

KARNATAKA ELECTRICITY REGULATORY COMMISSION
No. 16 C-1, Miller Tank Bed Area, Vasanthanagara, Bengaluru-560052

Dated 09.07.2025

Present:

Shri P. Ravi Kumar	...	Chairman
Shri H.K. Jagadeesh	...	Member (legal)
Shri Jawaid Akhtar	...	Member

In the matter of:

Determination of tariff and norms in respect of Solar Power Projects (including Distributed Solar Photovoltaic (DSPV) Plants with net-metering/gross metering) for the period from 1st July 2025 to 30th June 2026.

ORDER

a) Preamble:

1. The growing demand for sustainable and clean energy has led to a significant focus on solar power projects. As part of the commitment to renewable energy promotion, it is imperative to evaluate the current landscape, challenges, and opportunities associated with solar power deployment. The Discussion Paper dated 18.03.2025 was issued to seek the stakeholders' insights and recommendations for enhancing solar energy adoption.
2. The regulatory environment plays a critical role in shaping the development of solar projects. The key provisions under the Electricity Act, 2003, relevant to solar power include:
 - a) Section 86(1)(e): Mandates the promotion of renewable energy by State Electricity Regulatory Commissions (SERCs).

- b) Section 61: Provides guidance on setting terms and conditions for tariff determination.
 - c) Section 62(1)(a): Empowers regulatory commissions to determine the tariff for supply of electricity by generating companies.
 - d) Section 64: Prescribes the procedure for tariff determination.
3. As per Section 61 (a) of the Electricity Act, 2003, the Commission is guided by the Regulations issued by the CERC in the matter of transmission and generation tariffs. In so far as tariff for solar PV projects is concerned, the CERC Regulations indicate the parameters only in respect of project specific cases. Hence, for the purpose of determining the generic tariff of solar PV projects, the Regulations issued by the CERC are not being considered and wherever necessary they are being taken as guiding factors.
4. The Commission, in its Tariff Order dated 11.06.2024, had determined specific tariff rates for solar power projects, including solar rooftop photovoltaic projects, for FY25. These rates were applicable for the entire life of the projects (25 years) and were effective from April 1, 2024 to March 31, 2025. The Commission had set levelized tariff rates for Grid Connected solar power projects applicable to projects commissioned on or after April 1, 2024 as detailed below:

SL. No.	Particulars	Tariff per Unit
1	MW scale Solar Power Projects, bench mark tariff	Rs. 3.04
2	Solar power projects with BESS, bench mark tariff	Rs. 5.66
3	SRTPV of 1 kW up to the sanctioned load (excluding domestic 1 kW to 10 kW)	Rs. 3.20
4	SRTPV of 1 kW to 10 kW for domestic consumers without capital subsidy	Rs. 3.79
5	SRTPV under PM Surya Ghar Muft Bijli Yojana with capital subsidy	
	a. 1 kW up to 2 kW	Rs. 2.25
	b. 2 kW up to 3 kW	Rs. 2.43
	c. above 3kW	Rs. 2.62

The applicability of the above Order dated 11.06.2024 was extended up to 30.06.2025 vide the Commission's Order dated 16.06.2025.

5. The State has an installed solar power capacity of 5666.22 MW under ground-mounted PPA mode, and 754.89 MW rooftop photovoltaic plants as on 31.05.2025. The progress achieved in SRTPV is considerably low.
6. In response to the said Discussion Paper issued by the Commission, various stakeholders have submitted their written comments/views/suggestions. The Commission has considered some of the suggestions relating to Operational and Financial Parameters, for determining the tariff and has also noted other views/suggestions submitted by the stakeholders.
7. A public hearing was also held on 06.06.2025 to enable the stakeholders to submit their views/opinion in the matter. The stakeholders who have participated in the hearing, made their oral submissions before the Commission. The list of the stakeholders who have filed their comments/suggestions and those who made oral submissions in the public hearing is given in the Annexure, to this Order.
8. The Stakeholders, during the Public hearing, requested the Commission to allow implementation of solar panels on the elevated structures on the ground with net-metering facility as allowed under PM Surya Ghar Muft Bijali Yojana by MNRE. The Commission, in its Order dated 11.06.2024 has allowed for all non-residential consumers including Apartment Owners' Associations to implement the SRTPV plants on their rooftops of the building and also on the roof of the carport. It was submitted by the stakeholders that, Bi-facial solar PV modules installed on elevated structures will not only act as roof in case of car ports, storage sheds etc., but also generates additional solar energy. Hence, un-necessary extra costs spent for creation of roof for mounting solar PV modules shall have to be relooked by the Commission. A few of the Stakeholders have requested the Commission to allow facade-integrated solar panels on the walls of the buildings as part of solar PV power generation for net/gross metering purposes.

9. After duly considering the written and oral submissions made by the stakeholders, the Commission, in exercise of the powers conferred under section 62 (1)(a), read with section 64 & 86 (1) (e) and other enabling provisions of the Electricity Act, 2003 hereby passes this Order.

b) Renaming of “Solar Roof Top PV plants”:

Stakeholders' Proposal:

There is a large scope for addition of solar capacities into the grid with the developments of latest solar technology. The Commission has also proposed for Virtual Net Metering (VNM) and Group Net Metering(GNM) in the Discussion Paper. The Stakeholders in their written submissions and also through oral submissions in the Public hearing, have welcomed the introduction of Virtual Net Metering (VNM) and Group Net Metering(GNM) arrangement.

Commission's Decision:

In order to encourage and utilize the latest solar technologies, and as requested by the Stakeholders, the Commission decides to allow VNM & GNM.

The Commission also allows for installation of solar power plants on elevated structures on the ground & installation of facade-integrated solar panels on walls of the buildings within the premises. The details of these solar projects are dealt with, in relevant paras of this Order.

Now, in light of the above, the installation of SRTPV under net metering/gross metering arrangements, is not just limited to Roof of the buildings but now extended to ground mounted Distributed Solar PV projects with elevated Structures, facade-integrated solar panels on the walls within the premises and also VNM & GNM. Hence, the Commission decides to rename “Solar Roof Top PV (SRTPV) plants” as **“Distributed Solar PV (DSPV) Plants”** with net metering/gross metering arrangements, applicable from the date of the effect of this Order.

The word "SRTPV Plants" in the relevant Commission's Orders shall be read as "Distributed Solar PV Plants" with Net Metering/Gross Metering from the date of the effect of this Order.

c) Implementation of Facade-integrated solar panels on walls of the buildings, solar panels on roof of the building and on the elevated structures from the ground level up to the sanctioned load limit within the premises:

Commission's Decision: The Commission by considering the request of the Stakeholders, decides to allow installation of Facade-integrated solar panels also on the walls of the building, solar panels of mono-facial/ bi-facial on roof of the buildings and also on the elevated structures on ground up to the sanctioned load under net-metering/gross metering, subject to adherence to the Building Bye-laws and conforming to relevant Safety Regulations/Standards, by the consumers. The elevated structures must have minimum ground clearance of 8 (eight) feet at the lowest point, within the premises.

d) Virtual Net Metering (VNM) and Group Net Metering (GNM):

Commission's Decision: The Commission decides to allow Virtual Net Metering and Group Net Metering arrangement as detailed below:

i) Virtual Net Metering Arrangement(VNM):

- 1) VNM means an arrangement whereby the entire energy generated from a Solar plant with or without Battery Energy Storage System installed on Roof of the building /ground within the area of distribution licensee, is exported to the grid and the energy exported is adjusted in more than one electricity service connection(s) of the participating consumers belonging to the same consumer category located within the area of supply of the distribution licensee.

- 2) A group of two or more consumer(s) from the same consumer category may set up solar plant to offset the electricity consumption of more than one electricity service connection(s) of participating consumers located within the area of supply of the Distribution Licensee.
- 3) Domestic Consumers, group housing societies, institutions run or managed by charitable Institutions/organisations, government buildings including schools, buildings belonging to local authorities shall only be eligible to install Solar plants under virtual net metering arrangements.
- 4) The minimum size of solar plant that can be set up under virtual net metering arrangements shall be 5 kW. The maximum size shall not exceed the combined sanctioned load or contract demand of all the participating consumers.
- 5) The distribution licensee shall undertake meter reading of the Generation Meter as per regular billing cycle. The readings of the installations of the participating consumer(s) shall also be carried out on the same date i.e. Generation Meter reading date.
- 6) The energy generated from the solar plant shall be credited in the monthly electricity bills of each participating consumer(s) as per the ratio of procurement from solar plant indicated in the Power purchase agreement entered into between the participating Consumer(s) and the distribution licensee.
- 7) Where the export of units during any billing period exceeds the import of total units considering the participating consumer(s), the excess energy remaining at the end of each month shall be purchased by the Distribution Licensee at 75% of generic tariff applicable to ground mounted Solar Power Projects/ Distributed solar PV power projects as the

case may be, as determined by the Commission from time to time and amount settled to the Consumers at the end of a billing month.

- 8) For any late payments by the Distribution Licensee, Late Payment Surcharge shall be applicable as per the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022 as amended from time to time.
- 9) The electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the similar time blocks in the same billing cycle of the ToD Consumer and normal time block for Non-ToD Consumer.
- 10) The Consumer(s) shall have the option to change the share of credit of electricity from solar plant by submission of fresh application for change in the procurement ratio from solar plant once at the beginning of the financial year with an advance notice of two (2) months.
- 11) The consumers opting for VNM, shall install smart meter (s) at their cost, both at generation point and participation consumers' end.
- 12) VNM arrangement serves as an alternative to conventional Open Access and is subject to applicable Open Access charges as per the relevant Regulations/Orders of the Commission issued from time to time. However, the Commission decides to exempt consumers from these charges when the energy generated and consumed is within the same distribution transformer/11kV feeder.

ii) Group Net Metering (GNM):

- 1) GNM means an arrangement whereby surplus energy from a Solar plant with or without Battery Energy Storage System installed on Roof of the building /ground within the premises at any one of his installations

located within the area of distribution licensee is exported to the grid and the exported energy is adjusted to electricity consumption of more than one electricity service connection(s) of the same name and same category of consumer located within the area of supply of the distribution licensee.

- 2) Consumers of all categories shall be allowed to install Solar plant under group net metering arrangement-
- 3) The minimum size of Solar plant that can be set up under group net metering shall be 5 kW, while the maximum size shall not exceed the combined sanctioned load or contract demand of the consumer's installations.
- 4) The service connection where the solar plant is located shall consume at least 20% of the total energy generated by the solar plant in a billing month. The equivalent units (out of 20% of generated solar power), which are not consumed at source connection, shall be considered as lapsed energy.
- 5) The distribution licensee shall undertake the meter readings as per regular billing cycle. The readings at the generation point and the consumer's installations shall be carried out on the same date.
- 6) The energy generated from Solar plant shall be credited in the electricity bill of each participating connection(s) of the consumer, for each billing cycle, as per the priority indicated in the power purchase agreement executed with the distribution licensee.
- 7) Where the export of units during any billing period exceeds the combined import of units from the grid, such surplus units injected into the grid shall be purchased by the Distribution Licensee at 75% of the generic tariff applicable to ground mounted Solar Power Projects/ Distributed solar

power projects as the case may be determined by the Commission from time to time and amount settled to the Consumer at the end of billing month.

- 8) For any late payments by the Distribution Licensee, Late Payment Surcharge shall be applicable as per the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022 as amended from time to time.
- 9) The Consumer shall have the option to change the share of credit of electricity from solar plant to his installations by submission of fresh application for change in the procurement ratio from solar plant once at the beginning of the financial year with an advance notice of two (2) months.
- 10) The consumer opting for GNM shall install smart meter (s) at his cost, both at generation end and consumer metering point(s).
- 11) The electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the similar time blocks in the same billing cycle of the ToD Consumer and normal time block for Non-ToD Consumer.
- 12) GNM arrangement serves as an alternative to conventional Open Access and is subject to applicable Open Access charges as per the relevant Regulations/Orders of the Commission issued from time to time. However, the Commission decides to exempt consumers from these charges when the energy generated and consumed is within the same distribution transformer/11kV feeder.

The Commission directs BESCOM to submit format of agreements and SOP for VNM & GNM within 15 days of this Order, for the Commission's approval.

e) Elimination of PPA execution for Solar PV Plants with net metering/ gross metering for Domestic Consumers:

The Stakeholders in their written submissions and during the Public hearing have requested the Commission to do away with the PPA for ease of the implementation process of Solar PV Plants/projects with net /gross metering. BESCOM has submitted that MNRE has insisted for removal of the agreement process for residential Solar PV plants under PM Surya Ghar Muft Bijali Yojana by suitably modifying the application.

Commission's Decision:

The Commission notes that the terms and conditions for implementation of distributed Solar PV Plants with net /gross metering can be included in the online application itself for ease of implementation process. Hence, the Commission decides to eliminate the requirement of PPA to be executed between the Consumer and the ESCOMs for the Distributed Solar PV Plant capacity with net/gross metering arrangement for LT Domestic Consumers upto 150 kW.

The Commission directs the Distribution Licensees to modify the online application format so that all the terms and conditions for implementation of Distributed Solar PV Plants with net /gross metering shall be a part of online application itself.

f) Net-metering facility to Open Access Consumers:

The Commission, in its Order dated 18.07.2022 has not allowed the facility of Net Metering to the SRTPV plants of the consumers availing power from the other sources/captive sources through Open Access mechanism. Such

consumers were allowed to opt for Gross Metering arrangement or opt for establishing Captive Plant for self-consumption. The Consumers participating in the public hearing have requested the Commission for allowing net metering to the Open access consumers also.

Commission's Decision:

The Commission notes that, many entities have envisaged for increasing their RE consumption towards initiatives of GoI for achieving a 50% cumulative electric power capacity from non-fossil fuel sources by 2030 and hence decides to allow the open access consumers to opt for Gross Metering/Net Metering arrangement or may opt for establishing Captive Plant for self-consumption. In such cases, any excess energy injected to the grid from net metering arrangement from open access consumer in a billing month shall be at no cost to ESCOMs.

g) Continuation of PPA for change in location of Distributed Solar PV Plants with net-metering/gross metering as per PPA

The Consumers requested the Commission to allow shifting of their Solar PV Plant with net-metering/gross metering as per PPA, to their new location and to continue the same PPA without any change in the terms and conditions.

Commission's Decision:

If the Consumer who has invested in Solar PV Plants with net-metering/gross metering in a place, decides to shift his Solar PV Installation to a new location, the Commission will allow such consumer to shift the solar PV installation to a new place in the jurisdiction of the same Distribution Licensee and continue the same PPA for remaining PPA term, subject to limiting the solar plant capacity to the original sanctioned load, at new location.

h) Facilities for submission of online application/timelines to be followed by

Distribution Licensees and the consumers:

The execution of PPA for LT Domestic Consumers upto 150 kW is eliminated from the date of effect of this Order. The submission of online application/timelines for 1kW to 150 kW and for above 150 kW up to the sanctioned load is as detailed below:

A) For 1 kW to 150 kW:

Activity	Responsibility	Timeline
Submission of Application which includes PPA (PPA not applicable for LT Domestic consumers up to 150 kW) . No separate PPA is required to be executed. The submission of application is deemed to be the approval to commence the work.	Consumer/ Distribution Licensee	Zero Date
Directions: ESCOMs are directed to provide facilities for submission of online application. The PPA and letter of approval to execute the work shall form part of the application. The consumer will upload the work completion report within the timelines.		
Online uploading of Work Completion Report by the Consumer.	Consumer	150 (one hundred and fifty) days from the date of uploading/ submission of application.
Inspection by ESCOM officials for commissioning the project, after receipt of work completion report from the consumer.	Distribution Licensee	Within 5 (five) working days from the receipt of work completion report, after ensuring satisfactory completion of work. If the plant is not commissioned within 5 days from the date of work completion report, the concerned officer shall be liable to pay penalty of Rs.1000 per day, till the date of commissioning, to the applicant. After five days of work completion, in case the plant is not commissioned, the consumers are entitled to deemed generation benefit.
Commissioning of Distributed Solar PV System in case work completion is delayed by the Consumer	Consumer/ Distribution Licensee	In case of delay of more than six months, the tariff payable will be as per the terms of PPA/application.
Billing Process	Distribution Licensee	30 days from the date of commissioning of the Solar plant.
Activity	Responsibility	Timeline

B) For above 150 kW up to Sanctioned load

Submission of Application online.	Consumer	Zero Date.
Acknowledgment of Application by distribution licensee (ESCOM).	ESCOM	Within 03 (three) working days from zero date.
Site verification/ technical Feasibility & Issuance of Letter of Approval /Rejection of application.	ESCOM	Within 10 (ten) working days from the date of acknowledging the application.
Execution of PPA (Including countersignature by the controlling officer up to and inclusive of 1000 KW DSPV projects).	ESCOM & Consumer	Within 5 (five) working days from the date of issuance of Letter of Approval.
Submission for approval of the PPA to the ESCOM, less than 1000kW and to the Commission, for more than 1000 kW.	ESCOM	Within 07 (Seven) working days from the date of execution of PPA.
Submission of Works Completion Report by the Consumer.	Consumer	150 (one hundred and fifty) days from the date of execution of PPA.
Inspection by ESCOM officials for commissioning the project, after receipt of work completion report from the consumer.	ESCOM	<p>Within 5 (five) working days from the receipt of work completion report, after ensuring satisfactory completion of work.</p> <p>If the plant is not commissioned within 5 days from the date of work completion report, the concerned officer shall be liable to pay penalty of Rs.1000 per day, till the date of commissioning, to the applicant.</p> <p>After five days of work completion, in case the plant is not commissioned, the consumers are entitled to deemed generation benefit.</p>
Commissioning of Distributed Solar PV System in case of delay in submission of work completion report by the consumer.	Consumer/ ESCOM	In case of delay of more than 6 months, the tariff payable will be as per the terms of PPA.
Billing Process	ESCOM	30 days from the date of commissioning of the Solar plant.

i) Metering facility to DSPV Plants:

The Stakeholders during the public hearing requested to remove the solar generation meter. BESCOM and KREA suggested that the generation meter acts as a standby meter for measuring the solar generation in the event of meter fault and hence has to be provided by the consumer.

Commission's Decision:

Considering the requests of the Stakeholders, the Commission decided to allow the consumer to provide at his option a static/digital meter (existing/new) for solar generation with an add-on communication module

as per the Karnataka Electricity Regulatory Commission (Smart Modules for Existing Digital/Static Meters) Guidelines, 2024 dated 26.08.2024 or smart meter to record the solar generation. This is applicable for the plants which are commissioned from 01.07.2025.

The relevant PPA clause shall be suitably modified by the ESCOMs.

j) Mandating installation of Battery Energy Storage System (BESS) equivalent to 10% of the Distributed Solar PV Plant capacity under Net metering:

For ensuring reliable power supply, the Central Electricity Authority (CEA) has advised for mandating two hours of storage with the roof top solar plants.

The Commission sought views of the Stakeholders for mandating installation of Battery Energy Storage System (BESS) equivalent to 10% of the Distributed Solar PV Plant capacity under Net metering.

M/s Powergate Energy (Mysore) Pvt. Ltd. submitted that the Grid connected MW scale BESS would be more appropriate than installation of individual BESS. Many of the Consumers submitted that, if BESS is allowed then it will be discouraging for installation of Solar PV due to high cost involved in Hybrid inverters.

Commission's Decision:

The Commission notes that mandating BESS with Solar PV for net metering would be a setback for implementation of Distributed Solar PV plants on net metering given the poor progress in addition of solar capacity at present and hence, decides to not mandate installation of Battery Energy Storage System (BESS) equivalent to 10% of the Distributed Solar PV Plant capacity under Net metering.

k) Other issues of Distributed Solar PV projects:

The Commission decides to continue the following principles based on the earlier orders:

- 1) To install Distributed Solar PV projects with capacity equivalent to 100% of the sanctioned load of the respective consumer's installation for the purpose of gross or net-metering with their own investments/third party investment.
- 2) To allow installation of Distributed Solar PV projects on Government buildings, as per the Commission's Order dated 11.11.2016, with the tariff for any surplus energy injected as determined by the Commission.
- 3) To allow installation of Distributed Solar PV systems up to and inclusive of 10 kW sanctioned load, a capacity tolerance of up to 10% for the applied system capacity (DC), subject to condition that the AC capacity of the inverter shall not exceed the sanctioned load.
- 4) The consumers are allowed to install Solar panels and other equipment conforming to standards specified by IEEE / BIS, without insisting on procurement from the ESCOMs' empanelled vendors.
- 5) Connectivity of Distributed Solar PV installations above 5KW and up to 150 KW at LT level, 3 phase, 400 volts and above 150 KW and up to 2000 KW at 11KV HT. For above 2000kW capacity, the Distributed Solar PV installations shall be connected to the system as specified in the KERC Regulations/ Conditions of Supply of Electricity of Distribution Licensees (COS).
- 6) The PPAs/SPPAs of Distributed Solar PV plants, with an installed capacity up to and inclusive of 1000 kW, executed as per the approved standard PPA/SPPA format, shall be considered as deemed to have been approved

by the Commission and the ESCOMs are not required to obtain a separate approval thereon.

- 7) The Commission allows to connect the Distributed Solar PV grid tied plants with Generators especially during periods of low sunlight or grid outages. The Commission allows the consumer to use the hybrid grid tied inverter with the battery to the Distributed Solar PV plant.
- 8) The Commission has detailed the procedure for energy accounting when the meter is faulty or meters are not recording.
- 9) The Commission has removed the capacity restriction of 2000 kW for installing Distributed Solar PV projects and allowed to install the plants up to their sanctioned load/Contract demand.
- 10) The Commission in the Order dated 15.09.2017 has allowed installation of multiple DSPV units or a single DSPV unit with the combined installed capacity in a premise not exceeding the total sanctioned load at all the consumers in that premises at a tariff of 90% of the tariff as determined by the Commission and also in the Order dated 01.06.2023 the Commission has allowed net metering arrangement for the multiple registered consumers/single registered consumer in the same premises having an existing DSPV plant and willing to enhance the capacity of the plant within the sanctioned load or increase the sanctioned load to enhance the capacity of DSPV plant, by executing a separate PPA and connected to the same load. The tariff for the enhanced capacity will be the prevailing tariff as on the date of execution of the second PPA. The billing arrangement will be on prorata basis with reference to the generated energy and tariff as per the respective PPAs.

The Commission in the Order dated 11.06.2024 has issued clarification on the Order dated 15.09.2017 in a table form to understand the metering arrangements for the consumers. The table below shall be read with Order dated 15.09.2017:

Clause number as per Order dated 15.09.2017	Registered Consumer	Details of DSPV Units		Metering Arrangements (Net/Gross)
i	Single or multiple registered consumer	No existing DSPV unit	Wants to install multiple DSPV units	Net
ii	Registered consumer with multiple installations	No existing DSPV unit	Wants to install single DSPV unit	Gross
iii	Multiple Registered consumer with multiple installations	No existing DSPV unit	Wants to install single DSPV unit	Gross
iv	Multiple Registered consumer with multiple installations	Having existing DSPV unit of a single consumer	Wants to install multiple DSPV units	Net
v	Multiple Registered consumer with multiple installations	Having existing DSPV unit of a single consumer	Wants to install additional DSPV unit	Gross

The Commission has also allowed to a single or multiple registered consumers to opt for installing DSPV plants /plants with respect to each RR number separately, under net metering or gross metering as per the Commission's order dated 19.09.2016.

I) Determination of Tariff for Distributed Solar PV Plants with Net Metering/Gross Metering for kW scale and bench mark tariff for ground mounted MW scale projects.

1) Life of the Plant:

The Commission had proposed in the discussion paper, the useful life of Solar Power Plant as 25 years, for the purpose of determination of tariff.

Commission's Decision:

The Commission notes that, as of now, no grid-connected solar plants of MW/kW scale in India have completed their assumed useful life of 25 years. However, based on the lifespan assured by manufacturers and developers, as well as the consideration of useful life by other Regulatory Commissions across the country, the Commission proposes to retain the plant's useful life at 25 years.

2) Term and Tariff design:

To ensure certainty of cash flows for investors, the Commission had proposed in the Discussion Paper, the term and levelized tariff for a 25-year period for executing the PPA.

Commission's Decision:

No stakeholders have suggested the term of the PPA to be less or more than 25 years. Hence, the Commission decides to adopt levelized tariff for 25 years, to execute the PPA/application.

3) Degradation factor:

The Commission has not proposed for degradation factor in the Discussion Paper.

KREA has proposed to allow degradation of 0.93% per year.

Commission's Decision:

The Stakeholders have not furnished any document to establish the degradation factor.

The Commission continues to not consider the degradation factor as per the earlier orders noting that in the MW scale projects, the developer has to make the accurate estimation of energy and provide guarantee for the energy

output. Hence, the Commission, to ensure the said agreement remain fair and sustainable for both the parties involved, decides to not consider the degradation factor in Solar Photo voltaic projects.

4) Capacity Utilisation Factor: (CUF)

In the Discussion Paper, the Commission has proposed a CUF of 19% for all the Solar power plants.

M/s Powergate Energy (Mysore) Pvt. Ltd. has proposed to consider CUF of 17% for SRTPV.

Commission's Decision:

The Commission, in earlier orders had considered a CUF of 19% for solar photovoltaic plants. Since the available technologies have yet to establish an exact CUF with sufficient data, the Commission shall determine a reasonable CUF to balance the interests of both investors and consumers. Therefore, in line with its earlier orders, the Commission decides to adopt a CUF of 19% for solar plants, including both ground-mounted and Distributed Solar PV projects. The CERC Regulations indicate guiding parameters for only project specific cases. The stakeholders may provide the irradiation profile and other relevant parameters specific to locations within the State of Karnataka, independent of the energy generation data from solar plants for arriving at the different CUF.

5) Debt Equity Ratio:

For the determination of Generic Tariff, considering the tariff policy, industry norms, and previous orders, the Commission has proposed maintaining the debt-equity ratio at 70:30 for all solar power plants. Since, none of the stakeholders have suggested any changes in the debt equity ratio, the Commission decides to continue debt-equity ratio of 70:30 for Generic Tariff.

6) Capital Cost:

After considering the market rates, the Commission in the Discussion Paper has proposed the following capital cost:

1. 1kW to 10 kW SRTPV project (domestic consumer) at Rs. 35,000 per kW
2. 1 kW to up to sanctioned load Distributed Solar PV projects project (other than SRTPV consumer covered under (1)) at Rs. 30,000 per kW.
3. Ground mounted solar projects at Rs. 321.53 lakh per MW.

Sri C S Gopinath, GTSS Infrastructure Pvt. Ltd., has submitted to the Commission that the capital cost for SRTPV will not suffice and needs upward revision.

Commission's Decision:

The capital cost of Rs. 300.53 lakhs per MW was proposed in the Discussion Paper based on the market prices as on 03.02.2025 available on the website- PV insight, a network of reliable price information contributors of actual prices and sales contracts of solar PV components. The average module cost was Rs. 6.85 per watt by considering the average of 6 months' USD rate as per RBI. The Commission also notes that, there is an increase in cost of civil works, mounting structure, power conditioning unit, evacuation lines, equipment, general works etc., and considers, the increase of 5.72% is considered from the previous tariff order.

As per Ministry of New & Renewable Energy (MNRE) Notification dated 09.03.2021 and 27.09.2022, the applicable rate of the basic custom duty is 40% for solar modules and 25% for cells with effect from 01.04.2022. The imposition of Basic Customs Duty (BCD) as per above rates shall not be considered as change in law and RE implementing Agencies, stakeholders are required to

take these BCD rates into account while quoting the tariff in the bidding process.

The Commission in the Discussion Paper had proposed land cost at Rs. 15 lakh per MW (3 Acre per MW). The Commission notes that the land cost has increased considerably over the years and Stakeholders are facing difficulty in finding land at Rs. 5 lakh per acre for ground mounted Solar projects. Hence, the Commission decides to increase the land cost from Rs. 5 lakh per acre to Rs. 12 lakh per acre. Accordingly, land cost of Rs. 36 lakh per MW, (3 Acre per MW) is considered. With the increase in the costs as above, the Commission has considered capital cost of Rs. 321.53 Lakhs per MW for determination of tariff.

Considering the Basic Customs Duty at the rate of 40% wherein GST of 70% of the goods value shall be deemed to be the value of supply at said goods attracting 12% rate effective from 1st October 2021. The remaining portion (30%) of the aggregate value of such EPC contract shall be deemed to be the value of supply of taxable service attracting standard GST rate of 18%, which needs to be considered for computation of GST for service by way of construction or engineering or installation or other technical services provided in relation to setting up of solar power generating system.

In respect of Distributed Solar Power plants of 1kW up to sanctioned load other than domestic consumers (upto 10 kW), the capital cost has been considered as Rs. 30,000 per kW which is inclusive of all taxes, Duties and GST and extra premium.

The Commission further notes that the payment of the BCD amount if any, for the above Distributed Solar PV consumers will be determined by the

concerned ESCOMs on production of documents thereon for actual payment of BCD made to the competent authority by the Generators/Developers. This amount will be paid to the Generator/Developer by the concerned ESCOMs by spreading the actual BCD incurred, over the Tariff period as per the PPA, every year by cash, without carrying cost, on annuity basis during the month of April of the subsequent financial year.

The Commission also notes that the smaller consumers have not shown much interest in installing Distributed Solar PV systems, even though the potential for installation of smaller capacity Distributed Solar PV (DSPV) systems, especially by the domestic consumers, is substantial, since the installation of DSPV plants benefits both the consumers and the distribution licensees. Hence, to encourage the domestic consumers of 1kW to 10 kW to install DSPV projects, the Commission has considered capital cost of Rs. 40,000 per kW, which is inclusive of all taxes, Duties and GST and extra premium.

The Commission, decides to adopt the capital cost per MW, for ground mounted solar projects as below:

Capital Cost for Solar Power Plants		
SL. No.	Particulars	from 01.07.2025 to 30.06.2026
1	Average Module cost-USD/Watt peak	0.081
2	Average of 6 months USD in Rs. as per RBI	84.627
3	Cost of Solar Module in Rs./Watt	6.85
4	Cost of Solar Module in Rs. Lakhs /MW	68.55
5	As per MNRE official Memorandum dated 09.03.2021, the imposition of Basic Custom Duty (BCD) for solar module w.e.f. 01.04.2022 of 40% in Rs. Lakhs	27.42
6	Cost in Rs Lakhs /MW (before GST)	95.97
7	Civil and General Works, Mounting Structure, Power Conditioning Unit, Evacuation Lines & Equipment, Preliminary and preoperative expenses IDC etc., Rs. Lakhs/MW	182.35
8	Total Capital Cost in Rs Lakhs /MW	278.32
9	GST of 12% for 70% of the total cost (supply of solar modules and its accessories) as per clarification issued	23.38

	by Ministry of Finance (MoF) Government of India dated 22.12.2018/01.10.2021 in Rs. Lakhs per MW	
10	GST of 18% for 30% of the total cost of the project as per clarification issued by Ministry of Finance (MoF) Government of India dated 22.12.2018 in Rs. Lakhs per MW	15.03
11	Total cost of the project in Rs. Lakhs per MW	316.73
12	Land Cost in Rs. Lakhs per MW @ Rs.12.00 Lakhs per acre (3 Acres per MW)	36.00
13	Total cost of the project including land cost in Rs. Lakhs per MW	352.73
14	Less: The BCD and GST on the capital cost, to be reimbursed on production of proof of payment of the BCD by the generators/developers in Rs. Lakhs per MW.	31.20
15	Total Capital cost considered for determination of tariff in Rs. lakh per MW	321.53

The Commission hereby decides to adopt the following for the capital cost for:

1. 1kW to 10 kW DSPV project (domestic consumer) at Rs. 40,000 per kW
2. 1 kW to up to sanctioned load DSPV project (other than DSPV consumer covered under (1)) at Rs. 30,000 per kW.
3. Ground mounted solar projects at Rs. 321.53 lakh per MW.

7) Operation & Maintenance Cost:

In the Discussion Paper the Commission had proposed the O&M expenses at Rs.791.314/kW for SRTPV units and at Rs. 5.945 lakh/MW for ground mounted Megawatt Scale solar plants, with an annual escalation of 5.72%.

Commission's Decision:

The operation and maintenance cost consists of employee cost, administrative & general expenses and Repairs & Maintenance expenses (R&M). The Commission, in its earlier Orders, had considered O & M expenses at Rs 748.50/kW for DSPV units and at Rs.5.624 lakhs/MW for ground mounted Megawatt Scale solar plants, with an annual escalation of 5.72%. The Commission, after considering the inflation factor, decides to allow the O&M

expenses at Rs.791.314/kW for DSPV units and at Rs. 5.945 lakh/MW for ground mounted Megawatt Scale solar plants, with an annual escalation of 5.72%.

8) Interest and Tenure of Debt:

In the Discussion Paper the Commission had proposed the normative tenure of long term debt/loans as 13 years and to allow the interest on loan at 11.10% per annum considering the normative interest rate (MCLR) plus two hundred (200) basis points above the average State Bank of India MCLR of three years' tenure.

Commission's Decision:

Considering the prevalent lending rate being the Marginal Cost of Funds-Based Lending Rate (MCLR) at which the bank charges interest for all its loans, the Commission proposes to adopt the latest MCLR rate of 3 years of 9.10% per annum notified by the State Bank of India plus 200 basis points, which works out to 11.10% per annum.

Therefore, the Commission decides to adopt interest rate of 11.10% per annum for 13 years' loan period.

9) Working Capital and Interest on Working Capital:

In the Discussion Paper the Commission had proposed one month's receivables for SRTPV Projects and Two Months' receivables for MW scale Ground Mounted Solar Projects and to allow interest on working capital at the rate of 11.50% per annum. The Stakeholders have not suggested any change in the proposed interest rate for working capital.

Commission's Decision:

The Marginal Cost of Funds-Based Lending Rate(MCLR) is the rate at which the bank prices all its loans. Considering the prevalent lending rate being the Marginal Cost of Funds-Based Lending Rate (MCLR) at which the bank charges

interest for all its loans, the Commission decides to adopt the latest MCLR rate of 1 year of 9% per annum notified by the State Bank of India plus 250 basis points, which works out to 11.50% per annum.

The Commission therefore decides to allow 11.50% per annum as the interest rate for calculating the Interest on Working Capital, equal to one month's receivables for DSPV Projects and Two Months' receivables for MW scale Ground Mounted Solar Projects.

10) Depreciation:

In the Discussion Paper the Commission had proposed to adopt the depreciation on 90% of the capital cost (excluding land cost) at the rate 5.667% per annum for the ground mounted project and 5.38% per annum for the Distributed Solar PV Projects for the first 13 years and the remaining depreciation spread equally over the remaining useful life of the ground mounted projects and Distributed Solar PV projects Plants. The Stakeholders have not suggested any change in the proposed depreciation.

Commission's Decision:

The Commission has decided the depreciation amount equal to amount of loan repayment over a period of 13 years. The amount of the said depreciation is divided by the capital cost (excluding land cost) to arrive at a rate of depreciation of 6.064 % per annum for the ground mounted project and 5.38% per annum for the Distributed Solar PV Projects. The depreciation has been allowed on 90% of the capital cost recoverable in first 13 years and the balance of 10% to be recovered over the remaining useful life of the project of 12 years.

11) Return on Equity:

The Commission in the Discussion Paper had proposed RoE at 14%. The CERC, in its Regulations has also allowed normative RoE of 14%.

Commission's Decision:

The Commission notes that the prevailing CERC Regulations specify RoE of 14% per annum and this Commission has also adopted such rates in other Generic Tariff Orders. The Commission, therefore, decides to allow RoE of 14% per annum.

12) Discount Rate:

The Commission, earlier had considered a discount factor of 11.795%. Since the financing of capital cost is based on 70% debt and 30% equity, it would be appropriate to reckon weighted average cost of capital (WACC) as the discount factor to arrive at the levelized tariff. The Commission, therefore, decides to consider Discount Rate of 11.97%, based on WACC.

13) Auxiliary consumption:

The Commission notes that, there is no substantial documentary evidence to consider the maximum percentage of auxiliary consumption and hence, decides to allow the auxiliary consumption of 0.25% for MW scale Solar PV Plants in line with the earlier decisions and not to allow any auxiliary consumption for DSPV units.

The summary of the parameters for determining the Tariff from 01.07.2025 to 30.06.2026 is as under:

a. MW scale Solar Power Projects (Ground mounted):

Parameters for Megawatt scale solar projects	
Cost/MW- Rs. Lakhs	321.53
Useful life of the plant in years	25
Debt: Equity Ratio	70:30
Debt-Rs. Lakhs	225.071
Interest Rate on Debt-%	11.10
Debt Repayment in Yrs.	13
CUF in %	19
Equity- Rs. lakhs	96.459
ROE-%	14
Auxiliary consumption	0.25%
O & M expenses in Rs. Lakhs/MW	5.945
O & M Escalation p.a. (%)	5.72
WC interest (two months' receivables)	11.50%
Depreciation in %	6.064
Tariff Rs per unit	3.07

b. kW scale Distributed Solar PV Plants with Net-metering/Gross Metering (1kW to up to the sanctioned load and 1kW to 10kW) along with Subsidy tariff for schemes covered under Gol:

Parameters for Kilowatt scale		
Cost/kW- in Rs.	1kW to 10 kW – Rs. 40,000 per kW	1kW to up to the sanctioned load kW- Rs. 30,000 per kW
Useful life of the plant in years	25	25
Debt: Equity Ratio	70:30	70:30
Debt- in Rs.	28000	21000
Interest Rate on Debt-%	11.10	11.10
Debt Repayment in Yrs.	13	13
CUF in %	19	19
Equity- in Rs.	12000	9000
ROE-%	14	14
Auxiliary consumption	-	-
O & M expenses in Rs. /kW	791.314	791.314
O & M Escalation p.a. (%)	5.72	5.72
WC interest (one month's receivables) in %	11.50	11.50
Depreciation in %	5.38	5.38
Tariff Rs per unit(without subsidy)	3.86	3.08
Tariff Rs per unit(with subsidy) for schemes covered under PM Surya Ghar: Muft Bijli Yojana	For 1 kW up to 2 kW- Rs. 2.30 per unit	-
	For above 2 kW up to 3 kW – Rs. 2.48 per unit	
	For above 3 kW- Rs. 2.93 per unit	

Considering the above parameters and norms, the Commission hereby pass the following order.

ORDER

- (i) The determination and approval of the generic tariff is as follows:
- a. For grid connected megawatt scale power projects the approved benchmark tariff is Rs. 3.07 per unit;
 - b. For grid connected Distributed Solar PV Plants with net-metering/gross metering of 1 kW up to the sanctioned load (excluding domestic 1kW to 10 kW) the approved tariff is Rs. 3.08 per unit, without capital subsidy.
 - c. For grid connected Distributed Solar PV Plants with net-metering/gross metering of 1 kW to 10 kW for domestic consumers, the approved tariff is Rs. 3.86 per unit, without capital subsidy.
 - d. For grid connected Distributed Solar PV projects with net-metering/gross metering under PM Surya Ghar Muft Bijali Yojana for the Capacity 1 kW up to 2 kW the approved tariff is Rs. 2.30 per unit, with capital subsidy and for the capacity above 2 kW up to 3 kW, the approved tariff is Rs. 2.48 per unit with capital subsidy and for above 3 kW the approved tariff is Rs. 2.93 per unit, with capital subsidy.

The above tariff shall be applicable to all new solar power projects for which PPAs are entered into /applications submitted and the solar power projects are commissioned on or after 01.07.2025 up to 30.06.2026.

- (ii) The tenure of the PPA, shall be for twenty-five (25) years.
- (iii) All the other issues not covered under this order, shall be governed by the respective Regulations and Orders issued by the Commission and PPAs/other Agreements executed with the parties and

This order is signed and issued by the Karnataka Electricity Regulatory Commission on this Wednesday of 9th July, 2025.

-Sd-
(P. Ravi Kumar)
CHAIRMAN

-Sd-
(H.K.Jagadeesh)
MEMBER (Legal)

-Sd-
(Jawaid Akhtar)
MEMBER

List of stakeholders who have submitted their written Comments/Suggestions

Sl. No.	Stakeholders
1	Karnataka Renewable Energy Association (KREA)
2	Powergate Energy (Mysore) Pvt. Ltd.
3	Joseph N, Solar Evangelist & Prosumer
4	Murulidar Nagesh Sutar, Belagavi
5	C S Gopinath, GTSS Infrastructure Pvt. Ltd.
6	Jarka Radiance Renewables
7	Sundaram Auto Corporation Ltd.,
8	Chief Manager (Works), HAL
9	Distributed Solar Power Association
10	C N Srinivasa, IRS (Retd) Bengaluru
11	M Savitha, Bengaluru

List of persons participated in Public Hearing on 06.06.2025:

Sl. No.	Name	Company Name
1	Raghunandan	KREA
2	Sesha Prasanna	Espee Solar / KREA
3	C S Gopinath	GTSS / KREA
4	Kesari M T	Powergate Energy (Mysore) Pvt. Ltd.
5	M A Jayachandra	Jarka Radiance Renewables
6	Upendra Singh	Sundaram Auto Corporation Ltd.,
7	Nagaraj S	HAL
8	Krishna	Prasiddi Solar Pvt. Ltd.,
9	Darshan Baddi	KRESMA Solar
11	Hussain	KASSIA
12	HM Uma	GM, DSM, BESCOM
13	Giridhar	Emmvee
14	Anupama	Emmvee
15	C N Srinivasa	Individual
16	Savitha	Individual

The list of persons who attended the Public Hearing on 06.006.2025

Sl. No.	Name of the participants	Name of the Firm/Company
1	Raghunandan	Director AAnro / Pres-KREA
2	Seshaprasanna	E Spee Solar / KREA
3	Gopinath	GTSS / KREA
4	Kesari MT	Power gate / KREA
5	A R Kumar	Director / Jarka Renewable
6	Guruprasad GT	Solar
7	M.A. Jayachandra	Director / Jarka Renewable
8	Upendra Singh Bholoriya	Sumanan Auto Compronabhi
9	Santhosh Kumar B	Officer & Rec Limited
10	Manjunath M H	Orb Energy Pvt. Ltd
11	Umesh Nagoor	Orb Energy Pvt. Ltd
12	B.H. Nayak	Maruthi Solar System
13	Sharath S.R.	Manager BPAC
14	Channakeshav	Voltran Power System
15	G. Praveen	M/s. AAL, Bangalore
16	Nagaraj	M/s. HAL (Chief Manager)
17	Krishna	Prasiddl Soka Pvt. Ltd.
18	Dwarakha	S.B. Enterprises
19	Prathap Varma	Skymate Energy
20	Darshan Baddi	ELIO Solar
21	Jayanth K	JK Power Technologies
22	Nityananda Shetty	Orb Energy Pvt. Ltd
23	Srikanth	Ampin Energy Transition
24	S M Hussain	KASSIA
25	H.M. Uma	General Manager (DSM) BESCOM
26	Joseph N	Ecosoch Solar
27	Yogish S	Power Rays
28	K Raju	ACC Designer
29	Madhusudhan	ACC Designer
30	Swarooparani	GM Commercial CESC
31	Ganesh Kumar	Raga renewable Energy
32	Giridhar	EMMVEE
33	Amit S Shenoy	Sidvin Enterprises
34	Kiran S	Tprel
35	Vinay KM	Vimohrtha Enterprises
36	Sanath S	Vimohrtha Enterprises
37	Anupaner	EMMVE
38	Asthik Reddy	EMMVE
39	C.N. Srinivasa	Individual
40	Savitha	Architect K.B. Sandra
41	K. Nazeem	KSPL MD
42	Pradeep K Shetty	TATA Power Canara Solar