

BEFORE THE HON'BLE KERALA STATE ELECTRICITY REGULATORY COMMISSION

O.P. No :

In the Matter of : Petition for adoption of tariff for the procurement of 200 MW Solar power from ground mounted solar power plants, discovered through tariff based competitive bidding on All India basis.

Petitioner : Kerala State Electricity Board Limited
Vydhuthi Bhavanam, Pattom
Thiruvananthapuram

Respondents : 1. M/s. NTPC Ltd
Engineering Office Complex Annexe,
Plot no: A-8A, Sector-24, Noida,
Dist. Gautam Budh Nagar, PIN-201 301
(Email: rajpalsingh01@ntpc.co.in)
2. M/s. The TATA Power Company Ltd,
34 Sant Tukaram Road, Carnac Bunder,
Mumbai – 400 009
(Email: Gourav.soni@tatapower.com)


AFFIDAVIT VERIFYING THE APPLICATION

I, **B.Pradeep**, son of **P.Balachandran** aged **55** years, residing at **Vipanchika, Anayara.P.O, Thiruvananthapuram** do solemnly affirm and state as follows:

I am the Deputy Chief Engineer (Commercial & Planning) with full powers of Chief Engineer of Kerala State Electricity Board Limited, Vidyuthi Bhavanam, Pattom, Thiruvananthapuram, the representative of the petitioner in the above matter and I am duly authorized by KSEB Ltd. to make this affidavit on its behalf. I solemnly affirm at Thiruvananthapuram on this the 25th **November 2020** that

- (i) Contents of the above petition are true to my information, knowledge and belief. I believe that no part of it is false and no material has been concealed there from.
- (ii) That the statements made in paragraphs of the accompanying application now shown to me are true to my knowledge and are derived from the official records made available to me and are based on information and advice received which I believe to be true and correct.


Deponent


Deputy Chief Engineer (Commercial & Planning)
With full powers of the Chief Engineer
Kerala State Electricity Board Limited,
Vidyuthi Bhavanam, Pattom,
Thiruvananthapuram – 695 004

VERIFICATION

I, the above named deponent, solemnly affirm at Thiruvananthapuram on this the 25th **November 2020** that the contents of the petition are true to my information, knowledge and belief, that no part of it is false and that no material has been concealed there from.

Deponent


Deputy Chief Engineer (Commercial & Planning)
With full powers of the Chief Engineer
Kerala State Electricity Board Limited,
Vidyuthi Bhavanam, Pattom,
Thiruvananthapuram – 695 004

Solemnly affirmed and signed before me

Advocate and Notary 25.11.2020

2

T.N. OMANA
Advocate & Notary
Thiruvananthapuram Revenue District,
Kerala State South India



BEFORE THE HONOURABLE KERALA STATE ELECTRICITY REGULATORY COMMISSION

In the matter of : Adoption of tariff for the procurement of 200 MW Solar power through tariff based competitive bidding on All India basis.

Petitioner : The Kerala State Electricity Board Limited,
Vyduthi Bhavanam, Pattom,
Thiruvananthapuram

Respondents : 1. M/S. NTPC LTD
Engineering Office Complex Annexe,
Plot no: A-8A, Sector-24, Noida,
Dist. Gautam Budh Nagar, PIN-201 301
(Email: rajpalsingh01@ntpc.co.in)

2. M/S. The TATA Power Company Ltd
34 Sant Tukaram Road, Carnac Bunder,
Mumbai – 400 009
(Email: Gourav.soni@tatapower.com)

The petitioner humbly submits as follows:

1. This Hon'ble Commission vide order dated 19.11.2018, upon a petition (O.P.No. 56/2018), filed by KSEBL, had granted approval to KSEB Ltd for inviting bids on reverse e-bidding process for procuring 200MW solar power from solar PV plants to be established within the State of Kerala. Deviations, from the 'Guidelines for Tariff Based Competitive Bidding Process for Procurement from Grid Connected Solar PV Projects' notified by the MoP, GoI, vide Resolution No. 23/27/2017- R&R dated 3rd August 2017 and its subsequent amendment dated 14th June 2018, incorporated by KSEBL were also approved by this Hon'ble Commission.
2. KSEBL floated tender through tariff based competitive bidding in DEEP portal of MSTC Ltd on 14.12.2018. During the pre-bid meeting most of the prospective bidders requested modification in the clause relating to maximum CUF, interconnection point and regarding changing the location of plant indicated in the bid. Accordingly, KSEBL approached this Hon'ble Commission requesting approval for these changes vide petition dated 31.01.2019 (O.P.No. 32/2019) and favourable orders were issued by this Hon'ble Commission on 27.02.2019. Accordingly KSEB Ltd re-tendered the works through DEEP portal of MSTC on

2nd March 2019, by compressing the time gap allowed for the various events in the bid process.

3. Benchmark price proposed for procurement was Rs. 3.50 per kWh. Participation for supply of 10 MW only was received that too from a lone bidder – M/s CIAL Infrastructures Ltd. It is submitted that this 200 MW solar bid is a part of the 'Soura project' envisaged by the State Government to ensure 1000 MW solar power by the year 2021. In view of poor response of the SPGs in the State mostly due to issues related with land availability, KSEBL has abandoned further attempts of bidding as mandated in the MoP guidelines and decided to cancel tender dated 02.03.2019.

In order to achieve the solar RPO obligation of the utility and to ensure better participation and thereby to discover competitive rates, KSEBL decided to float a revised tender for the procurement of 200 MW solar power from Ground Mounted Power Plants situated anywhere in India with preference to plants to be set up within the State of Kerala. Accordingly, the bid documents were modified to suite the new proposal and a petition was filed before this Hon'ble Commission for approval on 14.10.2019.

4. Further, Hon'ble Commission vide letter dated 24.12.2019 directed to resubmit the petition for approval of the bidding documents RFS and PPA duly incorporating the amendments made by MNRE, GOI vide the resolution dated 22nd October 2019.
5. KSEB Ltd filed an additional submission on 06.03.2020 in the matter of 'granting approval for the modification in the Standard bid documents for the procurement of 200 MW from solar PV plants through competitive bidding route on all India basis' based on amendments to 'Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects' vide resolution No. 283/57/2018- Grid Solar dated 22.10.2019 of Ministry of New & Renewable Energy, Government of India. Hon'ble Commission admitted the submission as OP 09/2020.
6. Hon'ble Commission vide letter dated 04.06.2020 forwarded certain observations and comments on the bidding documents and instructed KSEBL to submit the revised bidding documents after incorporating the same for approval. In the meantime, Hon'ble Commission conducted a hearing on 09.06.2020. Accordingly and as directed by the Hon'ble Commission during the hearing, KSEB Ltd vide letter dated 22.06.2020 submitted its remarks on observations of Hon'ble Commission. Hon'ble Commission vide letter dated 03.07.2020 directed to modify the bidding documents and submit the same for approval.

Having considered the observations and decisions of the Hon'ble Commission, Board submitted the revised bidding documents on 23.07.2020.

7. This Hon'ble Commission vide order dated 25.08.2020 on Petition No. OP 09/2020 granted approval to KSEB Ltd for inviting bids on reverse e-bidding for procuring 200 MW solar power from solar PV plants through competitive bidding route on all India basis, with preference of 10% of requisitioned quantum to the plants to be set up within the State of Kerala. Hon'ble Commission also directed to submit the tender documents to the Hon'ble Commission within 30 days of publishing of tender. Also, it was ordered to submit a petition complete in all respects for the adoption of tariff, immediately after completion of bid process.
8. KSEB Ltd invited tenders on 18.09.2020. The bid was floated through 'National e-bidding portal for long term solar power procurement under DEEP portal of MSTC with last date of submission of bids on 09.10.2020. Meanwhile, a corrigendum notification (No.1) was issued and uploaded in the portal on 23.09.2020 for facilitating a pre-bidding meeting under Zoom platform on 29.09.2020. Another corrigendum notification (No.2) was also issued and uploaded in the portal on 06.10.2020 for the modified clause of RFS and PPA, to address the queries raised in the pre-bidding meeting regarding mismatch between certain clauses of RFS and PPA. As ordered by this Hon'ble Commission, entire tender documents along with corrigendum have already been submitted on 29.10.2020.
9. The last date of submission bids was 16.10.2020 and the non-financial bids were opened on 20.10.2020 as per bid stipulations. Two bidders M/s NTPC Ltd and M/s Tata Power Ltd have submitted bids. As per RFS, to ensure competitiveness, the minimum number of qualified Bidders should be two. M/s NTPC Ltd offered 90 MW from their proposed solar project at ANTA, Rajasthan. M/s Tata Power Ltd offered 200 MW from their proposed solar project at Bikaner, Rajasthan. The minimum and maximum Capacity Utilisation Factor (CUF) proposed by M/s NTPC Ltd is 24.47 % and 27.47% and whereas the minimum and maximum Capacity Utilisation Factor (CUF) proposed by M/s Tata Power Ltd for the project is 25.11% and 28.11%.
10. The technical and financial evaluation of the non-financial bids was done on 04.11.2020 as per technical and financial qualification criteria detailed in the bid documents, by the evaluation committee constituted for the purpose. On scrutiny, the committee has observed that the key documents required for technical and financial evaluation of non-financial bids have been submitted by both the bidders. The committee after vetting the bidding documents recommended that the financial bid of both bidders can be opened as per

schedule ie 11:00 hrs on 12.11.2020 and e-reverse auction at 13:00 hrs on 12.11.2020.

11. Accordingly the financial bids of the qualified bidders M/s NTPC Ltd. and M/s Tata Power Ltd. were opened in the DEEP e-bidding portal for procurement of long term Solar power at 11:00 hrs on 12.11.2020 and e-reverse auction was successfully conducted from 13:00 hrs to 15.00 hrs on 12.11.2020. As per the RFS, the bidders will be selected based on e-reverse bidding followed by e-reverse auction and L-1 price matching. After e-reverse auction, the discovered price is as detailed below: The details such as bid history, bid sheet and price comparative sheet of the bidding process are submitted as **Annexure.I**

Sl. No.	Name of Bidder	Bid Price (IPO) (Rs)	Bid Quantity (MW)	Bid Price (RA) (in Rs.)	Bid Quantity (RA) (in MW)
1	NTPC Limited	2.993	90	2.97	90
2	The TATA Power Company Limited	2.999	200	2.98	200

12. The final allotted quantum and price to M/s NTPC Ltd and M/s Tata Power Ltd after L-1 price matching in the DEEP e-bidding portal is as detailed below.


FINAL ALLOCATION			
Sl. No.	Name of Bidder	Allotted Price (in Rs.)	Allotted Quantity (in MW)
1	NTPC Limited	2.97	90
2	The TATA Power Company Limited	2.97	110

13. As per Clause 10.4 of the Amended Guidelines of MNRE 22.10.2019 and as ordered by this Hon'ble Commission, the distribution licensee shall approach the Appropriate Commission for adoption of tariff by the Appropriate Commission in terms of Section 63 of the Act.
14. It is submitted that there was no participation from any Kerala bidder. It is humbly requested that the tariff discovered in the DEEP portal of MSTC ie @Rs. 2.97 per unit for the procurement of 90 MW of solar power from M/s NTPC Limited and 110 MW of solar power from M/s TATA Power Company Limited through competitive bidding process may kindly be adopted by this Hon'ble Commission.

15. It is submitted that KSEBL is short of Solar RPO as stipulated by this Hon'ble Commission. In order to achieve the target KSEBL has been planning to implement various floating solar projects in its reservoirs of Idukki HE Project and various other HE Projects. This has been submitted in the Mid Term Review for the control period 2018-22 filed before this Hon'ble Commission on 26.03.2020. In this regard Hon'ble Commission may kindly note that the Forest Department as per letter of the Principal CCF dated 02.11.2020 has intimated that for various environmental as well as forest related issues it would be appropriate to avoid setting up of floating solar power plants in Idukki Reservoir. The department has also raised concern over the already installed floating solar project at the Banasura Sagar reservoir in Waynad. It is advised to conduct Environmental Impact Assessment of the floating solar projects in these reservoirs to facilitate appropriate processing by the department. KSEB Ltd has, accordingly decided to initiate the process of EIA. Given these developments, it is now clear that earlier estimate on availability time frames for solar power from floating solar projects to be revised. A copy of the letter dated 02.11.2020 is enclosed as Annexure II.
16. Certification of conformity of the bid process by the committee constituted for evaluation of bids is also enclosed as Annexure III.

PRAYER

KSEBL humbly pray that this Hon Commission may kindly adopt the tariff @ Rs. 2.97 per unit for the procurement of 90 MW of solar power from M/s NTPC Limited and also for 110 MW of solar power from M/s TATA Power Company Limited, discovered through competitive bidding process as approved by this Hon'ble Commission.


Deputy Chief Engineer (Commercial & Planning)
With full powers of Chief Engineer



Bid History

Select Event :	UTILITY/KSEBL/LTSP/20-21/RA with L-1 matching/46			
Select Item :	1			
Event Ref. No. :	UTILITY/KSEBL/LTSP/20-21/RA with L-1 matching/46			
Period :	12/11/2020 13:00:00 To 12/11/2020 15:00:00			
Item Name :	3			
Quantity (UOM):	200.0 (MW)			
Description:	From 01.08.2022:00.00 to 31.07.2047:24.00			
Sl.No.	Bidder Ref. No.	Booking Quantity	Booking Amount	Bid Time
1	NTPC Limited/117714	90	2.97	11/12/2020 14:16
2	NTPC Limited/117714	90	2.98	11/12/2020 13:30
3	The TATA Power Company Limited/162501	200	2.98	11/12/2020 13:49
4	The TATA Power Company Limited/162501	200	2.99	11/12/2020 13:01

Annexure I - 2/3

Price Comparative Statement			
Select Bidder :	ALL		
Event No. :	UTILITY/KSEBL/LTSP/20-21/ET/46		
Period :	18/09/2020 15:00:00 To 16/10/2020 15:00:00		
1)	Item No : 1 Desc. : From 01.08.2022:00.00 to 31.07.2047:24.00 Quantity : 200.0 MW		
	Price Header	NTPC Limited	The TATA Power Company Limited
	Bid Qty-MW	90	200
	Bid Price-Rs/unit	2.993	2.999
	Min.Order Qty-MW	90	5

Annexure-3/3

**Annexure
Bid Sheet**

Select Event :	UTILITY/KSEBL/LTSP/20-21/RA with L-1 matching/46							
Event Ref. No. :	UTILITY/KSEBL/LTSP/20-21/RA with L-1 matching/46							
Period :	12/11/2020 13:00:00 To 12/11/2020 15:00:00							
Lot No.	Item Name	Indent Quantity (UOM)	Min Bid Quantity (UOM)	Description				
1	1(3.000)	200.0(MW)	5.0(MW)	From 01.08.2022:00.00 to 31.07.2047:24.00				
Sl.No.	Bidder Ref No	Bid Price [ET]	Bid Quantity [ET]	Bid Time [ET]	Bid Price [RA]	Bid Quantity [RA]	Bid Time [RA]	L1-Match Bid Quantity
1	mstc/NTPC Limited/117714	2.993	90	15-10-2020 19:51:02	2.97	90	12-11-2020 14:16:08	-
2	mstc/The TATA Power Company Limited/162501	2.999	200	16-10-2020 12:38:51	2.98	200	12-11-2020 13:49:35	200
FINAL ALLOCATION								
Sl.NO.	Bidder Ref No	Allotted Price	Allotted Quantity					
1	mstc/NTPC Limited/117714	2.97	90					
2	mstc/The TATA Power Company Limited/162501	2.97	110					

SURENDRA KUMAR IFS
PRINCIPAL CHIEF CONSERVATOR OF FORESTS
(WILDLIFE) & CHIEF WILDLIFE WARDEN, KERALA.



Forest Headquarters,
Vanalakshmi, Thiruvananthapuram-695 014,
Kerala, India.
☎ 0471 - 2321610
☎ Mob: 9447979009
✉ Email: cww@for@kerala.gov.in

No. KFDHQ/4091/20/CWWWL4

Date : 02.11.2020

To

The Chairman & Managing Director
Kerala State Electricity Board Ltd.
Pattom, Thiruvananthapuram.

Sir,

Sub: KF&WLD - Establishing floating solar power projects in Idukki Reservoir - reg:

Ref: That office D.O. Lr.No. CMN-EE1/NTPC-Solar Reservoir/2019-20 dated 21.02.2019.

It was informed vide D.O. letter mentioned in the reference above that, the Kerala State Electricity Board Ltd. has proposed to establish floating solar power plants in Cheruthoni, Anchuruli, and Kulamavu areas in Idukki reservoir. It was also informed that based on the preliminary analysis an estimated area of **1600 acres** will be needed for setting up of Solar PV Plants for 400 MW power generations. Apart from this, for setting up of pooling sub stations and transmission lines, 7.364 acres will be additionally required. The matter was discussed in the video conference held on 22.10.2020.

In this regard, I would like to bring to your notice that the reservoir of Idukki dam is part of Idukki Wildlife Sanctuary and it is used by wild animals and traditional fishing communities. The total water spread area of Idukki reservoir is about 8648 acres and the estimated area for establishment of floating plant is 1600 acres, which amounts to about 18 to 20 percent of the reservoir area. Setting up of Solar PV plants in such a vast extent of area will affect the natural aesthetics of the reservoir and the adjoining forest area. The presence of Solar PV plant will act as direct physical barrier for the birds and other animals which frequently access the reservoir for various reasons like food water and seasonal/periodic movement/ migration. Once the plant is established, the access to this area may be restricted to the local fishing communities, thus affecting their livelihood also.

From the ecological point of view, the solar PV plant will prevent the entry of natural light in to the water body which may affect the development of phytoplanktons which are the crucial source of food for the fishes and other aquatic fauna. A simple

Annexure II 2/2

shift in the sunlight availability could throw off the metabolic equilibrium. The ramifications of this may also affect different levels of life forms including birds involved in the natural food chain.

Additionally, the presence of PV unit would also reduce the ability of sunlight for that body of water to warm up following the winter season, which could potentially induce ecosystem wide changes, depending on how the constituent organisms could deal with such a temperature change.


From the legal point of view, Wildlife Sanctuary is a category of Protected Area identified under the Wildlife (Protection) Act 1972. Such Protected Areas are the areas of particular ecological, floral, faunal, geomorphological, natural, zoological significance and such areas are demarcated for protecting, propagating or developing wildlife (both animals and plants) and also to protect the catchment areas of rivers and reservoirs by means of reducing siltation and extending the flow period of rivers. The entire Idukki reservoir is part of the Protected Area and any activity involving destruction of any sort/non-forestry use of forest land notified as Sanctuary require clearance from Government of India and National Board for Wildlife. Thus it would be appropriate to avoid setting up of floating solar power plants in Idukki Reservoir and the same may be shifted to some other Reservoir outside forest area.

The proposal also includes the Banasura Sagar reservoir. 240 ha of forest land was diverted for this purpose. However, only Stage I clearance has been issued by the Govt. of India for this and Stage II is pending for want of compliance of conditions imposed by Government of India. Delay in compliance has attracted adverse action from Government of India and the issue has to be resolved at the earliest.

In both these cases (Idukki and Banasura Sagar), KSEB has not signed the lease agreement so far and transfer of the lease right to KSEB Ltd. is also pending for a long time.

Issues of Stage II clearance for Banasura and lease agreement for the proposed sights need to be resolved at the earliest and at any rate before the proposal is taken up with Government of India. Therefore, to precede further proper steps, including EIA by a competent agency will be the first step.

Yours faithfully,


Principal Chief Conservator of Forests (Wildlife) &
Chief Wildlife Warden, Kerala



KERALA STATE ELECTRICITY BOARD LIMITED

Annexure III

(Incorporated under the Companies Act, 1956) CIN:U40100KL2011SGC027424

Office of the Chief Engineer (Commercial & Planning)

8th Floor, Vidyuthi Bhavanam, Pattom, Thiruvananthapuram - 695 004, Kerala.

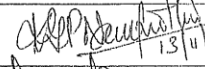
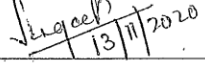
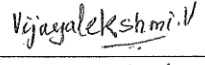
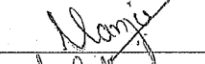
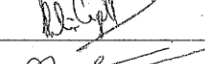
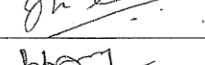
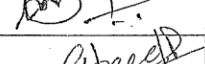
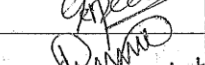

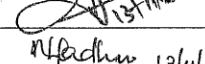
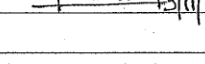
Telephone: +91 471 2514366, E-mail: dce.cp@kseb.in

Certification of conformity of the Bid Process

(DEEP portal reference no. Bid No. UTILITY/KSEBL/LTSP/2020-21/ET/46 dated 18-09-2020)

KSEBL has floated tender on 18.09.2020 for the procurement of 200 MW Solar power from ground mounted grid connected Solar PV plants through competitive bidding on All India basis through DEEP portal of MSTC. The last date of submission of both non financial and price bids was 16.10.2020 and opening of non-financial bids was on 20.10.2020. The non-financial bids submitted by the two bidders M/s NTPC Ltd and M/s Tata Power Ltd were technically and financially qualified and the opening of financial bids of these two qualified bidders was on 12.11.2020.

It is hereby certified by the Evaluation Committee constituted for the evaluation of bids, that the bid process evaluation of the aforesaid tender has been conducted according to the provisions of the P&S document and as notified in Para 8 of MNRE guidelines issued on 03.08.2017 and subsequent amendments in this regard.

1	✓ Sri. K.G.P Nampoothiri, Executive Engineer, TRAC - Chairman	 13/11/20
2	Smt. Sangeetha S, Executive Engineer, Commercial - Convener	 13/11/2020
3	✓ Smt. Vijayalekshmi V., Asst.Exe.Engineer, Commercial - Member	 Vijayalekshmi.V
4	Smt. Manju.K.R, Asst.Exe.Engineer, Commercial - Member	 Manju
5	✓ Smt. Shalini Cyril, Asst.Exe.Engineer, Commercial - Member	 Shalini
6	✓ Sri. Manuseenan V, Asst.Exe.Engineer, TRAC - Member	 Manuseenan
7	Sri. Subramony H.N, Asst. Exe. Engineer, O/o Chief Engineer (Tr-SO)- Member	 Subramony
8	Smt. Sabeeda K, Divisional Accounts Officer, O/o the CIA - Member	 Sabeeda
9	Sri. Siji Kumar G, Assistant Law officer – Member	 Siji Kumar
10	✓ Sri. Ajithkumar. G, Divisional Accounts Officer, TRAC- Member	 Ajithkumar
11	✓ Smt. Radhika. M, Finance Officer, O/o the Financial Adviser- Member	 Radhika