Rajasthan Electricity Regulatory Commission

Petition No. RERC-2040/2022

Petition filed under section 61 and 181 of the Electricity Act, 2003 read with regulations 94 of RERC (Terms and Conditions for Determination of tariff) Regulations, 2019 for allowing expenses incurred in execution of smart metering works over and above the current normative O&M expense.

Coram:

Dr. B. N. Sharma, Chairman
Sh. Hemant Kumar Jain, Member
Dr. Rajesh Sharma, Member

Petitioners : Jaipur Vidyut Vitran Nigam Ltd.
Ajmer Vidhyut Vitran Nigam Ltd.
Jodhpur Vidhyut Vitran Nigam Ltd.

Date of hearing : 01.09.2022
Date of Order : **21.10.2022**

ORDER

1. The three distribution companies namely, Jaipur Vidyut Vitran Nigam Ltd. (JVVNL), Ajmer Vidyut Vitran Nigam Ltd. (AVVNL) and Jodhpur Vidyut Vitran Nigam Ltd. (JdVVNL), collectively called Discoms or Petitioners had filed petitions under section 61 and 181 of the Electricity Act, 2003 read with regulations 94 of RERC (terms and conditions for determination of tariff) Regulations, 2019 for allowing expenses incurred in execution of smart metering works over and above the current normative O&M expense.
2. The matter was heard on dated 01.09.22 and Sh. Sandeep Pathak, Advocate appeared for Petitioners. Commission directed the Petitioners to file their written submissions on discussions held during the course of hearing.
3. Petitioners in its petition, written submissions and during the course of hearing submitted as under:
   3.1 The Petitioners are the Distribution Licensees in the State of Rajasthan and are engaged in maintaining distribution and retail supply of electricity to the consumers/public at large in the State, in

its areas of distribution. The Petitioners function as Distribution Licensees in terms of Section 14 of the Electricity Act and on the terms and conditions specified by the Hon'ble Commission from time to time.

3.2 The Petitioners in its endeavor to reduce Technical and Commercial losses have taken various initiatives which include participating in Govt. of India (GoI) and Govt. of Rajasthan (GoR) schemes from time to time. Revamped Distribution Sector Scheme (RDSS) is one such scheme which was notified by MoP on 20.07.2021. The objective of the scheme is to bring down pan-India AT&C losses to 12–15% level, reduce ACS-ARR gap to Zero by 2024-25 and improve reliability and quality of power to consumers.

3.3 The scheme mandates the participating Discoms to achieve predefined milestones for replacement/installation of Consumer Smart Pre-Paid Meters and System Smart Meters. Accordingly, the Rajasthan Discoms are required to install prepaid smart meters for all consumers (other than agriculture consumers) in phases.

3.4 The Petitioners further submitted that the RERC (Electricity supply code and connected matters) Regulation, 2021 also envisages installation of Smart Meters as per requirement and has laid out provisions for the same as under:-

> *"9.1. Supply through correct meter*
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> *(a) All supply of electricity shall be through installation of a correct meter in accordance with regulations made in this behalf by the Authority/practice directions issued by Commission, if any. If required, Licensee may install pre-paid meters/ Automated Meter Reading (AMR)/ Smart meter(s)/ smart pre-paid Meters with suitable communication facility as per CEA (Metering) Regulation, 2006 & amendments thereof."*

3.5 CEA notified (Installation and Operation of Meters) (Amendment) Regulations, 2019 on 23.12.2019 which was further amended on 28.02.2022 by (Installation and Operation of Meters) (Amendment) Regulations, 2022. The said amendments stipulated that all new Consumer Meters shall be Smart Meters with prepayment feature. Further, the existing meters, other than Smart Meters, were to be replaced with Smart Meters with prepayment feature within a time frame as specified by the Central Government. The relevant excerpt of the Regulations is produced below:-

"4.(1)(a) all new Interface Meters and Energy Accounting and Audit Meters shall be of static type and shall have automatic remote meter reading facility;

(b) All consumers in areas with communication network, shall be supplied electricity with Smart Meters working in prepayment mode, conforming to relevant IS, within the timelines as specified by the Central Government:

Provided that all consumer connections having current carrying capacity beyond that specified in relevant IS, shall be provided with meters having automatic remote meter reading facility or Smart Meters as per relevant IS.

Provided further that in areas which do not have communication network, installation of prepayment meters, conforming to relevant IS, shall be allowed by the respective State Electricity Regulatory Commission".

3.6 Ministry of Power (GoI) notified the timelines for installation of Smart Meters vide its Gazette notification dated 17.08.2021 and 23.05.2022. The amendment has mandated installation of Prepaid Smart Meters in phases (as per timelines stipulated under RDSS scheme) for all Discoms irrespective of the participation of the Discoms in the RDSS scheme. Timelines for execution of Smart Metering Works under RDSS and MoP notification is detailed below:-

S.No.	Activity	Timeline
1.	All feeders to be metered with communicable & AMI/AMR meters	31stDecember 2022
2.	Installation of DT meters (>25 kVA) in areas where Prepaid Smart metering is being carried out in first phase	31st March 2023
3.	Mandatory Prepaid Smart Metering for following Consumers/ Areas (excluding Agricultural Consumers) • All Electricity Divisions of 29 AMRUT cities in Rajasthan, with AT&C Losses > 15% in base year; • Industrial and Commercial Consumers; • All Government offices/ Autonomous Bodies/ Boards/ Corporations at Block level and above; • Other areas with high losses, which shall mandatorily include	31st December 2023

S.No.	Activity	Timeline
	Electricity Divisions having more than 50% consumers in urban areas and with AT&C losses more than 15% and other Electricity Divisions with AT&C losses more than 25%, in the base year.	
4.	All other DTs (>25 kVA) to be metered	31^{st} December 2023
5.	Prepaid Smart metering for remaining consumers (except agriculture)	31^{st}March 2025

3.7 The MoP/RDSS has recommended implementation of Smart Metering in TOTEX (Total Expenditure) mode through PPP. Under this mode, an agency will be contracted for supplying, maintaining and operating the metering infrastructure for the purpose of meter related data and services to the Discom. It will make both capital and operational expenditure under DBFOOT (Design, Build, Fund, Own, Operate & Transfer) or similar modes and will be paid for a portion of its capital expenditure initially and the remaining payment over the O&M period.

3.8 As per the Scheme, the DISCOM shall receive Government Budgetary Support from Central Government which shall be 15% of the approved cost for metering works including the operational cost, subject to a maximum of Rs. 900 per Consumer prepaid smart meters. The remaining amount shall be paid by the Discoms over the O&M period.

3.9 As part of the main features and guidance notes of Standard Bid Document (SBD) for appointment of Advanced Metering Infrastructure Service Provider (AMISP) for Smart Prepaid Metering in India, issued by GoI on 22.10.2021 under the RDSS scheme, the accounting process of AMISP payment shall be as follows:

- Transaction Nature: Payment to the AMISP by the DISCOM will be considered as an Operational Expenditure on DISCOM's account
- Regulatory Treatment: DISCOM to consider AMISP payments as operation expenditure while filing ARR and tariff review petition to the state ERC.

3.10 The Petitioners plans to install smart meters where 15% shall be provided as grant by the Central Government and the remaining payment shall be made by Petitioner as part of annual operational expenditure. The phase wise execution of Smart Metering work is detailed below:

Phase I - To be completed by December 2023 (nos.)

Name of Discom	Consumer Meter	DT Metering	Feeder and Boundary Meter (Up to Dec.22)
JVVNL	2,178,547	111,346	5,799
JdVVNL	1,444,840	167,809	10,322
AVVNL	1,165,989	155,453	11,007
Total	4,789,376	434,608	27,128

Phase II- To be completed by March 2025(nos.)

Name of Discom	Consumer Meter	DT Meter	Feeder Meter
JVVNL	2,584,096	New upcoming DTs after Dec. 23	New upcoming Feeders
JdVVNL	2,635,242		
AVVNL	4,266,242		
Total	9,485,580		

3.11 Operation and Maintenance expenses of Discoms are governed by Regulations 82 of RERC Tariff Regulation, 2019. The O&M expense allowed to the Discoms are normative in nature and comprises of i) Employee Expenses, ii) Administrative & General Expenses and iii) Repairs & Maintenance Expenses. The Employee and A&G expenses are computed based on the units sold whereas the R&M expenses are computed primarily based on Gross Fixed Assets for the (n-1)th year.

3.12 The O&M expenses allowed under existing Regulations compensate for the expenses incurred in the upkeep of existing resources and shall not cover expenditure incurred in implementation of Smart metering works under TOTEX mode.

3.13 The RDSS guidelines notified by MoP, GoI has mentioned that payment made to AMISP shall be considered as an Operational Expenditure on DISCOM's account and the same shall be claimed as operation expenditure while filing ARR and tariff review petition. Accordingly, the Hon'ble Commission is requested to allow the claim of expenses on account of installation of smart meter as operational expenditure.

3.14 Existing methodology of O&M expense on normative basis does not cover the expenditure that the Petitioners shall incur on account of smart meters work as these shall be executed under TOTEX mode. Under TOTEX mode only 15% of the approved cost of the metering works, including the operational cost, shall be provided by MoP as a grant while the remaining amount shall have to be recovered through tariff by Discoms as operational expense.

3.15 The Petitioners further submitted that smart metering works are currently being executed under Capex mode and accordingly, the expenses are recovered through various components of the tariff viz. Depreciation, Interest on loan and R&M expense.

3.16 Further, the base O&M expense allowed at the commencement of the Control Period (i.e. FY 2019-20) and which is escalated every year, does not have a component of aforementioned smart metering works as all the previous smart metering works were executed under Capex scheme.

3.17 Therefore, the petitioner requested Commission to allow the expenses incurred by the petitioners in execution of smart metering works under Opex mode as a separate component under O&M expense which shall be over and above the current normative O&M expense allowed to the petitioners.

3.18 Petitioners also submitted that they will submit the details of such operational expenditure on Smart Meters at the time of Truing up of relevant year once the actual rates are discovered in accordance with the SBD for appointment of Advanced Metering Infrastructure (AMI) Service Provider to be floated by the Petitioner in due course of time.

Prayer made by the petitioners:

The petitioner prayed the Commission to invoke “Power to Amend” provisions of RERC (Terms and Conditions for Determination of Tariff) Regulations, 2019 and to allow expenditure incurred in execution of Smart metering works as O&M expenses which shall be over and above the presently permitted normative O&M expense.

Commission view:

4. After careful consideration of the submissions of Petitioner in the petition and during hearing, the Commission observed as under:-

4.1 The Petitioners have participated in RDSS scheme of GoI. The scheme mandates the participating Discoms to achieve predefined milestones for replacement/installation of Consumer Smart Pre-Paid Meters and System Smart Meters. Accordingly, the Rajasthan Discoms are required to install prepaid smart meters for all consumers (other than agriculture consumers) in phases.

4.2 RERC Supply code and connected matters) Regulations, 2021also envisages installation of smart meters.

4.3 CEA (Installation and Operation of Meters) (Amendment) Regulations, 2022 also stipulated that all new Consumer Meters shall be Smart Meters with prepayment feature and existing meters, other than Smart Meters, are to be replaced with Smart Meters with prepayment feature within a time frame as specified by the Central Government. GoI has notified the timelines for installation of Smart Meters vide its Gazette notification dated 17.08.2021 and 23.05.2022 and has mandated installation of Prepaid Smart Meters in phases.

4.4 RDSS has recommended implementation of Smart Metering in TOTEX (Total Expenditure) mode through PPP. Under this mode, a service provider (AMISP) will supply, maintain and operate the metering infrastructure. It will make both capital and operational expenditure under DBFOOT (Design, Build, Fund, Own, Operate & Transfer) or similar modes and will be paid for a portion of its capital expenditure initially and the remaining payment over the O&M period. As per SBD issued by GoI, the accounting process of AMISP will be as under:-

Transaction Nature: Payment to the AMISP by the DISCOM shall be considered as an Operational Expenditure on DISCOM's account.

Regulatory Treatment: DISCOM to consider AMISP payments (AMISP service charge along with the lumpsum payment per meter) as operational expenditure while filing ARR and tariff review petition to the state ERC.

4.5 The DISCOM shall receive Government Budgetary Support from Central Government which shall be 15% of the approved cost for metering works including the operational cost, subject to a maximum of Rs. 900 per Consumer prepaid smart meters. The remaining amount shall be paid by the Discoms over the O&M period.

4.6 As per Regulations 82 of RERC Tariff Regulation, 2019, R&M expenses are computed primarily based on Gross Fixed Assets for the (n-1)th year and O&M expenses allowed under existing Regulations shall not cover expenditure incurred in implementation of Smart metering works under TOTEX mode. Smart metering works are currently being executed under Capex mode and accordingly, the expenses are recovered through various components of the tariff viz. Depreciation, Interest on loan and R&M expense.

4.7 Petitioner requested Commission to allow the expenses incurred by them in execution of smart metering works under Opex mode as a separate component under O&M expense which will be over and above the current normative O&M expense allowed to the petitioners.

5. Commission in its tariff order dt. 01.09.2022 has observed as under:-

*"3.180 **RDSS**: Discoms have proposed a substantial amount of capital investment under Revamped Distribution Sector Scheme with the objective to improve the quality, reliability and affordability of power supply to consumers through a financially sustainable and operationally efficient distribution sector. The Scheme aims to reduce the AT&C losses to pan-India levels of 12-15% and ACS-ARR gap to zero by 2024-25 by improving the operational efficiencies and financial sustainability of all DISCOMs/ Power Departments. The Scheme has the following parts –*

A. Metering, Component II: Distribution Infrastructure Works, Component III: Project Management

B. Training, Capacity Building and other Enabling & Supporting Activities

RDSS being an ambitious scheme, which will help Discoms in reducing both technical and commercial losses and improve operational efficiencies of Discoms. Accordingly, the Commission approves the proposed capex under the scheme. Discoms are directed to achieve the target set under RDSS and fulfill all conditions and reap maximum benefit of RDSS. It is observed that the metering is an important part of RDSS scheme.

Discoms have almost included all the consumers in RDSS scheme for metering purpose. However, it is observed that apart from RDSS scheme, JVVNL and AVVNL have also claimed additional amount of Rs 15.63 Crore and Rs. 5.27 Crore under Smart Metering. In view of duplicacy of similar works under metering, the Commission has not considered the additional amount of smart metering of Rs. 15.63 Crore and Rs. 5.27 Crore as claimed by JVVNL and AVVNL respectively as the same is approved under RDSS. However, from the submission of JVVNL and AVVNL it cannot be ascertained that such amount proposed for smart metering is a carried over work of any old scheme or not. In case it is a carried over work of earlier scheme and taken up by the Discoms, they may bring this fact in true up petition for consideration of the Commission, clearly proving that there is no duplicacy in the investment.

3.181 Target of AT&C losses as given by Commission should be strictly monitored and adhered to while taking up various works and focus should be on IT enablement, Feeder/DT metering, Network strengthening and implementation of ERP system, etc.

3.182 It has been observed that centrally sponsored scheme comprises funding from GoI/GoR and the resources of Discoms as per funding pattern of the schemes. Release of funds under the schemes from GoI/GoR is subject to the fulfillment of various conditions as stipulated in the guidelines of such scheme. Therefore, Discoms should ensure release of entire funds from GOI/GOR as per prescribed funding pattern."

6. Commission has observed that Discoms have submitted the same facts in investment plan petition for FY 2022-23 and Commission in its order dt. 01.09.2022 observed as under:-

"3.206 The Discoms Submitted that the norms of the O&M expenses as determined by the Commission does not include such expenditure on account of TOTEX mode of implementation of Smart meters. It is therefore, requested to the Commission to allow such operational expenditure on Smart Meters over and above the normative O&M expenditure.

3.207 The Discoms Submitted that they will submit the details of such operational expenditure on Smart Meters at the time of Truing up of relevant year once the actual rates are discovered in accordance with the SBD for appointment of Advanced Metering Infrastructure (AMI) Service Provider to be floated by the Petitioner in due course of time."

7. Commission observes that as per Discom's submission the Implementation of the RDSS Scheme would lead to consumer empowerment by way of prepaid Smart metering to be implemented in Public-Private-Partnership (PPP) mode and leveraging Artificial Intelligence to analyze data generated through IT/OT devices including System Meters, prepaid Smart meters to prepare system generated energy accounting reports every month to enable DISCOMs to take informed decisions on loss reduction, demand forecasting, Time of Day (ToD) tariff, Renewable Energy (RE) Integration and for other predictive analysis.

8. Commission also notes the para 5.1.5 of RDSS scheme, which is reproduced as under:-

"For consumer metering, feeder and DT metering to be carried out in TOTEX mode, it is expected that the DISCOM will be able to finance balance cost other than grant, due to enhanced revenue as a result of improvement in billing and collection due to prepaid metering. This component is self-financing. State Government/DISCOM may also provide Budgetary support in TOTEX mode. Since the implementation of the metering scheme is proposed through PPP on TOTEX mode, the DISCOM will not have to pay upfront for all the capital expenditure".

9. The Discoms have prayed for invoking power to amend Regulations for allowing expenditure made under Opex mode under the head O&M expenses as over and above normative expense.

10. The RDSS scheme itself envisage that Discoms will be able to finance costs after the grant due to enhanced revenue by way of efficiency improvement. It is likely that with installation of smart meters under Totex mode and consideration of the periodic payments under O&M, the amount of a particular component may increase but the overall cost of

all three components of O&M expenses viz. employee expenses, A&G expenses and R&M expenses may come down to certain extent, details of which will be available only during true up. Further Discoms have stated that they will submit the details of such operational expenditure on smart meters at the time of truing up of relevant year as actual rates are yet to be discovered.

11. Commission has observed that smart meters as per the RDSS guidelines are to be installed on TOTEX mode, i.e. capital expenditure and O&M expenditure. Commission is of the view that such expenses will be considered at the time of true up when details of actual impact of TOTEX mode on expenditure are available.

12. The Commission vide its tariff order dated 01.09.2022 has already approved the proposed expenditure under RDSS scheme where the Commission has not included the expenditure towards smart metering in capital expenditure as it was proposed to be done as O&M expenditure under TOTEX mode.

13. The Commission has also noted the prayer & submission of the Discoms regarding considering the amount incurred in implementation of smart metering over and above current normative O&M expenses. However, the Commission would like to proceed further only after quantification of expenditure made and impact of smart metering on other cost factors in the ARR.

14. Accordingly, the Commission directs Discoms to submit all relevant details including actual amount of payment made to AMISP, saving in various components of O&M cost and benefit derived from implementation of smart metering under TOTEX mode along with the true up petition of relevant year for consideration of the Commission.

15. The Petition is disposed of in above terms.

(Dr. Rajesh Sharma) Member	(Sh. Hemant Kumar Jain) Member	(Dr. B.N. Sharma) Chairman