

BEFORE THE HARYANA ELECTRICITY REGULATORY COMMISSION

Bays No. 33 - 36, Sector – 4, Panchkula-134109

In the matter of:

Discussion Paper for inviting comments/objections from stakeholders/general public for finalization of the Haryana Electricity Regulatory Commission (Prepaid Smart Metering) Regulations, 2021

Submission by Prayas (Energy Group), Pune

25th May, 2021

Haryana Electricity Regulatory Commission (HERC) has issued a discussion paper for Haryana Electricity Regulatory Commission (Prepaid Smart Metering) Regulations, 2021 and has invited public comments till 25th May, 2021. Prayas (Energy Group) has some suggestions related to the regulation. Our comments are divided into two parts, one being general to whole regulation and other being specific to certain provisions.

General Provisions

1. Consolidate all metering related provisions in one place: in either Supply code or a separate metering regulation

At present, Haryana has different regulations which mention metering provisions for consumers: Supply Code Regulation 2014, Prepaid metering regulations 2014 and Proposed Prepaid smart metering regulation 2021. While metering provisions in different regulations will create confusion for consumers, the ambiguity across the regulations over a provision might add to further confusion. For e.g., Smart meter is defined in Supply Code 2014 (through 2nd Amendment dated 8th Jan 2020) and also proposed in Prepaid Smart metering regulation 2021. Both the regulations have different definition for the same term, while both the regulations are for consumer supply.

Smart meter as per Supply Code Regulation 2014- Regulation 2.3(43) 2nd proviso

“Provided that “smart meter” means an alternating current static watthour meter with time of use registers, internal connect and disconnect switches with two-way communication capability;”

Smart meter as per Prepaid Smart metering regulation 2021- Regulation 2.1

“(r) “Smart meter” means an ac static watt-hour meter with time of use registers, internal connect and disconnect switches with two-way communication capability. It is designed to measure the flow of forward (import) or both forward (import) and reverse (export), store and communicate the same along with other parameters defined in this standard. It shall be remotely accessed for collecting data/events, programming for select parameters that is to be provided by the distribution utility for supplying electricity to a premises.”

Similarly, Prepaid regulation 2014 defines the “Prepaid meter”, however, the proposed regulation doesn’t define terms like “Prepaid meter” or “Prepaid smart meter”.

Along with this, we would like to mention that there is no mention of post-paid smart meters in the regulation or Supply code and hence, arises a serious void on how post-paid smart meters will be regulated. Another new regulation for post-paid smart meter should not be the next step. Hence, **we suggest the commission to consider either proposing a single metering regulation for all consumers in the state with backing of Supply code or amend the supply code to include all metering provisions at one place.**

2. Existence along with Haryana Electricity Regulatory Commission (Prepaid Metering), Regulations, 2014

While proposing these regulations, HERC has stated that

*“In view of enabling provision in National tariff policy and Electricity (Rights of Consumers) Rules, 2020 in the rules 5(5), 9(3) and 16 (e) which mentions about smart meters/any new technology meters. However, the existing Regulations i.e., Haryana Electricity Regulatory Commission (Prepaid Metering), Regulations, 2014 notified on 3rd September, 2015 doesn't have provision related to smart metering, hence **necessitated the need to modification/revision of existing prepaid metering regulations.**”*

However, there is no provision which mentions to replace or modify the 2014 regulations with the proposed regulations. Therefore, we suggest the commission to clarify whether the 2014 regulation are getting repealed with the notification of these regulation or both the regulations will co-exist (as the later means that there will be two regulations for prepaid meters).

3. Missing aspects in the regulation

The regulations are silent about the process of application and installation of prepaid meter in a consumer premises. There should a defined timeline for the process starting from the day of application to the day of installation, which hold distribution licensee personnel accountable for any kind of delay. Apart from this, the grievance redressal related to recharging frauds has not been dealt with in these regulations. There are no provisions related to application for checking of prepaid meter and process to be followed for replacement of meter due to any reason. We have suggested to include all these aspects in the Standard Operating Procedure (SOP) to be developed by distribution licensees.

4. Prioritise Consumer data protection and privacy

Smart prepaid meters will communicate consumer data to distribution licensee and DISCOMs will have option to store and use such data for various purpose or even share the data to any 3rd party for data analysis. Forum of Regulators (FoR) has emphasised on consumer privacy protection in its draft Model Smart Grid Regulations¹. Subsequently, several states have incorporated such provisions in their regulations which are currently at different stages. We are suggesting Consumer Privacy Protection provisions² below, which are broadly based on smart-grid regulations enacted by Assam³ and Tripura⁴ regulatory commissions.

¹ FoR Model Smart Grid Regulations, 2015, <http://www.forumofregulators.gov.in/Data/study/SG.pdf>

² For a detailed discussion on smart meters and data privacy, please refer our publication: <https://www.prayasipune.org/peg/resources/power-perspective-portal/270-handling-smart-meter-data-a-privacy-and-security-framework.html>

³ <http://www.aerc.nic.in/Smart%20Grid%20Regulations,2017.pdf>

⁴ [https://thc.nic.in/Tripura%20State%20Lagislation%20Regulations/The%20Tripura%20Electricity%20Regulatory%20Commission%20\(Smart%20Grid\)%20Regulatory%20Commission%20\(Smart%20Grid\)%20Regulations,%202015.pdf](https://thc.nic.in/Tripura%20State%20Lagislation%20Regulations/The%20Tripura%20Electricity%20Regulatory%20Commission%20(Smart%20Grid)%20Regulatory%20Commission%20(Smart%20Grid)%20Regulations,%202015.pdf)

"13. Customer Data Protection Standards

13.1. Licensees and other implementers of the Smart Grid projects/programs shall ensure that protection of consumer privacy is accorded the highest levels of priority in prepaid smart metering projects and the corresponding investment plans. The same shall apply for all operations including data collection, storage and transfer.

13.2. Consumer data shall be protected through appropriate levels of encryption and access controls, and shall not be shared with external agencies without explicit authorization of the Commission or unless required by statutory authorities or by courts of law. If deemed necessary for effective implementation, the Commission shall allow Licensees to disclose consumption data to third parties with appropriate consumer consent processes as applicable. The following conditions shall apply in such circumstances:

a) Data shall be classified as:

(i) Personality Identifiable Information (PII), which consists of customer names, addresses, identification numbers, and other information that specifically identifies the person or entity to which it applies.

(ii) Customer-Specific Energy Usage Data (CEUD), which at high resolutions, reveal details about consumer behaviour and therefore should be considered as personal data.

b) Data access by parties providing services shall only be permitted with explicit authorization of designated senior officers of the licensee who are duly authorized by the Board of Directors of the licensee to provide such data under required confidentiality, non-disclosure and non-unrelated use agreements. Such third parties shall be permitted access to all aggregated and anonymised CEUD. No PII data shall be disclosed to third parties.

c) The Commission, upon request of the licensee, may also approve third party service providers to have direct access to consumers and their consumption data as part of a Smart Grid project or program approved by the Commission. The licensee shall permit such access through appropriate confidentiality arrangements with such third parties.

d) It is explicitly clarified that neither the concerned licensee nor the third parties permitted data access would be permitted to sell or disseminate the consumer data to any other party or use for any other purpose.

e) Consumers shall have access to all of their own consumption data, which may be appropriately displayed on the meter display of the consumer and on authorized websites, with suitable levels of access control and security.

13.3. Disputes on consumer privacy and data protection shall be resolved through the Consumer Grievance Redressal Forum & Electricity Ombudsman. It is clarified that, in addition, the consumer is also free to approach Redressal fora as established under prevailing personal data protection legislations.

13.4. The Commission may at its discretion specify rules for customer privacy and data protection that the licensee shall be obliged to follow. In addition, the Commission may amend the rules to make them consistent with prevailing personal data protection legislations.

13.5 The licensee shall appoint a data officer as the nodal officer for handling complaints regarding data privacy, and shall act as the single point of contact (SPOC) for The Commission, consumers, third-parties and other stakeholders for all data privacy and security related matters."

Provision specific suggestions

1. Installation Plan

Installation of smart meters shall be approved by the commission after getting it scrutinised by commission and public hearing. Apart from this, during any process of approval, the learnings and study of past installations and a cost benefit analysis of proposed installation should be submitted by the distribution licensees. Therefore, we suggest that the following provision be added to Regulation 3.2:

“3.2 The distribution licensee shall arrange to install smart meters, in its area, in a phased manner as specified in the National Tariff Policy, 2016. The phase-wise smart meter installation plan will have to be approved by the Commission, subject to scrutiny. The installation plan shall contain information as stated in Annexure I.”

Annexure-I⁵ should be added, which will contain a table as stated below:

“Annexure-I

Information about smart meter rollout programs that should be reported by DISCOMs to the SERC

Parameter	(DISCOM Name)
Name of area for scheme implementation	
Consumer categories covered in meter replacement scheme	
No. of meters under each consumer category	
Target no. of days for replacement	
Replacement start date	
Replacement end date	
Reason for replacement (high loss area/ DSM measure, etc.)	
Financial benefit estimation per meter:	
– Savings in power purchase cost due to loss reduction (in ₹)	
– Savings in cost due to O&M cost reduction (in ₹)	
– Savings due to increase in collection efficiency (in ₹)	
– Savings due to any other reason (in ₹)	
Implementation agency(s)	
Roles and responsibilities of implementation agency(s)	
Payment option in smart meter (prepaid/post-paid)	
Technology used in smart meter (GPRS/RF, etc.)	
Cost of implementation (in ₹)	
Cost borne by DISCOM (in ₹)	
Cost borne by implementation agency (in ₹)	
Cost shared with consumers (in ₹)	

⁵ Detailed discussion on necessary financial and regulatory assessments of Smart Metering programs can be read in our publication : <https://www.prayaspuene.org/peg/resources/power-perspective-portal/275-smart-metering-of-electricity-consumers-in-india-getting-it-right.html>

Mechanism of cost sharing with consumers (charged for meter/ cost recovered through tariff, etc) number of years	
Plan for rollout provided? (Y/N)	
Duration of pilot project	
Meters installed	
Technology used	
Payment option in smart meter (prepaid/post-paid)	
Cost incurred (in ₹)	
Benefits incurred for each category (in ₹)	
No. of complains related to metering issues	

2. Choice of prepaid or post-paid arrangement to punctual consumers

Usually, the necessity of installing prepaid smart meters for a particular category of consumers is usually felt when DISCOMs find it difficult to get timely payment from consumers. However, in each consumer category, there are many punctual consumers who pay electricity bills timely and hence, they should be given a choice to opt either prepaid or post-paid functionality. Hence, the following changes should be made in Regulation 3.5:

*“3.5 The distribution licensee may also introduce smart prepaid metering scheme to such other category of consumers and in such areas of supply, where it is felt necessary to implement smart prepaid metering scheme. **In case of such targeted replacement programmes, where all meters will be smart meters, then a consumer with punctual bill payment history over last one year should be given an option to choose between pre-paid and post-paid functionality in the installed smart meter.**”*

3. Remote reading, Prepaid to post-paid conversion and Consumer data protection

Installation of smart meters and pre-payment meters helps reduce the need of remote reading and hence reduce the O&M costs associated with physically meter reading, apart from any malpractices in reading. However, the proposed regulation calls for periodic meter reading (1 month for smart meters and 3 months for pre-payment meters), which is unwarranted. The benefit related to meter reader with installation of smart prepaid meter will be nullified due to such provision. We suggest to remove such provision. Also, the data should be made available to consumers for energy consumption (on monthly, specific time period and real-time basis) and recharging history of the account.

While we appreciate the commission’s approach to allow prepaid to post-paid conversion but the mention of such provision under ACD and no clear mention of it anywhere else in the regulation is a point of concern. Hence, we suggest that it should be clearly mentioned in the regulation 4.

As stated before, we have proposed customer data protection standards and hence, we suggest following amendments to Regulation 3.7 and 4:

*“3.7. ~~The prepaid smart consumer shall not be required to be billed. However, in case of smart meters, the meters shall be read remotely at least once in every month and in case of other pre-payment meters, the meters shall be read by an authorized representative of the distribution licensee at least once in every three months.~~ The data regarding energy consumption **and recharging history** shall be made available to the consumer, through website or mobile App or SMS or e-mail, etc., **provided that Customer Data Protection Standards mentioned in***

Regulation remain applicable to such data sharing. Consumers having smart prepayment meters ~~may~~ **shall** also be given the data access for checking their consumption on real time basic.”

“4. Migration from post-paid to prepaid and vice-versa shall be as per the Standard Operating Procedure (SOP) decided by the licensee and approved by Commission. The SOP shall include the application process for new smart prepaid connection, post-paid to prepaid conversion and prepaid to post-paid conversion, application processing time, option to consumers to purchase such meter, the threshold limit of low credit and negative balance for various consumer categories (divided further on the basis of contract demand) and framework related to data storage and sharing. Such SOP should be approved within six months of notification of the regulation.

Provided that any consequent changes in the data collection and storage systems will have to comply with the regulations including Regulation 13 of this regulation.”

“6. Security/ACD

In case of new connection with prepaid smart meter the distribution licensee shall not require security, in pursuance of clause (a) of sub section (1) and sub section (5) of Section 47 of the Electricity Act, 2003. The consumer shall not be required to deposit any Advance Consumption Deposit (ACD) as part of security.

Provided further that for existing consumer shifting to smart prepaid metering arrangement, the ACD deposited with the licensee shall be adjusted against the last bill including arrears if any and the balance if any payable to the consumer shall be adjusted as per the arrear adjustment methodology already in force.

*In case of prepaid to post-paid conversion again, **as specified under Regulation 4**, ACD will be paid by the consumer in addition to other formalities, if any.”*

4. Transparency in meter procurement from vendors

Approval of a prepaid smart meter vendor by distribution licensee should be made through transparent manner and it should be revisited every two years. Hence, we suggest following changes in Regulation 7.1:

“7.1. The licensee shall approve vendor for prepaid smart meters (meters shall be certified as per the relevant IS16444) through a transparent manner either through floating a tender or inviting Expression of Interest (EOI). The approval shall be renewed after every two years. ~~and~~ The licensee shall make arrangement for recharge of the credit in the meter by the consumer through online and offline (cash collection centers of the distribution utilities) modes.”

5. Inclusive notification message for low credit

While we appreciate notification to consumer via message, an option of audible warning for one minute will be very helpful for consumer, this will also make it inclusive to all consumers. The consumer can manually or through app select if they want this audible warning option or not. Therefore, we suggest following addition to Regulation 7.3:

“7.3. The prepaid metering solution shall have the facility of online recharge and shall also be capable of sending a notification to the consumer via message on his/her registered mobile phone and an option of audible warning at least for a minute from the smart meter in case of low credit (negative balance) and disconnection on overload or Minimum Balance.”

6. Recharging Amount

Regulation 7.5 calls for minimum recharging amount of Rs. 500/- and in multiple of Rs. 100/-. However, the amount is very high for domestic consumers and small consumers might not be able to pay such an amount upfront. Such a large recharging amount will discourage domestic consumer to opt for smart prepaid meters. So, we suggest the minimum recharging amount should cover the energy cost and fixed cost for maximum of 7 days' period for a small consumer.

As per the latest tariff schedule for discoms for FY 2021-22, the energy charge for 0-50 units consumption is Rs. 2 per unit and fixed charges is Rs. 115 per kW per month. For 7 days, the energy consumption is expected to be 12 units ($50 \times 7/30$). So, minimum recharging amount can be:

Min amount= $(7/30) \times 115 + 2 \times 12 = 26.83 + 24 = 50.83$ (roughly say Rs. 50)

Based on the illustration shown above, we suggest that the minimum recharging amount should be Rs. 50. We suggest following amendment in the Regulation 7.5:

"7.5. The consumer can recharge his prepaid smart meter account as and when required in ~~multiple of Rs.100/-~~ with a minimum amount of Rs. 50/- ~~Rs 500/- as per the multi recharge facilities/options being provided by the DISCOMs~~

There shall be no maximum limit for recharge amount."

7. Communicating Tariff revision to consumers

Tariff revisions are usually not notified to consumers. However, as any tariff revision will be affecting such consumers from day 1 of effective tariff revision, such consumers should be notified about the tariff change as soon as possible. We suggest the addition as following:

*"7.8 The tariff revision in case of prepaid smart meter consumer shall be done in Meter Data Management System (MDMS) System or in the licensee's billing system. **Such tariff revision shall be notified to the consumer either within seven days of such tariff revision or before such tariff revision is effective.**"*

Commission should clarify on how any retrospective tariff revision will be implemented for such prepaid consumers.

8. Clarification about Regulation 7.9

Every consumer might not be able to view balance and consumption data on daily basis through mobile app and web portal. So, they should have option to access them through SMS and missed call services, similarly to USSD (Unstructured Supplementary Service Data code) service available to consumers for checking various services for their mobile number.

*"7.9 (b) Daily charge calculation/deduction shall be done in MDMS system or billing system based on the data collected from Head End System (HES) (daily profile, load profile and billing profile). The balance and consumption data shall be updated on daily basis against each consumer, which can be readily viewed by the consumer via dedicated mobile app and web portal **along with option to access such information through SMS or missed call.**"*

The regulation has provided option of notification/ alert based on level of account balance (30%, 20% and 10%). But it is not clarified what is the base level for which such percentages will be calculated and consumers will be notified.

The disconnection should be done on only week days (Monday to Friday) and not on weekends and public holidays.

*“7.9 (e) Disconnection process shall be scheduled only between 10 AM to 3 PM of any particular day, **other than weekends (Saturday and Sunday) and public holidays**, to avoid discomfort to consumers.”*

9. Informing consumer about successful transactions

There are possibilities that either transaction made by consumers fail (either at their end or discoms' end) or the recharge is not communicated to meter, which can result in continued disconnection of supply. The consumer can not be held accountable for such irregularities and DISCOM should supply power to such a consumer. Keeping this in mind, we suggest following changes in the Regulation 7.11:

“7.10. Consumers can recharge online through mobile application, web application or digital payment systems such as e-wallet, V-wallet, web portal etc. or off-line through collection counters.

*7.11. AMI application should initiate auto reconnection after successful recharge of the meter. **Provided that, consumer shall be intimated about the successful recharge transactions made as per Regulation 7.10 via SMS within thirty (30) minutes of the transaction, after which if there is no reconnection, the consumer can raise a complaint with distribution licensee to check the status of transaction. The distribution licensee shall allow power supply to the consumer till the issue is resolved.”***

10. No prepaid metering for defaulting consumers

Regulation 8.2 says that defaulting consumers will be accorded facility of pre-paid smart meters. However, the whole purpose of installing pre-paid meters was related to bill defaults by consumers. So, if defaulting consumers is not allowed prepaid meter, then the purpose of prepaid metering is lost. Also, it is not clear what defaulting consumers mean: defaulting history or outstanding bills at the time of application. We align to opine that any consumer with existing outstanding arrear shall not be allowed to install smart prepaid meter and any consumer with defaulting payment history shall be accorder priority in smart prepaid meter installation. Hence, we suggest to modify Regulation 8.2 in following manner:

*“8.2. In case of defaulting consumers (**with outstanding arrears**), the consumer shall not be accorded the facility of pre-paid smart meters.”*

11. Replacement of meter due to reasons related to consumer

Regulation 10.1 calls for replacing damaged meters due to reasons related to consumer at the cost of consumers. However, it is not clear whether the cost recovery will be done one time or in instalments. So, we suggest to allow consumers to pay such cost on monthly basis and hence the following amendment:

*“10.1. In case the prepaid smart meter installed by the licensee gets damaged due to overloading or any other reason related to consumer, the same shall be replaced at the cost of the consumer in case the consumer requests the licensee for a replacement. **In case any consumer is unable to the cost at one time, the consumer shall be given an option to pay the cost as monthly rent.”***

12. Meters purchased by Consumer

Regulation 11.2 has allowed the consumer to buy the meter at their own cost. However, there is a need to clarify the time taken for testing and installation of such meters otherwise discoms might take their own time and the consumers have to bear the pain. Also, any reason for rejection should be communicated to consumers.

*“11.2. The consumer may also purchase his own meter of approved make and specifications from the vendor(s) approved by the licensee. The consumer shall get such meter tested at the licensee’s meter testing lab after payment of the requisite fee. The licensee shall install the meter outside the consumer premises. **The process of testing and installation should be completed within 30 days of receipt of fee, in case the meter is not rejected by licensee under any ground duly communicated to the consumer.**”*