

TAMIL NADU ELECTRICITY REGULATORY COMMISSION
(Constituted under section 82 (1) of the Electricity Act, 2003)
(Central Act 36 of 2003)

PRESENT:

Thiru S.Akshayakumar	Chairman
Thiru G.Rajagopal	Member
and		
Dr.T.Prabhakara Rao	Member

M.P.No.10 of 2017

Tamil Nadu Generation and Distribution Corporation Ltd.
Represented by the Chief Engineer / Non-Conventional
Energy Sources

144, Anna Salai
Chennai – 600 002.

... Petitioner
(Thiru M.Gopinathan
Standing Counsel for TANGEDCO)

Vs.

NIL

...Respondent

Date of hearing : **02-06-2017**

Date of Order : **10-07-2017**

The M.P.No.10 of 2017 came up for admission on 02-06-2017. The Commission upon perusal of the Petition and connected records and after hearing the submissions of the Petitioner hereby makes the following:

ORDER

1. Prayer of the Petitioner in M.P.No.10 of 2017:-

The prayer of the Petitioner in the above M.P.No.10 of 2017 is to grant permission to TANGEDCO for procurement of 500 MW Wind Power from the Wind

Power Projects with minimum capacity of 25 MW and above through reverse bidding process considering the tariff of Rs.3.46 per unit as upper limit by considering the tariff arrived at by SECI through tender process and to approve the tender specification evolved by the TANGEDCO in line with the draft guidelines for procurement of Wind Power through bidding issued by the MNRE along with draft PPA and to pass such further or other orders as this Commission may deem fit and proper in the facts and circumstances of the case and thus render justice.

2. Facts of the Case:-

The petition is being filed seeking permission for procurement of 500 MW Wind Power by TANGEDCO from the developers through reverse bidding process considering the tariff of Rs.3.46 per unit as arrived at the recent tender floated by Solar Energy Corporation of India (SECI) as upper limit, and to approve the tender specification evolved by the TANGEDCO in line with the draft guidelines for procuring wind power through bidding issued by MNRE.

3. Contentions of the Petitioner:-

3.1. TNEB started to develop wind power generation from the year 1986 by erecting demonstration wind farm of capacity 55 KW to 250 KW totaling 17.465 MW. Subsequently due to the encouragement and generator supportive policy large number of private developers have started to invest in wind energy and erected WEGs.

3.2. Due to continuous encouragement and support, the installed capacity of wind mills in Tamil Nadu stands at number one since 1986 to till date with an installed

capacity of 7849.255 MW as on 31-03-2017 with 12008 Nos WEG's which constitutes 22.53% of total installed capacity of India.

3.3. TNEB started giving banking facility for captive users of wind energy from 1990 which encouraged the Industrial and Commercial HT consumers in the State to setup their own WEG for captive use which helps the industrialization of the State.

3.4. Due to the banking facility and the preferential wheeling and transmission charges extended to the captive consumers, the share of captive consumers in the total installed capacity of the State has gone from 40% to now above 70%.

3.5. The MoP has fixed a target of 175 GW of RE Power by 2020 of which 60 GW for Wind Power shall be procured as per the "Guidelines for development of Onshore Wind Power Projects" issued by MNRE vide notification F.No.66/183/2016-WE, dated 22.10.2016. For achieving the ambitious target of 60 GW of Wind Power, capacity additions from wind energy has to be doubled and while doing so, the competitive rate has also be arrived at.

3.6. The Commission vide notification dated 07.03.2016 has issued following amendment to the Renewable Energy Purchase Obligation Regulations, 2010:

"(1) Every obligated entity shall purchase not less than defined minimum percentage of its consumption of energy from renewable energy sources under the Renewable Purchase Obligation (RPO) during a year as specified below:

(1A) The following percentage of Renewable Purchase Obligation is fixed:

Sl. No.	Year	Minimum quantum of total renewable purchase obligation in percentage (in terms of energy in KWh)	Minimum quantum of solar Renewable Purchase Obligation in percentage out of the total Renewable Purchase Obligation mentioned in Column (3) (in terms of Energy in KWh)
(1)	(2)	(3)	(4)
1	2015-16	9.50%	0.50%
2	2016-17	11.50%	2.50%
3	2017-18	14.00%	5.00 %

The Renewable Purchase Obligations as specified for the year 2011-12 in sub-regulation (1) shall be applicable for the years 2012-13, 2013-14 and 2014-15 to the distribution licensee”.

3.7. In compliance with the above said RPO, the required capacity of the Wind Power Plant as on date is as follows:-

Sl. No.	Year	Non-Solar RPO target	Total electricity units sold and expected to be sold to different category of consumers	Electricity units to be procured in proportionate to Non-solar RPO	Total capacity of Wind Power generation required to meet out Non-solar RPO	Expected capacity of Wind Power Generation available	Capacity of Wind Power Generation required to be added
1	2	3	4	5	6(*)	7(**)	8
1	2015-16	9.0%	95050 MU	8555 MU	3597 MW	2280 MW	
2	2016-17	9.0%	99802 MU	8982 MU	3777 MW	2355 MW	
3	2017-18	9.0%	104792 MU	9431 MU	3966 MW	2355 MW	1611 MW

* - on the assumption of 27.15% PLF

** - on the assumption that 70% of the capacity are under captive generation.

The above tabular column reveals that 1611 MW under sale to Board category WEG may have to be achieved to meet RPO. The energy generated from the captive generators are not taken into account to meet RPO in view of the Writ Petition No.4558 of 2012 filed at Hon'ble High Court by the captive stakeholders.

3.8. To meet the RPO target of 9% for the year 2017-18 as fixed by the Commission and to avoid purchase of Renewable Energy Certificate in power exchange, to meet the compliance of RPO, if need be, TANGEDCO may have to consider to procure wind power of 1611 MW from the developers. Hence, TANGEDCO decided to initially procure wind power to a total capacity of 500 MW from WEG's within the State of Tamil Nadu.

3.9. In recent days few States in India have adopted bidding route for procurement of wind power in the absence of Central Government guidelines. In the State Advisory Committee Meeting held on 17-03-2016 where the issues relating to tariff fixation and wheeling in respect of renewable energy sources of power such as wind, solar, Biomass and bagasse based Co-generation plants, were discussed, wherein TANGEDCO inter-alia suggested that it may be appropriate to procure wind power through bidding route so that TANGEDCO could get power at lesser tariff.

3.10. The Solar Energy Corporation of India (SECI) has floated an All India tender for procurement of Wind Power upto 1000 MW, with connectivity to CTU and finalized Wind Power procurement at the rate of Rs.3.46 per unit. Most of the projects selected in the above bidding are from Tamil Nadu.

3.11. As per the provisions of section 63 of Electricity Act 2003, the State Electricity Commission is conferred with power to adopt tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government. While so, section 86 (1) (b) of the said Act,

inter-alia, provides that the State Commission shall regulate Electricity purchase and procurement process of distribution licensee including the price at which electricity shall be procured.

3.12. In the National Tariff Policy issued by MoP Resolution dated 28.01.2016 it is stated:

"States shall endeavor to procure power from Renewable Energy Sources through competitive bidding to keep the Tariff low, except from the waste to energy plants. Procurement of power by Distribution Licensee from Renewable energy Sources from Projects above the notified capacity, shall be done through competitive bidding process, from the date to be notified by the Central Government"

3.13. It may be stated final guidelines for procurement of wind power through bidding is not available as of now. However, draft guidelines for procurement of Wind Power through bidding by the MNRE is available and is yet to be finalized by the Government of India. Hence, approval of this Commission is sought for procurement of wind power based on draft guidelines issued by the MNRE, Gol issued in the notification No.F.No. 238/1/2017-18. TANGEDCO is of the firm view that by virtue of such approval / permission by this Commission, the TANGEDCO will be achieving the objects of sourcing power from WEGs meeting RPO and also at a competitive rate which will be in public interest. Hence, the petition is being filed seeking permission for procurement of 500 MW Wind Power by TANGEDCO from the developers through reverse bidding process considering the tariff of Rs.3.46 per unit as arrived at the recent tender floated by Solar Energy Corporation of India (SECI) as upper limit, and to approve the tender specification evolved by the TANGEDCO in line with the draft guidelines for procuring of wind power through bidding issued by MNRE.

4. Findings of the Commission:-

4.1. The petitioner, Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), has sought permission for procurement of 500 MW of wind power from wind power projects of minimum capacity 25 MW and above through reverse bidding process by fixing a tariff of Rs.3.46 per unit, the tariff discovered in the recent bidding conducted by Solar Energy Corporation of India(SECI) for wind power, as the upper limit, and to approve the tender specification evolved in line with the draft guidelines formulated for procurement of wind power through transparent process of bidding by the Ministry of New and Renewable Sources of Energy(MNRE), Government of India.

4.2. This procurement of wind power is to meet the renewable energy purchase obligation of the Distribution licensee, TANGEDCO. At a projected consumption of 104792 MU for the year 2017-18, TANGEDCO's requirement of wind power stated is 1611 MW. This requirement is in addition to the capacity contracted by TANGEDCO through preferential tariff. The distribution licensee states that over 70% of the wind capacity in the State have gone into captive use.

4.3. To process the request of the distribution licensee, the provisions in the National Electricity Policy and Tariff policy needs to be looked into.

Provisions in the National Electricity Policy:

“5.2.20 Feasible potential of non- conventional energy resources, mainly small hydro, wind and bio-mass would also need to be exploited fully to create additional power generation capacity. With a view to increase the overall share of non-conventional energy sources in the electricity mix, efforts will be made to encourage private sector participation through suitable promotional measures.”

“5.8.6 Competition will bring significant benefits to consumers, in which case, it is competition which will determine the price rather than any cost plus exercise on the basis of operating norms and parameters. All efforts will need to be made to bring the power industry to this situation as early as possible, in the overall interest of consumers. Detailed guidelines for competitive bidding as stipulated in section 63 of the Act have been issued by the Central Government.”

“5.12.2 The Electricity Act 2003 provides that co-generation and generation of electricity from nonconventional sources would be promoted by the SERCs by providing suitable measures for connectivity with grid and sale of electricity to any person and also by specifying, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee. Such percentage for purchase of power from nonconventional sources should be made applicable for the tariffs to be determined by the SERCs at the earliest. Progressively the share of electricity from non-conventional sources would need to be increased as prescribed by State Electricity Regulatory Commissions.

Such purchase by distribution companies shall be through competitive bidding process. Considering the fact that it will take some time before non-conventional technologies compete, in terms of cost, with conventional sources, the Commission may determine an appropriate differential in prices to promote these technologies.”

Para 6.4.2 of Tariff Policy 2016 says, *“ States shall endeavor to procure power from renewable energy sources through competitive bidding to keep the tariff low, except from the waste to energy plants. Procurement of power by Distribution Licensee from renewable energy sources from projects above the notified capacity, shall be done through competitive bidding process, from the date to be notified by the Central Government.”*

4.4. In the Order No. 3 of 2016 dt.28-03-2016 “Comprehensive Tariff Order on Wind Energy” issued by this Commission, a reference was made to an order of stay issued by the Supreme Court of India on 26.11.2011 on the subject of competitive bidding for procurement of power from NCES in Civil Appeal No.D 26531 of 2007.

The stay order was passed by the Apex court against the order passed by the Appellate Tribunal of Electricity in Appeal No.129 of 2005 directing Karnataka Electricity Regulatory Commission to frame guidelines enabling procurement of power from renewable energy sources through competitive bidding. This reference was made by the Commission in the context of determination of preferential tariff vs bidding wherein it was decided to have a preferential tariff in place fixed under section 62 of the Electricity Act, 2003. At the time of issue of the said order, guidelines for competitive bidding for wind power were not available. Now draft guidelines are available, and proof enough available of feasibility of competitive bidding in the wind sector through SECI's bidding that secured a capacity of 1050 MW, many of the projects being proposed to be developed from this State.

4.5. Regulation 4(3) of Commission's Power Procurement from New and Renewable Sources of Energy, 2008 states that where the tariff has been determined by following transparent process of bidding in accordance with the guidelines issued by the Central Government, as provided under section 63 of the Act, the Commission shall adopt such tariff.

4.6. If the Distribution licensee is able to secure enough capacities of wind projects at better rates through competitive bidding, the same needs to be encouraged. Therefore, keeping in view the provisions in the National Electricity Policy, Tariff Policy, and the provisions in the Electricity Act, 2003 that encourage promotion of renewable energy and procurement through competitive bidding, Commission during the hearing held on 02.06.2017 had permitted the petitioner to proceed with the tendering process as requested by the petitioner for procurement of 500 MW of wind

power with minimum capacity of 25 MW and above through transparent process of reverse bidding fixing Rs.3.46 per unit as the upper limit. While permitting the petitioner to proceed with the bidding process, Commission has made certain observations in respect of charging the developers for creating evacuation facilities i.e construction of dedicated line and related bay works on account of developer, and works related to upgradation of the petitioner's sub station on account of the petitioner, which may be adhered to.

4.7. As to the approval sought for the tender document prepared on the basis of the draft guidelines issued by MNRE, the bid document generally being on the lines of the draft guidelines of MNRE except for certain slight deviations on net worth criteria, payment security, offtake constraints etc., Commission accords in principle approval to the bid document that is annexed to this order.

4.8. Further to the approval issued in para 6 & 7 above, the Commission issues the following directions:-

i) TANGEDCO shall publish the notice inviting tender in atleast two daily newspapers, in English and Tamil, having wide circulation and host the same in the website. Clarifications/revisions to the bid document and Power Purchase Agreement on account of pre bid meeting may be uploaded in the website of the petitioner and adequate time granted for submission of bids.

(ii) Bidding shall be conducted in a transparent manner. Evaluation of the bids shall be undertaken with a proper committee in place before the bidding process.

(iii) Notwithstanding the above, if the number of qualified bidders is less than two, the petitioner shall seek approval from the Commission to continue with the bidding process.

4.9. The Commission further directs that prior approval for procurement of wind power on the basis of tariffs obtained in the reverse bidding process shall be obtained from the Commission furnishing full details of the tendering process including details of the evaluation committee, tariffs quoted by other bidders and a copy of power purchase agreement to be signed with the developers.

5. Appeal

An appeal against this Order shall lie before the Appellate Tribunal for Electricity under section 111 of the Electricity Act 2003, within a period of 45 days from the date of receipt of a copy of this order by the aggrieved person.

(Sd)
(Dr.T.Prabhakara Rao)
Member

(Sd.....)
(G.Rajagopal)
Member

(Sd.....)
(S.Akshayakumar)
Chairman

/True Copy /

Secretary
Tamil Nadu Electricity
Regulatory Commission



**TAMIL NADU GENERATION AND DISTRIBUTION
CORPORATION LIMITED**

**REQUEST FOR SUBMISSION (RFS) DOCUMENT
FOR PROCUREMENT OF WIND POWER FROM
DEVELOPERS ESTABLISHING WIND POWER
PROJECTS IN TAMIL NADU**

**THROUGH
REVERSE BIDDING PROCESS**

**LAST DATE FOR SUBMISSION OF RFS DOCUMENT
DUE ON2017 @ 14 Hrs.**

Specn.No.CE/NCES/OT No..../2017-18

**The Chief Engineer/NCES
Chennai-2.**

INTRODUCTION

The MNRE has issued draft "Guidelines for development of Onshore Wind Power Projects" vide notification No. F./No.66/183/2016-WE dt:22.10.2016 in which it has given guidelines for development of Onshore Wind Power Projects for achieving the ambitious target of 60GW of Wind Power installed capacity in the country by 2022. For achieving the target the current rate of deployment of Wind Power capacity is required to be more than doubled.

The Tamil Nadu State has a total installed wind generation capacity of 7850 MW as on 31.03.2017.

Further the Hon'ble TNERC vide notification dt: 07.03.2016 has fixed RPO target of 9% for 2017-18 and TANGEDCO needs to purchase 500 MW to meet out this RPO as a first phase.

Hence in order to facilitate the developers to establish Wind Power Projects of capacity 25 MW and above and also to have a competitive rate, TANGEDCO has proposed to procure wind power from these Projects through a Long Term Power Purchase Agreement up to a capacity of 500 MW considering a fixed tariff of Rs.3.46 as an upper limit. The developers will be selected through reverse bidding process.

INVITATION FOR BID

For and on behalf of TANGEDCO bids are invited for procurement of 500 MW of Wind power through Electronic Mode (e-bidding) for the following scheme:-

- 1) Description: Procurement of Wind Power from Developers establishing Wind Power Projects for a minimum of 25 MW with atleast 5 MW project at one site for a single bidder or company or group of companies in the State of Tamil Nadu at the rate to be finalized through reverse bidding, considering the fixed tariff of Rs.3.46 per unit as upper limit.

- 2) Specification No. CE/NCES/OT No...../2017-2018.

- 3) Earnest Money Deposit (EMD): Rs.25,000/- per MW (Rupees Twenty five thousand only), in the form of Bank Guarantee/ Cash/DD/ Banker's Cheque/RTGS. Bank Guarantee format is enclosed herewith as **Annexure E.**

- 4) Last date for Submission of RFS document: **upto 14 00 hrs.**

(Bids uploaded after the scheduled date and time towards submission of the bid will not be considered). Bids by consortium with two partners (including lead partner) are also accepted.

- 5) Date, time & Place of Opening of RFS Document(Techno-commercial bid): **at 14 30 hrs.**
Office of the Chief Engineer/NCES, 2nd Floor, Eastern Wing, NPKRR Maligai, TANGEDCO, 144, Anna Salai, Chennai-2.
If the due date happens to be a holiday, the RFS document will be opened on the next working day.

- 6) Period of Validity of offer: 180 days from the date of issue of RFS document.
- 7) Number of RFS offers to be furnished: 1 no. Scanned copy with signature in all pages except Annexure C and Annexure E.
- 8) Participation in the bid. Bidders can peruse the RFS document from TANGEDCO website (www.tangedco.gov.in) and Government of Tamil Nadu website (www.tenders.tn.gov.in) and can participate in the bidding.
- 9) Processing fee Rs.10,000/- per application.
- 10) Date of commencement of uploading of RFS document : at 10 00 Hrs
- 11) Pre-bid meeting date and venue :
- 12) Pre-bid queries uploaded from :
- 13) Reply to pre-bid queries uploaded from:
- 14) Tender Inviting Authority: **Chief Engineer/NCES/TANGEDCO, Chennai-2.**
E-mail: cences@tnebnet.org
Web: www.tangedco.gov.in

Specification No: CE/NCES/OT. No...../2017-2018.

INSTRUCTION TO BIDDERSCDF

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LTD

1.0) General :

- a) As per the Provisions of MNRE Draft Guidelines for procurement of wind power through Bidding Process for Grid Connected Wind Power Projects issued by MNRE vide Notification F. No. 238/1/2017 and as per the provision in the Tamil Nadu Transparency in Tender Act 1998 and Tamil Nadu Transparency in Tenders Rules 2000 with amendments as on date has been generally followed in this document.
- b) For and on behalf of Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), RFS document along with bids are invited through Electronic mode (e-bidding) from Wind Power Generators (WPG) by the **Chief Engineer, NCES, TANGEDCO, Chennai-2** for procurement of Wind power at the rate to be finalized through reverse bidding, by establishing Wind Power Projects for a minimum of 25 MW with at least 5MW project at one site for a single bidder or company or group of companies in Tamil Nadu.

2.0) Scope of Services:

To establish, maintain and operate Wind Power Projects for a minimum of 25 MW with at least 5MW project at one site for a single bidder or company or group of companies in Tamil Nadu and to supply the generated Wind power to TANGEDCO under long term Energy Purchase Agreement (EPA) at the rate to be finalized through reverse bidding,

considering the fixed tariff of **Rs.3.46 per unit as upper limit**, without any escalation during the contracted period.

3.0) Earnest Money Deposit (EMD): Rs.25,000/ per MW (Rupees Twenty five thousand only) per MW in the form of Bank Guarantee/Cash/D.D/RGTS/Bankers Cheque valid for a period of 180 days from the date of opening of techno commercial bid.

- a) Intending WPG should submit an EMD as specified in Invitation for Bid.
- b) Bids not accompanied with EMD in accordance with the above provisions will be summarily rejected.

The Bank Guarantee in original should reach the CE/NCES office before the due date and time of opening of techno commercial bid.

D.D/Bankers Cheque towards EMD should be drawn in favour of "TANGEDCO Collection Account" payable at Chennai. Cash may be remitted at Cash Counter in O/O CFC/General, VII Floor, TANGEDCO,Chennai-2 and the scanned receipt be placed in e-bid.

The EMD will be forfeited, in case, TANGEDCO offers to execute the EPA with the WPG and if the WPG refuses to execute the EPA within the stipulated time period and the EMD will be encashed by the TANGEDCO.

TANGEDCO will release the bank guarantees to the unsuccessful bidders within reasonable time from the date of completion of reverse bidding process.

Bids not satisfying the EMD criteria will be summarily rejected.

4.0 Schedules for Receipt and Opening of Bid:

- a) Opening date and time for RFS IST 10 00 Hrs.
Document:

- | | | | |
|----|---|-----------|------------|
| b) | Closing date and time for submission of RFS Document: | IST | 14 00 Hrs. |
| c) | Pre-bid queries uploaded from | IST | 10 00 Hrs. |
| d) | Reply to the queries uploaded from: | IST | 10 00 Hrs. |
| e) | Last date and time for receipt of RFS and techno commercial bids. | IST | 14 00 Hrs. |
| f) | Date and time for opening of bids (Techno-Commercial Bids) | IST | 14 30 Hrs |
| g) | Date and time for opening of Price Bids | IST | 14 00 Hrs |

5.0) RFS document will also be placed in the **TANGEDCO Web Site:** www.tangedco.gov.in and the **Government of Tamil Nadu website:** www.tenders.tn.gov.in. The prospective bidders may peruse the RFS Document from the above websites and can participate in the bid through MSTC website @ www.mstcecommerce.com/eprhome.

6.0) Bid Qualification Requirement (BQR):

The Bidder should be financially sound and the Bidder should have to give documentary proof of having financial capability to carry out this work. The required Financial Criteria are detailed in **Annexure D**.

7.0) Invitation of Bids :

Bid for a capacity of 500 MW maximum from Wind Power Projects for a minimum of 25 MW with at least 5MW project at one site for a single bidder or company or group of companies or consortium.

8.0) Submission of Bid :

- a) The bid shall be submitted as per the TANGEDCO schedule specified in the RFS document.
- b) Along with the scanned copy of RFS document, the following should be submitted:
 - (i) **Part A:** The techno commercial bid along with scanned copies of relevant receipts towards EMD payment, net worth

certificate and payment (*) of processing fee through RTGS.

*Payment through RTGS shall be to the A/c.No.0305002100153163, Punjab National Bank, Large Corporate Branch, Mount Road, Anna Salai, Chennai-2. This should not contain in any price details.

(ii) **Part B:** The price bid as per **Annexure C**. The price bid shall be submitted online through MSTC website only. The Price bid shall not be furnished in Techno Commercial bid.

Both Part A & Part B should be uploaded before the due date and time of submission of bid documents through online.

- c) The WPG shall submit the bid for supplying the Wind power generated from their proposed Wind Power Projects in Tamil Nadu indicating the location(s) of the proposed project.
- d) Expected date of commencement of supply shall be furnished by the bidder.

9.0) Opening of Bids :

The Bids will be opened by the Chief Engineer/NCES/ TANGEDCO / Chennai-2 on the specified date & time.

10.0) Short Listing of Bids :

- I. The bid of any company / firm / Individual may be rejected by TANGEDCO if:
 - a) It is observed that the WPG has not furnished the scanned copy of relevant receipts towards EMD payment, net worth certificate and payment of processing fee through RTGS.
 - b) The signed copy of RFS does not conform to the TANGEDCO's technical specification or commercial terms.

- c) If price bid is quoted along with techno commercial bid.
- II Only those WPG who fulfilled the technical criteria, financial criteria, EMD, payment of processing fee and producing net worth certificate will be considered for further evaluation and price bid opening.

11.0) Tariff :

Fixed tariff for 25 years. However, the tariff of Rs.3.46 per unit is the upper limit. The applicable tariff will be arrived after deducting the discount offered by the bidder from the upper limit tariff.

12.0) Capacity Utilisation Factor (CUF) :

The Capacity Utilisation Factor (CUF) shall be 20% to 27.15%(as specified by the TNERC in Wind Tariff Order No. 3 of 2016-17 Dt:31.3.2016), calculated on yearly basis. In case the availability is more than the maximum CUF specified i.e. 27.15%, the TANGEDCO will purchase the excess generation, at 75% of the PPA tariff. In case the availability is less than the minimum CUF specified i.e. 20%, the WPG shall pay TANGEDCO for the actual shortfall in terms of units at the prevailing forbearance price fixed by the CERC, since the TANGEDCO is an obligated entity to utilize Wind power as per Hon'ble TNERC's RPO Regulation.

13.0) Repowering:

The WPG will be free to re-power their Projects from time to time during the EPA duration. However, the TANGEDCO will be obliged to buy power only within the CUF specified in the EPA. Any excess generation will be purchased by the TANGEDCO at 75% of the PPA tariff. If there is any shortfall of generation after repowering of Project, the WPG shall pay TANGEDCO the prevailing forbearance price fixed by the CERC for the actual shortfall in units.

14.0) Energy Purchase Agreement (EPA) period:

The EPA period shall be 25 years. The WPG are free to operate their Projects after the expiry of 25 years EPA period. However, any extension of the EPA beyond 25 years shall be through mutual agreement between the WPG and the TANGEDCO. The WPG may like to take land for longer period, preferably 40 years, in order to be able to run the Project beyond 25 years.

Performance Bank Guarantee (PBG) of Rs.10 Lakh/MW at the time of signing of EPA shall be furnished by the WPG, either by way of DD/Banker's cheque/Pay Order or Bank guarantee valid for a period of 24 months. On furnishing of the Performance Bank Guarantee as above the EMD furnished shall be returned. In addition the available EMD already furnished may also be converted into Performance Bank Guarantee and another Performance bank guarantee may be furnished for the balance amount.

In case, TANGEDCO offers to execute the EPA with the WPG and if the WPG refuses to execute the EPA within the stipulated time period, the Bank Guarantees towards EMD shall be encashed by the TANGEDCO. In case the Project is not selected, TANGEDCO shall release the Bank Guarantees within reasonable time after the completion of bidding process. In case any extension is given to the project, the corresponding extension needs to be made in the PBG.

Power Purchase Agreement shall be executed with the WPG on production of following documents.

- a. The WEG should register the application corresponding to the capacity of the project with CE/NCES as per the existing procedure along with registered sale deed or lease deed for land
- b. Copy of the evacuation approval if any
- c. Copy of MOA & AOA/Partnership deed
- d. Certificate of incorporation
- e. Project layout.

- f. Village map and topo sketch.
- g. Detailed Project Report (DPR).

The WPG shall furnish the following documents to TANGEDCO before commissioning of the project and only on receipt of the following documents, TANGEDCO will issue Grid tie up approval to WPG.

- a. No Objection Certificate (NoC)/ Environmental clearance (if applicable) for the Power Project.
- b. Forest Clearance (if applicable) for the land for the Power Project.
- c. Approval from the concerned Authority (if applicable) for Water required for the Power Project.

The Performance Bank Guarantee format is enclosed as **Annexure E.**

15.0) Offtake Constraints due to grid security:

During the operation of the Project, there can be some periods where the Project can generate power but due to temporary transmission unavailability, and grid management the same does not happen. In such cases the generation compensation shall be:

Sl. No.	Duration of Grid unavailability	Provision for generation compensation
a.	Grid unavailability of upto 50 hours in a financial year:	No generation compensation
b.	Grid unavailability beyond 50 hours in a financial year:	The normative CUF of 27.15% or committed CUF, whichever is lower, for the period of grid unavailability beyond 50 hours, shall be taken for the purpose of generation compensation. Corresponding to this generation loss*, the excess generation by the WPG equal to this generation loss shall be procured by TANGEDCO at the PPA tariff so as to offset this loss in the succeeding three contract years.

* ---- *Generation loss = [(Average Generation per hour during the contract period) x(number of hours of grid unavailability during the contract year)].*

Where average Generation per hour during the contact year (kWh) = Total Generation in the contract year (kWh)/Total hours of generation in the contract year.

16.0) Termination Compensation:

In order to increase the bankability of the Wind EPAs, it is important to keep such EPA's sacrosanct. Accordingly, the TANGEDCO and the WPG are restricted from unilateral termination or amendment of the EPA's.

Notwithstanding above, in case, such a scenario arises, there shall be a termination compensation to be paid in the following manner:

(i) Termination of EPA for reasons solely attributable to the WPG:

The TANGEDCO shall not be liable to pay any termination compensation to the WPG. The Lender(s) may take over the project and manage it themselves, or they may bring in new promoter(s). Save as otherwise provided in the guidelines, the WPG cannot terminate PPA to supply power to a third party.

(ii) For all other cases:

Save as otherwise excluded in the Force Majeure clause(s) in the EPA, balance debt (as per the Debt-repayment schedule) or actual debt, whichever is less, minus the insurance coverage on the Project, shall be provided by the TANGEDCO to the WPG. The Wind power Project shall be handed over to TANGEDCO.

Notwithstanding the above, the WPG may choose not to take the termination compensation and retain the project assets, with the consent of the lenders.

17.0) Qualification Criteria for Short-Listing of Bids/ Projects :

(i) Technical Criteria:

The detailed technical parameters for Wind Power Projects to be selected are enclosed in **Annexure B**. The bidders shall follow the technical parameters to establish the Wind power Projects.

(ii) Financial Criteria:

Net worth: The net worth of the WPG should be equal to or greater than the value calculated at the rate of Rs.10 Lakhs per MW of the proposed project capacity (enclosed in **Annexure – D.**)

(iii) Connectivity with the Grid:

- i. The Wind Power Project shall be designed for inter-connection with STU/TANGEDCO substation through dedicated transmission line/cable at voltage level of 110 KV and above.
- ii. The feasibility of evacuation infrastructure will be decided after conducting Load Flow Study (LFS). The tentative availability of evacuation infrastructure at TANGEDCO developed 400/230-110KV SS is enclosed in Annexure H.
- iii. The entire cost of Transmission from the project up to the STU/TANGEDCO substation including cost of construction of line, losses etc. shall be borne by the WPG and it will not be reimbursed by the TANGEDCO or met by the STU/TANGEDCO.
- iv. The responsibility of getting Transmission Connectivity and access to the transmission system owned by the STU/TANGEDCO will lie with the WPG and shall be at the cost of WPG.

- v. The WPG shall not be entitled to any deemed generation in case of any delay in connectivity to the Project whatsoever the reason may be.
- vi. STU/TANGEDCO shall endeavour to match the commissioning of the transmission system with the commissioning of the Wind projects.
- vii. If two bidders bid for the same location, first preference will be given to L1. If the subsequent selected bidders (L2, L3 etc.) opt for the same location of L1, suggestion will be given by TANGEDCO to change the location. If they opt for same location of L1 again, the improvement works if any arises, shall be carried out by the STU/TANGEDCO at the cost of WEG and if there is any delay in such improvement works, causing delay in commissioning the project, STU/TANGEDCO shall not be held responsible.
- viii. The delivery point of power shall be at TANGEDCO/TANTRANSCO SS.
- ix. The Metering Point, which is the point at which energy supplied to the TANGEDCO shall be measured, shall be the low voltage bus bar of the TANGEDCO substation at which the wind power is injected in the transmission system of TANGEDCO. A Bulk meter with ABT compatibility with remote metering facility shall be provided by the Generator. The transmission of power up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the wind power generator at his own cost. All expenses including transmission charges (if any) and losses in relation to the transmission beyond the Metering Point shall be borne by the Procurer(s).

- x. The WPGs shall comply CERC/SERC regulations on Forecasting, Scheduling and Deviation Settlement, as applicable and are responsible for all liabilities related to LTA and Connectivity.
- xi. The transmission connectivity to the WPG may be provided by the TANGEDCO, as the case may be, prior to commissioning of the project on the request of the project developer, to facilitate testing and allow flow of infirm power generated into the grid to avoid wastage of Power.

18.0) Bidding Process :

The bidding will be conducted through Electronic mode (e-bidding), considering the tariff rate of Rs.3.46 per unit as upper limit. The bidders who have quoted highest discount shall be considered for the award. The TANGEDCO reserves the right to reject all price bids if the rates quoted are not aligned to the upper limit tariff rate of Rs.3.46 per unit. The bidder shall submit their RFS document through e-bidding service provider, M/s. MSTC Limited (A Government of India Enterprises) @ www.mstcecommerce.com/eprochome. The TANGEDCO reserves the rights to negotiate the other eligible bidders to match the quoted highest discount rate.

19.0) Payment Security:

The due date for payment of energy bill will be 60 days from the date of receipt (excluding the date of receipt) of bill in complete from the generator. TANGEDCO shall provide unconditional revolving and irrevocable LC which shall be drawn upon the WPG.

TANGEDCO shall provide LC from public sector/scheduled commercial bank. The payment shall be made on 60th day from the date of receipt of passed bill (Invoice) at LC opener's bank. If the 60th day (due date) happens to be a holiday for TANGEDCO and/or Banks, then payment will be made on the next working day. All expenses relating to

LC viz. Opening charges, Maintenance Charges, Negotiation Charges and renewal charges are to the account of WPG. The revolving LC shall have a term of 12 months and validity of the LC shall be renewed year after year and remains valid upto expiry of the agreement and the amount shall also be renewed for an amount equal to 105% of the average of monthly billing of proceeding 12 months.

20.0) Sharing of CDM Benefits :

The CDM benefit shall be shared between WPG and TANGEDCO in the following manner, namely

- a) 100% of the gross proceeds on account of CDM benefit to be retained by the WPG in the first year after the date of commercial operation of the generating station;
- b) In the second year, the share of the TANGEDCO 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 WPG and the TANGEDCO.

The above shall be in consonance with the CERC (Terms and Conditions for Tariff determination from Renewable energy Sources) Regulation, 2012, as amended from time to time.

21.0) Time Table for Bid Process :

The timetable for the bidding process is indicated in **Annexure-A**.

22.0) Role of STU/TANGEDCO:

The STU/TANGEDCO will provide transmission system to facilitate evacuation of power from the projects which may include the following:

- a. Provide connectivity to the Wind projects with the grid.
- b. Support during commissioning of projects.
- c. STU/TANGEDCO will execute bay extension work and any other improvement works under Deposit Contribution Works (DCW) basis on payment of estimated cost by the WPG and to carry out the operation and

maintenance of the bay extension and improvement works on payment of 50% of material cost of bay extension work and improvement work by the WPG.

23.0) Role of Wind Power Developer (WPG):

- a. The WPG has to establish, operate and maintain the Wind power Project.
- b. The erection of power evacuation line connecting the proposed Wind power Project and STU/TANGEDCO substation shall be under the scope of WPG.
- c. The WPG shall pay the cost of bay extension work to be executed by STU/TANGEDCO under Deposit Contribution Works (DCW) basis after finalization of transmission system required for power evacuation.
- d. The WPG's, those who are willing to carry out the bay extension work at TANGEDCO/TANTRANSCO SS on their own will be permitted on payment of establishment and supervision charges at the rate of 22% as per BP.No.534 dated 28.12.2013.

24.0) Minimum Paid up Share Capital to be held by the WPG:

The WPG developing the project shall provide the information about the Promoters and their shareholding in the company to TANGEDCO indicating the controlling shareholding before signing of the EPA with TANGEDCO.

No change in the shareholding in the Company developing the Project shall be permitted from the date of submitting the RFS till the execution of the EPA, except for minor changes on account of transfer of shares within the Group Companies or on account of exercise of share option by the company's employees. However, this condition will not be applicable if a listed company is developing the Project.

After execution of EPA, the controlling shareholding (controlling shareholding shall mean more than 51% of the paid up share capital) in the Company developing the project shall be maintained for a period of 1(one) year after commencement of supply of power. Thereafter, any change can be undertaken under intimation to TANGEDCO. This condition would not apply to the cases where substitution of Promoter / Controlling Shareholder is necessitated by action of and request by Lending Financial Institution / Lender.

25.0) Financial Closure :

The WPG shall report Project Financing Arrangements within 7 months from the date of signing Energy Purchase Agreement.

In case of delay in achieving above condition as may be applicable, TANGEDCO shall encash Performance Bank Guarantees and shall remove the project from the list of the selected projects. An extension for financial closure will be considered on payment of Rs.1 Lakh per MW.

26.0) Commissioning:

(a) Part Commissioning:

Part commissioning shall be accepted for the total 50% bidded capacity. Part commissioning will not be applicable to projects having capacity of 10 MW or less.

(b) Commissioning Schedule and Liquidated Damages for Delay in Commissioning:

The Wind power Project shall be commissioned within 15 months from the date of signing of Energy Purchase Agreement. In case of failure to achieve this milestone, TANGEDCO shall encash the Performance Guarantee in the following manner:

Delay up to Five months:

TANGEDCO will encash the Performance Bank Guarantee on per day basis and proportionate to the Capacity not commissioned,

with 100% encashment for 5 months delay beyond stipulated commissioning period of 15 months.

Delay beyond five months:

In case the commissioning of project is delayed beyond 5 months, the WPG shall, in addition to 100% encashment of Bank Guarantee, shall pay TANGEDCO a sum of Rs.10,000/- per MW per day of delay for the delay in such remaining Capacity which is not Commissioned.

The maximum time period allowed for commissioning of the full Project Capacity with encashment of Performance Bank Guarantee and payment of Liquidated Damages shall be 10 months from the scheduled date of commissioning. The amount of Liquidated Damages worked out as above shall be recovered by TANGEDCO from the payments due of the Project Developer on account of Sale of Wind Power to TANGEDCO. In case, the Commissioning of the Project is delayed beyond 10 months from the scheduled date of commissioning, the EPA capacity shall stand reduced / amended to the Project Capacity Commissioned and the EPA for the balance Capacity will stand terminated and shall be reduced from the selected Project Capacity. Also, if the project is not commissioned beyond 10 months from the scheduled date of commissioning, the EPA will be terminated.

27.0) Commercial Operation Date (COD):

The COD shall be considered from the actual date of commissioning of the first part capacity. The tenure of PPA shall commence from Commercial Operation Date of the first part commissioning of the project.

28.0) Transmission Feasibility :

The WPG has to pay open access application fee to TANGEDCO as per the Hon'ble TNERC's Intra State Open Access Regulations 2014. The WPG has to establish power evacuation facility based on the load flow study results i.e. the WPG has to erect the power evacuation line from their proposed Wind power Project to the STU/TANGEDCO substation at their cost as per section 10(1) of the Electricity Act, 2003. Also if new substation is required for power evacuation, the developer has to establish the substation and erect the transmission line upto TANTRANSCO grid substation which will be identified in load flow study as per section 10(1) of the Electricity Act, 2003.

29.0) Arbitration :

Where any dispute arises claiming any change in or regarding determination of the tariff or any tariff related matters, or which partly or wholly could result in change in tariff, such dispute shall be adjudicated only by the TNERC.

30.0) General Conditions:

- a) Mere submission of any tender offer connected with these documents and specification shall not constitute any agreement. The tenderer shall have no cause of action or claim, against TANGEDCO for rejection of his offer. TANGEDCO shall always be at liberty to reject or accept any offers at its sole discretion and any such action will not be called into question and the Tenderer shall have no claim in that regard against TANGEDCO.
- b) TANGEDCO reserves the right to reject or accept the proposal of any tenderer, if in the opinion of the TANGEDCO, the qualification data is incomplete or in the opinion of the Board the bidder is found not qualified.

- c) All the intending tenderers are requested to note that in the event of the documents furnished with the offer being found to be bogus or the documents contain false particulars, the EMD paid by such tenderers will be forfeited in addition to blacklisting them for future tenders/contracts in TNEB and also cancelling the award of contracts issued to them.
- d) The tenderers are requested to furnish copy of PAN No./TIN nos. in the offer.

ANNEXURE A

Sl. No.	Event	Elapsed Time from Zero date
1.	Date of issue of RFS and draft PPA	Zero date
2.	Pre bid queries, uploaded from	10 days from zero date
3.	Pre bid meeting	15 days from zero date
4.	Reply to pre bid queries, uploaded from	22 days from zero date
5.	RFP Bid submission	30 days from zero date
6.	Evaluation of bids and issue of LOI	120 days from zero date
7.	PPA becomes effective: Signing of Agreements: i) Power purchase agreement and any other agreement as applicable. ii) Signing of share purchase agreement and transfer of SPV, if applicable.	150 days from zero date

ANNEXURE - B

Technical Requirements for Grid Connected Wind Power Projects. The following are some of the technical measures required to ensure quality of equipment used in grid connected Wind Power Projects:

1. In order to ensure quality of wind turbines installed, only type certified wind turbine models listed in Revised List of Models and Manufactures (RLMM) brought out by MNRE, GoI from time to time, will be allowed for deployment in the country. The wind projects will be developed as per Guidelines issued by MNRE on Development of Onshore Wind Power Projects.
2. Wind forecasting as per the Indian Electricity Grid Code (IEGC) 2010 is to be carried out by you and State Load Despatch Center (SLDC) has to be informed as per code in force.
3. As per the Indian Electricity Grid Code (IEGC) effective from 01.01.2012, the wind generators shall be responsible for forecasting their generation.
4. As per CEA (Technical Standard for connectivity to the grid) Amendment Regulation 2013 dt.15.10.2013, the LVRT arrangement to be provided in your WEG and enabled before commissioning of the WEG.

ANNEXURE C

Price Bid

Specification CE/NCES/OTNo..... /2017-2018

Location of Proposed Wind power Project and name of the nearby SS which is to be connected	Capacity proposal in MW	Discount offered from the benchmark tariff of Rs.3.46 per unit (all inclusive) in Rs. Paise
		*

Company Seal

Signature

Designation

Date

*** Only discount offered in Rs. (Upto 2 decimals) from the upper limit of Rs.3.46 per unit shall be quoted. Bidders should not quote the unit rate directly.**

ANNEXURE D

Financial Criteria :

Net worth

The net worth of the bidder should be equal to or greater than the value calculated at the rate of Rs.10 Lakhs per MW of the proposed project capacity. The computation of net worth shall be based on unconsolidated audited annual accounts of the company. For the purpose of the computation of net worth, the bidder shall satisfy net worth of Rs.10 Lakhs per MW in any one of the last 3 years. The company would thus be required, to submit annual audited accounts for the last 3 financial years, which should be considered for evaluation, along with a certificate from the Chartered Accountant to demonstrate the fulfillment of the criteria.

For companies which are newly incorporated, the Net Worth criteria should be met seven days prior to the date of submission of bid by the Project Developer. To demonstrate fulfillment of the criteria, the Project Developer shall submit a certificate from a Chartered Accountant certifying the Net Worth on the date seven days prior to submission of bid further, the Project Developer shall submit the un-audited financial statements of the company for the date on which the Certificate of Chartered Account has been obtained.

Net Worth :

= Paid up share capital

Add: Reserves

Subtract : Revaluation Reserves

Subtract: Intangible Assets

Subtract: Miscellaneous Expenditures to the extent not written off and carry forward losses.

For the purposes of meeting financial requirements only unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Project Developer may be used for the purpose of financial requirements provided the Project Developer has at least twenty six percent (26%) equity in each company whose accounts are merged in the audited consolidated account and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Bid.

If the bid is submitted by a consortium the financial requirement to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each of them in the Project Company. Any consortium, if selected, shall, for the purpose of supply of power to TANGEDCO, incorporate a Project Company with equity participation by the Members before signing the EPA with TANGEDCO. The Project Developer may seek qualification on the basis of financial capability of its Parent Company and / or its Affiliate(s) for the purpose of meeting the Qualification Requirements. In case of the Project Developer being a Bidding Consortium, any Member may seek qualification on the basis of financial capability of its parent company and / or its Affiliate(s).

ANNEXURE E
BANK GUARANTEE IN LIEU OF EARNEST MONEY DEPOSIT (EMD) AND
PERFORMANCE BANK GUARANTEE (PBG) PAYABLE BY THE WIND POWER
GENERATOR (WPG)

Bank Guarantee No..... Date.....

NON-Judicial – Rs.80/- Stamp Paper

THIS DEED OF GUARANTEE made on this.....day ofTwo thousand and Sixteen by the Bank ofof(Bank Name and Address) (Hereinafter called "Bank") to and in favour of the TANGEDCO a body corporate constituted under the Indian Companies Act 1956 having its Registered office at NPKRR Maligai, 144, Anna Salai, Chennai-2 represented by the Chief Engineer/NCES (hereinafter called "TANGEDCO").

WHETHERAS Messrs
..... (herein called WPG, "The Wind Power Generator")
has proposed to establish MW Wind power Project at ...village,taluk,district under bidding route to supply Wind power to TANGEDCO for a period of 25 years in accordance with the terms and conditions of RFS document.

WHEREAS in accordance with the terms and conditions of RFS document the WPGhas to pay a sum of Rs...../- (RupeesOnly) towards EMD/PBG in the form of BG from a Nationalized Bank / Scheduled Bank.

AND WHEREAS the WPG has requested the TANGEDCO to accept bank guarantee in lieu of EMD/PBG for a sum of Rs.25,000/- per Mega Watt/Rs.10 Lakhs per Mega Watt for the satisfactory performance of the agreement.

AND WHEREAS the Bank has, at the request of the Wind Power Generator, agreed to guarantee the payment of the said sum in case the agreement is not performed in accordance with the specifications indicated in the terms and conditions contained in RFS document.

NOW THIS DEED WITNESSES AS FOLLOWS:

1. In consideration of the TANGEDCO having agreed to accept the Bank Guarantee from a Nationalized Bank / Scheduled Bank towards EMD/PBG for a sum equivalent to Rs..... (Rupees only), the Bank to hereby guarantee that if the Wind Power Generator fails to perform the agreement in accordance with the specification and conditions of the RFS document, the Bank shall pay forthwith merely on demand without any demur to the TANGEDCO such amount or amounts, as the Bank may be called upon to pay by the TANGEDCO.

PROVIDED that the liability of the Bank under this deed shall not at any time exceed the said guaranteed amount of Rs...../- (Rupees only).

PROVIDED further that the guarantee hereunder furnished shall be released as soon as the Wind Power Generator has performed his part of the agreement in accordance with the terms of the RFS document a certificate to that effect is issued by the TANGEDCO.

2. The Bank further undertakes to indemnify the TANGEDCO against any loss or damage that may be caused or suffered by the TANGEDCO by reason of any breach of the terms and conditions in the said RFS document.
3. The guarantee herein contained shall remain in force till the terms and conditions of the RFS document have been fully and properly carried out by the said WPG and in any case, the guarantee shall not hold good after
4. The Bank further agrees with the TANGEDCO shall have the fullest liberty (without the consent of the Bank and without affecting in any manner the obligations of the Bank hereunder) to vary any of the terms and conditions stipulated in the RFS document or to extend the time of performance by the said WPG from time to time or to postpone from time to time any of the powers exercisable by the TANGEDCO against the said WPG and to forbear to enforce any of the terms and conditions relating the said RFS document and the Bank shall not be relieved of its liability by the reason of any such variations, or extension being granted to the reason to the said Wind Power Generator or by

reasons of any forbearance, act or omission on the part of the TANGEDCO or any indulgence by the TANGEDCO to the said WPGor by any such matter or thing whatsoever which under the law relating the sureties would but for these provisions have the effect of so relieving the Bank.

- 5. Any account settled between the TANGEDCO and the WPGshall be the conclusive evidence against the Bank for the amount due and shall not be questioned by the Bank.
- 6. The expression 'Bank' TANGEDCO and "Wind Power Generator" hereinbefore used shall include their respective successors and assigns.

NOTWITHSTANDING anything contained herein above

- 1. Our liability under this Bank Guarantee shall not exceed Rs...../- (Rupees Only).
- 2. This Bank Guarantee shall be valid upto (Date of Expiry), and
- 3. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if you serve upon us a written claim or demand on or before (Date of Expiry), the expiry of this Guarantee.

IN WITNESS WHERE OF THIRU acting for and behalf of the Bank has signed this Deed on the day, month and year first above written.

Signature

With the seal of the Bank
(Name in Block letters)

In the presence of witnesses

- 1.
(Name in Capital with address)

- 2.
Name in capitals to be subscribed with designation,
Office address or Residential address).

ANNEXURE - F

ENERGY PURCHASE AGREEMENT FOR WIND POWER GENERATOR

COVERED UNDER TENDER SPECIFICATION IN CE/NCES/OT

NO.../2017-18

This agreement made at Chennai on this _____ day of _____ Two thousand _____ and _____ between **M/s.**

_____ hereinafter called the Wind Power Generator or WPG (which expression shall wherever the context so permits means and include its successors in interest, executors, administrators and permitted assigns) represented by Thiru..... and the Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), a Corporation incorporated under the Companies Act, 1956 and wholly owned by the Government of Tamil Nadu, having its registered office at No.144, Anna Salai, Chennai-600 002, hereinafter called the Distribution Licensee (which expression shall wherever the context so permits means and include its successors in interest, and permitted assigns) represented by Thiru....., Superintending Engineer/ Solar/NCES/TANGEDCO.

Whereas the distribution licensee, pursuant to the approval of the Hon'ble TNERC in M.P. No..... of 2016, dt:..... has invited bids to establish, maintain and operate wind power plant of 25 MW with atleast 5MW project at one site for a single bidder or company or group of companies in the State of Tamil Nadu at the rate to be finalized through reverse bidding, considering the fixed tariff of Rs.3.46 per unit as upper limit, vide Tender specification in CE/NCES/OT No.../ 2017-18.

Whereas the WPG has submitted its bid to sell wind power generated from its wind power plant(s) as detailed below, having a total capacity of MW.

Sl. No.	SF .No. and Address	Capacity	Plant No.

Whereas the distribution licensee has selected the WPG has a successful bidder, agreed to purchase the wind power at a rate finalized through reverse bidding process and issued Letter of Intent vide LOI.ref No.....dt:....., Note for Record letter reference Lr.No..... on the terms and conditions stipulated in Tender specification in CE/NCES/OT No...../2017-18 and also hereinunder agreed to.

NOW THESE PRESENTS WITNESS AND THE PARTIES HEREBY AGREE AS FOLLOWS:

1. Definitions

In this agreement-

- (a) "Billing Period" means the time period between the date of meter reading in a particular month and the corresponding reading in the immediately succeeding month and month shall mean a month reckoned in the British Calendar.
- (b) "Commission" means the Tamil Nadu Electricity Regulatory Commission;
- (c) "Date of Commercial operation" or "COD" means COD as defined in the regulation 2(m) of the TNERC (Terms and Conditions for the Determination of Tariff) Regulations 2005.
- (d) "Dispute" means any dispute or difference of any kind between the WPG and the Distribution licensee in connection with or arising out of this Agreement including but not limited to any issue on the interpretation and scope of the terms of this Agreement.
- (e) "Effective Date" means the date of execution of agreement between the distribution licensee and the Wind power developer and the date on which the agreement shall come into effect.
- (f) "Expiry Date" means the date occurring after 25 years from the COD.
- (g) "Force Majeure" or "Force Majeure Event" shall have the meaning prescribed thereto in Article 12 of this agreement.
- (h) "Installed Capacity" or " IC " means the AC output in MW of all the units of the Wind power generators or the total capacity of the Wind generating station (reckoned at the generator terminals) as declared by the generator and agreed by the distribution licensee.
- (i) "Interface line" means the interface line as defined in the regulation 2(f2) of the power procurement from new and renewable sources of energy regulations 2008, issued by the Commission.

- (j) "Inter connection point" means the interface point as defined in the regulation 2(f1a) of the power procurement from new and renewable sources of energy regulations 2008, issued by the Commission.
- (k) "STU" means the state transmission utility.

2. Interfacing and Evacuation Facilities:

- (a) Evacuation facilities from the point of generation to the interconnection point including the required metering, protection arrangement, and related other equipments and the entire interface line shall be provided by the WPG at their/his cost as per the Commission's Intra State Open access Regulations, the Central Electricity Authority (Technical Standards for connectivity to the Grid) Regulations and the Tamil Nadu Electricity Grid Code, in force and as amended from time to time.
- (b) The Wind Power Generator (WPG) and the Distribution Licensee/STU shall comply with the provisions contained in Commission's Intra State Open Access Regulations 2014 and Central Electricity Authority (CEA) (Technical Standards for connectivity to the Grid) Regulations, 2007 for grid connectivity which includes the following namely;
 - (i) Connection Agreement
 - (ii) Site Responsibility Schedule;
 - (iii) Access at Connection Site;
 - (iv) Site Common Drawings;
 - (v) Safety;
 - (vi) Protection System and Co-ordination;
 - (vii) Inspection, Test, Calibration and Maintenance prior to Connection.
- (c) The WPG shall comply with the safety measures contained in Central Electricity Authority Regulations 2010 and as amended from time to time.
- (d) Both parties shall comply with the relevant provisions contained in the Indian Electricity Grid Code, Tamil Nadu Electricity Grid Code, the Electricity Act, 2003, other Codes and Regulations issued by the Tamil Nadu Electricity Regulatory Commission/ Central Electricity Authority (CEA) as amended from time to time;

3. Operation and Maintenance:

- (a) The Wind power generated shall be evacuated to the maximum extent subject to Grid safety and shall not be subjected to merit order dispatch principles.
- (b) The WPG should provide adequate filtering mechanism to limit the harmonics within the stipulated norms as specified by the

Commission and by the Central Electricity Authority from time to time. If the WPG injects the harmonics beyond such stipulated limit, a compensation of 5% of the applicable generation tariff rate shall be deductible by the Distribution Licensee from every monthly bill in whose area the plant is located till such time it is reduced within the stipulated limit.

- (c) The WPG should minimize drawal of reactive power from the Distribution Licensee/STU's grid at an interchange point when the voltage at that point is below 97% of rated voltage and shall not inject reactive power when the voltage is above 103% of rated voltage subject to payment of required charges as per the Intra State Open Access Regulations and the order on open access charges in force.
- (d) The WPG shall provide suitable automatic safety devices so that the Generator shall automatically be isolated when the grid supply fails.
- (e) The WPG shall maintain the Generator and the equipments including the transformer, interface switch gear of Distribution/Transmission line and protection equipments and other allied equipments at their/his cost to the satisfaction of the authorized officer of the Distribution Licensee / STU.
- (f) The changing of the rupturing capacity of the interface switch gear of transmission line/distribution line and settings of the relays, if any, shall be subject to the approval of the Authorized Officer of the Distribution Licensee / STU.
- (g) The interfacing lines shall be maintained by the WPG at their/his cost.
- (h) There shall be no fluctuations or disturbances to the grid or other consumers supplied by the grid due to paralleling of the Wind Power Generators. The WPG shall provide at their/his cost adequate protection as required by the Distribution Licensee/STU to facilitate safe parallel operation of the Generators with grid and to prevent disturbances to the grid.
- (i) The WPG agrees that the Distribution Licensee/STU shall not be responsible for any damage to their/his Generating units resulting from parallel operation with the grid and that the Distribution Licensee/STU shall not be liable to pay any compensation whatsoever for any such damage.
- (j) The generating unit(s) shall be maintained effectively and operated by competent and qualified personnel.
- (k) In case of unsymmetrical fault on High Voltage Bus, the WPG shall share the fault current according to impedance of the circuit. To meet such contingency and for safe operation of the Generating units of the WPG, the WPG shall provide the following schemes of protection namely;

- (i) Separate overload relays on each phase and earth fault relays shall be installed by the WPG. Under no circumstances these relays shall be by-passed.
- (ii) With suitable current transformer and relay connections, the load sharing by the WPG and Distribution Licensee shall be limited to their rated capacity in the case of connectivity established with the distribution system. In the case of connectivity established with the transmission system, the load sharing by the WPG and STU shall be limited to their rated capacity by using the suitable current transformer and relay connections.
- (iii) Adequate indication and control metering for proper paralleling of the generators on the High Voltage bus shall be made available by the WPG.
- (iv) Protection co-ordination shall be done by the Distribution Licensee / STU in consultation with Regional Power committee and relays and the protection system shall be maintained by WPG as per site responsibility schedule.
- (l) Grid availability shall be subject to the restriction and control as per the orders of the State Load Dispatch Centre (SLDC) consistent with the provisions of the Electricity Act and regulations made thereon.
- (M) The Wind Energy Generator agrees that the starting current of the Generators shall not exceed the full load current of the machine and to provide the necessary current limiting devices like thyristor during starting.

4. Metering Arrangements:

- (a) The metering arrangements with facilities to record export and import of energy shall be provided in accordance with the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, Commission's Grid Connectivity and Intra State Open Access Regulations 2014, Tamil Nadu Electricity Distribution Code, 2004 and the Tamil Nadu Grid Code and in consultation with Distribution Licensee / STU. The periodicity of testing, checking, calibration, etc., shall be governed by the Regulations issued by the Central Electricity Authority / Commission's in this regard. Meter shall be installed and connected at the point of interconnection between electrical system of the generating company and Transmission/Distribution system at the cost of WPG.
- (b) Main and Check Meters shall have facility to communicate its reading to State Load Dispatch Centre on real time basis or otherwise as may be specified by the Commission. Meter reading shall be taken as per the procedure devised by the Distribution Licensee / STU.

- (c) The term 'Meter' shall mean a 'Meter' with 0.2S class accuracy ABT-DLMS Compatibility duly tested at NABL accredited Lab and digital communication facilities to be connected to the SLDC/Control centre.
- (d) The State Transmission Utility / Distribution Licensee may provide Check Meters of the same specification as Main Meters;
- (e) The WPG can have a standby meter of the same specification tested and sealed by the Distribution Licensee/STU at the cost of WPG.
- (f) The Main and Check Meters shall be test checked for accuracy as per the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006. The meters shall be tested using NABL accredited mobile laboratory or at any NABL accredited laboratory in the presence of parties involved or their authorized representatives at the cost of WPG. Both parties shall seal Main and Check meters. Defective meter shall be replaced immediately.
- (g) Reading of Main and Check meters shall be taken periodically at appointed day and hour by authorized officer of Distribution Licensee / STU and in the presence of generator or his/their authorized representative.
- (h) Check meter readings shall be considered when Main Meter is found to be defective or stopped functioning, provided that, if difference between the readings of main and check meter vis-à-vis main meter reading exceeds twice the percentage of error applicable to relevant class, both meters shall be tested and the one found defective shall be immediately replaced and reading of other will be considered. Both the meters shall be tested at the cost of WPG.
- (i) If during the periodical test or calibration, both the main meter and the check meter are found to have errors beyond permissible limits, the bill shall be revised for the previous 3 (Three) months or for the exact period, if known and agreed upon by both the parties, by applying correction as determined by the meter testing wing of the Distribution Licensee/STU to the consumption registered by the meter with lesser error. The periodical testing of meters shall be done as per the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006.
- (j) The WPG shall check the healthiness of meters (due to blowing of the Potential Transformer fuses or due to any other causes) by superficially checking indicator lamps or by taking readings as frequently as possible. If both the main meter and the check meter fail to record energy either due to the blowing of the Potential Transformer fuses or due to any other causes, the energy imported / exported may be arrived at based on the standby meter, if available, or as agreed mutually between the parties.

5. Tariff and Other Charges:

(a) Energy Charges:

The Wind Power Tariff for the Wind Power Generated during the agreement period shall be the rate mutually accepted by both parties at the time of finalizing tender.

(b) Reactive Power Charges:

The reactive power charges shall be as specified in the order on Open Access and as amended from time to time by the Commission.

(c) Start up Power Charges:

The drawal of energy by the WPG from the distribution licensee shall be adjusted against the exported energy for every billing period.

In case, drawal of power is in excess over the exported power in a billing month, such excess drawal shall be billed under applicable Temporary supply tariff, as per Commission's Tariff Order and as amended from time to time.

(d) Harmonics Compensation charges:

If the WEGs inject the Harmonics beyond the stipulated limit, then they should pay compensation @ 15% of applicable generation tariff rate on every month till such time the generator reduces the harmonics within the stipulated limit.

6. Capacity Utilisation Factor (CUF) :

The Capacity Utilisation Factor (CUF) shall be 20% to 27.15%(as specified by the TNERC in Wind Tariff Order No. 3 of 2016-17 Dt 31.3.2016), calculated on yearly basis. In case the availability is more than the maximum CUF specified i.e. 27.15%, the TANGEDCO will purchase the excess generation, at 75% of the PPA tariff. In case the availability is less than the minimum CUF specified i.e. 20%, the WPG shall pay TANGEDCO for the actual shortfall in terms of units at the prevailing forbearance price fixed by the CERC, since the TANGEDCO is an obligated entity to utilize Wind power as per Hon'ble TNERC's RPO Regulation.

7. Repowering:

The WPG will be free to re-power their Projects from time to time during the EPA duration. However, the TANGEDCO will be obliged to buy power only within the CUF specified in the EPA. Any excess generation will be purchased by the TANGEDCO at 75% of the PPA tariff. If there is any shortfall of generation after repowering of Project, the WPG shall pay TANGEDCO the prevailing forbearance price fixed by the CERC for the actual shortfall in units

8. Offtake Constraints due to grid security:

During the operation of the Project, there can be some periods where the Project can generate power but due to temporary transmission unavailability, and grid management the same does not happen. In such cases the generation compensation shall be:

Sl. No.	Duration of Grid unavailability	Provision for generation compensation
a.	Grid unavailability of upto 50 hours in a financial year:	No generation compensation
b.	Grid unavailability beyond 50 hours in a financial year:	The normative CUF of 27.15% or committed CUF, whichever is lower, for the period of grid unavailability beyond 50 hours, shall be taken for the purpose of generation compensation. Corresponding to this generation loss*, the excess generation by the WPG equal to this generation loss shall be procured by TANGEDCO at the PPA tariff so as to offset this loss in the succeeding three contract years.

* ---- $Generation\ loss = [(Average\ Generation\ per\ hour\ during\ the\ contract\ period) \times (number\ of\ hours\ of\ grid\ availability\ during\ the\ contract\ year)].$

Where $average\ Generation\ per\ hour\ during\ the\ contract\ year\ (kWh) = Total\ Generation\ in\ the\ contract\ year(kWh)/Total\ hours\ of\ generation\ in\ the\ contract\ year.$

9. Termination Compensation:

In order to increase the bankability of the Wind EPAs, it is important to keep such EPA's sacrosanct. Accordingly, the TANGEDCO and the WPG are restricted from unilateral termination or amendment of the EPA's.

Notwithstanding above, in case, such a scenario arises, there shall be a termination compensation to be paid in the following manner:

(i) Termination of EPA for reasons solely attributable to the WPG:

The TANGEDCO shall not be liable to pay any termination compensation to the WPG. The Lender(s) may take over the project and manage it themselves, or they may bring in new promoter(s). Save as otherwise provided in the guidelines, the WPG cannot terminate PPA to supply power to a third party or for captive use.

(ii) For all other cases:

Save as otherwise excluded in the Force Majeure clause(s) in the EPA, balance debt (as per the Debt-repayment schedule) or actual debt, whichever is less, minus the insurance coverage on the Project, shall be provided by the TANGEDCO to the WPG. The Wind power Project shall be handed over to TANGEDCO.

Notwithstanding the above, the WPG may choose not to take the termination compensation and retain the project assets, with the consent of the lenders.

10. Billing and Payment:

(a) The WPG shall raise a monthly bill along with the supporting documents every month to the distribution licensee for the net energy sold/exported after deducting the charges payable to the distribution licensee such as for startup /standby power, Grid availability charges, Harmonics compensation charges and reactive

power charges or any other lawful charges recoverable by the licensee.

- (b) The Distribution Licensee shall make payment to the WPG for the Wind energy purchased/exported at the metering point within 60 days from the date following the date of receipt of the bill in complete shape.
- (c) Stand-by (backup) Letter of Credit shall be opened by Distribution Licensee for an estimated value of one month bill, which will be valid for a period up to one year. The Letter of Credit so opened shall be renewed year after year for the value based on average value of previous 12 months bills. The LC will be revolved in the event of invocation due to non- payment of energy charges within the stipulated time frame. All the charges relating to establishment, amendment and operation of Letter of Credit shall be to the account of the beneficiary that is, WPG.
- (d) The Distribution Licensee wherever necessary, shall raise a bill at the end of a billing period of one month for the power drawn by the WPG in excess over the exported power and the WPG shall make payment to the Distribution Licensee at HT temporary supply tariff within the time stipulated to the HT consumers in the Commission's Supply code, 2004.

11. Assignment to lender:

This Agreement shall be binding upon, and inure to the benefit of the parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any party other than by mutual consent between the parties to be evidenced in writing:

Provided that, such consent shall not be withheld if the Distribution Licensee seeks to transfer to any transferee all of its rights and obligations under this agreement.

Provided further that any successor(s) or permitted assign(s) identified after mutual agreement between the parties may be required to execute a new agreement on the same terms and conditions as are included in this Agreement.

12. Applicability of the Electricity Laws:

Both parties shall be bound by the provisions contained in the Electricity Act, 2003, (CA 36 of 2003) and the Regulations, Rules, codes, notifications, orders, etc., made there under, as amended from time to time.

13. Terms of the Agreement:

(a) This agreement shall come into effect from the "Effective Date".

(b) The actual period of sale/purchase of power by the WPG/Distribution licensee under this agreement shall be valid for twenty five (25) years, subject to COD and expiry date.

(c) The parties to the agreement shall have the option to terminate the agreement for violation of any of the clauses of the agreement after serving a notice of three months on the other party.

14. Clean Development Mechanism Benefits:

The CDM benefits accrued shall be shared between the parties on gross basis starting from 100% to the WPG in the first year and thereafter reducing by 10% every year till the sharing becomes equal (50:50) between the WPG and the Distribution Licensee in the sixth year. Thereafter, the sharing of CDM benefits shall remain equal till such time the benefits accrue, provided that sharing shall take place only after actual receipt of benefit by the WPG. The CDM benefits availed by the WPG should be disclosed to the distribution licensee every year before 30th April.

15. Settlement of Disputes:

If any dispute or difference of any kind whatsoever arises between the parties relating to this agreement, it shall, in the first instance, be settled amicably, by the parties, failing which either party may approach the Commission for the adjudication of such disputes under section 86 (1) (f) of the Electricity Act, 2003 in accordance with the Conduct of Business Regulations 2004 and

Fees and Fines Regulations 2004 of the Commission. This agreement shall be governed by the laws of India and the Courts at Chennai alone shall have jurisdiction.

16. Force Majeure:

Both the parties shall ensure compliance of the terms of this agreement. However, no party shall be liable for any claim for any loss or damage whatsoever arising out of failure to carry out the terms of this agreement to the extent that such failure is due to force majeure events as defined here under. Any party claiming the benefit of this clause shall satisfy the other party of the existence of such an event(s) by giving notice to the other party in writing within 15 days from the occurrence of such Force majeure.

“Force Majeure” events means any event which is beyond the control of the parties involved which they could not foresee or with a reasonable amount of diligence could not have been foreseen or which could not be prevented and which substantially affect the performance by either party such as but not limited to:-

- (i) Acts of natural phenomena, including but not limited to floods, droughts, earthquakes, lightning and epidemics;
- (ii) Acts of any Government domestic or foreign, including but not limited to war declared or undeclared, hostilities, priorities, quarantines, embargoes;
- (iii) Riot or Civil Commotion; and
- (iv) Grid / Distribution System’s failure not attributable to parties to this agreement.

In witness whereof _____ acting
for and on behalf of **M/s.** _____, (Name of WPG) and

(Name, designation and officer, concerned of the Distribution Licensee) acting for and on behalf of the Distribution Licensee have hereunto set their hands on the day, month and year hereinabove first mentioned.

In the presence of witnesses

1.

Signature
Wind Power Generator
Common Seal

2.

In the presence of witnesses

1.

Signature
Authorized Officer of the
Distribution Licensee

2.

ANNEXURE G
COVERING LETTER FORMAT

From

Name of the WPG with full postal address.

Email address.....

To

The Chief Engineer/NCES
TANGEDCO,
2ND FLOOR, Eastern wing,
NPKRR Maligai,
144, Anna Salai,
Chennai-600 002.

Sir,

Sub: M/s...(Name of the WPG)- Establishment ofMW Wind power Project atvillage,taluk,district under bidding route – BG for EMD in original, UTR details towards payment of processing fee through RTGS, Networth certificate issued by the Auditor and Declaration – Submission of – Reg.

We, M/s..... has proposed to establishMW Wind power Project atvillage,taluk,district under bidding route in accordance with the specifications indicated in the RFS document.

We, herewith enclosed copy of signed RFS document along with original required EMD in the form of BG, Networth certificate issued by the Auditor and UTR details towards payment of processing fee through RTGS.

We declare that the validity of this offer is days from the date of opening of bid document and we have not taken any deviation of terms and conditions stipulated in the RFS document.

We, further declare that TANGEDCO have not blacklisted our organization in any case.

Encl: BG,Networth certificate

& UTR details in original

Signature with Company name and seal