

**KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM**

**Present : Shri T K Jose, Chairman
Shri B Pradeep, Member
Adv. A.J Wilson, Member**

OP No 06/2023

In the matter of : Petition seeking permission for retendering of 1.5 MWp Grid Connected Floating Solar PV plant at W.Island, Cochin Port Authority under RESCO Model (BOOT) for 25 years.

Petitioner : M/s Cochin Port Authority (CoPA)

Respondent : Kerala State Electricity Board Ltd (KSEB Ltd)

M/s CoPA represented by : Shri. V.Thuraipandian, Chief Mechanical Manager
Shri. R.S. Ajayakumar, Executive Engineer
Shri. Ajithkumar, Executive Engineer
Smt. S.Jayalakshmi, Assistant Executive Engineer

KSEB Ltd represented by : Shri. M.P.Rajan, Deputy Chief Engineer,
Smt. Latha.S.V, Asst: Executive Engineer,
Shri Rajesh, Asst: Executive Engineer.

Date of hearing : 22.02.2023 11.30 AM

Venue : e-hearing through video conferencing

Order dated 25.04.2023

1. Cochin Port Authority (hereinafter referred as M/s CoPA or petitioner) had filed a petition on 09.12.2022 before the Commission, with the following prayers,

“(i) Permit Cochin Port Authority (CoPA) to re-tender 1.5 MWP Floating Solar Project under RESCO model (BOOT) at W.Island for 25 years through transparent process of bidding in accordance with the guidelines issued by Central Government.

(ii) Approve draft bid document and draft PPA for the 1.5 MWP Floating Solar.

(ii) Permit grid connectivity with major distribution licensee, M/s.KSEBL for exporting the excess generation during low demand as per the provisions of KSERC (Renewable Energy and Net Metering) Regulations, 2020 and its amendments in 2022 and Hon’ble Commission may issue appropriate orders for export, billing and

accounting of Renewable Energy between major distribution licensee, M/s.KSEBL and Cochin Port Authority.”

2. The summary of the petition filed by the petitioner CoPA is given below.
- (1) CoPA, earlier filed a petition OP No.12/2022 before the Commission seeking approval for the purchase of 1.5 MWp Grid Connected Floating Solar PV under RESCO Model from M/s.Suryam International Limited, Odisha @ Rs.3.89 per unit. However, the Commission vide the Order dated 25.03.2022 in Petition OP No.12/2022 has rejected the petition due to non-compliance of the provisions of the Electricity Act, 2003, other relevant Guidelines, Rules and Regulations in force. Accordingly, the petitioner CoPA had cancelled the proposal to purchase 1.5 MWp Solar Power from M/s.Suryam International Limited.
 - (2) CoPA has submitted the initiatives taken by them for the generation and purchase of Solar power to meet its RPO as a distribution licensee.
 - CoPA had installed and commissioned 250 kW Solar Plants and generated 3.138 lakhs units in the year 2021-22.
 - The prosumers (consumers of CoPA) had installed 215 kW Solar plants.
 - CoPA had accounted 'six lakhs units' solar generation per annum towards RPO. This accounts for 1.70% of the total consumption of the Licensee.
 - By the end of 2022-23, the petitioner has to increase the RE Generation by 19% of its consumption as per KSERC (Renewable Energy and Net Metering) (First Amendment) Regulations, 2022.
 - Further, as per the Gol target of 500 GW RE Power by the year 2030, the Maritime India Vision (MIV) has set a target of 60% RE use in major ports by 2030.
 - In view of the RPO target of the KSERC and Gol, CoPA propose to re-invite tender for 1.5 MWp Grid Connected Floating Solar PV Projects. Draft bidding documents including draft PPA for re-tendering was prepared in compliance of the Order of the Commission dated 25.03.2022 in OP No.12/2022.
 - (3) CoPA has proposed to install 1.5 MWp Grid Connected Floating Solar PV Projects at the waterbody near CoPA's Walkway Avenue between BOT Junction and Kannangatt Bridge at W.Island. As per the bidding documents, the SPD shall provide at its cost the required 11 kV switch gears, transformers, transmission UG cables, metering and protecting devices, SCADA facilities etc., as per standards.

- (4) CoPA has been generally meeting its power requirements from KSEB Ltd. At present, CoPA had PPA with KSEB Ltd for 6.5 MVA power at 11kV at W.Island. Average monthly consumption from KSEB Ltd, is 22 lakh units at W.Island. The petitioner further submitted that the electricity demand of CoPA mainly depend on ship operations in Port. Total power demand of CoPA including its consumers occasionally goes below 2 MVA during low demand period and Sundays/holidays.

The total installed solar power capacity of CoPA and its consumers are 250 kWp and 215 kWp respectively at W.Island. More and more consumers are likely to apply for Grid Connected Solar Plants in W.Island. The total installed capacity of Solar Plant at the W.Island may exceed 2 MWp with the commissioning of 1.5 MWp Solar PV plant. Hence CoPA submit the following issues before the Commission for consideration.

- (a) KSEB Ltd may permit to export the excess power from solar PV Power plant to KSEB Ltd grid as and when the power demand of the port is minimal.
- (b) RE projects have Must run status as per Government norms. Hence CoPA could not request the SPD/Prosumer to stop the generation from Solar Plant when the CoPA could not absorb the excess solar generation by its prosumers when their demand is low.
- (c) CoPA being a small distribution licensee, 100% solar power evacuation during minimum power demand will be possible only if KSEB Ltd permits Grid Connectivity.
- (d) CoPA could not give grid connectivity and net metering facility to its consumers in future if KSEBL is not permitting grid connectivity. This may cause discrimination to the consumers of small licensees.
- (e) As per Section 86(1)(e) of the EA, 2003 the State Commission shall promote co-generation and generation of electricity from renewable source of energy by providing suitable measures for grid connectivity with the grid.
- (f) KSERC (Renewable Energy and Net Metering) Regulations, 2020 and its amendments in 2022 is applicable to distribution licensees who purchase power from KSEB Ltd as well.
- (g) Grid Connectivity for the RE power with KSEB Ltd is inevitable for CoPA to implement more RE Projects so as to transform the port into a green port as envisaged by MoPS&W and meet the RPO Obligation as per the Regulations.

- (5) Since KSEB is not permitting to inject excess solar power from CoPA area to KSEBL Grid, the petitioner CoPA included “battery energy storage Systems (BESS) of 300 kW/300 kWh” in the draft bid document/PPA, for storing the excess RE generation. The cost of solar power from SPD will not be economical if BESS is included in the project.

If grid connectivity and solar export is not permitted by KSEBL, then excess solar power will have to be stored using adequate BESS by the successful SPD.

- (6) The tender for proposed 1.5 MWp Solar Project will be floated through e-tendering in GEM Portal through transparent process of bidding in accordance with the guidelines issued by the Central Government. The petition for approval of Solar tariff quoted by the bidder shall be separately filed before the Commission for getting the approval. The PPA between CoPA and SPD may also be submitted before the Commission for approval.
- (7) The annual power purchase from 1.5 MWp Floating Solar power plant is expected to be Rs.21 lakhs per units per annum. With this generation the solar RPO may get enhanced from 2% to 7%.

3. KSEB Ltd vide the submission dated 08.03.2023 submitted the following;

- (1) M/s CoPA had earlier submitted a petition on 29.12.2021, seeking approval for the tariff of electricity generated from 1.5 MWp floating solar PV plant at wellington Island, Cochin Port Trust under RESCO model (BOOT) for 25 years. However, the Commission vide the Order dated 25.03.2022 in petition OP No 12/2022 rejected the petition, since the bidding was concluded in violation of the provisions of the EA-2003 and Solar Bidding guidelines notified by the Central Government.
- (2) M/s CoPA has filed the instant petition for the approval to retender 1.5 MWp floating solar PV and approval for the draft bid document and draft PPA. CoPA further requested to permit grid connectivity with KSEB Ltd for exporting the excess generation during low demand as per the KSERC(Renewable Energy and Net Metering) Regulation, 2020 and its amendments from time to time.

However, as per the Regulation 2(e) of the KSERC (RE and net metering Regulations) 2020 stipulates that, 'Banking facility' means such facility whereby the prosumer or the captive generator of Renewable Energy System injects energy into the grid during a time block or period and have a right to draw back the energy from the grid at a subsequent different time block or period, subject to the terms and conditions specified in these Regulations.

Though M/s COPA is a licensee, it does not come under the ambit of banking facility defined per provisions of KSERC (RE and Net Metering) Regulations, 2020 and KSERC (RE and net metering) (First Amendment) regulations, 2022.

- (3) M/s CoPA in the instant petition has requested to allow grid connectivity to KSEBL grid for prosumers inside M/s COPA distribution area. The Commission vide the Order dated 29.03.2022 in petition OP No.13/2022 has ordered that, there is no provision in the RE Regulation 2020 to bank the excess power of a prosumer with the incumbent licensee KSEB Ltd. Hence, the Commission cannot direct KSEB Ltd to provide connectivity and Net metering facility for the 830 kWp installed by M/s D.P World, the consumer of CoPT.
 - (4) KSEB Ltd further submitted that, as per the Renewable Energy Regulations in force, COPA shall have to absorb entire power generated from their own RE plant and from the prosumers under its license area. CoPA has included Battery Energy Storage Systems in the draft bidding document, for storing the excess RE generation. This may be allowed.
 - (5) KSEB Ltd submitted that sanction may be allowed to M/s CoPA for going for re - tendering of 1.5MWp grid connected Floating Solar PV plant, subject to the condition that all the power generated from the same maybe used fully by the CoPA itself.
4. The Commission admitted the petition as OP 06/2023. Smt. S.Jayalakshmi, Assistant Executive Engineer, CoPA presented the matter on behalf of the Petitioner. Smt. Biji, AE,TRAC presented the comments on behalf of the respondent KSEB Ltd. The summary of the deliberations during the hearing is given below.
- (1) M/s CoPA submitted the following;
 - (i) Cochin Port Authority (CoPA) has license under Electricity Act, 2003 to distribute electricity within the port area at Willingdon Island, Vallarpadam & Puthuvypin in the State of Kerala. The entire power requirement of the CoPA is being met by procuring power from the incumbent licensee KSEB Ltd. At present CoPA has a contract demand for 6 MVA power at 110kV at Willingdon Island. However, its RPO fixed by the Commission is being met separately through the generation from RE sources including solar installations.
 - (ii) Earlier, CoPA had filed a petition dated 29.12.2021 (OP No.12/2022) for the approval for purchase of solar power from the 1.5 MWp grid connected Floating solar under RESCO model from M/s Suryam International Pvt Ltd, Odisha at Rs. 3.89 per KWh. However, the Commission vide the Order dated 25.03.2022

in petition OP No.12/2022 had rejected the said petition due to noncompliance of the provisions as per Electricity Act, 2003 and other relevant guidelines, rules and regulations. Accordingly, as per the Order of the Commission dated 25.03.2022, CoPA cancelled the LoA dated 11.12.2020 issued to the SPD.

- (iii) CoPA proposes to re-invite tender for 1.5 MWp grid connected Floating solar project, which is proposed at the water body near CoPA's walkway avenue, between BOT Junction and Kannangatt bridge at W.Island, in RESCO model / BOOT (Build Own Operate Transfer). As per the bid condition, the SPD has to provide at his cost, 11KV switch gears, transformers, transmission U.G cables , metering and protection devices, SCADA facility etc. as per standards and interconnect solar power to the Port's 11 kV grid at 110 kV substation.
- (iv) CoPA further submitted that M/s KSEBL is not permitting grid connectivity and informed to block the flow of power back to KSEBL's grid using protective relays. So, battery energy storage system (BESS) of 300kW/ 300kWH has been included in the draft bid document / PPA for storing the excess RE generation.

Solar purchase cost from Solar Power Developer will not be economical, if BESS is to be included in the project. CoPA being a small distribution licensee, 100 % solar power evacuation during minimum power demand could be possible only if KSEB Ltd permits grid connectivity.

- (v) CoPA could not give grid connectivity and net metering facility even to small consumers in future, if KSEBL is not permitting grid connectivity. This will be a discrimination to the consumers of small distribution licensees and they will be deprived of their right to install RE plants with Net metering facility as per KSERC (RE and Net Metering) Regulations, 2020 & its amendments in 2022.
- (vi) CoPA further submitted that, the tender for the proposed 1.5 MWp solar project will be floated through e-tendering in GEM portal through transparent process of bidding in accordance with the guidelines issued by Central Government. Petition seeking approval for the solar tariff of the successful bidder (Solar Power Developer) and the initialled PPA between CoPA and the SPD will be submitted to the Commission for the approval subsequently.
- (vii) CoPA further submitted that Grid connectivity for the RE power with the major distribution licensee, M/s KSEBL is inevitable for Cochin Port Authority to implement more RE projects so as to transform the Port into a Green Port as envisaged by MoPS&W and to meet the RPO obligation as per KSERC Regulations.

- (2) During the hearing the KSEB Ltd submitted the following;
- (i) As per the Regulation 2(e) of the KSERC (Renewable Energy and net metering Regulations) 2020 provides the banking facility to the prosumer or captive generator, however CoPA being a distribution licensee, the facilities available to the prosumers of KSEB Ltd cannot be granted to the CoPA.

Hence, CoPA has to absorb entire power generated from their own RE plant and the prosumers under its license area as per the Renewable Energy Regulations in force.

CoPA has included Battery Energy Storage Systems in the draft bidding document, for storing the excess RE generation. This may be allowed.

- (ii) KSEB Ltd submitted that sanction may be granted to M/s CoPA for re - tendering of 1.5MWp grid connected Floating Solar PV plant, subject to the condition that the entire power generated from the same may be used fully by the licensee itself.
- (3) The Commission during the hearing directed the petitioner to clarify whether they deviated from the bidding guidelines issued by the Ministry of Power, Gol or not. M/s CoPA has not sought approval for such deviations if any. But, the Commission on the preliminary examination noted that, there are few deviations in the draft bidding documents from the bidding guidelines especially on the bid evaluation methodology etc. Hence the Commission directed the petitioner to submit the revised bid documents without any deviations from the bidding guidelines notified by MoP, Gol or seek specific approval for the deviations.

5. In compliance of the directions of the Commission, M/s CoPA vide the letter dated 20.03.2023 has submitted the revised bidding documents. The following changes are incorporated in the bidding documents duly considering the provisions in the guidelines notified by the MoP, Gol.

- (i) Clauses on performance bank guarantee

In the original draft, the amount of performance bank guarantee to be submitted by the successful bidders were not submitted. However, in the revised draft, the performance bank guarantee to be submitted by the successful bidder is 4% of the estimated cost.

- (ii) Clauses on Bid Evaluation and selection of projects

In the original draft, 'reverse auction' is the discretion of the procurer M/s CoPA. However, in the revised draft, it is specified that 'reverse auction' shall be conducted among the successful bidders.

Analysis and Decision of the Commission:

6. The Commission has examined in detail the petition filed by M/s CoPA as per the provisions of the Electricity Act,2003, Guidelines for Tariff Based Competitive Bidding Process for procurement of Power from Grid Connected Solar PV Projects, KSERC (Renewable Energy and Net metering Regulations) 2020 and its amendments, other relevant Rules and Regulations in force, decides as follows;

7. The prayers of the petitioner in the instant petition is extracted below;

“(i)Permit Cochin Port Authority (CoPA) to re-tender 1.5 MWP Floating Solar Project under RESCO model (BOOT) at W.Island for 25 years through transparent process of bidding in accordance with the guidelines issued by Central Government.

(ii)Approve draft bid document and draft PPA for the 1.5 MWP Floating Solar.

(iii)Permit grid connectivity with major distribution licensee, M/s.KSEBL for exporting the excess generation during low demand as per the provisions of KSERC (Renewable Energy and Net Metering) Regulations, 2020 and its amendments in 2022 and Hon’ble Commission may issue appropriate orders for export, billing and accounting of Renewable Energy between major distribution licensee, M/s.KSEBL and Cochin Port Authority.”

The Commission has examined each prayer of the CoPA in detail and decided as follows,

8. **Prayer-1. Permit CoPA to re-tender 1.5 MWP Floating Solar Project under RESCO model (BOOT) at W.Island for 25 years through transparent process of bidding in accordance with the guidelines issued by Central Government and approval for the draft bid document and draft PPA for the 1.5 MWP Floating Solar.**

(1) CoPA is one of the small distribution licensee in the State of Kerala. CoPA is holding license to distribute electricity in the port area of Willingdon Island and Vallarpadam SEZ area. As per the KSERC (Renewable Energy and Net Metering) (First Amendment) Regulations, 2022, all the distribution licensees in the State of Kerala including CoPA has to meet the Solar RPO @10.50% of the total consumption(excluding the quantum of energy met from large hydro sources having capacity above 25 MW, commissioned on or before 08.03.2019) in the financial year 2023-24. According to the petitioner, even with the purchase of power from the proposed 1.5MWp Floating Solar Plant, the Solar RPO will be 7.0% only instead of the Solar RPO target of 10.50% of the year 2023-24.

- (2) Section 63 of the EA-2003 provide as follows;

“Notwithstanding anything contained in section 62, the Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government”.

- (3) Clause 6.4.(2) of the Tariff Policy notified by the Central Government vide the resolution No. 23/2/2005-R&R dated 28.01.2016, in compliance of the Section 3 of the Electricity Act, 2003 provides as follows.

“6.2 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) The Central Government, as per the Section 63 of the Electricity Act, 2003, vide the Resolution dated 3rd August 2017 had notified the Guidelines for Tariff Based Competitive Bidding Process of procurement of Power from Grid Connected Solar PV Power Projects.

Subsequently, the Central Government vide the resolutions dated 14th June 2018, 3rd January 2019, 9th July 2019, 22nd October 2019 and 25th September 2020, made amendments in the original bidding guidelines dated 03.08.2017.

9. In the instant petition, the petitioner M/s CoPA had sought permission for retendering of 1.5MWp Floating Solar Project under RESCO Model (BOOT) at W. Island for 25 years through transparent process of bidding in accordance with the guidelines issued by the Central Government.

The Commission has examined the prayer of the petitioner in detail. As per the provisions of the EA-2003, National Tariff Policy, 2016, M/s CoPA as a distribution licensee in the State can take initiative to procure Solar Power through competitive bidding route as per the guidelines notified by the Central Government as per Section-63 of the EA-2003.

Prayer-2. (ii) Approve draft bid document and draft PPA for the 1.5 MWP Floating Solar.

10. The petitioner M/s CoPA submitted the bid documents including the ‘Request for Selection (RfS) and Model PPA’ along with the petition for approval. The petitioner claimed that the bidding documents were prepared as per the Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Solar PV Power Projects notified on 3rd August 2017 by the Central Government.

11. The Commission has examined the bidding documents as per the provisions of the EA-2003 and bidding guidelines notified by the Central Government dated 3rd August 2017 for the procurement of Solar Power through competitive bidding document, and noted the following;

(1) Bidding Guidelines

The Bidding Guidelines dated 3rd August 2017 notified by the Central Government for the procurement of power from grid connected solar projects is applicable for the solar projects having size of 5 MW and above only. However, in the instant petition, the installed capacity of the proposed floating solar plant is 1.50MWp only.

Commission noted that, separate guidelines for procurement of solar power having capacity less than 5MWp is yet to be notified by the Central Government as per Section-63 of the EA-2003. Hence, the Commission has decided to adopt the technical and financial criterion specified in the guidelines dated 3rd August 2017 and its amendments for the procurement of 1.5MWp grid connected solar plant at W. Island of M/s CoPA.

(2) Capacity Utilization Factor (CUF)

As per the paragraph-8 of the RfS – Instructions to the Bidders, the CUF of the plant is specified at 21%. The petitioner during the hearing clarified that, they had adopted the CUF specified by the Commission in the KSERC (Renewable Energy & Net Metering) Regulations, 2020 and its amendments in 2022.

The Commission noted the submission of the petitioner. The CUF at 21% specified by the Commission is generally for ground mounded Solar PV projects. Usually, the CUF of the floating solar PV projects are much higher than the normative CUF at 21% specified by the Commission for ground mounded solar PV projects. The Commission has also noted that the CUF of the recently commissioned floating solar PV projects installed by NTPC Ltd at Kayamkulam is 28%.

The Commission is of the view that, duly considering the advancement of solar panel technology and shade free areas, the CUF of 28% already achieved by the NTPC can be easily achieved at the back waters of Willingdon Island also. The petitioner may enhance the target CUF duly considering the above aspects.

(3) Capital cost of the project

The paragraph-2 of the RfS- Qualifying Requirements for Bidders, the total capital cost of the project is ₹ 6.255 Crores for the capacity of 1.5 MWp, i.e the cost per MW as per the bidding documents is ₹ 4.17 Crores. The petitioner during the hearing submitted that, they had adopted the normative capital cost specified by the Commission vide the KSERC

(Renewable Energy & Net Metering) (First Amendment) Regulations, 2022.

The Commission noted the submission of the petitioner. As per the 1st amendment to RE Regulations, 2022, the normative capital cost of solar PV plant having capacity in the range of 101KW to 500 KW is ₹4.17 Crores/MW.

In the present case the solar PV capacity is 3 times higher than the capacity limit specified in the KSERC (Renewable Energy & Net Metering) (First Amendment) Regulations, 2022. However, in the present case, the procurement of power from the project is based on the competitive bidding with tariff as the bidding parameter. The bench mark capital specified has relevance only to fix various technical and financial parameters to be satisfied by the successful bidders. Considering these aspects in detail, the Commission has decided to approve the upper ceiling of Capital Cost of the project at ₹6.255 Crores for the 1.5 MWp floating solar projects of the petitioner at W Island.

(4) Earnest Money Deposit (EMD)

As per the Clause 11.1 of the amendments to the bidding guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Projects dated 25.09.2020, the EMD to be provided by the bidders is fixed by the procurer with an upper limit of 2% of the estimated capital cost of the solar PV project. However, in the bid documents, the petitioner M/s CoPA proposed to provide an EMD equal to 1% of the estimated cost of the project, but the rationale for reducing the EMD was not specified by the petitioner.

The Commission is of the view that the EMD may be fixed at 2% of the estimated cost in view of the bidding guidelines, to avoid fraudulent and financially incapable bidders from participating the bid.

(5) Performance Bank Guarantee (PBG)

As per the Clause 11.2 of the amendments to the bidding guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Projects dated 25.09.2020, the PBG to be provided by the bidder is limited to 4% of the estimated capital cost, in case the site is specified by the procurer. As per the revised Bid Documents dated 27.02.2023 the PBG to be provided by the selected bidders is specified at 10% of the estimated capital cost. However, the petitioner vide its letter dated 20.03.2023 submitted that the PBG to be provided by the successful bidder is limited to 4% of the capital cost.

The commission noted the revision proposed by the petitioner and decided to approve the same.

(6) Bid Evaluation

The Section- V of the RfS document deals with the Bid Evaluation and the selection of project. In the original draft Bid Document, the petitioner provides that the reverse auction will be conducted at the discretion of the CoPA among the pre-qualified bidders. However, the petitioner vide the letter dated 22.03.2023 has clarified that they shall conduct the reverse auction among the pre-qualified and the bidders whose financial bids are open.

The commission noted the revision proposed by the petitioner and decided to approve the clauses related to bid evaluation and selection of projects with the revision proposed as above.

(7) BOOT Period

As per the paragraph-26 of the RfS document, the ownership of the installation including the water body shall be vested with CoPA. The SPD will be a lessee only during the contract period. It is also specified therein that the project shall be transferred to CoPA after 25 years.

Similarly, the Paragraph-3(d), at the end of the paragraph, "the ownership of the project shall be transferred to CoPA after completion of entire PPA period".

Similar provisions are thereunder the Clause 3.1.1 of the draft PPA, which is extracted below;

“ 3. TERMS AND TERMINATION

3.1. Term of agreement

3.1.1 *The term of the Agreement shall commence on the Effective Date and shall continue for a period of twenty-five (25) years from the Commercial Operations Date (the "Term"), unless and until terminated earlier pursuant to the provisions of the Agreement. After the Term, the ownership of the System shall be transferred to the Purchaser free of cost.*”

The Commission has examined the provisions in the RfS and draft PPA regarding the transfer of the project after completion of the PPA period, as per the Solar Bidding Guidelines dated 3rd August 2017 and its amendments. The Commission noted that the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Projects dated 3rd August 2017 and its subsequent amendments does not provide for transfer of project to the procurer after the PPA period. However, the clause 5.1 of the Solar Bidding Guidelines dated 3rd August 2017 provides for operation of the plant after the expiry of the PPA with proper arrangements with land and infrastructure owning

agencies. The transfer of the project after the PPA term of 25 years is a deviation from the Solar Bidding Guidelines notified by the Central Government dated 3rd August 2017 and its amendments. The licensee has not sought approval of the Commission for the said deviation.

Hence, the Commission hereby direct to delete the provisions related to the transfer of the project after the term of the PPA, in the RfS and draft PPA.

(8) Battery Energy Storage System (BESS)

The technical specification of the proposed 1.5 MWp floating solar plant is included under Annexure- A to the RfS. The paragraph-3.11 of the Technical Specification deals with BESS, the relevant paragraph is extracted below;

“3.11 Battery Energy Storage System (BESS)

Battery Energy Storage System (BESS) of required power and energy capacity of about 300 kW/ 300kWh, designed as per the load data given by CoPA, including unit batteries, Battery Management System (BMS), matching with Power Conditioning System (PCS), Step-up transformers, LT & HT switchgear panels, Auxiliary supply system, DC & AC power cables, control and communication cables, along with RTU and related accessories for communication, HVAC system, fire-fighting system and other related accessories.”

The petitioner submitted that the BESS of 300 kW/ 300kWh has to be included in the Draft Bidding Document for storing the excess RE generation for the proposed solar project, due to the reason that the KSEB Ltd is not permitting grid connectivity and its directions to block the flow of power back to KSEB Ltd using protective relays. CoPA also submitted that the solar power purchase cost from the solar developer will not be economical with BESS.

The Commission has noted the proposal of the CoPA to provide BESS to store the excess solar power as part of the floating solar power plant. The Commission is of the view that the BESS at present shall result in increase in the tariff of the electricity generated from the proposed floating solar power plant. The present cost of storage systems does not make it economically viable to integrate it with small RE systems and the Commission is inclined to decline such proposals at this stage.

The Commission also noted that as per the provisions of the existing KSERC (Renewable Energy & Net Metering) Regulations, 2020 and its amendment dated 15.07.2022, there is no provision in the Regulation to facilitate banking facility by KSEB Ltd to the small distribution licensees including CoPA. However, the small distribution licensee like CoPA could not facilitate RE generation especially solar generation without the grid support of KSEB Ltd.

As per the records available with the Commission KSEB Ltd also is well short of meeting its solar RPO. Considering these factors in detail the Commission hereby permits CoPA to export the surplus energy during any time block to KSEB Ltd grid. KSEB Ltd shall account and pay for the energy exported by CoPA at the tariff approved/adopted for the 1.5MWp floating solar plant of M/s CoPA by the Commission. KSEB Ltd can account such energy against their RPO and CoPA will not be eligible to account the exported energy against their RPO. With such an arrangement, the proposal to install the BESS by the SPD in the RfS can be avoided with the direction to CoPA and KSEB Ltd. KSEB Ltd and CoPA shall modify the metering arrangement, if required, to facilitate the accounting and settlement of the above transaction, as decided above by the Commission. The Commission hereby direct M/s CoPA to delete the clauses related to the installation of BESS by the SPD.

The commission noted that all the other clauses in the bidding documents generally confirms to the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Projects' notified by the Central Government vide the Resolution dated 03.08.2017 and its subsequent amendments dated 14th June 2018, 3rd January 2019, 9th July 2019, 22nd October 2019 and 25th September 2020.

The Commission, after careful examination of the bidding documents hereby approve the RfS with the above observations. The petitioner shall also incorporate necessary changes in the draft PPA which form part of the bidding documents, based on the revisions/modifications approved in the RfS.

Prayer-3; Permit grid connectivity with major distribution licensee, M/s.KSEBL for exporting the excess generation during low demand as per the provisions of KSERC (Renewable Energy and Net Metering) Regulations, 2020 and its amendments in 2022 and Hon'ble Commission may issue appropriate orders for export, billing and accounting of Renewable Energy between major distribution licensee, M/s.KSEBL and Cochin Port Authority

12. The Commission has examined the prayer of the petitioner to permit them to export excess generation during low demand period to KSEB Ltd grid and issue appropriate orders for export, billing and accounting of renewable energy between M/s KSEB Ltd and M/s CoPA.

As per the paragraph 11(8) above, the Commission has permitted CoPA to export the surplus energy from the 1.5 MWp floating solar plant to KSEB Ltd grid, and it is also directed that, since there is no provision in the KSERC (Renewable Energy & Net Metering) Regulations, 2020 and its amendment dated 15.07.2022 for banking, KSEB Ltd shall absorb the entire surplus

energy and pay at the tariff to be approved/adopted for the 1.5MWp solar floating plant of CoPA.

13. The Commission on 07.02.2020 has notified the KSERC (Renewable Energy & Net Metering) Regulations, 2020 and also notified its first amendment in 15.07.2022, for the integrated development of power from RE sources. These Regulations provide for net metering of the prosumers having RE power plants with capacity up to 1MW, export, import, grid connectivity, transmission & wheeling, and accounting of RE capacity by the prosumers as well as other captive consumers and IPPs within the State of Kerala. At present these Regulations provides for banking of excess energy from RE projects of prosumers and the captive consumers only and not facilitate banking of excess energy of one distribution licensee with the other.

The Commission is also aware of the fact that considering the low plant load factor and infirm nature of RE projects especially Solar Power plants, the CoPA cannot fully adhere to RE generation for meeting its demand, without having adequate support from the incumbent distribution licensee KSEB Ltd.

Hence, before initiating the process for setting up any new RE projects, other than the project being approved in this Order, the top level management of CoPA may seek help from KSEB Ltd by addressing the need for grid support before the management of KSEB Ltd to arrive at an amicable solution among them including the terms and conditions and charges payable for availing banking and such other facilities. KSEB Ltd, as the incumbent licensee of the State may look into the issue positively and arrive a consensus on additional charges including grid support charges, banking charges, Open Access and other related charges etc. or any other appropriate commercial mechanism for facilitating export of power by CoPA to KSEB Ltd grid during low demand and/or reuse it during peak hours, night off peak hours and other periods as required by M/s CoPA.

After arriving a consensus between them , both the parties may approach the Commission with joint affidavit for formal approval.

Order of the Commission

14. The Commission has examined the petition filed by M/s CoPA dated 09.12.2022 for seeking the permission for re-tendering of 1.5MWp grid connected floating solar PV plant at W.Island as per the provisions of the Electricity Act,2003, the 'Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Projects' notified by the Central Government vide the Resolution dated 03.08.2017 and its subsequent amendments, other Rules, Regulations and Orders in force, hereby orders the following;
 - (1) Grant approval to M/s CoPA for inviting bids for the installation and supply of 1.5MWp Floating Solar Project under RESCO Model to be set up in W.Islands for 25 years through competitive bidding route as per

the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Projects notified by the Central Government vide the Resolution dated 03.08.2017 and its subsequent amendments.

- (2) Approve the draft bidding documents including RfS and draft PPA, with the observations cited under paragraph-11, above.
- (3) After concluding the bidding, M/s CoPA shall submit a proper petition for the adoption of the tariff under Section-63 of the EA-2003 and also submit the initialled PPA to be entered with selected bidder before the Commission for approval.
- (4) KSEB Ltd shall allow export of surplus power from this project and settle the transaction at the rate approved/adopted by the Commission as per (3) above and account such energy against its RPO. CoPA will not be eligible to account the energy exported to KSEB Ltd grid against its RPO.
- (5) KSEB Ltd and CoPA may arrive a mutual consensus regarding settlement of surplus power from future RE projects as discussed in paragraph 13 above and file a joint affidavit before the Commission for formal approval of the consensus reached between them.

The petition disposed off. Ordered accordingly.

Sd/-
Adv. A J Wilson
Member

Sd/-
B Pradeep
Member

Sd/-
T K Jose
Chairman

Approved for issue

Sd/-
C R Satheeshchandran
Secretary