

KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM

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

In the matter of relaxation in KSERC (Renewable Energy & Net metering) Regulations, 2020 for implementation of PM-KUSUM Component-C project in Kerala

ORDER DATED 11.04.2024

1. Department of Power, Government of Kerala vide its letter No. PWR-PS2/215/2022-POWER dated 06-03-2024 has forwarded the letter No. ANERT-TECH/133/2022-T4 dated 20.01.2024 of the Chief Executive Officer ANERT to the Kerala State Electricity Regulatory Commission wherein relaxation of certain regulations of the KSERC (Renewable Energy & Net metering) Regulations, 2020 for the good sake of implementation of the PM-KUSUM Component-C project in Kerala was requested.
2. Summary of the letter of ANERT is as given hereunder.
 1. ANERT is implementing PM KUSUM Component C individual pump solarisation (9348 numbers) in 5 districts namely, Malappuram, Kasaragod, Palakkad, Ernakulam & Thrissur. This project helps to solarise the LT 5A free tariff (under Krishi Bhavan) agriculture consumers without any farmer financial share utilizing NABARD RIDF fund.
 2. The repayment of the loan is done using the power exported to KSEBL grid from each plant. MNRE had already given an additional sanction for 35652 pumps and another 55000 pumps sanction is also requested by ANERT, as Government intends to solarise at least one lakh pumps.
 3. At present the electricity bill of more than 2.65 lakh free tariff agricultural pumps are being paid by Agriculture Department to the KSEBL at 2.3 Rs/Unit (for which KSEBL incurs average cost of supply of Rs 7.32 /unit). If an average of 1793 units of energy is consumed per farmer, for 1 lakh farmers Agriculture department have to incur an amount of Rs 41.23 Cr. In a span of 25 years, the financial burden to the Government will be Rs 1031 Cr.

4. By solarising 1 lakh pumps this amount can be used for other beneficial programs. Upon the completion of loan repayment (7-8 years), the export power from each plant will become an additional income source for the farmers.
 5. *Unlike other states in India, the agriculture area and residence of the farmer are coming under the same boundary in Kerala. This is very prominent under the coconut, arecanut and other garden crop farmers who will be residing within the farming area which is irrigated using the free tariff LT 5A connection pump sets. The main criteria for site selection are finding out a shade free area (any existing rooftop or vacant ground) within 15 meters from the existing pump house which houses the LT 5A meter and accessories.*
 6. During field survey ANERT could identify that the available shades free area for solar power plant installation at several sites (more than 80% in some districts) is the residential rooftop of the farmers. In such cases both the domestic as well as agricultural connection are registered in the same name and there is no physical barrier between the premises of the house and the farming area where the pump house is situated.
 7. There are also cases where the shade free area is identified on top of separate or attached shed/ car shed/ cattle shed etc which may or may not have any interaction with KSEBL.
 8. Certain KSEBL sections have raised objection in connecting PM KUSUM solar power plants installed in residential roof top of the farmers to the LT 5A meter in the pump house stating that it is a violation which could be termed as crossing of premises under the "Supply Code" and "Net metering regulations" of KSERC. ANERT has taken up the issue with KSEB Limited on 20.11.2023 for a solution to move ahead with the project.
 9. *ANERT requested the Government to give a direction to the KSERC to agree to crossing of premises for PM-KUSUM projects by relaxing the relevant regulations. It is also recommended to waive off wheeling and transmission charges for the farmers coming under the scheme and also for all Government funded solar installations.*
3. Meanwhile, in response to the request, KSEB Limited vide letter 15-03-2024 informed M/s ANERT that their request for installation of solar plants on domestic rooftops and grid connectivity through the net meter of agricultural connection couldn't be permitted. *But for the time being, to resolve the issue, for those panels and inverters already installed by ANERT, permission for connectivity is*

permitted following the principles of gross metering with the under mentioned conditions.

- (a) The solar panels and inverters may be installed on the domestic rooftops and output of the inverter may be connected to the grid via solar/generation meter (without net meter) through a bus-bar arrangement in the domestic premises itself
 - (b) Energy meter of the domestic premises will be connected to the grid through the same bus bar arrangement
 - (c) Connection from the bus to the grid will be through a single service line
 - (d) Solar generation thus recorded in the generation meter will be wheeled and adjusted against the consumption of the agriculture service connection with applicable charges and losses as applicable in case of captive consumer
 - (e) Considering safety, billing and regulation issues connectivity will not be granted for solar plants installed in future in such manner
 - (f) Necessary approvals from MNRE and KSERC for connecting solar plants as stated above may be obtained by M/s ANERT
4. A meeting was convened on 27/03/2024 by the Commission for detailed appraisal on the matter. Director (Distribution, Safety & SCM) KSEB Limited, Director (Generation-Electrical, REES, SOURA, Sports & Welfare) KSEB Limited and Chief Executive Officer, ANERT were present in the meeting. In the meeting KSEB Limited reiterated their earlier stand as stated above in paragraph 3 and informed that relaxation in KSERC (Renewable Energy & Net metering) Regulations, 2020 is required for allowing the request of ANERT. KSEB Limited further informed that Agriculture Department is not remitting the electricity charges of these consumers and arrears are due from them. According to the present adjustment methods, any amounts credited against the consumers will be adjusted towards previous arrears. The CEO, ANERT requested the Commission to allow relaxation in regulations of KSERC (Renewable Energy & Net metering Regulations) 2020 for the smooth implementation of the PM-KUSUM Component C project in Kerala. During the deliberations, Commission observed that solarization of pump sets under PM-KUSUM project is a win-win situation both for KSEB Limited and the agricultural consumers. KSEB Limited will be benefitted due to the reduction in distribution losses and also due to non-drawal of grid power by the highly subsidized agricultural consumers coming under the scheme. Upon completion of the loan repayment period, the exported power from each plant will become an additional income source for the consumers. Further, the State Government can also reduce the financial burden on paying the electricity charges of these agricultural consumers coming under 'free supply of electricity' category. As the PM -KUSUM component C of the project is beneficial to the Agriculture Department, KSEB Limited and the agricultural consumers coming under the Scheme, the Commission decided to invoke power to relax provisions of the KSERC (Renewable Energy & Net

metering) Regulations, 2020 for the smooth implementation of the PM KUSUM Component-C project in Kerala.

Analysis & Decision of the Commission: -

5. Solarization of pump sets under PM-KUSUM project is a win-win situation both for KSEB Limited and the consumers. KSEB Limited will be benefitted due to the reduced distribution losses and also due to non-drawal of grid power by the highly subsidized agricultural consumers under the scheme. Upon completion of the loan repayment period of 7-8 years, the exported power from each plant will become an additional income source for the farmers. Further the State Government can also reduce the financial burden on paying the current charges of most of these agricultural connections coming under 'free supply of electricity'. As the PM -KUSUM component C of the project is beneficial to the Agriculture Department, KSEB Limited and the agricultural consumers under the scheme, the Commission considers it necessary to allow relaxation in certain provisions of the KSERC (Renewable Energy & Net metering) Regulations, 2020 for the implementation of the project in Kerala.

As per regulation 12 & 13 of KSERC (Renewable Energy & Net metering Regulations) 2020, *net metering facility is provided to grid interactive RE systems of consumers at his premises*. Since the premises of both the residential and agriculture connections are different, some relaxation in the regulations is required for many of the PM-KUSUM Component C projects. Further as per regulation 17(5) of the above regulations, *the prosumer has to bear the applicable wheeling charges, and distribution losses, as approved by the Commission from time to time for the quantum of excess renewable energy wheeled from one of his premises to another premise. Alternatively, if the solar plant is considered as the captive power plant of the agriculture consumer, provisions under Regulations 25 and 27 becomes applicable*. Relaxation in the above regulations is also required to consider the request of ANERT for waiving the transmission/wheeling charges and transmission/distribution losses for the highly beneficial PM-KUSUM Component C project where the premises of the house of the agricultural consumer and the farming area where the pump house is situated are adjoining and/or coming under the same distribution transformer feeding area.

Regulation 65 of KSERC (Renewable Energy & Net metering Regulations) 2020 provides as under:

“65. Power to relax: -

The Commission may by general or special order, for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely to be affected, relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person”

Since the implementation of PM-KUSUM Component C of the project in Kerala is highly beneficial to the State of Kerala considering the points mentioned in earlier paragraphs of this order, the Commission feels it expedient to invoke its powers conferred under Section 181 of Electricity Act 2003 and Regulation 65 of KSERC (Renewable Energy & Net metering) Regulations, 2020 to relax the provisions of regulation 12,13,17,25,27 and other related provisions of the Regulation for the smooth implementation of PM-KUSUM Component C project in Kerala.

Ministry of Power, Government of India vide its communication dated 29th January 2024 requested all States to shift the agricultural loads from non-solar hours to solar hours by end of March 2024 to reduce the gap in demand & supply during non-solar hours. Commission considers it necessary to implement the above directive in view of the increasing demand supply gap during non-solar hours in Kerala.

Orders of the Commission: -

6. The Commission, after examining the request of ANERT, views of KSEB Limited and the provisions of the Electricity Act 2003, provisions in the KSERC (Renewable Energy & Net metering) Regulations, 2020 and other facts and circumstances discussed in the preceding paragraphs hereby orders to relax the provisions of regulation 12,13,17,25,27 and other related provisions of the KSERC (Renewable Energy & Net metering) Regulations, 2020 to put in place the following enabling mechanism for the implementation of PM-KUSUM Component-C project in Kerala.
 - (a) The solar panels can be installed on the residential roof tops of the registered agricultural consumer. The solar generation meter installed in the domestic premises of the agricultural consumer shall be connected to the input side of the existing energy meter at the domestic consumer premises through a proper bus bar arrangement and shall be used for recording the solar generation (The solar meter shall be calibrated at NABL accredited meter testing labs or KSEB Limited TMR labs). The solar meter reading shall be taken along with the reading of the agricultural connection.

- (b) The entire solar generation at the residential premises shall be adjusted against the consumption in the agricultural connection while generating the bills. Transmission/wheeling charges, transmission/distribution losses and all other charges and procedures related to open access transactions shall be exempted since the residential premises of the agricultural consumer and the pump house of the agricultural connection are adjoining and/or coming under the same distribution transformer feeding area, as a special case.
- (c) The facilities under net metering including banking of surplus energy, settlement of excess energy after settlement period at APPC rates etc. will be extended to the agriculture consumer. Facility to use excess electricity in any other premises including the domestic premises will not be available under this arrangement.
- (d) Accounting and settlement of energy for agricultural consumers having connected load above 20 kW shall be done time period wise as per the procedure described in Regulation 21(4) of KSERC (Renewable Energy & Net metering) Regulations, 2020.
- (e) ANERT shall promptly inform the details of beneficiaries under the scheme to KSEB Limited with consumer numbers and name of Electrical Section. ANERT should also educate the agricultural consumers under the scheme to use the pumps only during solar hours.
- (f) For grant of feasibility to the solar plant, connectivity with the Grid, technical standards and safety, provisions in the KSERC (Renewable Energy & Net metering) Regulations, 2020 shall be strictly followed.
- (g) The arrears of the agricultural consumers under the scheme prior to solarization shall be segregated and settled with the Agriculture Department, Government of Kerala.

Ordered accordingly.

Sd/-
T K Jose
Chairman

Sd/-
Adv. A J Wilson
Member

Sd/-
B Pradeep
Member

Approved for issue

Sd/-
C R Satheesh Chandran
Secretary