BSES YAMUNA POWER LIMITED (BYPL)
NIT No. CMC/BY/24-25/RS/SKS/APT/37

Amendment No. 1

Sr. No.	Section	Page No.	Clause No.	Existing Clause	Amendment
1.	Section 2	38 of 473	Clause 10	Earnest Money Deposit (EMD)	Beneficiary Bank Details attached
2.	Section 3	53 of 473	Clause 14	Existing SLA and SLA Audit	Amended as Amended SLA and SLA Audit attached
3.	Section 5	75 of 473	Clause 5	Existing Terms of Payment	Amended as Amended Terms of Payment attached
4.	Section 5	79 of 473	Clause 6	Existing Payment Security Mechanism	Amended as Amended Payment Security Mechanism attached
5.	Section 5	81 of 473	Clause 7	Existing Direct Debit Facility	Amended as Amended Direct Debit Facility attached
6.	Section 5	84 of 473	Clause 13.2	Existing BYPL Event of Default	Amended as Amended BYPL Event of Default attached
7.	Section 5	93 of 473	Clause 23	New Clause	New clause Assignment attached
8.	Section 6	96 of 473	4. Indicative Smart Meter Roll out Plan	The details of Phase 1 Consumers are as given below;	Amended as Amended Phase 1 Consumers details attached
9.	Section 6	98 of 473	5.2 A g of 5.2 Brief Scope of Work:	Smart Meter Operation centre along with work Force Management application tool with suitable backend communication infrastructure hardware and Power supply as per Clause 8.8 of this section	Amended as Smart Meter Operation centre along with work Force Management application tool with suitable backend communication infrastructure, hardware and power backup as per Clause 8.8 of this section"
10.	Section 6	114 of 473	Point no. g of 8.4.6 c Integration with BYPL Existing HES/AMR	Integration with Mobile app supplied by meter vendors (Meter security keys not to be stored in the WFMS/HHU/Mobile app for field operation activity.) i. Meter reading through app	Amended as Integration with Mobile app supplied by AMISP/Meter Vendors for Meter Reading, Reconnection/ Disconnection

Sr. No.	Section	Page No.	Clause No.	Existing Clause	Amendment
				ii. Connect / Disconnect through app iii. Key exchange with app to perform field operations	and other field operations (Meter security keys to be exchange with app but not to be stored in the WFMS/HHU/Mobile app for field operation activity.) i. Meter reading through app ii. Connect / Disconnect through app iii. Other field operations and device configurations
11.	Section 6	140 of 473	8.6 Smart Prepaid Billing Module (SPBM)	Smart Prepaid application will ensure pre-payment meter functions. Smart Prepaid system will be capable of supporting Smart Pre-Payment Meter functionality along will full capability to manage conventional pre-payment with token recharge capability. Smart prepaid system will have flexible tariff, rate, slab, rules, taxes and credit management capability for all kinds of meters. Smart Prepaid will send alerts to consumer via SMS and App notifications for recharge and low balance etc. Smart prepaid system should have capability to send analytics based customer/society engagement communications via SMS/App or any public communication platform.	Amended as Smart Prepaid application will ensure pre-payment meter functions. Smart Prepaid system will be capable of supporting Smart Pre-Payment Meter functionality. Smart prepaid system will have flexible tariff, rate, slab, rules, taxes and credit management capability for all kinds of meters. Smart Prepaid will send alerts to consumer via SMS and App notifications for recharge and low balance etc. Smart prepaid system should have capability to send analytics based customer/society engagement communications via SMS/App or any public communication platform
12.	Section 6	152 of 473	8.8.3 Minimum Technical Requirements for SMOC Hardware	Existing Minimum Technical Requirements for SMOC Hardware	Amended as Amended Minimum Technical Requirements for SMOC Hardware attached
13.	Section 6	221 of 473	19. Project Implementation Schedule	Existing Project Implementation Schedule	Amended as Amended Project Implementation Schedule attached
14.	Section 6	234 of 473	Appendix 1: RF Mesh Solution Details	Communication OEM/Technology Support Escrow Continuous availability of the offered products and the maintenance are critical for Smart Metering system's seamless operations for its life. In case the RF Mesh communication solution/ Technology offered in this RFP is	Stands deleted

Sr. No.	Section	Page No.	Clause No.	Existing Clause	Amendment
				from a RF Mesh Communication OEM/ Technology Provider, the OEM/Technology provider must assure BYPL for their unconditional support for the entire duration of the project and shall agree to adhere to the Escrow principles so that the provision, maintenance, and support of Product/ Technology is available, in case RF Mesh OEM/ Technology provider fails to fulfil its obligations or if the RF Mesh OEM/Technology company does not remain in business. For this purpose the RF Mesh Communication OEM/ Technology provider shall deposit the proprietary technology including source codes of firmware, application software, security algorithms, key/ key generation mechanism, complete hardware reference design along with bill of materials including schematics, Gerber files and all information deemed necessary for manufacturing the RF Mesh communication devices employed for the solution and other materials to an escrow account with internationally recognized Escrow Agency.	
15.	Section 6	234 of 473	Appendix 1: RF Mesh Solution Details	SLA for RF Mesh	Amended as SLAs mentioned under Appendix 1 for RF Mesh stands deleted. However, SLAs for RF Mesh shall be applicable same as specified under Clause 14 of Section 6.
16.	Section 6	385 of 473	Annexure A System Sizing Requirement	The auxiliary memory and utilization of any of the Servers shall not exceed 30% and 25% respectively of their delivered capacity at any time even under peak loading conditions involving a combination of the following -	Amended as The auxiliary memory and utilization of any of the Servers shall not exceed 70% of their delivered capacity at any time even under peak loading conditions involving a combination of the following -

Sr. No.	Section	Page No.	Clause No.	Existing Clause	Amendment
17.	Section 6	396 of 473	Annexure H Project Execution Plan	Existing Annexure H- Project Execution Plan	Amended as Amended Annexure H Project Execution Plan attached
18.	Section 8	408, 441 of 473	Formats for Board Resolutions		Clarified as Bidders are not required to submit Board Resolution wherever mentioned in the RFP document. Board Resolution stands deleted.
19.	Section 8	418, 449 of 473	Form 6 & Form 20	Format of Bank Guarantee for Bid Security	Amended As: Form – 20 shall be considered for EMD instead of Form-6 wherever mentioned in the RFP document. Form-6 stands deleted.
20.	Section 8	448 of 473	Form 23	Bid Form	The CPBG shall be of 3% of total contract value inclusive of taxes & duties and shall be valid till agreement period, plus three (3) months or latest RBI guidelines (if any) whichever is higher towards claim period
21.	Section 6	97	Clause 4 (table Sr No-3)	Three phase LT CT Operated Smart Meter with Box and without CT – Consumer Meter	Amended as Three phase LT CT Operated Smart Meter with Box and with CT – Consumer Meter

All other terms & conditions of the referred Request for Proposal (RFP)/ Tender shall remain unchanged.

Section 2: Instructions to Bidders and Bid Data Sheet

10. Beneficiary Bank Details

The beneficiary bank details for the purpose of BG are as under:-

Name of the Bank	:	Axis Bank Limited
Branch Name & Full Address	:	C-58, Basement & Ground Floor, Preet Vihar, Main Vikas Marg, New Delhi 110092
Branch Code	:	055
Bank Account No	:	911030003596085
IFSC Code	:	UTIB0000055
Swift Code	:	AXISINBB055

Section 3: General Terms and Conditions

14. SLA and SLA Audit

14.1 The AMISP shall be liable to penalties in the event of non-compliance of Service Level Agreements as specified in Section 6: Project Requirement – Scope of Works.;

14.2 A designated team/ person from BYPL may review the system generated SLA performance report of AMISP each month. The review/ audit report will form basis of any action relating to imposing penalty on or breach of Contract of the AMISP.

14.3 In case, there is no review/ audit report submitted within 15 (fifteen) working days from availability of system generated SLA for every month, it shall be deemed that all SLAs were met in the previous month.

14.4 The AMISP shall ensure submission of SLA reports and availability of system generated SLA within first 5 (five) working days of every month.

Section 5: Special Conditions of Contract

5. Amended Terms of Payment

Part A: Upfront payment for Critical IT Deployment and initial Meter Supply (Applicable for initial 4 Lacs and Subsequent NTP in multiple of 4 Lacs Meters)

S. No.	Payment Schedule	Milestones
1.	25% of Project Cost for 4 Lacs Smart Meters	Supply of each 2.4 Lacs Meters Lots.

S. No.	Payment Schedule	Milestones
	BYPL has the option to make payment on Pro-rata basis on supply of each 40 K Meters.	
2.	5% of Project Cost for 4 Lacs Smart Meters	1. On Operational Go Live as defined under clause 16.7.1 of Section 6. (For first 4 Lacs Meters) and 2. Commissioning of supplied Meters for Subsequent NTP

Note

i. All above payments to be released subject to Acceptance of LoA, Contract signing and submission of PBG.
ii. Total Project cost for 20 Lacs Meters is as calculated under Price Schedule A.
iii. Total cost for 4 Lacs meter shall be prorated project cost of 20 Lacs meters.
iv. NTP*(s) shall be issued to AMISP for area and number of Meters to be replaced.

*NTP _ Notice to proceed

Part B: Applicable for monthly payable under Price Schedule A - To be paid on per Meter Per Month basis as 'AMISP Service Charge'

6. Amended Payment Security Mechanism

6.1 The payment shall be made to the AMISP in Indian Rupees (INR) only.

6.2 The payment to the AMISP shall commence only one month after Operational Go-Live as defined in **Section 6: Project Requirements and Scope of Work**;

6.3 The payments due to the AMISP from the BYPL shall be paid on monthly basis as per the payment structure specified in SCC.

6.4 Except in case of Change Order in accordance with **Clause 32** of **Section 3: General Terms and Conditions**, the sum total of all payments made to the AMISP shall not exceed the Contract Price quoted in **Section 7: Price Format.**

6.5 The actual payment shall be net of any applicable liquidated damages and/or penalty due to noncompliance of SLAs by the AMISP.

6.6 AMISP will raise and deliver the invoice and the Deliverables mentioned above to the BYPL for the monthly payments within first 5 (five) working days of following month. AMISP shall also raise a supplementary invoice for the agreed amount towards software change requests/new requirements completed in the previous month, in accordance with **Clause 32.2** of **Section 3: General Terms and Conditions**. BYPL will verify the AMISP invoice raised by the AMISP and the Deliverables including the SLA performance report, in accordance with **Clause 14** of **Section 3: General Terms and Conditions**, within 10 (ten) working days from the date of invoice submission. The invoice will be accepted only if all the supporting documents including SLA reports are submitted along with the invoice. BYPL may dispute the amount payable and shall pay the undisputed amount of the payment due via direct debit facility (as specified in Clause 7) starting from 16th (Sixteenth) working day of every month till the 10th (tenth) working day of next month subject to submission of invoice within first 5 working days of month. The disputed amount, (related to actual number of meters installed, integrated and operationalized, penalty imposed due to non- compliance of SLAs, and liquidated damages), shall be dealt separately by jointly deciding among the committee containing the members of AMISP and BYPL.

6.7 The BYPL shall, as a condition precedent to the award of the contract to the selected bidder, establish a Direct Debit Facility for the entire online consumer payments (in respect to payment received via payment gateway from sale of power by BYPL) to ensure recovery of the amount due to be paid to the AMISP including amount due to be paid towards supplementary invoice. In this regard, the BYPL shall create a separate facility compatible with all online payment options such as Net Banking, Credit/ Debit Card, Mobile Wallets, UPIs, etc. This facility shall be configurable for direct debit of 100% (hundred percent) of the monthly payment due to the AMISP from all recharges and bill payments by Consumers. For the avoidance of doubt, it is expressly acknowledged that the Direct Debit Facility shall not be restricted to the area where the AMISP is providing services but for the entire area of supply of the BYPL.

6.8 The Direct Debit Facility would include a bucket filling approach whereby all consumer recharges and bill payments from the 16th (Sixteenth) working day of every month up to 10th (tenth) working day of next month (subject to submission of invoice within first 5 working days of month) will be routed directly to the AMISP's bank account till such time the undisputed amount of the payment due including amount due towards with supplementary invoice issued by AMISP is recovered in its entirety. Once the entire undisputed amount of the payment due including amount due towards with supplementary invoice is recovered, the Direct Debit Facility shall no longer transfer any money to the AMISP. In the event the overall monthly amount due to the AMISP (i.e. 100% of undisputed amount due to be paid including any amount due to be paid towards supplementary invoice issued by AMISP) as the sum of the consumer payments is not reached till 10th working day of the next month, the shortfall/ deficit amount shall be paid along with the undisputed amount due to be paid including any amount to be paid towards supplementary invoice issued by AMISP for the immediately succeeding month. In case BYPL fails to clear any payment of the AMISP within 60 (Sixty) days of receipt of invoices, interest on the delayed payment shall be applicable as mentioned in clause 6.13. An illustration of the aforementioned Direct Debit Facility is provided in with **Clause 7** of **Section 5: Special Conditions of Contract**.

6.9 While establishing the direct debit facility and to ensure adequate funds for timely payment to the AMISP, the BYPL shall ensure the direct debit facility so created, has an average monthly inflow of at least 5 (five) times the estimated monthly payment to the AMISP. Average monthly inflow shall be calculated for the last six calendar months from the date of letter of award.

6.10 In the event the AMISP fails to meet a particular performance criterion as mentioned under the Service Level Agreement (SLA) specified in **Clause 14** of **Section 6: Project Requirements and Scope of Work** for cumulatively 3 (three) months in past 6 (six) months, resulting in the maximum penalty for the particular performance criterion, BYPL may issue an SLA Default Notice to the AMISP directing it to take steps within 90 days to comply with the performance criterion specified in the SLA[1].

6.11 In the event a Smart Meter supplied and installed by the AMISP is damaged for reasons not attributable to the AMISP such as theft, vandalism, burning, etc. or as a result of Force Majeure Event, the AMISP shall not be liable for such damage. In such cases, upon receipt of Notice from the BYPL, the AMISP shall repair or replace the damaged Smart Meters. AMISP shall be required to replace the Smart Meter no later than 15 days of notification by the BYPL. Upon replacing the Smart Meter, AMISP shall be entitled to raise a supplementary invoice for the amount (other than the insurance taken by AMISP and if not covered) mutually agreed between AMISP and the BYPL. The Supplementary Bill shall be paid along with the amount due to be paid towards AMISP Service Charges, for the immediately succeeding month.

For the avoidance of doubt:

i. a damaged meter(s) shall be excluded from the total numbers installed and operational smart meters while conducting the SLA audit of the AMI system in accordance with **clause 14** of **Section 3: General Terms and Conditions**; and
ii. in the event, AMISP replaces the Meter within 15 days of request by the BYPL or BYPL directs to continue operations without replacing the damaged Meter, the AMISP Service Charge qua such meter(s) shall be paid as if such damaged meter complies with the SLA prescribed in this AMISP Contract.

6.12 In the event that the AMISP has duly followed the procedure enumerated above and the BYPL fails to make any payment on its respective due date, the BYPL shall pay interest to the AMISP on such delayed payment amount (including disputed amount) as from the due date of payment. The applicable interest rate on the delayed payment amount will be equal to the marginal cost of funds-based lending rate (MCLR) for one year of the State Bank of India (MCLR shall be as applicable on the 1st April of the financial year in which the date of release of delayed payment lies). In case the period of default lies in two or more financial years the interest amount shall be calculated separately for the periods falling in different years.

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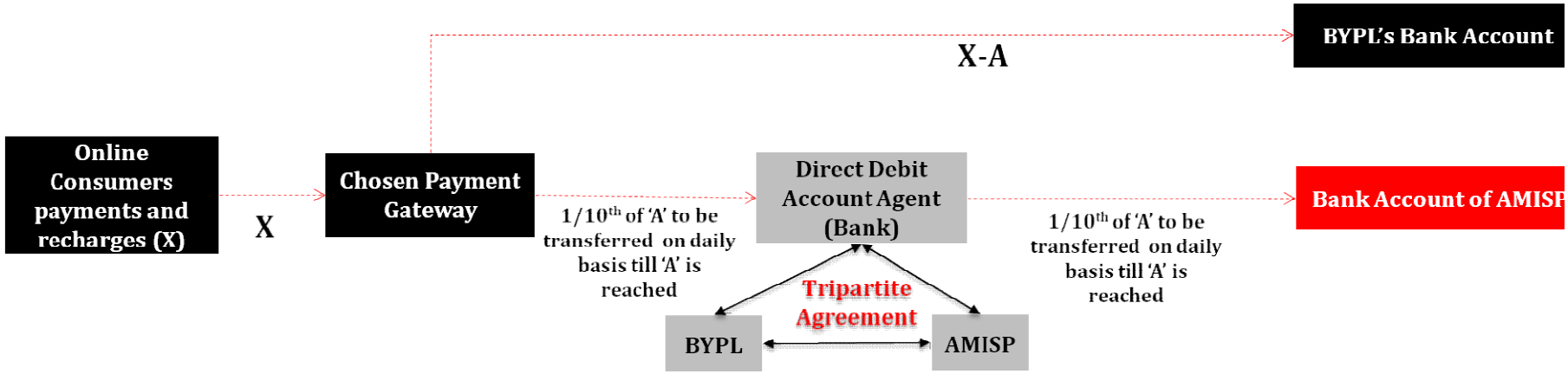
[1] *For example, in the event AMISP fails to meet the norm specified for "Availability of AMI System per month" for cumulatively 3 (three) months in past 6 (six) months leading to levy of maximum penalty thereof.*

6.13 All payments under this AMISP Contract shall be made to the Lead Consortium Member and BYPL shall have no role in inter se payments to the Consortiu Members.

6.14 AMISP service charge along with Lumpsum payment per meter paid by the BYPL to the AMISP will be considered as an Operational Expenditure on BYPI account

Note : In case Direct Debit Facility arrangement is not found to be feasible on account of the reasons beyond the control of BYPL/AMISP, a equivalent and secure payment security mechanism shall be deployed based on mutual discussion & agreement between AMISP and BYPL safeguard the interest of the AMISP.

7. Amended Direct Debit Facility



BYPL shall ensure that a daily inflow of at least 1/10th of the approved invoice amount is transferred from chosen payment gateway to the Direct Debit Ba account from 16th working day of the month till the 10th (tenth) working day of next month, the due approved amount to the AMISP is cleared in its entirety.

From the 16th working day of the month, Direct Debit Account Agent shall transfer amount from the Direct Debit Account to AMISP Bank Account on a daily basis t the amount equivalent to approved AMISP invoice amount is reached.

13. Amended BYPL Event of Default

13.2 BYPL Event of Default means any of the following events, unless such event has occurred as a consequence of the AMISP Event of Default or a Force Majeure event and where BYPL has failed to remedy these events within a period of 90 (ninety) days of issuance of a notice by AMISP requiring BYPL to remedy such event:

a) Terms of Payment should be referred under clause 5 of Section 5 ;
b) BYPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for BYPL or for the whole or material part of its assets that has a material bearing on its ability to perform its obligations under this Contract;
c) BYPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that in the reasonable opinion of AMISP would adversely affect BYPL's ability to perform its obligations under this Contract;
d) A resolution for winding up of BYPL is passed. The breach by BYPL of its obligations under this Contract which has an adverse effect on the performance of AMISP's obligations under this Contract.
e) Either failure of BYPL to establish Direct Debit Facility through online Consumer payments OR pay the Monthly amount due to be paid including amount due towards supplementary invoice in accordance with clause 6.2 or any other payment due from BYPL under this Contract and more than 90 (ninety) days have elapsed since such payments became due;
f) The breach by BYPL of its obligations under this Contract which has an adverse effect on the performance of AMISP's obligations under this Contract.

22. Assignment

22.1 The AMISP shall not assign, in whole or in part, their obligations under this Contract without prior permission of the BYPL.

22.2 The permission for assignment of whole or part of the AMISP's obligations of this contract shall only be requested/permitted at least two years after Installation Milestone.

22.3 However, in case of default by the AMISP in debt repayments or in the event of default by the AMISP as per **clause 13 of Section 5: Special Conditions of Contract**, the Utility may facilitate the Lenders to substitute the existing AMISP with their nominee AMISP subject to the fulfilment of the qualification requirements and provisions of the Contract and subsequently execute an amendment to this Contract.

Section 6: Project Requirement – Scope of Works

1. Amended Technical Specifications of Smart Meters in Section-6

Sr. No.	Page No.	Clause No.	Existing Clause	Amendment
1.	264 of 473	6.9 Battery of Appendix 3: Technical Specifications for Whole Current A.C. Three Phase Smart Energy Meter	c. Lithium ion battery with guaranteed design life of 10 years. In case battery removal or total discharge, it should not affect the working & memory of the meter except in case of single wire power condition	Amended As: c. Lithium ion battery with guaranteed design life of 10 years. In case battery removal or total discharge, it should not affect the working & memory of the meter
2.	284 of 473	1.0 Meter Box Type of Appendix 3: Technical Specifications for Whole Current A.C. Three Phase Smart Energy Meter	Flush type with Completely transparent top cover and base with Incoming and Outgoing cable entry and data downloading arrangement.	Amended As: Wall mounted, Completely transparent top cover and base with Incoming and Outgoing cable entry and data downloading arrangement.
3.	290 of 473	5.23 Display Sequence for the parameters of Appendix 4: Technical Specification for LT-CT Smart Meters	xvii. TOD MD for kWh and kVAh	Stands deleted
4.	291 of 473	5.23 Display Sequence for the parameters of Appendix 4: Technical Specification for LT-CT Smart Meters	xxxvii. Temperature xvii. MD in kVAR	Stands deleted
5.	293 of 473	6.5 Terminals of Appendix 4: Technical Specification for LT-CT Smart Meters	c. Material of terminals, screws and washers should be brass or tinned copper. Terminals shall be tested for continuous current of 150 % Imax.	Amended As: c. Material of terminals, screws and washers should be brass or tinned copper. Terminals shall be tested for continuous current of 120 % Imax.
6.	295 of 473	7.1 Meter category of Appendix 4: Technical Specification for LT-CT Smart Meters	Smart meter comply with D4 category of IS 15959 (Part 3)	Amended As: Smart meter comply with D3 category of IS 15959 (Part 3)
7.	310 of 473	3. Power Related Events of Appendix 4: Technical	If meter micro detect power off whereas phase voltage is present than	Stands deleted

Sr. No.	Page No.	Clause No.	Existing Clause	Amendment
		Specification for LT-CT Smart Meters	abnormal power will be recorded. Meter shall continue to record energy as per phase voltage and current.	
8.	312 of 473	3.6 of Appendix 4E- Technical Specification of LTCT Box	Suitable Arrangement for modem Installation	Stands deleted
9.	317 of 473	5.23 Display Sequence for the parameters of Appendix 5: Technical Specification of DT Smart Meter	xvii. TOD MD for kWh and kVAh	Stands deleted
10.	318 of 473	5.23 Display Sequence for the parameters of Appendix 5: Technical Specification of DT Smart Meter	xxxvii. Temperature xvii. MD in kVAR	Stands deleted
11.	320 of 473	6.5 Terminals of Appendix 5: Technical Specification of DT Smart Meter	c. Material of terminals, screws and washers should be brass or tinned copper. Terminals shall be tested for continuous current of 150 % Imax.	Amended As: c. Material of terminals, screws and washers should be brass or tinned copper. Terminals shall be tested for continuous current of 120 % Imax.
12.	322 of 473	7.1 Meter category of Appendix 5: Technical Specification of DT Smart Meter	Smart meter comply with D4 category of IS 15959 (Part 3)	Amended As: Smart meter comply with D3 category of IS 15959 (Part 3)
13.	338 of 473	3. Power Related Events of Appendix 5D- Tamper And Fraud Detection/ Events	If meter micro detect power off whereas phase voltage is present than abnormal power will be recorded. Meter shall continue to record energy as per phase voltage and current.	Stands deleted
14.	345 of 473	5.23 Display Sequence for the parameters of Appendix 6: Technical Specifications of HT Smart Meter	xxxvii. Temperature xvii. MD in kVAR	Stands deleted
15.	347 of 473	6.5 Terminals of Appendix 6:	c. Material of terminals, screws and	Amended As:

Sr. No.	Page No.	Clause No.	Existing Clause	Amendment
		Technical Specifications of HT Smart Meter	washers should be brass or tinned copper. Terminals shall be tested for continuous current of 150 % Imax.	c. Material of terminals, screws and washers should be brass or tinned copper. Terminals shall be tested for continuous current of 120 % Imax.
16.	365 of 473	3. Power Related Events of Appendix 6: Technical Specifications of HT Smart Meter	If meter micro detect power off whereas phase voltage is present than abnormal power will be recorded. Meter shall continue to record energy as per phase voltage and current.	Stands deleted
17.	240 of 473	6.5 Terminal cover of Appendix 2: Technical Specifications Energy Meter	g. Mechanism shall be provided to record an event with occurrence and restoration in case of terminal cover is opened. Bidder shall explain its mechanism.	Stands deleted
18.	341 of 473	Appendix 6: Technical Specification of HT Smart Meter	This specification covers the design, manufacture, assembly, inspection, testing and delivery of Smart CT operated 3 phase 4 wire, Accuracy Class 0.2s, 3 x 63.5V and Current rating: -/5 A (Imax: 10A) & -/1A (Imax:2A) meter with plug in communication module (Cellular (4G/NBIOT) and accessories required for successful operation of the meter in post paid mode or special application such as bidirectional net meters	Indicative Quantity Clarified As Current rating: -/5 A (Imax: 10A) – Nos. 549 Meters & -/1A (Imax:2A) – Nos. 19 meters
19.	258 of 473	1.0 Meter Box Type of Appendix 2: Technical Specifications for Whole Current A.C. Single Phase Smart Energy Meter	Flush type with Completely transparent top cover and base with Incoming and Outgoing cable entry and data downloading arrangement.	Amended As: Wall mounted, Completely transparent top cover and base with Incoming and Outgoing cable entry and data downloading arrangement.
20.	372 of 473	7. Document & Sample Submission of Appendix 7:	7.6 Five numbers of non-returnable samples of the seal shall also be	Amended As:

Sr. No.	Page No.	Clause No.	Existing Clause	Amendment
		Technical Specifications of for Polycarbonate Security Seals	submitted with the offer for evaluation of the product.	Five numbers of non-returnable samples of the seal shall be submitted during the detailed engineering for necessary approval.
21.	110 of 473	8.4.2 Configuration	r) Record temperature, generate alert and provision for disconnection if above threshold value (configurable) s) Configuration of Smart Meters based on difference in neutral and phase current to ensure disconnection in case difference is more than the threshold value (configurable) to ensure safety	Stands deleted
22.	110 of 473	8.4.2 Configuration	v) Configuration of events threshold like Voltage, Current, PF etc.	Stands deleted
23.	293 of 473	6.5 Terminals of Appendix 4: Technical Specification for LT-CT Smart Meters	c. Material of terminals, screws and washers should be brass or tinned copper. Terminals shall be tested for continuous current of 150 % I-max.	Amended As: c. Material of terminals, screws and washers should be brass or tinned copper. Terminals shall be tested for continuous current of 120 % Imax.
24.	327 of 473	7.20 Additional feature (Mandatory) of Appendix 5: Technical Specification of DT Smart Meter	a) Meter should measure Voltage between Earth and Neutral and for the same have an additional terminal which can be connected to earth potential. The VNE can be part of inst parameter group. b) Whenever meter experiences a sudden change in load i.e. sudden reduction by 30%, it should log last 10 such events.	Stands deleted
25.	343 of 473	Appendix 5E: Technical Specification of DT Meter Box of Appendix 5: Technical	Addition to Appendix 5	a. SMC with grade S3S having Improved chemical, thermal, electrical, mechanical, low shrink and flame retardant properties as per IS 13410 with thickness min 3mm

Sr. No.	Page No.	Clause No.	Existing Clause	Amendment
		Specification of DT Smart Meter		b. SMC Top cover fitted with non – openable transparent window- toughened glass thickness min 4mm c. The top Cover and Base of the box shall be made of SMC. d. IP55 rating
26.	287 of 473	Appendix 4: Technical Specification for LT-CT Smart Meters		LT CT Box Indicative Quantity Clarified As: CT Ratio: 200/5 — Qty: 4169 CT Ratio: 400/5 — Qty: 111
27.	256 of 473	4. Other Events: of Appendix 2: Technical Specifications for Whole Current A.C. Single Phase Smart Energy Meter	4. Other Events	Added as The meter should have capability to measure inside temperature and can log high temperature event.

2. <u>Amended details of Phase 1 Consumers are as given below</u>

S No.	Description	Qty.	Area
1	Single phase whole current Smart Meter with Box	383793	Daryaganj, Chandni Chowk & Yamuna Vihar LT CT, DT and HT Meter will be spread all over Licensed areas
2	Three phase whole current Smart Meter with Box	6852	
3	Three phase LT CT Operated Smart Meter with Box and with CT – Consumer Meter	4771	
4	Three phase LT CT Operated Smart Meter with Box and without CT – DT Meter	3994	
5	Three phase CT PT Operated Smart Meter with Box and without CT – HT Meter	590	

3. Revised Phase 1 (Indicative) Quantities

Phase	Targeted Activities	Meters to be Deployed	Time line
Implementation Phase – 30 Months			
Phase 1(a)	➢ AS-IS and System Study	~90,000	~6 Months
	➢ Cloud Deployment		
	➢ TSP Engagement		
	➢ Meter Integration		
	➢ Applications Integration		
	➢ UAT		
	➢ Meter Installation on selected consumers		
Phase 1(b)	➢ Rollout at High Loss divisions	~3,10,000	~6 months
	➢ Smart Grid Application		
Phase 2	➢ Full Scale MI Ramp up	~16,00,000	~18 months
	➢ New Consumers		
Operation Phase – 90 Months			
	➢ O&M /FMS ➢ ATS/AMS ➢ Cloud Hosting ➢ Data / Network		90 Months

4. Amended Project Implementation Schedule

The Project Implementation Schedule for AMI system establishment and timelines for Related Services milestones from date of execution of the Contract are given below:

S. No.	Milestone	Timeline (in months)
1.	Submission of detailed Project Implementation Plan giving the compliance sheet along with the make and model of various infrastructure, hardware & software that are proposed for delivery and operations incl.: • Specification of System • Architecture and Software Solution	Within [60] days from Contract Commencement date

S. No.	Milestone	Timeline (in months)
2.	Approval of detailed Project Implementation Plan by BYPL	Within [15] days from the date of submission of Project Implementation Plan.
3.	• Delivery, site installation and commissioning of Network Operations cum Monitoring Centre with related hardware, software and equipment; and • Delivery, site installation, integration and operationalization of [5%] of Smart Meters each with related hardware, software and equipment and successful Operational Go-live	Within [6] months from Contract Commencement date
4.	Installation, integration and operationalization of 100% of Phase 1 Smart Meters each with related hardware, software and equipment as per phased wise plan specified in Clause 4 in Section 6.	Within [12] months from Contract Commencement date as per phased wise plan specified in Clause 4 in Section 6
5.	Installation Milestone	Within [30] months from Contract Commencement date
6.	Operational period of the AMI system	From Operational Go-Live till end of the Contract Period
7.	Transfer of AMI system to the BYPL	At the end of Term of the Contract in accordance with Exit Management Plan provided in Clause 13.6 of SCC in Section 5

Installation Milestone

The "Installation Milestone" is defined as the milestone when installation and operationalisation is completed for the number of smart meters envisaged for the project. The AMISP is expected to complete this Installation Milestone as per the table given above. The number of smart meters envisaged may change through negative variations provided for in the Contract as mentioned in **clause 32** given in **Section 6: Project Requirements and Scope of Work**. If the AMISP completes the "Installation Milestone" ahead of schedule, then the revised date shall be accepted as the date of achievement of "Installation Milestone".

BYPL shall provide necessary clearance/ approval/ permits that are to be issued by it for initial 20% of contiguous electrical locations for Smart Meter deployment along with related documentation within 6 (six) months from date of execution of this Contract. Furthermore, BYPL shall provide necessary clearance/ approval/ permits to be issued by it for remaining contiguous electrical locations as well as non-contiguous electrical locations for Smart Meter deployment along with related documentation on quarterly basis. BYPL shall issue a Notice no later than 7 days of expiry of time period specified above confirming the actual number of meters for which clearance/ approval/ permits is available. If BYPL fails to issue the necessary clearance and approvals or if BYPL acknowledges that no further consumer/feeder locations are available for deployment within the allotted time, then the meter population for which clearance/ approval/ permits is available shall be assumed as the number required for meeting the "Installation Milestone".

As and when the "Installation Milestone" is achieved by the AMISP, BYPL shall be obliged to certify the milestone through a written communication giving the date and the meter population installed and operationalised.

5. Amended Annexure H: Project Execution Plan

S. No	Activity Name	Phase-1												Phase-2	O&M (M31 to M 120)
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	MI (M13 to M30)	
1.	Award of LOI/LOA/Contract to AMISP														
2.	Setup Program Governance (Steering Committee & Operations Committee)														
3.	Project Kickoff with BYPL														
4.	Creation of Work plan														
5.	Establishment of Site Office														
6.	Collection of latest consumer legacy data from BYPL														
7.	As-Is study, document review, carrying out requirement analysis														
8.	Site Survey for finalization of Communication Technology														
9.	Finalization of Solution and Technical Architecture and Sign-off														
10.	Integration Architecture - interfaces with external/third-party systems														
11.	Submission of detailed Project Implementation, Exit Management Consumer Engagement, Disaster Recovery and Training Plan														
12.	Submission of SoP for Meter Installation & other SoPs														
13.	Submission of Project Engineering Documents (HES, MDM, Cloud, Helpdesk etc.)														
14.	Cloud Environment Preparation & Setup- Test, Development, UAT & Production environment (DC & DR)														
15.	Installation, configuration of diagnostic and monitoring tools for alert based database, application and infrastructure monitoring system														
16.	Installation, testing & commissioning of entire IT infrastructure and applications (HES, MDMS, WFM and Mobile APP / Consumer Portal etc.) hosted on cloud														
17.	Deploy HES, MDMS & other AMI applications in Production														
18.	Integration of AMI system with Billing, CRM and other legacy Systems of BYPL.														
19.	Setup of Smart Meter Operation Centre (SMOC)														
20.	Primary network bandwidth for cellular based communication module-														

S. No	Activity Name	Phase-1												Phase-2	O&M (M31 to M 120)
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	MI (M13 to M30)	
	cloud hosting data centre (AMISP would need to sign a contract with NBSP as per TRAI Guidelines for bandwidth)														
21.	Delivery, site installation, integration and operationalization of [5%] of Smart Meters each with related hardware, software and equipment														
22.	Integration and system testing and satisfactory /user acceptance test (UAT), Security and performance testing.														
23.	Complete UAT & update the Code Deployment Document														
24.	UAT Signoff by the business owners														
25.	Finish Data Migration related activities														
26.	Handover Deployment documents- Installation Instructions/Roll-back steps														
27.	Provide access to all business users for UAT of full solution Integration testing by business users using complete test data sets														
28.	Training of BYPL staff by the AMISP.														
29.	Certification & Audit – Cert-In / STQC etc														
30.	Operational Go-live of AMI system.														
31.	Installation and commissioning of Phase-1 Smart meters. This includes electrical physical installation metering operation.														
32.	Remaining Phase-2 Meter Installation and maintenance of success performance as per the agreed service levels														
33.	Operation & Maintenance Phase														

6. Minimum Technical Requirements for SMOC Hardware

The network operation and monitoring center shall be equipped with the following minimum hardware components:

a) Six numbers Operator workstations including one for Supervisor
b) A dual redundant 1 Gbps local area network
c) Internet router with at least 8 no's 1 Gbps LAN ports and redundant at least 2 Gbps internet ports supporting IPsec, and SDWAN capability
d) Firewall and intrusion protection system
e) One video display system of at least 70-inch diagonal with laser light source HD cube (DLP technology) supported by,
    a. Dual power supply

b. IP based control options and
c. Display Port, DVI, HDMI and Analog D-Sub signal interfaces

f) One A3/A4 size laser jet B/W printer with LAN interface
g) One A4 size inktank colour printer with LAN interface
h) One dual redundant online UPS to support the load of the above-mentioned equipment with minimum 2 hours backup
i) 100 Mbps internet connectivity for Primary and Secondary each.

The minimum technical specification and requirement to be followed for hardware equipment is as per the table below.

Workstation Specifications:

S. No.	Description of the Features	Minimum Quantity of the features
1.	CPU	Intel i7/4C/2.8Ghz or better
2.	RAM	16 GB DDR5 or better with expandable to 32 GB
3.	HDD	500GB NvME expandable to 1TB
4.	Screen	23" wide screen (16:9 aspect ratio), full HD, Resolution (1920x1080) LED color monitor, VGA and HDMI
5.	Graphics Card	Yes, Dedicated graphic card with min 4Gb RAM
6.	DVD RW	No
7.	Sound	Yes, In built
8.	LAN	2x10/100/1000 RJ45 Lan
9.	WLAN	Yes
10.	Ports	3 x USB 3.0, 1 HDMI, Audio/Mic, Bluetooth,
11.	Keyboard & Mouse	Yes, Wired, optical mouse
12.	OS	Windows 11 pro

A3/A4 BW Laser Printer Specifications:

S. No	Description of the Features	Minimum Quantity of the features
1.	Functions	Print, Scan, Copy, fax
2.	Paper size	A3, A4
3.	Print speed	30 pages/minute of A4 size & 15 pages/minute of A3 size.
4.	Print resolution	600x600 dpi
5.	Scan resolution	600x600 dpi
6.	Paper weight	75-200 GSM

S. No	Description of the Features	Minimum Quantity of the features
7.	First page out time	10 sec
8.	Duty cycle	100000 pages per month
9.	Paper handling capacity	Minimum 500 sheets for input tray & 500 sheets for output tray.
10.	Automatic Duplex priniting	Yes
11.	Landscape and portrait orientation	Yes
12.	Interface	1 GB LAN ports + External Print Server 1 USB port
13.	RAM	1 GB

Router Specifications:

S. No	Description of the Features	Minimum Quantity of the features
1.	Functions	High performance Routing for data exchange between data centres, remote VDUs.
2.	Routing Capability	Layer -2 & Layer-3 routing & Dynamic discovery of routing
3.	Interface Ports	8x 1Gbps RJ45 L3 ports
4.	Processing capacity	Minimum 4 Mpps
5.	IPSec VPN tunnels	Minimum 2000
6.	Features to support	QoS, MPLS, Security, Broadband, Multiservice, Voice, IP to IP Gateway
7.	Routing protocols	RIP, IS-IS, OSPF, BGP, ARP, IPCP, IP forwarding, VLAN & MPLS etc.
8.	Network protocols	TCP/IP, IPv6, OSI, Telnet, UDP, DHCP
9.	Network management	Using SNMP Protocol V2 & V3
10.	Inbuilt software firewall features	Yes
11.	Speed configurability at each port	All ports shall be configurable from 64kbps to 1Gbps
12.	Interface Support	Router should support 1 GB, 10 GB, serial interfaces and router should support
13.	Mounting	19” rack mountable

Switch Specifications for workstation and screen:

S. No	Description of the Features	Minimum Quantity of the features
1.	Functions	For connecting all workstation & peripheral devices on Local Area Network (LAN)
2.	Switching capability	Layer-2 switching & VLAN
3.	Interface ports	Minimum 24- 1Gbps Ethernet ports
4.	Switching capacity	128 Gbps

S. No	Description of the Features	Minimum Quantity of the features
5.	Mounting	Rack mountable

Transit Insurance (Wherever applicable) – (Added)

The AMISP shall take a comprehensive insurance policy for marine cum storage cum erection (MSE) for all the goods supplied and installed under the contract. Post installation, bidder shall take suitable insurance policy for all operational items/assets till contract period. Copy of all insurance policies shall be provided to BYPL.