

KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM

Present: **Shri. Preman Dinaraj, Chairman**
Shri. S. Venugopal, Member
Shri. K. Vikraman Nair, Member

Petition No. OP 50/2019

In the matter of : Petition seeking approval for inviting bid for implementation of 200MWp of 'SOURA' Roof Top Solar PV Scheme.

Petitioner : Kerala State Electricity Board Limited

Order dated 30.08.2019

1. KSEBL on 24.06.2019, filed a petition before the Commission for "seeking approval for inviting bids for implementation of 200 MW 'SOURA' Roof Top Solar PV Scheme in the State, with the following prayers,
 - (1) Grant of consent to proceed with the tender process for implementation of 'SOURA' phase - 1 project comprising a cumulative capacity of 200MWp solar rooftop systems during 2019 - 20 to meet its RPO obligations.
 - (2) Permission may be granted to file separate petition for
 - (i) Specific approvals for adoption of Tariff or approval of EPC Cost or both, upon conclusion of tender process.
 - (ii) Procurement of power from Rooftop PV systems installed by Special Purpose Vehicle or RESCO, as may be necessary.
 - (3) Allowing KSEBL to avail credit of solar energy generated under SOURA Scheme towards fulfilment of its RPO target compliance.
 - (4) Allowing any further addition / alteration/ modification of the petition as may become necessary.

Subsequently, KSEB Ltd vide the additional affidavit dated 13.08.2019, submitted certain changes in the bid documents submitted along with the petition dated 24.06.2019.

2. The summary of the issues raised in the petition dated 24.06.2019 and additional affidavit dated 13.08.2019 is given below;

- (1) As a part of achieving the national goal in renewable energy development, the State Government launched a scheme named 'SOURA' under 'Urja Kerala Mission' aimed to develop Solar PV Roof Top/Ground mounted plants aggregated to 1000MWp in the State by 2020-21. The mission was launched by Hon'ble Chief Minister of Kerala in July 2018. The 'SOURA' scheme includes,
 1. 500MWp through roof top Solar
 2. 200MWp ground mounted Solar
 3. 100MWp floating Solar
 4. 150MWp Solar park and
 5. 50MWp canal top
- (2) Out of the 500MWp rooftop solar, 150MWp is proposed for domestic / agricultural sector, 100MWp for rooftop on Government buildings and 250MWp from other rooftop buildings (excluding Governmental buildings and domestic consumers).
- (3) The first phase of 'SOURA' aims at installing 200MWp Solar roof top in the State by the year 2019-20 and in second phase 300MWp of Solar roof top project in the year 2020-21.
- (4) Central Government, as part of the initiatives of achieving 175GW power from Renewable Energy by the year 2022, fixed a target of 1,00,000MWp grid connected Solar power by the year 2022, out of which 40,000 MW is proposed from rooftop solar plants. The target of rooftop solar for the State of Kerala is 800 MWp. The Central Government earmarked Rs 11814.00 crore towards Central Financial Support for implementing the 40000 MW rooftop solar plants. The scheme includes performance based incentive for DISCOMS for expeditious development of grid-connected roof top Solar power plants. The performance based incentive will be provided to DISCOMS based on the roof top solar capacity achieved in a financial year over and above the base capacity. The incentive to DISCOMS is as follows,

Sl.No.	Parameter	Incentive
1	For installed capacity achieved upto 10% over and above of installed base capacity* within a financial year.	No incentive
2	For installed capacity achieved above 10% and upto 15% over and above of installed based capacity*within a financial year	5% of the applicable cost** for capacity achieved above 10% of the installed base capacity
3	For installed capacity achieved beyond 15% over and above of installed based capacity* within one financial year	5% of the applicable cost** for capacity achieved above 10% and up to 15% of the installed base capacity PLUS 10% of the applicable cost** for capacity achieved beyond 15% of the installed base capacity.

*Installed base capacity shall mean the cumulative RTS capacity installed within the jurisdiction of DISCOMs at the end of previous financial year. This will include total RTS capacity installed under Residential, Institutional, Social Government, PSU, Statutory/Autonomous bodies, Private Commercial, Industrial Sectors etc.

** applicable cost is the applicable benchmark cost of MNRE for the state/UT for mid-range RTS capacity of above 10 kW and upto 100 kW or lowest of the costs discovered in the tenders for that State/UT in that year, whichever is lower.

As per the above scheme of the Central Government, the DISCOMS and its local offices shall be the nodal points for implementation of this program. Since, DISCOMs are required to incur additional expenditure for implementation of scheme in terms of additional man-power, creating infrastructure, capacity building, awareness, etc. performance linked incentives are provided to compensate DISCOMs. These incentives will be provided to enable DISCOMs to create an enabling ecosystem for expeditious implementation of RTS program in their area. The incentives to the DISCOMs will be available only for initial capacity addition of 18,000MW under the scheme.

3. In the present petition, KSEB Ltd requested for the approval to proceed with the tender process for the implementation of 'SOURA- Phase-1 Project'. The features of the SOURA- Phase -1 project, as per the petition filed by KSEB Ltd are given below:
 - (1) Under SOURA- Phase-1 project, 200 MWp roof top/ground mounted solar projects (within consumer premises) is planned to be installed by the year 2019-20.

- (2) KSEB Ltd has offered three financial models of roof top solar projects to the consumers as below,

Model-1 (Scheme-1)	Model-2 (Scheme-2)	Model-3 (Scheme-3)
The rooftop and land of willing consumers is utilized for installing solar plant by KSEBL. The energy generated will be fed into the grid for a period of 25 years and a fixed percentage (10%) of generation will be given as the incentive/lease rent to the premises owner for his own use.	KSEBL will install rooftop or ground mounted plant in consumer premises and the energy generated will be sold to the consumer for 25 years through PPA, as per his requirement at a fixed tariff.	The consumer will be the investor and KSEBL will setup the solar plant for the consumer and excess energy if any after the consumption of consumer/ plant owner/ will be fed into KSEB's grid and settled as per Net Metering Regulation.

- (3) Model - 1 and Model - 2 are implemented by KSEBL itself, while Model-3 is proposed to be implemented by the consumer.
- (4) The implementation of Model - 1 and Module - 2 is planned through the Engineering, Procurement and Construction (EPC) model and/or Tariff based, while Model-3 implementation is proposed through EPC model.
- (5) Under the EPC model in Scheme-1 and Scheme-2, KSEBL will own the Solar roof top plant and KSEBL will select the EPC contractor through competitive bidding. The contractor will be responsible for design, supply, construction and commissioning of the solar plants and will be handed over the plant to KSEBL. Two years of O&M is also to be carried out by the EPC contractor.
- (6) Under the tariff based model, a Renewable energy service company operator (RESCO) will own the roof top solar plant and sell electricity to KSEBL at tariff determined through competitive bidding for a period of 25 years from the date of COD.

4. Selection of EPC and RESCO model

- (1) KSEBL submitted that the bid process including the selection of the EPC/RESCO developers will be on an electronic platform provided by MSTC limited (an e-commerce company under Ministry of Steel, which has developed the DEEP e-bidding platform for Ministry of Power for the short term power procurement.)
- (2) The summary of the bid process proposed is given below.
- (i) KSEB Ltd decided to invite bids as follows;
- (a) EPC bids are invited for 50MWp

- (b) Tariff based bids are invited for 150 MWp
 - (c) The selection of EPC contractors and tariff based developers will be based on separate requisition for the above quantum.
 - (d) Under EPC model, there is no regional segregation of bids.
- (ii) For inviting tariff based bids, the entire State is divided in to four regions based on the following.
- Region 1:** Area of Chief Engineer (Distribution South) with head quarters at Trivandrum having the area of jurisdiction in District of Trivandrum, Kollam, Pathanamthitta and Kottayam.
- Region 2:** Area of Chief Engineer (Distribution Central) with head quarters at Ernakulum having the area of jurisdiction in District of Alappuzha, Ernakulum, Thrissur and Idukki.
- Region 3:** Area of Chief Engineer (Distribution North) with head quarters at Kozhikode having the area of jurisdiction in District of Palakkad, Malappuram and Kozhikode.
- Region 4:** Area of Chief Engineer (Distribution North Malabar) with head quarters at Kannur having the area of jurisdiction in District of Kannur, Kasargod and Wayanad.
- (iii) The range of bid capacities proposed are
- (a) of and below 10 kWp
 - (b) 11 kWp to 100 kWp,
 - (c) more than 100 kWp.
- (iv) The minimum bid capacity for EPC basis is set as 5MWp.
- (v) The capacity range in tariff based bidding is as follows;

Capacity Range	Min/Max capacity MWp	Region 1	Region 2	Region 3	Region 4
Part A - <=10kWp	Min	5	5	5	5
	Max	20	28	25	17
Part B 11- 100kWp	Min	5		5	
	Max	20		20	
Part C >100kWp	Min	5			
	Max	20			
Total		150 MW			

- (vi) The selection of bidders shall be undertaken through a step by step process, consisting of technical qualifications, e-bid, e-reverse bid

auction, L1 matching and bucket filling, as necessary. The final selection of bidders under EPC and RESCO is through offline comparison of price based on financial and operational parameter specified upfront in the bid documents.

KSEBL also submitted that 10% of the required capacity under each requisition is allocated to bidders who have registered office in Kerala who match their price with the discovered rate.

- (vii) The upper ceiling rate fixed in the tender document for EPC is given below.

Solar PV Plant capacity	Upper ceiling rate under EPC (inclusive of 2 years O&M and all taxes)
<= 10kWp	Rs. 51,500
11- 100 kWp	Rs. 45,500
>100 kWp	Rs. 42,500

The EPC upper ceiling rate was fixed based on the benchmark capital cost specified by MNRE for the year 2019-20.

- (viii) The upper ceiling on tariff for RESCO model is given below.

Plant capacity	Upper limit of tariff
Part-A: <= 10kWp	Rs. 3.70/unit
Part-B: 11- 100 kWp	Rs. 3.35/ unit
Part-D: >100 kWp	Rs.3.20/unit

The upper ceiling tariff for RESCO is derived by adopting CERC benchmark norms.

- (ix) To ensure sufficient participation in Part-A under tariff basis, a specific provision has been added that bidders quoting under Part B or Part C under tariff basis have to mandatorily quote under Part A for at least 25 % of their quoted capacity under Part B or Part C. Bidders can bid for Part A alone
- (x) The new empanelment of solar PV agencies/ EPC contractors by ANERT has been duly incorporated in the tender document.
- (xi) The minimum installed capacity at single location is 2 kWp. The CUF must be a minimum of 14% and a maximum of 19%. RPO will be on KSEB Ltd.'s account.

5. Demand aggregation for the 'SOURA' scheme:

- (1) KSEB Ltd had started an on-line registration of the scheme in July 2018 and closed it on 31.01.2019. Total, 2, 78,257 consumers registered under the scheme. The details of the registration are given below.

- (i) Financial model wise applications received.

Model	Applications Received	(%) of total
Model 1	2,13,382	77%
Model 2	40,572	15%
Model 3	24,310	9%
Total	2,78,264	100%

- (ii) Voltage wise details of applications received

Voltage level	Applications Received	(%) of total
LT	2,77,805	99.835%
HT	452	0.162%
EHT	7	0.003%
Total	2,78,264	100.000%

Out of the applications received at LT, 90% are from domestic consumers.

- (iii) Region wise details of registration

Region	Applications received	(%) of total
Region 1	51327	18.4%
Region 2	95700	34.4%
Region 3	81816	29.4%
Region 4	49421	17.8%
Total	278264	100.0%

- (2) KSEBL submitted that, it had almost completed the field survey of the registered consumers. A mobile application was also developed for capturing the survey details. The petitioner also developed a web based program for selecting the best roof out of the 2,78,264 registration. Out of the total registration, around 70,000 applications are having the best roof for installation of Solar PV Plants, with a total capacity about 400MWp.

Since the bid document is for 200MWp, KSEB Ltd proposes to select the best rooftop out of 70,000 roof top, based on the following criteria.

- a. Consumers with base load or day time consumption
- b. Distribution Transformer loading

- c. Areas/circles with high T&D loss level.
- d. Tariff category of consumers
- e. Paying history of consumers.

6. Technical Assistance of MNRE:

- (1) MNRE has engaged Asian Development Bank (ADB) for technical assistance for implementing Rooftop Solar Project in the States of Karnataka, Tamil Nadu, Kerala and Goa. KSEB Ltd submitted the copy of the correspondence from MNRE.
- (2) ADB has engaged the services of reputed consultants with consortium of KPMG and IDAM infrastructure advisory private limited for providing technical assistance to State Agencies for implementing Roof Top Solar installations. Punjab National Bank has a credit line from ADB for a scheme for financing grid connected Roof Top Solar PV Projects. The scheme is for financing the CAPEX and RESCO models as per the extant of 'MNRE and bank' guidelines. PNB has expressed their interest in financing the SOURA project. KSEB Ltd submitted copies of communication from ADB and PNB.
- (3) ADB team deployed in Kerala is closely working with KSEB Ltd to support finalization of the bid documents for SOURA Phase-1 project and various other activities including the assistance for developing a Central Monitoring System of KSEB Ltd for monitoring the generation data from all the rooftop solar installations under this scheme.

7. A high level technical committee has been constituted by the petitioner KSEB Ltd with Chief Electrical Inspector, ANERT and Technical Assistance team of MNRE for addressing the following issues while implementing SOURA phase-1 program.

- (1) Addressing the technical issues during implementation.
- (2) Support the evaluation of technical bids and financial bids.
- (3) Advising the petitioner to award the work.
- (4) Take an overseeing role during implementation of SOURA project.

8. The indicative capital cost of the SOURA Phase-1 200 MWp project is Rs 250 crore (Rs 5.00 crore/MW for EPC bid of 50 MW). PNB has agreed to offer a term loan for 70% of the project cost with attractive interest rate with a loan tenure upto 15 years based on the line of credit made available by ADB. The exact

financial commitment can be estimated only after completing the selection of rooftops and bid process and the bidders investment through RESCO mode.

9. KSEB Ltd proposes to invite bids for the selection of the EPC contractors / RESCO developers. KSEB Ltd is also contemplating the creation of a SPV for implementing the project so that the project activities can be ring fenced from the regulated business. Depending on the decision of the mode of implementation based on the bid outcome, the final approvals required from the Hon'ble Commission also vary.
10. The Commission admitted the petition as OP No. 50/2019. Public hearing on the petition held on 20.08.2019, at court hall of the Commission. The list of persons also attended the hearing is given as Annexure.
11. Sri Madhulal, Executive Engineer, KSEB Ltd presented the petition on behalf of the petitioner. Sri B Pradeep, Deputy Chief Engineer with full powers of Chief Engineer (Commercial & Planning) responded to the queries of the Commission. KSEB Ltd, explained in detail about the SOURA project as given in the petition dated 24.06.2019 and in the additional submission dated 13.08.2019. KSEB Ltd further submitted that, the present petition is for seeking the approval of the Commission for initiating the bid process for selecting the EPC contractor and the RESCO developer. KSEB Ltd is intending to start the bidding process by 1st September 2019 with the approval of the Commission, so that the selection of the EPC contractors and RESCO developers for implementing the SOURA Phase-1 project can be finalized by December 2019 and the implementation of the project can be started by January 2020.
12. Sri Prasad, representing Kerala Sastra Sahitya Parishad (KSSP), welcomed the initiative of the State Government and KSEB Ltd for developing roof top solar projects for meeting the electricity demand of the State. He further suggested that, KSEB Ltd should take steps to promote the daytime consumption so that, the solar potential can be exploited to the maximum extent. The targeted capacity in the SOURA phase-1 may be increased to 500 MW from the proposed 200 MW so that, more consumers can be participated for the program.
13. Sri Sivaramakrishnan, representing KREEPA congratulated KSEB Ltd for initiating such a project that may become a model in the national level. He submitted the following for consideration of the Commission.
 - (i) The payments on EPC and tariff based models in the SOURA scheme are linked with performance ratio and CUF. However, large portion of the beneficiary system under this program are going to be under 50 kWp

capacity and within that, major portion going to be domestic category with capacity less than 10kWp. Therefore, the measurement and establishment of the performance indicators on such small capacities for different seasons would become practically impossible. Hence, it is suggested as follows;

“Considering the average annual GHI of our state as 5.68kWh/m²/Day, the minimum guaranteed specific energy yield shall be benchmarked at 1400kWhr/kWp/Annum on normal weather condition and 100 % grid availability. Penalties shall be levied on the developers who do not deliver benchmark value of energy to grid. The performance bank guarantee shall be utilized for this purpose. The running bill payments shall be released based on this PBG. Annual energy measured by export meter should easily indicate the value of energy delivered to grid. Excess energy delivered over and above the benchmark figure shall be allowed to be carried forward.”

- (ii) ANERT has empanelled about 75 agencies and process of empaneling another batch is progressing. These agencies fall under MSME category. Since Kerala is a rooftop potential State as far as solar is concerned, for the installation and maintenance of kW size capacities, Kerala based MSME enterprises must be encouraged and protected. Empanelled agencies with ANERT shall be allowed to participate SOURA tender without additional technical and financial qualification for same rating.
- (iii) In order to enable maximum number of MSME's from each region to participate in the bidding process, the planned bid capacity in each region may be reduced from 5 MWp to 1 MWp under EPC.
- (iv) No fresh technical or financial eligibility criteria be imposed in the EoI documents for the ANERT empanelled agencies.
- (v) For over last 10 months, the solar penetration in the State is hindered due to reluctance of KSEB Ltd to issue feasibility certificate for solar installations, mainly citing the forthcoming SOURA program of KSEB Ltd. Hence the representative of KREEPA requested to issue proper guidelines to KSEB Ltd for providing equal opportunity to the private solar developers for issuing feasibility certificates.
- (vi) Instead of 4 regions, District wise segregation may be adopted.

- (vii) In order to bring in easiness and transparency, the feasibility approval may be made online and managed by a third party.
 - (viii) Flat upper ceiling rate of RESCO model is not feasible for Kerala labour market. So the rate may be fixed as variable with inflation index.
14. Sri Shaji Sebastian, KSSIA submitted during the hearing that, SOURA is a unique project and hence the KSSIA fully support the project. KSEB Ltd may formulate a separate implementation team for this project instead of entrusting the work with the Assistant Engineer/ Sub Engineers of the section offices. KSEB Ltd shall designate a single contact person for the co-ordination of SOURA scheme and necessary contact details including phone numbers of the contact persons may be published. He further added that, in spite of the regulatory frame works and initiatives, the RE projects in the State yet to get good takeoff. Sri Shaji Sebastain further submitted that, while formulating the agreement with the consumers under SOURA, the issues on sale of building, and expansion of the buildings covered under SOURA has to be properly addressed in detail.
15. Smt Jasmine Banu, representing the Officers Association of KSEB Ltd, submitted that the Association fully supports the programme. She further added that, the distributed energy generation from renewable is the need of the day.
16. KSEB Ltd clarified the following based on the deliberations during the hearing.
- (i) The lease agreement and the power purchase agreements to be signed with the consumers for installing solar plants under Model-1 and Model-2 of the SOURA scheme-1 is under preparation, and will be finalized based on the outcome of the bids for EPC and RESCO model. The issues regarding the sale of the buildings, expansion of the buildings etc by the roof top owners covered under the SOURA scheme will be addressed in the agreement to be signed between the consumers and KSEB Ltd. It is not intended to pledge the rooftop of the consumers, but the solar installations will be owned by KSEB Ltd and the installations only are required to provide as an assurance to the funding agencies.
 - (ii) Regarding the issue on denial/ delay of granting feasibility certificate for solar installations of consumers not covered under SOURA scheme, KSEB Ltd assured before the Commission that, no solar installations will be denied permission due to the implementation of the SOURA scheme. Instructions have already issued to the field offices in this regard. KSEB Ltd shall further instruct the field offices that, the feasibility certificates

shall be issued for the consumers/other interested parties in compliance of the prevailing Regulations in force.

- (iii) KSEB Ltd further submitted they propose to start the bidding procedure by 1st of September so as to complete the bidding process by December 2019, and to implement the SOURA phase-1 project during this financial year 2019-20 to the maximum extent, and to avail the incentives offered by Central Government to DISCOMs. Hence KSEB Ltd requested before the Commission to grant early approval to proceed with the tender process.

Analysis and Decision

- 17. The Commission has examined in detail the petition filed by KSEB Ltd as per the provisions of the Electricity Act, 2003, the policies and target of the Central Government for achieving 175 GW power from renewable energy sources by the year 2022, Regulations notified by the Commission for the promotion of electricity generation from renewable energy and other relevant documents.
- 18. As per the provisions of the Electricity Act, 2003, KSEB Ltd as the distribution licensee can develop and facilitate solar PV installations in the State.
- 19. Government of India, vide the press release dated 19.02.2019, informed that the Cabinet approved the Phase-II Grid connected roof top solar programme for achieving the cumulative capacity of 40000MW Rooftop Solar Projects by the year 2022, wherein the Cabinet addressed the increased involvement of DISCOMS in developing Rooftop Solar PV systems. Further, the Central Government vide the order dated 8th March 2019, earmarked Rs 4950 crore as incentives to DISCOMS based on achievement for installing additional grid connected roof top capacity over and above the base level, with incentives being limited to the first additional 18000MW of roof top capacity added in the Country.
- 20. 'SOURA' is the project launched by the State Government under 'Urja Kerala Mission' for developing 1000MWp from Solar PV Rooftop/ Ground mounted plants in the State by 2020-21. The 'SOURA' project is evolved in line with the Government of India policy on developing 1,00,000 MWp solar plants in the Country by the year 2022.
- 21. The present petition of KSEB Ltd deals with SOURA phase-1, for implementing 200MWp of Rooftop/ ground mounted, at their consumer's premises. KSEB Ltd in the petition and also during the hearing, has submitted in detail, the activities

so far initiated including the registration, field survey to identify and select the best roof top etc from the total registered consumers with KSEB Ltd for SOURA.

22. The Commission has examined the three models proposed by the KSEB Ltd for implementing the SOURA scheme-1 and the noted the following.

- (i) More than 77% of the willing consumers of the SOURA scheme are registered under Model-1 proposed by KSEB Ltd for implementing SOURA -1 project. Under model-1, KSEB Ltd shall install roof top PV system at the rooftop and on the land of the willing consumers. 10% of the energy generated from scheme will be provided to the consumers free of cost as incentive/ lease rent.

Under Model-1, the solar plant installed over the rooftop of the consumer is to be owned, operated and maintained by KSEB Ltd for 25 years through lease agreement with the consumer.

- (ii) In Model-2, about 15% of the willing consumers are registered for implementing the proposed SOURA scheme. Under the scheme, KSEB Ltd shall install the rooftop solar PV at its cost and the energy generated from the plant is to be supplied to the consumers for 25 years at a fixed tariff.

Under this scheme also, the rooftop solar plant installed over the rooftop of the consumers is to be owned, operated and maintained by KSEB Ltd for 25 years.

However, KSEB Ltd has not provided more details of the scheme, including the modalities for determining the tariff for supplying electricity to the consumers from the solar plant, and the incentives offered by KSEB Ltd to the consumers for absorbing the excess energy from the plant.

In the petition and also during the hearing KSEB Ltd submitted that, they are contemplating for the creation of a Special Purpose Vehicle (SPV) for the implementing the SOURA scheme so that the SOURA project activities can be ring fenced from the regulated business and also submitted that, separate approval shall be sought from the Commission for the same.

- (iii) Under Model-3, KSEB Ltd shall set up the Solar PV at the cost of the consumer, and the electricity generated from the rooftop plant is accounted against the consumption of the consumer. The excess energy

from the plant after the use of the consumer shall be fed into the system and accounted as per the provisions of the net metering provisions in the RE Regulation.

- (iv) Under Model-1 and Model-2, KSEB Ltd is owner of the solar installations, and shall also operate and maintain the plant for 25 years. Since the period of lease agreement / pledging the roof of the consumer with KSEB Ltd is for 25 years of operation of the plant, there is a possibility that disputes may arise between the consumer and KSEB Ltd, if the consumer in between opt for selling the building to a third part party or if the consumer intends to expand and/or dismantle the building for other purpose including the construction of a new building prior to the 25 year lease period.

KSEB Ltd during the hearing submitted that, such issues will be addressed in the lease agreement and power purchase agreement to be signed with the consumers for implementing the scheme under Model-1 and Model-2. The agreement will be finalized only after the selection of the bidders for the project. KSEB Ltd also submitted that, it shall file a separate petition after the finalization of the bids, for the approval of all such issues. The Commission noted the submission of the KSEB Ltd in this regard.

23. KSEB Ltd proposed to implement 50 MWp out of the 200 MWp of the SOURA scheme-1 through EPC model and 150 MW through RESCO Model. As per the details submitted by KSEB Ltd, the selection of bidders for EPC model and RESCO model is through an electronic platform developed by MSTC Ltd. The selection of bidders for both EPC bid and RESCO is through e-bid, e-reverse bid auction, L1 matching and bucket filling as necessary.

KSEB Ltd has also reserved 10% of the required capacity under EPC and RESCO for bidders having registered office in the State of Kerala, provided they match their price with the Discovered rate.

The benchmark price for EPC model is fixed based on the benchmark cost specified by MNRE for the year 2019-20. The upper ceiling tariff for RESCO is derived by adopting CERC benchmark norms.

The Commission noted that, under the EPC model, Since KSEB Ltd has made the investments for solar PV installation, the O&M of the plant from the third year onwards of the CoD has to be done by the KSEB Ltd. Accordingly, all the risks associated with the investments are vested with KSEB Ltd. It is also submitted

that, the total investment required for implementing the 50 MWp through EPC is about Rs 250.00 crore, and KSEB Ltd has been negotiating with Punjab National Bank (PNB) which has credit line from Asian Development Bank (ADB), the agency engaged as consultant for implementing the roof top solar PV plants in the State of Kerala. The KSEB Ltd is yet to submit the details of the financial assistance for the EPC mode of implementation. The Commission hereby directs that KSEB Ltd shall get the approval for the capital investment of the EPC mode of implementation (50 MWp) of the SOURA phase-1 separately, once the bidding process completed and bidders are finalized.

24. The present petition is filed for getting consent of the Commission to proceed with the tender process for implementation of the SOURA phase-1 project. Further, the tender documents are prepared with the technical assistance of Asian Development Bank (ADB), the agency engaged by the MNRE for assisting the rooftop PV installation in the State of Kerala. Further, ADB and their consortium including the reputed consultants M/s KPMG and M/s IDAM Infrastructure Advisory Private Ltd is assisting KSEB Ltd in implementing the SOURA phase-1 project. The Commission is yet to examine the details of the bidding documents at the macro level and hence has not propose any change in the bidding documents submitted before the Commission vide the additional submission dated 13.08.2019. KSEB Ltd can proceed with the tender process for implementing the SOURA Phase-1 as per the bidding documents submitted before the Commission.
25. The Commission noted with concern the issues raised by the stakeholders regarding the delay/denial of granting feasibility certificate for the installation of the roof top solar PV by the consumers who are not registered under the instant scheme, on account of the consumers registered with KSEB Ltd under SOURA phase-1 scheme. In this regard, the Commission noted the assurance given by the representative of KSEB Ltd present at the time of the hearing that such complaints will be addressed according to merit and appropriate provisions of the concerned regulations. The top Management of KSEB Ltd shall address these issues very seriously and issue necessary directions to the field offices that, feasibility certificate and connectivity shall be issued to all intending consumers for the installation of the roof top solar PV system, complying with the Regulations notified by the Commission in this regard. KSEB Ltd shall upload a copy of instructions at their website and a copy shall be forwarded to the Commission for information.

Order of the Commission

26. The Commission, after examining the petition filed by KSEB Ltd as per the provisions of the Electricity Act, 2003, the policies and target of the Central Government for achieving 175 GW power from renewable energy sources by the year 2022, Regulations notified by the Commission for the promotion of electricity generation from renewable energy and other relevant documents, here by orders the following.
- (i) KSEB Ltd may proceed with the tender process for implementation of 'SOURA Phase-1 project with cumulative capacity 200 MWp'.
 - (ii) While finalizing the bids and mode of implementation of the 'SOURA Phase- 1 project, KSEB Ltd shall address the issues highlighted by the Commission under the paragraphs 22, 23 and 24 above.
 - (iii) KSEB Ltd shall ensure that in case bucket filling is resorted to, all contracts awarded are exactly at the same price as that awarded to L1 bidder. No additional price on any account shall be considered or awarded by KSEB Ltd in such contracts.
 - (iv) Immediately after finalizing the bids, KSEB Ltd shall file separate petitions for the approval of EPC mode of implementation, and also for the adoption of tariff under RESCO model.
 - (v) KSEB Ltd shall, issue necessary instructions to its field offices that, feasibility certificate and connectivity shall be issued to all the consumers approaching KSEB Ltd for roof top solar PV installations, as per the provisions in the Regulations notified by the Commission in this regard, irrespective of the fact that whether the applicant is registered under SOURA or not.

Petition disposed off.

Sd/-
K.Vikraman Nair
Member

Sd/-
S.Venugopal
Member

Sd/-
Preman Dinaraj
Chairman

Approved for issue
Sd/-
G Jyothichudan
Secretary

Annexure

List of participants

1. Sri. Joseph, V.K, Chief Engineer, KSEB Ltd
2. Sri. B.Pradeep, Dy CE with full powers of Chief Engineer, KSEB Ltd.
3. Sri. Sasankan Nair, Dy CE, KSEB Ltd.
4. Sri. Nassarudeen. A, Dy CE, KSEB Ltd.
5. Sri. K.G.P Nampoothiri, EE, KSEB Ltd.
6. Sri. Madhulal J, EE, KSEB Ltd.
7. Smt. Latha S.V, AEE, KSEB Ltd.
8. Sri. Edward P.B, AEE (TRAC), KSEB Ltd
9. Smt. Deepa. R, AEE, KSEB Ltd.
10. Sri. Nandakumar N, AE, KSEB Ltd
11. Sri. Rajiv Shukla, IDAM, representing KSEB Ltd
12. Sri. Sivaramakrishnan, KREEPA
13. Sri. S.Santhosh, KREEPA
14. Sri. Shaji Sebastian, KSSIA
15. Sri. Prasad. N, K.S.S.P
16. Sri. Terance Alex, Wattsun