

**RAJASTHAN ELECTRICITY REGULATORY COMMISSION
JAIPUR**

Petition No. RERC/2244/2024

In the matter of

Petition filed under Section 63 (Determination of Tariff by Bidding Process) of the Electricity Act 2003, read with Regulation 19 and 21 of RERC (Transaction of Business), Regulations, 2021, for approval of levelized tariff discovered through transparent competitive bidding carried out by JVVNL for solar power projects with aggregate capacity of 208.91 MW under Component-C (Feeder Level Solarization) of PM-KUSUM Scheme vide TN-11 and TN-12.

Coram:

Shri Hemant Kumar Jain, Member (In Chair)

Dr. Rajesh Sharma, Member

Jaipur Vidyut Vitran Nigam Limited.

Petitioner

Date of hearing:

22.08.2024

Present : Sh. Sandeep Pathak, Advocate for Petitioner

Date of order

11.09.2024

Order

1. The present Petition has been filed by Jaipur Vidyut Vitran Nigam Limited (hereinafter referred to as 'JVVNL' or the 'Petitioner') under Section 63 (Determination of Tariff by Bidding Process) of the Electricity Act, 2003, read with Regulation 19 and 21 of the RERC (Transaction of Business), Regulations, 2021, for approval of levelized tariff discovered through transparent competitive bidding carried out by JVVNL for solar power projects with aggregate capacity of 208.91 MW under Component-C (Feeder Level Solarization) of PM-KUSUM Scheme vide TN-11 and TN-12.

2. The matter was heard on 22.08.2024. Advocate Sh. Sandeep Pathak appeared for the Petitioner.
3. Petitioner in its petition and during hearing mainly submitted as under:
 - 3.1. The Petitioner herein is one of the three Distribution Licensees in the State of Rajasthan and is undertaking the functions of distribution and retail supply of electricity to the public at large in its area of distribution.
 - 3.2. Ministry of New and Renewable Energy (hereinafter referred to as "MNRE") has launched the Pradhan Mantri Kishan Urja Suraksha evam Uthan Mahabhiyan Scheme (PM-KUSUM) scheme for farmers on 08.03.2019 which covers the following components:

Component A: Installation of Decentralized Ground Mounted Grid Connected Renewable Power Plants of individual plant size up to 2 MW.

Component B: Installation of 17.50 lakhs standalone Solar Powered Agriculture Pumps of individual pump capacity up to 7.5 HP.

Component C: Solarization of 10 Lakhs Grid-connected Agriculture Pumps of individual pump capacity up to 7.5 HP.

MNRE, further, issued guidelines for implementation of all three components of PM-KUSUM on 22.07.2019.
 - 3.3. On 04.12.2020, MNRE introduced and issued guidelines for implementation of Feeder Level Solarization under Component-C of the PM-KUSUM scheme wherein grid connected solar power plant of the capacity that can cater to the annual power requirement of one or more segregated agriculture feeders can be installed either through Capital Expenditure (CAPEX) or Renewable Energy Service Company (RESCO) mode to supply power to that feeder(s) through Central Financial

Assistance (CFA) of 30% of Project Cost (under CAPEX mode) or, Rs. 1.05 per MW (under RESCO mode).

- 3.4. Subsequently, in supersession to MNRE Office Memorandum (OM) dated 22.07.2019, MNRE issued the comprehensive guidelines for Implementation of PM-KUSUM Scheme on 17.01.2024 which, inter-alia, is having the following components:

Component A: Setting up of 10,000 MW of Decentralized Ground / Stilt Mounted Grid Connected Renewable Solar or others Renewable Energy based Power Plants of individual plant size up to 2 MW.

Component B: Installation of 14 lakhs standalone Solar Powered Agriculture Pumps of individual pump capacity up to 7.5 HP.

Component C: Solarisation of 35 Lakhs Grid-connected Agriculture Pumps including Feeder Level Solarization.

- 3.5. MNRE vide order dated 01.08.2022 waived off the condition of the domestic content requirement for solar cells as follows:

“3 (ii) The conditions of the domestic content requirement for solar cells has been waived off for the feeder level solarization under Component – C for the projects awarded by the implementing agency on or before 20.06.2023.”

- 3.6. Further, as on 10.03.2023 MNRE exempted from the requirement of procuring Solar PV modules from ALMM in its order as follows:

“With reference to the Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirements for Compulsory Registration) Order, 2019 and subsequent amendments and clarifications thereto, the undersigned is directed to convey that subject Order is hereby held in abeyance for one financial year, i.e. FY 2023-24. Thus, projects commissioned by 31.03.2024 will be exempted from the requirement of procuring Solar PV modules from ALMM.”

3.7. Subsequently, MNRE vide clarification letter dated 29.01.2024 confirmed the provision of indigenous solar cells (DCR) relaxation till 31.03.2024 as follows:

“(2) In this regard, it is to confirm that, the provision of requirement of indigenous solar cells (DCR) under Component C (FLS) of the PM KUSUM scheme has already been relaxed till 31.03.2024”.

3.8. Further, on 14.02.2024 MNRE vide OM issued additional clarification regarding comprehensive guidelines of PM-KUSUM scheme as follows:

“(a) CFA of Rs. 1.05 Cr./MW would be valid for all those LOAs, till any further update is announced by MNRE”

(b) The DCR exemption would be valid for all those Letter of Awards which have been issued on or before 31.03.2024.”

3.9. On 29.03.2024, MNRE vide OM issued order on Approved Modules and Manufactures of Solar Photovoltaic Modules (Requirements for Compulsory Registration) Order, 2019 as under:

“1. Vide MNRE Order of even no. dated 10th March 2023, the Approved Modules and Manufactures of Solar Photovoltaic Modules (Requirements for Compulsory Registration) Order (ALMM Order) was held in abeyance for one financial year, i.e FY 2023-24. It is clarified that the ALMM [Approved List of Modules & Manufacturers] for Solar PV Modules, shall accordingly come into effect from 1st April, 2024.”

“2. Each project where the solar pV modules have been received at the project site by 31st March, 2024 and is unable to get commissioned by that day, on account of reasons beyond the control of the renewable power developers, would be examined separately.”

3.10. As per scheme guidelines, feeder level solarization under Component- C of PM-KUSUM, the provision under CFA is limited to solar capacity for 7.5 HP pumps. However, for the purpose of CFA, the annual energy consumption of individual agriculture consumers having pump capacity more than 7.5 HP has been proportionately reduced to the 7.5 HP level and subsequently the individual Solar Photovoltaic (SPV) plant capacity & CFA @ Rs. 1.05 Cr per MW has been computed.

- 3.11. On 30.08.2022, MNRE sanctioned 1,00,000 grid connected agricultural pumps as the target for FY 2022-23 for the Distribution licensees of Rajasthan (including JVVNL) for feeder level solarization under Component-C of PM-KUSUM Scheme. Subsequently, MNRE vide Office Memorandum dated 15.09.2023 sanctioned additional 1,00,000 grid connected agricultural pumps as target for FY 2023-24. Further, additional sanction of 1,00,000 nos of agriculture pumps for Rajasthan Discoms have been received from MNRE vide OM No. 32/54/2018-SPV Division dated 20.08.2024.
- 3.12. Commission vide order dated 11.02.2020 has determined the prefixed levellised tariff as Rs. 3.14 per unit for Component-A of PM KUSUM Scheme. Further, as per the Commission's order dated 07.07.2020 such prefixed levellised tariff is to remain applicable upto the capacity of 725 MW under this component.
- 3.13. On 11.01.2023, JVVNL published Request for Selection (RfS) on e-procurement portal of Rajasthan (eproc.rajasthan.gov.in) vide Tender No. JVVNL/ACE(PPM)/ XEN(RE-DSM)/TN-01 for design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected solar power plants through RESCO mode, its associated 33 kV OR, 11 kV line to connect the plant with various 33/11 kV sub-stations and RMS of solar power plants for solarization of agriculture consumers connected on 11 kV feeders of various GSS in JVVNL under KUSUM Scheme Component-C (Feeder Level Solarization).
- 3.14. Subsequently, based on the Petition filed by JVVNL, Commission issued order on 16.06.2023 as under:

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“(2) The Commission approves Rs 3.55/kWh as the ceiling tariff for the solar projects to be set up under PM KUSUM Scheme, Component-C Feeder Level Solarisation.

(3) Commission also directs that Discoms will use the above ceiling tariff in their future bids. However, before initiating every future bidding the Discoms will continuously monitor the market condition and in case of any downwards revision in the cost, they should revise the above ceiling tariff downwardly at their own level.

(4) In case upward revision is required for future bids in the ceiling tariff the Discoms shall file a separate petition before the Commission.

(5) Discoms are advised to preferably select the feeders where maximum CFA from the Gol may be availed so that benefit of lower tariff can be achieved.

(6) Discoms will continuously monitor the change in law events and will ensure timely recovery/ payment on account of change in law events as per law.

(7) Discoms should follow the directions issued by MNRE in respect of implementation of Feeder Level Solarisation under Component-C of PM KUSUM Scheme from time to time.”

3.15. On 19.06.2022, JVVNL awarded the work for the 52.66 MW solar power projects to the selected RESCO developers under TN-01 of Component-C (feeder level solarization) of PM-KUSUM Scheme.

3.16. Further, JVVNL published various Request for Selection (RfS) on e-procurement portal of Rajasthan (eproc.rajasthan.gov.in) vide Tender No. TN-02, TN-03, TN-04, TN-05, TN-07 and TN-08 for design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected solar power plants through RESCO mode, its associated 33kV or 11kV line to connect the plant with various 33/11 kV sub-stations and RMS of solar power plants for solarization of agriculture consumers connected on 11 kV feeders of various GSS in JVVNL under KUSUM Scheme – Component C (Feeder Level Solarization).

3.17. Subsequently, on 04.06.2024, Commission approved the levelized tariff for 314.72 MW Solar PV Plants for 25 years for the projects of feeder level

solarization under Component-C of PM-KUSUM Scheme, where additional remarks by RERC along with Petitioner response are as tabulated below:

Sr. No.	Clause as per Hon'ble RERC Order Dated 04.06.2024	Petitioner Response on Hon'ble RERC Order Dated 04.06.2024
1.	<i>(2) Discoms should carry out system studies/load flow studies, if need be, to ensure proper integration of these systems with the network and also for optimum utilization of network.</i>	The Petitioner (on behalf of all the three Discoms) is already in process of carrying out system studies / load flow studies at some of the 33/11 kV Sub-stations where solar PV capacity are already commissioned in order to ensure proper integration of these systems with the network and also for optimum utilization of network.
2.	<i>(3) For future bids, Discoms should do the rate analysis at their own level for every tender and conduct bidding through transparent bidding mechanism (as mandated by MNRE) and if the Discoms after all due diligence are satisfied that discovered rates are reasonable and market aligned, they may approach the Commission for adoption of the tariff.</i>	The Petitioner is regularly analyzing the Market Prevailing Rates and based on past experiences / suggestions / recommendations varying the parameters in every tenders being floated & executed under Component C (feeder level solarization) of PM-KUSUM Scheme.
3.	<i>(4) Discoms should also explore the possibility of bidding for multiple substations grouped as one bidding group to discover a lower tariff for benefit of end consumers.</i>	The Petitioner has already explored the possibility of bidding for multiple substations grouped as one bidding group to discover a lower tariff for benefit of end consumers vide TN-10, however response was not good, as only Cluster No.- 1 (out of total 05 clusters) of 11.59 MW solar PV capacity (out of 100.74 MW capacity).
4.	<i>(5) Discoms are advised to preferably select the feeders where maximum CFA from the Gol may be availed so</i>	The Petitioner has already carried out exercise where maximum CFA from the MNRE, Government of India in order to avail benefit of lower power

Sr. No.	Clause as per Hon'ble RERC Order Dated 04.06.2024	Petitioner Response on Hon'ble RERC Order Dated 04.06.2024
	<i>that benefit of lower tariff can be achieved.</i>	purchase cost for the period of 25 years. Apart from this, all 33/11 kV Sub-stations where the farmers / land-owners / solar power developers have offered their lands are considered for implementation of Component C (feeder level solarization) of PM-KUSUM Scheme.
5.	<i>(6) Discoms should also take up the matter of increase in targets given by MNRE, whenever required, on priority.</i>	The Additional Chief Secretary, Energy Department, GoR (on behalf of all the three Discoms) has already requested MNRE for allocation of additional 3,56,000 Ag. Pumps vide dated 03.04.2024 & 24.05.2024 to Rajasthan Discoms, however allocation of agriculture pumps from MNRE is still awaited.

Saur Krishi Ajivika Yojna (SKAY) under KUSUM Component-C (feeder level solarization)

3.18. Based on state's experience with implementation of PM-KUSUM Component A, on 17.10.2022, Saur Krishi Ajivika Yojna (hereby referred to as "SKAY"), was launched by GoR, a dedicated platform for farmers / landowners and solar power developers to address 'land identification, its procurement and associated cost' related challenge and to boost decentralized distributed solar generation under PM-KUSUM Component-C (Feeder Level Solarization).

3.19. The objective of SKAY is to utilize State's abundant land resources by giving farmers / landowners an opportunity to lease out their barren / unutilized land on pre-fixed lease basis for setting up of solar power plant.

- 3.20. The portal developed as above acts as a facilitator, where interested farmers / landowners and solar power plant developers can collaborate to arrange land for a solar power plant on RESCO mode in the vicinity (preferably within 5 km radius) of identified 33/11 kV substations of Rajasthan Discoms as envisaged under PM-KUSUM Component-C (Feeder Level Solarization).
- 3.21. As per MNRE guidelines for PM-KUSUM Component-C (feeder level solarization), individual solar PV plant capacity is to be calculated based on the total annual power requirement of the feeder with no capping on the capacity and CFA is limited to capacity based on capping of pumps upto 7.5 HP only. Therefore, JVVNL has also computed individual solar PV plant capacities based on actual annual consumption of individual pumps irrespective of pump size to ensure 100% solarization of such pumps. However, this resulted in reduction of per MW CFA for such plants as most of the agriculture pumps in JVVNL are of capacity more than 7.5 HP. Even although this results in slight increase in levelized tariff but will help JVVNL to tap the intended benefit envisaged under the scheme.
- 3.22. SKAY guidelines, among other things, have also the provision that Developer is to pay the agreed lease rent amount as mentioned below to the farmer / landowner or, authorized individual directly as per agreement payable during plant installation and commissioning phase (i.e., 18 months from award of contract along with any extension thereof).

Prevailing DLC rate of Land at the time of registration (Rs. per hectare)	Annual Lease Rent (Rs. per hectare)
Upto 8 lakhs	80,000
More than 8 lakhs and less than 12 lakhs	1,00,000
More than 12 lakhs and less than 20 lakhs	1,40,000
More than 20 lakhs	1,60,000

3.23. Further, RUVITL (On behalf of Discoms) is to pay the applicable land lease rent (as per above schedule along with escalation in lease rent @5% every two years) directly to the registered farmer / landowner or, authorized individual and will recover the same from the monthly energy payable to the developer after commissioning of the solar power plant.

3.24. As of 4 July 2024, SKAY portal has received more than 11.45 lakhs site-hits and total 2413 nos. of farmers / land-owners and 841 developers have shown their interest.

Tenders (02 nos.) floated by JVVNL for feeder level solarization of 22923 agriculture consumers under Component-C of PM-KUSUM Scheme

3.25. Based on response received on SKAY portal, JVVNL identified 86 nos. solar PV power plants with total capacity of 231.52 MW to be installed in the vicinity of 68 nos. of 33/11 kV Substations having 22923 nos. connected agriculture consumers for the purpose of setting up grid connected solar power plants to meet the annual power requirement of feeders using solar energy.

3.26. Circle wise breakup of above mentioned 231.52 MW capacity considered under 2 nos. tender of feeder level solarization is as follows:

Name of District / Circle	No. of SPV plants	SPV Capacity (MW)
ALWAR	21	57.88
BARAN	07	21.05
BHARATPUR	02	2.21
BUNDI	06	17.59
DAUSA	08	24.57
DHOLPUR	02	3.51
JHALAWAR	07	22.19
JPDC	25	65.14
KARALI	02	2.95
KOTA	05	11.75
TONK	01	2.68

Name of District / Circle	No. of SPV plants	SPV Capacity (MW)
TOTAL	86	231.52

3.27. The Petitioner has opted for RESCO mode for implementation of the projects.

3.28. As per the Common Tender Specifications finalized by all three Rajasthan Discoms, following work is included in the scope of RESCO developer for implementation of feeder level solarization:

- a. Detailed site survey.
- b. Execution of land lease agreement applicable for 25 years (unless extended by both the parties on mutual agreement) between Land-Owner/ Farmer and Solar Power Plant Developer on non-judicial stamp of applicable value for Rajasthan State and development of the land for the solar power project;
- c. Design, supply and installation of solar power plant near the concerned 33/11 kV substation of DISCOM, in line with requirements under MNRE guidelines;
- d. Supply and erection of associated 33 kV OR, 11 kV line (as the case may be) connecting the solar power plant with concerned 33/11 kV substation (including bay, breakers and metering system at substation) as per design and specifications of DISCOM / MNRE / CEA;
- e. Testing and commissioning of plant & associated 33 kV OR, 11 kV line (as the case may be) by designated official(s) of JVVNL;
- f. Construction of control room or any other relative civil work (at the plant end) essential for Commissioning of Project;
- g. Operation & maintenance of the solar power plant as well as 33 kV / 11 kV line (as the case may be) for 25 years (unless extended by both the parties on mutual agreement) from COD;

- h. Injection of power at delivery point for 25 years at the awarded levelized tariff (Rs. per kWh) (inclusive of applicable taxes incl. GST, duties, etc.), extendable on mutual agreement;
 - i. The delivery point for solar power plant(s) having installed capacity upto 2.55 MWp shall be 11 kV side and for installation capacity above 2.55 MWp the delivery point shall be 33 kV side of the concerned 33/11 kV GSS of DISCOM;
 - j. Remote Monitoring of installed solar power plant through RMS for 25 years (unless extended by both the parties on mutual agreement).
- 3.29. In line with MNRE guidelines for feeder level solarization, JVVNL computed and shared the required solar power plant capacity along with eligible CFA for plants under TN-01 with MNRE on 16.01.2023 for approval.
- 3.30. In response to above, MNRE vide their mail dated 17.01.2023 shared their consent on eligible CFA stating that:
- "Considering the load and electricity consumption data, the CFA calculated by JVVNL is as per FLS guidelines and JVVNL may go ahead with implementation of FLS of these pumps as per FLS guidelines."*
- 3.31. In line with above mentioned principle approval received from MNRE, JVVNL floated various tenders (2 nos. viz, TN-11, TN-12) for implementation of feeder level solarization of agriculture pumps under Component-C of PM-KUSUM Scheme on similar lines.
- 3.32. In line with MNRE guidelines, JVVNL published Request for Selection (RfS) on e-procurement portal of Rajasthan (eproc.rajasthan.gov.in) for design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected solar power plants through RESCO mode, its associated 33 kV OR, 11 kV line to connect the plant

with various 33/11 kV sub-stations and RMS of solar power plants for solarization of agriculture consumers connected on 11 kV feeders of various GSS in JVVNL under KUSUM Scheme – Component C (Feeder Level Solarization). Tender wise details are as follows:

Tender No. & Date	Nos. of GSS	SPV Plants (nos.)	SPV Capacity (MW)	Nos. of Pumps
TN-11 Dated 13.03.2024	36	49	129.45	13,267
TN-12 Dated 13.03.2024	32	37	102.07	9,656
Total	68	86	231.52	22,923

3.33. Subsequently, based on suggestions received from prospective bidders against the floated tenders, corrigendum was issued under TN-11, TN-12 (as applicable).

3.34. The project milestones and timeline as per the RfS document (TN-11 and TN-12 of JVVNL) are as follows:

S. No.	Milestone	Timeline
1	Issuance of Letter of Intent (Lol) / Intimation Letter to the successful bidder	T1
2	Unconditional acceptance of Lol / Intimation Letter by successful Bidder	T1 + 03 days
<i>Petition filing by JVVNL to RERC for adoption of discovered leveled tariff for the solar power plant</i>		
3	Issuance of work order after approval of discovered tariff by RERC (tentatively 01 month) to the successful bidder	T2
4	Unconditional acceptance of work order by successful Bidder	T2 + 03 days
5	Submission of Performance Bank Guarantee (PBG), Team mobilization and Site survey	T2 + 01 month

S. No.	Milestone	Timeline
6	Signing of PPA between selected bidder (SPG) and RUVITL	T3 = Within 07 days of PBG submission
7	Completion of design, supply, installation, testing and commissioning of the SPV power plant and associated 33 kV OR 11 kV line for connecting solar power plant with concerned substation	T2 + 18 months
8	Operation and maintenance of power plant and associated 33 kV OR 11 kV line	25 years from COD (unless extended by both the parties on mutual agreement)

3.35. As per MNRE notifications dated 01.08.2022, amendments have been made on the conditions of the domestic content requirement for feeder level solarization as under:

“3 (iii) The conditions of the domestic content requirement for solar cells has been waived off for the feeder level solarization under Component C for the projects awarded by the implementing agency on or before 20.06.2023”

3.36. In view of above amendments, the Principal Secretary (Energy) (vide order no. Pr. Secretary/Energy/F./D.225 dated 01.09.2023), Chairman Discoms (vide order no. Chairman Discoms/TA/F./D. 306 dated 27.06.2023) and ACE (PPM) JVVNL (vide letter no. JPD/ACE(PPM)/XEN(DSM)/F./D. 556 dated 13.06.2023) sought clarification / extension on the validity of waiver of the Domestic Content Requirement of Solar Cells and requested for extending waiver for the conditions for Domestic Content Requirement after 20.06.2023. Meanwhile, in view of the anticipation of the above clarification, bid opening dates were extended multiple times.

3.37. Subsequently, MNRE vide Office Memorandum no. 32/645/2017-SPV Division dated 11.09.2023 extended the waiver of the Domestic Content

Requirement (DCR) for Solar Cells under Component-C of PM-KUSUM Scheme till 31.03.2024.

3.38. Technical bids were opened and evaluated for the following capacities / tenders based on competent authority approval:

Tender No. & Date	RfS Floated		Date of Technical Bid Opening	Bid Received		Bidders Participated (nos.)
	SPV Plants (nos.)	SPV Capacity (MW)		SPV Plants (nos.)	SPV Capacity (MW)	
TN-11 Dated 13.03.2024	49	129.45	01.05.2024	42	115.80	49
TN-12 Dated 13.03.2024	37	102.07	01.05.2024	34	96.90	50
Total	86	231.52	-	76	212.70	-

3.39. Further, snapshot of tender wise participation is as follows:

Tender No.	No. of SPV plants where only single bid received	No. of SPV plants where only 02 bids received	No. of SPV plants where only 03 bids received	No. of SPV plants where only 04 bids received	No. of SPV plants where only 05 bids received	No. of SPV plants where 'No' bids received
TN-11	15	10	13	03	01	07
TN-12	05	13	08	06	02	03
Total	20	23	21	09	03	10

3.40. Based on technical bid evaluation and Corporate Level Procurement Committee (CLPC) decision, price bids were opened for the qualified bidders. Snapshot of tender wise quoted tariff as follows:

Tender No.	Date of Financial Bid Opening	Lowest quoted tariff (Rs./kWh) by Bidder	Quoted Tariff Range (Rs./kWh)
TN-11	14.06.2024	2.898	2.898 – 3.900
TN-12	14.06.2024	2.900	2.900 – 3.950

Modalities considered by JVVNL for Solar PV plant wise Levelized Tariff Computation under TN-11 and TN-12 of PM-KUSUM Component-C (Feeder Level Solarization):

- 3.41. The Petitioner computed solar PV plant wise levelized tariff in line with the MNRE guidelines for Component-C (FLS), the RERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020' and the RERC (Terms and Conditions for Determination of Tariff) Regulations, 2019.
- 3.42. The Petitioner has considered the prevailing market trends including inputs received from solar module manufactures, vendors, bidders during negotiation meeting held on dated 16.05.2024 for determination of total project cost followed by CLPC negotiation meeting held on dated 24.06.2024.
- 3.43. Since, all the solar PV plants are of different capacity, the Petitioner has computed the capital cost of each solar PV project comprising of Variable and Fixed component.
- 3.44. The variable component comprises of cost components which increases proportionately with increase in plant size and hence, defined in Rs. Crores Per MW:

Parameters	Ex-works	Applicable GST (@13.8%)**	Total
Total module cost *	2.28	0.31	2.59
BoP and Civil cost (assuming 26% of total project cost*)	0.95	0.13	1.08
Grid connectivity charges (@ Rs. 2.5 lakhs per MW as per Regulation 89 of RERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations 2020)	0.03	-	0.03
Other cost (Legal, Contingency, Liason, land development) *	0.05	-	0.05
Total (Rs. Cr)	3.31	0.44	3.75

*As per prevailing market rate & inputs received from bidders

** As per Ministry of Finance notification dated 22.12.2018 and 30.09.2021 of MNRE

3.45. Fixed component comprises of cost components which fixed in nature irrespective of plant size, but linked to connectivity voltage level and hence, defined in Rs. Crores:

(i) For 11kV level connectivity (for solar PV plants upto 2.55 MW):

Parameters	Ex-works	Applicable GST (@13.8%)	Total
Cost of 11kV connecting line (5 kms)^	0.15	0.02	0.17
Metering system cost ^ - Plant level (main, check, standby)	0.04	0.01	0.05
Breakers cost (both ends of line)	0.10	0.01	0.11
Total	0.29	0.04	0.33

^ As per SoR of Rajasthan Discom

(ii) For 33kV level connectivity (for solar PV plants above 2.55 MW):

Parameters	Ex-works	Applicable GST (@13.8%)	Total
Cost of 33kV connecting line (5 kms)^	0.53	0.07	0.60
Metering system cost ^ - Plant level (main, check, standby)	0.04	0.01	0.05
Breakers cost (both ends of line)	0.20	0.03	0.23
Total	0.77	0.11	0.87

^ As per SoR of Rajasthan Discom

3.46. Petitioner has considered the following parameters for solar PV projects:

S.No.	Particulars	Value
1.	Useful life	25 years Reg 2.1 of the RERC RE Tariff Regulations, 2020
2.	Debt Equity Ratio	70:30 (Reg 16.1 of the RERC RE Tariff Regulations, 2020)
3.	Capacity Utilization Factor	19% without any derating factor (i.e. fixed for 25 years)(MNRE clarification dated 7.02.2022 and MNRE comprehensive guidelines dated 17.01.2024)
4.	Loan Tenure	14 years (Reg 17.1.1 of the RERC RE Tariff Regulations, 2020 and MNRE guidelines)
5.	Interest Rate	10.50% per annum (Reg 17.2 of the RERC RE Tariff Regulations, 2020)

S.No.	Particulars	Value
6.	Depreciation	4.67% per annum for first 15 years and remaining depreciation shall be spread over the remaining useful life of the project considering the salvage value of the project as 10% of the project cost (Reg 18.3 of the RERC RE Tariff Regulations, 2020)
7.	Return on Equity	16.47% with current rate of 15% MAT for the entire useful life (Reg 19.2 of the RERC RE Tariff Regulations, 2020)
8.	Interest on Working Capital	As per Part-III of the RERC RE Tariff Regulations, 2020 (Reg 20.1)
9.	O & M expenses:	The annual O&M cost @ Rs. 5 lakhs per MW with an annual escalation of 3.84%. (Reg 21.2 & 31.1 of the RERC RE Tariff Regulations, 2020)
10.	Annual cash flow & Discounting Rate	10%
11.	Degradation Factor	2% (for 2nd year) and 0.5% (from 3rd year onwards) as per the prevailing technical norms / manufacturer's Guaranteed Technical Parameters (GTP)

Remote Monitoring System (RMS) for Solar PV project:

3.47. According to the MNRE guidelines dated 04.12.2020 for PM-KUSUM Component-C feeder level solarization Remote Monitoring System (RMS) is mandatory and the Petitioner has considered the following associated costs with RMS for computation of levelized tariff:

- a) Fixed cost: Rs. 75,000 per system with provision for replacement every 8 years (based on market prevailing rates and inputs received from bidders).
- b) Recurring cost: Rs. 100 per month towards internet connectivity for the RMS system.

Central Financial Assistance (CFA) from MNRE:

3.48. As per MNRE guidelines dated 04.12.2020 for PM-KUSUM Component-C feeder level solarization:

“... The developer will get CFA @ 30% of the estimated cost of installation of solar power plant i.e. Rs. 1.05 Cr/MW (30% of Rs. 3.5 Cr/MW)...”

3.49. Also, in line with scheme guidelines, the individual solar PV power plant capacity has been computed based on the actual annual energy consumption of agriculture consumers connected on 11kV feeder(s) and 19% CUF. However, for the purpose of CFA, the annual energy consumption of individual agriculture consumers having pump capacity more than 7.5 HP has been proportionately reduced to the 7.5 HP level and subsequently the individual SPV plant capacity & CFA @ Rs. 1.05 Cr per MW has been computed.

3.50. This has resulted in reduced in CFA for the tendered Solar PV power plants as mentioned below:

Tender No.	Eligible CFA Range (Rs. Cr. per MW)
TN-11	0.38 – 1.02
TN-12	0.49 – 1.01

3.51. Impact of above variation in CFA has been considered by the Petitioner for computation of plant wise levelized tariff.

Land Lease Rent (as per SKAY modalities)

3.52. The Petitioner has considered the annual land lease rent as per the following schedule (duly approved by Govt of Rajasthan) with provision of 5% escalation every two years.

Prevailing DLC rate of Land at the time of registration (Rs. per hectare)	Annual Lease Rent (Rs. per hectare)
Upto 8 lakhs	80,000
More than 8 lakhs and less than 12 lakhs	1,00,000
More than 12 lakhs and less than 20 lakhs	1,40,000
More than 20 lakhs	1,60,000

Impact of variation in Solar Plant capacity, CFA and lease rent on levelized tariff:

3.53. There is significant variation in individual plant capacity, applicable CFA and lease rent for the 76 nos. Solar PV plants for which bids have been received by JVVNL under TN-11 and TN-12. Therefore, it is imperative that impact of these factors are given due consideration while evaluating the plant wise levelized tariff.

a. Impact of variation in Solar Power Plant Capacity

3.54. As already highlighted in the 'Capital Cost' part, the complete project cost of a Solar PV project has two components (variable and fixed). Owing to decrease in per MW fixed component, decreasing trend in levelized tariff is followed with increase in Solar PV plant capacity.

b. Impact of variation in applicable CFA

3.55. The Petitioner has observed a negative correlation between levelized tariff and CFA per MW and every Rs. 10 lakhs decrease in applicable CFA for a solar PV power project results in increase of Rs. 0.066 per unit in the levelized tariff.

c. Impact of Annual Land Lease Amount

3.56. The Petitioner has observed following impact of annual lease rent as per SKAY modalities on the levelized tariff:

Prevailing DLC rate of Land at the time of registration (Rs. per hectare)	Annual Lease Rent (Rs. per hectare)	Impact on levelized tariff (Rs. per unit)
Upto 8 lakhs	80,000	0.11
More than 8 lakhs and less than 12 lakhs	1,00,000	0.14
More than 12 lakhs and less than 20 lakhs	1,40,000	0.20
More than 20 lakhs	1,60,000	0.23

Computation of Levelized Tariff based on Applicable Land Lease Rent finalized during CLPC Negotiation Meeting dated 24.06.2024:

3.57. On 24.06.2024, the Petitioner conducted CLPC Negotiation Meetings with the successful bidders under TN-11 and TN-12 under Component-C (feeder level solarization) of PM-KUSUM Scheme.

3.58. During the CLPC negotiation meeting, the bidders mentioned requirement of higher capital cost (considering mandatory provisions of indigenously manufactured solar cells and solar modules / panels) and requested the Petitioner for its validation. Apart from this, maximum numbers of bidders raised concern over higher land procurement cost / applicable land lease rent on prevailing DLC rates under Jaipur Discom and suggested JVVNL to re-visit the levelized tariff computation.

3.59. Based on bidders inputs, the Petitioner re-visited computation of levelized tariff. Subsequently, as per RTPP Act / Rules 2013 and considering acceptance of bid validity after 31st March 2024, the competent authority of JVVNL decided the following on dated 24.06.2024:

- a. The capital cost considered for computation of levelized tariff is aligned with the market prevailing rates (considering mandatory provision of Domestic Content Requirement), hence no revisions shall be required.

- b. Since, levelized tariff (In Rs./kWh) for maximum numbers of SPV plants lied within acceptable limit, hence no variations under the applicable land lease rent of Rs. 80,000/Hec/Year were considered. Also, based on bidders feedback / past experience for installation of 1 MW solar PV plants on around 1 Hectare, requirement of land for development of solar power plants from earlier 2 Hectares per MW to 1 Hectare per MW has been considered for computation of levelised tariff.
- c. Additionally, based on market prevailing rates, CLPC also decided to reduce interest rate under debt and working capital servicing from earlier 12% to 10.50% for computation of levelised tariff.

3.60. In view of above, the Petitioner computed solar PV power plant wise levelized tariff (in Rs. Per unit) (1) without land lease, (2) with minimum land lease rent (i.e. Rs. 80,000/Hec/Year), and (3) with maximum land lease rent (i.e. Rs. 1,60,000/Hec/Year) for offering counter rates (based on CLPC decision) to the bidders under two scenarios as below:

- a. Counter rates shall be offered to all the following 'L1' bidders followed by L2, L3, L4 and so on (subject to acceptance in their preference of lowest to highest quoted levelized tariff) where JVVNL determined levelized tariff is below the quoted tariff and maximum levelized tariff (i.e, Rs. 3.310/kWh) awarded in previous tender (TN-04) in JVVNL;
- b. Maximum tariff (i.e, Rs. 3.310/kWh) awarded in previous tender (TN-04) of Component C (feeder level solarization) shall be offered to all the below 'L1' bidders followed by L2, L3, L4 and so on (subject to acceptance in their preference of lowest to highest quoted levelized tariff) where JVVNL determined levelized tariff is over and above the maximum tariff of Rs. 3.310 per unit.
- c. Summary of the same are provided below:

Tender No.	Levelized Tariff (Rs. Per kWh)		
	Without Lease	Minimum lease- @Rs. 80,000 per Hectare per Year	Maximum lease @Rs. 1,60,000 per Hectare per Year
Lowest tariff (i.e. Lowest SPV capacity & Min. CFA per MW)			
TN-11*	2.398	2.456	2.513
TN-12*	2.854	2.911	2.968
Highest tariff (i.e. Highest SPV capacity & Max. CFA per MW)			
TN-11*	3.452	3.509	3.566
TN-12*	3.438	3.495	3.552

**Later, capped at Rs. 3.310 per unit as awarded in previous tenders of JVVNL under Component C (feeder level solarization) of PM-KUSUM Scheme*

Key benefits associated with PM-KUSUM Component C (feeder level solarization):

3.61. Potential savings in Power Purchase Cost of Discoms:

- i. The landed Average Variable Power Purchase Cost (Rs. Per Unit) for Rajasthan Discoms at 11 kV voltage level for FY 2023-24, considering transmission losses @ ~8%, 33 kV level losses @ ~4% and 33 kV transformation losses @ ~3% is as under:

Discom	Landed Cost (Rs. Per Unit)*
JVVNL	4.14
AVVNL	4.09
JdVVNL	4.12
Overall	4.11

**Provisional Average Variable Power Purchase Cost, also includes Short Term Variable Power Purchase Cost.*

Therefore, the highest levelized tariff (i.e. Rs. 3.744 per unit under TN-11, for 'L1' Bidders @Maximum Land Lease Rent) computed by the

Petitioner is cheaper than the overall landed average variable power purchase cost of Rajasthan Discoms.

- ii. However, the cheap solar power generated from solar PV projects under KUSUM scheme shall primarily replace the existing conventional generation as per Merit Order Dispatch (MoD). Therefore, as per MoD from 13.06.2024 to 20.06.2024 the landed highest variable cost (landed at 11 kV level) ranged from Rs. 4.790 to Rs. 6.260 per unit which includes intra state transmission losses (~4.5%), 33 kV level losses (~4%) and 33 kV transformation losses (~3%) for Rajasthan Discoms.

Therefore, there is potential savings of upto Rs. 2.516 per unit in power purchase cost (variable) of Rajasthan Discoms through feeder level solarization under PM-KUSUM Scheme.

- 3.62. Better RPO compliance translating to savings of Re 1 per unit.
- 3.63. Day time power availability with potential to cater the demand during peak hours.
- 3.64. Reduction in the cost of transmission infrastructure for Discoms.
- 3.65. Improved voltage profile in rural areas.

Outcome of the Bids received vide TN-11 and TN-12 of JVVNL:

- 3.66. Based on technical bid evaluation and subsequent recommendations of the competent authority of JVVNL, the price bids of the bidders were opened on 14.06.2024 under TN-11 & TN-12).
- 3.67. The levelized tariff for 25 years including all applicable taxes (incl. GST), duties, etc. quoted by the bidders in the price bid of TN-11 and TN-12.
- 3.68. As per Ministry of Finance, Government of India notification No. 8/2021-Integrated Tax (Rate) dated 30.09.2021, applicable GST on Solar Modules & Solar Inverters has increased from 5% to 12%. This has resulted in

significant increase in overall project cost and thus the levelized tariff of a solar PV plant.

3.69. Further, MNRE vide office memorandum No. 283/3/2018 dated 09.03.2021 imposed Basic Customs Duty (BCD) on Solar PV Cells & Modules / Panels which includes:

3.70. "4 The following proposal of MNRE to impose BCD on solar cells and modules (without grandfathering of bid out projects) has been agreed to by the Ministry of Finance:"

Items	Upto 31.03.2022	w.e.f. 01.04.2022
Solar Module	0%	40%
Solar Cells	0%	25%

3.71. The above referenced BCD is applicable on imported cells and modules, while under PM-KUSUM Component-C (Feeder level solarization) it is mandatory to use DCR panels. Thus, there is no direct implication of the imposition of BCD, however, with limited production capacity of Indian players, the imposed custom duty of 25% on solar cells and 40% on Solar Modules are indirectly impacting the overall project cost in Indian market due to demand-supply challenges.

3.72. With due consideration of above two factors and based on CLPC decision on dated 24.06.2024, counteroffers were issued on 26.06.2024 with last date of acceptance as 01.07.2024.

3.73. As a result of negotiation & counter offer, for 05 nos. of Solar PV projects under TN-11 and for 02 nos. of Solar PV projects under TN-12, the respective single bidder / L1 bidder, agreed on a reduced levelized tariff offered during the negotiation meetings dated 24.06.2024 before the competent authority in addition to 25 nos. (under TN-11) & 22 nos. (under TN-12) of Solar PV projects against lowest (L1) bidders. Subsequently, for 12 nos. (under TN-11) & 09 nos. (under TN-12) of Solar PV projects bidders

accepted counter offer. For remaining 01 no. of Solar PV project, the offered reduced levelized tariff was not accepted by the bidders under TN-12.

3.74. Therefore, CLPC decided to issue Letter of Intent (LoI) subject to approval on the allocation of agriculture pumps capacity by MNRE and upon finalization / approval of discovered or negotiated rate (Rs./kWh) from the Commission (RERC) under Section 63 of The Electricity Act, 2003 for all the 75 nos. of Solar PV projects.

3.75. In view of above, the Petitioner had issued 75 nos. of Letter of Intent (LoI) subject to approval on the allocation of agriculture pumps capacity by MNRE and upon finalization / approval of discovered or negotiated rate (Rs./kWh) from the Commission (RERC) under Section 63 of The Electricity Act, 2003 for all the 75 nos. of Solar PV projects. Also, acceptance of all the 75 nos. of Letter of Intent (LoI) have been received at the office of the Petitioner.

3.76. In view of above, in line with RfS document and as per Section 63 of Electricity Act, 2003, the petitioner prays for approval of following 75 nos. Solar PV plant wise levelized tariff for the projects with total aggregated capacity of 208.91 MW under Component C of PM-KUSUM scheme, which has been discovered through the transparent competitive bidding process of MNRE guidelines and The Rajasthan Transparency in Public Procurement Rules, 2013.

a) List of bidders where JVVNL issued Letter of Intent (LOI) subject to approval on the allocation of agriculture pumps capacity by MNRE and upon finalization / approval of discovered or negotiated rate (Rs./kWh) from the Hon'ble Commission (RERC) under TN-11.

Sr. No.	Bidder Name	Circle	GSS Name	SPV Plant Capacity (MW)	Bidder Rank	Final Tariff (Rs. Per Unit)
Lowest (L1) Levelized Tariff Bidder						
1.	Hanuman Yadav	ALWAR	NANGAL UDIYA	1.81	Single Bid	3.190
2.	Manish Kumar	ALWAR	RAMGARH	1.50	Single Bid	3.290
3.	Asha Bhadana	JPDC	NIWANA	3.51	Single Bid	3.230
4.	Anuj Kasliwal	JPDC	PARVAN	2.11	Single Bid	2.898
5.	Vinod Yadav	JPDC	JATAWALI	1.44	Single Bid	3.160
6.	Manjeet Singh Yadav	ALWAR	KAYSA	2.83	L1	3.140
7.	Mamta Yadav	BARAN	PACHEL KALAN	2.65	L1	3.139
8.	M/s Yajwa Sunpowers	BARAN	DABRI KAKAJI	3.35	L1	3.039
9.	Mahendra Kumar	BHARATPUR	PADALWAS	0.54	L1	3.110
10.	M/s Bhanwar Lal	BUNDI	33/11 KV NAMANA	2.91	L1	3.289
11.	Aman Raj Sharma	JPDC	TIBARIYA	2.85	L1	3.230
12.	Amit Yadav	JPDC	GHASIPURA	0.68	L1	3.000
13.	Naven Kumar Yadav	JPDC	SUKALLBAS	2.90	L1	3.300
14.	Asha Bhadana	JPDC	SURSINGHPURA	1.37	L1	3.190
15.	M/s Yajwa Sunpowers	BARAN	DHOLAKUNWA	3.43	L1	3.039
16.	M/s. Cosine Power Private Limited	DAUSA	BADIYAL KALAN	3.10	L1	3.190
17.	Abhishek Jindal	JHALAWAR	ZONEPURA	4.52	L1	3.060
18.	Abhishek Jindal	JHALAWAR	SAROLA KALAN	4.23	L1	3.200
19.	Abhishek Jindal	JHALAWAR	SAROLA KALAN	3.71	L1	3.180
20.	M/s Yajwa Sunpowers	JPDC	GHINOI	4.80	L1	2.969

Sr. No.	Bidder Name	Circle	GSS Name	SPV Plant Capacity (MW)	Bidder Rank	Final Tariff (Rs. Per Unit)
21.	M/s Sanjeev Brothers (JV with M/s Om Construction Company)	JPDC	TALA	4.90	L1	3.050
22.	M/s Sanjeev Brothers (JV with M/s Om Construction Company)	JPDC	TALA	4.60	L1	3.050
23.	Mahesh Kumar Yadav	JPDC	SUKALLBAS	1.22	L1	2.900
24.	Mamta Yadav	DAUSA	RANOLI	3.56	L1	3.140
25.	Mamta Yadav	DAUSA	RANOLI	3.31	L1	3.040
Final Negotiated Rate duly accepted by the Bidder						
26.	M/s Bhanwar Lal	BUNDI	33/11 KV BASOLI	2.65	L1	3.252
27.	M/s Shree Vinayak Mining	JHALAWAR	SALOTIYA	2.64	L1	3.269
28.	Naveen Meena	JHALAWAR	KUNDLA PRATAP	1.25	L1	3.118
29.	M/s Bhanwar Lal	BUNDI	33/11 KV NAMANA	3.11	L1	3.278
30.	M/s Bhanwar Lal	BUNDI	33/11 KV BASOLI	3.00	L1	3.213
31.	M/s. Greenroots Renewable Energy Pvt. Ltd.	ALWAR	RAMGARH	2.47	Single Bid	3.309
32.	Ved Ram Yadav	ALWAR	SHAHJANPUR	1.72	Single Bid	3.229
33.	Lali Devi Sharma	JPDC	BIHARIPURA	1.94	Single Bid	3.300
34.	Ram Khiladi Meena	KARAU LI	33 KV LOHARRA	1.61	Single Bid	3.213
35.	M/s Suncity Urja Pvt. Ltd.	JHALAWAR	SALOTIYA	3.17	L1	3.252
36.	Pawan Kumar Gurjar	DAUSA	BADIYAL KALAN	2.54	L1	3.178
37.	Om Prakash Yadav	ALWAR	BEHROR (MAIN)	1.67	Single Bid	3.310
38.	Mahendra Singh	ALWAR	DAWANI	2.80	Single Bid	3.310

Sr. No.	Bidder Name	Circle	GSS Name	SPV Plant Capacity (MW)	Bidder Rank	Final Tariff (Rs. Per Unit)
39.	Shambhu Dayal Jain	ALWAR	GHATA BHANWAR	3.19	Single Bid	3.310
40.	M/s Sangamam Power Projects Pvt. Ltd.	ALWAR	KAYSA	3.44	Single Bid	3.310
41.	M/s Sangamam Power Projects Pvt. Ltd.	ALWAR	RAMPURA	2.94	Single Bid	3.310
42.	M/s Sangamam Power Projects Pvt. Ltd.	ALWAR	RAMPURA	3.83	Single Bid	3.310

b) List of bidders where JVVNL issued Letter of Intent (LOI) subject to approval on the allocation of agriculture pumps capacity by MNRE and upon finalization / approval of discovered or negotiated rate (Rs./kWh) from the Hon'ble Commission (RERC) under TN-12.

Sr. No.	Bidder Name	Circle	GSS Name	SPV Plant Capacity (MW)	Bidder Rank	Final Tariff (Rs. Per Unit)
Lowest (L1) Levelized Tariff Bidder						
1.	M/s Yajwa Sunpowers	ALWAR	CHATARPURA	4.31	Single Bid	2.969
2.	M/s Yajwa Sunpowers	BARAN	SAMSPUR	2.48	Single Bid	3.039
3.	M/s Sanjeev Brothers (JV with M/s Om Construction Company)	JPDC	SHYAMPURA	2.98	Single Bid	3.300
4.	Sailesh Pradhan	JPDC	KANWARPURA	3.16	Single Bid	3.210
5.	M/s. R.S Ornament	ALWAR	33/11 KV NAURANGABAD	1.72	L1	3.100
6.	Kalpana Yadav	ALWAR	CHIKANI	2.72	L1	2.950
7.	M/s. R.S Ornament	BHARATPUR	RANDHEER GARH	1.67	L1	3.100

Sr. No.	Bidder Name	Circle	GSS Name	SPV Plant Capacity (MW)	Bidder Rank	Final Tariff (Rs. Per Unit)
8.	M/s GP Eco Solutions India Ltd.	JHALAWAR	CHANDIPUR	2.67	L1	3.170
9.	Vibhas Goyal	JPDC	JOBNER	0.88	L1	3.110
10.	Mihir Yadav	JPDC	KEERATPURA	2.83	L1	2.920
11.	Mahima Yadav	ALWAR	DOOMROLI	2.70	L1	3.070
12.	Mamta Yadav	BARAN	SAMSPUR	2.62	L1	3.089
13.	Govind Sahai	DAUSA	BASWA	3.87	L1	3.170
14.	Ramdutt Gupta	KARALI	33/11 KV RONDHAI	1.34	L1	2.990
15.	Vedvati Yadav	ALWAR	KHOHRI	4.23	L1	2.950
16.	Vibhas Goyal	BUNDI	33/11 KV DARA KA NAYA GAON	2.81	L1	3.110
17.	M/s Yajwa Sunpowers	JPDC	HASTEDA	3.18	L1	2.969
18.	M/s Yajwa Sunpowers	JPDC	HASTEDA	3.01	L1	2.969
19.	Rajendra Yadav	JPDC	BASARI KHURD	1.71	L1	3.170
20.	Mamta Yadav	JPDC	CHHAPUDA	3.40	L1	2.970
21.	Mohit Kumar Yadav	JPDC	BADI JODI	2.77	L1	3.070
22.	Jaipratap Gurjar	TONK	RAJPURA	2.68	L1	2.900
Final Negotiated Rate duly accepted by the Bidder						
23.	M/s Bhanwar Lal	BUNDI	33/11 KV DARA KA NAYA GAON	3.11	L1	3.241
24.	M/s. Oriental Sales Corporation	DAUSA	SONAD	4.90	L1	3.239
25.	M/s Suncity Urja Pvt. Ltd.	BARAN	PARANIYA	3.23	L1	3.197
26.	M/s Suncity Urja Pvt. Ltd.	BARAN	BHANWARGAR H	3.29	L1	3.235

Sr. No.	Bidder Name	Circle	GSS Name	SPV Plant Capacity (MW)	Bidder Rank	Final Tariff (Rs. Per Unit)
27.	Aakriti Gambhir	KOTA	KAITHOON	1.37	L1	3.105
28.	Sailesh Pradhan	KOTA	POLAI KALAN	2.34	L1	3.141
29.	Man Singh Choudhary	KOTA	POLAI KALAN	2.23	L1	3.062
30.	M/s Suncity Urja Pvt. Ltd.	KOTA	DEEGOD	2.75	L1	3.226
31.	M/s Suncity Urja Pvt. Ltd.	KOTA	DEEGOD	3.06	L1	3.187
32.	M/s Sangamam Power Projects Pvt. Ltd.	JPDC	GUDLIYA	3.21	Single Bid	3.310
33.	M/s Sangamam Power Projects Pvt. Ltd.	ALWAR	MANDHAN	3.88	L1	3.310

3.77. The petitioner further highlights that the above mentioned “final levelized tariff” are based on actual CFA, i.e., capped at 7.5 HP pumps. However, if the above plants would have been offered full CFA, i.e., Rs. 1.05 per MW, then the estimated levelized tariff would have been reduced further.

Future capacity additions for feeder level solarization under Component C of PM-KUSUM Scheme

3.78. JVVNL with approx. 4,500 MW of solar power plants capacity is planning for floating tenders under feeder level solarization of Component C of PM-KUSUM Scheme in near future.

Additional Information submitted by the Petitioner:

3.79. JVVNL in the addition information filed on 02.09.2024 have submitted that they have followed the transparent bidding process by publishing the Request for Selection (RfS) document of each tender (TN-11 and TN-12) on eprocurement portal of Rajasthan (eproc.rajasthan.gov.in) in line with

the Rajasthan Transparency in Public Procurement Rules (RTPP) Act 2012/RTPP Rules 2013.

- 3.80. JVVNL have also carried out monitoring of the market conditions before and during the negotiation stage through meeting held on 24.06.2024 for determination of total project cost.
- 3.81. Subsequently, after detailed discussions and due diligence by the competent authority of the Petitioner towards reasonability of tariff, the final negotiated /L1 rates were awarded to the respective successful bidder of each solar PV Plant.
- 3.82. LOIs have been issued by them subject to the approval of the allocation of agriculture pumps capacity by MNRE and upon finalization/approval of discovered or negotiated rate (Rs/kWh) from the Commission (RERC).

Prayer

4. In view of the above submissions the petitioner prayed as under:
- (i) To admit and approve the petition for approval of the levelized tariff of 75 nos. of Solar PV plants with total aggregated capacity of 208.91 MW as mentioned at para 3.74 for 25 years for the projects of Solar PV Plant for feeder level solarization under Component C of PM-KUSUM Scheme.
 - (ii) To condone any error / omission and to give opportunity to rectify the same;
 - (iii) To permit the Petitioner to make further submission, additions and alterations to this Petition as maybe necessary from time to time;
 - (iv) To pass any such other order/s and/or direction/s, which the Hon'ble Commission may deem fit and proper in the facts and circumstances of the case.

Commission's view:

5. We have considered the submissions made and information placed on record on behalf of the Petitioner.
6. The present Petition has been filed under Section 63 (Determination of Tariff by Bidding Process) of the Electricity Act 2003, read with Regulation 19 and 21 of RERC (Transaction of Business), Regulations, 2021, for approval of levelized tariff discovered through transparent competitive bidding carried out by JVVNL for solar power projects with aggregate capacity of 208.91 MW under Component-C (Feeder Level Solarization) of PM-KUSUM Scheme vide TN-11 and TN-12.
7. Saur Krishi Ajivika Yojna (SKAY) platform launched by Govt of Rajasthan is a dedicated platform for farmers / landowners and solar power developers to address 'land identification, its procurement and associated cost' related challenge and to boost decentralized distributed solar generation under PM-KUSUM Component-C (Feeder Level Solarization).
8. According to the Petitioner the portal developed as above acts as a facilitator where interested farmers / landowners and solar power plant developers can collaborate to arrange land for a solar power plant on RESCO mode in the vicinity (preferably within 5 kMs radius) of identified 33/11 kV substations of Rajasthan Discoms as envisaged under PM-KUSUM Component-C (Feeder Level Solarization).
9. As per scheme guidelines, feeder level solarization under Component C of PM-KUSUM, the provision under Central Financial Assistance (CFA) is limited to solar capacity for 7.5 HP pumps. However, for the purpose of CFA, the annual energy consumption of individual agriculture consumers having pump capacity more than 7.5 HP has been proportionately

reduced to the 7.5 HP level and subsequently the individual SPV plant capacity & CFA @ Rs. 1.05 Cr per MW has been computed.

10. Based on response received on SKAY portal, JVVNL identified 86 nos. solar PV power plants with total capacity of 231.52 MW to be installed in the vicinity of 68 nos. of 33/11 kV Substations having 22,923 nos. connected agriculture consumers for the purpose of setting up grid connected solar power plant to meet the annual power requirement of feeders using solar energy.
11. According to the petitioner, their CLPC had decided to issue Letter of Intent (LoI) subject to approval on the allocation of agriculture pumps capacity by MNRE and upon finalization / approval of discovered or negotiated rate (Rs./kWh) from the Commission (RERC) under Section 63 of The Electricity Act, 2003 for all the 75 nos. of Solar PV projects.
12. In view of above, the Petitioner had issued 75 nos. of Letter of Intent (LoI) subject to approval on the allocation of agriculture pumps capacity by MNRE and upon finalization / approval of discovered or negotiated rate (Rs./kWh) from the Commission (RERC) under Section 63 of the Electricity Act, 2003 for all the 75 nos. of Solar PV projects. Also, according to the petitioner, acceptance of all the 75 nos. of Letter of Intent (LoI) have been received at their office. Further, the Petitioner has also submitted Solar PV plant wise final accepted levelized tariff for these two TNs.
13. It is noted from their submissions that the Petitioner has followed transparency in the bidding process. It is also noted from the submissions of the Petitioner that they have carried out the monitoring of the market conditions before and during the negotiation stage. Further, it is also their submission that detailed discussions and due diligence has been carried out by the competent authority of the petitioner towards reasonability of tariff.

14. In view of above, in line with RfS document and as per Section 63 of Electricity Act, 2003, the petitioner has prayed for approval of 75 nos. Solar PV plant wise levelized tariff for the projects with total aggregated capacity of 208.91 MW under Component C of PM-KUSUM scheme, which has been discovered through the transparent competitive bidding process of MNRE guidelines and the Rajasthan Transparency in Public Procurement Rules, 2013.
15. As the Discoms have filed the petition u/s 63 of the Electricity Act, 2003 for approval of tariff discovered through transparent competitive bidding process, accordingly, in this order, Commission has considered the tariff discovered during the bidding process and recommended by the Petitioner Discom for adoption.
16. Commission has issued various directions to the Discoms vide earlier orders with regard to the implementation of the projects. However, Commission considers it appropriate to issue consolidated directions at the cost of repetition.
17. In view of the para 1.1.2 of the RfS issued by the Petitioner in TN-11 & TN-12 under the Scope of work, all the Discoms are once again directed that they should ensure domestically manufactured panels and indigenous modules through inspection and verification at the manufacturing unit of the respective OEM as per the MNRE order for all tenders under consideration, wherever applicable. Further, Discoms are also directed that while issuing work order/PPA, they should ensure that the liability of 'change in Law' may not arise for them on this account. Also, in case of any refund/ benefit arises on account of the 'change in Law' then Discoms should also claim the same promptly. Considering the experience gained by the Discoms so far, pricing trends and the requirement of approaching the Commission for adoption of tariff after

each bid, the Commission had discontinued the practice of specifying ceiling tariff. It is once again directed that based on the prevalent prices trends, Discoms should do the rate analysis at their own level for every tender and conduct bidding through transparent bidding mechanism (as mandated by MNRE). Also, Discoms, after all due diligence, if satisfied that the discovered rates are reasonable and market aligned, they may approach the Commission for adoption of the tariff.

18. Based on the information submitted by the Petitioners in the various petitions and comprehensive guidelines issued on 17.01.2024 for implementation of PM-KUSUM Scheme. Discoms are once again directed to explore the possibility of awarding tenders where multiple substations may be grouped as one bidding group and SPDs may be permitted to quote the tariff common for all projects under one group and SPD may sign a single PPA with Discom. In addition, Discoms are also directed to study the experience and best practices of other States in this regard so as to further accelerate the implementation of the scheme and also to discover a lower tariff.
19. Further, Commission in its various orders has stressed the need for integrating more and more distributed power. If schemes like KUSUM Component-C (feeder level solarization) are implemented in the right earnest by the Discoms, it can prove to be a game changer for the sector as a whole. However, with large number of such plants certain system studies may also be required to be undertaken and need for storage and other balancing measure may arise. In this regard, the Commission has also earlier directed the Discoms to carry out necessary system studies in this light. Petitioner has also submitted the compliance report in this regard stating that it is already in process of carrying out system studies / load flow studies at some of the 33/11 kV Sub-stations where solar PV capacity are already commissioned in order to ensure proper integration

of these systems with the network and also for optimum utilization of network. It is observed that as more and more plants are likely to come on line, the requirement of such studies would increase. In order to ensure smooth integration of such plants, Discoms are once again directed that they may continue to conduct the necessary system studies for such plants.

20. It is also observed that Discoms have received additional sanction of 1,00,000 nos of agriculture pumps from MNRE for whole Rajasthan State. Commission has been approving the tariff of the solar PV projects under PM KUSUM Component-C, however, the Discoms have not reported the status of implementation in the field. It is, therefore, directed that the Discoms should also report the progress of the implementation of the projects approved by the Commission under Component-C while filing the petitions in future in the matter.
21. Accordingly, looking to the submissions of the Petitioner, the Commission orders as under:
 - (1) The Commission approves the purchase of power from 75 nos. of solar PV plants in TN-11 and TN-12 of solar PV plants as prayed in para 3.76 above for 25 years under Component-C of PM KUSUM Scheme.
 - (2) Discoms should carry out system studies/load flow studies, if needed, to ensure proper integration of the solar power PV systems with the network and also for optimum utilization of network.
 - (3) For future bids, Discoms should continue to do the rate analysis at their own level for every tender and conduct bidding through transparent bidding mechanism (as mandated by MNRE) and if the Discoms after all due diligence are satisfied that discovered rates

are reasonable and market aligned, they may approach the Commission for adoption of the tariff.

- (4) Discoms should also explore the possibility of bidding for multiple substations grouped as one bidding group to discover a lower tariff for benefit of end consumers.
 - (5) Discoms are advised to preferably select the feeders where maximum CFA from the Gol may be availed so that benefit of lower tariff can be achieved.
 - (6) Discoms are directed to ensure that condition of Domestic content requirement is followed as per the MNRE, orders wherever applicable. Also, while issuing work order /signing of PPA, Discoms are directed to ensure that no liability arise for 'Change in Law' on account of DCR and in case of any benefit/refund arises of 'Change in Law' on this account the Discom should also recover the same promptly.
 - (7) In addition, Discom will continuously monitor the change in law events and will ensure timely recovery/ payment on account of change in law events as per the law.
 - (8) Discoms should furnish the progress of implementation of the projects under Component-C in the petitions to be filed by them in future in the matter.
 - (9) Discoms should follow the guidelines and directions issued by MNRE in respect of implementation of Feeder Level Solarisation under Component-C of PM KUSUM Scheme from time to time.
22. Copy of this order may be sent to all Discoms.
23. The Petition is disposed of accordingly.

(Dr. Rajesh Sharma)
Member

(Hemant Kumar Jain)
Member