



Rajasthan Electricity Regulatory Commission

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PUBLIC NOTICE

Subject: Invitation of comments/suggestions on Draft Order for determination of pre-fixed levelised tariff under Component-A and rate of purchase of excess electricity by the DISCOMs under Component-C of the PM KUSUM scheme.

Ministry of New and Renewable Energy has recently launched the guidelines for implementation of *Pradhan Mantri KishanUrja Suraksha evam Uthan Mahabhiyan* Scheme (PM KUSUM) on 22nd July, 2019 which covers the following components:

- (a) Component-A: Setting up of 10,000 MW of Decentralized Ground Mounted Grid Connected Solar Power plants of individual plant size upto 2 MW;
- (b) Component-B: Installation of 17.50 Lakh Standalone Solar Powered Agriculture Pumps of individual capacity upto 7.5 HP; and
- (c) Component-C: Solarisation of 10 Lakh Grid-Connected Agriculture Pumps of individual pump capacity upto 7.5 HP.

Under the above scheme, Component- 'A' and 'C' will be initially implemented on pilot basis.

Rajasthan Urja Vikas Nigam Ltd (RUVNL) on behalf of DISCOMs have requested the Commission to determine the pre levelised tariff under component-A and rate of purchase of excess electricity by DISCOMs under Component-C of the PM KUSUM scheme.

Commission has prepared the Draft Order for determination of pre fixed levelised tariff for renewable power generated from the projects to be purchased by DISCOMs setup under component-A and rate of purchase of excess power by DISCOMs from the Farmers under Component-C of the PM KUSUM scheme

The Draft Order can be downloaded from the Commission's website www.rerc.rajasthan.gov.in and the copy of the same may also be obtained from the Receiving officer of the Commission on a payment of Rs 50/-.

Interested persons may submit their views and suggestions on the Draft Order to the Receiving officer on or before 23.09.2019.

(B.K.Dosi)
Secretary

(Not to be published)

(B.K.Dosi)
Secretary



राजस्थान विद्युत विनियामक आयोग

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सार्वजनिक सूचना

विषय: पीएम कुसुम योजना के घटक-अ के तहत पूर्व निर्धारित समतलित टैरिफ और घटक-सी के तहत वितरण कम्पनियों द्वारा अतिरिक्त बिजली की खरीद की दर के निर्धारण के लिए ड्राफ्ट ऑर्डर पर टिप्पणियों/ सुझावों का आमंत्रण।

नवीन और नवीकरणीय ऊर्जा मंत्रालय ने हाल ही में 22 जुलाई 2019 को प्रधान मंत्री किसान ऊर्जा सुरक्षा अभियान उत्थान महाभियान योजना (पीएम कुसुम) के कार्यान्वयन के लिए दिशा-निर्देश जारी किए हैं जिसमें निम्नलिखित घटक शामिल हैं।

- (अ) घटक-ए: 10,000 मेगावट विकेंद्रीकृत ग्राउंड माउंटेड ग्रिड कनेक्टेड सोलर 2 मेगावट के आकार तक के पावर प्लांट्स की स्थापना;
- (ब) घटक-बी: 7.5 एचपी तक की व्यक्तिगत क्षमता क 17.50 लाख स्टैंडअलोन सौर ऊर्जा संचालित कृषि पंपों की स्थापना तथा
- (स) घटक सी: 7.5 एचपी तक की व्यक्तिगत पंप क्षमता के 10 लाख ग्रिड से जुड़े कृषि पंपों का सोलराइजेशन।

उपरोक्त योजना के तहत घटक 'ए' तथा घटक 'सी' को शुरू में पायलट आधार पर लागू किया जाएगा।

राज्य वितरण कम्पनियों की ओर से राजस्थान ऊर्जा विकास निगम लिमिटेड ने आयोग से अनुरोध किया है कि वह पीएम कुसुम योजना के घटक ए के तहत पूर्व निर्धारित समतलित टैरिफ तथा घटक -सी के तहत वितरण कम्पनियों द्वारा अतिरिक्त बिजली की खरीद की दर का निर्धारण करें।

आयोग ने पीएम कुसुम योजना के घटक-ए के अन्तर्गत स्थापित होने वाली परियोजनाओं से उत्पन्न अक्षय ऊर्जा के वितरण कम्पनियों द्वारा क्रय हेतु पूर्व निर्धारित समतलित टैरिफ तथा घटक -सी के तहत किसानों से अतिरिक्त बिजली की खरीद की दर के निर्धारण के लिए ड्राफ्ट ऑर्डर तैयार किया है।

ड्राफ्ट ऑर्डर को आयोग की वेबसाइट www.erc.rajasthan.gov.in से डाउनलोड किया जा सकता है और इसकी प्रति आयोग के प्राप्तकर्ता अधिकारी से 50/- रुपये के भुगतान पर भी प्राप्त की जा सकती है।

इच्छुक व्यक्ति 23.09.2019 को या उससे पहले प्राप्त अधिकारी को ड्राफ्ट ऑर्डर पर अपने विचार और सुझाव प्रस्तुत कर सकते हैं।

(बी.के.दोसी)
सचिव

(अप्रकाशनीय)

(बी.के.दोसी)
सचिव

RAJASTHAN ELECTRICITY REGULATORY COMMISSION, JAIPUR

In the matter of

Determination of pre-fixed levellised tariff for sale of power from power projects set up under Component-A and rate for purchase of excess power from solarised agriculture pumps under Component-C of the PM KUSUM Scheme of GoI to the State Discoms.

Coram:

1. Shri Shreemat Pandey, Chairman
2. Shri Suresh Chandra Dinkar, Member
3. Shri Prithvi Raj, Member

Date of Order:

06.09.2019.

DRAFT ORDER

1. As per part of Intended Nationally Determined Contributions (INDCs), India has committed to increase the share of installed capacity of electric power from non-fossil sources to 40% by 2030. Large Scale Solar power generation projects are also being installed to achieve the ambitious target of 100 GW of Solar Power generation by 2022.
2. Ministry of New and Renewable Energy has recently launched the guidelines for implementation of *Pradhan Mantri KishanUrja Suraksha evam Uthan Mahabhiyan* Scheme (PM KUSUM) on 22nd July, 2019 covers the following components:
 - (a) Component A: Setting up of 10,000 MW of Decentralized Ground Mounted Grid Connected Solar Power plants of individual plant size upto 2 MW;
 - (b) Component-B: Installation of 17.50 Lakh Standalone Solar Powered Agriculture Pumps of individual capacity upto 7.5 HP; and
 - (c) Component-C: Solarisation of 10 Lakh Grid-Connected Agriculture Pumps of individual pump capacity upto 7.5 HP.

3. The Component-A and Component-C will be implemented initially on pilot mode for 1000 MW capacity and one lakh grid connected agriculture pumps respectively and Component-B will be implemented in full-fledged manner with total Central Government support of ₹ 19,036.5 Crore. After successful implementation of pilot project under Components-A and Component-C, the same shall be scaled up with necessary modifications based on the learning from the pilot phase with total Central Government support of ₹ 15,385.5 Crores. All three components of the scheme aim to add Solar capacity of 25,750 MW by 2022 with the total Central Financial Support of ₹ 34,422 crore.
4. The implementation mechanism under the said guidelines is as under:
 - I. **Component A: Setting up of 10,000 MW of Decentralized Ground/Stilt Mounted Grid Connected Solar or other Renewable Energy based Power Plants Component-A:**
 - i. Under Component-A, solar or other renewable energy-based power plants (REPP) of capacity 500 kW to 2 MW will be setup by individual farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (FPO)/Water User associations (WUA) hereinafter called Renewable Power Generator (RPG). However, States/DISCOMs may allow setting-up of solar or other renewable energy-based power plants of capacity less than 500 kW in specific cases. The REPP will be preferably installed within five km radius of the sub-stations in order to avoid high cost of sub-transmission lines and to reduce transmission losses.
 - ii. The Distribution companies (DISCOMs) will notify sub-station wise surplus capacity which can be fed from such RE power plants to the Grid and shall invite applications from interested beneficiaries for

setting up the renewable energy plants. The renewable power generated will be purchased by DISCOMs at a pre-fixed levellised tariff. In case, the aggregate capacity offered by Applicants is more than notified capacity for a particular sub-station, bidding route will be followed by DISCOMs to select Renewable Power generator and in such cases the pre-fixed levellised tariff will be the ceiling tariff for bidding. Selection of bidders will be based on the lowest tariff offered in the ascending order as quoted by the bidders in the closed bid or e-reverse auction as the case may be. A model PPA (Power Purchase Agreement) to be executed between RPG and DISCOMs has been prepared by MNRE. The duration of PPA will be 25 years from Commercial Operation Date (COD) of the project. The total energy purchased from these RE plants will be accounted for fulfilment of RPO by the DISCOM.

- iii. In case the farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (FPO)/ Water User associations (WUA) etc. are not able to arrange equity required for setting up the REPP, they can opt for developing the REPP through developer(s) or even through local DISCOM, which will be considered as RPG in this case. In such a case, the land owner will get lease rent as mutually agreed between the parties. The lease rent may be in terms of Rs per year per acre of land or in terms of Rs per unit energy generated per acre of land area. The farmer(s) may opt for payment of lease rent directly in their bank account by the DISCOM, from the payment due to the developer. A model Land Lease Agreement to facilitate the beneficiaries has also been prepared by MNRE. However, the terms of Land Lease Agreement may be finalised on mutual consent of concerned parties.

- iv. The REPP under the scheme would be implemented primarily on Barren / uncultivable land. Agricultural land is also permitted under the scheme provided that solar plants are installed in stilt fashion (i.e. raised structure for installation of Solar panels) and with adequate spacing between panel rows for ensuring that farming activity is not affected. The RPG would be free to adopt any renewable energy source or technology while responding to the bid. However, in case of cultivable land with solar plants, the same may be installed on stilts, so that the farmers continue to cultivate the land, apart from getting the benefit of lease rent. In such a case DISCOM may also float bids (in case of specific substations) where setting up of solar projects on stilts may be mandatorily required, and bids for energy tariff invited accordingly.
- v. DISCOM shall assess and notify RE generation capacity that can be injected in to all 33/11 kV or 66/11 kV or 110/11 kV sub-station of rural areas and place such notification on its website for information of all stakeholders. To facilitate farmers willing to lease out their land for development of RE plants near above notified substation(s), as per provisions of this scheme, DISCOM may also place list of such farmers on their website. However, the leasing of land of any farmers will be a bi-partite agreement between the farmer and the developer and DISCOM will not be held responsible for failure in getting the land leased out to a developer. To meet additional demand DISCOM will augment the capacity of sub-station under IPDS or any other scheme.
- vi. DISCOM or any agency authorized by the DISCOM shall invite 33/11 kV or 66/11 kV or 110/11 kV sub-station wise EoI from RPG to participate in selection process for development of decentralised renewable power plants. The RPG shall submit their interest against the

EoI as per the schedule notified by DISCOM. An RPG will not be allowed to apply for more than one renewable power plant for a particular 33/11 kV sub-station.

- vii. REPP of capacity up to 2 MW may be connected at 11 kV side of sub-station and the selected RPG will be responsible for laying of dedicated 11 kV line from REPP to sub-station, construction of bay and related switchgear at sub-station where the plant is connected to the grid and metering is done.
- viii. A copy of standard Power Purchase Agreement to be executed between the DISCOM and the RPG shall be provided by DISCOM along with invitation for submission of EoI. The model PPA agreement shall be as provided by MNRE.
- ix. The PPA shall be for a period of 25 years from the date of COD. The DISCOM will be obliged to buy the entire power from RPG within the contract capacity.
- x. MNRE will provide Procurement Based Incentive (PBI) to the DISCOMs @ 40 paise/kWh or Rs.6.60 lakhs/MW/year, whichever is lower, for buying solar/ other renewable power under this scheme. The PBI will be given to the DISCOMs for a period of five years from the Commercial Operation Date of the plant. Therefore, the total PBI that shall be payable to DISCOMs will be Rs. 33 Lakh per MW.
- xi. The total energy purchased from these RE plants will be accounted for fulfillment of RPO by the DISCOM.

II. Component B: Installation of 17.50 Lakh Stand-alone Solar Pumps:

- i. Under this Component, individual farmers will be supported to install standalone solar Agriculture pumps of capacity up to 7.5 HP for replacement of existing diesel Agriculture pumps / irrigation systems in off-grid areas, where grid supply is not available. Installation of new pumps shall also be permitted under this scheme except in dark zone areas. Pumps of capacity higher than 7.5 HP may be allowed, however, the CFA will be limited to the CFA applicable for pump of 7.5 HP. Water User Associations and community/cluster-based irrigation system will also be covered under this component. However, priority would be given to small and marginal farmers. In order to minimize the water usage for irrigation purpose, preference will be given to the farmers using Micro irrigation systems or covered under Micro irrigation schemes or who opt for micro irrigation system. The size of pump would be selected on the basis of water table in the area, land covered and quantity of water required for irrigation.
- ii. CFA of 30% of the benchmark cost or the tender cost, whichever is lower, of the stand-alone solar Agriculture pump will be provided. The State Government will give a subsidy of 30%; and the remaining 40% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 30% of the cost as loan. In case the State Government provides subsidy more than 30%, the beneficiary share will reduce accordingly.
- iii. DISCOMs/ Agricultural Department/ Minor Irrigation Department / any other Department designated by State Government will be the implementing agencies for this component.

III. Component C: Solarisation of 10 Lakh Grid Connected Agriculture Pumps:

- i. Under this Component, individual farmers having grid connected agriculture pump will be supported to solarise pumps. Solar PV capacity up to two times of pump capacity in kW is allowed under the scheme. However, State may specify lower solar PV capacity in kW, which in any case shall be not be less than pump capacity in HP e.g. for 2 HP pump it will not be less than 2 kW. The farmer will be able to use the generated solar power to meet the irrigation needs and the excess solar power will be sold to DISCOMs.
- ii. CFA of 30% of the benchmark cost or the tender cost, whichever is lower, of the solar PV component will be provided. The State Government will give a subsidy of 30%; and the remaining 40% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 30% of the cost as loan. In case the State Government provides subsidy more than 30%, the beneficiary share will reduce accordingly.
- iii. Further, the CFA will be limited to Solar PV capacity up to two times of pump capacity in kW for pumps up to 7.5 HP. Solarisation of Pumps of capacity higher than 7.5 HP may be allowed, however, the CFA will be limited to the CFA applicable for pump of 7.5 HP in the respective State/UTs. This will help to create an avenue for extra income to the farmers, and for the DISCOMs to meet their RPO targets. The solar power fed in to the grid and solar power utilized by farmer both will be accounted for fulfillment of solar RPO by the DISCOM.

- iv. DISCOM may adopt any of the modalities for solarisation of pumps viz, (i) Net-metering: in this case the agriculture pump will continue to run at rated capacity taking power from solar panels and balance power from grid, if required, and in case solar power generation is higher than required by pump, the additional solar power would be fed to the grid; (ii) Pump to run on solar power only: in this case the pump will run from the solar power as in case of stand-alone solar pump and no power will be drawn from the grid for operation of pump. In case solar power generation is higher than required by pump, the additional solar power would be fed to the grid.
- v. This component will be applicable to farmers already connected to grid. Feeder-wise implementation is proposed to be carried out. All agriculture pumps in a feeder will be solarised, however, States may impose a minimum solarisation requirement for a feeder in terms of minimum % of pumps solarized on that feeder.
- vi. DISCOMs will purchase excess power from the farmer at the rate decided by the respective State/SERC. The DISCOMs will ensure “must-run” status to the solarised feeders and will keep such feeders ‘ON’ during sunshine hours of a day.
5. Rajasthan Urja Vikas Nigam Ltd (RUVNL) vide their letter 26.07.2019 have requested as under:

“ Ministry of New and Renewable Energy, Government of India has issued guidelines for implementation of Pradhan Mantri Kisan Urja Suraksha evem Utthan Mahabhiyan (PM KUSUM) scheme. Under component -A decentralized

gridconnected solar power projects are to be set up, the power from which will be purchased by DISCOMS at a pre fixed levellised tariff. In case where bidding is required, this pre fixed levellised tariff will be the ceiling tariff.

Under component-C solarization of grid connected agricultural pumps: under this scheme, solar power will be generated by setting up of solar PV plants to run the agricultural pump sets. In case solar power generated is greater than the requirement of solar pumps, additional power will be fed in the grid. DISCOMs will purchase excess power from farmer at the rate decided by Hon'ble State Commission.

Therefore, you are requested to determine the pre fixed levelised tariff for decentralized grid connected solar power projects under component-A and also excess power purchase rate under component-C by initiating a suo-moto petition.”

6. The RUVNL on behalf of the DISCOMS have requested for determination of the pre fixed levellised tariff for decentralized grid connected solar power projects under component-A and the rate at which excess power will be purchased by the DISCOMS under component-C by initiating a Suo-Motu petition.
7. Considering the underlying objectives and likely benefits of the KUSUM scheme, Commission on the request received from RUVNL considers it appropriate to initiate the proceedings on Suo-Motu basis. Accordingly, a proposal has been prepared elaborated in subsequent para(s).
8. Before proceeding further, it is worth to see the latest solar tariff determined/adopted by other State ERCs.

9. KERC has also issued order on 1.08.2019 in the matter of Determination of tariff in respect of Solar Power Projects (including Solar Rooftop Photovoltaic Projects) for FY20. KERC in its order have determined generic tariff for grid connected megawatt scale solar power projects of less than 5MW capacity at ₹.3.08 per unit considering capital cost of ₹ 340 lakhs/MW and O&M expenses of ₹ 4.5 laks/MW.
10. In the above tariff calculations KERC has not considered the impact of the safe guard duty and its GST in the capital cost and decided it to be paid in cash by the respective Discoms, every year (=₹ 33.72 lakhs/tenure of PPA) on production of proof of payment of the safeguard duty by the generators/developers.
11. Tamil Nadu Electricity Regulatory Commission (TNERC) has issued order on 29.03.2019 on generic tariff for solar power and related issues while comparing competitive bid tariff in various States TNERC discussed capital Cost adopted by other Commissions and difference between preferential tariff and tariff discovered through competitive bidding and considering capital cost of ₹ 335 Lakhs/ MW and O&M @1.4% of capital cost, among other parameters, finally determined the tariff of ₹3.04 per unit without accelerated depreciation and ₹.2.80 per unit with Accelerated Depreciation (AD).
12. Maharashtra Electricity Regulatory Commission (MERC) in its order dated 15.02.2019 in case of Maharashtra State Electricity Distribution Co. Ltd. seeking approval for adoption of tariff for long term procurement of 180 MW Solar Power under '*Mukhyamantri Saur Krishi Vahini Yojana*' with 2 to 10 MW Capacity projects connected to distribution network under Section 63 of the Electricity Act, 2003 for meeting the Solar Renewable Purchase Obligations. MERC vide its above order approval for procurement of Solar Power from following parties for 25 Years as rate discovered through the competitive bidding process as below:

Sr.No.	Name of Bidder	District/ Circle	Capacity (MW)	Quoted tariff/Tariff Discovered (₹./Per Unit)
1	IBC Solar	Solapur	10	3.29
		Buldhana	10	3.29
		Osmanabad	10	3.29
2	Giriraj Renewables Pvt. Ltd	Satara	50	3.30
		Buldhana	50	3.30
		Jalgaon	50	3.30
Total			180	

13. MERC accorded the approval for signing the PPAs with the above parties as per the rates discovered through the competitive bidding process. In case the safe guard duty is not paid by the bidders, MSEDCL shall reduce ₹ 0.18/Unit from the discovered Tariff. The Solar power procured from these projects shall be counted towards fulfilment of its Solar RPO for the respective periods.
14. Thereafter in subsequent bidding the tariff quoted by various bidders in Maharashtra remained in range of ₹ 3.15/Unit to ₹ 3.30/Unit.

Pre-determined Levellised tariff for Component-A:

15. Given the large differences between regulated feed-in-tariffs / preferential tariffs and the winning bids for solar PV and wind in the past, CERC has stopped notifying wind and solar PV tariffs since the last 2 years. Similarly, Commission has determined the last generic tariff for solar PV vide order dated 9.10.2017 for the year 2017-18 as Rs 3.93 per unit for solar PV projects. Commission has also made a provision in the RERC Tariff Regulations 2019 for determination of projects specific tariff on case to case basis as and when situation arises in respect of RE projects including the projects covered under the Central/State Government scheme and while doing so Commission may appropriately consider the various norms

16. Given the flux in the solar sector accompanied with falling prices there is gap in preferential tariff determined by the Commission and prices discovered in the recent auctions. It is observed that the bidding guidelines issued by MoP for procuring power from grid connected solar projects, a threshold of 5 MW has been prescribed.
17. However, to arrive at an appropriate price, the Commission has considered the solar tariffs notified by KERC and TNERC for FY 2019-20. Based on the parameters considered by them and parameters specified under the RERC Tariff Regulations the Commission has worked out the tariff with following financial and operational parameters:

Tariff Components	Values
Capital cost	₹ 340 Lakh/MW
CUF	20%
Operation and maintenance expenses	₹ 4.5 Lakh per MW with escalation at 5.85% p.a from second year
Debt-Equity ratio	70:30
Life of plant and machinery	25 years
Return on Equity	14.00% grossed with MAT of 20.46%
Term of Loan	13 years
Interest on loan	10.53%
Depreciation	5.28% for 13 years and balance spread over balance useful life of the project with salvage value of 10%.
Working Capital components	one-month O&M expenses, maintenance spares of 15% of O&M expenses and 1.5 months receivables
Interest on working capital	11.53%
Discount factor	9.42%

18. The solar tariff computed with reference to the determinants listed above works out to ₹ 3.14 per unit without accelerated depreciation benefit .
19. Accordingly Commission specifies ₹ 3.14/kWh as the pre-fixed levelled tariff. In case, the aggregate capacity offered by Applicants is more than notified capacity for a particular sub-station, bidding route will be followed by DISCOMs to select Renewable Power generator and in such cases the prefixed levelled tariff will be the ceiling tariff for bidding. Selection of bidders will be based on the lowest tariff offered in the ascending order as quoted by the bidders in the closed bid or e-reverse bidding as the case may be.
20. The above tariff is applicable for the projects set up in both conditions either on the land mounted (in case of barren land) or on the stilt mounted (in case of agricultural land).

Buy back Rate for Component-C:

21. As per latest tariff petition filed by Discoms the average power purchase cost at Generating end is ₹ 3.85/unit. Rajasthan at present is surplus Power State and marginal variable Cost of power is ₹ 3.44 per unit as per latest tariff petition . Any purchase of power at consumer end at lower tariff will not only reduce the average power purchase price but also help in reduction of T&D losses of Discoms.
22. The present Energy charges for general rural agriculture consumer are ₹4.75 per unit. The Government of Rajasthan is at present providing a subsidy of ₹ 3.85/unit to Agriculture consumers making the effective rate chargeable to farmers as ₹ 0.90/Unit. The subsidy is likely to increase further with increase in tariff as proposed by Discoms in the recently filed tariff petition. Further the GOR is also providing free electricity up to Rs 10,000 for a year to these consumers through Direct Benefit transfer scheme. Under this scheme farmer is supposed to provide

40% of the Cost (10% Own contribution and 30% by taking Loan). Keeping in view the huge subsidy being provided by the State Government to grid connected pumps and investment to be made by the farmers under this Scheme ,any purchase rate limited to bidding rate discovered shall not encourage farmers to go for the scheme. Therefore, the tariff required to be fixed should be sufficient enough to provide debt service as well as reasonable return to the farmers.

23. The rate for agriculture consumers under Kusum can also not be compared with the rate given to domestic consumers i.e. ₹ 3.14/Unit for excess injection as domestic consumers are able to set-off their consumption of higher rate against solar generation and only a little surplus energy is pumped into the grid. In the present case power being offset by farmer was otherwise also almost free to him under present regime of subsidy. The rate at which farmer inject excess energy to grid should be remunerative, otherwise farmers will not opt for the solarisation and benefit to the Kusum scheme can not be reaped. As such as a special dispensation for rate is to be considered under RERC RE tariff Regulation being a government scheme.
24. The solarisation will help in reduction of Government subsidy. The solarisation will also provide reliable day time power to farmers and also help them to generate additional income. Apart from it, the solarisation will help to reduce the burden of additional Electric load on the grid for Agriculture Pumps.
25. Looking to the above benefits, overall objective of the scheme to provide opportunity to farmers to increase their income, RPO fulfilment ,reduction of Government subsidy, reduction of losses of Discoms and reduction in Cross subsidization, the scheme is a win-win situation for all constituents. Therefore, it would be imperative to provide a tariff which is remunerative to farmer that allows him to service his debt and provide for reasonable return on capital employed,

cover misc. expenses and also incentivize for judicious use of water & electricity by the farmer.

26. To optimize costs and ensure economic efficiency, if the above rate for Component-A of ₹ 3.14 per unit when adjusted for the 11 kV system losses of the distribution system @ 8.80%, the rate for purchase of power by Discoms works out to be approx ₹ 3.44per unit. Further , Considering the marginal cost of the power purchase cost of ₹ 3.44 per unit as reported by DISCOMs in their recent tariff petition, the Commission deems it appropriate that the rate for purchase of excess power by DISCOMs under Component-C be limited to ₹ 3.44 / unit.
27. Accordingly, the Commission determines the rate for purchase of excess power by DISCOMs under Component-C as ₹ 3.44/Unit.

Other aspects:

Agriculture hours of supply:

28. In order to ensure that the generation from solar power projects to be set up under the scheme is utilised locally to the extent possible and to provide day-time reliable supply to farmers, all agriculture feeders which are connected to such solar power projects be given supply preferably during the sun-shine (day-time) hours. This would also help in the cost-effective grid integration of such distributed solar power plants and reduce system balancing requirements. This condition is already there under Component C (grid tied solar pumps) of the PM KUSUM guidelines and hence may be observed for Component-A as well. Further, the DISCOM shall assess and notify RE generation capacity that can be injected in to notified sub-station of rural areas and place such notification on its website for information of all stakeholders.

Solar pump sizing:

29. The KUSUM guidelines limit the solar PV size to twice that of the pump capacity (in kW) and also limit the CFA as applicable for a 7.5 hp pump. Further, the CFA will be limited to Solar PV capacity up to two times of pump capacity in kW for pumps up to 7.5 HP. Solarisation of Pumps of capacity higher than 7.5 HP may be allowed, however, the CFA will be limited to the CFA applicable for pump of 7.5 HP in the respective State/UTs. Hence, the DISCOMs may explore the feasibility of grid-tied pumps only in areas with lower pump size and hours of use to make full use of the GoI CFA.

Modalities for solarisation of pumps:

30. The KUSUM guidelines lay down two options for solarisation of pumps. DISCOM may adopt any of the modalities for solarisation of pumps viz, Net-metering: in this case the agriculture pump will continue to run at rated capacity taking power from solar panels and balance power from grid, if required, and in case solar power generation is higher than required by pump, the additional solar power would be fed to the grid; Pump to run on solar power only: in this case the pump will run from the solar power as in case of stand-alone solar pump and no power will be drawn from the grid for operation of pump. In case solar power generation is higher than required by pump, the additional solar power would be fed to the grid. The Discoms may appropriately choose any option out of the above options based on local conditions.

Applicability:

31. Considering the fact that initially the projects are to be taken on pilot basis the tariff and other conditions stipulated under this order shall remain applicable for the capacity initially allocated to the State by MNRE under the Component-A and number of consumers under the component-C of the Scheme. If need be, DISCOMs may file a suitable petition for redetermination of tariff.

Commission Order:

32. The Commission orders as under:

- i. The pre fixed levellised tariff under Component-A is fixed at Rs 3.14 per unit . This will act as ceiling tariff for the competitive bidding for solar projects. The RUVNL/DISCOMs may initiate competitive bidding process for Component-A. The duration of PPA shall be 25 years for all projects covered under this scheme.
- ii. The rate for purchase of excess power by DISCOMs from grid connected solarised Agriculture pumps (Component-C in PM KUSUM scheme) shall be Rs 3.44 per unit.This tariff will be applicable for entire useful life cycle of the grid tied solar pumps set up under the Scheme.
- iii. The DISCOMs may explore the feasibility of grid connected solarised Agriculture pumps only in areas with lower pump size and hours of use to make full use of the CFA.To have greater learnings, it may be prudent that DISCOMs try out Component-C in different agro-climatic zones, in areas with different crops etc. within Rajasthan.
- iv. The above tariff and other conditions stipulated under this order shall remain applicable for the capacity initially allocated to the State by MNRE under the Component-A and number of consumers under the component-C of the Scheme.If need be,based on their learning and analysis ,DISCOMs may file a suitable petition for redetermination of pre-determined levellised cost / tariff and increase in the limits in terms of capacity or number of consumers, as the case may be, under the component-A & C of the scheme.
- v. The other terms and conditions stated under the PM KUSUM Scheme shall remain applicable and need to be followed by various entities.

33. Comments/suggestions of the stakeholders on the above proposal are invited by 23rd September, 2019.

(Prithvi Raj)
Member

(Suresh Chandra Dinkar)
Member

(Shreemat Pandey)
Chairman