTION COMPANY OF A.P. LIMITED
AND
M/S. ZR Renewable Energy Pvt LTD**

This Power Purchase Agreement (the "Agreement") entered into this 27th day of April 2016 between Southern Power Distribution Company of AP Limited (DISCOM), incorporated by the Government of Andhra Pradesh in accordance with the Andhra Pradesh Electricity Reform Act 1998 (Act No.30 of 1998), under the provisions of Companies Act, 1956, having its office at 19-13-65/A, Ragavendra Nagar, Kesavayana Gunta, Tiruchanoor Road, Tirupati, Pin - 517501, AP, India, hereinafter referred to as the "DISCOM" (which expression shall, unless repugnant to the context or meaning thereof, include its successors and assigns) as first party, and M/s ZR Renewable Energy Pvt Ltd, a company incorporated under companies Act, 1956, having registered office at No. 11, 2nd Floor, Alcazar Plaza & Towers, 6-3-249/6, Banjara Hills, Hyderabad - 500 033, hereinafter referred to as the "Wind Power Producer" (which expression shall, unless repugnant



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the con-text or meaning thereof, include its successors and assigns) as
ond party.

2. WHEREAS, the Wind Power Producer is setting up the New and Renewable Energy Project i.e., the 16 MW capacity Wind power project at Tallaricheruvu (V) Tadipatri Mandal, Anantapuram District, Andhra Pradesh (hereafter called the Project,) with a proposal of 0.08 MW for Auxiliary Consumption and 15.92 MW for export to grid for Sale to DISCOM as detailed in Schedule 1 attached herewith, and New and Renewable Energy Development Corporation of Andhra Pradesh Limited hereafter referred to as M/s NREDCAP has accorded approval to the said project in their proceedings No. NREDCAP/WE/10654/ZR/2011, Dated 25.08.2011 and NREDCAP/WE/10654/ZR/2015, dt.14.05.2015 and the Wind Power Producer has entered into an Agreement with NREDCAP on 25.08.2011 and the copies whereof are attached herewith as Schedule-II and Schedule III respectively;

3. WHEREAS, it has been agreed that the Project will be designed, engineered and constructed and operated by or on behalf of the Wind Power Producer or its successors with reasonable diligence subject to all applicable Indian laws, rules, regulations and orders having the force of law;

4. Whereas, the proposed Project is being setup at Tallaricheruvu (V) Tadipatri Mandal, Anantapuram District, and will be connected to the designated sub-station i.e., 132/33 KV Ankireddipalli at 33KV voltage level for power evacuation from wind power projects by erecting an exclusive 33KV dedicated feeder. The project will share a common metering on the above feeder at the designated sub-station. The project will also have a separate metering at project's switchyard.

5. The terms and conditions of the Agreement are subject to the provisions of the Electricity Act, 2003 (36 of 2003) and the amendments made to the act from time to time, and also subject to regulation by the APERC.

6. NOW THEREFORE, in consideration of the foregoing premises and their mutual covenants herein, and for other valuable consideration, the receipt and sufficiency of which are acknowledged, the parties hereto, intending to be legally bound hereby agree as follows:



ARTICLE 1

DEFINITIONS

As used in this Agreement, the following terms shall have the meanings set forth herein below. Defined terms of singular number shall include the plural and vice-versa.

- 1.1 **APTRANSCO:** Transmission Corporation of Andhrapradesh Limited, incorporated by the Government of Andhrapradesh.
- 1.2 **Billing Date:** means the fifth (5th) day after the Meter Reading Date.
- 1.3 **Billing Month:** means the period commencing from 25th of the calendar month and ending on the 24th of the next calendar month.
- 1.4 **Commercial Operation Date (COD):** means, with respect to each Generating unit, the date on which such Generating unit is declared by the Wind Power Producer to be operational, provided that the Wind Power Producer shall not declare a Generating unit to be operational until such Generating unit has completed its performance acceptance test as per standards prescribed.

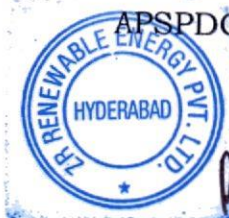
Explanation: In respect of Non-conventional based power projects the date of synchronization of the first unit of the project will be treated as the Commercial Operation Date of the project.

- 1.5 **Delivered Energy:** means, with respect to any Billing Month, the kilo watt hours (kWh) of electrical energy generated by the Project and delivered to the DISCOM at the Interconnection Point as defined in Article 1.11, as measured by the energy meter at the Interconnection Point during that Billing Month.

Explanation 1: For the purpose of clarification, Delivered Energy, excludes all energy consumed in the Project, by the main plant and equipment, lighting and other loads of the Project from the energy generated and as recorded by energy meter at Interconnection Point.

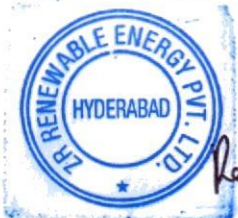
Explanation 2: The delivered energy in a Billing Month shall be limited to the energy calculated based on the Capacity agreed for export to network for sale to DISCOM as mentioned in Preamble and Schedule - 1, multiplied with number of hours and fraction thereof the project is in operation during that billing month. In case any excess energy is delivered no payment shall be made for the same.

- 1.6 **Designated Sub-station:** means 132/33 KV Ankireddypalli sub-station of APSPDCL /APTRANSCO.



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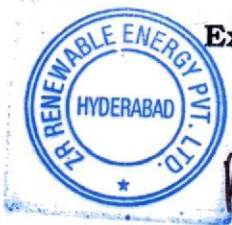
- 1.7 **Due Date of Payment:** means the date on which the amount payable by the DISCOM to the Wind Power Producer hereunder for Delivered Energy, if any, supplied during a Billing Month becomes due for payment, which date shall be thirty (30) days from the Meter Reading Date provided the bill is received by DISCOM within 5 days from Meter Reading Date, and in the case of any supplemental or other bill or claim, if any, the due date of payment shall be thirty (30) days from the date of the presentation of such bill or claim to the designated officer of the DISCOM.
- 1.8 **Financial Year:** shall mean, with respect to the initial Fiscal Year, the period beginning on the Commercial Operation Date and ending at 12.00 midnight on the following March 31. Each successive Financial Year shall begin on April 1 and end on the following March 31, except that the final Fiscal Year shall end on the date of expiry of the Term or on termination of this Agreement, whichever is earlier.
- 1.9 **Installed Capacity:** means the total rated capacity in MW of all the Wind Energy Generators installed by the Wind Power Producer.
- 1.10 **Interconnection Facilities:** means all the equipment and facilities, including, but not limited to, all metering facilities, switchgear, substation facilities, transmission lines and related infrastructure, to be installed at the voltage specified in Article 1.20 at the Wind Power Producer's expense from time to time throughout the term of this Agreement, necessary to enable the DISCOM to economically, reliably and safely receive Delivered Energy from the Project in accordance with the terms of this Agreement. As indicated in the preamble, the interconnection facilities beyond Project's switchyard shall be common for Wind Power Producer group projects connected to the designated Substation.
- 1.11 **Interconnection Point:** means the point or points where the Project and the APTRANSCO's / DISCOM network are interconnected. For this project, interconnection point is at the designated Sub-station. The metering for the Project will be provided at the interconnection point as per Article 4.1. As indicated in the Preamble of this Agreement, Interconnection point for this Project is at designated Sub-station.
- 1.12 **Meter Reading Date:** means mid-day (i.e., noon) of the 24th (twenty-fourth) day of each calendar month, at the Interconnection Point.
- 1.13 **Metering Point:** means points where metering shall be provided for Project and shall be as follows:
- (i) Common meter provided at the Interconnection Point for purposes of recording of Delivered Energy of the Project;
 - (ii) Individual meter provided at Project's switchyard;



- (iii) Metering point shall include two separate sets of 0.2/0.2S class accuracy electronic tri-vector meters as specified in Article 4.1, main meter installed by the Wind Power Producer and the check meter installed by the DISCOM and both sealed by the DISCOM, having facilities to record both export and import of electricity to / from the grid.
- 1.14 **Project:** means the 16 MW capacity Wind power project at Tallaricheruvu (V) Tadipatri Mandal in Anantapuram District, Andhra Pradesh with a proposal of 0.08 MW for Auxiliary Consumption and 15.92 MW for export to network for Sale to DISCOM as entrusted to the Wind Power Producer for construction and operation as detailed in Agreement entered into with NREDCAP as shown in Schedule 3 attached herewith and includes the metering system.
- 1.15 **Prudent Utility Practices:** means those practices, methods, techniques and standards, that are generally accepted for use in electric utility industries taking into account conditions in India, and commonly used in prudent electric utility engineering and operations to design, engineer, construct, test, operate and maintain equipment lawfully, safely, efficiently and economically as applicable to power stations of the size, service and type of the Project, and that generally conform to the manufacturers' operation and maintenance guidelines.
- 1.16 **SLDC:** means the State Load Dispatch Center as notified by the State Government under the provisions of the Electricity Act 2003.
- 1.17 **System Emergency:** means a condition affecting the APTRANSCO's/DISCOM's electrical network which threatens the safe and reliable operation of such system or which is likely to result in the disruption of safe, adequate and continuous electric supply by the APTRANSCO/DISCOM, or which endangers life or property, which condition is affected or aggravated by the continued delivery of Delivered Energy from the Project.
- 1.18 **Surcharge on Reactive Power drawn by Wind Farms:** means the charges leviable on the reactive power drawn by Wind Farms at the rate of 25 paise (twenty five paise) per KVARh of reactive energy drawn from grid upto 10% of net active energy generated and 50 paise per KVARh for total drawl if reactive energy drawn is more than 10% of net active energy generated. The above mentioned rates are subject to revision as per APERC orders from time to time.

Explanation 1: Induction generators used in Wind Farms draw reactive power from grid during generator mode and motor mode.

Explanation 2: Surcharge on reactive power drawn by Wind Farms will be



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levied on the Wind Power Producer.

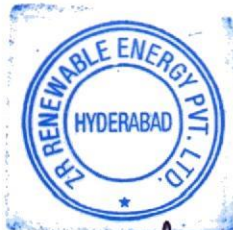
- 1.19 **Unit:** When used in relation to the generating equipment, means one set of turbine generator and auxiliary equipment, and facilities forming part of the project and when used in relation to electrical energy, means kilo watt hour (kWh).
- 1.20 **Voltage of Delivery:** means the voltage at which the electrical energy generated by the project is required to be delivered to the APTRANSCO at the Interconnection Point and the Voltage of Delivery is as detailed below:

(Note: Insert Table A or Table B whichever is applicable)

TABLE - A

At 33 KV level:

Project interfacing		Specified type of AAAC Conductor (size)	Proposed Wind power capacity on each 33 KV Line
From	To		
Wind project	Existing 33/11 KV DISCOM SS	55 sqmm	8 MW
		100 sqmm	10 MW *
		150 sqmm	
Wind project	EHT Pooling SS or existing EHT APTRANSCO SS	55 sqmm	8 MW
		100 sqmm	12 MW
		150 sqmm	17 MW **
* Capacity is restricted consistent with capacity of DISCOM SS.			
** As amended vide Commission's order dated 11-07-2012 in O.P.No. 7 of 2012 read with letter dated 04-06-2014 attached herewith as Schedule - IV			



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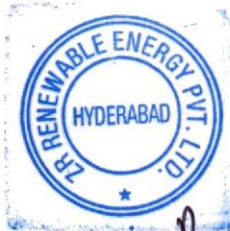
TABLE - B

At EHT level:

Project interfacing		EHT Level	Proposed Wind power capacity
From		To	
Pooling SS	Existing APTRANSCO EHT SS	132 KV	(i) Up to 50 MW on SC Line (ii) Above 50 MW to 100 MW on DC Line
Pooling SS	Existing APTRANSCO EHT SS	220 KV	Above 100 MW

This Project will generate electrical energy at 690 Volts, which will be stepped up to 33 KV at Project's switchyard and interconnected to the designated sub-station 132/33 KV Ankireddipalli Substation of APSPDCL/APTRANSCO, at 33 KV voltage level for power delivery to the grid.

- 1.21 All other words and expressions used herein and not defined herein but defined in Indian Electricity Rules 1956, AP Electricity Reform Act, 1998 and the Electricity Act, 2003 shall have the meanings respectively assigned to them in the said Acts.



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ARTICLE 2

PURCHASE OF DELIVERED ENERGY AND TARIFF

- 2.1 All the Delivered Energy at the interconnection point for sale to DISCOM will be purchased at the tariff provided for in Article 2.2 from and after the date of Commercial Operation of the Project. Title to Delivered Energy purchased shall pass from the Wind Power Producer to the DISCOM at the Interconnection Point.
- 2.2 The Wind Power Producer shall be paid tariff for energy delivered at the interconnection point for sale to DISCOM, which shall be firm at Rs.4.84 per unit without considering Accelerated Depreciation for a period of 25 Years from the Commercial Operation Date (COD) as per APERC order dated 26.03.2016 in O.P. No. 13 of 2016
- 2.3 Tariff Determined under these regulations shall be exclusive of taxes and duties as may be levied by the Government.
- Provided that the taxes and duties levied by the Government shall be allowed as pass through on actually incurred basis.
- 2.4 Income tax/ MAT is a pass through and is to be paid by the Distribution Licensees to the developer upon receipt of the claim from the developer. This is over and above the tariff determination made here in.
- Electricity Duty is a pass through and is to be paid by the Distribution Licensees to the developer upon receipt of the claim from the developer. This is over and above the tariff determination made herein.
- 2.5 Where in any Billing month, the energy supplied by the DISCOM to the Wind Power Producer as a bilateral arrangement to maintain the Auxiliaries in the power plant in situations of non-generation of power, shall be billed by the DISCOM, and the Wind Power Producer shall pay the DISCOM for such electricity supplies, at the DISCOM's then-effective tariff applicable to High Tension Category-I Consumers. For this purpose, the maximum demand specified in such DISCOM's Tariff shall be computed by dividing the amount of such energy supplied by the DISCOM by hours of drawl of power from the grid in the Month.

Explanation: The Wind plants during the plant shut down periods shall draw the energy from DISCOM only for the essential loads not exceeding auxiliary consumption.



ARTICLE 3

INTERCONNECTION FACILITIES

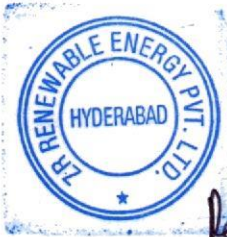
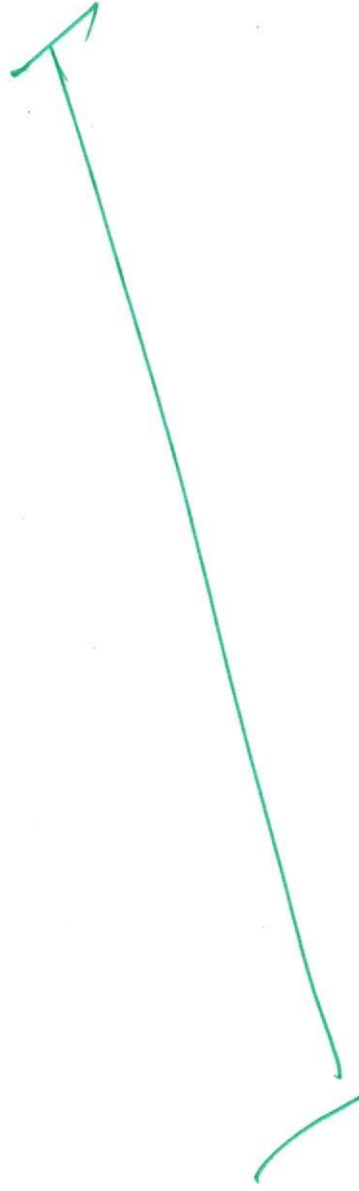
- 3.1 Upon receipt of a requisition from the Wind Power Producer, the APTRANSCO and DISCOM will prepare an estimate for arranging interconnection facilities for power evacuation at the voltage level as per Article 1.20. The Wind Power Producer have to bear the entire cost of the interconnection facilities as per the sanctioned estimate. The APTRANSCO and DISCOM shall evaluate, design, and install the Interconnection Facilities and perform all work, at the Wind Power Producer's expense, necessary to economically, reliably and safely connect the grid system to the Project switch yard.
- 3.2 APTRANSCO and DISCOM may also permit the Wind Power Producer to execute the interconnection facilities for power evacuation as per the sanctioned estimate at it's discretion duly collecting the supervision charges as per procedure in vogue.
- 3.3 The Wind Power Producer shall own, operate and maintain interconnection facilities from Project to Designated Substation from time to time and necessary expenditure shall have to be borne by the Wind Power Producer. The maintenance work on the Generating units has to be done in coordination with the APTRANSCO and DISCOM.
- 3.4 The Wind Power Producer shall agree to pay to the DISCOM, on or before signing of this Agreement, at the rate of Rs.37,000/- per MW of Installed Capacity and for fractions thereof on a pro-rata basis as a one time lump sum payment for the sole purpose of providing the required MVAR capacity at the Substation of the APTRANSCO/DISCOM to which the Project is interconnected to supply the requisite reactive power to the Grid System.
- APTRANSCO/DISCOM shall install the capacitors of required capacity, at the substation of the APTRANSCO and DISCOM to which the project is interconnected before commercial operation date of the project.
- 3.5 Any modifications or procedures or changes in arranging interconnection facilities for power evacuations rest with APTRANSCO and DISCOM.
- 3.6 During the period prior to the Commercial Operation Date, on the request of the Wind Power Producer, the DISCOM will supply energy to the Project for internal consumption, on the Terms and Conditions and at the tariff rates that are applicable from time to time to the category of consumers of the DISCOM to which the Wind Power Producer belongs, provided separate



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metering arrangements as may be required under the Terms and Conditions of such tariff have been installed at the Project.

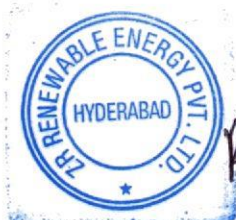


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factor and 0.5 power factor. Of these eight values, the error at the load and power factor nearest the average monthly load served at the Interconnection Point during the applicable period shall be taken as the error to be applied for correction.

- 4.7 If both the main and check meters fail to record or if any of the PT fuses are blown out, then the energy will be computed on a mutually agreeable basis for that period of defect.
- 4.8 The main and check meters shall be tested and calibrated once in a Financial year utilizing a Standard Meter. The Standard Meter shall be calibrated once in every year at the approved Laboratory by Government of India / Government of Andhra Pradesh, as per Terms and Conditions of supply.
- 4.9 All main and check meters tests shall be jointly conducted by the authorized representatives of both parties and the results and correction so arrived at mutually will be applicable and binding on both the parties.
- 4.10 On the Meter Reading Date of each month, meter readings shall be taken (and an acknowledgement thereof signed) by the authorized representatives of both parties.
- 4.11 Within six (6) months following the execution of this Agreement, the Wind Power Producer and the DISCOM shall mutually agree to technical and performance specifications (including, but not limited to, the metering configuration for the Project) concerning the design and operation of the facilities required to be installed by the Wind Power Producer in order for the Wind Power Producer to operate in parallel with the grid. Thereafter, any change in such specifications shall be subject to mutual agreement of the parties.
- 4.12 The Project shall be operated and maintained in accordance with good and generally accepted utility standards with respect to synchronizing, voltage, frequency and reactive power control.
- 4.13 Voltage regulation shall be such as to enable continued paralleling and synchronization with the network voltage at the point of interconnection.
- 4.14 The equipment of the Wind Power Producer shall be designed for fluctuations in the frequency within limits of -5% and +3% of the standard frequency of 50 cycles per second.
- 4.15 The Wind power developer shall ensure that the power factor of the power delivered to the DISCOM is maintained as per the APERC/CEA/CERC norms from the time to time.



ARTICLE 4

METERING AND PROTECTION

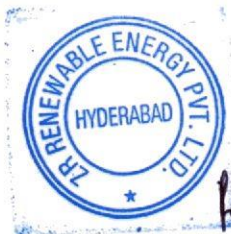
- 4.1 The Wind Power Producer shall install main meters of Static type 0.2 / 0.2S class accuracy at the Metering Point and the DISCOM shall install check meters of Static type at the same point and of the same accuracy. The main meters and check meters will each consist of a pair of export and import meters with facility for recording meter readings using Meter Recording Instrument. For the purpose of uniformity the Wind Power Producer shall follow metering specifications as developed by the DISCOM from time to time.
- 4.2 All of the meters required to be installed pursuant to Article 4.1 above shall be jointly inspected and sealed on behalf of both parties and shall not be interfered with, tested or checked except in the presence of representatives of both parties.
- 4.3 The meter readings from the main meters will form the basis of billing. If any of the meters required to be installed pursuant to Article 4.1 above are found to be registering inaccurately the affected meter will be immediately be replaced.
- 4.4 Where the half yearly meter check indicates an error in one of the main meter/meters beyond the limits for such meter but no such error is indicated in the corresponding check meter/meters, billing for the month will be done on the basis of the reading on the check meter/meters and the main meter will be replaced immediately.
- 4.5 If during the half yearly test checks, both the main meters and the corresponding check meters are found to be beyond permissible limits of error, both the meters shall be immediately replaced and the correction applied to the consumption registered by the main meter to arrive at the correct delivered energy for billing purposes for the period of the one month up to the time of such test check, computation of delivered energy for the period thereafter till the next monthly meter reading shall be as per the replaced main meter.
- 4.6 Corrections in delivered energy billing, whenever necessary, shall be applicable to the period between the previous monthly meter reading and the date and time of the test calibration in the current month when the error is observed and this correction shall be for the full value of the absolute error. For the purpose of determining the correction to be applied to any meter registering inaccurately, the meter shall be tested under conditions simulating 100, 50, 20 and 10 percent load at unity power




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- 4.16 Any change in rupturing capacity of switch-gear, settings of the relays, etc., shall be subject to approval of the DISCOM.
- 4.17 As the Project's generator may carry fault currents that may occur on the grid, the Wind Power Producer shall provide adequate generator and switchgear protection against such faults. The DISCOM is not responsible for damage, if any, caused to the Project's generator and allied equipment during parallel operation of the generator with the grid.
- 4.18 The Wind Power Producer shall make a good faith effort to operate the Project in such a manner as to avoid fluctuations and disturbances to the APTRANSCO's / DISCOM's network due to parallel operation with the network.
- 4.19 The Wind Power Producer shall control and operate the Project as per Prudent Utility Practices. The DISCOM shall only be entitled to request the Wind Power Producer to reduce electric power and energy deliveries from the Project during a System Emergency, and then only to the extent that in the DISCOM's reasonable judgment such a reduction will alleviate the emergency. The DISCOM shall give the Wind Power Producer as much advance notice of such a reduction as is practicable under the circumstances and shall use all reasonable efforts to remedy the circumstance causing the reduction as soon as possible. Any reduction required of the Wind Power Producer hereunder shall be implemented in a manner consistent with safe operating procedures.




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ARTICLE 5

BILLING AND PAYMENT

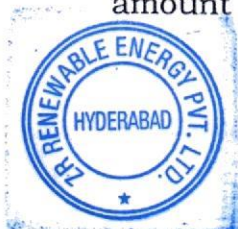
- 5.1 For Delivered Energy purchased, Wind Power Producer shall furnish a bill to the DISCOM calculated at the rate provided for in Article 2.2, in such form as may be mutually agreed between the DISCOM and the Wind Power Producer, for the billing month on or before the 5th working day following the Meter Reading Date.
- 5.2 For payment of bills of the generating company through letter of credit, a rebate of 2 % shall be allowed.

Where payments are made other than through letter of credit within a period of one month of presentation of bills by the generating company, a rebate of 1% shall be allowed.

Any payment made beyond the due date of payment, DISCOM shall pay interest at existing SBI base rates plus one percent and in case this rate is reduced, such reduced rate is applicable from the date of reduction.

- 5.3 The DISCOM shall pay the bill on monthly basis as per Article 5.1.
- 5.4 **Letter of Credit:** Not later than 30 days prior to the Scheduled COD of the Generating Unit, DISCOM shall cause to be in effect an irrevocable revolving Letter of Credit issued in favor of Wind Power Developer for a minimum period of one year by a Scheduled Bank (the "Letter of Credit").
- a. However Letter of Credit shall not be invoked for any disputed bill amount.
- 5.5 **Direct Payment:** Wind developer shall submit bills for the energy delivered during the billing period as per the provision of this PPA and there upon DISCOMs shall make payment for the eligible bill amount by the due date of payment.
- 5.6 **Billing disputes:** The DISCOM shall pay the bills of Wind Power Producer promptly subject to the clauses 5.1 and 5.2 above.

The DISCOM shall notify Wind Power Producer in respect of any disallowed amount on account of any dispute as to all or any portion of the bill. Wind Power Producer shall immediately take up issue with all relevant information with DISCOM which shall be rectified by the DISCOM, if found satisfactory. Otherwise notify its (DISCOM's) rejection of the disputed claim within reasonable time with reasons therefor. The dispute may also be decided by mutual agreement. If the resolution of any dispute requires the DISCOM to reimburse Wind Power Producer, the amount to be reimbursed shall bear interest at SBI base rates plus one



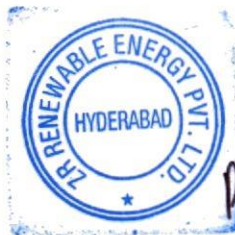
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percent and in case this rate is reduced, such reduced rate is applicable from the date of reduction from the date of disallowance to the date of reimbursement.

- 5.7 All payments by the DISCOM to Wind Power Producer hereunder shall be made to such address as may be designated by Wind Power Producer to the DISCOM in writing from time to time.

Address ZR Renewable Energy PVT Ltd,
No. 11, 2nd Floor,
Alcazar Plaza & Towers,
6-3-249/6 , Road, No. 1,
Banzara Hills, Hyderabad – 500 034

Telephone : 91-40-66362323
Fax : 91-40-23310648
Mobile No. :
Email id : info@zrrenergy.com




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ARTICLE 6
UNDERTAKING

6.1 The Wind Power Producer shall be responsible:

- (i) For proper maintenance of the project in accordance with established prudent utility practices.
- (ii) For operation, maintenance, overhaul of the plant, equipment, works, switch yard and transmission lines and equipment up to the Interconnection Point of the project in close coordination with the DISCOM.
- (iii) The Wind Power Producer shall furnish the generation and maintenance schedules every year.
- (iv) For making all payments on account of any taxes, cess, duties or levies imposed by any Government or competent statutory authority on the land, equipment, material or works of the project or on the energy generated or consumed by the project or the Wind Power Producer or on the income or assets of the Wind Power Producer.
- (v) For obtaining necessary approvals, permits or licences for operation of the project and sale of energy to DISCOM there from under the provision of the relevant laws.
- (vi) The Wind Power Producer have to comply with the provisions of the AP Code of Technical Interface (Grid Code).
- (vii) For achieving Commercial Operation Date within two years from the date of signing of the Agreement.
- (viii) For seeking approval of APTRANSCO and DISCOM in respect of Interconnection Facilities and synchronization of the Project with grid.
- (ix) The Wind Power Producer shall not dismantle and take away project machinery and interconnection facilities during the PPA term.
- (x) After 25th year of the operation from Commercial Operation Date, if plant continues to operate, the DISCOM shall have the first right of refusal on power purchase from the Wind power plant. The tariff beyond 25th year shall be as mutually agreed by both the parties, subject to approval of APERC.



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(xi) **Sharing of Clean Development Mechanism (CDM) benefits:**

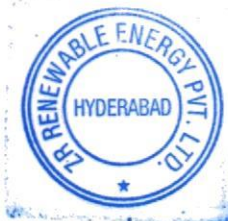
The Proceeds of carbon credit from approved CDM Project shall be shared between generating company and concerned beneficiaries in the following manner namely.

(a) 100% of the gross proceeds on account of CDM benefits is 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.

6.2 The DISCOM agrees:

- (i) To make all reasonable efforts for making arrangements for evacuation of power from the project to be completed prior to the Commercial Operation Date of the Project subject to Article 3.
- (ii) For purchase of Delivered Energy from the project as per section 2.2.
- (iii) To co-ordinate with APTRANSCO and assist the Wind Power Producer in obtaining approval for the interconnection facilities where the interconnection is at 132 kV or above voltages, for synchronization, Commercial Operation, regular operation etc., as required by the Wind Power Producer.



Revanth Shan.


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CHIEF GENERAL MANAGER
P & MM & IPC
APSPDCL :: TIRUPATI

ARTICLE 7

DURATION OF AGREEMENT

This Agreement shall be effective upon its execution and delivery thereof between parties hereto and shall continue in force from the Commercial Operation Date (COD) and until the twenty fifth (25th) anniversary that is for a period of twenty five years from the Commercial Operation Date (COD). This Agreement may be renewed for such further period of time and on such terms and conditions as may be mutually agreed upon by the parties, 90 days prior to the expiry of the said period of twenty five years, subject to the consent of the APERC. Any and all incentives/conditions envisaged in the Articles of this Agreement are subject to modification from time to time as per the directions of APERC.




CHIEF GENERAL MANAGER
P & MM & IPC
APSPDCL :: TIRUPATI

ARTICLE 8

NOTICES

- 8.1 Except as otherwise expressly provided in this Agreement, all notices or other communications which are required or permitted hereunder shall be in writing and sufficient if delivered personally or sent by registered or certified mail, email or fax addressed as follows:

If to the Wind Power Producer:

Attention ZR Renewable Energy PVT Ltd,
No. 11, 2nd Floor,
Alcazar Plaza & Towers,
6-3-249/6 , Road, No. 1,
Banzara Hills, Hyderabad – 500 034

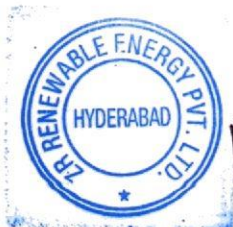
Telephone : 91-40-66362323
Fax : 91-40-23310648
Mobile No. :
Email id : info@zrrenergy.com


If to the DISCOM:

Attention : Chief General Manager, (IPC & P&MM)
APSPDCL,
19-13-65-A, Corporate Office ,
Ragavendra Nagar , Kesavayana Gunta,
Tiruchanoor Road, Tirupati – AP, India - 517501

Fax No. : 0877-2237407
Telephone No. : 0877-2237407
Email id : gmipcspdcl@gmail.com

- 8.2 All notices or communications given by email, fax shall be confirmed by depositing a copy of the same in the post office in an envelope properly addressed to the appropriate party for delivery by registered or certified mail. All notices shall be deemed delivered upon receipt, including notices given by email, fax regardless of the date the confirmation of such notice is received.
- 8.3 Any party may by written notice change the address and/or addresses to which such notices and communications to it are to be delivered or mailed.

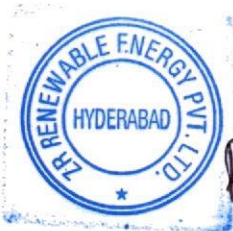



CHIEF GENERAL MANAGER
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ARTICLE 9

DEFAULT

- 9.1 The Wind Power Producer shall achieve Commercial Operation Date within two years from the date of signing of the Agreement, default of which, the Agreement is liable for termination and the same can be done at the option of DISCOM with due notice.
- 9.2 In the event, DISCOM commits a breach of any of the terms of this Agreement, the Wind Power Producer shall be entitled to specific performance of this Agreement or claim such damages as would be available under Law or both, at its option, by giving 30 days notice to DISCOM.
- 9.3 In the event, Wind Power Producer commits a breach of any of the terms of this Agreement, the DISCOM shall be entitled to specific performance of this Agreement or claim such damages as would be available under Law or both, at its option, by giving 30 days notice to Wind Power Producer.
- 9.4 If the default continues for a period of 30 days or more, either party will have a right to issue a preliminary notice for termination of this Agreement. If the default is not cured within 30 days thereafter, either party can terminate this Agreement and can claim damages at its option.
- 9.5 In the event of cancellation of the Project allotted to the Wind Power Producer by NREDCAP for any reason, the PPA with DISCOM will automatically get cancelled.



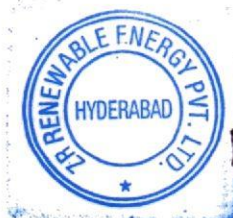
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CHIEF GENERAL MANAGER
P & MM & IPC
APSPDCL :: TIRUPATI

ARTICLE 10

DISPUTE RESOLUTION

- 10.1 Each Party shall designate in writing to the other party a representative who shall be authorized to resolve any dispute arising under this Agreement in an equitable manner.
- 10.2. Following notice by one Party to the other setting out the particulars of the dispute, if the designated representatives are unable to resolve a dispute under this Agreement within 15 days, such dispute shall be referred by such representatives to a senior officer designated by the Wind Power Producer and a senior officer designated by the DISCOM, respectively, who shall attempt to resolve the dispute within a further period of 15 days.
- 10.3. The Parties hereto agree to use their best efforts to attempt to resolve all disputes arising hereunder promptly, equitably and in good faith and further agree to provide each other with reasonable access during normal business hours to any and all non-privileged records, information and data pertaining to any such dispute.
- 10.4 Failing resolution of the dispute in terms of the above provisions or even otherwise, any party may approach the AP Electricity Regulatory Commission to adjudicate upon the dispute in terms of Section 86 (1) (f) of Electricity Act, 2003.



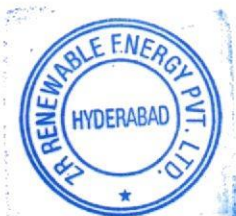
Renat Shan.

[Signature]
CHIEF GENERAL MANAGER
P & MM & IPC
APSPDCL :: TIRUPATI

ARTICLE 11

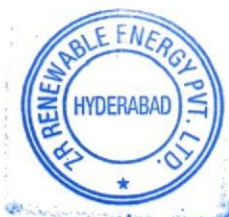
SPECIAL PROVISIONS

- 11.1 The waiver of any breach or failure to enforce any of the terms, covenants or conditions of this Agreement shall not in any way affect, limit, modify or waive the future enforcement of such terms, covenants or conditions.
- 11.2 No oral or written modification of this Agreement either before or after its execution shall be of any force or effect unless such modification is in writing and signed by the duly authorized representatives of the Wind Power Producer and the DISCOM, subject to the condition that any further modification of the Agreement shall be done only with the prior approval of Andhra Pradesh Electricity Regulatory Commission. However, the amendments to the Agreement as per the respective orders of APERC from time to time shall be carried out.
- 11.3 However, in respect of power evacuation, the voltage levels for interfacing with grid will be as per Article 1.20. The cost of interconnection facilities has to be borne by the Wind Power Producer as per Article 3.
- 11.4 The invalidity or unenforceability for any reason of any provision of this Agreement shall not prejudice or affect the validity or enforceability of any other provision of this Agreement.
- 11.5 The failure of any party to insist in one or more instances upon the strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or relinquishment of any such rights but the same shall continue in full force and effect.
- 11.6 Unless the context otherwise requires, every arrangement, procedure or any other matter which is, under any of the provisions of this Agreement, required to be mutually agreed upon between the parties, shall be concluded by a written Agreement between the parties not later than the date specified in the concerned clause of this Agreement, subject to the consent of the APERC.
- 11.7 This Agreement, including Schedule 1, 2 & 3 attached hereto, constitute the entire agreement between the parties with respect to the subject matter hereof, and there are no oral or written understandings, representations or commitments of any kind, express or implied, not set forth herein.
- 11.8 The headings contained herein are included solely for the convenience of the parties and are not to be used as a basis for interpreting the various sections of this Agreement.



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- 11.9 The parties each agree to act in good faith in implementing the terms and conditions of this Agreement and in carrying out their respective obligations hereunder.
- 11.10 In the event of the merger or re-organization of DISCOM, if the resulting entity is able to perform DISCOM's obligations hereunder in no less a manner than DISCOM, the resulting entity shall take the right and responsibility for performance of DISCOM's obligations.
- 11.11 In the event of the merger or re-organization of Wind Power Producer if the resulting entity is able to perform Wind Power Producer's obligations hereunder in no less a manner than Wind Power Producer, the resulting entity shall take the right and responsibility for performance of Wind Power Producer's obligations.
- 11.12 **Assignment and Financing:** Neither party shall assign this Agreement or any portion thereof to any third party without the prior written consent of the other party which consent shall not be unreasonably withheld.



CHIEF GENERAL MANAGER
P & MM & IPC
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SCHEDULE 1
Particulars of the Project
(Referred to in the Preamble to the Agreement)

Name of the Project	Location	No. of Wind Energy Converters	Capacity of the project in MW	Power export to the grid in MW*
M/s. ZR Renewable Energy PVT Ltd	Tallaricheruvu (V) Tadipatri Mandal, Anantapuram District Location Nos. Survey No. 1 - 721/1,720/3 2. - 721/3,722/1 3. - 723,723/3 4. - 724/1, 720/1 5. - 724/3,724/5 6. - 1328, 1329 7. - 1327 8. - 1574	8 Nos (2MW Each)	16	15.92

* Out of 16 MW, 0.08 MW is for Auxiliary Consumption and 15.92 MW is for export to grid for sale to DISCOM.



Permit given.

[Signature]
CHIEF GENERAL MANAGER
P & MM & IPC
APSPDCL :: TIRUPATI

SCHEDULE - II

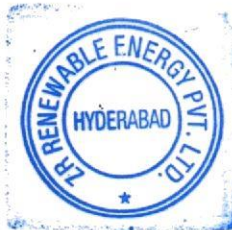
(Copy of sanction proceedings from NREDCAP to the Company)

SCHEDULE - III

(Copy of agreement entered into by the Company with NREDCAP)

SCHEDULE - IV

Annexure - I to the Commission's order dated 30-03-2010 in O.P.No. 40 of 2010 and Commission's order dated 11-07-2012 in O.P.No.7 of 2012 and letter dated 04-06-2014 & Regulation No. 1 of 2015 and as per APERC Order dated 26.03.2016 in O.P. No.13 of 2016



Permit No.

R
**CHIEF GENERAL MANAGER
P & MM & IPC
APSPDCL :: TIRUPATI**

Guidelines on Power Evacuation
from Wind Power Projects in Andhra Pradesh

1. The Wind power projects are mostly developed as cluster. The power evacuation scheme for such cluster projects consists of the following:
 - (a) Laying of 33 KV feeders for evacuation of power from all Wind projects in a site.
 - (b) Construction of Extra High Tension Substation (EHT SS) (Receiving / Pooling SS) for grouping the total Wind power and step up to higher Voltage level.
 - (c) EHT Line for interfacing Pooling SS to existing nearest APTRANSCO network.
2. In case of Wind power projects which may come up as independent projects at a particular location, they will normally be interfaced to nearest grid SS at available Voltage level.
3. The Power Evacuation from prospective Wind power projects will be governed by the guidelines mentioned below:
 - (i) Voltage level of evacuation:

At 33 KV level:

The Wind power projects supply intermittent energy. These are seasonal and operate at low capacity. As such, evacuation of Wind power at 33 KV level is permitted as mentioned below duly taking into consideration of the type of conductor to be used and corresponding current carrying capacity as per the Bureau of Indian Standards (BIS) vide IS398/Part-IV:

Sl. No.	Project interfacing		Type of AAAC Conductor (size)	Current carrying capacity at 45° ambient temp. as per standard	Calculated power carrying capacity at 33 KV level	Proposed Wind power capacity on each 33 KV line considering the temp. rise in conductor
	From	To				
(A)	(B)	(C)	(D)	(E)	(F) = ($\sqrt{3}$ x 33 KV x Current X PF at 0.9)	(G)
1	Wind project	Existing 33/11 KV DISCOM SS	55 sqmm	173 Amps	8.91 MW	8 MW
			100 sqmm	254 Amps	13.08 MW	10 MW*
			150 sqmm	370 Amps	19.05 MW	
2	Wind project	EHT Pooling SS or existing EHT APTRANSCO SS	55 sqmm	173 Amps	8.91 MW	8 MW
			100 sqmm	254 Amps	13.08 MW	12 MW
			150 sqmm	370 Amps	19.05 MW	17 MW

*Capacity is restricted considering less load availability in DISCOM SS.

At EHT level:

Project interfacing		EHT Level	Existing permissible capacity	Proposed Wind power capacity
From	To			
Pooling SS	Existing APTRANSCO EHT SS	132 KV	40 MW	(i) Up to 50 MW on SC Line (ii) Above 50 MW to 100 MW on DC Line
Pooling SS	Existing APTRANSCO EHT SS	220 KV	80 MW	Above 100 MW

The above evacuation facilities are permitted specifically for Wind power projects only, considering the following:

- (a) The Wind power projects are renewable and have low Capacity Utilization Factor (CUF).

(b) The Wind power projects are seasonal and operate at lesser capacity during most of the time.

(c) The optimum utilization of infrastructure will help the Wind power projects to enhance financial viability.

The above provisions shall not be adopted for other Non-conventional power projects, Conventional power projects and any other projects.

(ii) Metering Point and energy accounting:

(a) For Wind power projects coming under cluster scheme:

The common metering for Wind projects connected to a Pooling Substation (SS) shall be provided at EHT side of Power Transformer (PTR) in Pooling SS. This point shall be considered as Interconnection point where energy is delivered by each Wind power project to grid for sale. Also, metering for each individual project shall be provided at Project's switchyard (on 33 KV side of 415 V/33 KV Generator Transformer). As such, each Wind power project will have two metering points, one at Project's switchyard and another metering point is common metering point at EHT Pooling SS.

The DISCOM Officers & Wind Power Producer's representative shall take Joint meter readings for individual meters (at Project's switchyard) and common meter (at EHT side of pooling SS) every month.

The DISCOM will make payment to each Wind power project for delivered energy, which shall be calculated as per the formula mentioned below:

Delivered Energy to be billed for an individual project = $X_1 - (X_1 \times Z\%)$

Where

X_1 is the reading of the energy meter installed at the Project Site.

Z is the percentage line loss incurred in the 33 KV line between the Project and the Pooling (Receiving) Station and shall be:

$$Z = \left\{ \frac{(X_1 + X_2 + X_3 + X_4 + \dots) - Y}{(X_1 + X_2 + X_3 + X_4 + \dots)} \right\} \times 100$$

Where

Y is the reading of the common meter installed on EHT side of the Pooling SS and X_1, X_2, X_3, X_4 etc. are the readings of the energy meters installed at the various individual Wind projects connected to the Pooling Station.

(b) For Wind power projects coming as individual projects:

Metering shall be provided at designated APTRANSCO / DISCOM SS. The DISCOM Officers & Wind Power Producer's representative shall take Joint meter readings every month. The DISCOM will make payment for the energy recorded by the meter provided at SS.

(iii) Cost of power evacuation:

(a) For Wind power projects coming under cluster scheme:

The Cluster Project Developers and Wind Power Producers shall bear the entire cost for interconnecting the Wind projects with the grid and delivery of energy for sale, but not limited to, cost of 33 KV networks for interfacing individual Wind power projects to the Pooling SS, the cost of Pooling SS, Metering at individual project sites & Pooling SS etc., and cost of EHT line for interfacing Pooling SS with APTRANSCO network including cost of additional infrastructure on APTRANSCO side, required if any.

(b) For Wind power projects coming as individual projects:

The entire cost of evacuation shall be borne by the Wind Power Producer along with metering facility at SS and cost of necessary modifications/augmentations required, if any, at Grid SS.

(iv) Owning & O & M of infrastructure for lifetime:

The ownership of 33 KV network along with Pooling SS will be with the Wind Power Producers, who will own the Wind power projects connected to the Pooling SS. It shall be the duty of the Wind Power Producers, being the owners of the generating companies to operate and maintain the 33 KV network and Pooling SS as per the rules and regulations made for the purpose.

After completion of work, the ownership of EHT Line from Pooling SS to APTRANSCO grid shall be transferred to APTRANSCO and APTRANSCO shall carryout O&M of EHT line.

(v) Power evacuation scheme finalization & sanctioning of estimate:

The Cluster Project Developer or Wind Power Producers shall approach APTRANSCO with the details of proposed Wind power project scheme, which shall include proposed Wind power capacity, the location of Project, the proposed site & capacity of Pooling SS, nearest APTRANSCO grid to which the project is intended for interfacing, EHT Line voltage level etc.

APTRANSCO will study the proposed scheme and will intimate the feasibility for power evacuation. The APTRANSCO will approve the power evacuation scheme and also sanction the necessary estimates. APTRANSCO will also approve necessary drawings.

With regard to 33 KV networks, the Cluster Project Developer or Wind Power Producers shall approach the concerned DISCOM, who will sanction necessary estimates and drawings.

(vi) Execution of Power evacuation work & Synchronization of Wind power projects with grid for commercial operation:

APTRANSCO / DISCOM will take up the evacuation work on payment of total estimated cost by the Cluster Project Developer and / or Wind

Power Producers. Alternatively, the Cluster Project Developer and / or Wind Power Producers can take up the work on turnkey basis by paying supervision charges to APTRANSCO / DISCOM.

The supervision charges applicable to Wind power projects will be as follows:

- (i) 5% supervision charges on 33 KV network from Wind power projects to Pooling SS.
- (ii) 5% supervision charges on EHT Pooling Substation upto common metering point on HV side, which will be the interconnection point with the grid.
- (iii) 10% supervision charges on EHT System beyond interconnection point.

The above concessional supervision charges are applicable specifically for Wind power projects only, considering the following:

- (a) Wind power projects are renewable in nature and there is a need to encourage such renewable sources of power.
- (b) Andhra Pradesh is having one of the highest Wind potential but lowest investments. There is a need to maximize the utilization of such potential of renewable power.

The above concessional supervision charges are applicable to Wind power projects only and shall not be adopted for other Non-conventional power projects, Conventional power projects and any other projects.

The concessional supervision charges are applicable only for estimates to be sanctioned in future for evacuating energy from Wind power projects.

Where works are entrusted on turnkey basis, APTRANSCO Officers along with concerned DISCOM Officers shall supervise the evacuation works awarded on turnkey basis. The Cluster Project Developer and Wind Power Producers shall strictly adhere to the conditions stipulated in sanctioned estimate.

The Cluster Project Developer or Wind Power Producers shall file an application with DISCOM and obtain Temporary Power Supply for construction purpose. The Cluster Project Developer or Wind Power Producers shall have to pay all applicable charges for availing temporary power supply.

The metering for Wind projects shall be provided as per the standards laid down by APTRANSCO / DISCOM from time to time. The meters shall be tested at Central Government approved laboratory before installation. The Meters shall be installed and sealed by the authorized Officers of APTRANSCO and DISCOMs only.

After complete erection of the power evacuation infrastructure, the concerned Officers of APTRANSCO & DISCOMs shall inspect the same and confirm readiness for energisation. The Cluster Project Developer and / or Wind Power Producers shall obtain required approvals from Chief Electrical Inspector to the Government (CEIG) and other Government agencies as required from time to time.

The APTRANSCO & DISCOM shall issue permission for extending temporary supply for testing of Wind projects along with associated equipment. Power supplied from the grid to Projects during testing will be charged at HT-I Temporary Tariff and will be collected by DISCOM. The energy pumped into the grid during testing, if any, up to commencement of Commercial Operation shall be free of cost. This energy need not be taken into account for billing. The Officers of DISCOMs & APTRANSCO will witness testing and satisfactory performance of Wind projects.

The concerned DISCOM will issue permission for synchronization of Wind projects with the Grid for Commercial Operation and date on which 1st Wind generator of Project synchronizes with the grid for Commercial Operation shall be the Commercial Operation Date (COD) of the project.

(vii) Addition of loads to Pooling SS:

Whenever necessity arises, the Wind Power Producers shall permit APTRANSCO & DISCOM to connect loads to the Pooling SS at EHT level after the metering point without asking any compensation. However, the APTRANSCO & DISCOM shall ensure that connection of loads to Pooling SS will not have adverse effect on power evacuation from Wind power projects.

The APTRANSCO & DISCOM shall bear cost of new infrastructure proposed and also shall bear the cost of O & M of new infrastructure.

(viii) Execution of PPAs:

The Power Purchase Agreement (PPA) between the wind power producer and the Discom shall be as per the standard format approved by Andhra Pradesh Electricity Regulatory Commission (APERC).

ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
4th & 5th Floors, Singareni Bhavan, Red Hills, Hyderabad-500 004

O.P No.7 of 2012

Dated: 11-07-2012

Present

Sri A.Raghotham Rao, Chairman
Sri C.R.Sekhar Reddy, Member
Sri R.Ashoka Chary, Member

In the matter of

Indian Wind Energy Association (InWEA)
Having its registered office at
PHD House, 3rd Floor, Asian Games Village,
August Kranti Marg, New Delhi – 110 016.
Rep. by its Secretary.

.... Petitioner

AND

Transmission Corporation of Andhra Pradesh Ltd (APTRANSCO)
Vidyut Soudha, Khairathabad, Hyderabad.

..... Respondent

This petition coming up for hearing on several dates including on 21.05.2012, in the presence of Sri Arijit Maitra, Advocate, Sri Ajit Pandit, for the petitioner and Sri P.Shiva Rao, and Sri G.Brahmananda Rao, Advocates for the respondent and having stood over for consideration to this day, the Commission delivered the following:

ORDER

This petition is filed by the petitioner seeking modification of the guidelines in the order dated 30.03.2010, for evacuation of power from Wind Power Projects in Andhra Pradesh in line with Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electrical Lines) Regulation 2010, in pursuance of Regulations 6 (4) and Regulations 49 of APERC (Conduct of Business) Regulations, 1999 and APERC (Conduct of Business) Amendment Regulations, 2000 and Section 94 (1) (f) of Electricity Act, 2003.

1. In the said petition it is mentioned by the petitioner association that:
 - i) This Commission issued order dated 30.03.2010 approving guidelines for evacuation of power from wind energy projects and standard format for PPA. However, the Commission has not allowed choice to the developer to select size, type loading of the conductor at 33 kV.
 - ii) The said order of the Commission did not specify any control period or limitation period for applicability thereby implying that condition mentioned in the said order continue to be applicable till modified or amended. In view of the above, the respondent is imposing the restrictive conditions for limiting wind energy evacuation upto 10 MW that 33 kV and for evacuation of capacity in excess of 10 MW at higher system voltages at 132 kV.
 - iii) Recently CEA issued Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electrical Lines) Regulation 2010 which has been notified on August 20, 2010. The said Regulation covers the type of conductors to be used for transmission and distribution lines. Considering the mandate given to CEA, it would be necessary that norms in the State of AP should also be in conformity with the norms issued by CEA for development the grid and standardization.
 - iv) In support of its claim for modification of the guidelines issued by APERC in its order dated 30.03.2010, the petitioner mentioned various grounds in its petition and also mentioned evacuation system arrangements in other States.
2. The said petition was returned informing the petitioner to explain as to how the petition is maintainable. On 19.08.2011 the petitioner filed written submissions, wherein it is stated that:
 - a) The State Commission shall discharge under Section 86 (1) the following functions, namely:-

“to promote Generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid”

- b) Providing flexibility of choice of conductor enabling Wind Energy Generators to evacuate more power at 33 kV from the same line consequently resulting in optimum utilization of Electric lines as well as curtailment of extra cost for the wind generators are suitable measures for connectivity with the grid that the Commission is mandated to provide under Section 86 (1) (e) of the 2003 Act.
- c) It is technically feasible to evacuate higher capacity in terms of MW using conductors which allow higher line loading in Amp, rather than restricting it to 10 MW. For example with conductor such as ACSR Panther or AAAC Panther allows wind energy generators to easily inject 15 to 25 MW power at 33 kV.
- d) The Commission can sustain the change in policy where it would have properly balanced the legitimate expectation of the wind energy generators as against the need for a change.
- e) The Central Electricity Authority (CEA) is required to notify Regulations under Section 73 (b) read with Section 177 (2) (e) specifying the technical standards for construction of electrical plants electric lines and connectivity to the grid.
- f) Accordingly, the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010 (hereinafter referred to as “CEA Regulations 2010”) came to be notified. There is no reason why CEA Regulations 2010 should not be binding. In sharp contrast, the discretion under Section 61 (a) to “be guided by” the principles and methodologies specified by the Central Commission for determination of the tariff is not present in regard to CEA Regulations 2010.
- g) As far as the petitioner is aware, to date, no change has been made by the Parliament to the CEA Regulations 2010.
- h) The CEA Regulations 2010 have binding force, as they are statutory in nature. It is delegated legislation enacted under the powers

conferred upon CEA by the primary legislation i.e., under Section 73 (b) read with Section 177 (2) (e) of the 2003 Act.

- i) The Hon'ble Supreme Court has held in its judgment dated March 15, 2010 in PTC India Ltd Vs. CERC [reported in AIR 2010 SC 1338] that a Regulation stands on a higher pedestal vis-à-vis an order (decision) in the sense that an order has to be in conformity with the regulations.
- j) The Commission's order dated 30.03.2010 is required to be aligned to the CEA Regulations, 2010.
- k) The validity of the CEA Regulations, 2010 cannot be tested in any proceedings before this Commission.
- l) This Commission is empowered in law to review its order dated 30.03.2010 in terms of Section 94 (1) (f) of the 2003 Act read with Regulation 49 of the APERC (Conduct of Business) Regulations, 1999 (hereinafter referred to as the "Conduct of Business").
- m) The CEA Regulations 2010 were notified on 20th August, 2010. Thus, the requirement to review this Commission's order dated 30.03.2010, arises much after the limitation period of 90 days specified under Regulation 49 of the Conduct of Business, in any case. However, an issue would arise as to whether this Commission would allow its said order dated 30.03.2010 to continue particularly when it is apparent on the fact of records that the said order is contrary to the CEA Regulations, 2010.
- n) There has been a change in law subsequent to the notification of the CEA Regulations, 2010 which necessitate the review of this Commission's order dated 30.03.2010.
- o) The primary concern of this Commission is to implement the justice of the legislation contained in the CEA Regulations, 2010.
- p) The time of 90 days specified under Regulation 49 of the Conduct of Business, to file review petition can be extended under Regulation 59 thereof.
- q) Even under Section 5 of the Limitation Act, an application may be admitted after the prescribed period if the applicant satisfies the

Court that he had sufficient cause for not making the application within such period.

- r) The following Regulations sufficiently empower this Commission to admit the present petition and to review or modify its aforesaid order dated 30.03.2010 even though the limitation period for filing review may have expired.

55. Saving of inherent power of the Commission.

(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 for meeting the ends of justice or prevent the abuse of the process of the Commission.

(2) Nothing in these Regulations shall bar the Commission from adopting 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.

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

- s) In support of its contention raised in the petition, the petitioner relied upon a ruling reported in 2010 SCC (1338) by the Hon'ble Supreme Court of India.

3. Upon hearing the counsel for the petitioner on 24.08.2011, Commission decided to take the petition on to its file vide its order dated 06.01.2012.

4. Notice was issued to the respondents and on 21.05.2012 a 'reply' was filed on behalf of the respondent, inter-alia stating that

- a) Approval of evacuation guidelines is covered by the provision mentioned u/s 86 (1) (e) of Electricity Act, 2003. Hence, the said order shall be applicable till modified or amended. The Commission approved the limit of 10 MW duly considering the less load availability in DISCOMs.

- b) As per the directions of Commission, a meeting was conducted on 16.05.2012 between the representatives of the petitioner as well as the respondent herein on power evacuation issues and it is jointly decided that:
- (i) The developer shall have the discretion in choosing the conductor for connecting wind generator to the pooling substation of the developer subject to the CEIG approval.
 - (ii) The developer is allowed to inject a maximum of 10 MW from pooling substation of the wind generator to the existing 33 / 11 kV DISCOM substation.
 - (iii) The developers connecting at 33 kV level to the EHT SS, the maximum injection is limited upto 25 MW in case of single conductor 33 kV Bus and up to 40 MW in case of double conductor 33 kV Bus, subject to transformation capacity. Injection of power may be in one or more circuits depending up on availability of bays in that substation and loading per circuit not exceeding 25 MW.
 - (iv) Injection of power by wind developer from pooling substation to EHT substation at EHT level may be as per system studies.
- c) In the order dated 30.03.2010 it is approved by the Commission, that the limit of power to be transferred at specific voltage level is characterized by current carrying capacity of the conductor and voltage regulation and as such, there was requirement to specify the permissible capacity on specific conductor at specific voltage. During the meeting with the petitioner, it is agreed to allow choice of selecting the conductor upto the pooling substation to be left to the discretion of developer.
- d) The wind power projects are having low capacity utilization factor. As such , the licensees have proposed higher norms for wind power capacity flow at 33 kV level connecting to HTSS higher than the norms stipulated in the earlier orders.
- e) Commission may take appropriate decision for modification of amendments in the existing guidelines.
- f) In order to harness the available wind potential helpful in meeting the RPPO, it was jointly agreed to modify the existing guidelines with respect to conductor type and permissible capacity as mentioned at para 2 (b) supra.
- g) Commission may pass appropriate orders formulating the normative parameters and its values.

5. On 21.05.2012 Secretary General of the petitioner association filed an affidavit mentioning the meeting conducted by the representatives of the respondent with those of the petitioner and requested the Commission to review and modify its order dated 30.03.2010 and (i) to allow discretion to wind energy developers and choosing the conductor for connecting wind generator to the Pooling sub-station of the developer subject to CEIG approval (ii) to allow the wind energy developers to inject the maximum of 10 MW from pooling sub-station of the wind generator to the existing 33 / 11 kV DISCOM sub-station (iii) to provide that the developers connecting at 33 kV level to the EHT SS, the maximum injection be limited upto 25 MW in case of single conductor, 33 kV Bus and upto 40 MW in case of double conductor, 33 kV Bus, subject to transformation capacity and that injection of power may be in one or more circuits depending upon availability of bays in that sub-station and loading per circuit not exceeding 25 MW (iv) to provide that injection of power by wind developer from pooling sub-station to EHT sub-station at EHT level may be as per system studies.

6. Heard the counsel for the parties concerned.

7. The petitioner filed the above said petition for placing on record minutes of meeting held on 16th May, 2012 as follows:

a) The Commission during the hearing held on 23rd April, 2012 and further during the hearing held on 14th May, 2012, graciously indicated to the petitioner and the respondents to hold meeting and discuss the impending modifications to this to this Commission's order dated 30th March, 2010 for allowing Wind Energy Generators to exercise their choice of installing conductors inline with the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010.

b) Based on the above, Counsel appearing for Andhra Pradesh Distribution Company Ltd., during the hearing on 14th May, 2012 undertook to withdraw the reply dated 3rd May, 2012 filed by the said respondent in order to give effect to and comply with the aforesaid oral directions of this Commission.

c) Pursuant to the above, a meeting was organized on 16th May, 2012 by APTRANSCO in a Technical Committee comprising of Director (Grid Operation / APTRANSCO, Director (Transmission) / APTRANSCO, Director (Projects) / APTRANSCO, JMD (Distribution) / APTRANSCO, member from APPCC-JMD (HRD, CommI, IPC & IT) / APTRANSCO and representatives for the petitioner Indian Wind Energy Association. The following were agreed in the aforesaid meeting:

- i) The developer shall have the discretion in choosing the conductor for connecting wind generator to the pooling substation of the developer subject to the CEIG approval.
- ii) The developer is allowed to inject a maximum of 10 MW from pooling substation of the wind generator to the existing 33 / 11 kV DISCOM substation.
- iii) The developers connecting at 33 kV level to the EHT SS, the maximum injection is limited upto 25 MW in case of single conductor 33 kV Bus and upto 40 MW in case of double conductor 33 kV Bus, subject to transformation capacity. Injection of power may be in one or more circuits depending upon availability of bays in that substation and loading per circuit not exceeding 25 MW.
- iv) Injection of power by wind developer from pooling substation to EHT substation at EHT level may be as per system studies.

A copy of the aforesaid Minutes of Meeting duly signed by the all the aforesaid constituents of the Technical Committee is filed.

8. The petitioner has prayed that the Commission may

- a) be pleased to review and modify its order dated 20th March, 2010 to allow discretion to the Wind Energy Developers in choosing the conductor for connecting Wind Generator to the pooling substation of the developer subject CEIG approval.
- b) be pleased to review and modify its order dated 30th March, 2010 to allow the Wind Energy Developers to inject the maximum of 10 MW from Pooling Sub-Station of the Wind Generator to the existing 33 / 11 kV DISCOM Sub-Station.

- c) be pleased to review and modify its order dated 30th March, 2010 to provide that the developers connecting at 33 kV level to the EHT SS, the maximum injection be limited upto 25 MW in case of single conductor, 33 kV Bus and upto 40 MW in case of double conductor, 33 kV Bus, subject to transformation capacity and that injection of power may be in one or more circuits depending upon availability of bays in that Sub-station and loading per circuit not exceeding 25 MW;
- d) be pleased to review and modify its order dated 30th March, 2010, to provide that injection of power by Wind Developer from pooling Sub-station to EHT Sub-station at EHT level may be as per system studies;
- e) be pleased to pass any other order as may be just and necessary in the facts and circumstances of the present case.

9. Now the point for consideration is, whether the petitioner is entitled to seek a review of the order of the Commission dated 20.03.2010? If so in what manner?

10. The respondent has submitted a Memo withdrawing the reply filed by the respondent on 16.05.2012 by stating that they will file the same after negotiations by modifying the same, if necessary.

11. The respondent has not filed any reply of modifications but the petitioner has filed an affidavit narrating the negotiations and conclusions arrived at by the Committee as per the directions of the Commission. The minutes of meeting held on 16.05.2012 have been accepted and signed by both the sides viz., the representatives of APTRANSCO as well as the InWEA.

12. In view of the above circumstances, the Commission hereby reviews the order dt.30.03.2010 and in partial modification of the guidelines contained therein, hereby orders that:

- i) The developer shall have the discretion in choosing the conductor for connecting wind generator to the pooling substation of the developer subject to the CEIG approval.

ii) The developer is allowed to inject a maximum of 10 MW from pooling substation of the wind generator to the existing 33 / 11 kV DISCOM substation.

iii) The developers connecting at 33 kV level to the EHT SS, the maximum injection is limited upto 25 MW in case of single conductor 33 kV Bus and upto 40 MW in case of double conductor 33 kV Bus, subject to transformation capacity. Injection of power may be in one or more circuits depending upon availability of bays in that substation and loading per circuit not exceeding 25 MW.

iv) Injection of power by wind developer from pooling substation to EHT substation at EHT level may be as per system studies.

13. Hence, this petition is ordered accordingly.

The order is signed on this 11th day of July, 2012.

Sd/-
(R.ASHOKA CHARY)
MEMBER

Sd/-
(C.R.SEKHAR REDDY)
MEMBER

Sd/-
(A.RAGHOTHAM RAO)
CHAIRMAN



ఆంధ్ర ప్రదేశ్ రాజ పత్రము

THE ANDHRA PRADESH GAZETTE

PART-II EXTRAORDINARY
PUBLISHED BY AUTHORITY

No. 56]

HYDERABAD, FRIDAY, JULY 31, 2015.

NOTIFICATIONS BY HEADS OF DEPARTMENTS, Etc.

—x—

ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION

Terms and Conditions for Tariff Determination for Wind Power Projects in the State of
Andhra Pradesh for the period FY2015-16 to FY2019-20

Regulation No. 01 / 2015

In exercise of the powers conferred by Sections 61 and 86 read with Section 181 of the Electricity Act, 2003 (Central Act 36 of 2003), and all other powers enabling it in this behalf and after previous publication, the Andhra Pradesh Electricity Regulatory Commission hereby makes the following regulations, namely:

1. Short title and commencement:

(1) These regulations may be called the Andhra Pradesh Electricity Regulatory Commission (Terms and Conditions for Tariff determination for Wind Power Projects) Regulations, 2015.

(2) These regulations shall come into force from the date of their publication in the official Gazette and, unless reviewed earlier or extended by the Commission, shall remain in force up to 31st March, 2020.

2. Definitions and Interpretation:

(1) In these regulations, unless the context otherwise requires,-

- (a) 'Act' means the Electricity Act, 2003 (Central Act 36 of 2003);
- (b) 'Capital cost' means the capital cost as defined in Regulation 10;
- (c) 'CERC' means the Central Electricity Regulatory Commission;
- (d) 'CERC RE Tariff Regulations' means Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012, as amended from time to time.
- (e) 'Commission' means the Andhra Pradesh Electricity Regulatory Commission;
- (f) 'Control Period' means the period during which the norms for determination of tariff specified in these regulations shall remain valid;

- (g) 'Inter-connection Point' means the line isolator on outgoing feeder on HV side of the pooling sub-station i.e., the sub-station at project site of wind farm which consists of step-up transformer(s) and associated switchgear and to the LV side of which, multiple generating unit(s) i.e., wind turbine generators are connected;
- (h) 'MAT' means Minimum Alternate Tax;
- (i) 'MNRE' means the Ministry of New and Renewable Energy, Government of India;
- (j) 'Non-Conventional Energy' means the grid quality electricity generated from non-conventional energy sources;
- (k) 'Non-Conventional Energy Power Plants' means the power plants other than the conventional power plants generating grid quality electricity from non-conventional energy sources;
- (l) 'Non-Conventional Energy Sources' means non-conventional sources such as mini hydel, wind, biomass, bagasse, industrial waste, urban or municipal waste and other such sources as approved by the MNRE;
- (m) '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;
- (n) 'Project' means a generating station or the evacuation system;
- (o) 'Tariff period' means the period for which tariff is to be determined by the Commission on the basis of norms specified in these Regulations;
- (p) 'Useful Life' in relation to a wind power project means Twenty Five years from the date of commercial operation (COD);
- (q) 'Year' means a financial year.

(2) Save as aforesaid and unless repugnant to the context or the subject-matter otherwise requires, words and expressions used in these regulations but not defined herein and defined in the Act or the Andhra Pradesh Electricity Reform Act, 1998 (State Act 30 of 1998) or the Rules or Regulations made thereunder shall have the meanings assigned to them respectively therein.

3. Scope and extent of application:

These Regulations shall apply to the wind power projects to be commissioned within the State of Andhra Pradesh for generation and sale of electricity wholly or partly to the Distribution licensees within State of Andhra Pradesh subsequent to the date of notification of these Regulations and where tariff for a generating station or a unit thereof based on wind energy source, is to be determined by the Commission under section 62 read with section 86 of the Act.

Chapter 1: General Principles

4. Control Period:

The Control Period under these Regulations ends by 31st March, 2020. First year of the Control Period shall commence from the date of notification of these Regulations and shall cover upto the end of the financial year 2015-16.

Provided that the tariff determined as per these Regulations for the wind power projects commissioned during the Control Period, shall continue to be applicable for the entire duration of the Tariff Period as specified in Regulation 5 below.

5. Tariff Period:

- (a) The Tariff Period for wind power projects shall be equal to the useful life of the projects as defined under Regulation 2 (p).

- (b) Tariff period under these Regulations shall be considered from the date of commercial operation of the wind power projects.

6. Proceedings for determination of Tariff:

The Commission shall notify the generic preferential tariff on suo-motu basis at the beginning of each year of the Tariff Period for wind power projects for which norms have been specified under these Regulations:

Provided further that for FY2015-16, the generic preferential tariff on suo-motu basis, shall be notified soon after the publication of the regulations in the official gazette to be applicable with effect from the date of these regulations coming into force.

7. Tariff Structure:

The tariff for wind power projects shall be single part tariff consisting of the following cost components:

- (a) Return on equity;
- (b) Interest on loan capital;
- (c) Depreciation;
- (d) Interest on working capital;
- (e) Operation and Maintenance expenses;

8. Levellized Tariff:

Levellized Tariff is calculated by carrying out levellization for 'useful life' considering the discount factor for time value of money.

The discount factor considered for this purpose is equal to the weighted average cost of capital on the basis of normative debt-equity ratio (70:30) specified under Regulation 11. Considering the normative debt-equity ratio and weighted average of the rates of interest and post tax return on equity, the discount factor is calculated. Interest rate for the loan component (i.e. 70%) of Capital Cost is considered as explained under Regulation 12. For equity component (i.e. 30%), post tax Return on Equity (ROE) of 16% is considered as explained in Regulation 14.

9. Despatch principles for electricity generated from Wind Power Projects:

All Wind Power Projects shall be treated as 'MUST RUN' power plants and shall not be subjected to 'Merit Order Despatch principles' (MOD):

Provided that where the sum of generation capacity of the plants connected at the interconnection point to the transmission or distribution system is 10 MW and above and interconnection point is 33 kV and above, such Wind Power Generation Plants shall be subjected to scheduling and despatch code as specified in Indian Electricity Grid Code (IEGC) - 2010 and/or A.P. State Electricity Grid Code (APSEGC) as amended from time to time.

Chapter 2: Financial Principles

10. Capital Cost and Capital Cost Indexation Mechanism:

The norms for the Capital cost shall be generally inclusive of all capital work including plant and machinery, civil work, erection and commissioning, financing and interest during construction (IDC) and evacuation infrastructure.

The capital cost for FY2015-16, shall be '600 lakhs / MW.

The capital cost indexation mechanism as prescribed in the CERC RE Tariff Regulations, 2012 shall be considered as indicated below for arriving at the capital cost of the wind power projects for each year of the Control Period beyond FY2015-16, which shall be notified at the beginning of each financial year.

The following indexation mechanism shall be applicable for adjustments in capital cost over the control period beyond FY2015-16 with the changes in Wholesale Price Index for Steel and Electrical Machinery.

$$CC_{(n)} = P\&M_{(0)} * (1+F1+F2+F3)$$

$$P\&M_{(n)} = P\&M_{(0)} * (1+d_{(n)})$$

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

Where,

$CC_{(n)}$ = Capital Cost for nth year

$P\&M_{(n)}$ = Plant and Machinery Cost for nth year

$P\&M_{(0)}$ = Plant and Machinery Cost for the base year

Note: $P\&M_{(0)}$ is to be computed by dividing the base capital cost (for the first year of the control period i.e., FY2015-16) by $(1+F1+F2+F3)$

$d_{(n)}$ = Capital Cost escalation factor for year (n) of control period

$SI_{(n-1)}$ = Average WPI Steel Index prevalent for calendar year ending in (n-1) financial year of the control period

$SI_{(0)}$ = Average WPI Steel Index prevalent for the calendar year ending in financial year (0) at the beginning of the control period i.e., January 2014 to December, 2014

$EI_{(n-1)}$ = Average WPI Electrical Machinery Index prevalent for calendar year ending in (n-1) financial year of the control period

$EI_{(0)}$ = Average WPI Electrical and Machinery Index prevalent for the calendar year ending in financial year (0) at the beginning of the control period i.e., January 2014 to December, 2014

a = Constant to be determined by Commission from time to time, for weightage to Steel Index

b = Constant to be determined by Commission from time to time, for weightage to Electrical Machinery Index

F1 = Factor for Land and Civil Work

F2 = Factor for Erection and Commissioning

F3 = Factor for IDC and Financing Cost

The constants 'a' and 'b' and factors 'F1', 'F2' and 'F3' are specified and these would be determined by the Commission from time to time.

11. Debt Equity Ratio:

The debt equity ratio shall be 70:30.

12. Loan and Finance Charges:

(1) Loan Tenure: For the purpose of determination of tariff, loan tenure of Ten years shall be considered.

(2) Interest Rate:

- (a) The loans arrived at in the manner indicated in the Regulation 11 shall be considered as gross normative loan for calculation of interest on loan. The normative loan outstanding as on April 1st of every year shall be worked out by deducting the cumulative repayment up to March 31st of previous year from the gross normative loan.
- (b) For the purpose of computation of tariff, the normative interest rate shall be considered as average State Bank of India (SBI) Base rate prevalent during the first six months of the previous year plus 300 basis points.

- (c) Notwithstanding any moratorium period availed by the generating company, 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.

13. Depreciation:

- (1) The value base for the purpose of depreciation shall be the Capital Cost of the asset admitted by the Commission. The Salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the Capital Cost of the asset.
- (2) Depreciation per annum shall be based on 'Differential Depreciation Approach' using 'straight line' method over two distinct periods comprising loan tenure and period beyond loan tenure over the useful life. The depreciation rate for the first ten years of the Tariff Period shall be 7% per annum and 1.33% for the remaining useful life of the project from 11th year onwards.
- (3) Depreciation shall be chargeable from the first year of commercial operation.

14. Return on Equity:

- (1) The value base for the equity shall be 30% of the capital cost as determined under Regulation 11.
- (2) The normative Return on Equity shall be 16% with MAT/Income tax as pass through.

15. Interest on Working Capital:

- (1) The Working Capital requirement shall be computed as follows:
 - (a) Operation and Maintenance expenses for one month,
 - (b) Receivables equivalent to 2 (two) months of energy charges for sale of electricity calculated on the normative Capacity Utilisation Factor (CUF),
 - (c) Maintenance of spares at 15% of Operation and Maintenance expenses.
- (2) Interest on Working Capital shall be computed at the interest rate equivalent to the average State Bank of India Base Rate prevalent during the first six months of the previous year plus 350 basis points.

16. Operation and Maintenance Expenses:

- (1) 'Operation and Maintenance expenses' shall comprise repair and maintenance (R&M), establishment including employee expenses, and administrative and general expenses including insurance.
- (2) Operation and maintenance expenses for the first year of the control period shall be '8.57 lakhs / MW.
- (3) Normative O&M expenses allowed during first year of these Regulations (i.e. FY 15-16) shall be escalated at the rate of 5.72% per annum over balance of the control period.

17. Rebate:

- (1) For payment of bills of the generating company through letter of credit, a rebate of 2% shall be allowed.
- (2) Where payments are made other than through letter of credit within a period of one month of presentation of bills by the generating company, a rebate of 1% shall be allowed.

18. Sharing of Clean Development Mechanism (CDM) benefits:

The proceeds of carbon credit from approved CDM project shall be shared between generating company and concerned beneficiaries in the following manner, namely:-

- (a) 100% of the gross proceeds on account of CDM benefit is 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%, whereafter the proceeds shall be shared in equal proportion, by the generating company and the beneficiaries.

19. Taxes and Duties:-

- (a) Tariff determined under these regulations shall be exclusive of taxes and duties as may be levied by the Government:

Provided that the taxes and duties levied by the Government shall be allowed as pass through on actually incurred basis.

- (b) Income tax/MAT is a pass through and is to be paid by the Distribution Licensees to the developer upon receipt of the claim from the developer. This is over and above the tariff determination made herein.

- (c) Electricity Duty is a pass through and is to be paid by the Distribution Licensees to the developer upon receipt of the claim from the developer. This is over and above the tariff determination made herein.

20. Subsidy or Incentive by the Government:

The Commission shall take into consideration any incentive or subsidy offered by the Central or State Government, including accelerated depreciation (AD) benefit, if availed by the generating company, for the Wind Power Projects while determining the tariff under these Regulations.

Provided that the following principles shall be considered for ascertaining income tax benefit on account of accelerated depreciation, if availed, for the purpose of tariff determination:

- (a) Assessment of benefit shall be based on normative capital cost, accelerated depreciation, rate as per relevant provisions under the Income Tax Act and Corporate Income Tax Rate.
- (b) Capitalization of Wind Power Projects during second half of the fiscal year. Per unit levelized accelerated depreciation benefit has to be computed considering the post-tax weighted average cost of capital as discount factor (as explained in Regulation 8).

Chapter 3: Technology specific parameters for Wind Power Projects

21. Capacity Utilization Factor:

The Capacity Utilization Factor (CUF) for the control period shall be 23.5%.

Chapter 4: Miscellaneous

22. Deviation from Norms:

Tariff for sale of electricity by the Wind Power Project may also be determined in deviation from the norms specified in these Regulations subject to the condition that the levelized tariff over the useful life of the project on the basis of the norms in deviation does not exceed the levelized tariff calculated on the basis of the norms specified in these Regulations:

Provided that the reasons for deviation from the norms specified under these Regulations shall be recorded in writing.

23. Power to Relax:

The Commission may, by general or special order, for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely to be affected, relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person.

24. Issue of Orders and Practice Directions:

Subject to the provisions of the Act, the Andhra Pradesh Electricity Reform Act, 1998 and these Regulations, the Commission may, from time to time, issue orders and practice directions in regard to the implementation of these Regulations, the procedure to be followed and other matters, which the Commission has been empowered by these Regulations to specify or direct.

25. Power to Amend:

The Commission may, at any time, vary, alter, modify or amend any provisions of these Regulations.

26. Power to Remove Difficulties:

If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

27. OTHERS

(i) **Evacuation Guidelines:** The Evacuation Guidelines / practice directions issued by the Commission from time to time shall be applicable for all the wind power projects established since these regulations coming into force.

(ii) **Model PPAs:** The model Power Purchase Agreements earlier approved by the Commission shall be applicable to all the wind power projects established since these regulations coming into force also to the extent they are in consonance with these regulations.

Dr. A. SRINIVAS,
Commission Secretary (I/c).

Hyderabad,
31-07-2015.

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From
Communication Secretary,
APFEC, 4th & 5th Floors,
11-4-660, Nungambu Bhavan,
Red Hills, Lakshmapur,
Hyderabad 500 004

To
The Chairman & Managing Director,
APCPDCL, 6-1-80, 5th floor,
Corporate Office, Mint Compound,
Hyderabad 500 004

550.

Ref:- 1) Lr.No.CGM(Comml & RAC)/SE/IPC/F.D.No.79/14
Dt 11.04.2014

3) APERC Order dated 11.07.2012 in O.P. No.7 of 2012

After careful examination of the issue, in the partial modification of guidelines order issued in O.P. No.7 of 2012 the Commission grants discretion to the developer for choosing the conductor for connecting wind generator to the pooling substation of the developer, subject to the CEIG approval. No further clarifications on conductor size in this connection are required.

This is issued with the concurrence of the Commission.

Commission Secretary

The Chairman & Managing Director, APTransco, Vidyut Soudha, Hyderabad -52.

PS to the Chairman/APERC

PS to the Member (A)/APERCC

PS to the Member (R)/APEROC

ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
HYDERABAD

Order Dated 26-03-2016

IN

O.P.No.13 of 2016

(SUO - MOTU)

Present: Sri Justice G. Bhavani Prasad, Chairman
Dr. P. Raghu, Member
Sri P. Rama Mohan, Member

In the matter of notifying the generic preferential tariff applicable from 01-04-2016 to 31-03-2017 in respect of Wind Power Projects in the State of Andhra Pradesh pursuant to Regulation 6 of Regulation 1 of 2015

The Commission has issued the Andhra Pradesh Electricity Regulatory Commission (Terms and Conditions for Tariff Determination for Wind Power Projects) Regulation, 2015 and notified on 31-07-2015.

As per the Regulation 6 of Andhra Pradesh Electricity Regulatory Commission (Terms and Conditions for Tariff Determination for Wind Power Projects) Regulation, 2015, the Commission shall notify the generic preferential tariff on suo-motu basis at the beginning of the each year of the tariff period for the wind power projects for which norms have been specified under the Regulation.

Accordingly, the parameters taken into consideration as per the Regulation 1 of 2015 for determination of tariff are as hereunder:

Sl.No.	Parameter	Value
1.	Tariff Period	25 years
2.	Useful Life	25 years
3.	Capital Cost	Rs.600.9 Lakhs/MW (including evacuation cost)
4.	O & M Expenses	Rs.9.06 Lakhs
5.	O&M Expenses' Escalation	5.72 % p.a.
6.	Depreciation for the First 10 years	7% p.a.
7.	Depreciation for the remaining useful life of the plant	1.33% p.a.
8.	Capacity Utilization Factor	23.5 %
9.	Return on Equity	16%
10.	Interest Cost on Debt	12.76%
11.	Tenure of Loan	10 years
12.	Interest on Working Capital	13.26%
13.	Debt Equity Ratio	70:30
14.	Discount Rate	10.64

Contd....2

Based on the above parameters and considering the useful life of the Wind power Plant as 25 years, the levelised generic preferential tariff works out to Rs.4.84 per unit without considering the Accelerated Depreciation and Rs.4.25 per unit with Accelerated Depreciation as tabulated below.

Tariff without AD Benefit	Tariff with AD Benefit
4.84	4.25

The above tariff shall be applicable for all the new Wind Power Projects entering into Power Purchase Agreements (PPA's) with AP Discoms on or after 01-04-2016.

Sd/-
(P. RAMA MOHAN)
MEMBER

(on leave)
(Dr. P. RAGHU)
MEMBER

Sd/-
(JUSTICE G. BHAVANI PRASAD)
CHAIRMAN