

**KARNATAKA ELECTRICITY REGULATORY COMMISSION**

**No 16 C-1, Miller Tank Bed Area, Vasanthanagara, Bengaluru-52**

**Dated: 18<sup>th</sup> May, 2018**

**Present:**

Sri. M.K. Shankaralinge Gowda	Chairman
Sri. H.D. Arun Kumar	Member
Sri. D.B. Manival Raju	Member

In the matter of:

**“Determination of tariff and other norms in respect of new Solar Power Projects  
(Ground mounted and Solar Rooftop Photovoltaic Units)”**

**S/03/1**

**Preamble:**

1. As per Section 86(1)(e) of the Electricity Act, 2003, the State Electricity Regulatory Commissions are mandated to promote generation of electricity from renewable sources of energy. Accordingly, this Commission has been promoting the generation of power from renewable sources, by determining the feed-in-tariff (generic tariff) periodically, based on the normative financial and operational parameters for the control period as stipulated from time to time. This approach of the Commission has helped in creation of an enabling



environment for investment in RE projects in the State in order to get reasonable returns to the investors. As a result, the State has been able to achieve substantial capacity addition of Solar and Wind Power generation.

2. The Commission, in its Order dated 12<sup>th</sup> April, 2017, had determined a levelised tariff of Rs.4.36 per unit for megawatt scale solar projects (ground mounted), for the life of the projects, i.e. for 25 years. The tariff determined in this Order was applicable to the projects entering into Power Purchase Agreements (PPA) with the State's Distribution Licensees on or after 1<sup>st</sup> April, 2017 but before 1<sup>st</sup> April, 2018, and also for those projects for which the PPAs were entered into before 1<sup>st</sup> April, 2017, but were not commissioned within the Scheduled Commercial Operation Date and get commissioned during the period from 1<sup>st</sup> April, 2017 to 31<sup>st</sup> March,2018.
3. In respect of Solar Rooftop Photovoltaic Plants (SRTPV Plants) and small solar power projects, the Commission, in its Order dated 2<sup>nd</sup> May, 2016, had determined the generic tariff ranging from Rs. 7.08 to Rs. 5.20 per unit depending on the capacity of the SRTPV project and the subsidy availed by the developer. These rates were applicable for such projects entering into PPA and commissioned on or after 2<sup>nd</sup> May, 2016 and upto 31<sup>st</sup> March, 2018.



4. The above tariff was also made applicable to those SRTPV projects for which the PPA was entered into before 2<sup>nd</sup> May, 2016, but not commissioned within the Scheduled Commercial Operation Date and get commissioned during the period from 2<sup>nd</sup> May, 2016 to 31<sup>st</sup> March, 2018. The SRTPV plants coming under the above Order were entitled for net metering facility with the consumers falling under domestic, hospital and educational institutions categories (both LT & HT consumers) entitled for gross metering facility. Further, the installed capacity of the SRTPV plants was limited to 150% of the sanctioned load of the respective consumer's installation. The Commission, subsequently, in its Order dated 19<sup>th</sup> September, 2016, allowed one-time irrevocable option of either gross or net metering for the consumers under domestic, hospital and educational institutions categories, at the time of signing of PPA. It also decided to limit the installed capacity of all the SRTPV plants to 100% of the sanctioned load of the respective consumer's installation.
  
5. In respect of SRTPV plants installed by the distribution licensees on the roof tops of Government buildings under Government funding, the Commission, in its Order dated 11<sup>th</sup> November, 2016 allowed the offices and institutions located in such buildings to utilize the energy generated by the SRTPV plants and inject any



surplus energy into the grid without any actual payment by the concerned ESCOM.

6. Further, the Commission in its Order dated 15th September, 2017 allowed installation of a single or multiple SRTPV Plants on a common roof top by the consumers with the combined installed capacity of the plant/plants not exceeding the aggregate sanctioned load of all the installations in the building, on gross or net-metering basis as the case may be. Further, the Commission allowed installation of the SRTPV units on the basis of combined sanctioned load of all the installations in the premises with the attendant benefit of solar power generation made available equitably to all the consumers.
7. The new National Tariff Policy issued on 28th January, 2016, envisages future procurement of renewable energy (except from waste to energy plants) only through competitive bidding, as per the bidding guidelines issued by the Government of India. Pursuant to the said Policy, the Bidding Guidelines have been issued by the MNRE, Govt. of India on 3rd August, 2017, duly prescribing the standard bidding documents along with Models for Request For Selection (RFS), Power Purchase Agreement (PPA), Power Sale Agreement (PSA) etc.
8. In respect of power purchased from the small solar projects of the capacity of less than 5 MW and SRTPV projects of up to one MW, which are not covered under competitive bidding, the Commission has to determine tariff effective



from 01.04.2018. Accordingly, the Commission had issued a Discussion Paper in the matter, on 6th February, 2018, duly inviting comments / suggestions from the stakeholders, to be submitted to the Commission on or before 05th March, 2018.

9. In response to the said Discussion Paper, various stakeholders including some of the ESCOMs have submitted their written comments / suggestions. The Commission also held a public hearing in the matter on 11th April,2018 in the Court Hall of the Commission. The stakeholders present made their oral submissions before the Commission. The inputs provided by the stakeholders and the decisions of the Commission on the same are discussed in the subsequent paragraphs of this Order. The Commission has noted the communication dated 13.04.2018 of the Ministry of Power and New & Renewable Energy, Govt. of India to all SERCs that, they have to determine the Feed- in -Tariff for wind power projects of less than 25MW and solar power projects of less than 5 MW capacities which are not covered under the competitive bidding guidelines and that accordingly the Commission is proceeding to determine the generic tariff for such solar power projects.
10. The list of the stakeholders who filed their comments/suggestions and those who made oral submissions in the public hearing is given in the Annexure to this Order.



11. After considering the views and submissions made by the stakeholders and in exercise of powers conferred under Section 62(1)(a) read with Sections 64 and 86(1)(e) and other enabling provisions of the Electricity Act, 2003, the Commission proceeds to determine the generic tariff Order for ground mounted solar power projects of capacity upto five MW and the KW scale Solar Roof Top Photovoltaic Power Plants up to one MW capacity.

### ORDERS

1. The discussion and decisions on the operational and financial parameters, for determination of tariff for the above plants are given in the following paragraphs:

**1) Life of the Plant:**

The Commission had proposed to consider the life of the solar plants 25 years. No comments or suggestions have been received on this proposal.

**Commission's Decision:**

The Commission, in its earlier Orders has considered 25 years as the useful life of the Solar Power Plant. **The Commission, therefore, decides to adopt the useful life of the Solar Power Plants at 25 years, from the date of their commissioning.**

**2) Term and Tariff design:**

The Commission had proposed to adopt levelised tariff for a period of 25 years. No comments or suggestions have been received on this proposal.



**Commission's Decision:**

The Commission, in its earlier Orders has adopted the levelised tariff for a period of 25 years, in order to ensure certainty of revenue streams to the investors.

**The Commission, therefore, decides to adopt levelised tariff for a period of 25 years.**

**3) Degradation Factor:**

While the Commission had not separately proposed allowing any degradation factor, Adani Green Energy Ltd. has suggested that a degradation factor of 0.70% should be considered stating that the GERC has recognized this factor while the CERC was mistakenly considered it at 0.6% and that one of the Solar Module manufactures has declared it to be 0.70%.

**Commission's Decision:**

The Commission in its earlier Order has considered reduction of 0.5% of net generation as annual degradation from the fifth year onwards for MW scale projects. The rate adopted earlier cannot be reviewed based on only one manufacturer's unauthenticated pamphlet. **The Commission, therefore, decides to allow reduction of 0.5% of net generation as annual degradation from the fifth year onwards for MW scale projects.**



**4) Capacity Utilisation factor:**

The Commission had proposed as in its earlier Tariff Orders dated 02.05.2016 and 12.04.2017, to consider a CUF of 19% for solar power plants.

KBJNL has submitted that it is difficult for the ground mounted projects to achieve 19% and that in the case of SRTPV plants, CUF would not exceed 16% because of various constraints for such plants. Azure Power India Pvt. Ltd., has suggested that CUF for SRTPV plants should be 15% as adopted by SECI for all India tenders. Powergate Energy (Mysore) Pvt. Ltd., has suggested CUF at 17.5 per cent for SRTPV plants and CUF of 19 per cent for MW scale plants located in 'Sunny' areas. Ecosoch Solar Pvt. Ltd., has suggested CUF of 15% to 17% for SRTPV plants. Ravindra Energy Limited has suggested CUF in the range of 15-17%.

**Commission's decision:**

The Commission notes that the CUF of solar plants would vary based on the irradiation profile and other parameters of their locations. It is safe to assume that solar power Projects are taken up based on the initial studies of specific locations and their economic viability. Selection of locations with higher CUF would benefit the grid and also the investor. Commissioning of the Solar power plants in suboptimal locations, thereby resulting a lower CUF is not in the interest of the



stakeholders including the investors/developers. In any case while determining generic tariff, locational disadvantages of a few plants cannot be factored.

As per the data published by the MNRE and the capacity utilization factor for solar PV plants considered by the CERC and most of the SERCs in the country, the CUF is 19%.

**The Commission, therefore, decides to adopt a CUF of 19% for Solar Power plants (both ground mounted and SRTPV plants).**

**5) Capital Cost:**

The Commission had proposed to adopt a Capital Cost of Rs. 40,000/KW for SRTPV plants and Rs. 350 lakhs/MW for ground mounted solar power plants.

KBJNL has suggested a Capital Cost of Rs.510.48 lakhs including evacuation cost for ground mounted solar power projects. Renew Power Ventures Pvt. Ltd., has suggested a capital cost of Rs.430 Lakhs/MW including evacuation cost. Azure Power India Pvt. Ltd., has suggested for SRTPV plants a Capital Cost of Rs.70,000/kWp for less than 10 kW, Rs.65,000/kWp for 10-100 kW and Rs.60,000/kWp for above 100 kW capacities, while stating that the proposed cost of Rs.350 lakhs/MW for megawatt scale projects is too low, considering the increase in module cost and uncertainty in duties. Hero Future Energies Pvt. Ltd. has submitted that considering the proposed Safeguard Duty, the revised Capital Cost would be



Rs.472.00 Lakhs/MW for ground mounted solar projects and Rs.54,000/kWp for SRTPV plants. Powergate Energy (Mysore) Pvt. Ltd. has submitted that even without the proposed Safeguard Duty, the cost of good quality 5kW SRTPV plant is Rs.63,000/kWp and therefore, the current slab-wise Capital Cost should be continued. Eco Soch Solar Pvt. Ltd. has submitted that a Capital Cost of Rs.85,000/kWp to Rs.1,20,000/kWp for 1-5 kWp capacity SRTPV plant and Rs.70,000/kWp to Rs.85,000/kWp for 5-10 kWp should be considered. Ravindra Energy Ltd. has suggested that Capital Cost ranging from Rs.65,00 per KW to Rs.55,00 per kW should be considered for SRTPV plants with capacity ranging from 10kW to above 500 kW.

**Commission's Decision:**

The Capital cost as proposed is inclusive of evacuation infrastructure. Available literature including reports by international organisation like IRENA indicates rapid decline in module cost beginning from 2010 with costs declining 80% between the end of 2010 and the end of 2016; the decline was 18% between 2015 and 2016. They also reveal that module cost reductions are not only influenced by substantial capacity and deployment upsurge, but more recently because of improvements in the production process and efficiency gains associated with increased adoption of newer cell designs. With installations declining in other parts of the



world like Europe and decline in costs, India has emerged as a new market for solar project developers. Competitive pressures have led to further reduction in installation cost. The Commission takes note of these developments.

As against a Capital Cost of Rs.440 Lakhs per MW adopted in its Order dated 12.04.2017, in which it was noted that as per one of the latest market report the average module cost was at about Rs.23.488/Watt, the Commission had proposed to adopt a cost of Rs.350 Lakhs per MW (i.e. about 20% less).As per one of the market reports available on the internet (PVinsight) as on 02.05.2018, the average module cost is at about Rs.19.26/watt i.e. a reduction in module cost by about 18% as compared to the cost adopted earlier. As noted earlier, most of the developers have more serious concerns about the likely increase in module/ panel cost because of levy of Safeguard Duty and such other duties, than about the proposed Capital Cost. Presently there has been no imposition of such duties. Further, no documents like invoices, bills etc have been produced by any of the stakeholders to support their claim that the actual Capital Costs are higher than proposed. With the reduction in costs of other equipments and materials along with interest rates, the proposed Capital Cost of Rs.350 lakhs/MW is fair and reasonable for megawatt scale ground mounted solar power plants. Similarly, there is reduction in the Capital Cost of SRTPV plants since the last tariff revision. As



noted earlier, the Commission has allowed installation of multiple SRTPV plants on common roofs by multiple consumers and thereby considering slab-wise Capital Cost for SRTPV plants is longer relevant. The argument of some of the developers that the cost of smaller capacity SRTPV plant would be higher for lack of economies of scale is not acceptable because, it is not as if the panels / modules or other equipments are manufactured for each such project.

**Accordingly, the Commission hereby decides to adopt a capital cost of Rs.350 Lakhs per MW for MW scale projects and Rs 40,000 per kW for kW scale SRTPV projects.**

**6) Operation & Maintenance Cost:**

The Commission had proposed to allow O&M expenses at 1% of the Capital cost with an annual escalation of 5.72%.

Adani Green Energy Ltd. has suggested that O&M cost should not be linked to the Capital Cost as held by the Hon'ble ATE and it should be the same as allowed in the earlier generic Tariff Order with an annual escalation of 5.72%, i.e. Rs.7.823 Lakh/MW. KBJNL has suggested that O&M expenses should be at least Rs.6 Lakh/MW with annual escalation of 5.72%. Renew Power Ventures Pvt. Ltd., has suggested that as earlier the O&M expenses should be at 1.7% of the Capital Cost i.e. Rs.7.3 lakhs with annual escalation of 5.72%. Powergate Energy (Mysore) Pvt. Ltd., has suggested that for SRTPV plants, O&M expenses should be allowed



at 2.5% of the current Capital Costs. Eco Soch Solar Pvt. Ltd. has suggested the expenses at 2% of the Capital Cost of the SRTPV plants.

**Commission Decision:**

The Commission notes that many of the stakeholders have submitted that proposed O&M expenses at 1% of the Capital cost is too low as the O&M expenses have not reduced to the extent of reduction in Capital Cost. **The Commission, therefore, decides to allow O&M expenses at Rs.600/kW SRTPV plants and at Rs.4.5Lakh/MW for ground mounted Megawatt Scale solar plants, with an annual escalation of 5.72%.**

**7) Interest and Tenure of Loan:**

The Commission had proposed the normative tenure of long term loans as 12 years and to allow Interest on loan at 9% per annum.

KBJNL has suggested for retention of interest rate at 11%. Renew Power Ventures Pvt. Ltd., has suggested that the interest rate on term loan should be considered at 9.97% as per the CERC Regulations, 2017. Azure Power India Pvt. Ltd. has submitted that the proposed 9% rate is too low. Hero Future Energies Pvt., has requested for considering a rate of atleast 9.5% p.a. Powergate Energy (Mysore) Pvt. Ltd., has



suggested a rate of 11.25% with loan tenure of 7 years. Ravindra Energy Ltd. has suggested interest rate in the range of 11% to 12% in respect of SRTPV projects.

The commission notes that, with effect from 22.01.2018, Indian Renewable Energy Development Agency (IREDA) has revised the interest rates, which vary from 9.55% to 10.75% for wind projects, with a reduction of 25, 20 and 15 base points for grades 1 to 3 respectively with external grading.

Similarly, PFC has revised the rates of interest with effect from 17.04.2018, which varies from 9.60% to 10.00% for State Sector and 9.50% to 11.00% for private sector with rating IR – 1 to IR-5 for RE sources other than Biomass Power Plants. For Biomass Power Plants it varies from 10.50% to 11% for State Sector and 11.00% to 12% for Private Sector.

As per the latest data, with effect from 01.05.2018, the MCLR of SBI is ranging between 8.15% to 8.35% for loan tenure varying from one year to three years. Considering 200 bps above MCLR, the maximum interest rate would be 10.35%.

The above facts indicate that the rate of interest on domestic loan for solar projects would be in the range of 9.50% to 11.00%, depending upon the credit ratings of the solar power generators and the average works out to 10.25%. The CERC in its Order dated 28.03.2018 has considered interest on term loan at 9.97%.



**Commission's Decision:**

**Therefore, the Commission decides to adopt interest rate of 10% per annum and consider the tenure of loans as 13 years.**

**8) Working Capital:**

The Commission had proposed to consider one months' receivables as Working Capital.

Renew Power Ventures Pvt. Ltd. and Adani Green Energy Ltd., have requested that the working capital should be retained at two months' receivables. Azure Power India Ltd., has suggested it should be 5 months' receivables considering payment delays.

**Commission's Decision:**

The Commission notes that a reasonable working capital has to be allowed for enabling the investor to sustain his operations. In respect of SRTPV plants the need for Working Capital would not be as pressing as the megawatt scale projects.

**The Commission, therefore, decides to allow one month's receivables for SRTPV projects and two months' receivables for megawatt scale ground mounted Solar Power Projects.**

**9) Interest on Working Capital:**

The Commission considering that the interest rates are on a declining trend, had proposed to consider interest on working capital at 10%.



Adani Green Energy Ltd., has suggested that the rate should be 11.75%. Renew Power Ventures Pvt. Ltd. has suggested a rate of 10.97%, while Azure Power India Ltd., submits that the proposed rate of 10% is low.

**Commission decision:**

The Commission notes that the CERC in its recent Order dated 28.03.2015 has considered 10.97% as the interest on Working Capital.

**The Commission, therefore, decides to adopt 11% per annum as the rate of interest on working capital.**

**10) Depreciation:**

The Commission had proposed to allow depreciation at 5.83% of the capital cost excluding the land cost, for the first 12 years and 1.54% for the remaining 13 years. The Commission notes that the CERC in its RE Tariff Regulations on determination of tariff for renewable energy sources of 2017, has specified that the salvage value of the asset shall be considered as 10% and depreciation shall be allowed upto maximum of 90% of the Capital Cost of the asset. That a depreciation rate of 5.28% per annum be considered for first 13 years and the remaining depreciation be spread during the balance useful life of the RE projects considering the salvage value of the project as 10% of the project cost.



**The Commission, therefore, decides to consider the depreciation on 90% of the capital cost (excluding land cost) at rate at 5.38% for the first 13 years, for recovery of debt, with the remaining depreciation spread equally over the balance useful life of the projects.**

**11) Return on Equity:**

The Commission had proposed RoE of 14%.

Adani Green Energy Ltd., has requested for a RoE of 16% considering the higher risk in RE projects. KBJNL has also suggested the RoE at 16% as reduction will impact investment. Renew Power Ventures Pvt. Ltd. while agreeing with the RoE of 14% has requested it to be grossed upto MAT rate for first 10 years (i.e. at 17.58%) and prevailing corporate tax for the remaining 15 years (i.e. at 21.41%). Azure Power India Pvt. Ltd. has submitted that 14% is too low. Hero Future Energies Pvt. Ltd. has suggested RoE of 16%.

**Commission's Decision:**

The Commission notes that the prevailing CERC Regulation specify RoE of 14% and the Commission has adopted such rates in other Generic Tariff Orders.

**The Commission, therefore, decides to allow RoE of 14%.**



**12) Discount Rate:**

Since the financing of capital cost is based on 70% debt and 30% equity, the Commission had proposed that it would be appropriate to reckon weighted average cost of capital (WACC) as the discount factor to arrive at the levelised tariff.

No comments or suggestions have been received on the proposal.

**Commission's decision:**

**The Commission, therefore, decides to confirm the proposal.**

**13) Auxiliary consumption:**

The Commission, had proposed to consider auxiliary consumption of 0.25% of the gross generation for MW scale projects and not allow any auxiliary consumption for SRTPV plants.

Adani Green Energy Ltd. has suggested that 0.50% of the total energy generated should be considered as auxiliary consumption for megawatt scale projects as in other States.

**Commission Decision:**

The Commission notes that the CERC in its draft terms and conditions for determination of tariff for RE Sources of power generation for FY18, has specified auxiliary consumption of 0.25% of the gross generation for Solar PV Plants. **The Commission, therefore, decides to allow auxiliary consumption of 0.25% for MW solar photovoltaic plants and not to allow any auxiliary consumption for SRTPV plants.**



**14) Other Issues for kW projects (SRTPV plants):**

i) The Commission in its earlier Order has allowed consumers to install SRTPV units with capacity equivalent to the sanctioned load of the respective consumer's installation based on gross or net-metering. The Commission had proposed to allow installation of SRTPV plants with capacity equivalent to 75% of the sanctioned load of the respective consumers' installation based on gross or net-metering.

The stakeholders including CESC have requested the Commission to allow installation of SRTPV plants with capacity equivalent to 100% of the sanctioned load.

**Commission's Decision:**

The Commission notes that limiting the installed capacity of the SRTPV plants to 75% of the sanctioned load of the consumer would make such investments financially unviable and unattractive to the consumers. **The Commission therefore, decides to allow installation of SRTPV with capacity equivalent to 100% of the sanctioned load of the respective consumer's installation.**

ii) The Commission in its Order dated 11.11.2016, has allowed installation of SRTPV plants on the Government buildings by the ESCOMs under funding from the Government, with the energy from such plants being allowed to be utilised by the concerned office/institution on net metering basis and inject any surplus energy into



the grid at APPC rate to be adjusted by the ESCOM towards maintenance of the SRTPV plants without any actual payment. This scheme was proposed to be continued but with the tariff as determined by the Commission instead of APPC rate. CESC has requested the Commission to retain the APPC rate to be adjusted by the ESCOMs towards maintenance of SRTPV.

**Commission's Decision:**

The Commission notes that with generic tariff and the bid discovered tariff for RE sources falling much below the APPC, allowing the ESCOMs to account the notional tariff payable towards the surplus energy injected at a higher rate would have an adverse impact on the retail tariff to other consumers. **The Commission therefore decides to continue to allow the scheme but with the tariff for any surplus energy injected as determined by the Commission in this Order.**

iii) The Commission in its Order dated 15.09.2017 has allowed installation of multiple SRTPV units or single SRTPV unit with the combined installed capacity in a single premises not exceeding the total sanctioned load of all the consumers in that premises at a tariff equivalent to APPC or Rs.4 per unit, whichever is less. The Commission in the Discussion Paper had proposed to continue the scheme but with the tariff as determined by the Commission.

The Commission has not received any specific comments or suggestion on this issue.



**Commission's Decision:**

The Commission therefore decides to continue the scheme but with 90% of the tariff as determined by the Commission in this Order.

2. With the above parameters considered, the applicable tariff works out as follows:

**(a) MW scale Solar Power Projects:**

<b>Parameters for Megawatt scale solar projects</b>	
Cost/MW- Rs. Lakhs	350
Debt: Equity	70:30
Debt-Rs. Lakhs	245
Interest charges on Debt-%	10%
Debt Repayment in Yrs.	13
CUF	19%
Equity- Rs. lakhs	105
ROE-%	14%
Auxiliary consumption	0.25%
O & M expenses in Rs. lakhs	4.5
O & M.Escalation p.a.	5.72%
WC interest (two months' receivables)	11%
Depreciation in %	5.38%p.a for first 13 years and remaining depreciation spread equally over balance years of the plant useful life.



**(b) kW scale SRTPV projects(1 to 1000kW):**

<b>Parameters for Kilowatt scale</b>	
Cost/KW- Rs. Lakhs	1 to1000 kW-Rs.40000 per kW
Debt: Equity	70:30
Debt-Rs. Lakhs	0.28
Interest charges on Debt-%	10 %
Debt Repayment in Yrs.	13 Years
CUF	19%
Equity- Rs. lakhs	0.12
ROE-%	14%
Auxiliary consumption	00
O & M expenses in Rs. lakhs	0.006
O & M Escalation p.a.	5.72%
WC interest (one month's receivables)	11%
Depreciation in %	5.38%p.a for first 13 years and remaining depreciation spread equally over balance years of the plant's useful life.

**3. Applicability of tariff determined:**

The Commission in its earlier generic tariff Orders had stated that the generic tariff determined for a particular RE project was applicable for the projects commissioned within a review period. The Commission always intended that the 'commissioning of a project' means 'commercial operation of a project' with either



sale to an ESCOM under a PPA or sale to third person under open access, by actual injection of energy. However, the approved standard formats of PPA, have not defined the word 'commissioning' but only the words 'commercial operation date'. Therefore, for avoiding any uncertainty, instead of the word 'commissioning', the word 'commercial operation' is specified in this Order.

4. For the forgoing reasons, we pass the following:

**ORDER**

- (i) The Commission, hereby determines the generic tariff, for grid connected megawatt scale solar power projects of less than 5MW capacity at Rs.3.05 [Three Rupees five paise] only per unit; and for grid connected Solar Rooftop Photovoltaic projects of 1MW and below at Rs.3.56 [Three Rupees fifty-six paise] only per unit (without capital subsidy) and at Rs.2.67 [Two Rupees sixty seven paise] only per unit (with capital subsidy);
- (ii) The above tariff shall be applicable to all such new solar power projects for which PPAs are entered into and approved by the Commission after the date of issue of this Order, that achieve commercial operation on or after 01.04.2018;
- (iii) The tenure of the PPA, shall be for life of the solar power projects i.e., twenty-five (25) years;



- (iv) The generic tariff determined in this Order shall also be applicable for payment towards any banked energy purchased by the Distribution Licensees and in such other cases as specified in the relevant orders of the Commission;
- v) All the other issues not covered under this Order, shall be governed by the respective Regulations and Orders issued by the Commission and PPAs signed by the parties;  
and
- v) This Order shall be in force with effect from 1<sup>st</sup> April, 2018 and till 31<sup>st</sup> March, 2019.

**This Order is signed and issued by the Karnataka Electricity Regulatory Commission on this 18<sup>th</sup> day of May, 2018.**

Sd/-

(M.K. SHANKARALINGE GOWDA)

**CHAIRMAN**

Sd/-

(H.D. ARUN KUMAR)

**MEMBER**

Sd/-

(D.B. MANIVAL RAJU)

**MEMBER**



**Annexure**

**LIST OF STAKEHOLDERS WHO HAVE SUBMITTED COMMENTS / SUGGESTIONS  
ON THE DISCUSSION PAPER DATED 6<sup>TH</sup> FEBRUARY, 2018 FOR DETERMINATION OF TARIFF  
FOR SOLAR PV POWER PLANTS**

Sl.No.	Name and Address
1	The Associate Vice President, Adani, Gujarat
2	The Managing Director, KBJNL, Bangalore
3	The COO, ReNew Power, Ventures Private Limited, Haryana
4	Azure Power India Private Limited, New Delhi.
5	The General Manager (Coml), CESC , Mysore.
6	Hero Future Energies Private Limited, New Delhi.

**LIST OF PERSONS WHO PARTICIPATED IN PUBLIC HEARING ON 11.04.2018:**

1	Sri A.C. Eswar, Microsun Solar, Bengaluru
2	Sri Shiva Prasad Shanthanagowdar, KRESHMA
3	Sri M.T. Kesari, Power Energy (Mysore) Pvt. Ltd.
4	Sri Joseph N, Ecosoch Solar Pvt. Ltd.
5	Sri Yash Marwari, PRDC Pvt. Ltd.
6	Sri Piyush Kapoor, U-Solar Pvt. Ltd.
7	Sri Prashanth, Tata Power Solar
8	Sri Srinivasan Sekar, Terracura Solutions Pvt. Ltd
9	Shanthan Lath, Ravindra Energy Ltd.
10	Sri Viswanath. C., Gurutva Energies Pvt. Ltd.