



Chennai Metropolitan Water Supply and Sewerage Board

DRAFT CONCESSION AGREEMENT

For

**Procurement, Testing, Installation, Commissioning, Operation, and
Maintenance of 1.0 Lakh Smart Water Meters with Associated Communication
and Billing System in Chennai City, under Hybrid Annuity Model (HAM)**

REQUEST FOR PROPOSAL (RFP)

VOLUME – II

Draft Concession Agreement

E-Tender Notice No.: CNT/WSS/NCB/TNIDB/002/2025-26

April 2025

**SUPERINTENDING ENGINEER (CONTRACTS & MONITORING)
CHENNAI METROPOLITAN WATER SUPPLY & SEWERAGE BOARD**

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CONCESSION AGREEMENT

THIS AGREEMENT is entered into on this the..... day of, 20.....

BETWEEN

1. Chennai Metropolitan Water Supply & Sewerage Board, established under the Chennai Metropolitan Water Supply & Sewerage Act, 1978 and Chennai Metropolitan Water Supply & Sewerage Act (Second Amendment) 2012, represented by its _____ and having its principal offices at No.1, Pumping Station Road, Chintadripet, Chennai – 600 002 (hereinafter referred to as the “**Authority or CMWSSB**” which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One Part

AND

2. _____ LIMITED, a company incorporated under the provisions of the Companies Act, 2013 with CIN _____ represented by its _____ and having its registered office at _____ (hereinafter referred to as the “**Concessionaire**” which expression shall, unless repugnant to the context or meaning thereof, include its successors and permitted assigns and substitutes) of the Other Part.

WHEREAS:

1. The Authority had decided to install Smart Water Meters for certain categories of consumers on design, build, finance, operate and transfer (the “**DBFOT Annuity**” or “**Hybrid Annuity**”) basis and intends to enter into an Agreement for Procurement, Testing, Installation, Commissioning, Operation, and Maintenance of Smart Water Meters (Electromagnetic/ Ultrasonic AMI Meters) and Associated Communication and Billing System in accordance with the terms and conditions to be set forth in this Concession Agreement.
2. The Authority had adopted single stage, two cover bidding process and accordingly invited proposals under its Request for Proposal No. _____ dated _____ (the “**Request for Proposal**” or “**RFP**”) for selection of bidders for undertaking the Project. Pursuant to the terms of the RFP, bids were received by the Authority on or before [***]. The {Selected Bidder/ Consortium comprising _____ and _____ (collectively the “**Consortium**” _____) with _____ as its lead member (the “**Lead Member**”)¹ } was one of the bidders who had submitted its bid for the Project (the “**Bid**”).
3. Following the evaluation of the bids submitted by the bidders, including that of the Selected Bidder, the Authority had accepted the Bid. Subsequently, the Authority had issued the letter of award no. [_____] dated [_____] (the “**Letter of Award**” or “**LOA**”) to the Selected Bidder, *inter alia*, requiring it to incorporate a new private limited company under the Companies Act (as defined hereinafter) and execution of this Agreement within 30 (thirty) days of the date of issue thereof.
4. {The Selected Bidder/ Consortium has since promoted and incorporated the Concessionaire as a limited liability company under the Companies Act 2013, and} has requested the Authority to accept the Concessionaire as the entity which shall undertake and perform the obligations and exercise the rights of the {Selected bidder/ Consortium under the LOA,} including the obligation to enter into this Concession Agreement pursuant to the LOA for undertaking the Project.

¹ This will be suitably modified in case the bidder being a single entity.

5. {By its letter dated_____ the Concessionaire has also joined in the said request of the Selected Bidder/ Consortium to the Authority to accept it as the entity which shall undertake and perform the obligations and exercise the rights of the selected bidder/ Consortium including the obligation to enter into this Concession Agreement pursuant to the LOA. The Concessionaire has further represented to the effect that it has been promoted by the Selected Bidder/ Consortium for the purposes hereof and has delivered to the Authority a legal opinion with respect to the authority of the Concessionaire to enter into this Concession Agreement and the enforceability of the provisions thereof.}
6. The Authority has {agreed to the said request of the Selected Bidder/ Consortium and the Concessionaire, and has} accordingly agreed to enter into this Concession Agreement with the Concessionaire for implementation of the Project on Hybrid Annuity basis, subject to and on the terms and conditions set forth hereinafter.

NOW, THEREFORE, in consideration of the foregoing and the respective covenants and agreements set forth in this Concession Agreement, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Parties agree as follows:

ARTICLE 1 DEFINITIONS AND INTERPRETATIONS

1.1 Definitions

The words and expressions beginning with capital letters and defined in this Agreement shall, unless the context otherwise requires, have the meaning ascribed thereto herein, and the words and expressions defined in the Schedules and used therein shall have the meaning ascribed thereto in the Schedules.

In this Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively assigned to them:

“Access to Service Area” means the unrestricted access and other rights of way, howsoever described, necessary for construction, operation and maintenance of the Project in accordance with this Agreement;

“Accounting Year” means the financial year commencing from the first day of April of any calendar year and ending on the thirty-first day of March of the next calendar year;

“Additional Auditors” shall have the meaning as set forth in Article 27.2.3;

“Adjusted Equity” means the Equity funded in Indian Rupees and adjusted on the first day of the current month (the **“Reference Date”**), in the manner set forth below, to reflect the change in its value on account of depreciation and variations in WPI, and for any Reference Date occurring:

- (a) on or before COD, the Adjusted Equity shall be a sum equal to the Equity funded in Indian Rupees and expended on the Project, revised to the extent of one half of the variation in WPI occurring between the first day of the month of Appointed Date and the Reference Date;
- (b) from COD and until the 4th (fourth) anniversary thereof, an amount equal to the Adjusted Equity as on COD shall be deemed to be the base (the **“Base Adjusted Equity”**) and the Adjusted Equity hereunder shall be a sum equal to the Base Adjusted Equity, revised at the commencement of each month following COD to the extent of variation in WPI occurring between COD and the Reference Date;
- (c) after the 4th (fourth) anniversary of COD, the Adjusted Equity hereunder shall be a sum equal to the Base Adjusted Equity, reduced by 0.83% (zero point eight three per cent) thereof at the commencement of each month following the 4th (fourth) anniversary of COD and the amount so arrived at shall be revised to the extent of variation in WPI occurring between COD and the Reference Date;

**This is arrived at by dividing 100% by the number of months comprising the Concession Period, rounded off to two decimal places*

For the avoidance of doubt, the Adjusted Equity shall, in the event of Termination, be computed as on the Reference Date immediately preceding the Transfer Date; provided that no reduction in the Base Adjusted Equity shall be made for a period equal to the duration, if any, for which the Concession Period is extended, but the revision on account of WPI shall continue to be made;

“Affected Party” shall have the meaning as set forth in Article 28.1;

“Agreement” or **“Concession Agreement”** means this Agreement, its Recitals, and the Schedules, the RFP hereto, and any amendments thereto made in accordance with the provisions contained in this Agreement;

“Annuity Payments” shall have the meaning as set forth in Article 23.6.2;

“Annuity Payment Date” shall have the meaning as set forth in Article 23.6.2;

“Applicable Laws” means all laws, brought into force and effect by GOI or the State Government including rules, regulations and notifications made thereunder, and judgments, decrees, injunctions, writs and orders of any court of record, applicable to this Agreement and the exercise, performance and discharge of the respective rights and obligations of the Parties hereunder, as may be in force and effect during the subsistence of this Agreement;

“Applicable Permits” means all clearances, licenses, permits, authorizations, no objection certificates, consents, approvals and exemptions required to be obtained or maintained under Applicable Laws in connection with the construction, operation and maintenance of the Project during the subsistence of this Agreement;

“Appointed Date” means the date on which Financial Close is achieved and every Condition Precedent is satisfied, in accordance with the provisions of this Agreement, and such date shall be the date of commencement of the Concession Period;

“Associate” or **“Affiliate”** means, in relation to either Party {and/or Consortium Members}, a person who controls, is controlled by, or is under the common control with such Party {or Consortium Member} (as used in this definition, the expression “control” means, with respect to a person which is a company or corporation, the ownership, directly or indirectly, of more than 26% (twenty six per cent) of the voting shares of such person, and with respect to a person which is not a company or corporation, the power to direct the management and Policies of such person, whether by operation of law or by contract or otherwise);

“Authority” shall have the meaning attributed thereto in the array of Parties as set forth in the Recitals;

“Authority Default” shall have the meaning as set forth in Article 31.2.1;

“Authority Indemnified Persons” shall have the meaning set forth in Article 36.1.1;

“Authority Representative” means such person or persons as may be authorized in writing by the Authority to act on its behalf under this Agreement and shall include any person or persons having authority to exercise any rights or perform and fulfil any obligations of the Authority under this Agreement;

“Award” shall have the meaning set forth in Article 40.3.3;

“Bank” means a scheduled commercial bank incorporated in India and having a minimum net worth of Rs. 1,000 crore (Rupees one thousand crore), but does not include a bank in which any Senior Lender has an interest;

“Bid” means the documents in their entirety comprised in the bid submitted by the {selected bidder/Consortium} in response to the Request for Proposals in accordance with the provisions thereof and “Bids” shall mean the bids submitted by any and all prequalified bidders;

“Bid Due Date” means the last date on which the Bid may have been submitted in accordance with the provisions of the Request for Proposals;

“Bid Documents” shall mean the RFP and any amendments thereto;

"Bid Project Cost" shall have the meaning as set forth in Article 23.1;

"Bid Security" means the security provided by the Concessionaire to the Authority along with the Bid, in accordance with the Request for Proposals, and which is to remain in force until substituted by the Performance Security;

"CIP" means the capital investment plan prepared by the Concessionaire and approved by the Authority as per Article 5.9.7;

"COD" or **"Commercial Operation Date"** shall have the meaning as set forth in Article 15.1.1;

"CPI (IW)" means the Consumer Price Index for Industrial Workers as published by the Labour Bureau, Government of India and shall include any index which substitutes the CPI (IW), and any reference to CPI (IW) shall, unless the context otherwise requires, be construed as a reference to the CPI (IW) published for the period ending with the preceding quarter;

"Capex Annuity" or "Annuity Payments" shall have the same meaning unless repugnant to the context or meaning;

"Change in Law" means the occurrence of any of the following after the Bid Date:

- (a) The enactment of any new Indian law;
- (b) The repeal, modification or re-enactment of any existing Indian law;
- (c) The commencement of any Indian law which has not entered into effect until the Bid Date;
- (d) a change in the interpretation or application of any Indian law by a judgment of a court of record which has become final, conclusive and binding, as compared to such interpretation or application by a court of record prior to the Bid Date; or
- (e) Any change in the rates of any of the Taxes that have a direct effect on the Project;

"Change in Ownership" means a transfer of the direct and/or indirect legal or beneficial ownership of any shares, or securities convertible into shares, that causes the aggregate holding of the {selected bidder/ Consortium Members, together with {its/their} Associates, in the total Equity to decline below:

- (i) Till the achievement of the COD and until the expiry of 2 (two) years therefrom each Consortium Member whose financial capacity (net worth) or technical capacity was evaluated for the purposes of the RFP shall subscribe and continue to hold not less than 26% (twenty six percent) of the Equity
- (ii) The Consortium Members shall together hold at least 51% of the Equity the expiry of the Concession Period and the Consortium Member whose technical experience in operations and maintenance was considered for qualification during the RFP stage should hold not less than 26% of the Equity subsequent to the minimum lock in period as stated in (i) above;

"Change of Scope" shall have the meaning as set forth in Article 16.1.1;

"Change of Scope Order" shall have the meaning as set forth in Article 16.2.3;

"Company" means the company acting as the Concessionaire under this Agreement;

"Completion Certificate" shall have the meaning as set forth in Article 14.4;

"Completion Cost" shall have the meaning as set forth in Article 23.5.1;

“Concession” shall have the meaning as set forth in Article 3.1.1;

“Concessionaire” shall have the meaning attributed thereto in the array of Parties as set forth in the Recitals;

“Concession Period” means the period starting on and from Appointed Date and ending on the Transfer Date. For avoidance of doubt it is clarified that the Concession Period shall include the Construction Period plus a fixed period of 10 (ten) years of Operation & Maintenance Period from the COD;

“Concessionaire Default” or “Concessionaire Event of Default” shall have the meaning as set forth in Article 31.1.1;

“Conditions Precedent” shall have the meaning as set forth in Article 4.1.1;

{**“Consortium”** shall have the meaning as set forth in Recital (D);}

{**“Consortium Member”** means a company specified in Recital (D) as a member of the Consortium;}

“Construction/Installation Plan” means the detailed installation plan to be prepared by the Concessionaire, which will set out the work to be performed by the Concessionaire to achieve each of the Payment Milestones, in a manner such that the Project is completed on or prior to the Scheduled Completion Date. The Construction/Installation Plan shall be approved by the Authority in accordance with the provisions of the Concession Agreement

“Construction/Installation Payments” means the payments to be made to the Concessionaire during the Construction Period, upon satisfactory completion of the Payment Milestones, which shall, in aggregate, be equivalent to 60% of the Bid Project Cost, as adjusted from time to time to reflect the variation in the Price Index;

“Construction/Installation Period” means the period beginning from the Appointed Date and ending on COD;

“Construction Works” means all works and things necessary to complete the construction of Project Facilities in accordance with this Agreement;

“Contractor” means the person or persons, as the case may be, with whom the Concessionaire has entered into any of the EPC Contract, the O&M Contract or any other material agreement or contract for construction, operation and/or maintenance of the Project or matters incidental thereto, but does not include a person who has entered into an agreement for providing financial assistance to the Concessionaire;

“Concessionaire’s Representative” means the Person nominated by the Concessionaire to act on its behalf and liaise with the Authority for the purposes of this Agreement and notified as such in writing to the Authority;

“Cure Period” means the period specified in this Agreement for curing any breach or default of any provision of this Agreement by the Party responsible for such breach or default and shall:

(a) Commence from the date on which a notice is delivered by one Party to the other Party asking the latter to cure the breach or default specified in such notice;

(b) Not relieve any Party from liability to pay Damages or compensation under the provisions

of this Agreement; and

(c) Not in any way be extended by any period of Suspension under this Agreement; provided that if the cure of any breach by the Concessionaire requires any reasonable action by the Concessionaire that must be approved by the Authority or the Independent Engineer hereunder, the applicable Cure Period shall be extended by the period taken by the Authority or the Independent Engineer to accord their approval;

“DBFOT Annuity” or **“Hybrid Annuity”** shall have the meaning as set forth in Recital (A);

“Damages” shall have the meaning as set forth in Sub-Article (w) of Article 1.2.1;

“Debt Due” means the aggregate of the following sums expressed in Indian Rupees outstanding on the Transfer Date:

- (a) the principal amount of the debt provided by the Senior Lenders under the Financing Agreements for financing the Total Project Cost (the “principal”) but excluding any part of the principal that had fallen due for repayment two years prior to the Transfer Date;
- (b) all accrued interest, financing fees and charges payable under the Financing Agreements on, or in respect of, the debt referred to in Sub-Article (a) above until the Transfer Date but excluding (i) any interest, fees or charges that had fallen due one year prior to the Transfer Date, (ii) any penal interest or charges payable under the Financing Agreements to any Senior Lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to Authority Default; and
- (c) any Subordinated Debt which is included in the Financial Package and disbursed by lenders for financing the Total Project Cost;

provided that if all or any part of the Debt Due is convertible into Equity at the option of Senior Lenders and/or the Concessionaire, it shall for the purposes of this Agreement be deemed to be Debt Due even after such conversion and the principal thereof shall be dealt with as if such conversion had not been undertaken;

“Debt Service” means the sum of all payments on account of principal, interest, financing fees and charges due and payable in an Accounting Year to the Senior Lenders for and in respect of Debt Due under the Financing Agreements;

“Dispute” shall have the meaning as set forth in Article 40.1.1;

“Dispute Resolution Procedure” means the procedure for resolution of Disputes as set forth in Article 40;

“Divestment Requirements” means the obligations of the Concessionaire for and in respect of Termination as set forth in Article 32.1;

“Document” or **“Documentation”** means documentation in printed or written form, or in tapes, discs, drawings, computer programs, writings, reports, photographs, films, cassettes, or expressed in any other written, electronic, audio or visual form;

“Design and Drawings” means the detailed 'good for construction' designs and drawings, technical information, plans, samples, patterns, models and specifications prepared by the Concessionaire for the construction of Project facilities, on the basis of the Specifications and Standards, Technical Specifications and which are approved by the Authority in accordance

with the provisions of the Agreement and reviewed by the Independent Engineer in accordance with the provisions of this Agreement.

“Effective Date” means the date of execution of this Agreement

“EPC Contract” means the engineering, procurement and construction contract or contracts entered into by the Concessionaire with one or more Contractors for, inter alia, engineering and construction of the Project in accordance with the provisions of this Agreement;

“EPC Contractor” means the person with whom the Concessionaire has entered into an EPC Contract;

“Emergency” means a condition or situation that is likely to endanger the security of the individuals on or about the Project, including Users thereof, or which poses an immediate threat of material damage to any of the Project facilities;

“Encumbrances” means, in relation to the Project, any encumbrances such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations, and shall include any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project;

“Equity” means the sum expressed in Indian Rupees representing the paid up equity share capital of the Concessionaire for meeting the equity component of the Total Project Cost, and for the purposes of this Agreement shall include convertible instruments or other similar forms of capital, which shall compulsorily convert into equity share capital of the Company, and any interest-free funds advanced by any shareholder of the Company for meeting such equity component;

“Escrow Account” means an Account which the Concessionaire shall open and maintain with a Bank in which all inflows and outflows of cash on account of capital and revenue receipts and expenditures shall be credited and debited, as the case may be, in accordance with the provisions of this Agreement, and includes the Sub-Accounts of such Escrow Account;

“Escrow Agreement” shall have the meaning as set forth in Article 25.1.2;

“Escrow Bank” shall have the meaning as set forth in Article 25.1.1;

“Escrow Default” shall have the meaning as set forth in Schedule-N;

“Financial Close” means the fulfilment of all conditions precedent to the initial availability of funds under the Financing Agreements which shall be communicated by the Lender’s Representative to the Authority in writing. Such communication from Lender’s Representative shall be treated as date on which the Financial Close is achieved;

“Financial Default” shall have the meaning as set forth in Schedule-Q;

“Financial Model” means the financial model adopted by Senior Lenders, setting forth the capital and operating costs of the Project and revenues therefrom on the basis of which financial viability of the Project has been determined by the Senior Lenders, and includes a description of the assumptions and parameters used for making calculations and projections therein;

“Financial Package” means the financing package indicating the total capital cost of the Project and the means of financing thereof, as set forth in the Financial Model and approved by the Senior Lenders, and includes Equity, all financial assistance specified in the Financing Agreements and Subordinated Debt, if any;

“Financial Progress” means the schedule of construction costs to be incurred by the Concessionaire to achieve the Project Milestones in compliance with the Project Completion Schedule, defined in the Financial Package and / or the Financial Model as approved by the Senior Lenders;

“Financing Agreements” means the agreements executed by the Concessionaire in respect of financial assistance to be provided by the Senior Lenders by way of loans, guarantees, subscription to non-convertible debentures and other debt instruments including loan agreements, guarantees, notes, debentures, bonds and other debt instruments, security agreements, and other documents relating to the financing (including refinancing) of the Total Project Cost, and includes amendments or modifications made in accordance with Article 5.2.3;

“Force Majeure” or **“Force Majeure Event”** shall have the meaning ascribed to it in Article 28.1;

“Force Majeure Costs” shall have the meaning ascribed to it in Article 28.7.2;

“GOI” means the Government of India;

“Good Industry Practice” means the practices, methods, techniques, designs, standards, skills, diligence, efficiency, reliability and prudence which are generally and reasonably expected from a reasonably skilled and experienced operator engaged in the same type of undertaking as envisaged under this Agreement and which would be expected to result in the performance of its obligations by the Concessionaire in accordance with this Agreement, Applicable Laws and Applicable Permits in reliable, safe, economical and efficient manner and for providing safe, economical, reliable and efficient use of the Project;

“Government” means the Government of Tamil Nadu;

“Government Instrumentality” means any department, division or sub-division of the Government or the State Government and includes any commission, board, authority, agency or municipal and other local authority or statutory body, including Panchayat, under the control of the Government or the State Government, as the case may be, and having jurisdiction over all or any part of the Project or the performance of all or any of the services or obligations of the Concessionaire under or pursuant to this Agreement;

“Implementation Schedule” means the progressive Project Milestones forming part of the CIP in accordance with which the Project Facilities shall be constructed;

“Indemnified Party” means the Party entitled to the benefit of an indemnity pursuant to Article 36;

“Indemnifying Party” means the Party obligated to indemnify the other Party pursuant to Article 36;

“Independent Auditors” means a reputable firm of chartered accountants acting as independent auditors and appointed in accordance with Article 27.2.1;

“Independent Engineer” shall have the meaning as set forth in Article 21.1;

“Indirect Political Event” shall have the meaning as set forth in Article 28.3;

“Inspection Report” shall have the meaning as set forth in Article 13.2;

“Insurance Cover” means the aggregate of the maximum sums insured under the insurances taken out by the Concessionaire pursuant to Article 26, and includes all insurances required to be taken out by the Concessionaire under Article 26.2 but not actually taken, and when used in the context of any act or event, it shall mean the aggregate of the maximum sums insured and payable or deemed to be insured and payable in relation to such act or event;

“Intellectual Property” means all patents, trademarks, service marks, logos, get-up, trade names, internet domain names, rights in designs, blue prints, programs and manuals, drawings, copyright (including rights in computer software), database rights, semiconductor, topography rights, utility models, rights in know-how and other intellectual property rights, in each case whether registered or unregistered and including applications for registration, and all rights or forms of protection having equivalent or similar effect anywhere in the world;

“Invoice” means an invoice for payment of:

- (a) the Construction Payments during the Construction Period; or
- (b) the Capex Annuity and /or Annuity Payments, the O&M Payment during the Operation Period, submitted by the Concessionaire to the Authority in accordance with provision of the Agreement;

“KPI” or Key Performance Indicators means the key performance indicators set out in Schedule C, which the Project must achieve during the Operation Period;

“LOA” or “Letter of Award” means the letter of award referred to in Recital (D);

“Lead Member” shall have the meaning set forth in Recital (D);

“Lenders’ Representative” means the person duly authorized by the Senior Lenders to act for and on behalf of the Senior Lenders with regard to matters arising out of or in relation to this Agreement, and includes his successors, assigns and substitutes;

“Maintenance Manual” shall have the meaning as set forth in Article 17.9;

“Maintenance Program” shall have the meaning as set forth in Article 17.12;

“Maintenance Requirements” shall have the meaning as set forth in Article 17.11;

“Material Adverse Effect” means a material adverse effect of any act or event on the ability of either Party to perform any of its obligations under and in accordance with the provisions of this Agreement and which act or event causes a material financial burden or loss to either Party;

“Nominated Company” means a company selected by the Lenders’ Representative and proposed to the Authority for substituting the Concessionaire in accordance with the provisions of the Substitution Agreement;

“Non-Political Event” shall have the meaning as set forth in Article 28.2;

“NPV” shall have the meaning as set forth in Article 35.3;

“O&M” means the operation and maintenance of the Project Facilities and the Hardware, Software and Communication infrastructure during the Operation Period and includes all matters connected with or incidental to such operation and maintenance, and provision of services and facilities, in accordance with the provisions of this Agreement;

“O&M Contract” means the operation and maintenance contract, if any, that may be entered into between the Concessionaire and the O&M Contractor for performance of all or any of the O&M obligations;

“O&M Contractor” means the person, if any, with whom the Concessionaire has entered into an O&M Contract for discharging O&M obligations for and on behalf of the Concessionaire;

“O&M Expenses” means expenses incurred by or on behalf of the Concessionaire or by the Authority, as the case may be, for all O&M including (a) cost of salaries and other compensation to employees, (b) cost of materials, supplies, utilities and other services, (c) premia for insurance, (d) all taxes, duties, cess and fees due and payable for O&M, (e) all repair, replacement, reconstruction, reinstatement, improvement and maintenance costs, (f) payments required to be made under the O&M Contract, or any other contract in connection with or incidental to O&M, and (g) all other expenditure required to be incurred under Applicable Laws, Applicable Permits or this Agreement;

“O&M Inspection Report” shall have the meaning as set forth in Article 19.2;

“O&M Payments” shall have the meaning as set forth in Article 23.6;

“O&M Plan” means the operation and maintenance plan prepared and submitted by the Concessionaire and approved by the Authority;

“O&M Quote” shall mean the first year cost of O&M of the Project Facilities, as the case may be, quoted by the Successful Bidder in its financial proposal in the Bid;

“Operation Period” means the period of commencing from COD and ending on the Transfer Date during which the Concessionaire shall be responsible for the operation and maintenance of the Project facilities;

“Operation Period Payments” means, collectively the:

- (a) Capex Annuity and/or Annuity Payments;
- (b) O&M Payments; and

“Online Monitoring System” means the monitoring system to be set up by the Concessionaire as part of the Project for continuous monitoring of the Project;

“Parties” means the parties to this Agreement collectively and “Party” shall mean any of the parties to this Agreement individually;

“Payment Milestone” shall have the meaning as set forth in Article 23.4;

“Performance Guarantee” shall have the meaning as set forth in Article 33.2.3

“Performance Security” shall have the meaning as set forth in Article 9.1.1;

“Physical Progress” shall mean the actual construction progress of any of the Project Facilities compared against the proposed physical progress as part of the Construction/Installation Plan, which shall be determined by the Independent Engineer by quantifiable measures, including completed work quantities, milestones achieved, and installed elements. The Independent Engineer shall undertake periodic inspections according to an agreed schedule (as part of the Construction/Installation Plan), serving as the basis for monitoring, evaluation, and payment purposes.

“Political Event” shall have the meaning as set forth in Article 28.4;

“Price Index” shall comprise:

(a) 70% (seventy per cent) of WPI; and

(b) 30% (thirty per cent) of CPI (IW),

Which constituents may be substituted by such alternative index or indices as the Parties may by mutual consent determine;

“Preparatory Period” shall mean the period of 150 (one hundred and fifty) days from the Effective Date which shall comprise of the period for fulfilment of the Condition Precedent of the Parties, unless the same is extended by the Authority in accordance with the provisions of this Agreement.

“Price Index Multiple” shall have the meaning set forth in 23.2.3;

“Project” means the construction, operation and maintenance of the Project Facilities in accordance with the provisions of this Agreement, and includes all works, services and equipment relating to or in respect of the Scope of the Project in the Service Area comprising all Project Facilities, and its subsequent development, rehabilitation and augmentation in accordance with this Agreement;

“Project Agreements” means this Agreement, the Financing Agreements, EPC Contract, O&M Contract, and any other material agreements or contracts that may be entered into by the Concessionaire with any person in connection with matters relating to, arising out of or incidental to the Project, but does not include the Escrow Agreement, Substitution Agreement, or any agreement for procurement of goods and services;

“Project Facilities” shall mean the facilities to be constructed and the equipments to be installed by the Concessionaire including replacements, if any, forming part of the water supply to the individual consumer and shall include the water meter, any electronic equipment, software, hardware and communication systems, Advanced metering interface with AMI smart meters (electromagnetic / ultrasonic) AMI software, billing system, customer information system, customer care and testing Centre and Associated Infrastructure, as stated in the agreed in the CIP and subject to any addition or deduction that may occur pursuant to Change in Scope approved by the Authority in accordance with this Agreement.

“Project Completion Schedule” means the progressive Project Milestones set forth in Schedule-G for completion of the Project on or before the Scheduled Completion Date;

“Provisional Certificate” shall have the meaning as set forth in Article 14.3;

“Punch List” shall have the meaning ascribed to it in Article 14.2;

“RBI” means the Reserve Bank of India, as constituted and existing under the Reserve Bank of India Act, 1934, including any statutory modification or replacement thereof, and its successors;

“Re.”, “Rs.” or “Rupees” or “Indian Rupees” means the lawful currency of the Republic of India;

“Reference Exchange Rate” means, in respect of any one currency that is to be converted into another currency in accordance with the provisions of this Agreement, the exchange rate as of 12.00 (twelve) noon on the relevant date quoted in Chennai by the State Bank of India, and in the absence of such rate, the average of similar rates quoted in Chennai by the Indian Bank and Indian Overseas Bank;

“Reference Index Date” means, in respect of the specified date or month, as the case may be, that last day of the preceding month with reference to which the Price Index or any constituent thereof is revised and in the event such revision has not been notified, the last such Price Index or any constituent thereof shall be adopted provisionally and used until the Price Index or such constituent thereof is revised and notified;

“Request for Proposals” or “RFP” shall have the meaning as set forth in Recital (B);

“SBI MCLR” means the prevailing marginal cost of fund based lending rate for a tenor of 1 year, notified by the State Bank of India;

“Scheduled Completion Date” shall have the meaning as set forth in the Implementation Schedule and the CIP.;

“Scope of the Project” shall have the meaning as set forth in Article 2.1;

“Senior Lenders” means the financial institutions, banks, multilateral lending agencies, trusts, funds and agents or trustees of debenture holders, including their successors and assignees, who have agreed to guarantee or provide finance to the Concessionaire under any of the Financing Agreements for meeting all or any part of the Total Project Cost and who hold pari passu charge on the assets, rights, title and interests of the Concessionaire;

“Service Area and Site” shall have the meaning as set forth in Article 10.1;

“Standard Operating Procedures” means the procedures set by the Concessionaire in relation to the O&M of the Project Facilities and approved by the Authority;

“State” means the State of Tamil Nadu and **“State Government”** means the government of that State;

“Statutory Auditors” means a reputable firm of chartered accountants acting as the statutory auditors of the Concessionaire under the provisions of the Companies Act, 2013, including any re-enactment or amendment thereof, for the time being in force, and appointed in accordance with Article 27.2.1;

“Study Period” means the period from the Effective Date until the Appointed Date;

“Selected Bidder” means the Bidder selected by the Authority for award of the Project;

“Subordinated Debt” means the aggregate of the following sums expressed in Indian Rupees or in the currency of debt, as the case may be, outstanding as on the Transfer Date:

(a) the principal amount of debt provided by lenders for meeting the Total Project Cost and subordinated to the financial assistance provided by the Senior Lenders; and
(b) all accrued interest on the debt referred to in Sub-Article (a) above but restricted to the lesser of actual interest rate and a rate equal to 5% (five per cent) above the Bank Rate in case of loans expressed in Indian Rupees and lesser of the actual interest rate and 6 (six) month Secured Overnight Financing Rate (SOFR) plus 2% (two per cent) in case of loans expressed in foreign currency, but does not include any interest that had fallen due 1 (one) year prior to the Transfer Date; provided that if all or any part of the Subordinated Debt is convertible into Equity at the option of the lenders, it shall for the purposes of this Agreement be deemed to be Subordinated Debt even after such conversion and the principal thereof shall be dealt with as if such conversion had not been undertaken;

"Subcontract" means a contract entered into by the Concessionaire to subcontract any part of its scope of work in relation to the Project under this Agreement;

"Subcontractor" means the Concessionaire's counterparty under any Subcontract;

"Substitution Agreement" shall have the meaning as set forth in Article 34.3.1;

"Suspension" shall have the meaning as set forth in Article 30.1;

"Taxes" means any Indian taxes including GST, excise duties, customs duties, value added tax, sales tax, local taxes, cess and any impost or surcharge of like nature (whether Central, State or local) on the goods, materials, equipment and services incorporated in and forming part of the Project charged, levied or imposed by any Government Instrumentality, but excluding any interest, penalties and other sums in relation thereto imposed on any account whatsoever. For the avoidance of doubt, Taxes shall not include taxes on corporate income;

"Technical Specifications and Standards" means the specifications and standards relating to the quality, quantity, capacity and other requirements for the Project, as set forth in Schedule D including Technical Specifications and any modifications thereof, or additions thereto, as included in the design and engineering for the Project submitted by the Concessionaire to, and expressly approved by, the Authority;

"Termination" means the expiry or termination of this Agreement and the Concession hereunder;

"Termination Notice" means the communication issued in accordance with this Agreement by one Party to the other Party terminating this Agreement;

"Termination Payment" means the amount payable by the Authority to the Concessionaire, under and in accordance with the provisions of this Agreement, upon Termination;

"Tests" means the tests set forth in Schedule-I to determine the completion of the Project in accordance with the provisions of this Agreement and approved by the Independent Engineer in accordance with Article 13.3 and shall include the Tests on Completion to be approved by the Independent Engineer in accordance with Article 14.1;

"Total Project Cost" means 40 % (forty percent) of the Bid Project Cost specified in Article 23.1; provided that the Bid Project Cost hereinbefore specified shall be adjusted for the Price Index Multiple, in the manner described in Article 23.2;

“Transfer Date” means the date on which this Agreement and the Concession hereunder expires pursuant to the provisions of this Agreement or is terminated by a Termination Notice;

“User” means a person using the Project Facilities or intends to use the Project Facilities or any part thereof in accordance with the provisions of this Agreement and Applicable Laws;

“User Charges” means the charges paid for availing the benefits of the the Project Facilities during the Operation Period;

“Vesting Certificate” shall have the meaning as set forth in Article 32.4;

“WPI” means the Wholesale Price Index for all commodities as published by the Ministry of Industry, GOI and shall include any index which substitutes the WPI, and any reference to WPI shall, unless the context otherwise requires, be construed as a reference to the latest monthly WPI published no later than 30 (thirty) days prior to the date of consideration hereunder; and

1.2 Interpretation

1.2.1 In this Agreement, unless the context otherwise requires,

- A. references to any legislation or any provision thereof shall include amendment or re-enactment or consolidation of such legislation or any provision thereof so far as such amendment or re-enactment or consolidation applies or is capable of applying to any transaction entered into hereunder;
- B. references to laws of India or Indian law or regulation having the force of law shall include the laws, acts, ordinances, rules, regulations, bye laws or notifications which have the force of law in the territory of India and as from time to time may be amended, modified, supplemented, extended or re-enacted;
- C. references to a “person” and words denoting a natural person shall be construed as a reference to any individual, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and shall include successors and assigns;
- D. the table of contents, headings or sub-headings in this Agreement are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;
- E. the words “include” and “including” are to be construed without limitation and shall be deemed to be followed by “without limitation” or “but not limited to” whether or not they are followed by such phrases;
- F. references to “construction” or “building” include, unless the context otherwise requires, investigation, design, engineering, procurement, delivery, transportation, installation, processing, fabrication, testing, commissioning and other activities incidental to the construction, and “construct” or “build” shall be construed accordingly;
- G. references to “development” include, unless the context otherwise requires, construction, renovation, refurbishing, augmentation, upgradation and other activities incidental thereto, and “develop” shall be construed accordingly;
- H. any reference to any period of time shall mean a reference to that according to Indian Standard Time;
- I. any reference to day shall mean a reference to a calendar day;
- J. Reference to a “business day” shall be construed as reference to a day (other than a Sunday) on which banks in the State are generally open for business;

- K. any reference to month shall mean a reference to a calendar month as per the Gregorian calendar;
- L. references to any date, period or Project Milestone shall mean and include such date, period or Project Milestone as may be extended pursuant to this Agreement;
- M. any reference to any period commencing “from” a specified day or date and “till” or “until” a specified day or date shall include both such days or dates; provided that if the last day of any period computed under this Agreement is not a business day, then the period shall run until the end of the next business day;
- N. the words importing singular shall include plural and vice versa;
- O. References to any gender shall include the other and the neutral gender;
- P. “lakh” means a hundred thousand (100,000) and “crore” means ten million (10,000,000);
- Q. “Indebtedness” shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;
- R. references to the “winding-up”, “dissolution”, “insolvency”, or “reorganisation” of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganisation, dissolution, arrangement, protection or relief of debtors;
- S. save and except as otherwise provided in this Agreement, any reference, at any time, to any agreement, deed, instrument, license or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference; provided that this Sub-Article (s) shall not operate so as to increase liabilities or obligations of the Authority hereunder or pursuant hereto in any manner whatsoever;
- T. any agreement, consent, approval, authorization, notice, communication, information report or any other correspondence required under or pursuant to this Agreement from or by any Party or the Independent Engineer shall be valid and effective only if it is routed through _____ (unless the law requires to send such notice, communication, etc, through physical/any other specified mode only) under the hand of a duly authorized representative of such Party or the Independent Engineer, as the case may be, in this behalf and not otherwise;
- U. the Schedules and Recitals to this Agreement and the Request for Proposals (“RFP”) forms an integral part of this Agreement and will be in full force and effect as though they were expressly set out in the body of this Agreement;
- V. references to Recitals, Articles, Sub-articles, Sub-clauses, Provisos or Schedules in this Agreement shall, except where the context otherwise requires, mean references to Recitals, Articles, Sub-articles, Sub-clauses, Provisos and Schedules of or to this Agreement; reference to an Annex shall, subject to anything to the contrary specified therein, be construed as a reference to an Annex to the Schedule in which such reference occurs; and reference to a Paragraph shall, subject to anything to the contrary specified therein, be construed as a reference to a Paragraph of the Schedule or Annex, as the case may be, in which such reference appears;
- W. the damages payable by either Party to the other of them, as set forth in this Agreement, whether on per diem basis or otherwise, are mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by

the Party entitled to receive the same and are not by way of penalty (the “**Damages**”); and

- X. Time shall be of the essence in the performance of the Parties’ respective obligations. If any time period specified herein is extended, such extended time shall also be of the essence.

1.2.2 Unless expressly provided otherwise in this Agreement, any Documentation required to be provided or furnished by the Concessionaire to the Authority and/ or the Independent Engineer shall be provided free of cost and in three copies, and if the Authority and/or the Independent Engineer is required to return any such Documentation with their comments and/or approval, they shall be entitled to retain two copies thereof.

1.2.3 The rule of construction, if any, that a contract should be interpreted against the parties responsible for the drafting and preparation thereof, shall not apply.

1.2.4 Any word or expression used in this Agreement shall, unless otherwise defined or construed in this Agreement, bear its ordinary English meaning and, for these purposes, the General Clauses Act 1897 shall not apply.

1.3 Measurements and arithmetic conventions

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being rounded down.

1.4 Priority of agreements, Articles and schedules

1.4.1 This Agreement, and all other agreements and documents forming part of or referred to in this agreement are to be taken as mutually explanatory and, unless otherwise expressly provided elsewhere in this Agreement, the priority of this Agreement and other documents and agreements forming part hereof or referred to herein shall, in the event of any conflict between them, be in the following order:

- (a) this Agreement; and
- (b) all other agreements and documents forming part hereof or referred to herein, i.e. the Agreement at (a) above shall prevail over the agreements and documents at (b) above.

1.4.2 Subject to provisions of Article 1.4.1, in case of ambiguities or discrepancies within this Agreement, the following shall apply:

1. between two or more Articles of this Agreement, the provisions of a specific Article relevant to the issue under consideration shall prevail over those in other Articles;
2. between the Articles of this Agreement and the Schedules, the Articles shall prevail and between Schedules and Annexes, the Schedules shall prevail;
3. between any two Schedules, the Schedule relevant to the issue shall prevail;
4. between the written description on the Drawings and the Specifications and Standards, the latter shall prevail;
5. between the dimension scaled from the Drawing and its specific written dimension, the latter shall prevail; and
6. between any value written in numerals and that in words, the latter shall prevail.

ARTICLE 2 SCOPE OF THE PROJECT

2.1 Project Phases

- a) The phase between the Effective Date and the Appointed Date, which shall consist of the Study Period
- b) The construction phase which shall consist of the Construction/Installation Period; and
- c) The operations phase which shall consist of the Operation Period.

2.2 Scope of the Project

The scope of the Project (the “**Scope of the Project**”) shall mean and include, the following:

- i. Conduct studies, analysis and assessment of the conditions prevailing in the Service Area, to be conducted by the Concessionaire, during the Study period along with the preparation of the CIP. The study shall include review of the Consumer data available with the Authority, the existing billing and collection systems of the Authority and systems associated with the same.
- ii. Prepare Network design for gateways / IOT, billing system, set up customer relationship management centre and submit procurement, construction and operations plan;–
- iii. Creating awareness among the consumers on the metering programme along with the Authority.
- iv. Installation of Smart Water Meter (AMI water electromagnetic/ Ultrasonic meters DN15/20 to DN40 having no moving parts and conforming to ISO4064/MID) approved including construction of Meter Chambers wherever required;
- v. Replacement of mechanical meter and installation of Smart Meter wherever required;
- vi. Reading of meters every month and integration of the read data with the Authority software for generating bills automatically. Current Billing Cycle is 26th of previous month to 25th of current month and readings should be integrated on or before 28th of the same month.
- vii. Serve the demand notice (prepared by CMWSSB) to the consumers, both in digital form, on a monthly basis.
- viii. To maintain opening & closing readings and consumption on daily basis
- ix. Attend to consumer complaints as directed by the Authority and set up mechanisms and offices for the same
- x. Periodic maintenance of meters and replacement of defective meters during the Concession Period;
- xi. Set up web based and mobile applications wherein customers can login and monitor the daily readings and also to maintain database;
- xii. Provide testing facilities as per IS and the testing facilities should be NABL accredited to test meters in case of consumer complaints. The Authority shall provide the necessary space for setting up the testing facilities at one of its premises;
- xiii. The concessionaire shall design, install, and integrate the Smart Meter Infrastructure (SMI) system. This includes ensuring robust communication and facilitating data flow between the SMI's Field Area Network and the Head End System. All requisite equipment and software, such as data concentrators and repeaters to handheld units and meter-specific software, shall fall under the concessionaire's scope.

- xiv. The concessionaire is also responsible for communication, data gathering, and data management components, charged on a per-meter basis. The proposed SMI must seamlessly integrate with the Meter Data Management System (MDMS), billing systems, and other relevant applications.
- xv. Generally, do such things as needed to ensure accurate metering and billing during the Concession Period;

For the purpose of this Project, Smart Water Meters refers to AMI water electromagnetic/ Ultrasonic meters (DN15/20 to DN40) having no moving parts and confirming to ISO4064/ MID approved in Chennai city with associated communication systems and billing software and hardware.

For the avoidance of any doubt, the collection of payments against the bills generated by the Concessionaire is the responsibility of the Authority and the Concessionaire will not be responsible for collection.

2.3 Activity Chart

The obligation of the Concessionaire under this Agreement shall consist of the following activities:

List of Major Activities:

Activity	Time Period (unless extended in terms of this Agreement)
Achievement of Conditions Precedent	150 (One hundred and fifty) days from the Effective Date
Completion of Conditions Precedent and Financial Close	Appointed Date
Commencement of Construction of Project Facilities	Appointed Date
Completion of Construction of Project Facilities	2 years from Appointed Date
Commencement of operation of Project Facilities	On and from COD
End of Concession Period	On Transfer Date

List of documents to be submitted:

Document submission	Key Date
Construction Period Performance Security	Within 21 (twenty one) days from Effective date
Operation Period Performance Security	30 days prior to the commencement of the Concession year
Construction/Installation Plan and CIP	Draft – 120 days from Effective Date Final – 7 days from receipt of comments from Authority
Approval of Construction/Installation Plan and CIP by the Authority	Within 150 days from Effective Date
O&M Plan	Draft – 120 days from Effective Date Final – 7 days from receipt of comments from Authority
Implementation Schedule	Along with CIP
Communications Plan	Along with CIP
Emergency Response Plan	Along with CIP
Standard Operating Procedures and Policy	Along with CIP
Executed Escrow Agreement	Within 150 days from the Effective Date
Progress reports	Quarterly reports – 7 days from end of relevant quarter

ARTICLE 3 GRANT OF CONCESSION

3.1 The Concession

- 3.1.1 Subject to and in accordance with the provisions of this Agreement, Applicable Laws and Applicable Permits, the Authority hereby grants to the Concessionaire the concession set forth herein including the exclusive right, license and authority to construct, upgrade, operate and maintain the Project facilities (the “**Concession**”) during the Construction Period of 2 (Two) years from the Appointed Date and Operation Period of 10 (Ten) years commencing from COD, and the Concessionaire hereby accepts the Concession and agrees to implement the Project subject to and in accordance with the terms and conditions set forth herein and agrees to maintain the Smart Water Meters (Electromagnetic/Ultrasonic AMI Meters) and associated communication and billing system during the Operation period.
- 3.1.2 Subject to and in accordance with the provisions of this Agreement, the Concession hereby granted shall oblige or entitle (as the case may be) the Concessionaire to:
- a. access the Service Area during the Study Period and the Construction/Installation period;
 - b. access the Service Area for the purpose of and to the extent conferred by the provisions of this Agreement;
 - c. finance the Project in accordance with terms hereof;
 - d. construct the Project Facilities during the Construction/Installation Period;
 - e. operate, maintain and manage the Project Facilities;
 - f. perform and fulfil all of the Concessionaire’s obligations under and in accordance with this Agreement;
 - g. receive the Construction/Installation Payments during the Construction/Installation Period, Capex Annuity and the O&M Payments during the Operation Period, subject to compliance with the terms and performance of the obligations under this Concession Agreement;
 - h. save as otherwise expressly provided in this Agreement, bear and pay all costs, expenses and charges in connection with or incidental to the performance of the obligations of the Concessionaire under this Agreement;
 - i. neither assign, transfer or sublet or create any lien or encumbrance on this Agreement, or the Concession hereby granted or on the whole or any part of the Project nor transfer, lease or part possession thereof, save and except as expressly permitted by this Agreement.

ARTICLE 4 CONDITIONS PRECEDENT

4.1 Conditions Precedent

4.1.1 Save and except as expressly provided in Articles 4, 5, 6, 7, 8, 9, 10, 22, 28, 40 and 43, or unless the context otherwise requires, the respective rights and obligations of the Parties under this Agreement shall be subject to the satisfaction in full of the conditions precedent specified in this Article 4.1 (the “**Conditions Precedent**”)

4.1.2 Upon submission of the Construction Period Performance Security by the Concessionaire may, by notice require the Authority to satisfy all of the Conditions Precedent set forth in this Article 4.1.2 within a period of 150 (one hundred and fifty) days thereafter. The Conditions Precedent required to be satisfied by the Authority shall be deemed to have been fulfilled when the Authority shall have:

- a) facilitated for the Concessionaire access to the Service Area in accordance with the provisions of Article 10.2.;
- b) obtain all approvals and consents, including the Authority Applicable Permits and any approvals required for Authority to enter into this Concession Agreement and undertake the Project;
- c) appoint a nodal officer for facilitating the matters in relation to the execution of this Agreement within 30 (thirty) days from the Effective Date;
- d) list of Existing Facilities in the Service Area, both underground and above ground within 45 (forty five) days from the Effective Date;
- e) within 45 (forty five) days from the Effective Date, provide the following existing database to the Concessionaire:
 - (i) latest base map of the Service Area;
 - (ii) latest customer database of the Service Area;
 - (iii) the connection details of the consumers
- f) within 60 days from the Effective Date, appoint the Independent Engineer
- g) review and approve the CIP, Installation Plan, Design and Drawings of the Project;
- h) review and approve the Substitution Agreement with the Concessionaire, Lender/s in the agreed form as set out at Schedule- Q; and
- i) execute the Escrow Agreement along with the Concessionaire within 150 days from the Effective Date.

The preparatory Period shall be extended by the actual number of days by which the fulfilment of Article 4.1.2 (d) is delayed by the Authority;

4.1.3 The Conditions Precedent required to be satisfied by the Concessionaire within a period of 150 (one hundred and fifty) days from the Effective Date shall be deemed to have been fulfilled when the Concessionaire shall have:

- a) provided Performance Security to the Authority in terms of Article 9.1 of this Agreement. For the avoidance of doubt it is clarified and agreed that the Concessionaire is required to provide the Construction Period Performance Security within 21 (twenty one) days of signing of this Agreement;
- b) submitted to and procured approval of the Authority, for the Design and Drawings of the Project;
- c) executed and procured execution of the Escrow Agreement within 90 days from the Effective Date.;
- d) executed and procured execution of the Substitution Agreement;

- e) procured all the Applicable Permits unconditionally or if subject to conditions, then all such conditions required to be fulfilled by the date specified therein shall have been satisfied in full and such Applicable Permits are in full force and effect within 90 days from the Effective Date;
- f) executed the Financing Agreements and delivered to the Authority 3 (three) true copies thereof, duly attested by a Director of the Concessionaire;
- g) delivered to the Authority 3 (three) true copies of the Financial Package and the Financial Model, duly attested by a Director of the Concessionaire, along with 3 (three) soft copies of the Financial Model in MS Excel version or any substitute thereof, which is acceptable to the Senior Lenders;
- h) delivered to the Authority {from the Consortium Members, their respective} confirmation of the correctness of the representations and warranties set forth in Sub-Articles (k), (l) and (m) of Article 7.1 of this Agreement within 90 (Ninety) days from the Effective Date;
- i) submit the CIP within 120 (One Hundred and Twenty Days) from the Effective Date and along with the CIP, submit the following to the Authority:
 - (i) the Consumer Survey
 - (ii) the Construction/Installation Plan
 - (iii) the O&M Plan
 - (iv) the Implementation Schedule
 - (v) the Communications Plan
 - (vi) the Emergency Response Plan
 - (vii) the Standard Operating Procedures and Policy
 - (viii) the Environment & Social Management Plan (ESMP)

4.1.4 Each Party shall make all reasonable endeavours to satisfy the Conditions Precedent within the time stipulated and shall provide the other Party with such reasonable cooperation as may be required to assist that Party in satisfying the Conditions Precedent for which that Party is responsible. Subject only to payment of Damages, it is agreed between the Parties that the obligation to fulfil each parties' Conditions Precedent is an independent obligation of the respective Party.

4.1.5 The Parties shall notify each other in writing at least once a month on the progress made in satisfying the Conditions Precedent. Each Party shall promptly inform the other Party when any Condition Precedent for which it is responsible has been satisfied.

4.2 Damages for delay by the Authority

In the event that (i) the Authority does not procure fulfilment of any or all of the Conditions Precedent set forth in Article 4.1.2 within the period specified in respect thereof, and (ii) the delay has not occurred as a result of breach of this Agreement by the Concessionaire or due to Force Majeure, the Authority shall pay to the Concessionaire Damages in an amount calculated at the rate of 0.1% (zero point one per cent) of the Construction Period Performance Security for each day's delay until the fulfilment of such Conditions Precedent, subject to the maximum limit equal to 20% of the Construction Period Performance Security and upon reaching such limit, the Concessionaire may, in its sole discretion terminate the Agreement. The Damages payable hereunder shall be the sole remedy available to the Concessionaire for delay by the Authority.

Provided further that in the event of delay by the Concessionaire in procuring fulfilment of the Conditions Precedent specified in Article 4.1.3, no Damages shall be due or payable by the Authority under this Article 4.2 until the date on which the Concessionaire shall have procured fulfilment of the Conditions Precedent specified in Article 4.1.3.

4.3 Damages for delay by the Concessionaire

In the event that (i) the Concessionaire does not procure fulfilment of any or all of the Conditions Precedent set forth in Article 4.1.3 within the period specified in respect thereof, and (ii) the delay has not occurred as a result of failure to fulfil the obligations under Article 4.1.2 or other breach of this Agreement by the Authority, or due to Force Majeure, the Concessionaire shall pay to the Authority, Damages in an amount calculated at the rate of 0.2% (zero point two per cent) of the Construction Period Performance Security for each day's delay until the fulfilment of such Conditions Precedent. Provided, however, that the Damages payable hereunder shall be subject to the maximum limit equal to 20% of the amount of the Construction Period Performance Security and upon reaching such limit, the Authority may, in its sole discretion and subject to the provisions of Article 9.2, terminate the Agreement.

Provided further that in the event of delay by the Authority in procuring fulfilment of the Conditions Precedent specified in Article 4.1.2, no Damages shall be due or payable by the Concessionaire under this Article 4.3 until the date on which the Authority shall have procured fulfilment of the Conditions Precedent specified in Article 4.1.2.

4.4 Commencement of Concession Period

The date on which Financial Close is achieved and all the Conditions Precedent specified in Article 4.1 are satisfied shall be the Appointed Date which shall be the date of commencement of the Concession Period. For the avoidance of doubt, the Parties agree that the Concessionaire may, upon occurrence of the Appointed Date, by notice convey the particulars thereof to the Authority, and shall thereupon be entitled to commence construction on the Project.

4.5 Deemed Termination upon delay

Without prejudice to the provisions of Articles 4.2 and 4.3, and subject to the provisions of Article 9.2, the Parties expressly agree that in the event the Appointed Date does not occur, for any reason whatsoever, before the 1st (first) anniversary of the date of this Agreement or the extended period provided in accordance with this Agreement, all rights, privileges, claims and entitlements of the Concessionaire under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased with the concurrence of the Concessionaire, and the Concession Agreement shall be deemed to have been terminated by mutual agreement of the Parties. Provided, however, that in the event the non-occurrence of the Appointed Date is for reasons attributable to the Concessionaire, the Bid Security, Construction Period Performance Security, if any, of the Concessionaire shall be encashed and appropriated by the Authority as Damages thereof.

ARTICLE 5 OBLIGATIONS OF THE CONCESSIONAIRE

5.1 Obligations of the Concessionaire

- 5.1.1 Subject to and on the terms and conditions of this Agreement, the Concessionaire shall, at its own cost and expense, procure finance for and undertake the designing, engineering, procurement, construction, rehabilitation, operation and maintenance of the Project and observe, fulfil, comply with and perform all its obligations set out in this Agreement or arising hereunder.
- 5.1.2 The Concessionaire shall apply for and obtain all Applicable Permits and comply with all Applicable Laws and Applicable Permits (including renewals as required) in the performance of its obligations under this Agreement.
- 5.1.3 Save and except as otherwise provided in this Agreement or Applicable Laws, as the case may be, the Concessionaire shall, in discharge of all its obligations under this Agreement, conform with and adhere to Good Industry Practice at all times.
- 5.1.4 The Concessionaire shall, at its own cost and expense, in addition to and not in derogation of its obligations elsewhere set out in this Agreement:
- a. make, or cause to be made, necessary applications to the relevant Government Instrumentalities with such particulars and details as may be required for obtaining Applicable Permits, other than those set forth in Article 4.1.2, and obtain and keep in force and effect such Applicable Permits in conformity with Applicable Laws;
 - b. procure, as required, the appropriate proprietary rights, licenses, agreements and permissions for materials, methods, processes, know-how and systems used or incorporated into the Project;
 - c. shall procure all licences and warranties in the name of the Authority;
 - d. perform and fulfil its obligations under the Financing Agreements;
 - e. make reasonable efforts to maintain harmony and good industrial relations among the personnel employed by it or its Contractors in connection with the performance of its obligations under this Agreement;
 - f. ensure and procure that its Contractors comply with all Applicable Permits and Applicable Laws in the performance by them of any of the Concessionaire's obligations under this Agreement;
 - g. always act in a manner consistent with the provisions of this Agreement and not cause or fail to do any act, deed or thing, whether intentionally or otherwise, which may in any manner be violative of any of the provisions of this Agreement;
 - h. procure fulfilment of Key Performance Indicators (KPIs) in accordance with Article 20 of this Agreement;
 - i. support, cooperate with and facilitate the Authority in the implementation and operation of the Project in accordance with the provisions of this Agreement; and
 - j. transfer the Project to the Authority upon Termination of this Agreement, in accordance with the provisions of this Agreement.
- 5.1.5 The Concessionaire shall remedy any or all loss or damage to the Project Facilities during the Defects Liability Period at the Concessionaire's cost to the extent that such loss or damage shall have arisen out of reasons specified in Article 33 Defects liability period.

- 5.1.6 The Concessionaire shall remedy any or all loss or damage to the Project Facilities during the Operation Period as per the provisions of this Agreement, save and except to the extent that such loss or damage shall have arisen on account of any default or neglect of the Authority or on account of a Force Majeure Event.
- 5.1.7 The project is financed by The World Bank and the Bidders/ Suppliers/ Contractors/ Concessionaire/ Consultants are required to comply with the applicable guidelines (available at the following link): <https://ppfdocuments.azureedge.net/3682.pdf>

5.2 Obligations relating to Project Agreements

- 5.2.1 It is expressly agreed that the Concessionaire shall, at all times, be responsible and liable for all its obligations under this Agreement notwithstanding anything contained in the Project Agreements or any other agreement, and no default under any Project Agreement or any other agreement shall excuse the Concessionaire from its obligations or liability hereunder.
- 5.2.2 The Concessionaire shall submit to the Authority the drafts of all Project Agreements, or any amendments or replacements thereto, for its review and comments, and the Authority shall have the right but not the obligation to undertake such review and provide its comments, if any, to the Concessionaire within 30 (thirty) days of the receipt of such drafts. Within 7 (seven) days of execution of any Project Agreement or amendment thereto, the Concessionaire shall submit to the Authority a true copy thereof, duly attested by a Director of the Concessionaire, for its record. For the avoidance of doubt, it is agreed that the review and comments hereunder shall be limited to ensuring compliance with the terms of this Agreement. It is further agreed that any failure or omission of the Authority to review and/ or comment hereunder shall not be construed or deemed as acceptance of any such agreement or document by the Authority. No review and/ or observation of the Authority and/ or its failure to review and/ or convey its observations on any document shall relieve the Concessionaire of its obligations and liabilities under this Agreement in any manner nor shall the Authority be liable for the same in any manner whatsoever.
- 5.2.3 The Concessionaire shall not make any addition, replacement or amendments to any of the Financing Agreements without the prior written consent of the Authority if such addition, replacement or amendment has, or may have, the effect of imposing or increasing any financial liability or obligation on the Authority, and in the event that any replacement or amendment is made without such consent, the Concessionaire shall not enforce such replacement or amendment nor permit enforcement thereof against the Authority. For the avoidance of doubt, the Authority acknowledges and agrees that it shall not unreasonably withhold its consent for restructuring or rescheduling of the debt of the Concessionaire and shall respond to the request for consent no later than 30 days from the receipt of such request from the Concessionaire.
- 5.2.4 The Concessionaire shall procure that each of the Project Agreements contains provisions that entitle the Authority and / or Lenders Representative to step into such agreement, in its sole discretion, in substitution of the Concessionaire in the event of Termination or Suspension (the "Covenant"). Further, it is clarified that in case both the Authority and Lenders' Representative decide to exercise their right to step-in, the Authority shall have the sole right to step into the Project Agreements. For the avoidance of doubt, it is expressly agreed that in the event the Authority does not exercise such rights of substitution within a period not exceeding 90 (ninety) days from the Transfer Date, the Project Agreements shall be deemed to cease to be in force and effect on the Transfer Date without any liability whatsoever on the Authority and the Covenant shall expressly provide for such eventuality. The Concessionaire expressly agrees to include the Covenant in all its Project Agreements and undertakes that it shall, in respect of each

of the Project Agreements, procure and deliver to the Authority an acknowledgment and undertaking, in a form acceptable to the Authority, from the counter party(ies) of each of the Project Agreements, where under such counter party(ies) shall acknowledge and accept the Covenant and undertake to be bound by the same and not to seek any relief or remedy whatsoever from the Authority in the event of Termination or Suspension.

5.2.5 Notwithstanding anything to the contrary contained in this Agreement, the Concessionaire agrees and acknowledges that selection or replacement of the EPC Contractor and O&M Contractor and execution of the EPC Contract and O&M Contract shall be subject to the following:

- a. The prior approval of the Authority from national security and public interest perspective, the decision of the Authority in this behalf being final, conclusive and binding on the Concessionaire, and undertakes that it shall not give effect to any such selection or contract without prior approval of the Authority; and
- b. The prior approval of the Authority to ensure that the proposed replacements possess necessary qualification and credentials as that of the original EPC Contractor and O&M Contractor, as the case may be.

The Authority shall endeavour to convey its decision thereon expeditiously and no later than 30 days from the date of receipt of the proposal along with the draft agreement by the Authority. It is also agreed that the Authority shall not be liable in any manner on account of grant or otherwise of such approval and that such approval or denial thereof shall not in any manner absolve the Concessionaire or its Contractors from any liability or obligation under this Agreement.

5.3 Obligations relating to Change in Ownership

5.3.1 The Concessionaire shall not undertake or permit any Change in Ownership, except with the prior written approval of the Authority.

5.3.2 Notwithstanding anything to the contrary contained in this Agreement, the Concessionaire agrees and acknowledges that:

- a. until the expiry of 2 (two) years from the commercial operation of the Project, the shareholders of the Concessionaire shall subscribe and hold equity share capital in the Concessionaire in the following proportion: (a) the Consortium Member whose technical capacity in relation to implementation was evaluated for the purposes of the RFP shall hold not less than 51% (fifty one percent) of the subscribed and paid-up equity of the Concessionaire; (b) the Member whose Financial Capacity had been evaluated shall subscribe and hold not less than 26% (twenty six percent) of the subscribed and paid-up equity of the Concessionaire; and
- b. subsequent to the minimum lock in period as stated in Article 5.3.2 (i) and for the remainder of the Concession Period, the shareholders of the Concessionaire shall together hold not less than 51% (fifty one percent) of the Equity of which the Consortium Member whose technical capacity in relation to O&M was evaluated for the purposes of the RFP shall hold at least 26% (twenty six percent) of the Equity.
- c. all acquisitions of Equity by an acquirer, either by himself or with any person acting in concert, directly or indirectly, including by transfer of the direct or indirect legal or beneficial ownership or control of any Equity, in aggregate of 25% (twenty five per cent) or more of the total Equity of the Concessionaire; or

- d. acquisition of any control directly or indirectly of the Board of Directors of the Concessionaire by any person either by himself or together with any person or persons acting in concert with him,

shall constitute a Change in Ownership requiring prior approval of the Authority from national security and public interest perspective, the decision of the Authority in this behalf being final, conclusive and binding on the Concessionaire, and undertakes that it shall not give effect to any such acquisition of Equity or control of the Board of Directors of the Concessionaire without such prior approval of the Authority. For the avoidance of doubt, it is expressly agreed that approval of the Authority hereunder shall be limited to national security and public interest perspective, and the Authority shall endeavour to convey its decision thereon expeditiously. It is also agreed that the Authority shall not be liable in any manner on account of grant or otherwise of such approval and that such approval or denial thereof shall not in any manner absolve the Concessionaire from any liability or obligation under this Agreement.

For the purposes of this Article 5.3.2:

- a. the expression “acquirer”, “control” and “person acting in concert” shall have the meaning ascribed thereto in the Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeover) Regulations, 2011 or any statutory re- enactment thereof as in force as on the date of acquisition of Equity, or the control of the Board of Directors, as the case may be, of the Concessionaire;
- b. the indirect transfer or control of legal or beneficial ownership of Equity shall mean transfer of the direct or indirect beneficial ownership or control of any company or companies whether in India or abroad which results in the acquirer acquiring control over the shares or voting rights of shares of the Concessionaire; and
- c. power to appoint, whether by contract or by virtue of control or acquisition of shares of any company holding directly or through one or more companies (whether situate in India or abroad) the Equity of the Concessionaire, not less than half of the directors on the Board of Directors of the Concessionaire or of any company, directly or indirectly whether situate in India or abroad, having ultimate control of 25% (twenty five per cent) or more of the Equity of the Concessionaire shall constitute acquisition of control, directly or indirectly, of the Board of Directors of the Concessionaire.

5.4 Obligations relating to employment of foreign nationals

The Concessionaire acknowledges, agrees and undertakes that employment of foreign personnel by the Concessionaire and/or its contractors and their subcontractors shall be subject to grant of requisite regulatory permits and approvals including employment/residential visas and work permits, if any required, and the obligation to apply for and obtain the same shall and will always be of the Concessionaire and, notwithstanding anything to the contrary contained in this Agreement, refusal of or inability to obtain any such permits and approvals by the Concessionaire or any of its contractors or sub-contractors shall not constitute Force Majeure Event, and shall not in any manner excuse the Concessionaire from the performance and discharge of its obligations and liabilities under this Agreement.

5.5 Obligations relating to employment of trained personnel

The Concessionaire shall ensure that the personnel engaged by it in the performance of its obligations under this Agreement are at all times properly trained for their respective function

5.6 Facilities for differently abled and elderly persons

The Concessionaire shall, in conformity with the guidelines issued from time to time by the Ministry of Social Justice and Empowerment, or a substitute thereof, procure a barrier free environment for the differently abled and for elderly persons using the Project.

5.7 Branding of Project

The Project or any part thereof shall not be branded in any manner to advertise, display or reflect the name or identity of the Concessionaire or its shareholders. The Concessionaire undertakes that it shall not, in any manner, use the name or entity of the Project to advertise or display its own identity, brand equity or business interests, including those of its shareholders, save and except as may be necessary in the normal course of business. For the avoidance of doubt, it is agreed that the Concessionaire may display its own name at a spot where other public notices are displayed for the Users. It is further agreed that the Project shall be known, promoted, displayed and advertised by the name of _____²

5.8 Sole purpose of the Concessionaire

The Concessionaire having been set up for the sole purpose of exercising the rights and observing and performing its obligations and liabilities under this Agreement, the Concessionaire or any of its subsidiaries shall not, except with the previous written consent of the Authority, be or become directly or indirectly engaged, concerned or interested in any business other than as envisaged herein.

5.9 Obligations during Study Period

5.9.1 Preliminary Activities

The Concessionaire shall carry out the following Preliminary Activities during the Study period in order to be prepared for the Construction/Installation:

	Description of work
A	Preliminary Activities
1	Review of the Consumer data available with the Authority, the existing billing and collection systems of the Authority and systems associated with the same
2	A well-planned citizen engagement program should precede this activity of application and regularization. A detailed work plan, review of existing assets, procedures and come out with construction and operations plan
3	Supply, testing, installation, commissioning of cloud based AMI Infrastructure including HES, MDMS, Billing Integration, customised App development
4	Establishment of Customer Relationship Management Centre. The space for the same will be provided by the Authority at one of its premises.

5.9.2 Deleted

² To be decided by the Authority in consultation with the Concessionaire during the Study Period

5.9.3 Obtaining relevant Applicable Permits as may be required by the Concessionaire during the Construction/Installation Period and Operation Period.

5.9.4 Construction/Installation Plan

- a) Within 120 days from the Appointed Date, the Concessionaire shall prepare and submit to the Authority a detailed Construction/Installation Plan. The Installation Plan shall set out:
 - (i) the detailed plan for completing the construction/installation of the Project by the Scheduled Completion Date;
 - (ii) specific activities and extent of construction/installation work to be performed by the Concessionaire to achieve each of the Payment Milestones for the Project; and
 - (iii) the order in which the Concessionaire proposes to execute the construction/installation of the Project;
- b) The Authority shall review and provide comments, if any, on the draft Construction/Installation Plan to the Concessionaire or notify the Concessionaire of its approval of the draft Construction/Installation Plan within 30 days from the date of receipt of the draft Construction/Installation Plan from the Concessionaire. The Authority may require the Concessionaire to amend or modify the draft Construction/Installation Plan if the Authority identifies any deficiencies or shortcomings in the draft Construction/Installation Plan.

If the Concessionaire receives any comments, suggestions, or instructions to modify the draft Construction/Installation Plan from the Authority, then the Concessionaire shall incorporate the suggestions made by the Authority and modify the draft Construction/Installation Plan to address any such comments, shortcomings or deficiencies identified by the Authority. Thereafter, the Concessionaire shall submit the revised Construction/Installation Plan to the Authority for its approval. The process set out in this Clause shall continue until the Construction/Installation Plan is approved by the Authority in accordance with this Clause.

- c) The Concessionaire shall construct the Facilities strictly in accordance with the approved Construction/Installation Plan. The Concessionaire shall not deviate from or make any subsequent modification or amendment to the approved Construction/Installation Plan without the prior approval of the Authority. The Concessionaire shall not commence construction/installation of any part of the Project prior to approval of the Construction/Installation Plan in accordance with this Clause.
- d) Notwithstanding any approval of the Construction/Installation Plan by the Authority, the Concessionaire shall, subject this Clause, be solely liable for completing the construction of the Facilities by the Scheduled Completion Date.

5.9.5 Subcontracting

- a) The Concessionaire may enter into Subcontracts to perform any part of its scope of work during the Construction/ Installation Period, with the prior written consent of the Authority. However, the Concessionaire has the prime responsibility under the contract obligations, warranty as specified in Bidding Documents and planning and overall management of all contracted activities

- b) Where the value of the sub contract is more than 20% (twenty percent) of the bid project cost the following shall apply:
- (i) The Concessionaire shall provide a copy of each proposed Subcontract, along with details of the relevant Subcontractor, to the Authority for its approval, which should set out the precise scope of work to be subcontracted to such Subcontractor and should be consistent with the terms of this Concession Agreement.
 - (ii) Within 15 (fifteen) days of receipt of a draft Subcontract under the aforementioned clause, the Authority shall notify the Concessionaire of its approval or rejection (along with reasons) of the Subcontractor.
 - (iii) The approval of any Subcontractor and the corresponding Subcontract by the Authority shall be subject to the following conditions:
 - (a) the Subcontractor appointed by the Concessionaire possesses the requisite skill, expertise and capability to perform the relevant obligations of the Concessionaire during the Construction/Installation Period;
 - (b) the Subcontract is on terms consistent with this Concession Agreement;
 - (c) the Subcontract contains provisions that provide, at the Authority's option, for the subcontract to be novated or assigned to the Authority or its nominee without any further consent or the approval from the Concessionaire or the Subcontractor or entitle the Authority or its nominee to step into such Subcontract, in substitution of the Concessionaire, if this Concession Agreement is terminated due to a Concessionaire Event of Default. However, the step-in rights of the Authority shall always be subject to the substitution rights of the Lenders under this Concession Agreement or the Substitution Agreement; and
 - (d) the Concessionaire shall be responsible for the supervision and monitoring of the performance of any work or services by the Subcontractor.
 - (iv) If the Authority does not notify its approval or rejection of any Subcontract to the Concessionaire within 15 (fifteen) days of the receipt of the draft Subcontract, then such Subcontract will be deemed to be approved by the Authority.
 - (v) Within 7 (seven) days of the execution of an amendment to any approved Subcontract, the Concessionaire shall submit a copy of such amendment to the Authority for its records.
 - (vi) If the Concessionaire proposes to novate an approved Subcontract and/or replace an approved Subcontractor, then such novation or replacement shall be with prior approval of the Authority and the process set out in this Clause shall apply in such case.
 - (vii) Notwithstanding the approval of any Subcontractor by the Authority, the Concessionaire shall be and remain liable under this Concession Agreement for all work and services subcontracted under this Concession Agreement and for all acts, omissions, or defaults of any Subcontractor. No default under any Subcontract shall excuse the Concessionaire from its obligations or liabilities under this Concession Agreement. All references in this Concession Agreement to any act, default, omission, breach, or negligence

of the Concessionaire shall be construed to include any such act, default, omission, breach or negligence of the Subcontractors.

- (viii) The Authority has the right to access of information and audit the sub - contractor files with regards to the Concession Agreement.

5.9.6 Sub contracting for communication software

Further to the provisions of Article 5.9.5, where the Concessionaire uses the services of a subcontractor for providing the Software services detailed in Annex 1 to Schedule H, the same shall in addition to the provisions of Article 5.9.5 wherever applicable and Article 12.3, be governed by Clause 2.2.4 (A3) of the RfP.

- a. Sub-contractor shall continue for a minimum 2 (two) years post COD, after which an agency with equivalent qualifications may be substituted with the approval of the Authority.
- b. There shall be an overlap of 6 months with the substitute contractor and evidence of successful takeover by substitute contractor shall be demonstrated by the Concessionaire.
- c. The maximum number of such substitutions during the concession period shall be limited to 2 (two).
- d. A breach of any of the conditions stipulated in this Article 5.9.6, shall be treated as a Concessionaire event of default and Authority shall have the right to terminate the Agreement.

5.9.7 Preparation of the CIP and O&M Plan describing in detail how the Concessionaire shall manage the Project Facilities in a cost effective and sustainable manner to meet the Key Performance Indicators. The CIP shall be prepared in the following manner:

- (a) No later than 120 (one hundred and twenty days) from the Effective Date, the Concessionaire shall provide to the Authority and the Independent Engineer the draft CIP and the draft O&M Plan as per the guidelines stated in Annexure 2 of Schedule B along with a detailed power point presentation to the Authority and the Independent Engineer. The Concessionaire while developing the draft CIP may suggest new technologies / ideas which will facilitate accurate reading of the smart water meters and the transfer of the information to the Authority's database in an efficient manner.
- (b) The Independent Engineer shall review each of the draft CIP and O&M Plan and provide to the Authority with a copy to the Concessionaire any comments and suggested amendments, if any, to the drafts as it considers appropriate within 7 (seven) days of receipt of the drafts from the Concessionaire.
- (c) Within 15 (fifteen) days of the date on which the Authority receives comments from the Independent Engineer on the draft CIP and the draft O&M Plan, the Authority shall review and, in consultation with the Independent Engineer, approve, if the same is in line with the details furnished along with the Bid and the deviations if any would result in improving the quality of services to be offered by the Concessionaire during the Operation Period or suggest revisions to the draft CIP and O&M Plan. In the event that the Authority fails to approve the draft CIP or suggest any revisions thereto in writing to the Concessionaire within the stipulated period, the draft CIP submitted by the Concessionaire shall be deemed to be approved. Provided that no such approval may be deemed, if, pursuant to the draft CIP additional works is required to be performed by the Concessionaire, which shall be taken up as per Article 5.9.7. In the event that the Authority fails to approve or provide comments on the draft O&M Plan within the stipulated period, the draft

O&M Plan shall be deemed to be approved.

- (d) If the Concessionaire is unable to deliver the draft CIP or O&M Plan within the time frame set out in Article 5.9.7, the Authority may, at its sole discretion provide additional time to the Concessionaire to complete these obligations, or may immediately terminate this Agreement and forfeit the Construction Period Performance Security. If the Concessionaire can reasonably demonstrate that the delay in submission is due to a failure on the part of the Authority or its representatives to provide the Concessionaire the information requested by the Concessionaire in a timely manner or due to an event of Force Majeure, then the Concessionaire will be granted such extension of time for delivery of the draft CIP and/ or O&M Plan as the Independent Engineer certifies as being reasonable.
- (e) If the Concessionaire fails to meet the time line set out in Article 5.9.7 (a) (as extended under Article 5.9.7 (d), if applicable), then:
 - (i) the Concessionaire will use its best endeavours to mitigate any delay in delivery of the CIP;
 - (ii) if such delay is for 45 (forty five) days or more, then the Authority, may terminate this Agreement immediately, except that the Concessionaire may be liable to Damages in accordance with Article 4.3.
- (f) In the event the Concessionaire agrees with the changes proposed by the Authority to the draft CIP under Article 5.9.7 (c), the Concessionaire shall resubmit the draft CIP within 14 (fourteen) business days of the receipt of the changes proposed by the Authority, and the Authority shall subject to due incorporation of its comments and suggestions, approve the CIP, within 14 (fourteen) business days of receipt of the revised draft CIP.
- (g) If the Concessionaire does not agree with the changes proposed by the Authority to the draft CIP under Article 5.9.7 (c), it shall meet with the Authority and the Independent Engineer to seek to resolve the areas of disagreement.
- (h) Once the Authority and the Concessionaire reach an agreement with regard to the draft CIP, the Authority and the Concessionaire shall sign off on the finalized version of the draft CIP which shall be the final CIP ("CIP") and the Concessionaire shall proceed to implement the CIP.
- (i) The CIP and agreed O&M Plan shall be updated by the Concessionaire once in every 5 (five) years during the Concession Period or at such other duration as may be mutually agreed between the Parties. Copy of the updated CIP and agreed O&M Plan shall be submitted to the Authority along with a copy to Independent Engineer, as the case may be during the Construction Period and the Operation Period respectively. The procedure for approval of CIP and O&M Plan as set out in Articles 5.9.7 (b) to 5.9.7 (h) shall apply mutatis mutandis for approval of the updated CIP and O&M Plan.

5.9.8 Preparation of a Communications Plan detailing the communication activities to be undertaken during the Study Period, and implementation of the Study Period activities.

ARTICLE 6 OBLIGATIONS OF THE AUTHORITY

6.1 Obligations of the Authority

- 6.1.1 The Authority shall, at its own cost and expense undertake, comply with and perform all its obligations set out in this Agreement or arising hereunder.
- 6.1.2 The Authority agrees to provide support to the Concessionaire and undertakes to observe, comply with and perform, subject to and in accordance with the provisions of this Agreement and Applicable Laws, the following
- A. upon written request from the Concessionaire, and subject to the Concessionaire complying with Applicable Laws, provide reasonable support and assistance to the Concessionaire in procuring Applicable Permits required from any Government Instrumentality for implementation and operation of the Project;
 - B. upon written request from the Concessionaire, provide reasonable assistance to the Concessionaire in obtaining access to all necessary infrastructure facilities and utilities, as may be required to perform the works during the Construction/Installation Period and the Operation Period, at rates and on terms no less favourable to the Concessionaire than those generally available to commercial customers receiving substantially equivalent services;
 - C. procure that the performance of the Project shall not be obstructed by any Government Instrumentality or persons claiming through or under it, except for reasons of Emergency, national security or law and order;
 - D. Subject to and in accordance with Applicable Laws, grant to the Concessionaire the authority to regulate use of the Project facilities;
 - E. Assist the Concessionaire in procuring police assistance for regulation of Users, removal of trespassers and security on or at the Project;
 - F. Not do or omit to do any act, deed or thing which may in any manner is violating of any of the provisions of this Agreement;
 - G. support, cooperate with and facilitate the Concessionaire in the operation and maintenance of the Project Facilities in accordance with the provisions of this Agreement;
 - H. upon written request from the Concessionaire and subject to the provisions of Article 5.4, provide reasonable assistance to the Concessionaire and any expatriate personnel of the Concessionaire or its Contractors to obtain applicable visas and work permits for discharging their respective obligations under this Agreement and the Project Agreements; and
 - I. subject to the Concessionaire complying with Applicable Laws, provide reasonable support and assistance to the Concessionaire in procuring approvals;
 - J. The Authority hereby covenants that, on and from the date hereof and until the Appointed Date:
 - (i) give prompt written notice to the Concessionaire of:
 - (a) the commencement of any dispute or proceeding between the Authority and/or any person which, if determined adversely to the Authority, as the case may be, could reasonably be expected to have a material adverse effect on the Authority's operations and/or financial condition or the performance by the Authority of its obligations hereunder,
 - (b) the occurrence of any event of default in connection with any agreement

of the Authority, or any event which, upon a lapse of time or the giving of notice or both, would become an event of default under any such agreement, and

- (c) the occurrence of any other event which has or could reasonably be expected to have a material adverse effect on the Authority's operations and/or financial condition, the performance by each Party of its obligations hereunder.

(vii) The Authority shall designate a senior officer as its project coordinator ("Project Coordinator") on the Appointed Date. The Project Coordinator shall be the point of contact for the Concessionaire. The Authority shall notify the Concessionaire of the identity and contact details for the Project Coordinator 15 (fifteen) days prior to the Appointed Date. The Authority will notify the Concessionaire in accordance with this Agreement of any change made to the identity or contact details for the Transition Coordinator.

6.2 Obligations relating to refinancing

Upon request made by the Concessionaire to this effect, the Authority shall, in conformity with any regulations or guidelines that may be notified by the Government or the Reserve Bank of India, as the case may be, permit and enable the Concessionaire to secure refinancing on such terms as may be agreed upon between the Concessionaire and the entity providing such refinancing; provided, however, that the refinancing hereunder shall always be subject to the prior consent of the Authority, which consent shall not be unreasonably withheld. The Authority shall endeavour to convey its decision on such request of the Concessionaire within 30 days of receipt of the proposal by the Authority.

ARTICLE 7 REPRESENTATION AND WARRANTIES

7.1 Representations and warranties of the Concessionaire.

The Concessionaire represents and warrants to the Authority that:

- a. It is duly organized and validly existing under the laws of India, and has full power and authority to execute and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;
- b. it has taken all necessary corporate and other actions under Applicable Laws to authorise the execution and delivery of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
- c. {the Selected Bidder/ Consortium Members and its/their} Associates have the financial standing and resources to fund the required Equity and to raise the debt necessary for undertaking and implementing the Project in accordance with this Agreement;
- d. this Agreement constitutes its legal, valid and binding obligation, enforceable against it in accordance with the terms hereof, and its obligations under this Agreement will be legally valid, binding and enforceable obligations against it in accordance with the terms hereof;
- e. it is subject to the laws of India, and hereby expressly and irrevocably waives any immunity in any jurisdiction in respect of this Agreement or matters arising hereunder including any obligation, liability or responsibility hereunder;
- f. The information furnished in the Bid and as updated on or before the date of this Agreement is true and accurate in all respects as on the date of this Agreement;
- g. the execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of the terms of its Memorandum and Articles of Association {or those of any member of the Consortium} or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- h. there are no actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform any of its obligations under this Agreement;
- i. it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or Government Instrumentality which may result in any material adverse effect on its ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement;
- j. it has complied with Applicable Laws in all material respects and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have a material adverse effect on its ability to perform its obligations under this Agreement;
- k. it shall at no time undertake or permit any Change in Ownership except in accordance with the provisions of Article 5.3
- l. {the selected bidder/ each Consortium Member} is duly organized and validly

- existing under the laws of the jurisdiction of its incorporation or registration, as the case may be, and has requested the Authority to enter into this Agreement with {itself/the Concessionaire} pursuant to the Letter of Award, and has agreed to and unconditionally accepted the terms and conditions set forth in this Agreement;
- m. all its rights and interests in the Project shall pass to and vest in the Authority on the Transfer Date free and clear of all liens, claims and Encumbrances, without any further act or deed on its part or that of the Authority, and that none of the Project facilities shall be acquired by it Subject to any agreement under which a security interest or other lien or Encumbrance is retained by any person, save and except as expressly provided in this Agreement;
 - n. no representation or warranty by it contained herein or in any other document furnished by it to the Authority or any Government Instrumentality in relation to Applicable Permits contains or will contain any untrue or misleading statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading;
 - o. no sums, in cash or kind, have been paid or will be paid, by it or on its behalf, to any person by way of fees, commission or otherwise for securing the Concession or entering into this Agreement or for influencing or attempting to influence any officer or employee of the Authority in connection therewith;
 - p. all information provided by the {selected bidder/ Consortium Members} in response to the Request for Proposals or otherwise, is to the best of its knowledge and belief, true and accurate in all material respects; and
 - q. All undertakings and obligations of the Concessionaire arising from the Request for Proposals or otherwise shall be binding on the Concessionaire as if they form part of this Agreement.

7.2 Representation and warranties of the Authority

The Authority represents and warrants to the Concessionaire that:

- a. it has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated herein and that it has taken all actions necessary to execute this Agreement, exercise its rights and perform its obligations, under this Agreement;
- b. It has taken all necessary actions under Applicable Laws to authorize the execution, delivery and performance of this Agreement;
- c. It has the financial standing and capacity to perform its obligations under this Agreement;
- d. this Agreement constitutes a legal, valid and binding obligation enforceable against it in accordance with the terms hereof;
- e. it has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Government Instrumentality which may result in any material adverse effect on the Authority's ability to perform its obligations under this Agreement;
- f. it has complied with Applicable Laws in all material respects;
- g. it has the right, power and authority to undertake implementation of the Project; and
- h. it shall procure good and valid right to the Service Area, and has power and authority to grant a license in respect thereto to the Concessionaire;

7.3 Disclosure

In the event that any occurrence or circumstance comes to the attention of either Party that renders any of its aforesaid representations or warranties untrue or incorrect, such Party shall immediately notify the other Party of the same. Such notification shall not have the effect of remedying any breach of the representation or warranty that has been found to be untrue or incorrect nor shall it adversely affect or waive any right, remedy or obligation of either Party under this Agreement.

ARTICLE 8 DISCLAIMER

8.1 Disclaimer

- 8.1.1 The Concessionaire acknowledges that prior to the execution of this Agreement, the Concessionaire has, after a complete and careful examination, made an independent evaluation of the Request for Proposals, Scope of the Project, Service Area, the BOQ, local conditions, and all information provided by the Authority or obtained, procured or gathered otherwise, and determine to its satisfaction the accuracy or otherwise thereof and the nature and extent of difficulties, risks and hazards as are likely to arise or may be faced by it in the course of performance of its obligations hereunder.. The Authority makes no representation whatsoever, express, implicit or otherwise, regarding the accuracy, adequacy, correctness, reliability and/or completeness of any assessment, assumptions, statement or information provided by it and the Concessionaire confirms that it shall have no claim whatsoever against the Authority in this regard
- 8.1.2 The Concessionaire acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth in Article 8.1.1 above and hereby acknowledges and agrees that the Authority shall not be liable for the same in any manner whatsoever to the Concessionaire, {the Consortium Members and their} Associates or any person claiming through or under any of them.
- 8.1.3 The Parties agree that any mistake or error in or relating to any of the matters set forth in Article 8.1.1 above shall not vitiate this Agreement, or render it voidable.
- 8.1.4 In the event that either Party becomes aware of any mistake or error relating to any of the matters set forth in Article 8.1.1 above, that Party shall immediately notify the other Party, specifying the mistake or error; provided, however, that a failure on part of the Authority to give any notice pursuant to this Article 8.1.4 shall not prejudice the disclaimer of the Authority contained in Article 8.1.1 and shall not in any manner shift to the Authority any risks assumed by the Concessionaire pursuant to this Agreement.
- 8.1.5 Except as otherwise provided in this Agreement, all risks relating to the Project shall be borne by the Concessionaire and the Authority shall not be liable in any manner for such risks or the consequences thereof.

ARTICLE 9 PERFORMANCE SECURITY

9.1 Performance Security

- 9.1.1 The Concessionaire shall, for the performance of its obligations hereunder, provide to the Authority no later than 21 (twenty one) days from the Effective date, an unconditional and irrevocable bank guarantee for an amount equal to 5% of the Bid Project Cost, in the form set forth in Schedule F1 (the “**Construction Period Performance Security**”). The Construction Period Performance Security shall periodically renewed and kept valid for a period of 30 (thirty) days after the expiry Defects Liability Period. Until such time the Performance Security is provided by the Concessionaire pursuant hereto and the same comes into effect, the Bid Security shall remain in force and effect, and upon such provision of the Performance Security pursuant hereto, the Authority shall release the Bid Security to the Concessionaire.
- 9.1.2 Notwithstanding anything to the contrary contained in this Agreement, in the event Performance Security is not provided by the Concessionaire within a period of 21 (twenty one) days from the Effective date, the Authority may encash the Bid Security and appropriate the proceeds thereof as Damages during the Construction period, and thereupon all rights, privileges, claims and entitlements of the Concessionaire under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased with the concurrence of the Concessionaire, and this Agreement shall be deemed to have been terminated by mutual agreement of the Parties.
- 9.1.3 The Concessionaire shall, for the performance of its obligations during the Operation Period, provide to the Authority, an irrevocable and unconditional guarantee from a Bank for a sum equivalent to Rs. 6,00,00,000/- (Rupees six crore only), in the form set forth in Schedule F2 (the “**Operation Period Performance Security**”). The Operation Period Performance Security shall be provided at least one month prior to the commencement of the Concession Year and shall be maintained through the Concession Year and shall remain valid for a period of 30 (thirty) days after the expiry of the said Concession Year.
- 9.1.4 The Performance Security shall secure the due performance of the Concessionaire's obligations during the Concession Period. The cost of procuring the Performance Security shall be borne solely by the Concessionaire.
- 9.1.5 If the Performance Security is not renewed by the expiry of the 11th month of the relevant year of the Concession Period, then the Authority shall be entitled to drawdown the total amount available under the Operation Period Performance Security, and retain such amount as cash security until such time that the Concessionaire submits an extension or replacement of the Operation Period Performance Security.
- 9.1.6 The Authority shall be entitled to utilize such retained amount in the same manner as it would utilise the Operation Period Performance Security.
- 9.1.7 Upon receipt of a renewed or replacement Operation Period Performance Security, the authority shall return the unutilized cash security amount for the Operation Period Performance Security to the Concessionaire. The interest earned on any retained amounts or cash security shall be the property of the Authority and the Authority shall not be required to account to the Concessionaire for any such interest.

9.2 Appropriation of Performance Security

Upon occurrence of a Concessionaire Default or failure to meet any Condition Precedent, the Authority shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to encash and appropriate from the Construction Period Performance Security or Operation Period Performance Security, as the case may be, the amounts due to it for and in respect of such Concessionaire Default or for failure to

meet any Condition Precedent.

Upon such encashment and appropriation from the Performance Security, the Concessionaire shall, within 15 (fifteen) days thereof, replenish, in case of partial appropriation, to the original level of the relevant Performance Security, and in case of appropriation of the entire Construction Period Performance Security or Operation Period Performance Security, provide a fresh relevant Performance Security, as the case may be, within 15 days thereof, failing which the Authority shall be entitled to terminate this Agreement in accordance with Article 31.

Provided that upon replenishment of the Construction period Performance Security or Operation period Performance Security or furnishing of a fresh relevant Performance Security, as the case may be, the Concessionaire shall be entitled to an additional Cure Period of 120 (one hundred and twenty) days for remedying the Concessionaire Default, save and except as provided in Article 4.5 of this Agreement, and in the event of the Concessionaire not curing its default within such Cure Period, the Authority shall be entitled to encash and appropriate such Performance Security as Damages, and to terminate this Agreement in accordance with Article 31.

9.3 References to Performance Security

References to Construction Period Performance Security or Operation Period Performance Security occurring in this Agreement for and in respect of any period prior to the delivery of the relevant Performance Security by the Concessionaire to the Authority, or in respect of any period subsequent to the expiry or release thereof, as the case may be, shall be construed solely for the purposes of calculating the amount of Damages payable by the Concessionaire.

9.4 Release of Performance Security

The Authority shall return the Construction Period Performance Security to the Concessionaire within 60 (sixty) days of the expiry of the Defects Liability Period under this Agreement. Notwithstanding the aforesaid, the Parties agree that the Authority shall not be obliged to release the Construction Period Performance Security until 30 (thirty) days after the expiry Defects Liability Period. The Operation Period Performance Security shall remain in force and effect till expiry of the Concession Period and shall be released within 30 (thirty) days therefrom.

ARTICLE 10 ACCESS TO SERVICE AREA

10.1 The Service Area

The Service Area of the Project shall comprise of the area where Project Facilities are to be constructed as per this Agreement (the "Service Area/Site") as detailed in Schedule A. The Authority shall facilitate access to the Service Area to the Concessionaire under and in accordance with this Agreement (the "**Service Area/Site**").

10.2 Access to the Service Area

- 10.2.1 The Authority hereby grants to the Concessionaire access to the Service Area for carrying out any surveys, investigations and tests that the Concessionaire may require during the Study Period, it being expressly agreed and understood that the Authority shall have no liability whatsoever in respect of survey, investigations and tests carried out or work undertaken by the Concessionaire on or about the Service Area pursuant hereto in the event of Termination or otherwise.
- 10.2.2 In consideration of the Project, this Agreement and the covenants and warranties on the part of the Concessionaire herein contained, the Authority, in accordance with the terms and conditions set forth herein, shall facilitate to the Concessionaire, commencing from the Appointed Date, the right to access the Service Area which is described, delineated and shown in Schedule-A hereto, on an "as is where is" basis, to develop, operate and maintain the project facilities and, for the purposes permitted under this Agreement, and for no other purpose whatsoever.
- 10.2.3 The access granted by this Agreement to the Concessionaire shall always be subject to existing rights of way and the Concessionaire shall perform its obligations during the Construction/Installation Period without disruption, except with prior notification to the Authority and the Independent Engineer appointed by the Authority.
- 10.2.4 It is expressly agreed that the access granted hereunder shall terminate automatically and forthwith, without the need for any action to be taken by the Authority to terminate the same upon the Termination of this Agreement for any reason whatsoever. For the avoidance of doubt, the Parties expressly agree that notwithstanding any temporary or permanent structures erected on the Service Area by the Concessionaire or its sub-licensees, the right of access in respect of the Service Area shall automatically terminate, without any further act of the Parties, upon Termination of this Agreement.

ARTICLE 11 DELETED

ARTICLE 12 CONSTRUCTION OF PROJECT FACILITIES

12.1 Obligations prior to commencement of construction

The Concessionaire shall, prior to commencement of Construction/Installation Works:

- a) submit to the Authority or its nominee, and the Independent Engineer its Basic Engineering design, installation methodology, quality assurance procedures as per the CIP, and the procurement, engineering and construction time schedule for completion of the Project in accordance with the Project Completion Schedule as set forth in Schedule-G;
- b) Appoint its representative duly authorized to deal with the Authority in respect of all matters under or arising out of or relating to this Agreement;
- c) undertake, do and perform all such acts, deeds and things as may be necessary or required before commencement of construction under and in accordance with the CIP, this Agreement, Applicable Laws and Applicable Permits; and
- d) Make its own arrangements procurement of materials needed for the Project under and in accordance with Applicable Laws and Applicable Permits.

12.2 Designs and Drawings

In respect of the Concessionaire's obligations relating to the Designs and Drawings of the Project Facilities as set forth in Schedule-H, the following shall apply:

1. The Concessionaire shall prepare and submit at its cost, charges and expenses, in conformity with the Technical Specifications, with reasonable promptness and in such sequence as is consistent with the Project Completion Schedule, 3 (three) copies each of all Designs and Drawings to the Independent Engineer for review.
2. By submitting the Designs and Drawings for review to the Independent Engineer, the Concessionaire shall be deemed to have represented that it has determined and verified that the design and engineering, including the field construction criteria related thereto, are in conformity with the Scope of the Project, CIP, Technical Specifications and Standards, Applicable Laws and Good Industry Practice.
3. Within 15 (fifteen) days of the receipt of the Designs and Drawings, the Independent Engineer shall review the same and convey its observations to the Concessionaire with particular reference to their conformity or otherwise with the Scope of the Project and the Specifications and Standards. The Concessionaire shall not be obliged to await the observations of the Independent Engineer on the Designs and Drawings submitted pursuant hereto beyond the said 15 (fifteen) days period and may begin or continue Construction/Installation Works at its own discretion and cost.
4. If the aforesaid observations of the Independent Engineer indicate that the Designs and the Drawings are not in conformity with the Scope of the Project or the Technical Specifications and Standards, the Concessionaire shall revise the Designs and Drawings as the case maybe and resubmit to the Independent Engineer for review. The Independent Engineer shall give its observations, if any, within 7 (seven) days of receipt of the revised Designs and Drawings.
5. No review and/or observation of the Independent Engineer and/or its failure to review and/or convey its observations on the Designs and Drawings shall relieve the Concessionaire of its obligations and liabilities under this Agreement in any manner nor shall the Independent Engineer or the Authority be liable for the same in any manner.

6. The Authority may, at its discretion, in addition to the review of the Designs and Drawings by the Independent Engineer, constitute an expert committee ("Expert Committee") for review and approval of the Designs and Drawings submitted by the Concessionaire. The Concessionaire agrees and undertakes to provide all the information necessary for the review and approval of the Designs and Drawings by the Expert Committee from time to time. No review and/or observation of the Expert Committee and/or its failure to review and/or convey its observations on the Designs and Drawings shall relieve the Concessionaire of its obligations and liabilities under this Agreement in any manner nor shall the Expert Committee or the Authority be liable for the same in any manner.
7. Within 90 (ninety) days of COD, the Concessionaire shall furnish to the Authority and the Independent Engineer a complete set of all Designs and as-built Drawings, in 2 (two) hard copies and in its editable digital format or in such other medium or manner as may be acceptable to the Authority, reflecting the Project as actually designed, engineered and constructed/installed.

12.3 Specification for Software and Communication

In respect of the Concessionaire's obligations relating to Software and communication as set forth in Annex 1 to Schedule H, the following shall apply:

1. The Concessionaire shall prepare a Business Requirement Specification (BRS) document which details the various business processes that are to be covered under the automation process. This will include among others, the process for reading the smart meters, the computation of the quantity of water consumed and updation of the customer and billing database and such other databases as required, with CMWSSB.
2. The Concessionaire shall submit a Software Requirement Specification (SRS) document detailing the functionality, performance, design, and other aspects of the software.
3. Within 30 days of receipt of the BRS and SRS documents, the Authority shall cause the same to be reviewed (either through its in-house experts or an external consultant) and provide its observations to the Concessionaire.
4. The Concessionaire shall update the BRS and SRS documents within 30 days of receiving the comments and observations
5. The software shall be developed on an Open Source platform and the Authority shall not be required to procure any License for operating the system. In the event any Licence is required to operate the system, the Concessionaire shall procure a perpetual Licence, at its cost, in the name of the Authority and provide the same to the Authority.
6. Within 90 (ninety) days of COD, the Concessionaire shall submit to the Authority the complete documentation of the Software including all the necessary manuals such as user manual, administrator manual and such other documents required for the effective operation of the system.
7. Within 90 (ninety) days of COD, the concessionaire shall deposit the Source Code of the software program with the Authority or with such other agency that the Authority may direct for the purpose of safekeeping the Source code.

12.4 Construction of Project Facilities

- 12.4.1 During the Construction/Installation Period, the Concessionaire shall undertake construction of the Project Facilities as specified in the CIP and Scope of the Project.

and the Concessionaire agrees and undertakes that the Project shall be completed in accordance with the Implementation Schedule provided with the CIP.

- 12.4.2 During the Construction Period, the Concessionaire shall implement the CIP on behalf of the Authority in accordance to Good Industry Practice and reasonable care shall be taken by the Concessionaire to minimize supply interruptions, traffic disruptions and ensure good and timely communications with Users in the Service Area. All the works and interventions proposed as part of the CIP shall be in conformity with the relevant industry standards and the Environmental Code of Practice.
- 12.4.3 The Concessionaire shall construct the Project in accordance with the Project Completion Schedule set forth in Schedule-G. In the event that the Concessionaire fails to achieve any Project Milestone within a period of 90 (ninety) days from the date set forth for such Project Milestone in Schedule-G, unless such failure has occurred due to Force Majeure or for reasons attributable to the Authority, it shall pay Damages to the Authority in a sum calculated at the rate of 0.1% (zero point one per cent) of the amount of Construction Period Performance Security for delay of each day until such Project Milestone is achieved; provided that if any or all Project Milestones or the Scheduled Completion Date are extended in accordance with the provisions of this Agreement, the dates set forth in Schedule-G shall be deemed to be modified accordingly and the provisions of this Agreement shall apply as if Schedule-G has been amended as above; provided further that in the event COD is achieved on or before the Scheduled Completion Date, the Damages, if any, paid under this Article 12.3.3 shall be refunded by the Authority to the Concessionaire, but without any interest thereon. For the avoidance of doubt, it is agreed that recovery of Damages under this Article 12.3.3 shall be without prejudice to the rights of the Authority under this Agreement, including the right of Termination thereof.
- 12.4.4 In the event that the Project is not completed and COD does not occur within 180 (one hundred and eighty) days from the Scheduled Completion Date, unless the delay is on account of reasons attributable to the Authority or due to Force Majeure, the Authority shall be entitled to terminate this Agreement.
- 12.4.5 In the event the Concessionaire is required to provide new connections during the Construction Period, that are not included in the CIP, the cost for the same shall be reimbursed by the Authority. Such reimbursement shall be at the same rates at which the Concessionaire is providing the Project Facilities and the same shall be certified by the Independent Engineer.

ARTICLE 13 MONITORING OF CONSTRUCTION

13.1 Monthly progress reports

During the Construction/Installation Period, the Concessionaire shall, no later than 7 (seven) days after the close of each month, furnish to the Authority and the Independent Engineer a monthly report on physical progress and financial progress of the Construction Works and shall promptly give such other relevant information as may be required by the Independent Engineer.

13.2 Inspection

During the Construction/Installation Period, the Independent Engineer shall inspect the Project at least once a month and make a report of such inspection (the “**Inspection Report**”) stating in reasonable detail the defects or deficiencies, if any, with particular reference to the Design and Drawings, CIP, Project Completion Schedule, Scope of the Project, Technical Specifications, and Standards. It shall send a copy of the Inspection Report to the Authority and the Concessionaire within 7 (seven) days of such inspection and upon receipt thereof, the Concessionaire shall rectify and remedy the defects or deficiencies, if any, stated in the Inspection Report. Such inspection or submission of Inspection Report by the Independent Engineer shall not relieve or absolve the Concessionaire of its obligations and liabilities hereunder in any manner whatsoever.

13.3 Tests

- 13.3.1 For determining that the Construction/Installation Works conform to the Specifications and Standards, the Independent Engineer shall require the Concessionaire to carry out or cause to be carried out tests, at such time and frequency and in such manner as may be specified by the Independent Engineer from time to time, in accordance with Good Industry Practice for quality assurance. The size of sample for such tests shall, to the extent possible, not exceed 10% (ten per cent) of the quantity and/or number of tests required by Good Industry Practice for the construction/installation works undertaken by the Authority through their contractors. The Concessionaire shall, with due diligence, carry out or cause to be carried out all the tests in accordance with the instructions of the Independent Engineer and furnish the results thereof to the Independent Engineer. One half of the costs incurred on such tests, and to the extent certified by the Independent Engineer as reasonable, shall be reimbursed by the Authority to the Concessionaire. Provided, however, that the Independent Engineer may, instead of carrying out the tests specified hereunder, at its option decide to witness, or participate in, any of the tests to be undertaken by the Concessionaire for its own quality assurance in accordance with Good Industry Practice, and in such an event, the Concessionaire shall cooperate with, and provide the necessary assistance to, the Independent Engineer for discharging its functions hereunder. For the avoidance of doubt, the costs to be incurred on any test which is undertaken for determining the rectification of any defect or deficiency in construction shall be borne solely by the Concessionaire.
- 13.3.2 In the event that results of any tests conducted under this Article 13.3 establish any defects or deficiencies in the Construction/Installation Works, the Concessionaire shall carry out remedial measures and furnish a report to the Independent Engineer in this behalf. The Independent Engineer shall require the Concessionaire to carry out or cause to be carried out tests to determine that such remedial measures have brought the Construction/Installation Works into compliance with the Specifications and Standards, and the procedure set forth in this Article 13.3 shall be repeated until such Construction/Installation Works conform to the Specifications and Standards. For the avoidance of doubt, it is agreed that tests pursuant to this Article 13.3 shall be

undertaken in addition to and independent of the tests that shall be carried out by the Concessionaire for its own quality assurance in accordance with Good Industry Practice. It is also agreed that a copy of the results of such tests shall be sent by the Concessionaire to the Independent Engineer forthwith.

13.4 Quality control system

- 13.4.1 The Concessionaire shall establish a quality control mechanism to ensure compliance with the provisions of this Agreement (the "Quality Assurance Plan" or "QAP").
- 13.4.2 The Concessionaire shall, within 30 (thirty) days of the Appointed Date, submit to the Independent Engineer its Quality Assurance Plan which shall include the following:
- a) organisation, duties and responsibilities, procedures, inspections and documentation;
 - b) quality control mechanism including sampling and testing of Materials, test frequencies, standards, acceptance criteria, testing facilities, reporting, recording and interpretation of test results, approvals, check list for site activities, and proforma for testing and calibration in accordance with the Technical Specifications, relevant Applicable Law and Good Industry Practice; and
 - c) internal quality audit system.

The Independent Engineer shall convey its comments to the Concessionaire within a period of 21 (twenty-one) days of receipt of the QAP stating the modifications, if any, required, and the Concessionaire shall incorporate those in the QAP to the extent required for conforming with the provisions of this Article 13.4.

- 13.4.3 The cost of testing of construction, materials and workmanship under this Article 13 shall be borne by the Concessionaire.

13.5 Methodology

The Concessionaire shall, at least 15 (fifteen) days prior to the commencement of the construction/installation, submit to the Independent Engineer for review the methodology proposed to be adopted for executing the works, giving details of equipment to be deployed and measures for ensuring safety. The Independent Engineer shall complete the review and convey its comments to the Concessionaire within a period of 10 (ten) days from the date of receipt of the proposed methodology from the Concessionaire.

13.6 Inspection and technical audit by the Authority

The Independent Engineer may inspect and review the progress and quality of the construction of the Project Facilities and issue appropriate directions to the Concessionaire for taking remedial action in the event the works are not in accordance with the provisions of this Agreement.

13.7 Inspection of construction records

The Authority shall have the right to inspect the records of the Concessionaire relating to the construction of the Project Facilities.

13.8 Samples

The Concessionaire shall submit the following samples of materials and relevant information to the Independent Engineer for pre-construction review:

- a) manufacturer's test reports and standard samples of manufactured materials; and
- b) samples of such other materials as the Independent Engineer may require.

13.9 Examination of work before covering up

- 13.9.1 In respect of the work which the Independent Engineer is entitled to examine, inspect, measure and/or test before it is covered up or put out of view or any part of the work is placed thereon, the Concessionaire shall give notice to the Authority and the Independent Engineer whenever any such work is ready and before it is covered up. The Authority and the Independent Engineer shall then either carry out the examination, inspection or testing without unreasonable delay, or promptly give notice to the Concessionaire that the Independent Engineer does not require to do so. Provided, however, that if any work is of a continuous nature where it is not possible or prudent to keep it uncovered or incomplete, the Concessionaire shall notify the schedule of carrying out such work to give sufficient opportunity, not being less than 3 (three) business days' notice, to the Authority and the Independent Engineer to conduct its inspection, measurement or test while the work is continuing. Provided further that in the event the Concessionaire receives no response from the Authority or the Independent Engineer within a period of 3 (three) business days from the date on which the Concessionaire's notice hereunder is delivered to the Independent Engineer, the Concessionaire shall be entitled to assume that the Independent Engineer would not undertake the said inspection.

13.10 Rejection

- 13.10.1 If, as a result of an examination, inspection, measurement or testing, any plant, materials, design or workmanship is found to be defective or otherwise not in accordance with the provisions of this Agreement, the Independent Engineer shall reject the plant, materials, design or workmanship by giving notice to the Concessionaire, with reasons. The Concessionaire shall then promptly make good the Defect and ensure that the rejected item complies with the requirements of this Agreement.
- 13.10.2 If the Independent Engineer requires the plant, materials, design or workmanship to be retested, the tests shall be repeated under the same terms and conditions, as applicable in each case. If the rejection and retesting cause the Authority to incur any additional costs, such cost shall be recoverable by the Authority from the Concessionaire; and may be deducted by the Authority from any monies due to be paid to the Concessionaire.

13.11 Remedial work

- 13.11.1 Notwithstanding any previous test or certification, the Independent Engineer may instruct the Concessionaire to:
- a) remove from the Service Area and replace any plant or materials which are not in accordance with the provisions of this Agreement;
 - b) remove and re-execute any work which is not in accordance with the provisions of this Agreement and the Technical Specification; and
 - c) execute any work which is urgently required for the safety of the Project Facilities, whether because of an accident, unforeseeable event or otherwise; provided that in case of any work required on account of a Force Majeure Event, the provisions of Article 28.7 shall apply.
- 13.11.2 If the Concessionaire fails to comply with the instructions issued by the Independent Engineer under Article 13.11.1, within the time specified in the Independent Engineer's notice or as mutually agreed, the Independent Engineer may advise the Authority to have the work executed by another agency. The cost so incurred by the Authority for undertaking such work shall, without prejudice to the rights of the Authority to recover Damages in accordance with the provisions of this Agreement, be recoverable from the Concessionaire and may be deducted by the Authority from any monies due to be paid to the Concessionaire.

13.12 Delays during construction

Without prejudice to the provisions of Article 12.3.4, if the Concessionaire does not achieve any of the Project Milestones or the Independent Engineer shall have reasonably determined that the rate of progress of Construction Works is such that the Project is not likely to be completed by the Scheduled Completion Date, it shall notify the Concessionaire to this effect, and the Concessionaire shall, within 15 (fifteen) days of such notice, by a communication inform the Independent Engineer in reasonable detail about the steps it proposes to take to expedite progress and the period within which it shall achieve COD.

13.13 Suspension of unsafe Construction Works

- 13.13.1 Upon recommendation of the Independent Engineer to this effect, the Authority may by notice require the Concessionaire to suspend forthwith the whole or any part of the Construction/Installation Works if, in the reasonable opinion of the Authority, such work threatens the safety of the Existing Assets, persons related to the Project, Users and general public. Provided, however, that in case of an emergency, the Authority may suo moto issue the notice referred to hereinabove.
- 13.13.2 The Concessionaire shall, pursuant to the notice under Article 13.13.1, suspend the Construction/Installation Works or any part thereof for such time and in such manner as may be specified by the Authority and thereupon carry out remedial measures to secure the safety of suspended works. The Concessionaire may by notice require the Independent Engineer to inspect such remedial measures forthwith and make a report to the Authority recommending whether or not the suspension hereunder may be revoked. Upon receiving the recommendations of the Independent Engineer, the Authority shall either revoke such suspension or instruct the Concessionaire to carry out such other and further remedial measures as may be necessary in the reasonable opinion of the Authority, and the procedure set forth in this Article 13.13 shall be repeated until the suspension hereunder is revoked.
- 13.13.3 Subject to the provisions of Article 28, all reasonable costs incurred for maintaining and protecting the Construction Works or part thereof during the period of suspension (the **"Preservation Costs"**) shall be borne by the Concessionaire; provided that if the suspension has occurred as a result of any breach of this Agreement by the Authority, the Preservation Costs shall be borne by the Authority.
- 13.13.4 If suspension of Construction/Installation Works is for reasons not attributable to the Concessionaire, the Independent Engineer shall determine any extension of the dates set forth in the Project Completion Schedule to which the Concessionaire is reasonably entitled, and shall notify the Authority accordingly whereupon the Authority shall extend such Project Completion Schedule dates in accordance with the recommendations of the Independent Engineer.

13.14 Video recording During Construction Period

During the Construction Period, the Concessionaire shall provide to the Authority for every calendar quarter, a video recording, which will be compiled into a 3 (three)-hour digital video disc or any substitute thereof, covering the status and progress of Construction Works in that quarter. The first such video recording shall be provided to the Authority within 7 (seven) days of the Appointed Date and thereafter, no later than 15 (fifteen) days after the close of each quarter.

13.15 IT Dashboard for Construction Progress

During the Construction Period, the Concessionaire shall develop an internet based software interface comprising a project progress dashboard that can integrate seamlessly with the IT infrastructure of the Authority. The Concessionaire shall update construction progress in to the dashboard on a daily basis, enabling the Authority (and its officers) and the Independent Engineer to undertake virtual review of Project Construction progress in a periodic manner.

ARTICLE 14 COMPLETION CERTIFICATE

14.1 Tests on Completion

- 14.1.1 No later than 30 (thirty) days prior to the likely completion of the Project, the Concessionaire shall notify the Independent Engineer of its intent to subject the part of the Project that has been completed to Tests. The date and time of each of the Tests shall be determined by the Independent Engineer in consultation with the Concessionaire, and notified to the Authority who may designate its representative to witness the Tests. The Concessionaire shall provide such assistance as the Independent Engineer may reasonably require for conducting the Tests. In the event of the Concessionaire and the Independent Engineer failing to mutually agree on the dates for conducting the Tests, the Concessionaire shall fix the dates by not less than 10 (ten) days' notice to the Independent Engineer, and in the event the Independent Engineer delays the Tests hereunder, the Authority shall impose exemplary penalties on the Independent Engineer and shall ensure that Tests are completed in time either by the Independent Engineer or any substitute thereof.
- 14.1.2 All Tests shall be conducted in accordance with Schedule-I at the cost and expense of the Concessionaire. The Independent Engineer shall observe, monitor and review the results of the Tests to determine compliance of the Project with Specifications and Standards and if it is reasonably anticipated or determined by the Independent Engineer during the course of any Test that the performance of the Project or any part thereof does not meet the Specifications and Standards, it shall have the right to suspend or delay such Test and require the Concessionaire to remedy and rectify the defects or deficiencies. Upon completion of each Test, the Independent Engineer shall provide to the Concessionaire and the Authority copies of all Test data including detailed Test results. For the avoidance of doubt, it is expressly agreed that the Independent Engineer may require the Concessionaire to carry out or cause to be carried out additional Tests, in accordance with Good Industry Practice, for determining the compliance of the Project with Specifications and Standards.
- 14.1.3 The Authority shall make arrangements to conduct necessary Tests of the hardware, software and communication equipment either through its in-house personnel or external experts in accordance with Schedule I. The cost of such tests shall be borne by the Concessionaire and the results shall be approved by the Authority.

14.2 Provisional Certificate

- 14.2.1 Independent Engineer may, at the request of the Concessionaire, issue a provisional certificate of completion substantially in the form set forth in Schedule-J (the "**Provisional Certificate**") if the Tests are successful and the Project can be safely and reliably placed in Trial operation though certain works or things forming part thereof are outstanding and not yet complete. In such an event, the Provisional Certificate shall have appended thereto a list of outstanding items signed jointly by the Independent Engineer and the Concessionaire (the "**Punch List**"); provided that the Independent Engineer shall not withhold the Provisional Certificate for reason of any work remaining incomplete if the delay in completion thereof is attributable to the Authority; provided further that the Punch List shall also include the cost of completion for each of the outstanding items. Provided however, no such Trial Operations may be permitted unless the hardware, Software and Communication infrastructure are installed, tested and ready to operate.

14.3 Trial Operations

- 14.3.1 The Concessionaire shall, within 7 (seven) days of the issuance of the Provisional Certificate, commence the Trial Operations of the Project in accordance with the Trial Operation Procedures to determine whether the Project meets the KPIs on a continuous basis and is fit and ready to be placed into commercial operations in accordance with this Agreement.
- 14.3.2 If the Concessionaire fails to commence or continue the Trial Operations, due to reasons attributable to the Authority, then the Authority shall extend the time period for the Trial Operations. In such case, the Scheduled COD shall be extended on a day-for-day basis, provided that the Scheduled COD shall not be extended beyond the date which is 6 (six) months from the date of the Provisional Certificate.
- 14.3.3 For the Trial Operations to be successfully concluded, the Concessionaire shall demonstrate that the Project consistently and continuously meets the KPIs during all the 30/31 (thirty/thirty one) days of a month. If the Facilities fails to achieve the KPIs consistently and continuously during the 30/31(thirty/thirty one) days of the month, the Trial Operations period (as extended in accordance with the provisions of this Agreement), shall be extended by another 30/31 (thirty/thirty one) days. If the Facilities fails to achieve the KPIs in the second opportunity, the Authority may extend the Trial Operations for a further period of 30/31 days. It is clarified that no Performance related Damages are payable by the Concessionaire during the Trial Operations period for a failure to achieve the KPIs.
- 14.3.4 If the Concessionaire is able to consistently achieve the KPIs for 30/31 (thirty/thirty one) consecutive days (as supported by daily reports), the Concessionaire shall issue a notice to the Independent Engineer to undertake a final inspection of the Facilities. The Independent Engineer shall undertake such final inspection within 5 (five) Business Days of a notice being issued by the Concessionaire.
- 14.3.5 All items in the Punch List shall be completed by the Concessionaire within 60 (sixty) days of the date of issue of the Provisional Certificate and for any delay thereafter, other than for reasons solely attributable to the Authority or due to Force Majeure, the Authority shall be entitled to recover Damages from the Concessionaire to be calculated and paid for each day of delay until all items are completed, at the lower of (a) 0.1% (zero point one per cent) of the Construction period Performance Security, and (b) 0.2% (zero point two per cent) of the cost of completing such items as estimated by the Independent Engineer. Subject to payment of such Damages, the Concessionaire shall be entitled to a further period not exceeding 60 (sixty) days for completion of the Punch List items. For the avoidance of doubt, it is agreed that if completion of any item is delayed for reasons solely attributable to the Authority or due to Force Majeure, the completion date thereof shall be determined by the Independent Engineer in accordance with Good Industry Practice, and such completion date shall be deemed to be the date of issue of the Provisional Certificate for the purposes of Damages, if any, payable for such item under this Article 14.3.5.
- 14.3.6 Upon completion of all Punch List items and successful completion of Trial Operations, the Independent Engineer shall issue the Completion Certificate. Failure of the Concessionaire to complete all the Punch List items within the time set forth in Article 14.3.5 for any reason, other than conditions constituting Force Majeure or for reasons solely attributable to the Authority, shall entitle the Authority to terminate this Agreement.

14.4 Completion Certificate

- 14.4.1 If, upon final inspection, the Independent Engineer is satisfied that the Project meets the KPIs and the Technical Specifications, and are capable of safe and reliable operations, shall issue the Completion Certificate in the form set forth in Schedule-J (the "**Completion Certificate**") for the Facilities, within 7 (seven) days of undertaking a final inspection of the Facilities.
- 14.4.2 If the Trial Operations are not successfully completed, in the time schedule mentioned under the provisions of Article 14.3.3, then the Authority shall have the right to treat such failure as a Concessionaire Event of Default and the consequences set out at Article 31 shall follow.
- 14.4.3 The Concessionaire will not be entitled to any O&M Payments or any other payment for conducting the Trial Operations, which shall be carried out solely at the cost and risk of the Concessionaire.

Upon completion of Construction/Installation Works and the Independent Engineer determining the Tests to be successful, it shall within 7 (seven) days issue to the Concessionaire and the Authority a certificate substantially in the form set forth in Schedule-J.

14.5 Withholding of Provisional or Completion Certificate

- 14.5.1 If the Independent Engineer determines that the Project or any part thereof does not conform to the provisions of this Agreement and cannot be safely and reliably placed in commercial operation, it shall forthwith make a report in this behalf and send copies thereof to the Authority and the Concessionaire. Upon receipt of such a report from the Independent Engineer and after conducting its own inspection, if the Authority is of the opinion that the Project is not fit and safe for commercial service, it shall, within 7 (seven) days of receiving the aforesaid report, notify the Concessionaire of the defects and deficiencies in the Project and direct the Independent Engineer to withhold issuance of the Provisional Certificate or Completion Certificate, as the case may be. Upon receipt of such notice, the Concessionaire shall remedy and rectify such defects or deficiencies and thereupon Tests shall be undertaken in accordance with this Article 14. Such procedure shall be repeated as necessary until the defects or deficiencies are rectified.
- 14.5.2 Notwithstanding anything to the contrary contained in Article 14.5.1, the Authority may, at any time after receiving a report from the Independent Engineer under that Article, direct the Independent Engineer to issue a Provisional Certificate under Article 14.3, and such direction shall be complied forthwith.

14.6 Rescheduling of Tests on Completion

If the Independent Engineer certifies to the Authority and the Concessionaire that it is unable to issue the Completion Certificate or Provisional Certificate, as the case may be, because of events or circumstances on account of which the Tests could not be held or had to be suspended, the Concessionaire shall be entitled to re-schedule the Tests and hold the same as soon as reasonably practicable.

ARTICLE 15 ENTRY INTO COMMERCIAL SERVICE

15.1 Commercial Operation Date (COD)

- 15.1.1 The construction of Project Facilities or anypart thereof shall be deemed to be complete when the Completion Certificate or the Provisional Certificate, as the case may be, is issued under the provisions of Article 14, and accordingly the commercial operation date of the Project shall be the date on which such Completion Certificate or the Provisional Certificate is issued (the “**COD**”). The Project shall enter into commercial service on COD whereupon the Concessionaire shall be entitled to demand and collect Annuity Payments and O&M payments in accordance with the provisions of this Agreement.

15.2 Damages for delay

Subject to the provisions of Article 12.3, if COD does not occur prior to the 91st (ninety first) day after the Scheduled Completion Date, unless the delay is on account of reasons attributable to the Authority or due to Force Majeure, the Concessionaire shall pay Damages to the Authority in a sum calculated at the rate of 0.2% (zero point two per cent) of the amount of Construction Period Performance Security for delay of each day until COD is achieved. Upon failure of the Concessionaire to pay the said Damages, the same shall be paid along with interest of SBI MCLR plus 3% and shall be deducted from the 1st (first) Annuity Payment. In case the Damages and the interest thereof are more than the 1st Annuity Payment then the balance Damages along with interest thereof shall be recovered from any further amount due and payable to the Concessionaire excluding O&M Payments but including interest to be paid on reducing balance of the Completion Cost remaining to be paid along with the 1st Annuity or from further Annuity Payments.

ARTICLE 16 CHANGE OF SCOPE

16.1 Change of Scope

- 16.1.1 The Authority may, notwithstanding anything to the contrary contained in this Agreement, require the provision of additional works and services which are not included in the Scope of the Project as contemplated by this Agreement (the “Change of Scope”). Any such Change of Scope shall be made in accordance with the provisions of this Article 16 and the costs thereof shall be expended by the Concessionaire and reimbursed to it by the Authority in accordance with Article 16.3.
- 16.1.2 If the Concessionaire determines at any time that a Change of Scope is necessary to ensure that the Project is in compliance with the then prevailing Technical Specifications and Standards, Applicable Laws, Applicable Permits, and KPIs, or for providing safer and improved services to the users, it shall by notice in writing require the Authority to consider such Change of Scope. The Authority shall, within 15 (fifteen) days of receipt of such notice, either accept such Change of Scope with modifications, if any, and initiate proceedings therefor in accordance with this Article 16 or inform the Concessionaire in writing of its reasons for not accepting such Change of Scope, which decision of the Authority shall be final and binding.
- 16.1.3 Any works or services which are provided under and in accordance with this Article 16 shall form part of the Project and the provisions of this Agreement shall apply mutatis mutandis to such works or services.

16.2 Procedure for Change of Scope

- 16.2.1 In the event of the Authority determining that a Change of Scope is necessary, it shall issue to the Concessionaire a notice specifying in reasonable detail the works and services contemplated thereunder (the “**Change of Scope Notice**”).
- 16.2.2 Upon receipt of a Change of Scope Notice, the Concessionaire shall, with due diligence, provide to the Authority such information as is necessary, together with preliminary Documentation in support of:
- a. the impact, if any, which the Change of Scope is likely to have on the Project Completion Schedule if the works or services are required to be carried out during the Construction Period, and
 - b. the options for implementing the proposed Change of Scope and the effect, if any, each such option would have on the costs and time thereof, including a detailed breakdown by work classifications specifying the material and labour costs calculated in accordance with the schedule of rates applicable to the works assigned by the Authority to its contractors, along with the proposed premium/discount on such rates; provided that the cost incurred by the Concessionaire in providing such information shall be reimbursed by the Authority to the extent such cost is certified by the Independent Engineer as reasonable.
- 16.2.3 Upon receipt of information set forth in Article 16.2.2, if the Authority decides to proceed with the Change of Scope, it shall convey its preferred option to the Concessionaire, and the Parties shall, with assistance of the Independent Engineer, thereupon make good faith efforts to agree upon the time and costs for implementation thereof. Upon reaching an agreement, the Authority shall issue an order (the “**Change of Scope Order**”) requiring the Concessionaire to proceed with the performance thereof. In the event that the Parties are unable to agree, the Authority may, by issuing a Change of Scope Order, require the Concessionaire to proceed with the performance thereof pending resolution of the Dispute, or carry out the works in accordance with Article 16.5.

- 16.2.4 The provisions of this Agreement, insofar as they relate to Construction Works and Tests, shall apply *mutatis mutandis* to the works undertaken by the Concessionaire under this Article 16.

16.3 Payment for Change of Scope

Within 7 (seven) days of issuing a Change of Scope Order, the Authority shall make an advance payment to the Concessionaire in a sum equal to 20% (twenty per cent) of the cost of Change of Scope as agreed hereunder, and in the event of a Dispute, 20% (twenty per cent) of the cost assessed by the Independent Engineer. The Concessionaire shall, after commencement of work, present to the Authority bills for payment in respect of the works in progress or completed works, as the case may be, supported by such Documentation as is reasonably sufficient for the Authority to determine the accuracy thereof. Within 30 (thirty) days of receipt of such bills, the Authority shall disburse to the Concessionaire such amounts as are certified by the Independent Engineer as reasonable and after making a proportionate deduction for the advance payment made hereunder, and in the event of any Dispute, final adjustments thereto shall be made under and in accordance with the Dispute Resolution Procedure. The Authority shall make a proportionate deduction of 10% of the cost identified in the Change of Scope Order, towards retention money which shall be released after a period of 1 (one) year from the completion of works or COD, whichever is later,

16.4 Restrictions on certain works

- 16.4.1 Notwithstanding anything to the contrary contained in this Article 16, but subject to the provisions of Article 16.4.2, the Authority shall not require the Concessionaire to undertake any works or services if such works or services are likely to delay completion of the Project by the Scheduled Completion Date; provided that in the event that the Authority considers such works or services to be essential, it may issue a Change of Scope Order, subject to the condition that the works forming part of or affected by such Change of Scope Order shall not be reckoned for purposes of determining completion of the Project and issuing the Provisional Certificate.
- 16.4.2 Notwithstanding anything to the contrary contained in this Article 16, the Concessionaire shall be entitled to nullify any Change of Scope Order if it causes the cumulative costs relating to all the Change of Scope Orders to exceed 10% (ten per cent) of the Bid Project Cost in any continuous period of 3 (three) years immediately preceding the date of such Change of Scope Order or if such cumulative costs exceed 25% (twenty five per cent) of the Bid Project Cost at any time during the Concession Period.

16.5 Power of the Authority to undertake works

- 16.5.1 Notwithstanding anything to the contrary contained in Articles 16.1.1, 16.2 and 16.3, the Authority may, after giving notice to the Concessionaire and considering its reply thereto, award any works or services, contemplated under Article 16.1.1, to any person on the basis of open competitive bidding; provided that the Concessionaire shall have the option of matching the first ranked bid in terms of the selection criteria, subject to payment of 2% (two per cent) of the bid amount to the Authority³ and thereupon securing the award of such works or services. For the avoidance of doubt, it is agreed that the Concessionaire shall be entitled to exercise such option only if it has participated in the bidding process and its bid does not exceed the first ranked bid by more than 10% (ten per cent) thereof. It is also agreed that the Concessionaire shall provide access, assistance and cooperation to the person who undertakes the works or services

³ The Authority shall transfer 75% (seventy five percent) of the amount so received to the first ranked bidder whose bid has been matched by the Concessionaire.

hereunder, but shall not be responsible for rectification of any Defects and/ or maintenance of works carried out by other agencies. For the avoidance of doubt, the Authority acknowledges and agrees that it shall not undertake any works or services under this Article 16.5.1 if such works or services cause a Material Adverse Effect on the Concessionaire.

- 16.5.2 The works undertaken in accordance with this Article 16.5 shall conform to the Specifications and Standards, and shall be carried out in a manner that minimizes disruption in operation of the Project. The provisions of this Agreement, insofar as they relate to Construction Works (including Performance Security) and Tests, shall apply mutatis mutandis to the works carried out under this Article 16.5.

16.6 Reduction in Scope of the Project

- 16.6.1 In the event of the Concessionaire failing to complete any Construction Works on account of Force Majeure or for reasons attributable to the Authority, the Authority shall follow the following process for calculation of total cost of reduced scope:
- a. On direction by the Authority, the Independent Engineer to assess the cost of the reduced Scope of the Project, as per the schedule of rates applicable on the Bid Due Date.
 - b. The cost of the reduced Scope shall be multiplied by the 1.05 to arrive at the estimated cost of reduced Scope.

On or before a Payment Milestone immediately succeeding the date of finalization of such reduction in the Scope of Work, the Bid Project Cost shall be reduced by the Total Cost of Reduced Scope and all payments made or to be made to the Concessionaire shall be suitably adjusted and recoveries, if any, shall be made from the payment to be released on that Payment Milestone immediately succeeding the date of finalization of Reduction in Scope.

For the avoidance of doubt, it is agreed that upon the reduction of the Scope of the Project and revision of Bid Project Cost, all references to Bid Project Cost would mean the revised Bid Project Cost and all the payments would be calculated as per the revised Bid Project Cost.

- 16.6.2 For determining the obligations of the Concessionaire under this Article 16.6, the provisions of Articles 16.1, 16.2 and 16.4 shall apply mutatis mutandis, and upon issue of Change of Scope Order by the Authority hereunder, the Concessionaire shall pay forthwith the sum specified therein.

16.7 Effect of Change of Scope on the O&M Costs

- 16.7.1 Pursuant to the provisions of this Article 16, if the Change of Scope leads to a reduction or increase in the Bid Project Cost, the O&M Payments as provided in Article 23.6 shall be reduced or increased in proportion to the reduction or increase of the Bid Project Cost.

ARTICLE 17 OPERATION AND MAINTENANCE

17.1 Maintenance during Operation Period

17.1.1 During the Operation Period, the Concessionaire shall operate and maintain the Project Facilities in accordance with this Agreement in compliance with the provisions of this Agreement, Applicable Laws and Applicable Permits, and conform to Technical Specifications and Good Industry Practice.

17.1.2 In addition to the above stated responsibilities the Concessionaire shall perform the following obligations during the Operation Period:

- a) The Concessionaire shall operate and maintain the Project in a manner that:
 - (i) is in compliance with the Technical Specifications, Applicable Laws, Applicable Permits and Good Industry Practice;
 - (ii) results in the Project achieving the KPIs;
 - (iii) is safe and reliable, subject to normal wear and tear of the Project;
 - (iv) is in compliance with the technology license agreement(s) executed by the Concessionaire for the technology, processes, know-how and systems used or incorporated into the Project;
 - (v) maintains the safety and security of personnel, material and property at the Service Area, in accordance with the Applicable Laws and Applicable Permits; and
 - (vi) ensures that all waste materials and hazardous substances are stored and/or disposed in accordance with, Applicable Laws and Applicable Permit
- b) The Concessionaire shall provide all necessary assistance to the Independent Engineer and the Authority in undertaking inspection and monitoring of the operation and maintenance of the Project.
- c) The Concessionaire shall consider and act upon the comments/suggestions made by the Independent Engineer and the Authority during any meetings of the Concessionaire with its Subcontractors.
- d) The Concessionaire shall provide the Authority and the Independent Engineer with reasonable access to the Service Area during office hours to monitor and inspect the Project.
- e) The Concessionaire shall arrange for all equipment, machinery, tools, and other resources required to undertake the O&M of the Project and shall take all reasonable measures to ensure that the transportation of any of the Concessionaire's or the Subcontractors' personnel or equipment, to or from the Site, does not interfere with local traffic in the vicinity of the Site.
- f) The Concessionaire shall develop and implement a safety and surveillance programme for the Project.
- g) The Concessionaire shall ensure that none of its employees, consultants, service

providers, suppliers, or Subcontractors shall engage in any corrupt, fraudulent, collusive, coercive, or obstructive practice.

- h) Concessionaire shall upload all complaints/information received from the customer to the Authority's portal for redressal.
- i) Concessionaire shall ensure compliance to the guidelines issued by the Authority including Metering Policy 2022 (hereinafter referred to as the "**Metering Policy**") published by the Authority as annexed at Schedule E and as amended by the Authority from time to time. Any deviation from the Metering Policy shall be allowed only with the prior written approval of the Authority and the decision of the Authority shall be final and binding.
- j) Ensure that the data pertaining to the Project either made available by Authority or collected by the Concessionaire shall be kept as confidential and shall not be disclosed/ shared/ used without the permission in writing of the Authority
- k) Undertake Communications and outreach to the Users in the Service Area as provided in Article 17.1.6.
- l) Submit monthly reports on the operation & maintenance activities.

17.1.3 During the Operation Period the Concessionaire shall be fully responsible for all costs associated with minor maintenance activities of the Project Facilities. The Concessionaire's proposals for major maintenance will be included in the annual update of the CIP. This shall include the periodic maintenance of Smart Water Meters and replacement of defective meters.

17.1.4 In the Operation Period the Concessionaire shall be responsible for Reading of meters every month and integration of the billing data with the Authority's software for generating bills automatically. Billing Cycle is 26th of the previous month to the 25th of current month and readings shall be integrated with the Authority's software on or before 28th of the same month unless agreed otherwise with the Authority. The concessionaire shall also serve the demand notice (prepared by the Authority) to the consumers, in digital form and where required in physical form as well. The concessionaire shall maintain the Opening and closing readings and consumption details on a daily basis.

17.1.5 Updating and Implementation of the CIP

- a) The Concessionaire shall update the CIP and the O&M Plan once in every 5 (five) years to capture improved data on asset condition and performance, experience from operation of the Project Facilities, actual progress in implementing the CIP and from any other information that will improve the quality of the CIP and the O&M Plan.
- b) The Concessionaire shall at its cost carry out during the Operation Period all preventive/routine/minor maintenance activities.
- c) All expansions of water supply network / pumping stations / treatment plants etc., not covered under the CIP the Concessionaire shall initiate a Change in Scope request which shall be approved as per Article 16.

17.1.6 Communications and Outreach

- a) The Concessionaire shall, in consultation with the Authority, notify the communities and User in the Services well in advance regarding the plans and time lines

installation of smart meters, including the procedures that will be followed and actions that will need to be taken by the consumers/ households, billing related issues, type of supported / guidance available from the Concessionaire.

- b) The Concessionaire shall cooperate and collaborate with the various mechanisms instituted by the Authority for facilitating outreach to the Users in the Service Area.
- c) The Concessionaire shall, in consultation with the Authority, provide clear information to households on connection policy for existing connection holders, new connections, regularization of illegal connection, collection of arrears, and settlement of disputes.
- d) The Concessionaire shall provide advance warning to Users of planned maintenance, if any, that will affect such Users.
- e) The Concessionaire shall conduct regular camps for resolving any disputes in the billing as well as camps for collection of dues.

17.1.7 Performance Standards during the Operation Period

- a) During the Operation Period, the Concessionaire shall meet the Key Performance Indicators set out in Schedule C.
- b) the Independent Engineer shall monitor achievement of Key Performance Indicators set out in Schedule C.

17.2 General obligations of the Concessionaire

17.2.1 Notwithstanding its specific obligations during the Operation Period of this Agreement, the Concessionaire shall have the following general obligations as they may be applicable during the Operation Period:

- a) to operate the Project Facilities, and install Smart Water Meters in accordance with this Agreement, and carry out its obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and Good Industry Practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods;
- b) to carry out day-to-day management of the Project Facilities within the Service Area;
- c) to be responsible for maintaining all Applicable Permits to operate the Project Facilities throughout the Operation Period;
- d) to ensure that all materials and workmanship used in the operation and maintenance of the Project Facilities shall be in accordance with relevant standards of Bureau of Indian Standards and in the absence of which to the relevant standards of International Standards Organisation;
- e) to maintain all records and data in up to date format on the various information systems;
- f) to permit the Independent Engineer to conduct quarterly and annual audits to regularly review the performance of the Concessionaire under the Agreement from Appointed Date till the end of the Concession Period, and shall fully cooperate with the Independent Engineer in the conduct of audit and review exercises and checks as may be required under this Agreement and shall immediately provide all requested information to the Independent Engineer;
- g) to permit the Independent Engineer, from the commencement of the Operation

Period, to review the data, analysis, and design computations which support the Concessionaire's proposals in the CIP, and shall fully cooperate with the Independent Engineer in the conduct of any such review;

- h) to update on a periodic basis the GIS system and all relevant maps and drawings of the Service Area at a scale of 1:2000 and list of every connection and property where the smart water meter has been installed by the Concessionaire;
- i) to update on a periodic basis the User data on any additions to the property, addition or reduction in number of residents, usage of water for intended use etc;
- j) not to engage, and ensure that its employees do not engage, either directly or indirectly, in any business or professional activities in India which would conflict with the provisions under this Agreement;
- k) To set-up website dedicated to the project which shall provide information regarding plan maintenance, approved quarterly performance reports, tariff etc. it should also have a link to online registration of complaints.
- l) to update the Standard Operating Procedures periodically to reflect latest practices;

17.3 Interruptions in water supply during the the Construction/Installation Period

Notwithstanding anything to the contrary contained in any provision of this Agreement, but subject to the Applicable Laws:

- a) the Concessionaire shall be entitled to request the Authority to make interruptions in the distribution of water supply for the installation of Smart Water Meters and other associated works
- b) The Concessionaire shall sufficiently in advance notify the Authority / the Independent Engineer of any interruptions of water supply in the Service Area to the extent reasonably practicable.

17.4 Deleted

17.5 Excuse from performance of obligations

The Concessionaire shall not be considered in breach of its obligations under this Agreement if any part of the Project Facilities is not available to Users on account of any of the following for the duration of:

- a) an event of Force Majeure;
- b) compliance with a request from the Authority or the directions of any Government Instrumentality, the effect of which is to close all or any part of the Project; or

Provided, that any such non-availability and particulars thereof shall be notified by the Concessionaire to the Authority and the Independent Engineer without any delay;

17.6 Standard Operating Procedures

- 17.6.1 The Concessionaire shall prepare a set of Standard Operating Procedures (SOPs) for the management and operation of the Project Facilities. Such Standard Operating Procedures shall be developed for effective and efficient service delivery which shall include but not be limited to, the following:

- a) Emergency Response Plan (ERP);
- b) User Management and Communications Plan;

- c) Health and safety plan;
- d) New Connections policy for all types of connections including services to the urban poor and treatment of illegal connections;
- e) Use manual and administration manual for hardware, software and communication infrastructure

17.7 User Service Centres

The Concessionaire shall set up of a customer service centre (“CSC”) to facilitate receiving and resolving User requests, complaints, and grievances in the areas of new connections, service deficiencies, resolution of billing disputes, inappropriate actions by staff, etc. The Authority shall provide the necessary space for setting up the CSC at one of its premises. While doing so the Concessionaire shall take into consideration the existing User Service Centres and propose an optimal solution. The CSCs shall function between 8 AM to 8 PM during business days including Saturdays and between 8 AM to 1 PM during public holidays including Sundays. The CSC shall have reasonable space and furniture for the Customers to wait, interact and represent their requirements. During the other off peak times of 8 PM to 8 AM, the Concessionaire shall have a facility to receive User complaints and grievances through telephone, fax, text message, email and any other reasonable electronic means. The CSC shall be equipped with sufficient human resources with proficiency in local language, hardware and software to facilitate continuous record of User requests, monitoring the resolution, and reporting completion of necessary actions and tasks.

1. ensure that the Computer terminals and dashboard screen to be provided to display the consumer complaints indicating the resolution timings with a minimum of 2 telephone lines
2. ensure that all complaints both on line and off line shall be registered through a software which is automated, numbered and passed on to Authority’s Area engineer
3. ensure the redressal of complaints within the timeline as indicated by Authority
4. shall provide at its cost the facilitation counters for issue of application forms for new water connections, change of name, address, size of connection, customer details etc.

17.8 Connections to Users

17.8.1 The Concessionaire shall prepare a detailed programme based on the connection policy of the Authority for undertaking sanction and installation of connections to new Users and get the same approved by the Authority.

17.8.2 The Concessionaire may, subject to the Connection Policy and necessary approvals of the Authority, provide installation of the following optional improvements by the User which shall be paid for by the Users:

- a) service pipe after the customer meter connected to a faucet (tap) at a convenient point; and
- b) a ball-cock valve on an existing ground storage tank after the meter for prevention of overflow or back flow.

- 17.8.3 In the case of Bulk Water Supply with connections of 25mm diameter or higher, such as apartments, housing societies, private layouts, institutions and industries within the Service Area, the Concessionaire shall propose installation of a suitably sized, accurate consumption smart meter.
- 17.8.4 The Concessionaire, based on the findings during the Study Period, and in accordance with the Connection Policy, shall lay out a plan for identification of illegal or unauthorized connections and necessary obligations of the Authority to permit regularization of such illegal connections. In the case of a property with an illegal connection where the property owner accepts the option to legitimise the connection, to facilitate regularization of connection; and if the property owner does not opt to legalise the connection, shall intimate the Authority for disconnection of such illegal connections. The Authority shall be responsible for the disconnection of such illegal connection.
- 17.8.5 The Concessionaire shall develop procedures consistent with the Connection Policy for:
- a) (i) sanctioning new service connections; (ii) change of ownership for existing connections; (iii) division of existing connections consequent to division of property, (iv) disconnections in case of defaulting User; and (v) reconnections and (vi) dealing with the un-authorized or illegal connections;
 - b) (i) smart meter reading procedures and arrangements, (ii) meter reader control (iii) efficient and accurate meter reading practices (iii) respond to reports of malfunctioning meters from Users; (iv) testing and calibrating meters as required (v) replacing old, malfunctioning or low accuracy meters (vi) procedures for replacement of meters after their end of life; the Concessionaire shall prepare a plan to set up a water meter testing bench for testing and calibrating of smart water meters.

17.9 Maintenance Manual

- 17.9.1 No later than 90 (ninety) days prior to the COD, the Concessionaire shall, in consultation with the Independent Engineer, evolve a repair and maintenance manual (the “**Maintenance Manual**”) for the regular and preventive maintenance of the Project Facilities in conformity with the Technical Specifications, Maintenance Requirements, Safety Requirements and Good Industry Practice, and shall provide 3 (three) copies thereof to the Authority and 2 (two) copies to the Independent Engineer. The Maintenance Manual shall be revised and updated once every 3 (three) years and the provisions of this Article shall apply, mutatis mutandis, to such revision.
- 17.9.2 Without prejudice to the provision of Article 17.9.1, the Maintenance Manual shall, in particular, include provisions for maintenance of the Project Facilities and shall provide for life cycle maintenance, routine maintenance and reactive maintenance which may be reasonably necessary for maintenance and repair of the Project Facilities, including replacement thereof, such that their overall condition conforms to Good Industry Practice.

17.10 Damages for breach of maintenance obligations

- 17.10.1 In the event that the Concessionaire fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the specified time limit or is unable to perform any of the obligations stated in this Article 17 or meet the Key Performance Indicators, it shall be deemed to be in breach of this Agreement. The Authority shall be entitled to recover Damages at the rate stated in Schedule C for the respective Key Performance Indicators which the Concessionaire has been unable to

achieve. Recovery of such Damages shall be without prejudice to the rights of the Authority under this Agreement, including the right of Termination thereof.

- 17.10.2 The Damages set forth in Article 17.15.1 may be assessed and specified forthwith by the Independent Engineer; provided that the Authority may, in its discretion, demand a lesser sum as Damages, if in its opinion, the breach has been cured promptly and the Concessionaire is otherwise in compliance with its obligations hereunder. The Concessionaire shall pay such Damages forthwith and in the event that it contests such Damages, the Dispute Resolution Procedure shall apply.

17.11 Deleted

17.12 Maintenance Program

- 17.12.1 On or before COD and no later than 45 (forty five) days prior to the beginning of each Accounting Year during the Operation Period, as the case may be, the Concessionaire shall provide to the Authority and the Independent Engineer, its proposed annual program of preventive, urgent and other scheduled maintenance (the “**Maintenance Program**”) to comply with the Maintenance Requirements, Maintenance Manual and EHS Requirements. Such Maintenance Program shall include:
- a. preventive maintenance schedule;
 - b. arrangements and procedures for carrying out urgent repairs;
 - c. Criteria to be adopted for deciding maintenance needs;
 - d. Intervals and procedures for carrying out inspection of all elements of the Project;
 - e. Intervals at which the Concessionaire shall carry out periodic maintenance;
 - f. Arrangements and procedures for carrying out safety related measures; and
 - g. Intervals for major maintenance works and the scope thereof.
- 17.12.2 Within 15 (fifteen) days of receipt of the Maintenance Program, the Independent Engineer shall review the same and convey its comments to the Concessionaire with particular reference to its conformity with the Maintenance Requirements, Maintenance Manual, and EHS Requirements.
- 17.12.3 The Concessionaire may modify the Maintenance Program as may be reasonable in the circumstances, and the procedure specified in Articles 17.9.1 and 17.9.2 shall apply mutatis mutandis to such modifications.

17.13 Safety, breakdowns and accidents

- 17.13.1 The Concessionaire shall ensure safe conditions for the Users, all related persons and general public, and in the event of unsafe conditions, it shall follow the relevant operating procedures in accordance with the provisions of this Agreement, Specifications and Standards, Applicable Laws, Applicable Permits and Good Industry Practice.

17.14 Deleted

17.15 Damages for breach of maintenance obligations

- 17.15.1 In the event that the Concessionaire fails to repair or rectify any defect or deficiency within 7 (seven) days of identification of the said defect or deficiency by the Independent Engineer, it shall be deemed to be in breach of this Agreement and the Authority shall be entitled to recover Damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% (two per cent) of the Performance Security, and (b) 0.1% (zero point one per cent) of the cost of such repair or rectification as estimated

by the Independent Engineer. Recovery of such Damages shall be without prejudice to the rights of the Authority under this Agreement, including the right of Termination thereof.

17.15.2 The Damages set forth in Article 17.16.1 may be assessed and specified forthwith by the Independent Engineer; provided that the Authority may, in its discretion, demand a smaller sum as Damages, if in its opinion, the breach has been cured promptly and the Concessionaire is otherwise in compliance with its obligations hereunder. The Concessionaire shall pay such Damages forthwith and in the event that it contests such Damages, the Dispute Resolution Procedure shall apply.

17.15.3 For the avoidance of doubt, the Damages payable hereunder by the Concessionaire shall be in addition to the Damages, penalty or deductions in O&M Payment, if any, due and payable under the provisions of Article 20 and Schedule C.

17.16 Authority's Right to take Remedial Measures

17.16.1 If after the COD, the Concessionaire ceases to operate the Project for a period of 48 consecutive hours other than in accordance with the Maintenance Program, without the prior written consent of the Authority, the Authority shall be entitled to step-in and undertake O&M of the Project until the Concessionaire demonstrates to the satisfaction of the Authority that it can and will resume normal operation and maintenance of the Project. The exercise of the Authority's rights under this Article shall be at the cost, risk and expense of the Concessionaire. The Concessionaire shall not be entitled to receive any O&M Payments for the duration that the Authority steps-in to operate and maintain the Project.

17.16.2 In the event the Concessionaire does not maintain and/or repair the Project or any part thereof in conformity with the Maintenance Requirements, the Maintenance Manual, and the Maintenance Program, as the case may be, and fails to commence remedial works within 15 (fifteen) days of receipt of the O&M Inspection Report or a notice in this behalf from the Authority or the Independent Engineer, as the case may be, the Authority shall, without prejudice to its rights under this Agreement including Termination thereof, be entitled to undertake such remedial measures at the risk and cost of the Concessionaire, and to recover its cost from the Concessionaire.

17.16.3 The Authority shall have the right, and the Concessionaire hereby expressly grants to the Authority the right, to recover the costs specified in Articles 17.17.1 & 17.17.2 directly from the Escrow Account (or deduct from O&M Payments payable to the Concessionaire) as if such costs were O&M Expenses, and for that purpose, the Concessionaire hereby agrees to give irrevocable instructions to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the Authority under this Article 17.18.3 and debit the same to O&M Expenses.

17.16.4 In addition to the recovery of costs specified in Article 17.18.3, the Authority shall have the right, and the Concessionaire hereby expressly grants to the Authority the right, to recover the Damages to be estimated as 20% of the costs specified in Articles 17.17.1 & 17.17.2 directly from the Escrow Account (or deduct from O&M Payments payable to the Concessionaire) as if such Damages were O&M Expenses, and for that purpose, the Concessionaire hereby agrees to give irrevocable instructions to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the Authority under this Article 17.17.4 and debit the same to O&M Expenses. For the avoidance of doubt, the right of the Authority under this Article 17.17.4 shall be without prejudice to its rights and remedies provided under Article 17.16.

17.17 Overriding powers of the Authority

- 17.17.1 If in the reasonable opinion of the Authority, the Concessionaire is in material breach of its obligations under this Agreement and, in particular, the Maintenance Requirements, and such breach is causing or likely to cause material hardship or danger to the Users, the Authority may, without prejudice to any of its rights under this Agreement including Termination thereof, by notice require the Concessionaire to take reasonable measures immediately for rectifying or removing such hardship or danger, as the case may be.
- 17.17.2 In the event that the Concessionaire, upon notice under Article 17.17.1, fails to rectify or remove any hardship or danger within a reasonable period, the Authority may exercise overriding powers under this Article 17.17.2 and take over the performance of any or all the obligations of the Concessionaire to the extent deemed necessary by it for rectifying or removing such hardship or danger; provided that the exercise of such overriding powers by the Authority shall be of no greater scope and of no longer duration than is reasonably required hereunder; provided further that any costs and expenses incurred by the Authority in discharge of its obligations hereunder shall be deemed to be O&M Expenses, and the Authority shall be entitled to recover them from the Concessionaire in accordance with the provisions of Article 17.16 along with the Damages specified therein.
- 17.17.3 In the event of a national emergency, civil commotion or any other act specified in Article 34.3, the Authority may take over the performance of any or all the obligations of the Concessionaire to the extent deemed necessary by it or as directed by the Government, and exercise such control over the Project or give such directions to the Concessionaire as may be deemed necessary; provided that the exercise of such overriding powers by the Authority shall be of no greater scope and of no longer duration than is reasonably required in the circumstances which caused the exercise such overriding powers by the Authority. For the avoidance of doubt, it is agreed that the consequences of such action shall be dealt in accordance with the provisions of Article 28. It is also agreed that the Concessionaire shall comply with such instructions as the Authority may issue in pursuance of the provisions of this Article 17.17, and shall provide assistance and cooperation to the Authority, on a best effort basis, for performance of its obligations hereunder.

17.18 Restoration of loss or damage to the Project

Save and except as otherwise expressly provided in this Agreement, in the event that the Project or any part thereof suffers any loss or damage during the Concession Period from any cause whatsoever, the Concessionaire shall, at its cost and expense, rectify and remedy such loss or damage forthwith so that the Project conforms to the provisions of this Agreement.

17.19 Modifications to the Project

The Concessionaire shall not carry out any material modifications to the Project, save and except where such modifications are necessary for the Project to operate in conformity with the Specifications and Standards, Maintenance Requirements, Good Industry Practice and Applicable Laws; provided that the Concessionaire shall not carry out undertake any such modifications to the Project without prior written approval of the Authority; provided also that the Concessionaire shall notify the Authority and the Independent Engineer of the proposed modifications along with particulars thereof at least 15 (fifteen) days before commencing work on such modifications and shall reasonably consider any suggestions that the Independent Engineer may make within 15 (fifteen) days of receiving the Concessionaire's proposal. For the avoidance of doubt, all modifications made hereunder shall comply with the EHS Requirements ,

Specifications and Standards, Applicable Laws, Good Industry Practice and the provisions of this Agreement.

17.20 Excuse from performance of obligations

The Concessionaire shall not be considered in breach of its obligations under this Agreement if any part of the Project is not Available on account of any of the following for the duration thereof:

- i. an event of Force Majeure;
- ii. measures taken to ensure the safe use of the Project except when unsafe conditions occurred because of failure of the Concessionaire to perform its obligations under this Agreement; or
- iii. compliance with a request from the Authority or the directions of any Government Instrumentality, the effect of which is to close all or any part of the Project:

Provided, that any such non-availability and particulars thereof shall be notified by the Concessionaire to the Authority and the Independent Engineer without any delay:

Provided further that the Concessionaire shall continue to operate all unaffected parts of the Project, provided they can be operated safely.

17.21 Barriers and diversions

The Authority shall procure that during the Operation Period, no barriers are erected or placed by any Government Instrumentality on the Project except for reasons of Emergency or national security.

17.22 Advertising on the Site

The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the Site except with prior written approval of the Authority.

17.23 Traffic regulation by the Concessionaire

The Concessionaire shall regulate traffic on the Project in accordance with Applicable Laws, and subject to the supervision and control of a competent authority empowered in this behalf under Applicable Laws.

17.24 Unauthorized Use of Project facilities

During the Operation Period, the Concessionaire shall be responsible for the following:

- (a) preventing, with the assistance of concerned law enforcement agencies, any unauthorised use of the Project; and
- (b) preventing, with the assistance of the concerned law enforcement agencies, any encroachments on, or unauthorised entry to the Project and / or the Project facilities;

ARTICLE 18 ENVIRONMENT, HEALTH, SAFETY

18.1 Safety Requirements

- 18.1.1 The concessionaire shall submit a Environment, Health and Safety management Plan within 90 (ninety) days from the effective Date. The plan shall provide the details of the key risks and provide the mitigation measures and emergency response measures.
- 18.1.2 The Concessionaire shall comply with the provisions of this Agreement, Applicable Laws and Applicable Permits and conform to Good Industry Practice for securing the safe operation of the Project Facilities. In particular, the Concessionaire shall comply with the safety requirements set forth in Schedule R (the "Safety Requirements")
- 18.1.3 The Independent Engineer shall carry out safety audit of the Project in accordance with the Safety Requirements, and shall take all other actions necessary for securing compliance with the Safety Requirements.

ARTICLE 19 MONITORING OF OPERATION AND MAINTENANCE

19.1 Inspection and Measurement of Key Performance Indicators

The Independent Engineer shall inspect the Project Facilities at least once a month. It shall make a report of such inspection (the “**O&M Inspection Report**”) stating in reasonable detail the defects or deficiencies, if any, with particular reference to the Maintenance Requirements, Maintenance Manual, the Maintenance Program, the O&M plan and Safety Requirements, and send a copy thereof to the Authority and the Concessionaire within 7 (seven) days of such inspection.

For determining that the Project conforms to the Maintenance Requirements, the Independent Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests specified by it in accordance with Good Industry Practice. The Concessionaire shall, with due diligence, carry out or cause to be carried out all such tests in accordance with the instructions of the Independent Engineer and furnish the results of such tests forthwith to the Independent Engineer. One half of the costs incurred on such tests, and to the extent certified by the Independent Engineer as reasonable, shall be reimbursed by the Authority to the Concessionaire.

19.2 Remedial measures

- 19.2.1 The Concessionaire shall repair or rectify the defects or deficiencies, if any, set forth in the O&M Inspection Report or in the test results referred to in Article 19.1 and 19.2 and furnish a report in respect thereof to the Independent Engineer and the Authority within 15 (fifteen) days of receiving the O&M Inspection Report or the test results, as the case may be; provided that where the remedying of such defects or deficiencies is likely to take more than 15 (fifteen) days, the Concessionaire shall submit progress reports of the repair works once every week until such works are completed in conformity with this Agreement.
- 19.2.2 The Independent Engineer shall require the Concessionaire to carry out or cause to be carried out tests, at its own cost, to determine that such remedial measures have brought the Project into compliance with the Maintenance Requirements and the procedure set forth in this Article 19.2 shall be repeated until the Project conforms to the Maintenance Requirements. In the event that remedial measures are not completed by the Concessionaire in conformity with the provisions of this Agreement, the Authority shall be entitled to recover Damages from the Concessionaire under and in accordance with the provisions of Article 17.16.

19.3 Reports of unusual occurrence

The Concessionaire shall, prior to the close of each day, send to the Authority and the Independent Engineer, by facsimile or e-mail, a report stating accidents and unusual occurrences on the Project relating to the safety and security of the Users and the Project. A weekly and monthly summary of such reports shall also be sent within 3 (three) days of the closing of each week and month, as the case may be. For the purposes of this Article 19.3, accidents and unusual occurrences on the Project shall include:

- a. Death or injury to any person;
- b. Damaged or dislodged fixed equipment;
- c. Any damage or obstruction on the Project, which hampers the quality of the services being provided by the Concessionaire;

- d. Disablement of any equipment during operation;
- e. Communication failure affecting the operation of the Project;
- f. Smoke or fire;
- g. Such other relevant information as may be required by the Authority or the Independent Engineer.

ARTICLE 20 KEY PERFORMANCE INDICATORS

20.1 Fulfillment of KPIs

- 20.1.1 The Concessionaire acknowledges, agrees and undertakes that it shall comply with the Key Performance Indicators (“**KPIs**”) specified in Schedule C. The KPIs shall serve as measurable targets to assess and monitor the effectiveness of the Concessionaire's efforts in installing and maintaining Smart Water Meters in the Service Area.
- 20.1.2 The Concessionaire shall make reasonable and diligent efforts to achieve and fulfill the specified KPIs within the agreed-upon timeframes including, but not limited to, implementing appropriate strategies, conducting regular monitoring, and taking necessary actions to address any identified gaps or issues affecting the Project.

20.2 Penalty for shortfall in performance

- 20.2.1 The Concessionaire shall ensure and procure compliance of the Key Performance Indicators specified in this Article 20 and for any shortfall in average performance during a quarter, it shall pay penalty to the Authority within 30 (thirty) days of the quarter in which the shortfall occurred subject to a maximum of 30% of quarterly O&M Payment. The penalty/damages due and payable under this Article 20.2 shall be determined in accordance with Schedule C; provided, however, that the Authority may waive the Damages, in part or full, if it is satisfied that the Concessionaire has been carrying out its obligations diligently and efficiently and that the shortfall to be waived was on account of reasons beyond the control of the Concessionaire.
- 20.2.2 The Authority shall have the right, and the Concessionaire hereby expressly grants to the Authority the right, to recover the penalty/ damages specified in Article 20.2.1 directly from the Escrow Account (or deduct from O&M Payments payable to the Concessionaire) as if such costs were O&M Expenses, and for that purpose, the Concessionaire hereby agrees to give irrevocable instructions to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the Authority under this Article 20.2.2 and debit the same to O&M Expenses. Alternatively, the Authority may also claim aforesaid damages by appropriating and encashing the Performance Security submitted by the Concessionaire in terms of Article 9 hereof.

20.3 Termination of Non-fulfillment of KPIs

In the event, the Concessionaire consistently fails to meet the agreed-upon KPIs and the cumulative penalty/ Damages collected in accordance with Article 20.2 exceed 20% of the quarterly O&M Payments continuously for 3 (three) quarters, or the cumulative penalty/ Damages collected in accordance with Article 20.2 exceed 20% of the quarterly O&M Payments for 5 (five) quarters in a 2 (two) year period, then such failure shall be treated as a Concessionaire Event of Default and the consequences set out at Article 31 shall follow.

ARTICLE 21 INDEPENDENT ENGINEER

21.1 Appointment of Independent Engineer

The Authority shall appoint a consulting engineering firm, with experience in water resources, water supply and wastewater management sector, substantially in accordance with the selection criteria set forth in Schedule-L, to be the independent consultant under this Agreement (the “**Independent Engineer**”). The appointment shall be made no later than 60 (sixty) days from the date of this Agreement and shall be for a period of Construction Period plus six (6) months). On expiry or termination of the aforesaid appointment, the Authority shall appoint an Independent Engineer for a further term of 3 (three) years in accordance with the provisions of Schedule-L, and such procedure shall be repeated after expiry of each appointment.

21.2 Duties and functions

- 21.2.1 The Independent Engineer shall discharge its duties and functions substantially in accordance with the terms of reference set forth in Schedule-M.
- 21.2.2 The Independent Engineer shall submit regular periodic reports (at least once every month) to the Authority in respect of its duties and functions set forth in Schedule-M.
- 21.2.3 A true copy of all communications sent by the Authority to the Independent Engineer and by the Independent Engineer to the Authority shall be sent forthwith by the Independent Engineer to the Concessionaire.
- 21.2.4 A true copy of all communications sent by the Independent Engineer to the Concessionaire and by the Concessionaire to the Independent Engineer shall be sent forthwith by the Independent Engineer to the Authority.

21.3 Remuneration

The remuneration, cost and expenses of the Independent Engineer shall be paid by the Authority and subject to the limits set forth in Schedule-L, one-half of such remuneration, cost and expenses shall be reimbursed by the Concessionaire to the Authority within 15 (fifteen) days of receiving a statement of expenditure from the Authority. The Authority shall also have the option of adjusting the remuneration of the Independent Engineer from the payments due to the Concessionaire under this Agreement.

21.4 Termination of appointment

- 21.4.1 The Authority, subject to Article 21.4.2, may, terminate the appointment of the Independent Engineer at any time, but only after appointment of another Independent Engineer in accordance with Article 21.1.
- 21.4.2 If the Concessionaire has reason to believe that the Independent Engineer is not discharging its duties and functions in a fair, efficient and diligent manner, it may make a written representation to the Authority and seek termination of the appointment of the Independent Engineer. Upon receipt of such representation, the Authority shall hold a tripartite meeting with the Concessionaire and Independent Engineer for an amicable resolution of the Dispute, and if any difference or disagreement between the Authority and the Concessionaire remains unresolved, the Dispute shall be settled in accordance with the Dispute Resolution Procedure. In the event that the appointment of the Independent Engineer is terminated hereunder, the Authority shall appoint forthwith another Independent Engineer in accordance with Article 21.1.

21.5 Authorized signatories

The Authority shall require the Independent Engineer to designate and notify to the Authority and the Concessionaire up to 2 (two) persons employed in its firm to sign for and on behalf of the Independent Engineer, and any communication or document required to be signed by the Independent Engineer shall be valid and effective only if signed by any of the designated persons; provided that the Independent Engineer may, by notice in writing, substitute any of the designated persons by any of its employees.

21.6 Dispute resolution

If either Party disputes any advice, instruction, decision, direction or award of the Independent Engineer, or, as the case may be, the assertion or failure to assert jurisdiction, the Dispute shall be resolved in accordance with the Dispute Resolution Procedure.

21.7 Interim arrangement

In the event that the Authority does not appoint an Independent Engineer, or the Independent Engineer so appointed has relinquished its functions or defaulted in discharge thereof, the Authority may, in the interim, designate and authorize any person to discharge the functions of the Independent Engineer in accordance with the provisions of this Agreement, save and except that such person shall not exercise any functions relating to review, comment, approval or inspection as specified in this Agreement for and in respect of the Independent Engineer, and such functions shall be discharged as and when an Independent Engineer is appointed in accordance with the provisions of this Agreement. Provided, however, that nothing contained in this Article 21.7 shall in any manner restrict the rights of the Authority to enforce compliance of the provisions of this Agreement.

ARTICLE 22 FINANCIAL CLOSE

22.1 Financial Close

- 22.1.1 The Concessionaire may at its discretion avail project financing for the Project. In the event the Concessionaire decides to avail financing for the Project it hereby agrees and undertakes that it shall achieve Financial Close within 150 (one hundred and fifty) days from the Effective Date. In the event of delay in achieving the Financial Close, the Concessionaire shall be entitled to a further period not exceeding 120 (one hundred twenty) days, subject to payment of Damages to the Authority in a sum calculated at the rate of 0.05% (zero point zero five per cent) of the Construction Period Performance Security for each day of delay, provided that the Damages specified herein shall be payable every week in advance and the period beyond the said 150 (one hundred and fifty) days shall be granted only to the extent of Damages so paid. In the event of delay in achieving the Financial Close beyond 270 (two hundred and seventy) days from the date of this Agreement, the Concessionaire shall be entitled to a further period not exceeding 95 (ninety five) days, subject to payment of Damages to the Authority in a sum calculated at the rate of 0.1% (zero point one per cent) of the Performance Security for each day of delay, provided that the Damages specified herein shall be payable every week in advance and the period beyond the said 270 (two hundred and seventy) days shall be granted only to the extent of Damages so paid; provided further that no Damages shall be payable if such delay in Financial Close has occurred due to Force Majeure. For the avoidance of doubt, the Damages payable hereunder by the Concessionaire shall be in addition to the Damages, if any, due and payable under the provisions of Article 4.3.
- 22.1.2 The Concessionaire shall, upon occurrence of Financial Close, notify the Authority forthwith, and shall have provided to the Authority, at least 2 (two) days prior to the Financial Close, 3 (three) true copies of the Financial Package and the Financial Model, duly attested by a Director of the Concessionaire, along with 3 (three) soft copies of the Financial Model in MS Excel version or any substitute thereof, which is acceptable to the Senior Lenders.

22.2 Termination due to failure to achieve Financial Close

- 22.2.1 Notwithstanding anything to the contrary contained in this Agreement, but subject to Article 28.6.1, in the event that Financial Close does not occur, for any reason whatsoever, within the period set forth in Article 22.1.1 or the extended period provided thereunder, all rights, privileges, claims and entitlements of the Concessionaire under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased with the concurrence of the Concessionaire, and the Concession Agreement shall be deemed to have been terminated by mutual agreement of the Parties.
- 22.2.2 Upon Termination under Article 22.2.1, the Authority shall be entitled to encash the Bid Security and appropriate the proceeds thereof as Damages; provided, however, that if Financial Close has not occurred due to Force Majeure, it shall, upon Termination, release the Bid Security or Construction Period Performance Security, as the case may be. For the avoidance of doubt, it is expressly agreed that if the Bid Security shall have been substituted by the Construction Period Performance Security, the Authority shall be entitled to encash there from an amount equal to the Bid Security.

ARTICLE 23 PAYMENT OF BID PROJECT COST

23.1 Bid Project Cost

The Parties expressly agree that the cost of Construction/Installation of the Project, as on the Bid Date, which is due and payable by the Authority to the Concessionaire, shall be deemed to be Rs.....(Rupees.....) (The “**Bid Project Cost**”). The Parties further agree that the Bid Project Cost specified hereinabove for payment to the Concessionaire shall be inclusive of the cost of construction/installation, interest during construction, working capital, physical contingencies and all other costs, expenses and charges for and in respect of construction/installation of the Project, save and except any additional costs arising on account of variation in Price Index, Change of Scope, Change in Law, Force Majeure or breach of this Agreement, which costs shall be due and payable to the Concessionaire in accordance with the provisions of the Agreement. The Bid Project Cost shall be exclusive of GST, which shall be paid to the Concessionaire by the Authority at the applicable rates. For the avoidance of doubt, the Bid Project Cost specified herein represents the amount due and payable by the Authority to the Concessionaire.

23.2 Adjusted Bid Project Cost

- 23.2.1 The Bid Project Cost specified in Article 23.1 shall be revised from time to time in accordance with the provisions of this Article 23.2 to reflect the variation in Price Index occurring after the Reference Index Date immediately preceding the Bid Date.
- 23.2.2 The Bid Project Cost adjusted for variation between the Price Index occurring between the Reference Index Date preceding the Bid Date and the Reference Index Date immediately preceding the Appointed Date shall be deemed to be the Bid Project Cost at commencement of construction.
- 23.2.3 For every month occurring after the Appointed Date, the Authority shall compute the variation in Price Index occurring between the Reference Index Date preceding the Bid Date and the Reference Index Date preceding the date of Invoice, and shall express the latter as a multiple of the former (the “**Price Index Multiple**”). All Invoices to be submitted by the Concessionaire to the Authority for and in respect of the Construction Period shall be the product of the relevant proportion of the Bid Project Cost and the Price Index Multiple applicable on the date of Invoice. For the avoidance of doubt and by way of illustration, if (a) the Price Index on the Reference Index Date preceding the Bid Date, say January 31, 2024, is 200 (two hundred); (b) the Invoice is submitted on October 15, 2025; and (c) the Price Index as on September 30, 2025 is 210 (two hundred and ten), then the Price Index Multiple for determination of the amount due in respect of such Invoice shall be 1.05 (one point zero five).

23.3 Payment of Bid Project Cost

- 23.3.1 60% (sixty per cent) of the Bid Project Cost, adjusted for the Price Index Multiple, shall be due and payable to the Concessionaire in 8 (eight) equal instalments of 7.5% (seven point five per cent) each during the Construction Period in accordance with the provisions of Article 23.4.
- 23.3.2 The remaining Bid Project Cost, adjusted for the Price Index Multiple, shall be due and payable in 40 (forty) quarterly instalments in accordance with the provisions of Article 23.5.

23.4 Payment during Construction Period

Upon receiving a report from the Independent Engineer certifying the achievement of the below mentioned Payment Milestones, the Authority shall issue a payment advice to the Escrow Bank, within 15 (fifteen) days of receipt of each such report, for release of an instalment equal to 7.5% (seven point five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of that report.

For the purpose of this Article 23.4, the Payment Milestone for release of payment during Construction Period shall be as under:

	Payment Milestone	Physical Progress	Payment Due to the Concessionaire
a.	I (first) Payment Milestone	On achievement of 12.5% Physical Progress	7.5% (seven point five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
b.	II (second) Payment Milestone	On achievement of 25% Physical Progress	7.5% (seven point five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
c.	III (third) Payment Milestone	On achievement of 37.5% Physical Progress	7.5% (seven point five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
d.	IV (fourth) Payment Milestone	On achievement of 50% Physical Progress	7.5% (seven point five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
e.	V (fifth) Payment Milestone	On achievement of 62.5% Physical Progress	7.5% (seven point five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
f.	VI (sixth) Payment Milestone	On achievement of 75% Physical Progress	7.5% (seven point five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
g.	VII (seventh) Payment Milestone	On achievement of 87.5% Physical Progress	7.5% (seven point five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
h.	VIII (eighth) Payment Milestone	On achievement of 100% Physical Progress	7.5% (seven point five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable

Provided that in case of Change of Scope, the Physical Progress shall be recalculated to account for the changed scope.

23.5 Annuity Payments during Operation Period

- 23.5.1 The “**Completion Cost**” shall be the summation of A, B, C, D, E, F, G and H:
- A. 12.5% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 12.5% Physical Progress.
 - B. 12.5% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 25% Physical Progress.
 - C. 12.5% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 37.5% Physical Progress.
 - D. 12.50% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 50% Physical Progress.
 - E. 12.5% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 62.5% Physical Progress.
 - F. 12.5% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 75% Physical Progress.
 - G. 12.5% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 87.5% Physical Progress.
 - H. 12.5% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of COD.

The Parties acknowledge and agree that the Authority has paid a portion of the Completion Cost as payments during Construction Period pursuant to Article 23.4 of this Agreement. The balance Completion Cost remaining shall be due and payable during the Operation Period in accordance with the provisions of Article 23.5.2.

- 23.5.2 The Completion Cost remaining to be paid in pursuance of the provisions of Article 23.5.1 shall be due and payable in quarterly payments over a period of 10 (ten) years commencing from COD, (the “**Annuity Payments**”). The 1st (first) instalment of Annuity Payments shall be due and payable within 15 (fifteen) days of the end of the Quarter⁴ falling immediately after the COD. Thereafter, each Annuity shall be paid at the end of each quarter.
- Each of the Annuity Payments due and payable during the years following the COD shall be at 1% of the completion cost payable and shall be payable at the end of each quarter. Each of the quarterly instalments shall be paid along with interest as specified in Article 23.5.4.

- 23.5.3 Deleted

⁴ End of the quarter shall mean the quarterly end of a financial year, namely, the 30th of June, 30th of September, 31st of December and 31st of March

23.5.4 Interest shall be due and payable on the reducing balance of Completion Cost at an interest rate equal to the average of SBI MCLR plus 2%. Such interest shall be due and payable every quarter along with each instalment. For the avoidance of doubt and by way of illustration, the Parties agree on the following:

- (a) The first Annuity of 1% of the Completion cost shall be payable, along with the interest at the end of the Quarter falling immediately after the COD. Interest shall be calculated on the Completion Cost remaining to be paid, from the COD and until the end of the Quarter falling immediately after the COD.
- (b) Thereafter, each Annuity shall be paid at the end of each quarter, along with interest calculated on the Completion cost remaining to be paid, from the end of the previous quarter until the end of next Quarter.

The Parties further agree that interest shall be calculated based on the number of days a particular average of SBI MCLR was applicable during the period of calculation. For the purpose of illustration, assuming that the balance capital cost remaining to be paid is Rs 100 crores on the 1st Annuity Payment Date, the applicable average of SBI MCLR for the first 75 days is 8% and thereafter it is revised to 7.5% and remains unchanged till the 2nd Annuity Payment Date, the interest would be calculated as $((100 \times 10\% \times 75)/365) + ((100 \times 9.5\% \times 105)/365)$. For the avoidance of doubt, the Interest would be calculated on simple interest basis and no compounding of the same would be undertaken.

23.6 O&M Payment

- 23.6.1 The Parties acknowledge and agree that all O&M Expenses shall be borne by the Concessionaire and in lieu thereof; a lump sum financial support of Rs..... (Rupees.....)⁵ in the form of quarterly payments shall be due and payable by the Authority (the “**First Quarter O&M Cost**”), in accordance with the provisions of this Article 23.6.1 (the “**O&M Payments**”). The Parties further acknowledge and agree that any O&M Expenses in excess of the O&M Payments shall be borne solely by the Concessionaire, save and except as expressly provided in this Agreement. For avoidance of doubt it is clarified that the O&M Payments will be subject to any Change in Scope of the Project of the Concessionaire under Article 16 of this Agreement. Further provided that the payments shall be subject to the compliance of the Key Performance Indicators as detailed in Schedule C.
- 23.6.2 Subject to the Provisions of Article 23.6.1, the O&M Payments due and payable to the Concessionaire shall be paid in quarterly instalments and disbursed by the Authority together with the corresponding instalments of Annuity Payments.
- 23.6.3 Each instalment of O&M Payment shall be the product of the amount determined in accordance with Article 23.6.1 and the Price Index Multiple on the Reference Index Date preceding the due date of payment thereof.

⁵ As quoted by the selected Bidder

ARTICLE 24 DELETED

ARTICLE 25 ESCROW ACCOUNT

25.1 Escrow Account

- 25.1.1 The Concessionaire shall, prior to the Appointed Date, open and establish an Escrow Account with a Bank (the “**Escrow Bank**”) in accordance with this Agreement read with the Escrow Agreement.
- 25.1.2 The nature and scope of the Escrow Account are fully described in the agreement (the “**Escrow Agreement**”) to be entered into amongst the Concessionaire, the Authority, the Escrow Bank and the Senior Lenders through the Lenders’ Representative, which shall be substantially in the form set forth in Schedule-N.
- 25.1.3 The Parties shall, at the time of opening the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the Escrow Bank instructing, inter alia, that deposits in and withdrawals from the Escrow Account. The Parties agree the Escrow Account shall consist of separate sub-accounts namely the collection of the User Charges and the payment of Hybrid Annuity Payments

25.2 Deposits into Escrow Account

- 25.2.1 The Concessionaire shall deposit or cause to be deposited the following inflows and receipts into the Escrow Account:
- i. All funds constituting the Financial Package;
 - ii. All revenues from or in respect of the Project, including the proceeds of any rentals, deposits, capital receipts or insurance claims; and
 - iii. All payments made by the Authority, after deduction of any outstanding payments.
 - iv. In the event, as per applicable rules of the Authority, the User Charges are deposited in any other account designated by the Authority, the Authority shall, with respect to the amounts collected during the month, cause such amounts to be transferred to the account opened in accordance with Article 25.2 within the 15th of the succeeding month.
- 25.2.2 Minimum Escrow Balance:
- i. The Authority shall deposit an amount equivalent to the following: (i) first two Payment Milestone on the Appointed Date. During the remainder of the Construction Period, the Authority shall ensure that the Escrow Account is funded with an amount equivalent to the next Payment Milestone; (ii) construction period O&M payments for two quarters, (the “**Construction Period Minimum Escrow Balance**”); and
 - ii. on and from COD and during the Operation Period, the Authority shall deposit into the Escrow Account, by an agreed date, an amount equivalent to the sum of the following: (a) Annuity Payments for two quarters, and (b) O&M Payments for two quarters, (the “**Operation Period Minimum Escrow Balance**”).

If at any time during the Construction Period or the Operation Period, the balance in the Escrow Account falls below the Construction Period Minimum Escrow Balance or the Operation Period Minimum Escrow Balance, as the case may be, the Authority shall promptly, and in any event, no later than 60 (sixty) days of such occurrence, fund the Escrow Account such that the Construction Period Minimum Escrow Balance or the Operation Period Minimum Escrow Balance (as applicable) is maintained.

Any interest earned on the amounts deposited by Authority in the Escrow Account shall be counted towards the Construction Period Minimum Escrow Balance/ Operation Period Minimum Escrow Balance and the abovementioned deposit into the Escrow Account.

25.3 Withdrawals during Concession Period

25.3.1 The Concessionaire shall, at the time of opening the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the Escrow Bank instructing, inter alia, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:

- i. All taxes due and payable by the Concessionaire for and in respect of the Project;
- ii. All payments relating to construction of the Project, subject to and in accordance with the conditions, if any, set forth in the Financing Agreements;
- iii. O&M Expenses, subject to the ceiling, if any, set forth in the Financing Agreements;
- iv. O&M Expenses and other costs and expenses incurred by the Authority in accordance with the provisions of this Agreement, and certified by the Authority/Independent Engineer as due and payable to it;
- v. Monthly proportionate provision of Debt Service due in an Accounting Year;
- vi. All payments and Damages certified by the Authority as due and payable to it by the Concessionaire;
- vii. Monthly proportionate provision of debt service payments due in an Accounting Year in respect of Subordinated Debt;
- viii. Any reserve requirements set forth in the Financing Agreements; and
- ix. Balance, if any, in accordance with the instructions of the Concessionaire.

Provided that the Authority shall be allowed to withdraw amounts lying in the Escrow account in excess of the amounts due to the Concessionaire for a period of 2 (two) quarters.

25.3.2 The Concessionaire shall not in any manner modify the order of payment specified in Article 25.3.1, except with the prior written approval of the Authority.

25.4 Withdrawals upon Termination

25.4.1 Notwithstanding anything to the contrary contained in this Agreement, all amounts standing to the credit of the Escrow Account shall, upon Termination, be appropriated in the following order:

- i. All taxes due and payable by the Concessionaire for and in respect of the Project;
- ii. Percentage of Debt Due excluding Subordinated Debt if required to be paid to the Concessionaire as per the terms of this Agreement;
- iii. Outstanding payments due to the Authority;
- iv. All payments and Damages certified by the Authority as due and payable to it by the Concessionaire;
- v. Retention and payments relating to the liability for defects and deficiencies set forth in Article 33;

- vi. Outstanding Debt Service including the balance of Debt Due;
- vii. Outstanding Subordinated Debt;
- viii. Incurred or accrued O&M Expenses;
- ix. Any other payments required to be made under this Agreement; and
- x. Balance, if any, in accordance with the instructions of the Concessionaire

Provided that no appropriations shall be made under Sub-Article (x) of this Article 25.4.1 until a Vesting Certificate has been issued by the Authority under the provisions of Article 32.

- 25.4.2 The provisions of this Article 25 and the instructions contained in the Escrow Agreement shall remain in full force and effect until the obligations set forth in Article 25.4.1 have been discharged.

25.5 Payment Security Mechanism

Tamil Nadu Infrastructure Development Fund (TNIDF), operated by Tamil Nadu Infrastructure Development Board (TNIDB), shall act as the backstop guarantee for this project. In case the Authority fails to ensure Minimum Escrow Balance in terms of Article 25.2.2 of this Agreement, then the Escrow account shall be replenished by drawing funds from the TNIDF upon request of the Concessionaire or Authority, subject to the approval of TNIDB.

ARTICLE 26 INSURANCE

26.1 Insurance during Concession Period

The Concessionaire shall effect and maintain at its own cost, during the Construction Period and the Operation Period, such insurances (for Project facilities) for such maximum sums as may be required under the Financing Agreements and Applicable Laws, and such insurances as may be necessary or prudent in accordance with Good Industry Practice. The Concessionaire shall also effect and maintain such insurances as may be necessary for mitigating the risks that may devolve on the Authority as a consequence of any act or omission of the Concessionaire during the Construction Period. The Concessionaire shall procure that in each insurance policy, the Authority shall be a co-insured and that the insurer shall pay the proceeds of insurance into the Escrow Account. For the avoidance of doubt, the level of insurance to be maintained by the Concessionaire after repayment of Senior Lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of Senior Lenders' due.

26.2 Insurance Cover

Without prejudice to the provisions contained in Article 26.1, the Concessionaire shall, during the Operation Period, procure and maintain Insurance Cover including but not limited to the following:

- (a) Loss, damage or destruction of the Project Facilities, at replacement value;
- (b) Comprehensive third party liability insurance including injury to or death of personnel of the Authority or others caused by the Project;
- (c) The Concessionaire's general liability arising out of the Concession;
- (d) Liability to third parties for goods or property damage;
- (e) Workmen's compensation insurance; and
- (f) any other insurance that may be necessary to protect the Concessionaire and its employees, including all Force Majeure Events that are insurable at commercially reasonable premiums and not otherwise covered in items(a) to (e) above.

26.3 Notices to the Authority

No later than 45 (forty five) days prior to commencement of the Construction Period or the Operation Period, as the case may be, the Concessionaire shall by notice furnish to the Authority, in reasonable detail, information in respect of the insurances that it proposes to effect and maintain in accordance with this Article 26. Within 30 (thirty) days of receipt of such notice, the Authority may require the Concessionaire to effect and maintain such other insurances as may be necessary pursuant hereto, and in the event of any difference or disagreement relating to any such insurance, the Dispute Resolution Procedure shall apply.

26.4 Evidence of Insurance Cover

All insurances obtained by the Concessionaire in accordance with this Article 26 shall be maintained with insurers on terms consistent with Good Industry Practice. Within 15 (fifteen) days of obtaining any insurance cover, the Concessionaire shall furnish to the Authority, notarized true copies of the certificate(s) of insurance, copies of insurance policies and premium payment receipts in respect of such insurance, and no such insurance shall be cancelled, modified, or allowed to expire or lapse until the expiration of at least 45 (forty five) days after notice of such proposed cancellation, modification or nonrenewal has been delivered by the Concessionaire to the Authority.

26.5 Remedy for failure to insure

If the Concessionaire shall fail to effect and keep in force all insurances for which it is responsible pursuant hereto, the Authority shall have the option to either keep in force any such insurances, and pay such premier and recover the costs thereof from the Concessionaire, or in the event of computation of a Termination Payment, treat an amount equal to the Insurance Cover as deemed to have been received by the Concessionaire.

26.6 Waiver of subrogation

All insurance policies in respect of the insurance obtained by the Concessionaire pursuant to this Article 26 shall include a waiver of any and all rights of subrogation or recovery of the insurers thereunder against, inter alia, the Authority, and its assigns, successors, undertakings and their subsidiaries, affiliates, employees, insurers and underwriters, and of any right of the insurers to any set-off or counterclaim or any other deduction, whether by attachment or otherwise, in respect of any liability of any such person insured under any such policy or in any way connected with any loss, liability or obligation covered by such policies of insurance.

26.7 Concessionaire's waiver

The Concessionaire hereby further releases, assigns and waives any and all rights of subrogation or recovery against, inter alia, the Authority and its assigns, undertakings and their subsidiaries, affiliates, employees, successors, insurers and underwriters, which the Concessionaire may otherwise have or acquire in or from or in any way connected with any loss, liability or obligation covered by policies of insurance maintained or required to be maintained by the Concessionaire pursuant to this Agreement (other than third party liability insurance policies) or because of deductible clauses in or inadequacy of limits of any such policies of insurance.

26.8 Application of insurance proceeds

The proceeds from all insurance claims, except life and injury, shall be paid to the Concessionaire by credit to the Escrow Account and it shall, notwithstanding anything to the contrary contained in Article 25.3, apply such proceeds for any necessary repair, reconstruction, reinstatement, replacement, improvement or delivery of the Project, and the balance remaining, if any, shall be applied in accordance with the provisions contained in this behalf in the Financing Agreements.

26.9 Compliance with conditions of insurance policies

The Concessionaire expressly acknowledges and undertakes to fully indemnify the Authority from and against all losses and claims arising from the Concessionaire's failure to comply with conditions imposed by the insurance policies affected in accordance with this Agreement.

ARTICLE 27 ACCOUNTS AND AUDIT

27.1 Audited accounts

- 27.1.1 The Concessionaire shall maintain books of accounts recording all its receipts (including all revenues derived/collected by it from or on account of the Project and/or its use), income, expenditure, payments (including payments from the Escrow Account), assets and liabilities, in accordance with this Agreement, Good Industry Practice, Applicable Laws and Applicable Permits. The Concessionaire shall provide 2 (two) copies of its Balance Sheet, Cash Flow Statement and Profit and Loss Account, along with a report thereon by its Statutory Auditors, within 180 (one hundred and eighty) days of the close of the Accounting Year to which they pertain and such audited accounts, save and except where expressly provided to the contrary, shall form the basis of payments by either Party under this Agreement. The Authority shall have the right to inspect the records of the Concessionaire during office hours and require copies of relevant extracts of books of accounts, duly certified by the Statutory Auditors, to be provided to the Authority for verification of basis of payments, and in the event of any discrepancy or error being found, the same shall be rectified and such rectified account shall form the basis of payments by either Party under this Agreement.
- 27.1.2 The Concessionaire shall, within 30 (thirty) days of the close of each quarter of an Accounting Year, furnish to the Authority its unaudited financial results in respect of the preceding quarter, in the manner and form prescribed by the Securities and Exchange Board of India for publication of quarterly results by the companies listed on a stock exchange.
- 27.1.3 On or before the thirtieth day of September each Year, the Concessionaire shall provide to the Authority, for the preceding Accounting Year, a statement duly audited by its Statutory Auditors giving summarized information on revenues derived from the Project, and such other information as the Authority may reasonably require.

27.2 Appointment of auditors

- 27.2.1 The Concessionaire shall appoint, and have during the subsistence of this Agreement as its Statutory Auditors, a firm chosen by it from the mutually agreed list of 5 (five) reputable firms of chartered accountants (the "Panel of Chartered Accountants"), such list to be prepared substantially in accordance with the criteria set forth in Schedule-O. All fees and expenses of the Statutory Auditors shall be borne by the Concessionaire.
- 27.2.2 The Concessionaire may terminate the appointment of its Statutory Auditors after a notice of 45 (forty five) days to the Authority, subject to the replacement Statutory Auditors being appointed from the Panel of Chartered Accountants.
- 27.2.3 Notwithstanding anything to the contrary contained in this Agreement, the Authority shall have the right, but not the obligation, to appoint at its cost from time to time and at any time, another firm (the "**Additional Auditors**") from the Panel of Chartered Accountants to audit and verify all those matters, expenses, costs, realizations and things which the Statutory Auditors are required to do, undertake or certify pursuant to this Agreement.

27.3 Certification of claims by Statutory Auditors

Any claim or document provided by the Concessionaire to the Authority in connection with or relating to receipts, income, payments, costs, expenses, accounts or audit, and any matter incidental thereto shall be valid and effective only if certified by its Statutory Auditors. For the avoidance of doubt, such certification shall not be required for exchange of information in the normal course of business including the submission of any periodic information in pursuance of the provisions of this Agreement, save and except where such certification is expressly provided.

27.4 Set off

In the event any amount is due and payable by the Authority to the Concessionaire, it may set-off any sums payable to it by the Concessionaire and pay the balance remaining. Any exercise by the Authority of its rights under this Article shall be without prejudice to any other rights or remedies available to it under this Agreement or otherwise.

27.5 Dispute resolution

In the event of there being any difference between the findings of the Additional Auditors or the Concurrent Auditors, as the case may be, and the certification provided by the Statutory Auditors, such Auditors shall meet to resolve the differences and if they are unable to resolve the same, such Dispute shall be resolved by the Authority by recourse to the Dispute Resolution Procedure.

ARTICLE 28 FORCE MAJEURE

28.1 **Force Majeure**

As used in this Agreement, the expression “**Force Majeure**” or “**Force Majeure Event**” shall, save and except as expressly provided otherwise, mean occurrence in India of any or all of Non-Political Event, Indirect Political Event and Political Event, as defined in Articles 28.2, 28.3 and 28.4 respectively, if it affects the performance by the Party claiming the benefit of Force Majeure (the “Affected Party”) of its obligations under this Agreement and which act or event (a) is beyond the reasonable control of the Affected Party, and (b) the Affected Party could not have prevented or overcome by exercise of due diligence and following Good Industry Practice, and (c) has Material Adverse Effect on the Affected Party.

28.2 **Non-Political Event**

A Non-Political Event shall mean one or more of the following acts or events:

- a) act of God, epidemic, extremely adverse weather conditions, lightning, earthquake, landslide, cyclone, flood, volcanic eruption, chemical or radioactive contamination or ionizing radiation, fire or explosion (to the extent of contamination or radiation or fire or explosion originating from a source external to the Site);
- b) strikes or boycotts (other than those involving the Concessionaire, Contractors or their respective employees/representatives, or attributable to any act or omission of any of them) interrupting supplies and services to the Project for a continuous period of 24 (twenty four) hours and an aggregate period exceeding 7 (seven) days in an Accounting Year, and not being an Indirect Political Event set forth in Article 28.3;
- c) any failure or delay of a Contractor but only to the extent caused by another Non-Political Event and which does not result in any offsetting compensation being payable to the Concessionaire by or on behalf of such Contractor;
- d) any judgment or order of any court of competent jurisdiction or statutory authority made against the Concessionaire in any proceedings for reasons other than (i) failure of the Concessionaire to comply with any Applicable Law or Applicable Permit, or (ii) on account of breach of any Applicable Law or Applicable Permit or of any contract, or (iii) enforcement of this Agreement, or (iv) exercise of any of its rights under this Agreement by the Authority;
- e) The discovery of geological conditions, toxic contamination or archaeological remains on the Site that could not reasonably have been expected to be discovered through a site inspection; or
- f) Any event or circumstances of a nature analogous to any of the foregoing.

28.3 **Indirect Political Event**

An Indirect Political Event shall mean one or more of the following acts or events:

- i. An act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, riot, insurrection, terrorist or military action, civil commotion or politically motivated sabotage;
- ii. any political or economic upheaval, disturbance, movement, struggle or similar occurrence which could not have been anticipated or foreseen by a prudent person and which causes the construction or operation of the Project to be financially unviable or otherwise not feasible;
- iii. industry-wide or State-wide strikes or industrial action for a continuous period of 24 (twenty four) hours and exceeding an aggregate period of 7 (seven) days in an Accounting Year;

- iv. any civil commotion, boycott or political agitation which prevents collection of revenues by the Concessionaire for an aggregate period exceeding 30 (thirty) days in an Accounting Year;
- v. failure of the Authority to permit the Concessionaire to continue its Construction Works, with or without modifications, in the event of stoppage of such works after discovery of any geological or archaeological finds or for any other reason;
- vi. Any failure or delay of a Contractor to the extent caused by any Indirect Political Event and which does not result in any offsetting compensation being payable to the Concessionaire by or on behalf of such Contractor;
- vii. Any Indirect Political Event that causes a Non-Political Event; or
- viii. Any event or circumstances of a nature analogous to any of the foregoing.

28.4 Political Event

A Political Event shall mean one or more of the following acts or events by or on account of any Government Instrumentality:

- i. Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Article 35 and its effect, in financial terms, exceeds the sum specified in Article 35.1;
- ii. Compulsory acquisition in national interest or expropriation of any Project facilities or rights of the Concessionaire or of the Contractors;
- iii. unlawful or unauthorized or without jurisdiction revocation of, or refusal to renew or grant without valid cause, any clearance, license, permit, authorization, no objection certificate, consent, approval or exemption required by the Concessionaire or any of the Contractors to perform their respective obligations under this Agreement and the Project Agreements; provided that such delay, modification, denial, refusal or revocation did not result from the Concessionaire's or any Contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such clearance, license, authorization, no objection certificate, exemption, consent, approval or permit;
- iv. any failure or delay of a Contractor but only to the extent caused by another Political Event and which does not result in any offsetting compensation being payable to the Concessionaire by or on behalf of such Contractor; or
- v. Any event or circumstance of a nature analogous to any of the foregoing.

28.5 Duty to report Force Majeure Event

28.5.1 Upon occurrence of a Force Majeure Event, the Affected Party shall by notice report such occurrence to the other Party forthwith. Any notice pursuant hereto shall include full particulars of:

- i. The nature and extent of each Force Majeure Event which is the subject of any claim for relief under this Article 28 with evidence in support thereof;
- ii. The estimated duration and the effect or probable effect which such Force Majeure Event is having or will have on the Affected Party's performance of its obligations under this Agreement;
- iii. the measures which the Affected Party is taking or proposes to take for alleviating the impact of such Force Majeure Event; an
- iv. Any other information relevant to the Affected Party's claim.

28.5.2 The Affected Party shall not be entitled to any relief for or in respect of a Force Majeure Event unless it shall have notified the other Party of the occurrence of the Force Majeure Event as soon as reasonably practicable, and in any event no later than 7 (seven) days after the Affected Party knew, or ought reasonably to have known, of its occurrence, and shall have given particulars of the probable material effect that the Force Majeure Event is likely to have on the performance of its obligations under this Agreement.

28.5.3 For so long as the Affected Party continues to claim to be materially affected by such Force Majeure Event, it shall provide the other Party with regular (and not less than weekly) reports containing information as required by Article 28.5.1, and such other information as the other Party may reasonably request the Affected Party to provide.

28.6 Effect of Force Majeure Event on the Concession

28.6.1 Upon the occurrence of any Force Majeure Event prior to the Appointed Date, the period set forth in Article 4.1 for fulfilment of Conditions Precedent and in Article 22.1.1 for achieving Financial Close shall be extended by a period equal in length to the duration of the Force Majeure Event.

28.6.2 at any time after the Appointed Date, if any Force Majeure Event occurs:

- i. before COD, the Construction Period and the dates set forth in the Project Completion Schedule shall be extended by a period equal in length to the duration for which such Force Majeure Event subsists; or
- ii. After COD, the Concessionaire shall be entitled to receive Annuity Payments plus interest due and payable under this Agreement. Provided any payment to be made under this Article shall be subject to deduction of outstanding dues of the Authority, if any.

28.7 Allocation of costs arising out of Force Majeure

28.7.1 Upon occurrence of any Force Majeure Event prior to the Appointed Date, the Parties shall bear their respective costs and no Party shall be required to pay to the other Party any costs thereof.

28.7.2 Upon occurrence of a Force Majeure Event after the Appointed Date, the costs incurred and attributable to such event and directly relating to the Project (the “**Force Majeure Costs**”) shall be allocated and paid as follows:

- i. upon occurrence of a Non-Political Event, the Parties shall bear their respective Force Majeure Costs and neither Party shall be required to pay to the other Party any costs thereof;
- ii. upon occurrence of an Indirect Political Event, all Force Majeure Costs attributable to such Indirect Political Event, and not exceeding the Insurance Cover for such Indirect Political Event, shall be borne by the Concessionaire, and to the extent Force Majeure Costs exceed such Insurance Cover, one half of such excess amount shall be reimbursed by the Authority to the Concessionaire; and
- iii. Upon occurrence of a Political Event, all Force Majeure Costs attributable to such Political Event shall be reimbursed by the Authority to the Concessionaire. For the avoidance of doubt, Force Majeure Costs may include interest payments on Debt Due, O&M Expenses, any increase in the cost of Construction Works on account of inflation and all other costs directly attributable to the Force Majeure Event, but shall not include any costs which are expressly covered under any provision of this Agreement or debt repayment obligations, and for determining such costs, information contained in the Financial Package may be relied upon to the extent that such information is relevant.

28.7.3 Save and except as expressly provided in this Article 28, neither Party shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event or exercise of any right pursuant hereto.

28.8 Termination Notice for Force Majeure Event

If a Force Majeure Event subsists for a period of 180 (one hundred and eighty) days or more within a continuous period of 365 (three hundred and sixty five) days, either Party may in its discretion terminate this Agreement by issuing a Termination Notice to the other Party without being liable in any manner whatsoever, save as provided in this Article 28, and upon issue of such Termination Notice, this Agreement shall, notwithstanding anything to the contrary contained herein, stand terminated forthwith; provided that before issuing such Termination Notice, the Party intending to issue the Termination Notice shall inform the other Party of such intention and grant 15 (fifteen) day's time to make a representation, and may after the expiry of such 15 (fifteen) days period, whether or not it is in receipt of such representation, in its sole discretion issue the Termination Notice.

28.9 Termination Payment for Force Majeure Event

28.9.1 If Termination is on account of a Non-Political Event, the Authority shall make a Termination Payment to the Concessionaire in an amount to be calculated as under:

(i) In case termination occurs prior to COD:

1. Construction Payments due to the Concessionaire for Project Milestones completed and certified by the Authority on the date of the Termination Notice under Article 28;
2. Debt Due as on date of the Termination Notice;
LESS
3. any insurance proceeds received and retained by the Concessionaire.

For the avoidance of doubt, it is clarified that in case of termination happening in between two Payment Milestones, for the purpose of calculation of termination payment, the milestone achieved would only be considered.

(ii) In case termination occurs post COD:

- a) Construction Payments if not paid already as on date of the Termination Notice;
- b) the O&M Payments due to the Concessionaire as on the date of the Termination Notice under Article 28;
- c) Debt Due as on date of the Termination Notice;
LESS
- d) any insurance proceeds received and retained by the Concessionaire

28.9.2 If Termination is on account of an Indirect Political Event, the Authority shall make a Termination Payment to the Concessionaire in an amount equal to:

(i) In case Termination occurs prior to COD:

- a) Construction Payments due to the Concessionaire for Payment Milestones completed and certified by the Authority as on the date of the Termination Notice under Article 28;
- b) Debt Due as on date of the Termination Notice; provided that if any insurance claims forming part of the Insurance Cover are not admitted and paid, then 80%

(eighty per cent) of such unpaid claims shall be included in the computation of Debt Due. For the avoidance of doubt, it is clarified that in case of termination happening in between two Payment Milestones, for the purpose of calculation of Debt Due, the milestone achieved would only be considered ; and

- c) 110% (one hundred and ten per cent) of the Adjusted Equity;
LESS
- d) any insurance proceeds received and retained by the Concessionaire; and
- e) any amounts due and payable by the Concessionaire under this Agreement.

(ii) In case termination occur post COD

- a) Construction Payments if not paid already as on date of the Termination Notice;
- b) the O&M Payments due to the Concessionaire as on the date of the Termination Notice under Article 28;
- c) Capex Annuity for the unexpired portion of the Operation Period;
LESS
- d) any insurance proceeds received and retained by the Concessionaire; and
- e) any amounts due and payable by the Concessionaire under this Agreement

28.9.3 If Termination is on account of a Political Event, the Authority shall make a Termination Payment to the Concessionaire in an amount that would be payable under Article 31.3.3 as if it were an Authority Default.

28.10 Dispute resolution

In the event that the Parties are unable to agree in good faith about the occurrence or existence of a Force Majeure Event, such Dispute shall be finally settled in accordance with the Dispute Resolution Procedure; provided that the burden of proof as to the occurrence or existence of such Force Majeure Event shall be upon the Party claiming relief and/or excuse on account of such Force Majeure Event

28.11 Excuse from performance of obligations

If the Affected Party is rendered wholly or partially unable to perform its obligations under this Agreement because of a Force Majeure Event, it shall be excused from performance of such of its obligations to the extent it is unable to perform on account of such Force Majeure Event; provided that:

- (a) The suspension of performance shall be of no greater scope and of no longer duration than is reasonably required by the Force Majeure Event;
- (b) the Affected Party shall make all reasonable efforts to mitigate or limit damage to the other Party arising out of or as a result of the existence or occurrence of such Force Majeure Event and to cure the same with due diligence; and
- (c) When the Affected Party is able to resume performance of its obligations under this Agreement, it shall give to the other Party notice to that effect and shall promptly resume performance of its obligations hereunder.

ARTICLE 29 COMPENSATION FOR BREACH OF AGREEMENT

29.1 Compensation for default by the Concessionaire

Subject to the provisions of Article 29.3, in the event of the Concessionaire being in material breach or default of this Agreement, it shall pay to the Authority by way of compensation, all direct costs suffered or incurred by the Authority as a consequence of such material breach or default, within 30 (thirty) days of receipt of the demand supported by necessary particulars thereof; provided that no compensation shall be payable under this Article 29.1 for any material breach or default in respect of which Damages are expressly specified and payable under this Agreement or for any consequential losses incurred by the Authority.

29.2 Compensation for default by the Authority

Subject to the provisions of Article 29.3, in the event of the Authority being in material breach or default of this Agreement at any time after the Effective Date, it shall pay to the Concessionaire by way of compensation, all direct costs suffered or incurred by the Concessionaire as a consequence of such material breach or default within 30 (thirty) days of receipt of the demand supported by necessary particulars thereof; provided that no such compensation shall be payable for any material breach or default in respect of which Damages have been expressly specified in this Agreement. For the avoidance of doubt, compensation payable may include interest payments on debt, O&M Expenses, any increase in capital costs on account of inflation and all other costs directly attributable to such material breach or default but shall not include loss of Annuity Payments, debt repayment obligations or other consequential losses, loss of profit, Sub Contractors claims, and for determining such compensation, information contained in the Financial Package and the Financial Model may be relied upon to the extent it is relevant.

29.3 Mitigation of costs and damage

The Affected Party shall make all reasonable efforts to mitigate or limit the costs and damage arising out of or as a result of breach of Agreement by the other Party.

ARTICLE 30 SUSPENSION OF CONCESSIONAIRE'S RIGHTS

30.1 Suspension upon Concessionaire Default

Upon occurrence of a Concessionaire Default, the Authority shall be entitled, without prejudice to its other rights and remedies under this Agreement including its rights of Termination hereunder, to (a) suspend all rights of the Concessionaire under this Agreement, and pursuant hereto, and (b) exercise such rights itself and perform the obligations hereunder or authorize any other person to exercise or perform the same on its behalf during such suspension (the "**Suspension**"). Suspension hereunder shall be effective forthwith upon issue of notice by the Authority to the Concessionaire and may extend up to a period not exceeding 180 (one hundred and eighty) days from the date of issue of such notice; provided that upon written request from the Concessionaire and the Lenders' Representative, the Authority shall extend the aforesaid period of 180 (one hundred and eighty) days by a further period not exceeding 90 (ninety) days.

30.2 Authority to act on behalf of Concessionaire

- 30.2.1 During the period of Suspension, the Authority shall, on behalf of the Concessionaire, collect all revenues under and in accordance with this Agreement and deposit the same in the Escrow Account. The Authority shall be entitled to make withdrawals from the Escrow Account for meeting the O&M Expenses and for meeting the costs incurred by it for remedying and rectifying the cause of Suspension, and thereafter for defraying the expenses specified in Article 25.3.
- 30.2.2 During the period of Suspension hereunder, all rights and liabilities vested in the Concessionaire in accordance with the provisions of this Agreement shall continue to vest in the Concessionaire and all things done or actions taken, including expenditure incurred by the Authority for discharging the obligations of the Concessionaire under and in accordance with this Agreement and the Project Agreements, shall be deemed to have been done or taken for and on behalf of the Concessionaire and the Concessionaire undertakes to indemnify the Authority for all costs incurred- during such period. The Concessionaire hereby licenses and sub-licenses respectively, the Authority or any other person authorized by it under Article 30.1 to use during Suspension, all Intellectual Property belonging to or licensed to the Concessionaire with respect to the Project and its design, engineering, construction, operation and maintenance, and which is used or created by the Concessionaire in performing its obligations under the Agreement.

30.3 Revocation of Suspension

- 30.3.1 In the event that the Authority shall have rectified or removed the cause of Suspension within a period not exceeding 90 (ninety) days from the date of Suspension, it shall revoke the Suspension forthwith and restore all rights of the Concessionaire under this Agreement. For the avoidance of doubt, the Parties expressly agree that the Authority may, in its discretion, revoke the Suspension at any time, whether or not the cause of Suspension has been rectified or removed hereunder.
- 30.3.2 Upon the Concessionaire having cured the Concessionaire Default within a period not exceeding 90 (ninety) days from the date of Suspension, the Authority shall revoke the Suspension forthwith and restore all rights of the Concessionaire under this Agreement.

30.4 Substitution of Concessionaire

At any time during the period of Suspension, the Lenders' Representative, on behalf of Senior Lenders, shall be entitled to substitute the Concessionaire under and in accordance with the Substitution Agreement, and upon receipt of notice thereunder from the Lenders' Representative, the Authority shall withhold Termination for a period not

exceeding 180 (one hundred and eighty) days from the date of Suspension, and any extension thereof under Article 30.1, for enabling the Lenders' Representative to exercise its rights of substitution on behalf of Senior Lenders.

30.5 Termination

- 30.5.1 At any time during the period of Suspension under this Article 30, the Concessionaire may by notice require the Authority to revoke the Suspension and issue a Termination Notice. Subject to the rights of the Lenders' Representative to undertake substitution in accordance with the provisions of this Agreement and within the period specified in Article 30.4, the Authority shall, within 15 (fifteen) days of receipt of such notice, terminate this Agreement under and in accordance with Article 31 as if it is a Concessionaire Default under Article 31.1.
- 30.5.2 Notwithstanding anything to the contrary contained in this Agreement, in the event that Suspension is not revoked within 180 (one hundred and eighty) days from the date of Suspension hereunder or within the extended period, if any, set forth in Article 30.1, the Concession Agreement shall, upon expiry of the aforesaid period, be deemed to have been terminated by mutual agreement of the Parties and all the provisions of this Agreement shall apply, mutatis mutandis, to such Termination as if a Termination Notice had been issued by the Authority upon occurrence of a Concessionaire Default.

ARTICLE 31 TERMINATION

31.1 Termination for Concessionaire Default

31.1.1 Save as otherwise provided in this Agreement, in the event that any of the defaults specified below shall have occurred, and the Concessionaire fails to cure the default within the Cure Period set forth below, or where no Cure Period is specified, then within a Cure Period of 60 (sixty) days, the Concessionaire shall be deemed to be in default of this Agreement (the “**Concessionaire Default**”), unless the default has occurred as a result of any breach of this Agreement by the Authority or due to Force Majeure. The defaults referred to herein shall include the following:

- a. The Construction Period Performance Security has been encashed and appropriated in accordance with Article 9.2 and the Concessionaire fails to replenish or provide fresh Performance Security within a Cure Period of 15 (fifteen) days;
- b. subsequent to the replenishment or furnishing of fresh Performance Security in accordance with Article 9.2, the Concessionaire fails to meet any Condition Precedent or cure the Concessionaire Default, as the case may be, for which whole or part of the Performance Security was appropriated, within a Cure Period of 120 (one hundred and twenty) days;
- c. the Concessionaire does not achieve the latest outstanding Project Milestone due in accordance with the provisions of Schedule G and continues to be in default for 120 (one hundred and twenty) days;
- d. the Concessionaire abandons or manifests intention to abandon the construction or operation of the Project without the prior written consent of the Authority;
- e. COD does not occur within the period specified in Article 12.3.3;
- f. the Concessionaire has failed to fulfil the Key Performance Indicators (KPIs) that has led to a Concessionaire Event of Default in accordance with Schedule C
- g. the Concessionaire is in breach of the Maintenance Requirement, Maintenance Manual or the Safety requirements, as the case may be;
- h. the Concessionaire has failed to make any payment to the Authority within the period specified in this Agreement;
- i. an Escrow Default has occurred and the Concessionaire fails to cure the default within a Cure Period of 15 (fifteen) days;
- j. upon occurrence of a Financial Default, the Lenders’ Representative has by notice required the Authority to undertake Suspension or Termination, as the case may be, in accordance with the Substitution Agreement and the Concessionaire fails to cure the default within the Cure Period specified hereinabove;
- k. a breach of any of the Project Agreements by the Concessionaire has caused a Material Adverse Effect;
- l. the Concessionaire creates any Encumbrance in breach of this Agreement;
- m. the Concessionaire repudiates this Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the Agreement;
- n. a Change in Ownership has occurred in breach of the provisions of Article 5.3;
- o. there is a transfer, pursuant to law either of (i) the rights and/or obligations of the Concessionaire under any of the Project Agreements, or of (ii) all or part of the assets or undertaking of the Concessionaire, and such transfer causes a Material

Adverse Effect;

- p. an execution levied on any of the assets of the Concessionaire has caused a Material Adverse Effect;
- q. the Concessionaire is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the Concessionaire or for the whole or material part of its assets that has a material bearing on the Project;
- r. the Concessionaire has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the Authority, a Material Adverse Effect;
- s. a resolution for winding up of the Concessionaire is passed, or any petition for winding up of the Concessionaire is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 (ninety) days of the date thereof or the Concessionaire is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction; provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of the Concessionaire are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of the Concessionaire under this Agreement and the Project Agreements; and provided that:
 - (i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under this Agreement and the Project Agreements;
 - (ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under this Agreement and the Project Agreements and has a credit worthiness at least as good as that of the Concessionaire as at the Appointed Date; and
 - (iii) Each of the Project Agreements remains in full force and effect;
- t. any representation or warranty of the Concessionaire herein contained which is, as of the date hereof, found to be materially false, incorrect or misleading or the Concessionaire is at any time hereafter found to be in breach thereof;
- u. the Concessionaire submits to the Authority any statement, notice or other document, in written or electronic form, which has a material effect on the Authority's rights, obligations or interests and which is false in material particulars;
- v. the Concessionaire has failed to fulfil any obligation, for which failure Termination has been specified in this Agreement;
- w. the Concessionaire issues a Termination Notice in violation of this Agreement;
- x. the Concessionaire commits a default in complying with any other provision of this Agreement if such default causes a Material Adverse Effect on the Authority.

31.1.2 Without prejudice to any other rights or remedies which the Authority may have under this Agreement, upon occurrence of a Concessionaire Default, the Authority shall be entitled to terminate this Agreement by issuing a Termination Notice to the Concessionaire; provided that before issuing the Termination Notice, the Authority shall by a notice inform the Concessionaire of its intention to issue such Termination Notice and grant 15 (fifteen) days to the Concessionaire to make a representation, and may after the expiry of such 15 (fifteen) days, whether or not it is in receipt of such representation, issue the Termination Notice, subject to the provisions of Article 31.1.3.

- 31.1.3 The Authority shall, if there be Senior Lenders, send a copy of its notice of intention to issue a Termination Notice referred to in Article 31.1.2 to inform the Lenders' Representative and grant 15 (fifteen) days to the Lenders' Representative, for making a representation on behalf of the Senior Lenders stating the intention to substitute the Concessionaire in accordance with the Substitution Agreement. In the event the Authority receives such representation on behalf of Senior Lenders, it shall, in its discretion, either withhold Termination for a period not exceeding 180 (one hundred and eighty) days from the date of such representation or exercise its right of Suspension, as the case may be, for enabling the Lenders' Representative to exercise the Senior Lenders' right of substitution in accordance with the Substitution Agreement: Provided that the Lenders' Representative may, instead of exercising the Senior Lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid period of 180 (one hundred and eighty) days, and upon such curing thereof, the Authority shall withdraw its notice referred to above and restore all the rights of the Concessionaire. Provided further that upon written request from the Lenders' Representative and the Concessionaire, the Authority shall extend the aforesaid period of 180 (one hundred and eighty) days by such further period not exceeding 90 (ninety) days, as the Authority may deem appropriate.

31.2 Termination for Authority Default

- 31.2.1 In the event that any of the defaults specified below shall have occurred, and the Authority fails to cure such default within a Cure Period of 90 (ninety) days or such longer period as has been expressly provided in this Agreement, the Authority shall be deemed to be in default of this Agreement (the "**Authority Default**") unless the default has occurred as a result of any breach of this Agreement by the Concessionaire or due to Force Majeure. The defaults referred to herein shall include the following:
- i. The Authority commits a material default in complying with any of the provisions of this Agreement and such default has a Material Adverse Effect on the Concessionaire;
 - ii. The Authority has failed to make payment of 3 (three) consecutive Annuity Payments due to the Concessionaire within the period specified in this Agreement;
 - iii. The Authority fails to provide, within a period of 180 (one hundred and eighty days) from the Appointed Date, statutory clearances required for construction of the Project; or
 - iv. The Authority repudiates this Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by this Agreement.
- 31.2.2 Without prejudice to any other right or remedy which the Concessionaire may have under this Agreement, upon occurrence of an Authority Default, the Concessionaire shall, subject to the provisions of the Substitution Agreement, be entitled to terminate this Agreement by issuing a Termination Notice to the Authority; provided that before issuing the Termination Notice, the Concessionaire shall by a notice inform the Authority of its intention to issue the Termination Notice and grant 15 (fifteen) days to the Authority to make a representation, and may after the expiry of such 15 (fifteen) days, whether or not it is in receipt of such representation, issue the Termination Notice.

31.3 Termination Payment

- 31.3.1 Upon Termination on account of a Concessionaire Default during the **Operation Period**, the Authority shall pay to the Concessionaire, by way of Termination Payment, an

amount equal to 65% (sixty five per cent) of the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.

31.3.2 Notwithstanding to the provisions of Article 31.3.1, upon Termination on account of a Concessionaire Default during the **Construction Period (prior to COD)**, the Authority shall pay to the Concessionaire, by way of Termination Payment, the aggregate of:

a. Construction Payments due to the Concessionaire for Payment Milestones completed and certified by the Authority as on the date of the Termination Notice;

b. 85% of Debt Due;
LESS

c. any amounts due and payable by the Concessionaire under this Agreement. For the avoidance of doubt, it is clarified that in case of termination happening in between two Payment Milestones, for the purpose of calculation of Termination Payment, the milestone achieved would only be considered.

31.3.3 Upon Termination on account of an Authority Default, the Authority shall pay to the Concessionaire, by way of Termination Payment, an amount equal to:

i. In case the termination occurs **prior to COD**

a. Construction Payments due to the Concessionaire for Payment Milestones completed and certified by the Authority as on the date of the Termination Notice;

b. Debt Due as on the date of Termination Notice less insurance cover; provided that if any insurance claims forming part of the Insurance Cover are not admitted and paid, then 80% (eighty per cent) of such unpaid claims shall be included in the computation of Debt Due;

c. 120% (one hundred and twenty per cent) of the Adjusted Equity;
LESS

d. any amounts due and payable by the Concessionaire under this Agreement. For the avoidance of doubt, it is clarified that in case of termination happening in between two Payment Milestones, for the purpose of calculation of Debt Due, the milestone achieved would only be considered.

ii. In case the termination occurs on or **after COD**, the Authority shall pay to the Concessionaire, by way of Termination Payment, an amount equal to

a. Construction Payments if not already paid as on the date of the Termination Notice;

b. O&M Payments due to the Concessionaire as on the date of the Termination Notice;

c. Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date;
LESS

d. any amounts due and payable by the Concessionaire under this Agreement.

iii. Along with the payment under Article 31.3.3, the Authority shall:

a. return the Construction Period Performance Security and / or the Operation Period Performance Security as the case may be, forthwith;

31.3.4 Termination Payment shall become due and payable to the Concessionaire within 30 (thirty) days of a demand being made by the Concessionaire to the Authority with the necessary particulars, and in the event of any delay, the Authority shall pay interest at a rate equal to 2% (two per cent) above the prevailing SBI MCLR on the amount of Termination Payment remaining unpaid; provided that such delay shall not exceed 90 (ninety) days. For the avoidance of doubt, it is expressly agreed that Termination Payment shall constitute full discharge by the Authority of its payment obligations in respect thereof hereunder.

31.3.5 The Concessionaire expressly agrees that Termination Payment under this Article 31 shall constitute a full and final settlement of all claims of the Concessionaire on account of Termination of this Agreement for any reason whatsoever and that the Concessionaire or any shareholder thereof shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

31.4 Certain limitations on Termination Payment

31.4.1 During the Construction Period, Termination Payment due and payable under this Agreement shall be computed with reference to the Debt Due in accordance with the provisions of this Agreement. The Parties also agree that for the purposes of computing Termination Payment, the Debt Due shall at no time exceed 70% (seventy per cent) of the Total Project Cost.

31.4.2 The amount payable in respect of any Debt Due expressed in foreign currency shall be computed at the Reference Exchange Rate for conversion into the relevant foreign currency as on the date of Termination Payment. Provided further that all borrowings in foreign currency shall be restricted to the financing of Total Project Cost and any borrowings in excess thereof shall not qualify for computation of Termination Payment. It is clarified that the rate of conversion of such foreign currency shall be calculated on the date on which the Agreement is terminated.

31.5 Other rights and obligations of the Authority

Upon Termination for any reason whatsoever, the Authority shall:

- i. Be deemed to have taken possession and control of the Project forthwith;
- ii. Take possession and control of all materials, stores, implements, construction plants and equipment on or about the Site;
- iii. Be entitled to restrain the Concessionaire and any person claiming through or under the Concessionaire from entering upon the Site or any part of the Project;
- iv. Shall cause the Concessionaire to submit copies of licences and warranty documents;
- v. Require the Concessionaire to comply with the Divestment Requirements set forth in Article 32.1; and
- vi. succeed upon election by the Authority, without the necessity of any further action by the Concessionaire, to the interests of the Concessionaire under such of the Project Agreements as the Authority may in its discretion deem appropriate, and shall upon such election be liable to the Contractors only for compensation accruing and becoming due and payable to them under the terms of their respective Project Agreements from and after the date the Authority elects to succeed to the interests of the Concessionaire. For the avoidance of doubt, the Concessionaire acknowledges and agrees that all sums claimed by such Contractors as being -due and owing for works and services performed or accruing on account of any act, omission or event prior to such date shall constitute debt between the Concessionaire

and such Contractors, and the Authority shall not in any manner be liable for such sums. It is further agreed that in the event the Authority elects to cure any outstanding defaults under such Project Agreements, the amount expended by the Authority for this purpose shall be deducted from the Termination Payment.

31.6 Survival of rights

Notwithstanding anything to the contrary contained in this Agreement, but subject to the provisions of Article 31.3.5, any Termination pursuant to the provisions of this Agreement shall be without prejudice to the accrued rights of either Party including its right to claim and recover money damages, insurance proceeds, security deposits, and other rights and remedies, which it may have in law or contract. All rights and obligations of either Party under this Agreement, including Termination Payments and Divestment Requirements, shall survive the Termination to the extent such survival is necessary for giving effect to such rights and obligations.

ARTICLE 32 DIVESTMENT OF RIGHTS AND INTEREST

32.1 Divestment Requirements

32.1.1 Upon Termination, the Concessionaire shall comply with and conform to the following Divestment Requirements:

- a) Notify to the Authority forthwith the location and particulars of all Project facilities;
- b) deliver forthwith the actual or constructive possession of the Project, free and clear of all Encumbrances, save and except to the extent set forth in the Substitution Agreement;
- c) cure all Project Facilities, of all defects and deficiencies so that the Project is compliant with the Maintenance Requirements; provided that in the event of Termination during the Construction Period, all Project Facilities shall be handed over on 'as is where is' basis after bringing them to a safe condition;
- d) deliver and transfer relevant records, reports, Intellectual Property and other licenses pertaining to the Project Facilities and its design, engineering, construction, operation and maintenance, including all programmers and manuals pertaining thereto, and complete 'as built' Drawings as on the Transfer Date. For the avoidance of doubt, the Concessionaire represents and warrants that the Intellectual Property delivered hereunder shall be adequate and complete for the design, engineering, construction, operation and maintenance of the Project and shall be assigned to the Authority free of any Encumbrance;
- e) Transfer and/or deliver all Applicable Permits to the extent permissible under Applicable Laws;
- f) execute such deeds of conveyance, documents and other writings as the Authority may reasonably require for conveying, divesting and assigning all the rights, title and interest of the Concessionaire in the Project Facilities, including manufacturers' warranties in respect of any plant or equipment and the right to receive outstanding insurance claims to the extent due and payable to the Authority, absolutely unto the Authority or its nominee; and.
- g) Comply with all other requirements as may be prescribed or required under Applicable Laws for completing the divestment and assignment of all rights, title and interest of the Concessionaire in the Project, free from all Encumbrances, absolutely unto the Authority or to its nominee.

32.1.2 Subject to the exercise by the Authority of its rights under this Agreement or under any of the Project Agreements to perform or procure the performance by a third party of any of the obligations of the Concessionaire, the Parties shall continue to perform their obligations under this Agreement, notwithstanding the issuance of any Termination Notice, until the Termination of this Agreement becomes effective in accordance with its terms.

32.2 Inspection and cure

Not earlier than 90 (ninety) days prior to Termination but not later than 15 (fifteen) days prior to the effective date of such Termination, the Independent Engineer shall verify, after giving due notice to the Concessionaire specifying the time, date and place of such verification and/or inspection, compliance by the Concessionaire with the Maintenance Requirements, and if required, cause appropriate tests to be carried out at the

Concessionaire's cost for this purpose. Defaults, if any, in the Maintenance Requirements shall be cured by the Concessionaire at its cost and the provisions of Article 33 shall apply, mutatis mutandis, in relation to curing of defects or deficiencies under this Article 32. Provided if the Termination occurs any time after the COD, if the Concessionaire fails to rectify any of the defaults in the maintenance of the Project Facilities, the Authority may rectify such default and adjust the costs incurred thereof, from the Operation Period Performance Guarantee.

32.3 Cooperation and assistance on transfer of Project

- 32.3.1 The Parties shall cooperate and take all necessary measures, in good faith, to achieve a smooth transfer of the Project, including licences, warranties and other rights and the relevant documents pertaining thereto, in accordance with the provisions of this Agreement so as to protect the safety of and avoid undue delay or inconvenience to the Users, other members of the public or the lawful occupiers of any part of the Site.
- 32.3.2 The Parties shall provide to each other, 9 (nine) months prior to the Transfer Date in the event of Termination by efflux of time and immediately in the event of either Party conveying to the other Party its intent to issue a Termination Notice, as the case may be, as much information and advice as is reasonably practicable regarding the proposed arrangements for operation of the Project following the Transfer Date. The Concessionaire shall further provide such reasonable advice and assistance as the Authority, its concessionaire or agent may reasonably require for operation of the Project until the expiry of 6 (six) months after the Transfer Date.
- 32.3.3 The Authority shall have the option to purchase or hire from the Concessionaire at a fair market value and free from any encumbrance all or any part of the plant and machinery used in connection with the Project but which does not form part of the assets specified in Article 32.1.1 and is reasonably required in connection with operation of the Project. For the avoidance of doubt, in the event of dispute or difference relating to fair market value, the Dispute Resolution Procedure shall apply.

32.4 Vesting Certificate

The divestment of all rights, title and interest in the Project shall be deemed to be complete on the date when all of the Divestment Requirements have been fulfilled, and the Authority shall, without unreasonable delay, thereupon issue a certificate substantially in the form set forth in Schedule-P (the "**Vesting Certificate**"), which will have the effect of constituting evidence of divestment by the Concessionaire of all of its rights, title and interest in the Project, and their vesting in the Authority pursuant hereto. It is expressly agreed that any defect or deficiency in the Divestment Requirements shall not in any manner be construed or interpreted as restricting the exercise of any rights by the Authority or its nominee on, or in respect of, the Project on the footing that all Divestment Requirements have been complied with by the Concessionaire.

32.5 Divestment costs etc.

- 32.5.1 The Concessionaire shall bear and pay all costs incidental to divestment of all of the rights, title and interest of the Concessionaire in the Project facilities in favor of the Authority upon Termination, save and except that all stamp duties payable on any deeds or Documents executed by the Concessionaire in connection with such Divestment shall be borne by the Authority.
- 32.5.2 In the event of any Dispute relating to matters covered by and under this Article 32, the Dispute Resolution Procedure shall apply.

ARTICLE 33 DEFECTS LIABILITY AFTER TERMINATION

33.1 Liability for defects after Termination

The Concessionaire shall be responsible for all defects and deficiencies in the Project for a period of 120 (one hundred and twenty) days after Termination, and it shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies observed by the Independent Engineer in the Project during the aforesaid period. In the event that the Concessionaire fails to repair or rectify such defect or deficiency within a period of 15 (fifteen) days from the date of notice issued by the Authority in this behalf, the Authority shall be entitled to get the same repaired or rectified at the Concessionaire's risk and cost so as to make the Project conform to the Maintenance Requirements. All costs incurred by the Authority hereunder shall be reimbursed by the Concessionaire to the Authority within 15 (fifteen) days of receipt of demand thereof, and in the event of default in reimbursing such costs, the Authority shall be entitled to recover the same from the funds retained in the Escrow Account under the provisions of Article 33.2 or from the Performance Guarantee provided thereunder. For the avoidance of doubt, the provisions of this Article 33 shall not apply if Termination occurs prior to COD.

33.2 Retention in Escrow Account

- 33.2.1 Notwithstanding anything to the contrary contained in this Agreement, but subject to the provisions of Article 33.2.3, a sum equal to 15% (fifteen per cent) of the Annuity Payment due and payable immediately preceding the Transfer Date shall be retained in the Escrow Account for a period of 120 (one hundred and twenty) days after Termination for meeting the liabilities, if any, arising out of or in connection with the provisions of Article 33.1.
- 33.2.2 Without prejudice to the provisions of Article 33.2.1, the Independent Engineer shall carry out an inspection of the Project at any time between 210 (two hundred and ten) and 180 (one hundred and eighty) days prior to the Termination and if it recommends that the status of the Project is such that a sum larger than the amount stipulated in Article 33.2.1 should be retained in the Escrow Account and for a period longer than the aforesaid 120 (one hundred and twenty) days, the amount recommended by the Independent Engineer shall be retained in the Escrow Account for the period specified by it.
- 33.2.3 The Concessionaire may, for the performance of its obligations under this Article 33, provide to the Authority in the form of Account Payee Demand Draft, Banker's Cheque or e - Bank Guarantee from a Bank for a sum equivalent to the amount determined under Article 33.2.1 or 33.2.2, as the case may be, and for the period specified therein, substantially in the form set forth in Schedule F (the "**Construction Period Performance Guarantee**" or "**Operation period Performance Guarantee**" as the case may be), to be modified, mutatis mutandis, for this purpose, and the Authority shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to encash and appropriate the required amounts from the relevant Performance Guarantee for undertaking the repairs or rectification at the Concessionaire's risk and cost in accordance with the provisions of this Article 33. Upon furnishing of the relevant Performance Guarantee under this Article 33.2.3, the retention of funds in the Escrow Account in terms of Article 33.2.1 or 33.2.2, as the case may be, shall be dispensed with.

ARTICLE 34 ASSIGNMENT AND CHARGES

34.1 Restrictions on assignment and charges

- 34.1.1 Subject to Articles 34.2 and 34.3, this Agreement shall not be assigned by the Concessionaire to any person, save and except with the prior consent in writing of the Authority, which consent the Authority shall be entitled to decline without assigning any reason.
- 34.1.2 Subject to the provisions of Article 34.2, the Concessionaire shall not create nor permit to subsist any Encumbrance, or otherwise transfer or dispose of all or any of its rights and benefits under this Agreement or any Project Agreement to which the Concessionaire is a party, except with prior consent in writing of the Authority, which consent the Authority shall be entitled to decline without assigning any reason.

34.2 Permitted assignment and charges

The restraints set forth in Article 34.1 shall not apply to:

- i. liens arising by operation of law (or by an agreement evidencing the same) in the ordinary course of business of the Project;
- ii. mortgages/pledges/hypothecation of goods/assets other than Project facilities and their related documents of title, arising or created in the ordinary course of business of the Project, and as security only for indebtedness to the Senior Lenders under the Financing Agreements and/or for working capital arrangements for the Project. For the avoidance of doubt, the Senior Lenders would be entitled to create a lien on the Escrow Account, subject to and without prejudice to the rights of the Authority under this Agreement;
- iii. assignment of rights, interest and obligations of the Concessionaire to or in favor of the Lenders' Representative as nominee and for the benefit of the Senior Lenders, to the extent covered by and in accordance with the Substitution Agreement as security for financing provided by Senior Lenders under the Financing Agreements; and
- iv. Liens or encumbrances required by any Applicable Law.

34.3 Substitution Agreement

- 34.3.1 The Lenders' Representative, on behalf of Senior Lenders, may exercise the right to substitute the Concessionaire pursuant to the agreement for substitution of the Concessionaire (the "Substitution Agreement") to be entered into amongst the Concessionaire, the Authority and the Lenders' Representative, on behalf of Senior Lenders, substantially in the form set forth in Schedule-Q.
- 34.3.2 Upon substitution of the Concessionaire under and in accordance with the Substitution Agreement, the Nominated Company substituting the Concessionaire shall be deemed to be the Concessionaire under this Agreement and shall enjoy all rights and be responsible for all obligations of the Concessionaire under this Agreement as if it were the Concessionaire; provided that where the Concessionaire is in breach of this Agreement on the date of such substitution, the Authority shall by notice grant a Cure Period of 120 (one hundred and twenty) days to the Concessionaire for curing such breach.

34.4 Assignment by the Authority

Notwithstanding anything to the contrary contained in this Agreement, the Authority may, after giving 60 (sixty) days' notice to the Concessionaire, assign and/ or transfer any of its rights and benefits and/or obligations under this Agreement to an assignee who is, in the reasonable opinion of the Authority, capable of fulfilling all of the Authority's then outstanding obligations under this Agreement.

ARTICLE 35 CHANGE IN LAW

35.1 Increase in costs

If as a result of Change in Law, the Concessionaire suffers an increase in costs or reduction in net after-tax return or other financial burden, the aggregate financial effect of which exceeds the higher of Rs. 1,00,00,000/- (Rupees one crore only) or 2% (two per cent) of the sum of the Annuity Payments and O&M Payments in any Accounting Year, the Concessionaire may so notify the Authority and propose amendments to this Agreement so as to place the Concessionaire in the same financial position as it would have enjoyed had there been no such Change in Law resulting in increased costs, reduction in return or other financial burden as aforesaid. Upon notice by the Concessionaire, the Parties shall meet, as soon as reasonably practicable as but no later than 30 (thirty) days from the date of notice and either agree on amendments to this Agreement or on any other mutually agreed arrangement:

Provided that if no agreement is reached within 90 (ninety) days of the aforesaid notice, the Concessionaire may by notice require the Authority to pay an amount that would place the Concessionaire in the same financial position that it would have enjoyed had there been no such Change in Law, and within 15 (fifteen) days of receipt of such notice, along with particulars thereof, the Authority shall pay the amount specified therein; provided that if the Authority shall dispute such claim of the Concessionaire, the same shall be settled in accordance with the Dispute Resolution Procedure. For the avoidance of doubt, it is agreed that this Article 35.1 shall be restricted to changes in law directly affecting the Concessionaire's costs of performing its obligations under this Agreement.

35.2 Reduction in costs

If as a result of Change in Law, the Concessionaire benefits from a reduction in costs or increase in net after-tax return or other financial gains, the aggregate financial effect of which exceeds the higher of Rs. 1,00,00,000/- (Rupees one crore only) or 2% (two per cent) of the sum of the Annuity Payments and O&M Payments in any Accounting Year, the Authority may so notify the Concessionaire and propose amendments to this Agreement so as to place the Concessionaire in the same financial position as it would have enjoyed had there been no such Change in Law resulting in decreased costs, increase in return or other financial gains as aforesaid. Upon notice by the Authority, the Parties shall meet, as soon as reasonably practicable as but no later than 30 (thirty) days from the date of notice and either agree on such amendments to this Agreement or on any other mutually agreed arrangement:

Provided that if no agreement is reached within 90 (ninety) days of the aforesaid notice, the Authority may by notice require the Concessionaire to pay an amount that would place the Concessionaire in the same financial position that it would have enjoyed had there been no such Change in Law, and within 15 (fifteen) days of receipt of such notice, along with particulars thereof, the Concessionaire shall pay the amount specified therein to the Authority; provided that if the Concessionaire shall dispute such claim of the Authority, the same shall be settled in accordance with the Dispute Resolution Procedure. For the avoidance of doubt, it is agreed that this Article 35.2 shall be restricted to changes in law directly affecting the Concessionaire's costs of performing its obligations under this Agreement.

35.3 Protection of NPV

Pursuant to the provisions of Articles 35.1 and 35.2 and for the purposes of placing the Concessionaire in the same financial position as it would have enjoyed had there been no Change in Law affecting the costs, returns or other financial burden or gains, the Parties shall rely on the Financial Model to establish a net present value (the "**NPV**") of the net cash flow and make necessary adjustments in costs, revenues, compensation or other relevant parameters, as the case may be, to procure that the NPV of the net

cash flow is the same as it would have been if no Change in Law had occurred. For the avoidance of doubt, the Parties expressly agree that for determination of NPV, the discount rate to be used shall be equal to the weighted average rate of interest at which the Concessionaire has raised the Debt Due under its Financing Agreements.

35.4 Restriction on cash compensation

The Parties acknowledge and agree that the demand for cash compensation under this Article 35 shall be restricted to the effect of Change in Law during the respective Accounting Year and shall be made at any time after commencement of such year, but no later than one year from the close of such Accounting Year. Any demand for cash compensation payable for and in respect of any subsequent Accounting Year shall be made after the commencement of the Accounting Year to which the demand pertains, but no later than 2 (two) years from the close of such Accounting Year.

ARTICLE 36 LIABILITY AND INDEMNITY

36.1 General indemnity

- 36.1.1 The Concessionaire shall indemnify, defend, save and hold harmless the Authority and its officers, servants, agents, Government Instrumentalities and Government owned and/or controlled entities/enterprises, (the “**Authority Indemnified Persons**”) against any and all suits, proceedings, actions, demands and claims from third parties for any loss, damage, cost and expense of whatever kind and nature, whether arising out of any breach by the Concessionaire of any of its obligations under this Agreement or any related agreement or on account of any defect or deficiency in the provision of services by the Concessionaire to the Authority or to any User, or from any negligence of the Concessionaire under contract or tort or on any other ground whatsoever, except to the extent that any such suits, proceedings, actions, demands and claims have arisen due to any negligent act or omission, or breach or default of this Agreement on the part of the Authority Indemnified Persons.
- 36.1.2 The Authority shall indemnify, defend, save and hold harmless the Concessionaire against any and all suits, proceedings, actions, demands and claims from third parties for any loss, damage, cost and expense of whatever kind and nature arising out of (a) defect in title and/or the rights of the Authority in the land comprised in the Service Area, and/or (b) breach by the Authority of any of its obligations under this Agreement or any related agreement, which materially and adversely affect the performance by the Concessionaire of its obligations under this Agreement, save and except that where any such claim, suit, proceeding, action, and/or demand has arisen due to a negligent act or omission, or breach of any of its obligations under any provision of this Agreement or any related agreement, and/or breach of its statutory duty on the part of the Concessionaire, its subsidiaries, affiliates, contractors, servants or agents, the same shall be the liability of the Concessionaire.

36.2 Indemnity by the Concessionaire

- 36.2.1 Without limiting the generality of Article 36.1, the Concessionaire shall fully indemnify, hold harmless and defend the Authority and the Authority Indemnified Persons from and against any and all loss and/or damages arising out of or with respect to:
- i. Failure of the Concessionaire to comply with Applicable Laws and Applicable Permits;
 - ii. Payment of taxes required to be made by the Concessionaire in respect of the income or other taxes of the Concessionaire's contractors, suppliers and representatives; or
 - iii. Non-payment of amounts due as a result of materials or services furnished to the Concessionaire or any of its contractors which are payable by the Concessionaire or any of its contractors.
 - iv. the Concessionaire not implementing the Project as per the Implementation Schedule, resulting in time and cost overruns;
 - v. the Concessionaire not adhering to the Key Performance Indicators which has resulted in the deterioration of services provided to the Users residing in the Service Area and/or action initiated by such Users against the Authority;
 - vi. default by the Concessionaire under the Financing Agreements;
- 36.2.2 Without limiting the generality of the provisions of this Article 36, the Concessionaire shall fully indemnify, hold harmless and defend the Authority Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and

damages which the Authority Indemnified Persons may hereafter suffer, or pay by reason of any demands, claims, suits or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information, design or process used by the Concessionaire or by the Concessionaire's Contractors in performing the Concessionaire's obligations or in any way incorporated in or related to the Project. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, the Concessionaire shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the revocation or suspension of the injunction or restraint order. If, in any such suit, action, claim or proceedings, the Project, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, the Concessionaire shall promptly make every reasonable effort to secure for the Authority a license, at no cost to the Authority, authorizing continued use of the infringing work. If the Concessionaire is unable to secure such license within a reasonable time, the Concessionaire shall, at its own expense, and without impairing the Specifications and Standards, either replace the affected work, or part, or process thereof with non-infringing work or part or process, or modify the same so that it becomes non infringing.

36.3 Notice and contest of claims

In the event that either Party receives a claim or demand from a third party in respect of which it is entitled to the benefit of an indemnity under this Article 36 (the "**Indemnified Party**") it shall notify the other Party (the "**Indemnifying Party**") within 15 (fifteen) days of receipt of the claim or demand and shall not settle or pay the claim without the prior approval of the Indemnifying Party, which approval shall not be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim or demand, it may conduct the proceedings in the name of the Indemnified Party, subject to the Indemnified Party being secured against any costs involved, to its reasonable satisfaction.

36.4 Defense of claims

- 36.4.1 The Indemnified Party shall have the right, but not the obligation, to contest, defend and litigate any claim, action, suit or proceeding by any third party alleged or asserted against such Party in respect of, resulting from, related to or arising out of any matter for which it is entitled to be indemnified hereunder, and reasonable costs and expenses thereof shall be indemnified by the Indemnifying Party. If the Indemnifying Party acknowledges in writing its obligation to indemnify the Indemnified Party in respect of loss to the full extent provided by this Article 36, the Indemnifying Party shall be entitled, at its option, to assume and control the defense of such claim, action, suit or proceeding, liabilities, payments and obligations at its expense and through the counsel of its choice; provided it gives prompt notice of its intention to do so to the Indemnified Party and reimburses the Indemnified Party for the reasonable cost and expenses incurred by the Indemnified Party prior to the assumption by the Indemnifying Party of such defense. The Indemnifying Party shall not be entitled to settle or compromise any claim, demand, action, suit or proceeding without the prior written consent of the Indemnified Party, unless the Indemnifying Party provides such security to the Indemnified Party as shall be reasonably required by the Indemnified Party to secure the loss to be indemnified hereunder to the extent so compromised or settled.
- 36.4.2 If the Indemnifying Party has exercised its rights under Article 36.3, the Indemnified Party shall not be entitled to settle or compromise any claim, action, suit or proceeding without the prior written consent of the Indemnifying Party (which consent shall not be unreasonably withheld or delayed).

36.4.3 If the Indemnifying Party exercises its rights under Article 36.3, the Indemnified Party shall nevertheless have the right to employ its own counsel, and such counsel may participate in such action, but the fees and expenses of such counsel shall be at the expense of the Indemnified Party, when and as incurred, unless:

- i. The employment of counsel by such party has been authorized in writing by the Indemnifying Party;
- ii. The Indemnified Party shall have reasonably concluded that there may be a conflict of interest between the Indemnifying Party and the Indemnified Party in the conduct of the defense of such action;
- iii. the Indemnifying Party shall not, in fact, have employed independent counsel reasonably satisfactory to the Indemnified Party, to assume the defense of such action and shall have been so notified by the Indemnified Party; or
- iv. The Indemnified Party shall have reasonably concluded and specifically notified the Indemnifying Party either:
 1. that there may be specific defenses available to it which are different from or additional to those available to the Indemnifying Party; or
 2. That such claim, action, suit or proceeding involves or could have a material adverse effect upon it beyond the scope of this Agreement: Provided that if Sub-Articles (b), (c) or (d) of this Article 36.4.3 shall be applicable, the counsel for the Indemnified Party shall have the right to direct the defense of such claim, demand, action, suit or proceeding on behalf of the Indemnified Party, and the reasonable fees and disbursements of such counsel shall constitute legal or other expenses hereunder.

36.5 No consequential claims

Notwithstanding anything to the contrary contained in this Article 36, the indemnities herein provided shall not include any claim or recovery in respect of any cost, expense, loss or damage of an indirect, incidental or consequential nature, including loss of profit, except as expressly provided in this Agreement.

36.6 Survival on Termination

The provisions of this Article 36 shall survive Termination.

ARTICLE 37 RIGHTS AND TITLE OVER THE SERVICE AREA

37.1 Licensee rights

For the purpose of this Agreement, the Concessionaire shall have rights to the use of the Service Area as a licensee subject to and in accordance with this Agreement, and to this end; it may regulate the entry and use of the Project by third parties in accordance with and subject to the provisions of this Agreement.

37.2 Access rights of the Authority and others

- 37.2.1 The Concessionaire shall allow free access to the Service Area at all times for the authorized representatives and vehicles of the Authority and/or its contractors, Senior Lenders, and the Independent Engineer, and for the persons and vehicles duly authorized by any Government Instrumentality to inspect the Project and to investigate any matter within their authority, and upon reasonable notice, the Concessionaire shall provide to such persons reasonable assistance necessary to carry out their respective duties and functions.
- 37.2.2 The Concessionaire shall, for the purpose of operation and maintenance of any utility or road specified in Article 11, allow free access to the Site at all times for the authorized persons and vehicles of the controlling body of such utility or road.

37.3 Property taxes

Property taxes, if any, on the Service Area shall be payable by the Authority as owner of the Service Area; provided, however, that any such taxes payable by the Concessionaire under Applicable Laws for use of the Service Area shall not be reimbursed or payable by the Authority. For the avoidance of doubt, the Parties agree that stamp duties, if any, due and payable on the grant of license comprising this Agreement shall be paid by the Authority. Provided, however, that the Authority may require the Concessionaire to pay such stamp duties, which shall be reimbursed by the Authority to the Concessionaire within 15 (fifteen) days of receiving the demand thereof.

37.4 Restriction on sub-letting

The Concessionaire shall not sub-license or sub-let the whole or any part of the Service Area, save and except as may be expressly set forth in this Agreement; provided that nothing contained herein shall be construed or interpreted as restricting the right of the Concessionaire to appoint Contractors for the performance of its obligations hereunder including for operation and maintenance of all or any part of the Project.

ARTICLE 38 DELETED

ARTICLE 39 DEFECTS LIABILITY

39.1 Defects Liability Period

39.1.1 The Concessionaire shall be responsible for all the Defects and deficiencies, except usual wear and tear in the Project Facilities or any part thereof, till the expiry of a period of 1 (one) year commencing from the date of Provisional Certificate (the "Defects Liability Period"). Provided that the Defects Liability Period shall in no case be less than 6 (six) months from the date of Completion Certificate for and in respect of works for which Time Extension was granted. Provided further that in the event no Provisional Certificate is issued, the Defects Liability Period shall commence from the date of the Completion Certificate. For the avoidance of doubt, any repairs or restoration on account of usual wear or tear in the Project Facilities or any part thereof shall form a part of the maintenance obligations of the Concessionaire as specified in Article 17. Provided that in the event of termination of this Agreement, either at the completion of the term of the Agreement or anytime prior, the provisions of Article 33 shall apply.

39.2 Remedying Defects

The Concessionaire shall repair or rectify all Defects and deficiencies observed by the Independent Engineer during the Defects Liability Period within a period of 15 (fifteen) days from the date of notice issued by the Independent Engineer in this behalf, or within such reasonable period as may be determined by the Independent Engineer at the request of the Concessionaire, in accordance with Good Industry Practice.

39.3 Cost of remedying Defects

For the avoidance of doubt, any repair or rectification undertaken in accordance with the provisions of Article 39.2, including any additional testing, shall be carried out by the Concessionaire at its own risk and cost, to the extent that such rectification or repair is attributable to:

- (a) the design of the Project Facilities;
- (b) plant, materials or workmanship not being in accordance with this Agreement and the Technical Specifications;
- (c) improper maintenance during construction of the Project by the Concessionaire.

39.4 Concessionaire's failure to rectify Defects

In the event that the Concessionaire fails to repair or rectify such Defect or deficiency within the period specified in Article 39.2, the Authority shall be entitled to get the same repaired, rectified or remedied at the Concessionaire's cost so as to make the Project Facilities conform to the Technical Specifications and the provisions of this Agreement. All costs consequent thereon shall, after due consultation with the Authority and the Concessionaire, be determined by the Independent Engineer. The cost so determined and an amount equal to twenty percent of the cost as Damages shall be recoverable by the Authority from the Concessionaire and may be deducted by the Authority from any monies due to the Concessionaire or from the Construction Period Performance Guarantee.

39.5 Concessionaire to search cause

39.5.1 The Independent Engineer may instruct the Concessionaire to examine the cause of any Defect in the Project Facilities or part thereof before the expiry of the Defects Liability Period.

39.5.2 In the event any Defect identified under Article 39.5.1 is attributable to the Concessionaire, the Concessionaire shall rectify such Defect within the period specified by the Independent Engineer, and shall bear the cost of the examination and rectification of such Defect.

39.5.3 In the event such Defect is not attributable to the Concessionaire, the Independent Engineer shall, after due consultation with the Authority and the Concessionaire, determine the costs incurred by the Concessionaire on such examination and notify the same to the Concessionaire, with a copy to the Authority, and the Concessionaire shall be entitled to payment of such costs by the Authority.

39.6 Extension of Defects Liability Period

The Defects Liability Period shall be deemed to be extended till the identified Defects under Article 39.2 have been remedied.

39.7 Replacement of assets upon expiry of Defects Liability Period

Upon expiry of the Defects Liability Period, any replacement of the assets in the Project Facilities shall be performed in accordance with the process provided for Construction of Project Facilities.

ARTICLE 40 DISPUTE RESOLUTION

40.1 Dispute Resolution

- 40.1.1 Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "**Dispute**") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure set forth in Article 40.2.
- 40.1.2 The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of this Agreement promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non privileged records, information and data pertaining to any Dispute.

40.2 Conciliation

In the event of any Dispute between the Parties, either Party may call upon the Independent Engineer to mediate and assist the Parties in arriving at an amicable settlement thereof. Failing mediation by the Independent Engineer or without the intervention of the Independent Engineer, either Party may require such Dispute to be referred to the Principal Secretary of the Authority and the Chairman of the Board of Directors of the Concessionaire for amicable settlement, and upon such reference, the said persons shall meet no later than 7 (seven) days from the date of reference to discuss and attempt to amicably resolve the Dispute. If such meeting does not take place within the 7 (seven) day period or the Dispute is not amicably settled within 15 (fifteen) days of the meeting or the Dispute is not resolved as evidenced by the signing of written terms of settlement within 30 (thirty) days of the notice in writing referred to in Article 40.1.1 or such longer period as may be mutually agreed by the Parties, either Party may refer the Dispute to arbitration in accordance with the provisions of Article 40.3.

40.3 Arbitration

- 40.3.1 Any Dispute which is not resolved amicably by conciliation, as provided in Article 40.2, shall be finally decided by reference to arbitration by a Board of Arbitrators appointed in accordance with Article 40.3.2. Such arbitration shall be held in accordance with the Rules of Nani Palkhivala Arbitration Centre, Chennai (the "**Rules**"), or such other rules as may be mutually agreed by the Parties and shall be subject to the provisions of the Arbitration Act. The venue of such arbitration shall be Chennai, and the language of arbitration proceedings shall be English.
- 40.3.2 There shall be a Board of three arbitrators, of whom each Party shall select one, and the third arbitrator shall be appointed by the two arbitrators so selected, and in the event of disagreement between the two arbitrators, the appointment shall be made in accordance with the Rules.
- 40.3.3 The arbitrators shall make a reasoned award (the "**Award**"). Any Award made in any arbitration held pursuant to this Article 40 shall be final and binding on the Parties as from the date it is made, and the Concessionaire and the Authority agree and undertake to carry out such Award without delay.
- 40.3.4 The Concessionaire and the Authority agree that an Award may be enforced against the Concessionaire and/or the Authority, as the case may be, and their respective assets wherever situated.
- 40.3.5 This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the Award in any arbitration proceedings hereunder. Further, the parties unconditionally acknowledge and agree that notwithstanding any dispute between them, each party shall proceed with the performance of its respective

obligations, pending resolution of Dispute in accordance with this Article.

40.4 Adjudication by Regulatory Authority, Tribunal or Commission

In the event of constitution of a statutory regulatory authority, tribunal or commission, as the case may be, with powers to adjudicate upon disputes between the Concessionaire and the Authority, all Disputes arising after such constitution shall, instead of reference to arbitration under Article 40.3, be adjudicated upon by such regulatory authority, tribunal or commission in accordance with the Applicable Law and all references to Dispute Resolution Procedure shall be construed accordingly. For the avoidance of doubt, the Parties hereto agree that the adjudication hereunder shall not be final and binding until an appeal against such adjudication has been decided by an appellate tribunal or court of competent jurisdiction, as the case may be, or no such appeal has been preferred within the time specified in the Applicable Law.

ARTICLE 41 DISCLOSURE

41.1 Disclosure of Specified Documents

The Concessionaire shall make available for inspection by any person, copies of this Concession Agreement, the Maintenance Manual, Maintenance Program, the Environment, Health & Safety plan, the detailed Drawings and any other related documents (hereinafter collectively referred to as the “**Specified Documents**”), free of charge, during normal business hours on all working days at the Site and the Concessionaire’s Registered Office. The Concessionaire shall prominently display at the Service Area, public notices stating the availability of the Specified Documents for such inspection, and shall provide copies of the same to any person upon payment of copying charges on a ‘no profit no loss’ basis.

41.2 Disclosure of Documents relating to safety

The Concessionaire shall make available for inspection by any person copies of all Documents and data relating to safety of the Project, free of charge, during normal business hours on all working days, at the Concessionaire’s Registered Office. The Concessionaire shall make copies of the same available to any person upon payment of copying charges on a ‘no profit no loss’ basis.

Notwithstanding the provisions of Articles 41.1 and 41.2, the Authority shall be entitled to direct the Concessionaire, from time to time, to withhold the disclosure of Protected Documents (as defined herein below) to any person in pursuance of the aforesaid Articles.

Explanation: The expression Protected Documents shall mean such of the Specified Documents or documents referred to in Articles 41.1 and 41.2, or portions thereof, the disclosure of which the Authority is entitled to withhold under the provisions of the Right to Information Act, 2005.

ARTICLE 42 REDRESSAL OF PUBLIC GRIEVANCES

42.1 Complaints Register

- 42.1.1 The Concessionaire shall maintain a public relations office at the Service Area/Site where it shall keep a register (the “**Complaint Register**”) open to public access at all times for recording of complaints by any person (the “**Complainant**”). Information relating to the availability of and access to the Complaint Register shall be prominently displayed by the Concessionaire at each the Service Area/Site so as to bring it to the attention of all Users.
- 42.1.2 The Complaint Register shall be securely bound and each page thereof shall be duly numbered. It shall have appropriate columns including the complaint number, date, name and address of the Complainant, substance of the complaint and the action taken by the Concessionaire. Immediately after a complaint is registered, the Concessionaire shall give a receipt to the Complainant stating the date and complaint number.
- 42.1.3 Without prejudice to the provisions of Articles 42.1.1 and 42.1.2, the Authority may, in consultation with the Concessionaire, specify the procedure for making complaints in electronic form and for responses thereto.

42.2 Redressal of complaints

- 42.2.1 The Concessionaire shall inspect the Complaint Register every day and take prompt and reasonable action for redressed of each complaint. The action taken shall be briefly noted in the Complaint Register and a reply stating the particulars thereof shall be sent by the Concessionaire to the Complainant under a certificate of posting.
- 42.2.2 Within 7 (seven) days of the close of each month, the Concessionaire shall send to the Authority and to the Independent Engineer a true photocopy each of all the pages of the Complaint Register on which any entry has been recorded during the course of such month, and upon perusal thereof, the Authority may, in its discretion, advise the Concessionaire to take such further action as the Authority may deem appropriate for a fair and just redressal of any grievance. The Concessionaire shall consider such advice and inform the Authority of its decision thereon, and if the Authority is of the opinion that the Complainant is entitled to further relief, the Authority may advise the Complainant to seek appropriate remedy under the Consumer Protection Act, 1986, at his own risk and cost.

ARTICLE 43 MISCELLANEOUS

43.1 Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts in Chennai shall have exclusive jurisdiction over matters arising out of or relating to this Agreement.

43.2 Waiver of immunity

Each Party unconditionally and irrevocably:

- i. Agrees that the execution, delivery and performance by it of this Agreement constitute commercial acts done and performed for commercial purpose;
- ii. agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Agreement or any transaction contemplated by this Agreement, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of the Party with respect to its assets;
- iii. waives any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and
- iv. consents generally in respect of the enforcement of any judgment or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgment that may be made or given in connection therewith).

43.3 Depreciation

For the purposes of depreciation under Applicable Laws, the property representing the capital investment made by the Concessionaire in the Project shall be deemed to be acquired and owned by the Concessionaire. For the avoidance of doubt, the Authority shall not in any manner be liable in respect of any claims for depreciation to be made by the Concessionaire under Applicable Laws.

43.4 Delayed payments

- 43.4.1 The Parties hereto agree that payments due from one Party to the other Party under the provisions of this Agreement shall be made within the period set forth therein, and if no such period is specified, within 30 (thirty) days of receiving a demand along with the necessary particulars. Unless otherwise specified in this Agreement, in the event of delay beyond such period, the defaulting Party shall pay interest for the period of delay calculated at a rate equal to 2% (two per cent) above the prevailing SBI MCLR, and recovery thereof shall be without prejudice to the rights of the Parties under this Agreement including Termination thereof.
- 43.4.2 Unless otherwise specified, any interest payable under this Agreement shall accrue on a daily outstanding basis and shall be compounded on the basis of quarterly rests.

43.5 Waiver

- 43.5.1 Waiver, including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:
- i. Shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;

- ii. Shall not be effective unless it is in writing and executed by a duly authorized representative of the Party; and
- iii. Shall not affect the validity or enforceability of this Agreement in any manner.

43.5.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

43.6 Liability for review of Documents and Drawings

Except to the extent expressly provided in this Agreement

- a) no review, comment or approval by the Authority or the Independent Engineer of any Project Agreement, Document or Drawing submitted by the Concessionaire nor any observation or inspection of the construction, operation or maintenance of the Project nor the failure to review, approve, comment, observe or inspect hereunder shall relieve or absolve the Concessionaire from its obligations, duties and liabilities under this Agreement, Applicable Laws and Applicable Permits; and
- b) The Authority shall not be liable to the Concessionaire by reason of any review, comment, approval, observation or inspection referred to in Sub-Article (a) above.

43.7 Exclusion of implied warranties etc.

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties or any representation by either Party not contained in a binding legal agreement executed by both Parties.

43.8 Survival

43.8.1 Termination shall:

- i. Not relieve the Concessionaire or the Authority, as the case may be, of any obligations hereunder which expressly or by implication survive Termination hereof; and
- ii. except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of, or caused by, acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.

43.8.2 All obligations surviving Termination shall only survive for a period of 3 (three) years following the date of such Termination.

43.9 Entire Agreement

This Agreement and the Schedules together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn. For the avoidance of doubt, the Parties hereto agree that any obligations of the Concessionaire arising from the Request for Proposals, as the case may be, shall be deemed to form part of this Agreement and treated as such.

43.10 Severability

If for any reason whatsoever, any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to the Dispute Resolution Procedure set forth under this Agreement or otherwise.

43.11 No partnership

This Agreement shall not be interpreted or construed to create an association, joint venture or partnership between the Parties, or to impose any partnership obligation or liability upon either Party, and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

43.12 Third parties

This Agreement is intended solely for the benefit of the Parties and their respective successors and permitted assigns, and nothing in this Agreement shall be construed to create any duty to, standard of care with reference to, or any liability to, any person not a Party to this Agreement including any Concessionaire's Contractor.

43.13 Successors and assigns

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns.

43.14 Notices

Unless the law requires to follow the specified mode of communication only as prescribed therein, any notice or other communication to be given by one contracting Party to the other Party under or in connection with the matters contemplated by this Agreement shall be routed through _____ under the hand of the authorized representative and shall:

1. in the case of the Concessionaire, be given through _____ and marked for attention of the person set out below or to such other person as the Concessionaire may from time to time designate by notice to the Authority.

{Attention:

Designation:

Address:

Fax No:

Email ;}

2. in the case of the Authority, be given through _____ and be addressed to the person named below with a copy delivered to the Authority Representative or such other person as the Authority may from time to time designate by notice to the Concessionaire;

{Attention:

Designation:

Address:

Fax No:

Email :}; and

3. any notice or communication by one contracting Party to the other Party, given in accordance herewith, shall be deemed to have been delivered when given through

or made on the _____.

43.15 Language

All notices required to be given by one Party to the other Party and all other communications, Documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

43.16 Counterparts

This Agreement may be executed in two counterparts, each of which, when executed and delivered, shall constitute an original of this Agreement.

SCHEDULE A: SERVICE AREA/SITE

That part of the Location (defined herein) to be metered including extended areas I, II, III, VII, XI, XII, XIV and XV of Authority wherein the Concessionaire performs Project related activities.

CATEGORY WISE SURVEY DETAILS FOR SMART WATER METERS

ABSTRACT

S. No	Area	Commercial	Partly Commercial	Domestic		Pvt Ins	Industries	Total
				Multi storied buildings	Individual buildings above 2500 Sq ft			
1	Core Area	7,273	12,789	19,906	33,290	316	34	73,608
2	Added Area	1,551	5,273	5,771	13,753	43	1	26,392
TOTAL		8,824	18,062	25,677	47,043	359	35	1,00,000

AREAWISE DETAILS

S.No	Area	Commercial	PC	Domestic		Pvt Ins	Industries	Total
				Multi storied buildings	Individual buildings above 2500 sq.ft			
1	I	25	151	0	624	0	0	800
2	II	9	73	0	138	3	0	223
3	III	306	948	267	503	8	0	2,032
4	IV	106	789	153	3,776	5	0	4,829
5	V	2,375	2,706	1,471	2,666	253	0	9,471
6	VI	287	1,127	1,140	5,295	0	0	7,849
7	VII	555	2,828	2,176	3,322	22	1	8,904
8	VIII	637	1,680	5,443	7,303	23	2	15,088
9	IX	1,672	2,285	3,805	7,207	9	0	14,978
10	X	1,606	3,177	4,623	6,073	15	0	15,494
11	XI	325	536	260	2,929	1	0	4,051
12	XII	110	221	342	2,510	0	0	3,183
13	XIII	590	1,025	3,271	970	11	32	5,899
14	XIV	158	386	2,165	1,933	6	0	4,648
15	XV	63	130	561	1,794	3	0	2,551
TOTAL		8,824	18,062	25,677	47,043	359	35	1,00,000

SIZE OF SMART WATER METERS TO BE FIXED

Sl. No	Area	Size of Connections in mm						Meter chamber	
		15	20	25	32	40	Total	Available	Not Available
1	I	800	0	0	0	0	800	0	800
2	II	223	0	0	0	0	223	0	223
3	III	1,755	265	12	0	0	2,032	0	2,032
4	IV	4,713	115	0	0	1	4,829	0	4,829
5	V	9,470	0	1	0	0	9,471	0	9,471
6	VI	7,848	0	1	0	0	7,849	0	7,849
7	VII	8,611	249	43	1	0	8,904	2,328	6,576
8	VIII	9,164	5,767	139	0	18	15,088	1,479	13,609
9	IX	9,153	5,639	181	3	2	14,978	3,843	11,135
10	X	8,960	5,590	932	12	0	15,494	5,077	10,417
11	XI	4,028	0	7	15	1	4,051	0	4,051
12	XII	2,896	267	6	1	13	3,183	519	2,664
13	XIII	4,609	763	523	1	3	5,899	0	5,899
14	XIV	4,644	2	2	0	0	4,648	1,526	3,122
15	XV	2,452	96	1	1	1	2,551	0	2,551
Total		79,326	18,753	1,848	34	39	100,000	14,772	85228
Core Area		53,917	17,874	1,777	16	24	73,608	10,399	63,209
Added Area		25,409	879	71	18	15	26,392	4,373	22,019

SCHEDULE B: DEVELOPMENT REQUIREMENTS

Annexure 1

1. Description of Work

1.1 Civil

Sl. No	Description
A1	Smart Water Meter fixing charges with specials
	Includes <ul style="list-style-type: none">Supplying the specials and pipes for fixing meters for sizes of Dia 15mm, 20 mm, 25mm, 32mm & 400 mm Fixing of water meters including MDPE Pipes & Specials (Union, Male Threaded Adaptor, U PVC ball valve, Coupler & GM Non return Valve and any other necessary specials based on site conditions).
A2	Protection/Surface Box
	Includes <ul style="list-style-type: none">Supply and delivery of protection box of size 20cm x 30cm for fixing of Smart Water Meter. Material of construction should be weather resistant polyethylene (PE) blue /black .
A3	Construction of Meter chambers
	Includes <ul style="list-style-type: none">Construction of Meter chambers of 0.6m x 0.6m x 1.5m with earth work excavation for foundationConstruction of 23cm thick concrete bed using 40mm brick jelly concrete in C.M. 1:4:10 for foundationConstruction of brick work in C.M. 1:6 for chamberPlastering with C.M. 1:3,12mm thick, benching, channelling, supplying and fixing 45x45cm FRC cover and frame, etc.

1.2 Metering

Concessionaire to provide technical specifications

1.3 Scope of work for Software Service Provider

The Scope of work of the Software Service Provider shall cover the following:

- Meter Communication,
- Meter Data Management Software,
- Software Integration with CMWSSB ERP &
- Associated Applications/Tools

The service provider will be required design the software application/Portal on an open source platform and on cloud-hosted environment, develop and maintain a complete system of HES, MDMS, integration to existing billing system, consumer and O&M Applications. This will include: Periodic Backup, optimisation of procedures and DB, fixing up vulnerabilities of any kind, updation of software/OS components, etc. for a period of 12 years.

Deliverables

- Software service provider (SP) shall be responsible for all the development, implementation, testing, maintenance, support, feature enhancements, documentation, and support of applications.
- SP shall be responsible for the complete turnkey operation of the IT systems (software only) to ensure a minimum of 99.5% uptime availability of all the applications under this project.
- Complete Software Development Life Cycle (SDLC) should be followed for each application.
- Proper Documentation with versioning of all the applications should be maintained like SRS, High Level Design, Low Level Design, functionality document (process document), user manual, test case/evaluation report, Impact Analysis Report, Change Document etc.
- All the changes in the applications should be properly documented and reflected in respective documents.
- Proper coding standards should be followed in all the applications. Periodic code review should be done for improvement in source code. Code & query optimization should be done to the extent possible.
- Proper testing should be done for the changes done in the application or database. Testing should be done on exhaustive test cases.
- Ensure proper backup of application and database as per the approved backup policy.
- In case of any eventuality, it has to be ensured that the downtime is minimum and system is restored with minimum data loss.
- It should also be ensured that all the security measures are undertaken to prevent vulnerabilities/threats/hacking of application or data theft. The new software applications developed shall comply with the necessary Internet Security Guidelines from NIC/Cert-in empanelled Internet Security Auditors before hosting and to provide safe-to-host certificate after fixing all kind of vulnerabilities as per NIC norms.
- SP shall be responsible to maintain the confidentiality of application, data and any other information and make sure that information is not shared outside the CMWSSB. The required confidentiality agreement shall be signed by SP as well as by each team member deployed at CMWSSB.
- Source Code will be handed over to the IT Division, CMWSSB along with compiled version and executables. Any software developed shall be the property of CMWSSB. Software, Documents, Information and other elements of the project shall have the copyrights of CMWSSB unless some copy right material is used with due permission of any third party.
- Proper versioning of source code should be maintained. It should be ensured that uploading of the revamped application in the LIVE servers is carried out with due care to avoid any wrong upload or accidental file replace.
- Preventive maintenance shall be carried out on the database and functioning of the program to handle large volume of traffic.

The deliverables also include:

- System Requirements Specifications document
- User Acceptance Testing (UAT) signoff for revamped Portal
- Complete source code
- Fully functional working version of the Portal including CMWSSB related data, if any
- Test Plans used and test cases
- Technical design document and Users' manuals

The AMI system shall be designed to meet the system availability as defined below:

S. No.	System	Minimum System Availability Requirements
1.	Smart Water Meters	99.5%
2.	Gateways	99.5%
3.	MDMS	99.5%
4.	HES	99.5%
5.	NOMC Hardware such as UPS, Router, etc.	99.5%
6.	Utility and Consumer User Interface	99.5%

During the condition precedent period the software service provider shall come out with a proper service level agreement furnishing cloud service uptime commitment, gateway requirements, security and backups, help desk support, software uptime.

Annexure 2

1. Capital Investment Plan

To be provided by the Concessionaire

2. Operations & Maintenance Plan

To be provided by the Concessionaire

SCHEDULE C: KEY PERFORMANCE INDICATORS

The Concessionaire shall ensure and procure compliance of the below Key Performance Indicators (KPIs) in a diligent manner:

1. Construction Period:

During the construction period the Concessionaire shall have the obligation to achieve the following targets:

- (a) Setting up of AMI Infrastructure, communication and Software with ERP Integration by the end of 6 months from the Appointed Date
- (b) Metering of a minimum of 30% of connections metered in the CIP or 25,000 connections whichever is lower, by the end of one year from the Appointed Date
- (c) Metering of a minimum of 100% of connections metered in the CIP or 100,000 connections whichever is lower, by the end of two years from the Appointed Date

Each connection shall be considered completed upon:

- (i) Installation of User Meter
- (ii) Inclusion of customer in the GIS based customer database
- (iii) Successful automated porting of consumer's water consumption data to the Authority's billing system through AMI network

Provided however, if the Concessionaire has failed to achieve any or all of the mile-stones as mentioned in (a) and (b) above, the Liquidated Damages will be computed as provided below:

Sl. No.	Time Period from Scheduled Completion Date	Liquidated Damaged INR/Day
1.	Upto 60 (sixty) days	Rs. 100,000
2.	Beyond 60 (sixty) days upto 120 (one hundred and twenty) days	Rs. 2,00,000
3.	Beyond 120 (one hundred and twenty) days upto 270 (two hundred and seventy) days	Rs. 5,00,000
4.	Beyond 270 (two hundred and seventy) days	Termination under Article 31

However, it is expressly clarified that this Liquidated Damage shall not be payable if the delay is due to any reason not attributable to the Concessionaire's fault, and for which the Authority has provided Extension of time to complete the obligations.

It is further clarified that in the event of levy of any Liquidated Damages on account of non-performance of 1(b) above, the same shall be adjusted against the computation of Liquidated Damages at the time of CoD. To illustrate, if the milestone mentioned in 1(b) is delayed by 10 days and the Concessionaire is levied a penalty of Rs. 10,00,000, and the overall project is completed in 10 days from the Scheduled CoD, no further penalty shall be levied at the time of CoD. In the above illustration, if the overall project is completed on the scheduled completion date, the Liquidated damaged levied on the Concessionaire shall be reimbursed. It is expressly clarified that, no penalty shall be levied for delay in the completion of milestone in 1(a) above, since no payments will be due in the event the milestone in 1(a) is not achieved.

2. Operation Period

The Concessionaire has to achieve minimum performance standards as detailed here in below. Poor performances below the minimum performance standards shall attract penalties as detailed herein:

Sr. No.	Service Level Benchmark	Target	Targeted performance
1	Efficiency in Redressal of Complaints	95%	95% of complaints to be redressed within the stipulated time from COD
2	Smart water Meter reading and Billing Efficiency	100%	From COD
3	Functioning of Smart Water Meters	100%	From COD

Calculation methods:-

Above Service level benchmark shall be calculated using following formula and the Performance Parameters, Penalties and the Measurement framework shall be as detailed below:

The penalties will be calculated on a monthly basis and the deductions/additions will be made quarterly when the O&M payments are made.

(1) Efficiency in Redressal of Complaints:

Rationale	Responsive to consumer needs
Frequency	Monthly
Required Service Level	95% of complaints should be resolved within the time period provided for respective category of complaint. Complaints to be resolved within 48 hours: Complaints relating to functioning of smart water meters including wrong readings, non functioning and other issues relating to the meter. Complaints to be resolved within 7 days: Complaints related to errors or problems in billing information (resulting from issues in communication infrastructure), change in customer database, other complaints connected to customer database or billing. Complaints for which Redressal beyond the control of the Concessionaire to be listed separately and to be certified by the Independent Engineer. In the event a complaint is not redressed within twice the time period provided for such redressal period, the same shall be considered as an additional complaint by the same Complainant. The accumulation of complaints shall continue till it has been resolved.
Measured by	Percentage of total number of customer requests resolved during the month under review, including those resolved until the 7 th of the succeeding month (where the time period allowed is 7 days) over the total number of customer requests received and recorded during that month under review.

Data Requirements	Total number of smart water meter complaints received per month and total number of smart water meter complaints redressed within 48 hrs and 7 days. Where the complaints have been resolved beyond the stipulated time, the actual time taken for the resolution.
Calculation	Total number of complaints redressed within the stipulated time for the respective category Total number of complaints received in a month in the respective categories
Monitored by	An electronic registry maintained by the Concessionaire, the registry shall include detailed database and summary tables including: <ul style="list-style-type: none"> • Time and Date • Complaint Number • Consumer Name • Consumer Identification Number • CMC Number • Nature of Complaint • Time and Date at which Consumer is provided with response • Action Taken Report • Time and Date of resolution of Complaint
Allowable Exclusions	Period in which no water is supplied
Penalty/Damages	X being the percentage of complaints not resolved within the stipulated time $(95\% - X) \times \text{Monthly O\&M fees}$

(2) **Smart Water Meter Reading and Capturing Water Consumption Data for Billing:**

Rationale	Capturing water consumption data and facilitating billing
Frequency	Monthly
Required Service Level	100% of the smart water meters to be read and the data on consumption to be transferred to the Billing system of the Authority automatically through AMI
Measured by	Percentage of total number of smart water meters read and billing database updated over the total number of consumer meters
Data Requirements	Total number of functioning meters Number of smart meters read and billing data uploaded to the Authority's database
Calculation	$\frac{\text{Number of meters read and billing database updated}}{\text{Total number of functioning meters}}$
Monitored by	<ul style="list-style-type: none"> • Smart Water Meter readings are completed by the scheduled date • Electronic consumer data base updated with monthly billing data for each consumer • Generation of bills for all metered consumers

	Random check of the billing data by independent engineer and investigating the anomalies
Allowable Exclusions	None
Penalty/Damages	X being the percentage of meters read and billed. Penalty = (100% - X) x Monthly O&M fees
Incentive	No incentive

(3) **Functioning of Smart Water Meters:**

Rationale	Capturing the quantity of water consumed
Frequency	Monthly
Required Service Level	100% of total consumer smart meter should be functional and bills shall be issued as per actual smart meter reading for each billing cycle.
Measured by	Total number of functional metered connection as a percentage of total number of metered connections
Data Requirements	Total number of connection & number of registered metered connection.
Calculation	$\frac{\text{Total number of functional metered connection.}}{\text{Total number of metered connections}}$
Monitored by	<ul style="list-style-type: none"> Electronic consumer data base with initial meter reading and final reading for each billing cycle Consumer numbers in database Meter reading statement <p>Random check of the functioning of the meter by independent engineer for each billing cycle and investigating the anomalies</p>
Allowable Exclusions	<p>Maximum up to 5% is allowed to be issued bills with average consumption and or non-issue of bills</p> <ol style="list-style-type: none"> Meter damaged or stolen by third party Refusal by consumer and reported to CMWSSB Disconnected by CMWSSB (will be deducted while calculating % from total consumers)
Penalty/Damages	X being the percentage of functional meters Penalty = (100% - X) x Monthly O&M fees
Incentive	No incentive

SCHEDULE D: TECHNICAL SPECIFICATIONS FOR SMART WATER METERS

Technical Requirements	Details		
Technical Standards	a) IS 779:1994 (reaffirmed 2015) - Specification for water meters (domestic type) b) IS 6784:1996 – method of performance testing of water meters c) ISO 4064-1:2014 – water meters for cold potable water and hot water – metrological and technical requirements d) ISO 4064-2:2014 – water meters for cold potable water and hot water – test methods e) ISO 4064-3:2014 (Reviewed and Confirmed in 2019) – water meters for cold potable water and hot water – test report format f) ISO 4064-4:2014 – (Reviewed and Confirmed in 2019) – Non metrological requirements not covered in ISO 4064-1. g) ISO 4064-5:2014 – (Reviewed and Confirmed in 2019) – Installation requirements		
Required Certificates	IS 779:1994 (reaffirmed 2015) and IS 6784:1996, IS 2373: 1981 (reaffirmed 2017), ISO 4064 (1 to 5):2014 The Meter should be MID certified. In addition, endurance test report in accordance with ISO4064:2014 from FCRI should be provided.		
	Manufacturer's authorization		
Class of Water Meter	Class 2 Water meters in accordance with ISO4064:2014. Operating range ratio (Q3/Q1) = R500.		
Sizing of Water Meter	The size of meter shall be arrived based on the dwelling units of the premises:		
	Equivalent Dwelling Units	Size of Meter (mm)	Recommended range of monthly consumption (m ³)
	Up to 6	15	0-100
	7 to 20	20	101-170
	21 to 40	25	171-260
	41 to 70	32	261-420
	Above 70	100	420 – 550
Material Requirements	The water meter body shall be made of Corrosion resistant material like, Engineering Plastic, brass, Bronze, Stainless steel, Carbon steel. The same will be reviewed time to time by the Technical committee.		

Technical Requirements	Details
Tamper protection seals	A water Meter shall include protection devices which can be sealed so as to prevent, both before and after correct installation of the water Meter, dismantling or modification of the Meter, its adjustment device or its correction device, without damaging these devices. This can be done by sealing with a corrosive resistant wire or specially made plastic ribbon inserted through 2.5 mm diameter holes in the halves of the body, and secured by a circular sheet metal seal impressed by a device which provides a unique imprint on the seal.
Meter Accuracy Testing	A water Meter shall be designated as accuracy class2. This requires the Maximum Permissible Error (MPE) to be $\pm 2\%$ (for temperatures from 0.1 °C to 30 °C and $\pm 3\%$ for temperatures greater than 30 °C) for the upper flow rate zone (Q3 & Q4). The MPE for the lower flow rate zone (Q1andQT) shall be $\pm 5\%$. During procurement, two Meter samples from each Tender shall be tested in an accredited facility. Any Meter that shall fail the accredited test shall be considered technically non responsive in the tendering process.

SCHEDULE E: METERING POLICY



**CHENNAI METROPOLITAN
WATER SUPPLY AND
SEWERAGE BOARD**

METERING POLICY

2022

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“METERING POLICY - 2022”

1. Background/Context:

Chennai City has no perennial source of drinking water. Being a fast-growing city, the demand for water is increasing every year. The Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) has made investments in Desalination plants and Tertiary sewage treatment facilities, and hence the cost of water production is high. Therefore, there is a need for judicious use and conservation of limited available and expensive water.

In this context, CMWSSB is taken up a demand management program by expanding the Consumer water metering program. This water meter policy provides the basis, details, the objective, roles and responsibilities of all stakeholders and the technical standards for the water metering program.

Consumers are also classified as Domestic, Partly Commercial, Commercial, Industrial, Institutional and Municipal Bulk Supply, based on the nature of water usage activity of the consumer.

As at the end of September 2022, the Board is providing drinking water through 770,292 property service connections, out of which 746,194 connections are unmetered and 24,095 are metered. Out of 746,194 unmetered connections, 670,652 belong to Domestic, 54,140 belong to Partly Commercial, 21,402 belong to Commercial and institutional.

The Board has installed 11,387 nos of Mechanical meters and 12,708 nos of mechanical meters with AMR attachments for the Commercial and high-volume consumers under smart city funding. The total meters installed so far is 24,095nos. which is 3.12%. AMR meters are installed from November 2019 and as a result, revenue has generated to the extent of Rs.57 Crores during the year of 2021-22.

2. Definitions:

Added Areas means and includes the erstwhile local bodies including the Panchayats and Municipalities annexed to Chennai city in 2011 to form the Greater Chennai City;

Authorised Authority means any committee, director, officer, engineer or any other employee of the Board to whom such power or function has been delegated under Section 22 of the Chennai Metropolitan Water Supply and Sewerage Act, 1978; (TAMIL NADU ACT 28 OF 1978) in relation to any power to be exercised or function to be performed.

Authorized Personnel means any official authorized for this purpose by the Managing Director;

Board means the Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) established under Section 3, Chennai Metropolitan Water Supply And Sewerage Act, 1978;

Chennai Metropolitan Area means the Chennai Metropolitan Planning Area as defined in clause (23-a) of section 2 of the Tamil Nadu Town and Country Planning Act, 1971 (Tamil Nadu Act 35 of 1972);

Consumer means any person or entity either owner or occupier of any premises provided with drinking water supply and or provided with sewerage services by the Board in accordance to the Section 6 of Regulations for Levy and collection of Tax and Charges;

Core City means the geographical area governed by Greater Chennai Corporation prior to the merger of Added Areas in the year 2011;

Defective Water Meter means any consumer water meter which is dis-functional or indicating erroneous readings not reflecting the accurate consumed quantity of water;

Government means the State Government of Tamil Nadu;

Grievance means a complaint on certain level of deficiency or unfairness in the services provided by the Board in respect of water supply and sewerage disposal including all commercial services of provision of new connections, disconnections, reconnections and associated billing and revenue collection. Defective water supply and sewerage system can also form part of grievances of the Consumer.

Operational Area means the operational jurisdiction vested with the Board for water supply and sewerage services within the geographical area of Chennai Metropolitan Area, which is 1189 sq. km;

Service Area means the area vested with the Board for provision of water supply and sewerage services within the geographical area of Chennai Metropolitan Area;

Water Meter or Meter means the device used to measure the volume of water consumed by the consumers resident in domestic, partly-commercial, commercial, institutional, industrial buildings and any other premises that are supplied with drinking water or treated waste water by the Board's water supply system;

Water Supply means the system of providing drinking water to an individual, community or an entity for meeting its requirement for drinking and other domestic uses, including commercial, industrial, recreational and other public uses except for purposes of irrigation and generation of hydel power;

Water works includes any source of water supply like stream, lake, spring, river or canal, well, reservoir, cistern and tank dug well, bore well, dug-cum-bore well, tube well, filter points and infiltration galleries, any channel, duct, whether covered or open, desalination plants, treatment units, sluice supply main, culvert, bridge, engine, water tank hydrants, stand-pipe or post, conduit and machinery and any adjacent land not being private property and any land, building or other things for supplying water or for protecting source of water supply or for treatment of water;

Year means the financial year of the Government;

3. Legal Framework:

The clause number 47, Chapter VI, Water Supply and Sewerage, in the CMWSSB Act 1978, provides “For calculating the amount payable by the owner for consumption of water supplied by the Board, the Board may determine the quantity consumed on the basis of reading recorded by a meter installed in the premises”.

4. Objectives of the Policy

The key objectives of the policy are:

- a) To promote water conservation by encouraging efficient water use
- b) To reduce Non-Revenue Water (NRW) and increase cost recovery.
- c) To ensure fairness and equity to all Consumers in charging for water services.
- d) To achieve 100% of metering of all high rise and commercial connections by the year 2023 and to achieve 80% of domestic connections (G+2 and below buildings) by the year 2027.
- e) To set out roles and responsibilities of both CMWSSB and Consumer in relation to the installation of metered connections, maintenance of the water meters.

5. Scope of the Policy

This policy covers types of consumers for metering, selection of meter, its specification and installation guidelines. This also covers the tariff, billing & collection and grievance redressal procedures related to metering. Further the responsibilities of the Board and consumers with regard to metering are described. Cost recovery and subsidy framework are not part of this policy and are dealt separately.

5.1. Who is metered?

CMWSSB shall install the water consumption meters for all the consumers having water connections in a phased and progressive manner commencing with high water consumption and high revenue categories and all non-residential and new Consumers.

5.2. Ownership of meters:

The Consumer meters shall be owned by **Board** and fixed rental charges will be levied on **the consumers along with the water charges**. The rental charges shall be used for the specific purpose of routine and periodical maintenance of the meters and regular meter replacement program by the Board. The day-to-day safety and up keep of the meters shall be the responsibility of the Consumer. If any willful tampering or damage of the meters occurs either other than natural wear and tear, the Board will undertake replacement of such defective meter and the cost of such exceptional repair or replacement of meter shall be recovered from the consumer with advance notice.

5.3. Meter Specifications:

Meter standards and specifications are governed by respective Indian or International standards as applicable from time to time as summarized in Annexure 1.

5.4. Meter Technology:

- i. Electromagnetic or Ultrasonic electronic meters with in - built battery and with AMR or AMI data transfer communication ability.
- ii. MultiJet Mechanical meter of Class B with AMR facility
- iii. MultiJet Mechanical Meter of Class B (with AMR Compatibility)
- iv. Positive displacement water meter with AMR compatibility or AMR facility
- v. Any other meter technology as approved by the Board appointed technical committee from time to time.

5.5. Meter sizing:

The size of meter shall be arrived based on the dwelling units of the premises as mentioned in annexure 1.

5.6. Meter Installation and Testing:

The meters will be tested at Board own lab or NABL accredited labs. The meter of prescribed size and specification shall be installed at designated locations along with Geo tagging by the Board or its authorized representative.

In case of any fault / dispute in readings, only the “authorized personnel” of Board are allowed to remove, attend to repairs and reinstall the meters. In case of any violations or tampering of meters by consumer, the water connection will be disconnected as per Sec 49 (d) of CMWSSB Act.

The Standard operating procedure to be adopted during installation of meters is detailed in Annexure2.

5.7. Meter Location:

The meter shall be installed at a spot where it is readily accessible and readable. The meter shall be installed inside the Consumer premises at a point upstream of the tap. In case of service pipes connected to consumer's sump, the meter shall be installed at a point upstream of the sump with mandatory installation of backflow prevention device and a float valve fitted at the inlet point into the sump.

In added areas all new meters shall be installed above Ground level as per prudent industry practice.

In core areas, meter will be installed for the buildings located nearer to WDS and at the locations wherever sufficient pressure exists.

For the remaining part of the core area the Metering program will be planned and implemented along with overall distribution rehabilitation and service improvement program in progressive manner.

5.8. Meter Relocation:

The case of meter relocation arises under the following cases:

- i. Due to change in internal arrangement or alteration of pipe laying inside the premises.
- ii. Division of existing connection arising due to division of property ownership
- iii. Due to consumer applying for shifting of water service connection

In the above cases the consumer has to intimate to corresponding Area office stating the reason for relocation. After physical verification of the premises by the concerned Depot Engineer, if the reason stated by the consumer is found to be justifiable, the relocation of meters will be approved by concerned Area Engineer within 3 working days at the cost of consumer.

5.9. Meter Removal:

In case of valid reasons only the "Authorized personnel" are permitted to remove the meters after obtaining orders from the "Area Engineer". The removed meters shall be re-installed in suitable required location. In case of any violations the water connection will be disconnected as per Sec 49 of CMWSSB Act.

5.10. Meter Installation in exceptional consumers:

In case of any meter installations in exceptional locations of high security areas, military operations, and similar such sensitive locations, the expert team constituting the Area Engineer and Deputy Area Engineer shall visit the location and identify suitable location to install meters in close coordination with such consumers.

5.11. Sub metering:

The Board is not responsible for any sub metering or internal arrangements. As per Board norms only one connection will be effected to single premises.

5.12. Meter Reading and Billing

- a) The billing cycle will be as decided by the Managing Director with respect to the category of the premises from time to time.
- b) Meters will be read by authorised representatives possessing identification.
- c) The bill shall include the details of consumer, meter ID, previous reading with date, present reading with date, arrears if any, current consumption charges, total amount due, payment deadlines without interest, penalty interest rate, incentives if any for early payment, subsidies as applicable and the trend of consumption for the six previous months.

In case of any dispute in consumption charges, the consumer shall represent to the concern Area office. In such case, the meter shall be removed tested and re-installed by authorized personnel only and a standby meter will be installed. If the meter is found to be accurate, then the cost of meter testing and re-installation shall be borne by the consumer.

In the event that a meter reading cannot be made due to the fact that the meter has been out of order on account of no fault of the consumer or the meter has been taken or removed by the Board on the order of the competent authority for the purpose of testing or rectifying the defects, the Board shall bill the consumer for that period on any one of the following basis namely;

- a) based on the actual reading of the meter for the corresponding period in the previous year if applicable, OR
- b) An average of the meter reading for the previous 6 months or 12 months when the meter was functioning or whichever is higher.

In event of excess payment made by the consumer, after re-conciliation the same will be adjusted in the forthcoming bills.

5.13. Meter Security

It is the responsibility of the consumer to ensure the security of the meter fixed. If a meter is stolen, or tampered or damaged, connection shall be provided with a new meter and all costs related to removal of old meters, cost of new meter and all installation charges shall be recoverable from the Consumer along with monthly water charges and penalty of Rs.2000/-.

5.14. Illegal bypass of meter and installation of suction pumps upstream of meter

Wherever a consumer is found to have installed a bypass or suction pump in the upstream of the meter or fails to fix or prevents the fixing of a meter as required by or under the provisions of this Act, or willfully or negligently tampers or damages the meter or otherwise interferes with any pipe or tap or main, action will be taken as per CMWSSB Act and Board Regulations in force.

5.15. Fire Hydrant availability, Use and Metering:

The vehicles from fire stations fill water from the nearest 42 filling stations maintained by Board. These vehicles use designated assess card to discharge designated quantity of water from the automated metered filling point. The water is being supplied at free of cost.

5.16. Meter Accuracy and Testing:

The accuracy of the meters should comply with the IS 779 and IS 6784 or ISO 4064. The important parameters shall include:

- a) Pressure tightness
- b) Loss of pressure
- c) Metering accuracy

d) Minimum starting flow

Board ensures that all meters installed are of appropriate type to measure the estimated range of particular connection, tested, calibrated, accurate and shall not cause loss of pressure higher than permissible and the installations are as per Board approved standard operating procedure updated from time to time.

In an exceptional event of a consumer suspecting the accuracy of the meter, the consumer shall report to the Depot Engineer or Contact help lines and shall remit the prescribed meter testing fees and the Board shall organize either testing on site or testing at lab as per respective testing standards.

A meter shall be regarded as registering incorrectly if on being tested it is found to exceed the prescribed limits of error.

In the event of the tested meter found to be beyond the stipulated accuracy range, the Board shall replace such inaccurate meter within three working days and refund the meter testing fees to the consumer.

Where a tested meter is proved to have registered less than the volume of water supplied to that premises, the balance payable by the consumer shall not exceed an amount reflecting the charge for the volume of water which would ordinarily have been supplied to the house during the three months preceding the last occasion on which the inaccurate meter was last read, less any sums already paid in respect of that period.

If the tested meter is found to be recording higher than the accurate consumption, the Area Engineer shall review the previous bills not exceeding three months from the date of last reading of the meter prior to the consumer complaint date and determine the revision of charges if any and issue an adjustment credit note in the subsequent bills.

5.17. Defective Water meters:

Any meter which are dis-functional or does not reflect the consumed quantity of water or share inaccurate readings are termed as Defective meters. During routine maintenance works, on identification of any defective meters, or consequent to a complaint from consumer and meter found to be inaccurate or defective, or a meter tampered or damaged or sabotaged due to negligence or willful default by a consumer, such defective meters shall be replaced by a standby meter, until they are repaired and reinstalled by the Board.

5.18. Consumer Responsibility

- i. The consumer shall always maintain the meter in safe and clean condition and shall provide access to the authorities fix or check the meter at all times.
- ii. Shall promptly notify the authority in event of any damages or repairs.
- iii. Shall clear any dues payable to the Board within specified period under this Act, or any regulation or other instruments made there under.
- iv. The consumer shall not be willfully or negligently damage the meter fixed and the

consumer shall not otherwise interfere with any pipe or tap or main or other work of conveying water from any works of the Board.

5.19. Consumer Privacy:

All data collected in regard to consumption and related data shall be safely secured and will be used only for the intended purposes including studies for service improvements in the city. The consumer will be given access to view their consumption history.

5.20. Power of Entry:

The power of entry into the premises of the consumer by the authorized authority to check the readings/working of meters is as per Section 67 of the CMWSSB Act.

The authorised authority shall except in the case of an emergency give not less than 24hrs notice in writing of its intention to do so to the owner or occupier: provided the authorised authority shall, except in case of an emergency, obtain the prior permission from the concerned where the land, the building, or immovable property is owned by and is in the possession.

5.21. Contacting the Utility:

The Board has formulated and established various Grievance Redressal mechanisms with the objective of transparency in providing services to the citizens. The Board also welcomes Consumer comments, suggestions and inputs which shall enable improvement of service delivery and achieve efficiency in its operations. On receipt, the Board shall investigate it and report back to the complainant and address the issue as efficiently and effectively as possible. The different methods for registering the complaints are stated below:

- a) 24X 7 Complaint Cell / 044-45674567
- b) Online Complaints
- c) E-mail complaints
- d) Open House Meetings
- e) Mobile APP for Grievance Redressal System
- f) Mobile Phone numbers, email ids, Mobile App details and other contact facilities are available in Boards Official Website.

5.22. Revision of Meter Policy:

This policy shall be reviewed at least once three years or as and when found necessary by the Board's Technical Committee consisting of Engineering Director, Chief Engineer (O&M)- I and Finance Director, and report to be submitted to the Board.

Annexure 1: Technical Specifications for Consumer Smart Water Meters

Technical Requirements	Details		
Technical Standards	a) IS 779:1994 (reaffirmed 2015) - Specification for water meters (domestic type) b) IS 6784:1996 – method of performance testing of water meters c) ISO 4064-1:2014 – water meters for cold potable water and hot water – metrological and technical requirements d) ISO 4064-2:2014 – water meters for cold potable water and hot water – test methods e) ISO 4064-3:2014 (Reviewed and Confirmed in 2019) – water meters for cold potable water and hot water – test report format f) ISO 4064-4:2014 – (Reviewed and Confirmed in 2019) – Non metrological requirements not covered in ISO 4064-1. g) ISO 4064-5:2014 – (Reviewed and Confirmed in 2019) – Installation requirements		
Required Certificates	IS 779: 1994 (reaffirmed 2015) and IS 6784:1996, IS 2373: 1981 (reaffirmed 2017), ISO 4064 (1 to 5):2014 The Meter should be MID certified. In addition, endurance test report in accordance with ISO4064:2014 from FCRI should be provided.		
	Manufacturer's authorization		
Class of Water Meter	Class 2 Water meters in accordance with ISO4064:2014. Operating range ratio (Q3/Q1) = R500.		
Sizing of Water Meter	The size of meter shall be arrived based on the dwelling units of the premises:		
	Equivalent Dwelling Units	Size of Meter (mm)	Recommended range of monthly consumption (m3)
	Up to 6	15	0-100
	7 to 20	20	101-170
	21 to 40	25	171-260
	41 to 70	32	261-420
	Above 70	100	420 – 550

Technical Requirements	Details
Material Requirements	The water meter body shall be made of Corrosion resistant material like, Engineering Plastic, brass, Bronze, Stainless steel, Carbon steel. The same will be reviewed time to time by the Technical committee.
Tamper protection seals	A water Meter shall include protection devices which can be sealed so as to prevent, both before and after correct installation of the water Meter, dismantling or modification of the Meter, its adjustment device or its correction device, without damaging these devices. This can be done by sealing with a corrosive resistant wire or specially made plastic ribbon inserted through 2.5 mm diameter holes in the halves of the body, and secured by a circular sheet metal seal impressed by a device which provides a unique imprint on the seal.
Meter Accuracy Testing	A water Meter shall be designated as accuracy class2. This requires the Maximum Permissible Error (MPE) to be $\pm 2\%$ (for temperatures from 0.1 °C to 30 °C and $\pm 3\%$ for temperatures greater than 30 °C) for the upper flow rate zone (Q3 & Q4). The MPE for the lower flow rate zone (Q1andQT) shall be $\pm 5\%$. During procurement, two Meter samples from each Tender shall be tested in an accredited facility. Any Meter that shall fail the accredited test shall be considered technically non responsive in the tendering process.

Annexure 2 -Standard Operating Procedure for Installation of SMART WATER METERS

The following Standard Operating Procedure has to be adopted in installation of meters.

- (a) The water meter being a delicate instrument shall be handled with great care. Rough handling including jerks or fall is likely to damage it and affects its accuracy;
- (b) To avoid damages and over run of the meter due to intermittent water supply system, It is always advisable to install the meter, so that the top of the meter is below the level of the communication pipes so that meters always contains water, when there is no supply in the line. Also, the minimum straight length condition as per the drawing shall be observed;
- (c) The meter shall preferably be housed in a protection box (PVC) with the lid; it should never be buried under ground nor installed in the open nor under a water tap so that water may not directly fall on the meter.
- (d) The meter shall be installed so that the longitudinal axis is horizontal the flow of water should be in the direction shown by the arrow cast on the body.
- (e) Before connecting the meter to the water pipe, it should be thoroughly cleaned by installing in the place of the water meter a pipe of suitable length and diameter and letting the passage of a fair amount of water flow through the pipe work to avoid the formation of air pockets. It is advisable that the level of the pipeline where the meter is proposed to be installed should be checked by a spirit level;
- (f) Before fitting the meter to the pipeline check the unions nuts in the tail pieces and then insert the washers. There after screw the tail pieces on the pipes and install the meter in between the nuts by screwing. To avoid its rotation during the operation, the meter should be kept fixed with suitable non-metallic clamps. Care should be taken that the washer does not obstruct the inlet and outlet flow of water;
- (g) The protective lid should normally be kept closed and should be opened only for reading the dial;
- (h) The meter shall not run with free discharge to the atmosphere. Some resistance should be given in the downstream of the meter, if static pressure on the main exceeds 10m head;
- (i) A float valve shall be fitted inside the sump to avoid wastage of water due to over flow/ excess supply.
- (j) A meter shall be located where it is not liable to get the severe shock of water hammer which might break the system of the meter;
- (k) Owing to the fine clearance in the working parts of the meters they are not suitable for measuring water containing sand or similar foreign matter and in such cases a filter or

dirt box of the adequate effective area shall be fitted on the upstream side of the meter. It should be noted that the normal strainer fitted inside a meter is not a filter and does not prevent the entry of small particles, such as sand;

- (l) Where intermittent supply is likely to be encountered the meter may be provided with a suitable air-valve before the meter in order to reduce inaccuracy and to protect the meter from being damaged. At higher altitude, if the meter is installed as above, the problem will be eliminated;
- (m) Every user expects a problem-free installation of the meter and there after only accurate reading. Regular monitoring is desirable in order to avoid failures;
- (n) The meter is installed in the pipeline using flanged or threaded connections giving due consideration for conditioning sections. It should be seen that stress-free installation is carried out in the pipeline;
- (o) It is essential to install the flow meter co-axially to the pipeline without protruding any packing or gasket into the water flow stream. In the case of ultrasonic meter, the probes are welded on the pipeline which requires care to see that no projection is protruding in the pipeline;
- (p) The Control valve should be fixed in the upstream of the water meter.
- (q) Installation in 'U' shape is essential for intermittent water supply;
- (r) Flow meters should be provided with battery backup in order to retain integrator reading.

SCHEDULE F1: CONSTRUCTION PERIOD PERFORMANCE SECURITY

WHEREAS:

A..... (the “**Concessionaire**”) and (the “**Authority**”) have entered into a Concession Agreement dated (the “**Agreement**”) whereby the Authority has agreed to the Concessionaire undertaking the development ofbasis (the “**Project**”), subject to and in accordance with the provisions of the Agreement.

B. The Agreement requires the Concessionaire to furnish a Performance Security to the Authority in a sum of Rs..... (Rupees crore) (the “**Guarantee Amount**”) as security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the Construction Period (as defined in the Agreement).

C.....We, through our Branch at..... (the “**Bank**”) have agreed to furnish this Bank Guarantee by way of Performance Security.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due performance of the concessionaire’s obligations during the Construction period, under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon occurrence of any failure or default in due and faithful performance of all or any of the Concessionaire’s obligations, under and in accordance with the provisions of the Agreement, on its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Concessionaire, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an Officer not below the rank of Executive Director in the Authority, that the Concessionaire has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Concessionaire is in default in due and faithful performance of its obligations during the Construction Period under the Agreement and its decision that the Concessionaire is in default shall be final, and binding on the Bank, notwithstanding any differences between the Authority and the Concessionaire, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Concessionaire for any reason whatsoever.

3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Concessionaire and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.

4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Concessionaire before presenting to the Bank its demand under this Guarantee.

5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfilment and/or performance of all or any of the obligations of the Concessionaire contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Concessionaire, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Concessionaire or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.

6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Agreement or for the fulfilment, compliance and/or performance of all or any of the obligations of the Concessionaire under the Agreement.

7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force in accordance with Article 9 of the Agreement.

8. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.

9. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred Branch, which shall be deemed to have been duly authorised to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

10. This guarantee shall also be operational at our branch at _____, from whom, confirmation regarding the issue of this guarantee or extension/renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for a period of two years from the date hereof or until it is released earlier by the Authority pursuant to the provisions of the Agreement.

Signed and sealed this day of, 20..... at

SIGNED, SEALED AND DELIVERED

For and on behalf of the BANK by:

(Signature)

(Name) (Designation) (Code Number)

(Address)

NOTES:

(i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

(ii) The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

SCHEDULE F2: OPERATION PERIOD PERFORMANCE SECURITY

WHEREAS:

A..... (the “**Concessionaire**”) and (the “**Authority**”) have entered into a Concession Agreement dated (the “**Agreement**”) whereby the Authority has agreed to the Concessionaire undertaking the development ofbasis (the “**Project**”), subject to and in accordance with the provisions of the Agreement.

B. The Agreement requires the Concessionaire to furnish a Performance Security to the Authority in a sum of Rs..... (Rupees crore) (the “**Guarantee Amount**”) as security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the Construction Period (as defined in the Agreement).

C.....We, through our Branch at..... (the “**Bank**”) have agreed to furnish this Bank Guarantee by way of Performance Security.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due performance of the concessionaire’s obligations during the Operation Period, under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon occurrence of any failure or default in due and faithful performance of all or any of the Concessionaire’s obligations, under and in accordance with the provisions of the Agreement, on its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Concessionaire, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an Officer not below the rank of Executive Director in the Authority, that the Concessionaire has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Concessionaire is in default in due and faithful performance of its obligations during the Construction Period under the Agreement and its decision that the Concessionaire is in default shall be final, and binding on the Bank, notwithstanding any differences between the Authority and the Concessionaire, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Concessionaire for any reason whatsoever.

3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Concessionaire and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.

4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Concessionaire before presenting to the Bank its demand under this Guarantee.

5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfilment and/or performance of all or any of the obligations of the Concessionaire contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Concessionaire, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Concessionaire or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.

6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Agreement or for the fulfilment, compliance and/or performance of all or any of the obligations of the Concessionaire under the Agreement.

7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force in accordance with Article 9 of the Agreement.

8. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.

9. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred Branch, which shall be deemed to have been duly authorised to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

10. This guarantee shall also be operational at our branch at _____, from whom, confirmation regarding the issue of this guarantee or extension/renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for a period of two years from the date hereof or until it is released earlier by the Authority pursuant to the provisions of the Agreement.

Signed and sealed this day of, 20..... at

SIGNED, SEALED AND DELIVERED

For and on behalf of the BANK by:

(Signature)

(Name) (Designation) (Code Number)

(Address)

NOTES:

(i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

(ii) The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

SCHEDULE G: PROJECT COMPLETION SCHEDULE

To be provided by the Concessionaire

SCHEDULE H: Design and Drawings

1. Drawings

In compliance of the obligations set forth in Article 12.2 of this Agreement, the Concessionaire shall furnish to the Independent Engineer/Authority, free of cost, all Drawings listed in Para 3 of this Schedule-H.

2. Additional drawings

If the Independent Engineer determines that for discharging its duties and functions under this Agreement, it requires any drawings other than those listed in Para, it may by notice require the Concessionaire to prepare and furnish such drawings forthwith. Upon receiving a requisition to this effect, the Concessionaire shall promptly prepare and furnish such drawings to the Independent Engineer/Authority, as if such drawings formed part of Para 3 of this Schedule-H.

3. List of Drawings

List of drawings to be added here

To be provided by the Concessionaire

Annex 1 to Schedule H

Glossary of Terms

APN platform: A platform that provides secure and private communication for the Advanced Persistent Network (APN).

Head-End System (HES): The central system that collects and manages data from smart meters 1 lakh meters and future meters of additional 1 Lakh. Further, the system shall be scalable and replicable to add more meters in future to expand in order to cover all the connections in the City of Chennai, including extended areas.

Meter Data Management System (MDMS): A system that collects, validates, and stores data from smart meters, providing insights and supporting remote operations.

Enterprise Service Bus (ESB): A software architecture that standardizes communication and data interchange between different systems.

Network Operations and Control Centre (NOCC): The central control centre that monitors, aggregates, and analyses data in real-time.

Data Concentrator: A device that gathers data from multiple meters and forwards it to a centralized system for processing and analysis.

WAN (Wide Area Network): A network that connects devices over a large geographical area, such as multiple sites or cities.

SI Units: International System of Units used for measurement, including cubic meters and litres

Legal Metrology Act: Legislation governing metrological standards and regulations for measuring instruments, including water meters

Low-Power Wide Area Network (LPWAN): A wireless network technology designed for connecting low-power IoT devices over long distances with efficient power consumption. SIGFOX is a Low-Power Wide-Area Network (LPWAN) technology that caters to IoT devices with low data rate requirements

Multi-factor user authentication: A method of verifying a user's identity using multiple factors, such as usernames, passwords, and tokens. This adds an extra layer of security by requiring more than one form of identification.

NB-IoT: Narrowband Internet of Things. A cellular communication technology introduced in 3GPP Release 13 as part of Cellular IoT. It operates in licensed spectrum bands, offering long-range connectivity and improved indoor coverage. It caters to low-power, low-data-rate IoT applications and leverages existing cellular infrastructure for secure communication.

3GPP: 3rd Generation Partnership Project. A global organization that develops specifications for cellular communication technologies.

Long-Term Evolution (LTE): A standard for high-speed wireless communication in cellular networks also commonly referred to as 4G.

LoRaWAN (Long Range Wide Area Network): LoRaWAN is another LPWAN technology that provides long-range communication for IoT devices. The abbreviation combines "LoRa"

for Long Range and "WAN" for Wide Area Network, indicative of its long-range capabilities.

SIM (Subscriber Identification Module) Card: A smart card that securely stores subscriber information used for authentication and communication on a cellular network.

eSIM (Embedded SIM): A SIM card that is embedded directly into a device, eliminating the need for a physical SIM card.

Message Queuing Telemetry Transport (MQTT): A lightweight messaging protocol for IoT devices.

Access Point Name (APN): A unique identifier that defines a gateway between a cellular network and another IP network (e.g., the internet)

Intelligent Threat Detection (ITD): An approach used in cybersecurity to proactively identify and detect potential threats and malicious activities within computer systems or networks. ITD employs advanced technologies, algorithms, and threat intelligence to identify different types of threats, such as malware, hacking attempts, and unauthorized access. It enables real-time or near-real-time detection, generating alerts or triggering automated responses to mitigate risks and protect systems.

1. The key project components with respect to Software and Communication:

The key components of the system include advanced solid-state meters, meter replacement, data concentrators for data aggregation, and protective meter enclosures. The goal is to ensure state-of-the-art technology, reduced obsolescence, and operational excellence in line with CMWSSB's standards and service level agreements. The smart water management system will integrate components and functionalities for precision and efficiency.

- Data management includes a communication network, an APN platform, and a Head-End System (HES), Meter Data Management System (MDMS) that integrates with CMWSSB's billing systems for data analytics.
- The Meter Data Management System (MDMS) collects, validates, and stores data from smart water meters, offering insights and supporting remote operations.
- The system prioritizes data security, regulatory adherence, disaster resilience, and scalability.
- The Enterprise Service Bus (ESB) standardizes communication and data interchange.
- The Network Operations and Control Centre (NOCC) drives data aggregation and analysis, providing real-time monitoring and reporting.
- A mobile app allows users to monitor water consumption and receive alerts.
- Field Workforce App to monitor concessionaire in terms of complaint management, meter reading management and reporting.

A. Smart Water Meter Infrastructure Requirement (SMI):

- The Metering Infrastructure proposed is AMI so all devices should automatically push data at designated interval through open communication technologies.
- The meter data and communication protocols of the Smart static meters should be open and shared with CMWSSB before installation itself. All the Encryption keys also be shared along with meters for smooth integration

- The HES and MDMS also should be open and can be used for other current wireless devices in future also.
- The HES and MDMS source code should be submitted to CMWSSB, for future need of IOT devices integration by the concessionaire and his subcontractor.

The concessionaire is tasked with designing, installing, and integrating the SMI system. This includes ensuring robust communication and facilitating data flow between the SMI's Field Area Network and the HES - referred to as the Backhaul Solution. All requisite equipment and software, from data concentrators and repeaters to handheld units and meter-specific software, fall under the concessionaire's scope. The concessionaire is also accountable for communication, data gathering, and data management components, charged on a per-meter basis. The proposed SMI must seamlessly integrate with the MDMS, billing systems, and other relevant applications. In essence, the concessionaire is responsible for the end-to-end delivery and functionality of the SMI system.

Communications Protocol Optionality

CMWSSB emphasizes the autonomy and responsibility of the Concessionaire in selecting and managing the communication solution for our smart water meter initiative. Given the diverse environmental dynamics of CMWSSB, there is no one-size-fits-all solution, making the role of concessionaire and its service providers even more pivotal.

Considering CMWSSB's vast landscape and the need for wide coverage, CMWSSB is open to the selection of any technology. However, considering CMWSSB's environment and the diverse settings of our water infrastructure, it is highly recommended that hybrid options that combine the strengths of multiple technologies are proposed. A suitable technology option will be selected by CMWSSB during the condition precedent period that encompasses the following key criteria.

- **Low Power Consumption:** Smart Static meters will be installed in all the 15 Zones of Chennai GCC area so the data and communication protocol should consume minimal power.
- **Scalability:** The system must be able to manage data from a large number of devices.
- **Low Bandwidth:** The system should be efficient in terms of the data sent
- **Reliability:** The data is essential for billing and other services; thus it is critical that data delivery is reliable.
- **Security:** Given that this data can be used for billing, security is a paramount concern.

Communication:

For the purpose of providing clear guidance, the section has been broken down into some of the potential common communication solutions indicating the standards and functionality that applies.

- The proposed wireless network infrastructure should a fixed network infrastructure
- Methods of AMI data transmission can be radio or non radio technologies like RF/LPWAN/LoRaWAN/Sigfox or new cellular technology like NB-IoT. CMWSSB will decide during the condition precedent after concessionaire conducts RF study, gateway radio planning report, gateway information, test results, capacity table and submission of reports with field trials if required of the technology.

- The network infrastructure should be fully scalable and should support long-range communication for both indoor / outdoor application and should be able to read meters in deep pits in the core area of the city .
- The network infrastructure should support Bi-directional communication between the water meter and Application software.
- The network gateway should be installed on Govt / Public buildings/ Public cell towers and should be backed by power supply . The scope of this installation , power supply is under scope of concessionaire and CMWSSB will facilitate in locating government buildings .
- The network gateway should be beyond the access of public and should be secured with lock and key and should allow only authorized persons .
- The network should adhere to SLA of minimum 99% network availability

B. Network Infrastructure:

The Concessionaire will be responsible for the following:

- Designing and deploying the network in our target area, which involves installing the necessary infrastructure, equipment, and software.
- Configuring and managing the network to ensure optimal performance and availability. This includes monitoring and maintaining the network on an ongoing basis.
- Providing IoT devices, sensors, and other equipment required for network support. This includes installing and configuring these devices.
- Providing fallback services in case the primary technology is unavailable or experiences issues.
- Designing the entire system to comply with regulatory and security guidelines.

Key considerations for the network are as follows:

Network Coverage:

- The network should effectively cover the required geographical areas Zone 1 to 15.
- The signal strength should ensure reliable connectivity and 99% network availability.

Scalability and Capacity:

- The network should support a minimum of 2,00,000 devices, considering the projected growth of the IoT deployment. The network should have the capacity to be scalable and replicable in order to add more devices. It is expected that all the connections will progressively be added to the network.
- The system should be capable of being scaled and/or replicated further to add more devices
- The service provider should be capable of handling high device density in specific areas, such as crowded urban environments or concentrated industrial zones.
- Network capacity plans should be provided to accommodate future expansion and increasing device numbers.

Security:

- End-to-end data encryption should be used to protect sensitive information transmitted over the network.
- Authentication mechanisms for device onboarding should be implemented to ensure secure and authorized access.
- Measures to prevent unauthorized access, tampering, or eavesdropping on the network should be in place.
- The network Infrastructure should be compliant with relevant security standards and protocols.

Network Management:

- Monitoring and management tools should be employed for efficient network operation and troubleshooting.
- Remote management and configuration of network gateways and devices should be possible for seamless maintenance and updates.
- Fault detection and reporting mechanisms should be implemented for prompt issue resolution.
- Network performance monitoring and reporting capabilities should ensure adherence to SLAs as defined in the RFP .

Quality of Service (QoS):

- SLAs for network availability, uptime, and performance should be provided to guarantee reliability.
- Latency for data transmission and acknowledgment should ensure timely and responsive communication.

Integration:

- The network should provide easy integration with analytics platforms or other downstream systems.

The Key Design Principles that must be adhered to by the include:

Futureproofing: The chosen technology should be scalable and adaptable to emerging trends and innovations in the smart metering landscape.

Resilience: Given the critical nature of water infrastructure, the communication system must guarantee high uptime and rapid recovery from potential disruptions.

Security: Protecting data integrity and privacy is paramount. As such, the chosen solution should have robust encryption and security measures to safeguard against breaches and unauthorized access.

Integration: The solution should seamlessly integrate with existing systems and infrastructure while being flexible enough to accommodate future upgrades and expansions.

Open Protocols & Vendor Neutrality: Embracing open standards and protocols ensures that the technology remains versatile and can interface with various systems.

The responsibility and implementation therefore rest with the Concessionaire and his subcontractor hold the primary responsibility for the design, implementation, monitoring, and maintenance of the chosen communication solution.

This includes conducting the necessary research and network studies to ensure the reliability and accuracy of smart meter data. Factors such as network coverage, signal strength, potential interference sources, and data transmission reliability should be diligently examined.

Concessionaire are expected to consistently achieve meter online rates of 96% to 99% and ensure accurate data collection. Achieving these metrics will necessitate continuous network monitoring, regular system updates, and timely interventions.

The Concessionaire must provide:

- An in-depth explanation of the chosen communication option (e.g. RF/ NB-IOT, SIGFOX, LoRaWAN, WMBUS, or hybrid) and the rationale.
- An explanation of how the communication solution will ensure that the key KPIs are achieved
- An explanation as to how the Key Design Principles - as noted above - will be applied.
- A comprehensive technical methodology and implementation plan.

This documentation should:

- Detail the step-by-step deployment process, including network setup, device installation, data validation, and user acceptance testing.
- Highlight strategic considerations such as compatibility with existing systems, scalability, and security measures.
- To implement this vision, will engage in network audits, standardized equipment alignment with other providers, staff training, periodic network reviews, and establish feedback mechanisms for prompt issue resolution.

Adherence to Open Standards:

- CMWSSB requires the utilization of standard IoT Network Protocols
- Proprietary locking software or protocols are strictly prohibited.

Data Accuracy Standards:

Meter Reading Data Accuracy: This refers to the actual readings that meter's record and report, which are indicative of water usage or any other measurable metric. Ensuring the precision of these readings is vital because it directly affects billing, consumption analysis, and other operational decisions.

Must implement rigorous calibration processes for meters before installation to ensure that they record and transmit data accurately. Regular accuracy checks post-installation are also essential to cater for drifts or anomalies that might arise over time.

All customer and meter data generated, processed, or transmitted—remains under the sole proprietorship of CMWSSB.

Key Management:

- Key management refers to the systematic handling of cryptographic keys, ensuring secure generation, distribution, storage, and periodic rotation, safeguarding data integrity and authenticity.
- The integration of meter keys and robust key management to ensure secure data transmission and authentication in the smart water meter system.
- All cryptographic keys utilized in the system must be transparently shared with CMWSSB, providing the organization full access and oversight over encrypted meter data transmissions.

C. Hosting on MEITY approved cloud infrastructure

Cloud Hosting will be done on servers located in India by Indian agency. The Service Provider needs to provide the cloud hosting as Infrastructure-as-a-Service model from a Ministry of Electronics and Information Technology (MeitY), Gol empanelled Cloud Service providers.

1. Centralized storage on Cloud is proposed for hosting all applications, data, and related storage.
2. The Data Recovery shall reside on a secure cloud-based environment only.
3. The Data Center (DC) shall be highly secure and have high availability.
4. Data Recovery (DR) shall be hosted on a highly secure and highly available Cloud environment hosted in different Seismic Zone than that of the Data Center with an established Cloud Service.
5. The proposed DC/DR solution must adhere to all regulatory and security standards for hosting Government services as directed in the guidelines by Government of India (Gol) and Government of Tamilnadu (GoT)
6. CMWSSB shall approve DC/DR sites and services based on detailed assessment report submitted by the concessionaire.
7. DC and DR shall be in different seismic zone.
8. The DC shall be in Chennai and shall have built-in redundancy mechanisms for high availability.
9. DC and DR shall be dynamically scalable to deploy virtual servers, push configuration and monitoring policies, with no impact on existing data, applications, and storage.
10. CMWSSB shall have secured and seamless access to its data, applications, services, and storage.

2 The Functionalities required for Software, Communication and Billing system including integration are as below**2.1. Data Collection & Communication:**

- **Communication Network:** The digital infrastructure that serves as the link between meters, peripheral devices, and the primary system, enabling seamless data flow and command execution.

- **Data Concentrator:** A crucial device that collates data from an array of meters, subsequently forwarding this accumulated data to a centralized system for further processing and analysis. Use and installation dependent on the type of communication solution proposed.
- **APN Platform:** A sophisticated system tailored for the streamlined management and configuration of Access Point Names, ensuring the smart meters remain connected and communicative.
- **Head-End System (HES):** A central hub responsible for the intricate tasks of data aggregation, processing, organization, and eventual distribution to relevant parties or systems.
- **MDMS:** MDMS is a system designed to manage, process, and analyse vast amounts of data collected from the smart meters. For the integration, it is expected that suppliers will construct an interface based on CMWSSB's data presentation preferences and requirements. This ensures that the data will be not only relayed accurately but also displayed in an interpretable and actionable manner. This interface will bridge the HES and the MDMS, making certain that data flows seamlessly between the two, and between any analytics or reporting tools employed

2.2. Software meter reading (HES)

Head End Systems (HES) along with Cloud Service Provider (CSP) Should be compliant of following:

- ISO 4064-1:2014: This standard specifies the general requirements and test methods for water meters used for billing purposes. The HES should comply with this standard to ensure accurate billing of water consumption.
- IEC 61968: This standard defines interfaces for the exchange of information between different systems involved in the management of water utilities. The HES should comply with this standard to enable seamless integration with other systems.
- Data Protection Act: The Data Protection Act is a data protection and privacy law. HES should adhere to this act requirement to safeguard individuals' privacy, ensure responsible handling of personal information and enhance data security practices.
- IEEE 802.11: This standard defines wireless local area network (WLAN) communication protocols. The HES should support IEEE 802.11 to enable wireless communication with the AMI system equipment.
- ISO/IEC 27001: An international standard for information security management systems (ISMS). It provides a systematic approach for managing sensitive company information, ensuring its confidentiality, integrity, and availability. This standard is crucial for securing data and communication networks in the project
- NIST Cybersecurity Framework: Align the HES with the NIST Cybersecurity Framework, which provides a comprehensive set of guidelines for managing and reducing cybersecurity risks.
- NIST SP 800-53: Adhere to NIST Special Publication 800-53, which provides security controls and guidelines for federal information systems in the United States. It covers various aspects of information security, including access control, encryption, and incident response.

The integration between the HES and the MDMS is pivotal for efficient water data management. This integration facilitates the exchange of critical data related to water consumption and meter reading.

2.3. Software meter data management meter reading (MDMS)

The concessionaire is required to provide the features highlighted below.

The MDM System provided to CMWSSB by the Contractor shall have the following features:

- The MDM software shall collect and maintain historical meter reading data including as a minimum: meter identification number, meter attributes, meter location (xy coordinates), account and premise identification, meter readings, read dates and times, failures to read, tampering alerts, and leak detection, for each meter in the system.
- The MDM software shall provide the user with reports of the current status and reading of the history of individual accounts and selectable groups of accounts. The software shall be able to sort and list accounts and their meter reading data.
- The software shall also be able to create user-defined account groups and aggregate consumption profiles.
- The MDM should enable errors in meter readings (such as negative consumption, bad readings, etc) to be detected and excluded from the upload to the Billing Server. This requirement is linked to the quality assurance of the meter readings submitted to CMWSSB.
- Indicate normal modes of operation of the AMI system software, including batch processing and single meter reading query processing.
- The MDMS must interface to CMWSSB BILLING system to provide monthly or on-demand meter readings both individually and in batch upon request by the system; such as to synchronise data related to meters, service locations and customers; and provide status reports of alerts for accounts.
 - Customer information shared and synchronized with the CMWSSB BILLING should include billing cycle, customer account-premise-meter relationship, meter type, etc.
 - The Concessionaire must describe the process by which the MDMS will be synchronized with CMWSSB's Billing system
 - Support Service Oriented Architecture patterns for integration with MDMS and other CMWSSB's applications.
 - Support scheduled batch loading of meter data to the MDMS.
 - Be capable of obtaining interval data and logs from meters at a configurable frequency for delivery to the AMI headend.
 - Support configurable units of measure and interval lengths for meters.
 - Provide a Graphical User Interface (GUI) for internal system users.
 - Provide a web-enabled platform for remote access by internal system users, including field services crew.

- Provide meter status for all meters.
- Process all meter and collector communication issues received from the AMI headend system to include as a minimum:
 - Non-communicating meters
 - Intermittent meter communications
 - Collector communications issues
- Process all meter issues received from the AMI headend system to include at a minimum:
 - Meters with missing reads
 - Unknown meters
- Process all customer/consumption related issues received from the AMI headend system to include at a minimum:
 - Consumption on a vacant account
 - Zero consumption on an active account
 - High usage
- Allow for configurable event notifications based on CMWSSB business rules (e.g. meter has not communicated with the AMI headend system within 3 number of days) Provide system synchronization to ensure all register and interval readings remain in alignment
- Allow for manual review of exceptions based on business rules defined by CMWSSB, including: negative usage, high/low tolerance, zero read, spike check, missing reads and multiplier checks.
- Allow manual editing of missing or estimated/allocated data with changed data marked by quality flag (original data should not be disturbed).
- Automatically estimate meter data to fill gaps in interval usage data.
- Accept register reads via manual entry.
- Support on-demand meter reads by authorized users.
- Provide the capability to schedule an on-demand read operation to be initiated at a specified time.
- Track meter events by billing account (i.e. flags, relocation, reconfiguration, tampering, etc.).
- Align water bill for usage starting with the same date each month for coincident billing.
- The MDM system should have the ability to prioritize alerts, alarms, and reports within queues or workflows in order for the information to be distributed to the appropriate groups within the company.
- The MDM system should have the capability to prioritize failed validations for meters that are due for billing within a configurable window and make this information available to the MDM operator or billing analyst.

2.4. Analysis of Usage

The Concessionaire should describe how potential leaks, high consumption, misuse, and water theft are identified by the MDMS from the data, and what analysis reports are generated, including:

- Identification of possible low flow rate leaks (e.g., extended periods when interval reads are always above zero or consumption anomalies above user-defined thresholds by account).
- Identification of possible continuous high-consumption events at individual customers' premises.
- Monitoring "usage on inactive" (registered reads above configurable thresholds without an active customer account) and automatically generating alerts and notifications.
- Water theft analysis, use after shutting off, and reverse flow.
- Identification of any meter with little or no change in registration (zero or low consumption) for a configurable number of days.
- Identification of potentially underperforming meters.

2.5. Reporting

- Provide reports that compare multiple months of historical data side-by-side.
- Provide reporting tool to allow user-defined date range in graphical and tabular data views.
- Identify and report success or failure of all remote connect/disconnect operations. Provide configurable KPI Dashboards depending on the users needs (i.e. - meter health, AMI health, revenue health, conservation program health, outage management health, revenue protection health).
- Contain customizable KPI dashboard elements using existing tools within the MDM.
- Provide AMI performance reports that provides overall AMI system performance and facilitates troubleshooting of AMI system components and meter communication failures.
- This should display as a minimum:
 - Non-communicating meters
 - Intermittent meter communications
 - Collector communications issues
 - GIS map showing status of field equipment
 - Ability to send emails, SMS based on user defined alarm exceedance.
 - Ability to export data based on user defined meter aggregations.
 - Identify customers with leaks due to continuous consumption alerts based on configurable threshold for customer leak detection.
- The MDMS shall be capable of generating consumption profiles for groups of meters ("virtual meters"). Indicate by what parameters or data fields meters may be grouped

for this purpose. Describe the procedure for assigning meters in the MDMS to district metered areas (DMAs) in the future .

- The system shall enable the comparison of consumption between an individual meter and a group of meters, or between two or more groups of meters.
- The system shall enable the comparison of consumption from all of the meters within a demand management area and the master meter(s). Describe the options for obtaining and synchronizing the appropriate master meter data.
- Describe the options for reporting this data, including graphical and tabular, and maps.
- Reports shall be able to be set up or changed without modifying source program code and without any proprietary language skills.
- Describe how reports can be exported to standard file formats (ex: .csv, .xls, .mdb, .html, etc.).
- List all supported reporting tools used by the system.
- System Event Reporting and Tamper Management
- The system should enable and record a normal meter change out, authorized by a work order (including a meter with a higher resolution than the meter it is replacing).
- Identification of a meter that has been changed without a work order.
- Missing reads. Show how the system can triage or prioritize recommended work orders based on the number of missing reads, proximity to read-for-billing dates, the severity of the problem, etc.
- Events and alarm data; and performing trending analytics and correlating failures with a variety of attributes and time frames.
- The MDMS shall enable the users to set start and end date report filters for the above.
- The system shall provide a list of accounts with one or more of the above conditions.
- The MDMS should have the capability to generate field work orders based on configurable settings
- The MDMS should have the facility to provide data files to CMWSSB BILLING .
- The system should have the facility to generate letters, emails or text messages for customers
- The system should keep track of notifications (e.g. about continuous flow) that have been sent and whether they have been received, and to schedule subsequent notifications if the condition still persists.

2.6. Deliverables

- Concessionaire shall be responsible for all the development, implementation, testing, maintenance, support, feature enhancements, documentation, and support of applications.
- Concessionaires subcontractor shall be responsible for the complete turnkey

operation of the IT systems (software only) to ensure a minimum of 99.5% uptime availability of all the applications under this project and should be available during the complete tenure of the concession .

- Complete Software Development Life Cycle (SDLC) should be followed for each application.
- Proper Documentation with versioning of all the applications should be maintained like SRS, High Level Design, Low Level Design, functionality document (process document), user manual, test case/evaluation report, Impact Analysis Report, Change Document etc.
- All the changes in the applications should be properly documented and reflected in respective documents.
- Proper coding standards should be followed in all the applications. Periodic code review should be done for improvement in source code. Code & query optimization should be done to the extent possible.
- Proper testing should be done for the changes done in the application or database. Testing should be done on exhaustive test cases.
- Ensure proper backup of application and database as per the approved backup policy.
- In case of any eventuality, it has to be ensured that the downtime is minimum and system is restored with minimum data loss.
- It should also be ensured that all the security measures are undertaken to prevent vulnerabilities / threats /hacking of application or data theft. The new software applications developed shall comply with the necessary Internet Security Guidelines from NIC/Cert-impanelled Internet Security Auditors before hosting and to provide safe-to-host certificate after fixing all kind of vulnerabilities as per NIC norms.
- Concessionair and its subcontractor shall be responsible to maintain the confidentiality of application, data and any other information and make sure that information is not shared outside the CMWSSB. The required confidentiality agreement shall be signed by concessionaire as well as by each team member deployed at CMWSSB.
- Source Code will be handed over to the IT Division, CMWSSB along with compiled version
- and executables. Any software developed shall be the property of CMWSSB. Software, Documents, Information and other elements of the project shall have the copyrights of CMWSSB unless some copy right material is used with due permission of any third party.
- Proper versioning of source code should be maintained. It should be ensured that uploading
- of the revamped application in the LIVE servers is carried out with due care to avoid any wrong upload or accidental file replace.
- Preventive maintenance shall be carried out on the database and functioning of the program to handle large volume of traffic.

- The deliverables also include:
 - System Requirements Specifications document
 - User Acceptance Testing (UAT) signoff for revamped Portal
 - Complete source code
 - Fully functional working version of the Portal including CMWSSB related data, if any
 - Test Plans used and test cases
 - Technical design document and Users' manuals

SCHEDULE I: Tests

1. Schedule of Tests

1.1. The Concessionaire shall, no later than 30 (thirty) days prior to the likely completion of the Project, notify the Independent Engineer and the Authority of its intent to subject the Project to Tests, and no later than 7 (seven) days prior to the actual date of Tests, furnish to the Independent Engineer and the Authority detailed inventory and particulars of all works and equipment forming part of the Project.

1.2. The Concessionaire shall notify the Independent Engineer of its readiness to subject the Project to Tests at any time after 7 (seven) days from the date of such notice, and upon receipt of such notice, the Independent Engineer shall, in consultation with the Concessionaire, determine the date and time for each Test and notify the same to the Authority who may designate its representative to witness the Tests. The Independent Engineer shall thereupon conduct the Tests itself or cause any of the Tests to be conducted in accordance with Article 14 and this Schedule-I.

1.3. The Authority shall conduct the Tests itself or cause any of the Tests to be conducted on the Hardware, Software and communication infrastructure created by the Concessionaire. The Concessionaire shall notify the Authority of its readiness to subject the Project to Tests at any time after 7 (seven) days from the date of such notice, and upon receipt of such notice, the Authority shall, in consultation with the Concessionaire, determine the date and time for each Tests.

2. Tests

2.1. In pursuance of the provisions of Article 14.1.2 of this Agreement, the Independent Engineer shall conduct, or cause to be conducted, the Tests specified in this Paragraph 2.

2.2. Visual and physical Test: The Independent Engineer shall conduct a visual and physical check of the Project to determine that all works and equipment forming part thereof conform to the provisions of this Agreement.

2.3. Asset or Equipment Specific Tests: The Independent Engineer may require the Concessionaire to carry out or cause to be carried additional Tests, in accordance with Good Industry Practice, for determining the compliance of the Project with Specifications and Standards.

2.4. Hardware, Software and Communication Infrastructure: The Authority shall conduct the tests either by itself or through an expert agency to assess whether the required functionalities required for the efficient collection, transmission and storage of data are operational and are in compliance with the BRS and SRS documents.

3. Agency for conducting Tests

All Tests set forth in this Schedule-I shall be conducted by the Independent Engineer or such other agency or person as it may specify in consultation with the Authority. Tests for Hardware, Software and Communication infrastructure shall be conducted either by the competent personnel of the Authority or any expert agency that the Authority may appoint for this purpose.

4. Completion/Provisional Certificate

Upon successful completion of Tests, the Independent Engineer or the Authority or expert agency (for hardware, Software and Communication infrastructure) shall issue the Completion Certificate or the Provisional Certificate, as the case may be, in accordance with the provisions of Article 14.

5. Tests during construction

Without prejudice to the provisions of this Schedule-I, tests during construction shall be conducted in accordance with the provisions of Article 13.3.1.

SCHEDULE J: COMPLETION CERTIFICATE

FORMAT OF COMPLETION CERTIFICATE

1 I/We,..... (Name of the Independent Engineer), acting as Independent Engineer, under and in accordance with the Concession Agreement dated(the "Agreement"), for _____ on Hybrid Annuity Model Project (the "Project") on design, build, operate and transfer (the "DBFOT Annuity or Hybrid Annuity") basis, through.....(Name of Concessionaire), hereby certify that the Tests specified in Article 14 and Schedule I of the Agreement have been successfully undertaken to determine compliance of the Project with the provisions of the Agreement, and I/We am/are satisfied that the Project can be safely and reliably placed in commercial service of the Users thereof.

2 It is certified that, in terms of the aforesaid Agreement, all works forming part of the Project have been completed, and the Project is hereby declared fit for entry into commercial operation on this the day of _____

SIGNED, SEALED AND DELIVERED

For and on behalf of
INDEPENDENT ENGINEER by:

(Signature)
(Name)
(Designation)
(Address)

FORMAT OF PROVISIONAL CERTIFICATE

1 I/We,..... (Name of the Independent Engineer), acting as Independent Engineer, under and in accordance with the Concession Agreement Dated..... (the "Agreement"), for development and operation of the _____ on Hybrid Annuity Mode (the "Project") on design, build, operate and transfer (the "DBFOT Annuity or Hybrid Annuity") basis through.....(Name of Concessionaire), hereby certify that the Tests specified in Article 14 and Schedule-I of the Agreement have been undertaken for the Project/section..... of the Project to determine compliance thereof with the provisions of the Agreement.

2 Construction Works forming part of the Project/section of the Project that were found to be incomplete and/or deficient have been specified in the Punch List appended hereto, and the Concessionaire has agreed and accepted that it shall complete and/or rectify all such works in the time and manner set forth in the Agreement. Some of the incomplete works have been delayed as a result of reasons attributable to the Authority or due to Force Majeure and the Provisional Certificate cannot be withheld on this account. Though the remaining incomplete works have been delayed as a result of reasons attributable to the Concessionaire,⁶ I/We am/are satisfied that having regard to the nature and extent of such incomplete works, it would not be prudent to withhold commercial operation of the Project/section..... of the Project, pending completion thereof.

⁶ May be struck out if not applicable. Also strike out other parts which are not applicable.

3 In view of the foregoing, I/We am/are satisfied that the Project/section of the Project can be safely and reliably placed in commercial service of the Users thereof, and in terms of the Agreement, the Project/section of the Project is hereby provisionally declared fit for entry into commercial operation on this the day of..... 20

**ACCEPTED, SIGNED, SEALED
DELIVERED**

FOR AND ON BEHALF OF
OF

CONCESSIONAIRE by:

(Signature)

(Name and Designation)

(Address)

**SIGNED, SEALED AND
DELIVERED**

FOR AND ON BEHALF

INDEPENDENT ENGINEER by:

(Signature)

(Name and Signature)

(Address)

SCHEDULE K: MAINTENANCE REQUIREMENTS

1. O&M Manual

- a) The Concessionaire shall prepare detailed O&M Manual for the Project in accordance with the Technical Specifications, Applicable Laws and Applicable Permits. The O&M Manual shall specify the operation procedures and maintenance procedures. In case of any errors or deficiencies in the Technical Specifications, the O&M Manual shall take in account, address or rectify such errors or deficiencies. The language of the O&M Manual shall be English.
- b) At least 30 days prior to the Scheduled Completion Date, the Concessionaire shall submit 4 hard copies and 1 soft copy on a compact disc of the draft O&M Manual to the Authority for its review and approval.
- c) The Authority shall review and provide comments, if any, on the draft O&M Manual to the Concessionaire or notify the Concessionaire of its approval of the draft O&M Manual within 20 days from the date of receipt of the draft O&M Manual from the Concessionaire. The Authority may require the Concessionaire to amend or modify the draft O&M Manual if the Authority identifies any deficiencies, inaccuracies, or shortcomings in the draft O&M Manual. If the Concessionaire receives any comments, suggestions, or instructions to modify the draft O&M Manual from the Authority, then the Concessionaire shall modify the draft O&M Manual to correct any shortcomings, inaccuracies or deficiencies identified by the Authority and/or address, in writing, the Authority 's comments on the draft O&M Manual and submit the revised O&M Manual to the Authority within 10 days of having received Authority's response for its approval. The process set out in this clause shall continue until the O&M Manual is approved by the Authority in accordance with this clause.
- d) The Concessionaire shall revise the O&M Manual as and when the Concessionaire thinks it necessary to do so and in such case the provisions of aforementioned clause will apply as is to the approval of the revised manual.

2. O&M as per the O&M Manual

- a) The Concessionaire shall undertake the O&M of the Project strictly in accordance with the approved O&M Manual. The Concessionaire shall not deviate from or make any amendment to the approved O&M Manual without the prior written approval of the Authority. The Concessionaire shall not commence operation of the Project prior to approval of the O&M Manual in accordance with this clause.
- b) Notwithstanding any approval of the O&M Manual by the Authority, the Concessionaire shall bear all risk, responsibility and liability for the suitability, accuracy, adequacy and practicality of the O&M Manual. The Concessionaire shall not be entitled to any extension of time and/or costs incurred in the preparation of or updating the O&M Manual and complying with the requirements of this clause.

3. Maintenance and Repair of the Facilities

- a) During the O&M Period, the Concessionaire shall undertake the maintenance of the Project and repair any damage to the Project either by itself, such that the Project shall be:
- (i) in good working condition (subject only to wear and tear and Force Majeure) and achieve their full useful economic life in accordance with the Designs and Drawings;
 - (ii) maintained in compliance with the Technical Specifications, O&M Manual, Scheduled Maintenance Programme, Applicable Laws, Applicable Permits, Good Industry Practice and the recommendations of the technology providers; and
 - (iii) capable of meeting the KPIs.

- b) Within 15 days of receipt of the relevant Scheduled Maintenance Programme, the Authority shall notify the Concessionaire of its approval of such schedule.

If the Authority does not accept any one or more of the requested Scheduled Maintenance periods the Authority shall advise the Concessionaire within 15 days of the receipt of the Scheduled Maintenance Programme on when any Scheduled Maintenance can be rescheduled may be minimised. The rescheduled time shall be as close as reasonably practicable to the requested time, and shall be of equal duration as the requested period. If the Authority fails to object to any Scheduled Maintenance within the specified time period or fails to advise the Concessionaire of a substitute time, the Concessionaire may schedule the Scheduled Maintenance for such duration and at such time as initially requested.

- c) Notwithstanding the finalization of the Scheduled Maintenance Programme pursuant to this clause, the Authority may require the Concessionaire to reschedule a Scheduled Maintenance in the Scheduled Maintenance Programme, provided that:
- (i) the Authority has given the Concessionaire at least 30 days' prior written notice of such re-scheduling;
 - (ii) the Authority shall not require such Scheduled Maintenance to be rescheduled for a period of shorter or longer duration;
 - (iii) the Authority shall not require that a single Scheduled Maintenance period be split into two or more periods; and
 - (iv) the Authority shall not require that a Scheduled Maintenance be brought forward any earlier than 15 days from the date of such notice without the consent of the Concessionaire.
- d) Notwithstanding the finalization of the Scheduled Maintenance Programme pursuant to this Clause, the Concessionaire may request a rescheduling of any Scheduled Maintenance upon 60 days' prior written notice to the Authority. The Authority shall respond to such request within 10 days and shall not unreasonably withhold its

permission for such re-scheduling.

- e) Within 5 days of any re-scheduling of a Scheduled Maintenance in accordance with the provisions of the Concession Agreement, the Concessionaire shall provide to the Authority, the relevant amended Scheduled Maintenance Programme, which shall then be the "Scheduled Maintenance Programme".
- f) During the O&M Period, the Concessionaire shall, at its own cost, replace any component or part of the Project that is damaged or worn out or in the Concessionaire's judgement becomes no longer practicable to repair as a result of normal wear and tear.
- g) If at any time during the O&M Period, the Project is damaged by a minor casualty, the Concessionaire shall, with reasonable diligence, proceed to process the claim with insurance providers and repair, replace, and restore the damaged portion of the Project to the same condition that it was in before the occurrence of such minor casualty. To the extent available, insurance proceeds shall be applied to such repair, replacement or restoration.

4. Maintenance of Facilities

4.1. Civil Assets - O&M including insurance etc.

All pipes, fittings and other apparatus shall comply with the list of Accepted Water Installation Components as issued by CMWSSB in this tender

The concessionaire is to observe the provisions of the relevant Health and Safety Act. Working on underground pipelines presents hazardous conditions, the relevant insurance of workers and staff should be valid for entire duration of contract.

Notice must be given to affected residents 24 hours prior to any planned shutdown

Every completed layer or section of the Works shall be subject to check testing by the Concessionaire, at his own cost. Once the Concessionaire has satisfied himself with the standard of his works, he shall provide the CMWSSB the results of his check testing indicating that the work is to specification. To minimise delays due to testing, the Concessionaire shall give the CMWSSB at least 24 hours' notice of when any portion of the works will be completed to his satisfaction so that the CMWSSB can arrange for his acceptance control testing to be done.

Existing meters shall remain the property of the CMWSSB and shall be returned by the Concessionaire to CMWSSB. Care taken of meters The Concessionaire shall obtain the signatures of the appropriate CMWSSB Official, acknowledging receipt. All the material must be itemised i.e., type, size, diameter, make, number, meter number, meter reading, stand number etc. from which the meter has been removed. The Concessionaire shall allow in his rate for the return of such material to the Engineer's Depot

The Concessionaire will be held solely responsible for observing the by-laws and regulations of the relevant local authorities. The Concessionaire shall indemnify the Employer against all claims for damages arising from this source.

The Concessionaire attention is drawn to the relevant clauses of the General Conditions of Contract of CMWSSB

4.2. Meters - O&M including AMC, replacements, insurance etc.

Any meter maintenance, as it pertains to installation (meter and box) required needs to be performed in line with Installation requirements, specifications and standards, processes, controls, and reporting requirements, as outlined in this document and the Deployment and Quality Guideline.

Maintenance in the context of the meter point post installation involves a range of critical activities to ensure the smart meter and associated infrastructure continue to function optimally over time. It encompasses both preventive and corrective measures, addressing any issues that may arise.

- **Meter Repairs:** In the event of meter malfunctions, service providers should promptly address and repair any issues to ensure accurate data collection.
- **Infrastructure Repairs:** Any damage or issues with the meter chamber, enclosure, or accessories must be repaired promptly to protect the meter and maintain its functionality.
- **Communication Troubleshooting:** If communication disruptions occur, service providers must diagnose and rectify the problem promptly to avoid data loss.
- **Meter Replacement:** In cases where meters are irreparable, timely replacement is necessary to maintain continuous water usage monitoring.
- **Meter Malfunction:** Smart meters can encounter issues with their internal components or data transmission. Service providers should diagnose the problem, repair or replace the meter as needed, and recalibrate it for accuracy.
- **Communication Breakdown:** Communication failures may result from signal interference or equipment malfunctions. Troubleshooting, equipment replacement, or signal boosting may be required to restore communication.
- **Physical Damage:** Accidental or intentional damage to metering equipment, such as the chamber or enclosure, necessitates immediate repairs or replacements to protect the meter.
- **Battery Health:** Regular checks of battery health ensure backup power availability during outages; replacing depleted batteries is crucial to prevent data gaps.
- **Remote Diagnostics:** Advanced systems can remotely monitor the health and performance of meters. Maintenance is triggered when anomalies or issues are detected through remote diagnostics.
- **Data Anomalies:** Maintenance may be initiated when irregularities or anomalies are identified in the data collected by meters, such as sudden spikes or drops in consumption data.
- **Leak Detection:** Maintenance can be triggered by the detection of water leaks, either through data analysis or by meters equipped with leak detection capabilities.
- **Tampering Alerts:** When meters detect tampering attempts or unauthorized access, maintenance is needed to investigate and address the issue.
- **Data Quality Checks:** Regular data quality checks and validation processes can trigger maintenance when data integrity issues are identified.

- **Customer Complaints:** Maintenance may be initiated in response to customer complaints or concerns about meter accuracy or functionality.

Concessionaire must establish a robust monitoring system to track the health and performance of meters post-installation. This includes tracking consumption patterns, identifying anomalies, and promptly addressing any deviations. Regular reporting to CMWSSB is essential to keep stakeholders informed of maintenance activities, issues, and resolutions.

The Concessionaire would have to comply with the KPIs during the maintenance period as defined in the RFP and show clear documentation for their variable payments.

In summary, post-installation maintenance of smart water meters is vital to guarantee accurate water usage measurement and system reliability. Service providers must proactively address potential issues and promptly respond to any malfunctions or damage to ensure the longevity and effectiveness of the metering infrastructure.

General guidelines for Maintenance of Smart Water Meters

- Operation and Maintenance of the smart water meter with all required fittings and accessories including replacement of faulty meters and/or parts should be in-line with best industry practices and relevant applicable standards.
- Replacement the faulty meters should be within 24 hrs from the time of complaint received by the Contractor.
- During replacement the disconnection of the water meters should be in line with the following:
- Smart Water Meter shall be disconnected in such a way that nearby fittings of house service connections shall not get disturbed
- After taking down water meter the left-out pipes shall be plugged to make the same watertight. There shall not be any visible leakage after inserting plugs.
- Smart Water Meter shall be packed in such a way that packing shall be capable of absorbing shocks due to any mishandling or fall down, the water meter shall not get damaged, also packing shall be packed and sealed as per the specification/standard of water meter manufacturer
- Continuous monitoring the health of the smart water meters using application software and in case of any issue observed reported the contractor to perform troubleshooting, repair, or replacement as applicable to re-store the meter within specified timeline.
- Deploying qualified manpower, vehicles, tools, tackles, and equipment for curative and maintenance works.
- Sufficient spare to be maintained at site to maintain SLA.
- Report submission on a daily, weekly, and monthly basis to Engineer-in-charge for billing purpose as per the specified format.
- In case of theft of the installed water meters or related fittings and accessories, Contractor shall immediately report
- to Engineer-In-charge and provide required evidence/ documentation available at site.
- Calibration of smart Water Meters needs to be carried out if any complaint is made by the consumer.

4.3. Software O&M including AMC, replacements, insurance etc.

(i) ICT Infrastructure Support and Maintenance

ICT infrastructure includes servers, storages, back up, networking, load balancers, security equipment, operating systems, database, enterprise management system, help desk system and other related ICT infra required for running and operating the envisaged system. Service Provider shall define, develop, implement and adhere to IT Service Management (ITSM) processes aligned to defined framework for all the IT Services and managed as part of this project.

(ii) Warranty support

- (a) Concessionaire shall provide comprehensive and on-site warranty for 12 years from the date of Go-Live for the infrastructure deployed on the project. Service Provider need to have OEM support for these components and documentation in this regard need to be submitted to CMWSSB.
- (b) Concessionaire shall provide the performance warranty in respect of performance of the installed hardware and software to meet the performance requirements and service levels.
- (c) Concessionaire is responsible for sizing and procuring the necessary hardware and software licenses as per the system requirements. During the warranty period Service Provider shall replace or augment or procure higher-level new equipment or additional licenses/hardware at no additional cost to the CMWSSB in case the procured hardware or software is not enough or is undersized to meet the service levels and the project requirements.
- (d) During the warranty period concessionaire shall maintain the systems and repair/replace at the installed site, at no charge to CMWSSB, all defective components that are brought to the Service Provider's notice.
- (e) The Service Provider shall carry out Preventive Maintenance (PM) of all hardware and testing for virus, if any, and should maintain proper records at each site for such PM. The PM should be carried out at least once in six months as per checklist and for components agreed with CMWSSB.
- (f) The concessionaire shall carry out Corrective Maintenance for maintenance/troubleshooting of supplied hardware/ software and support infrastructure problem including network (active/passive) equipment, security and rectification of the same. The concessionaire shall also maintain complete documentation of problems, isolation, cause and rectification procedures for building knowledge base for the known problems in centralized repository, accessible to CMWSSB team as well.
- (g) Concessionaire shall monitor warranties to check adherence to preventive and repair maintenance terms and conditions.
- (h) The Concessionaire shall ensure that the warranty complies with the agreed technical standards, security requirements, operating procedures, and recovery procedures. Concessionaire shall have to stock and provide adequate onsite and offsite spare parts and spare component to ensure that the uptime commitment as per SLA is met.

- (i) Any component that is reported to be down on a given date should be either fully repaired or replaced by temporary substitute (of equivalent configuration) within the time frame indicated in the Service Level Agreement(SLA).
- (j) The Concessionaire shall have a comprehensive Assets Management process & appropriate tool to manage the entire lifecycle of every component of system.

The scope of work for infrastructure and maintenance includes the following:

- 1. Data Centre operations to be in compliance with industry leading frameworks
- 2. Data recovery on hosted model (Computing, Storage, Backup, Networking, Security and DC-DR Replication solution)
- 3. Ensure compliance to relevant SLA's
- 4. 24x7 monitoring & management of availability & security of the infrastructure and assets
- 5. Perform regular hardening, patch management, testing and installation of software updates issued by OEM/vendors from time to time after following agreed process
- 6. Ensure overall security – ensure installation and management of every security component at every layer including physical security
- 7. Prepare documentation/policies required for certifications included in the scope of work
- 8. Preventive maintenance plan for every quarter
- 9. Performance tuning of system as required
- 10. Design and maintain Policies and Standard Operating Procedures
- 11. User access management
- 12. Other activities as defined to meet the project objectives
- 13. Updating of all Documentation.

During operations phase the concessionaire needs to submit proof of renewal of support for all IT infrastructure products and other system software's for whom it is mandated to have OEM support.

General guidelines for Maintenance of Software and Communication Systems

A. System Maintenance and Management

- 1) The concessionaire shall be responsible for tasks including but not limited to setting up servers, configuring and apportioning storage space, account management, performing periodic backup of data and automating reporting tasks, and executing hardware and software updates when necessary. It shall be noted that the activities performed by the concessionaire may also be reviewed by CMWSSB.
- 2) On an on-going basis, concessionaire shall be responsible for troubleshooting issues in the IT infrastructure solution to determine the areas where fixes are required and ensuring resolution of the same.
- 3) Concessionaire shall be responsible for identification, diagnosis and resolution of problem areas pertaining to the IT Infrastructure and maintaining the defined SLA levels.
- 4) Concessionaire shall implement and maintain standard operating procedures for the maintenance of the IT infrastructure based on the policies formulated in discussion

with CMWSSB and based on the industry best practices/frameworks. Service Provider shall also create and maintain adequate documentation/checklists for the same.

- 5) Concessionaire shall be responsible for managing the user names, roles and passwords of all the relevant subsystems, including, but not limited to servers, other devices, etc. Service Provider shall be required to set up the directory server. Logs relating to access of system by administrators shall also be kept and shall be made available to CMWSSB on need basis.
- 6) Concessionaire shall implement a password change mechanism in accordance with the security policy formulated in discussion with CMWSSB and based on the industry best practices/frameworks
- 7) The administrators shall also be required to have experience in latest technologies so as to provision the existing and applicable infrastructure on a requirement based scenario.

B. System Administration

- 1) Continuous monitoring and management of the servers in the Data centre
- 2) Concessionaire shall also ensure proper configuration of server parameters and performance tuning on regular basis. Service Provider shall be the single point of accountability for all hardware maintenance and support the ICT infrastructure. It should be noted that the activities performed by the Service Provider may be reviewed by CMWSSB.
- 3) Concessionaire shall be responsible for operating system administration, including but not limited to management of users, processes, preventive maintenance and management of upgrades including updates, upgrades and patches to ensure that the system is properly updated.
- 4) Concessionaire shall also be responsible for installation and re-installation of the hardware(s) as well as the software(s) in the event of system crash/failures.
- 5) Concessionaire shall also be responsible for proactive monitoring of the applications hosted
- 6) Concessionaire shall appoint system administrators to regularly monitor and maintain a log of the monitoring of servers to ensure their availability to CMWSSB at all times.
- 7) CMWSSB shall undertake regular analysis of events and logs generated in all the sub systems including but not limited to servers, operating systems etc. The system administrators shall undertake actions in accordance with the results of the log analysis. The system administrators shall also ensure that the logs are backed up and truncated at regular intervals. Service Provider shall refer to CERT-In Guidelines so as to ensure their alignment with the practices followed.
- 8) The system administrators shall adopt a defined process for change and configuration management in the areas including, but not limited to, changes in servers, operating system, applying patches, etc.
- 9) The system administrators shall provide information of servers in line with the defined security policies. Validation and configuration will be carried out quarterly and deviations must be tracked through SLA reporting

- 10) The system administrators shall provide integration and user support on all supported servers, data storage systems etc.
- 11) The system administrators shall be required to trouble shoot problems with web services, application software, server relationship issues and overall aspects of a server environment like managing and monitoring server configuration, performance and activity of all servers.
- 12) The system administrators should be responsible for documentation regarding Configuration of all servers, IT Infrastructure etc.
- 13) The system administrators shall be responsible for managing the trouble tickets, diagnosis of the problems, reporting, managing escalation, and ensuring rectification of server problems as prescribed in Service Level Agreement.
- 14) The administrators will also be required to have experience in latest technologies so as to provision the existing and applicable infrastructure on a requirement based scenario.

C. Storage Administration

- 1) Concessionaire shall be responsible for the management of the storage solution including, but not limited to, storage management policy, configuration and management of library, etc. It should be noted that the activities performed by the Service Provider may be reviewed by CMWSSB.
- 2) Concessionaire shall be responsible for storage management, including but not limited to management of space, security, business continuity volumes, performance, etc.
- 3) The storage administrator will be required to identify parameters including but not limited to key resources in the storage solution, interconnects between key resources in the storage solution, health of key resources, connectivity and access rights to storage volumes and the zones being enforced in the storage solution.
- 4) The storage administrator will be required to create/delete, enable/disable zones in the storage solution.
- 5) The storage administrator will be required to create/delete/modify storage volumes in the storage solution.
- 6) The storage administrator will be required to create/delete, enable/disable connectivity and access rights to storage volumes in the storage solution.
- 7) To facilitate scalability of solution wherever required.
- 8) The administrators will also be required to have experience in technologies such as virtualization and cloud computing so as to provision the existing and applicable infrastructure on a requirement-based scenario.

D. Database Administration

- 1) The Concessionaire shall be responsible for monitoring database activity and performance, changing the database logical structure to embody the requirements of new and changed programs.
- 2) The concessionaire shall be responsible to perform physical administrative functions such as reorganizing the database to improve performance.

- 3) The concessionaire shall be responsible for tuning of the database, ensuring the integrity of the data and configuring the data dictionary.
- 4) The concessionaire will follow guidelines issued by CMWSSB in this regard from time to time including access of data base by system administrators and guidelines relating to security of database.
- 5) Database administration should follow the principle of segregation of duties to ensure no single DBA can update production tables/data singularly.
- 6) In addition to restrictions on any direct change in Data by any administrator, the Databases shall have Auditing features enabled to capture all activities of administrators.

E. Backup / Restore /Archival

- 1) The concessionaire shall be responsible for implementation of backup & archival policies as finalized with CMWSSB. The concessionaire is responsible for getting acquainted with the storage policies of CMWSSB before installation and configuration. It should be noted that the activities performed by the Service Provider may be reviewed by CMWSSB.
- 2) The concessionaire shall be responsible for monitoring and enhancing the performance of scheduled backups, scheduled regular testing of backups and ensuring adherence to related retention policies.
- 3) The concessionaire shall be responsible for prompt execution of on-demand backups of volumes and files whenever required by CMWSSB or in case of upgrades and configuration changes to the system.
- 4) The concessionaire shall be responsible for real-time monitoring, log maintenance and reporting of backup status on a regular basis. Service Provider shall appoint administrators to ensure prompt problem resolution in case of failures in the backup processes.
- 5) The concessionaire shall undertake media management tasks, including, but not limited to, tagging, cross-referencing, storing, logging, testing, and vaulting in fire proof cabinets (onsite and offsite as per the detailed process finalized by during project implementation phase).
- 6) The concessionaire shall also provide uninterrupted support for file and volume restoration requests at the Data Centre(s).

F. Network monitoring

- 1) The concessionaire with his subcontractor shall provide services for management of network environment to maintain performance at optimum levels. It should be noted that the activities performed by the concessionaire may be reviewed by CMWSSB
- 2) The Service Provider shall also provide network related support and will coordinate with connectivity Service Providers of CMWSSB/other agencies who are terminating their network at the DC/ for access of system.

G. Security Management

- 1) Performing security services on the components that are part of the CMWSSB environment as per security policy finalized with CMWSSB

- 2) IT Security Administration – Manage and monitor safety of information/data
- 3) Reporting security incidents and resolution of the same
- 4) Proactively monitor, manage, maintain & administer all security devices and update engine, signatures, and patterns as applicable.
- 5) Managing and monitoring of anti-virus, anti-malware, phishing and malware for Managed resources.
- 6) Ensuring 100% antivirus coverage with patterns not old more than period agreed on any given system
- 7) Ensuring APT (Advanced Threat Protection)
- 8) Reporting security incidents and co-ordinate resolution
- 9) Maintaining secure domain policies
- 10) Performing firewall management and review of policies on at-least quarterly basis
- 11) Resolution of calls for security notifications, system alerts, vulnerabilities in hardware/ software and alerting CMWSSB as appropriate
- 12) Performing patch management using software distribution tool for all security applications including content management system, antivirus and VPN
- 13) Providing root cause analysis for all defined problems including hacking attempts
- 14) Monthly reporting on security breaches and attempts plus the action taken to thwart the same and providing the same to CMWSSB
- 15) Maintaining documentation of security component details including architecture diagram, policies and configurations
- 16) Performing periodic review of security configurations for inconsistencies and redundancies against security policy
- 17) Performing periodic review of security policy and suggest improvements
- 18) Reviewing logs daily of significance such as abnormal traffic, unauthorized penetration attempts, any sign of potential vulnerability. Security alerts and responses. Proactive measures in the event a problem is detected
- 19) Policy management (firewall users, rules, hosts, access controls, daily adaptations)
- 20) Modifying security policy, routing table and protocols
- 21) Sensitizing users to security issues through regular updates or alerts – periodic updates/ Help CMWSSB issuance of mailers in this regard
- 22) Performing capacity management of security resources to meet business needs
- 23) Rapidly resolving every incident/problem within mutually agreed timelines
- 24) Testing and implementation of patches and upgrades
- 25) Implementing and maintaining security rules
- 26) Performing any other day-to-day administration and support activities

H. DR Facility (on Hosted model)

- 1) Service Provider should ensure the availability of below components on DR hosted site:
 - a. Computing Infrastructure
 - b. Storage Infrastructure
 - c. Backup system
 - d. Networking components
 - e. IT security System as per standards
 - f. DC-DR replication Software
 - g. Bandwidth for DC –DR replication and to ensure 99%availability

I. Other Activities

- 1) The concessionaire shall ensure that it prepares configuration manual for OS, appliances, middleware, all tool, servers/devices and all equipment's and the same need to be submitted to CMWSSB, any changes in the configuration manual need to be approved by CMWSSB. Configuration manual to be updated periodically.
- 2) The concessionaire shall maintain data regarding entitlement for software upgrades, enhancements, refreshes, replacements and maintenance.
- 3) If the Operating System or additional copies of Operating System are required to be installed/reinstalled/un-installed, the same should be done as part of O&M.
- 4) The concessionaire should carry out any requisite adjustments/changes in the configuration for implementing different versions of Application Software.
- 5) Updates/Upgrades/New releases/new versions: The Service Provider shall provide from time to time the Updates/Upgrades/new releases/new versions of the software and operating systems as required. The Service Provider should provide free upgrades, updates & patches of the software and tools to CMWSSB as and when released by OEM.
- 6) The concessionaire shall provide patches to the software as part of IT infrastructure, operating system, databases and other applications.
- 7) Software License Management: The Service Provider shall provide for software license management and control. Service Provider shall maintain data regarding entitlement for software updates, enhancements, refreshes, replacements, and maintenance.
- 8) Data backup/recovery management services
- 9) All other activities required to meet the project requirements and service levels.
- 10) It is responsibility of the concessionaire to scale up the Operations & Maintenance (O&M) team as and when required to ensure smooth project execution throughout the project duration.

4.4. Other aspects of O&M

- 1) Any meter maintenance, as it pertains to installation (meter and box) required needs to be performed in line with Installation requirements, specifications and standards, processes, controls, and reporting requirements, as outlined in this document and the Deployment and Quality Guidelines.

2) Maintenance in the context of the meter point post installation involves a range of critical activities to ensure the smart meter and associated infrastructure continue to function optimally over time. It encompasses both preventive and corrective measures, addressing any issues that may arise.

- **Meter Repairs:** In the event of meter malfunctions, Concessionaire should promptly address and repair any issues to ensure accurate data collection.
- **Infrastructure Repairs:** Any damage or issues with the meter chamber, enclosure, or accessories must be repaired promptly to protect the meter and maintain its functionality.
- **Communication Troubleshooting:** If communication disruptions occur, Concessionaire must diagnose and rectify the problem promptly to avoid data loss.
- **Meter Replacement:** In cases where meters are irreparable, timely replacement is necessary to maintain continuous water usage monitoring.
- **Meter Malfunction:** Smart meters can encounter issues with their internal components or data transmission. Concessionaire should diagnose the problem, repair or replace the meter as needed, and recalibrate it for accuracy.
- **Communication Breakdown:** Communication failures may result from signal interference or equipment malfunctions. Troubleshooting, equipment replacement, or signal boosting may be required to restore communication.
- **Physical Damage:** Accidental or intentional damage to metering equipment, such as the chamber or enclosure, necessitates immediate repairs or replacements to protect the meter.
- **Battery Health:** Regular checks of battery health ensure backup power availability during outages; replacing depleted batteries is crucial to prevent data gaps.
- **Remote Diagnostics:** Advanced systems can remotely monitor the health and performance of meters. Maintenance is triggered when anomalies or issues are detected through remote diagnostics.
- **Data Anomalies:** Maintenance may be initiated when irregularities or anomalies are identified in the data collected by meters, such as sudden spikes or drops in consumption data.
- **Tampering Alerts:** When meters detect tampering attempts or unauthorized access, maintenance is needed to investigate and address the issue.
- **Data Quality Checks:** Regular data quality checks and validation processes can trigger maintenance when data integrity issues are identified.
- **Customer Complaints:** Maintenance may be initiated in response to customer complaints or concerns about meter accuracy or functionality.

Concessionaire must establish a robust monitoring system to track the health and performance of meters post-installation. This includes tracking consumption patterns, identifying anomalies, and promptly addressing any deviations. Regular reporting to CMWSSB is essential to keep stakeholders informed of maintenance activities, issues, and resolutions.

In summary, post-installation maintenance of smart water meters is vital to guarantee accurate water usage measurement and system reliability. Concessionaire must proactively address potential issues and promptly respond to any malfunctions or damage to ensure the longevity and effectiveness of the metering infrastructure.

SCHEDULE L: INDEPENDENT ENGINEER

1. Selection of Independent Engineer

1.1. The Authority shall appoint a consulting engineering firm substantially in accordance with the selection criteria set forth in the Tamil Nadu Transparency in Tenders Act, 1998 and read with the Tamil Nadu Transparency in Tenders (Public Private Partnership Procurement) Rules, 2012 and any amendments thereof to be the independent consultant under this Agreement (the "Independent Engineer"). The appointment shall be made no later than 60 (sixty) days from the Effective Date and shall initially be for a period of 5 (five) years which may be extended for a further term of 5 (five) years. On expiry of the aforesaid appointment, the Authority shall appoint an Independent Engineer for a further terms in accordance with the provisions of the above stated legislations and such procedure shall be repeated after expiry of each appointment.

1.2. In the event of termination of an Independent Engineer appointed in accordance with the provisions of Paragraph 1.1, the Authority shall appoint another firm of Technical Consultants forthwith or may engage a government-owned entity in accordance with the provisions of Paragraph 5 of this Schedule-M.

1.3. The Concessionaire may, in its discretion, nominate a representative to participate in the process of selection to be undertaken by the Authority under this Schedule-M.

2. Terms of Reference

The Terms of Reference for the Independent Engineer shall substantially conform to Schedule-M.

3. Fee and expenses

3.1. In determining the nature and quantum of duties and services to be performed by the Independent Engineer during the Study Period and Construction Period, the Authority shall endeavour that payments to the Independent Engineer on account of fee and expenses do not exceed 3% (three per cent) of the Bid Project Cost. Payments not exceeding such 3% (three per cent) shall be borne equally by the Authority and the Concessionaire in accordance with the provisions of this Agreement and any payments in excess thereof shall be borne entirely by the Authority.

3.2. The nature and quantum of duties and services to be performed by the Independent Engineer during the Operation Period shall be determined by the Authority in conformity with the provisions of this Agreement and with due regard for economy in expenditure. All payments made to the Independent Engineer on account of fee and expenses during the Operation Period shall be borne equally by the Authority and the Concessionaire.

4. Selection every three years

No later than 3 (three) years from the date of appointment of Independent Engineer pursuant to the provisions of Paragraph 1 of this Schedule-M, and every 3 (three) years thereafter, the Authority shall engage another firm in accordance with the criteria set forth in this Schedule-M.

5. Appointment of government entity as Independent Engineer

Notwithstanding anything to the contrary contained in this Schedule, the Authority may in its discretion appoint a government-owned entity as the Independent Engineer; provided that such entity shall be a body corporate having as one of its primary function the provision of consulting, advisory and supervisory services for engineering projects; provided further that a government- owned entity which is owned or controlled by the Authority shall not be eligible for appointment as Independent Engineer.

SCHEDULE M: TERMS OF REFERENCE FOR INDEPENDENT ENGINEER

1. Scope

These Terms of Reference for the Independent Engineer (the "TOR") are being specified pursuant to the Concession Agreement dated (the "Agreement"), which has been entered into between the Authority and the "Concessionaire") for _____ on HAM mode in the state of Tamil Nadu on design, build, operate and transfer (the "DBFOT Annuity or Hybrid Annuity") basis, and a copy of which is annexed hereto and marked as Annex-A to form part of this TOR.

2. Definitions and interpretation

- a. The words and expressions beginning with or in capital letters used in this TOR and not defined herein but defined in the Agreement shall have, unless repugnant to the context, the meaning respectively assigned to them in the Agreement.
- b. References to Articles, Clauses and Schedules in this TOR shall, except where the context otherwise requires, be deemed to be references to the Articles, Clauses and Schedules of the Agreement, and references to Paragraphs shall be deemed to be references to Paragraphs of this TOR.
- c. The rules of interpretation stated in Clauses 1.2, 1.3 and 1.4 of the Agreement shall apply, mutatis mutandis, to this TOR.

3. Role and functions of Independent Engineer

- a. The role and functions of the Independent Engineer shall include the following:
 - i. review of the detailed Drawings, DPR and other documents as set forth in Paragraph 4;
 - ii. Review, inspection and monitoring of Construction Works as set forth in Paragraph 5; conducting Tests on completion of construction and issuing Completion/ Provisional Certificate as set forth in Paragraph 5
 - iii. Review, inspection and monitoring of O&M as set forth in Paragraph 6;
 - iv. review, inspection and monitoring of Divestment Requirements as set forth in Paragraph 7;
 - v. determining, as required under the Agreement, the costs of any works or services and/or their reasonableness;
 - vi. determining, as required under the Agreement, the period or any extension thereof, for performing any duty or obligation;
 - vii. Assisting the Parties in resolution of Disputes as set forth in Paragraph 9; and
 - viii. Undertaking all other duties and functions in accordance with the Agreement.

4. Study Period

- a. During the Study Period, the Independent Engineer shall undertake a detailed review of the detailed Drawings and DPR to be furnished by the Concessionaire along with supporting data, including the geo-technical and hydrological investigations, characteristics of materials from borrow areas and quarry sites,

topographical surveys and traffic surveys. The Independent Engineer shall complete such review and send its comments/ observations to the Authority and the Concessionaire within 15 (fifteen) days of receipt of such Drawings and DPR. In particular, such comments shall specify the conformity or otherwise of such Drawings and DPR with the Scope of the Project and Specifications and Standards.

- b. The Independent Engineer shall review any modified Drawings and DPR or supporting Documents sent to it by the Concessionaire and furnish its comments within 7 (seven) days of receiving such Drawings or DPR.
- c. The Independent Engineer shall review the detailed Drawings and DPR comprising construction methodology, quality assurance procedures and the procurement, engineering and construction time schedule sent to it by the Concessionaire and furnish its comments within 15 (fifteen) days of receipt thereof.
- d. Upon reference by the Authority, the Independent Engineer shall review and; comment on the EPC Contract or any other contract for construction, operation and maintenance of the Project, and furnish its comments within 7 (seven) days from receipt of such reference from the Authority.

5. Construction Period

- a. In respect of the detailed Drawings received by the Independent Engineer for its review and comments during the Construction Period, the provisions of Paragraph 4 shall apply, mutatis mutandis.
- b. The Independent Engineer shall review the monthly progress report furnished by the Concessionaire and send its comments thereon to the Authority and the Concessionaire within 7 (seven) days of receipt of such report
- c. The Independent Engineer shall inspect the Construction Works and the Project once every month, preferably after receipt of the monthly progress report from the Concessionaire, but before the 20th (twentieth) day of each month in any case, and make out a report of such inspection (the "Inspection Report") setting forth an overview of the status, progress, quality and safety of construction, including the work methodology adopted, the materials used and their sources, and conformity of Construction Works with the Scope of the Project and the Specifications and Standards. In a separate section of the Inspection Report, the Independent Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in the construction of the Project. The Inspection Report shall also contain a review of the maintenance of the existing lanes in conformity with the provisions of the Agreement. The Independent Engineer shall send a copy of its Inspection Report to the Authority and the Concessionaire within 7 (seven) days of the inspection.
- d. The Independent Engineer may inspect the Project more than once in a month if any lapses, defects or deficiencies require such inspections.
- e. For determining that the Construction Works conform to Specifications and Standards, the Independent Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests on a sample basis, to be specified by the Independent Engineer in accordance with Good Industry Practice for quality assurance. The Independent Engineer shall issue necessary directions to the Concessionaire for ensuring that the tests are conducted in a fair and efficient manner, and shall monitor and review the results thereof.

- f. The sample size of the tests, to be specified by the Independent Engineer under Paragraph 5.5, shall comprise 10% (ten per cent) of the quantity or number of tests prescribed for each category or type of tests in the Quality Control Manuals; provided that the Independent Engineer may, for reasons to be recorded in writing, increase the aforesaid sample size by up to 10% (ten per cent) for certain categories or types of tests.
- g. The timing of tests referred to in Paragraph 5.5, and the criteria for acceptance/rejection of their results shall be determined by the Independent Engineer in accordance with the Quality Control Manuals. The tests shall be undertaken on a random sample basis and shall be in addition to, and independent of, the tests that may be carried out by the Concessionaire for its own quality assurance in accordance with Good Industry Practice.
- h. In the event that the Concessionaire carries out any remedial works for removal or rectification of any defects or deficiencies, the Independent Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests to determine that such remedial works have brought the Construction Works into conformity with the Specifications and Standards, and the provisions of this Paragraph 5 shall apply to such tests
- i. In the event that the Concessionaire fails to achieve any of the Project Milestones, the Independent Engineer shall undertake a review of the progress of construction and identify potential delays, if any. If the Independent Engineer shall determine that completion of the Project is not feasible within the time specified in the Agreement, it shall require the Concessionaire to indicate within 15 (fifteen) days the steps proposed to be taken to expedite progress, and the period within which COD shall be achieved. Upon receipt of a report from the Concessionaire, the Independent Engineer shall review the same and send its comments to the Authority and the Concessionaire forthwith.
- j. If at any time during the Construction Period, the Independent Engineer determines that the Concessionaire has not made adequate arrangements for the safety of workers and Users in the zone of construction or that any work is being carried out in a manner that threatens the safety of the workers and the Users, it shall make a recommendation to the Authority forthwith, identifying the whole or part of the Construction Works that should be suspended for ensuring safety in respect thereof .
- k. In the event that the Concessionaire carries out any remedial measures to secure the safety of suspended works and Users, it may, by notice in writing, require the Independent Engineer to inspect such works, and within 3 (three) days of receiving such notice, the Independent Engineer shall inspect the suspended works and make a report to the Authority forthwith, recommending whether or not such suspension may be revoked by the Authority.
- l. If suspension of Construction Works is for reasons not attributable to the Concessionaire, the Independent Engineer shall determine the extension of dates set forth in the Project Completion Schedule, to which the Concessionaire is reasonably entitled, and shall notify the Authority and the Concessionaire of the same.
- m. The Independent Engineer shall carry out, or cause to be carried out, all the Tests specified in Schedule-I and issue a Completion Certificate or Provisional Certificate, as the case may be. For carrying out its functions under this Paragraph 5(m) and all matters incidental thereto, the Independent Engineer shall act under and in accordance with the provisions of Article 14 and

Schedule-I.

- n. Upon reference from the Authority, the Independent Engineer shall make a fair and reasonable assessment of the costs of providing information, works and services as set forth in Article 16 and certify the reasonableness of such costs for payment by the Authority to the Concessionaire
- o. The Independent Engineer shall aid and advise the Concessionaire in preparing the Operation and Maintenance Manual
- p. Upon reference from the Authority, the Independent Engineer shall undertake the assessment of cost of civil works, as per applicable schedule of rates, for the reduction of Scope of work as provided in Article 16.6.1 of the Concession Agreement.

6. Operations Period

- a. In respect of the Drawings, Documents and Safety Report received by the Independent Engineer for its review and comments during the Operation Period, the provisions of Paragraph 4 shall apply, mutatis mutandis.
- b. The Independent Engineer shall review the annual Maintenance Program furnished by the Concessionaire and send its comments thereon to the Authority and the Concessionaire within 15 (fifteen) days of receipt of the Maintenance Program.
- c. The Independent Engineer shall review the monthly status report furnished by the Concessionaire and send its comments thereon to the Authority and the Concessionaire within 7 (seven) days of receipt of such report.
- d. The Independent Engineer shall inspect the Project once every month, preferably after receipt of the monthly status report from the Concessionaire, but before the 20th (twentieth) day of each month in any case, and make out an O&M Inspection Report setting forth an overview of the status, quality and safety of O&M including its conformity with the Maintenance Requirements and EHS Requirements. In a separate section of the O&M Inspection Report, the Independent Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in O&M of the Project. The Independent Engineer shall send a copy of its O&M Inspection Report to the Authority and the Concessionaire within 7 (seven) days of the inspection.
- e. The Independent Engineer may inspect the Project more than once in a month, if any lapses, defects or deficiencies require such inspections.
- f. The Independent Engineer shall in its O&M Inspection Report specify the tests, if any, that the Concessionaire shall carry out, or cause to be carried out, for the purpose of determining that the Project is in conformity with the Maintenance Requirements. It shall monitor and review the results of such tests and the remedial measures, if any, taken by the Concessionaire in this behalf.
- g. In respect of any defect or deficiency referred to in Paragraph 3 of Schedule-K, the Independent Engineer shall, in conformity with Good Industry Practice, specify the permissible limit of deviation or deterioration with reference to the Specifications and Standards and shall also specify the time limit for repair or rectification of any deviation or deterioration beyond the permissible limit.
- h. The Independent Engineer shall determine if any delay has occurred in completion of repair or remedial works in accordance with the Agreement, and shall also determine the Damages, if any, payable by the Concessionaire to

the Authority for such delay.

- i. The Independent Engineer shall examine the request of the Concessionaire for closure of any lane(s) of the carriageway for undertaking maintenance/repair thereof, keeping in view the need to minimize disruption in traffic and the time required for completing such maintenance/repair in accordance with Good Industry Practice. It shall grant permission with such modifications, as it may deem necessary, within 3 (three) days of receiving a request from the Concessionaire. Upon expiry of the permitted period of closure, the Independent Engineer shall monitor the re-opening of such lane(s), and in case of delay, determine the Damages payable by the Concessionaire to the Authority under Article 17.7
- j. The Independent Engineer shall monitor and review the curing of defects and deficiencies by the Concessionaire as set forth in Article 19.3
- k. In the event that the Concessionaire notifies the Independent Engineer of any modifications that it proposes to make to the Project, the Independent Engineer shall review the same and send its comments to the Authority and the Concessionaire within 15 (fifteen) days of receiving the proposal.
- l. The Independent Engineer shall undertake traffic sampling, as and when required by the Authority, under and in accordance with the provisions of this Agreement.

7. Termination

- a. At any time, not earlier than 90 (ninety) days prior to Termination but not later than 15 (fifteen) days prior to such Termination, the Independent Engineer shall, in the presence of a representative of the Concessionaire, inspect the Project for determining compliance by the Concessionaire with the Divestment Requirements set forth in Article 32.1 and, if required, cause tests to be carried out at the Concessionaire's cost for determining such compliance. If the Independent Engineer determines that the status of the Project is such that its repair and rectification would require a larger amount than the sum set forth in Article 33.2, it shall recommend retention of the required amount in the Escrow Account and the period of retention thereof.
- b. The Independent Engineer shall inspect the Project once in every 15 (fifteen) days during a period of 90 (ninety) days after Termination for determining the liability of the Concessionaire under Article 33, in respect of the defects or deficiencies specified therein. If any such defect or deficiency is found by the Independent Engineer, it shall make a report in reasonable detail and send it forthwith to the Authority and the Concessionaire.

8. Determination of costs and time

- a. The Independent Engineer shall determine the costs, and/or their reasonableness, that are required to be determined by it under the Agreement.
- b. The Independent Engineer shall determine the period, or any extension thereof, that is required to be determined by it under the Agreement.

9. Assistance in Dispute resolution

- a. When called upon by either Party in the event of any Dispute, the Independent Engineer shall mediate and assist the Parties in arriving at an amicable settlement.
- b. In the event of any disagreement between the Parties regarding the meaning,

scope and nature of Good Industry Practice, as set forth in any provision of the Agreement, the Independent Engineer shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature.

10. Other duties and functions

The Independent Engineer shall perform all other duties and functions specified in the Agreement.

11. Miscellaneous

- a. The Independent Engineer shall notify its programmer of inspection to the Authority and to the Concessionaire, who may, in their discretion, depute their respective representatives to be present during the inspection.
- b. A copy of all communications, comments, instructions, Drawings or Documents sent by the Independent Engineer to the Concessionaire pursuant to this TOR, and a copy of all the test results with comments of the Independent Engineer thereon shall be furnished by the Independent Engineer to the Authority forthwith.
- c. The Independent Engineer shall obtain, and the Concessionaire shall furnish in 2 (two) Copies thereof, all communications and reports required to be submitted, under this Agreement, by the Concessionaire to the Independent Engineer, whereupon the Independent Engineer shall send 1 (one) of the copies to the Authority along with its comments thereon.
- d. The Independent Engineer shall retain at least one copy each of all Drawings and Documents received by it, including 'as-built' Drawings, and keep them in its safe custody
- e. Upon completion of its assignment hereunder, the Independent Engineer shall duly classify and list all Drawings, Documents, results of tests and other relevant records, and hand them over to the Authority or such other person as the Authority may specify, and obtain written receipt thereof. Two copies of the said documents shall also be furnished in their editable digital format or in such other medium or manner as may be acceptable to the Authority.
- f. Wherever no period has been specified for delivery of services by the Independent Engineer, the Independent Engineer shall act with the efficiency and urgency necessary for discharging its functions in accordance with Good Industry Practice.

SCHEDULE N: ESCROW AGREEMENT

THIS ESCROW AGREEMENT is entered into on this the day of 20__ AMONGST

1.Limited, a company incorporated under the provisions of the Companies Act, 2013 and having its registered office at..... (hereinafter referred to as the “Concessionaire” which expression shall, unless repugnant to the context or meaning thereof, include its successors, permitted assigns and substitutes);
2.(insert name and particulars of Lenders’ Representative) and having its registered office at..... acting for and on behalf of the Senior Lenders as their duly authorized agent with regard to matters arising out of or in relation to this Agreement (hereinafter referred to as the “Lenders’ Representative” which expression shall, unless repugnant to the context or meaning thereof, include its successors and substitutes);
3.(insert name and particulars of the Escrow Bank) and having its registered office at (hereinafter referred to as the “Escrow Bank” which expression shall, unless repugnant to the context or meaning thereof, include its successors and substitutes); and
4. The _____, established under the _____, represented by its _____ and having its principal offices at _____ (hereinafter referred to as the “Authority” which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns).

WHEREAS:

A. The Authority has entered into a Concession Agreement dated_____ with the Concessionaire (the “Concession Agreement”) for the _____ on HAM mode in the state of Tamil Nadu. Project (the “Project”) on design, build, operate and transfer (the “DBFOT Annuity or Hybrid Annuity”) basis, and a copy of which is annexed hereto and marked as Annex-A to form part of this Agreement.

B. Senior Lenders have agreed to finance the Project in accordance with the terms and conditions set forth in the Financing Agreements.

C. The Concession Agreement requires the Concessionaire to establish an Escrow Account, inter alia, on the terms and conditions stated therein.

NOW, THEREFORE, in consideration of the foregoing and the respective covenants and agreements set forth in this Agreement, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Parties agree as follows:

1. DEFINITIONS AND INTERPRETATION

1.1. Definitions

In this Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively assigned to them:

“**Agreement**” means this Escrow Agreement and any amendment thereto made in accordance with the provisions contained herein;

“**Concession Agreement**” means the Concession Agreement referred to in Recital (A) above and annexed hereto as Annex-A, and shall include all of its Recitals and Schedules and any amendments made thereto in accordance with the provisions contained in this behalf therein;

“Cure Period” means the period specified in this Agreement for curing any breach or default of any provision of this Agreement by the Concessionaire, and shall commence from the date on which a notice is delivered by the Authority or the Lenders’ Representative, as the case may be, to the Concessionaire asking the latter to cure the breach or default specified in such notice;

“Escrow Account” means an escrow account established in terms of and under this Agreement, and shall include the Sub-Accounts;

“Escrow Default” shall have the meaning ascribed thereto in Article 31.1.1;

“Lenders’ Representative” means the person referred to as the Lenders’ Representative in the foregoing Recitals;

“Parties” means the parties to this Agreement collectively and “Party” shall mean any of the Parties to this Agreement individually;

“Payment Date” means, in relation to any payment specified in Clause 4.1, the date(s) specified for such payment; and

“Sub-Accounts” means the respective sub-accounts of the Escrow Account, into which the monies specified in Clause 4.1 would be credited every month and paid out if due, and if not due in a month then appropriated proportionately in such month and retained in the respective sub-accounts and paid out therefrom on the Payment Date(s).

1.2. Interpretation

1.2.1. References to Lenders’ Representative shall, unless repugnant to the context or meaning thereof, mean references to the Lenders’ Representative, acting for and on behalf of Senior Lenders.

1.2.2. The words and expressions beginning with capital letters and defined in this Agreement shall have the meaning ascribed thereto herein, and the words and expressions used in this Agreement and not defined herein but defined in the Concession Agreement shall, unless repugnant to the context, have the meaning ascribed thereto in the Concession Agreement.

1.2.3. References to Clauses are, unless stated otherwise, references to Clauses of this Agreement.

1.2.4. The rules of interpretation stated in Clauses 1.2, 1.3 and 1.4 of the Concession Agreement shall apply, mutatis mutandis, to this Agreement.

2. ESCROW ACCOUNT

2.1. Escrow Bank to act as trustee

2.1.1. The Concessionaire hereby appoints the Escrow Bank to act as trustee for the Authority, the Lenders’ Representative and the Concessionaire in connection herewith and authorizes the Escrow Bank to exercise such rights, powers, authorities and discretion as are specifically delegated to the Escrow Bank by the terms hereof together with all such rights, powers, authorities and discretion as are reasonably incidental hereto, and the Escrow Bank accepts such appointment pursuant to the terms hereof.

2.1.2. The Concessionaire hereby declares that all rights, title and interest in and to the Escrow Account shall be vested in the Escrow Bank and held in trust for the Authority, the Lenders’ Representative and the Concessionaire, and applied in accordance with the terms of this Agreement. No person other than the Authority, the Lenders’ Representative and the Concessionaire shall have any rights hereunder as the beneficiaries of or as third party beneficiaries under this Agreement.

2.2. Acceptance of Escrow Bank

The Escrow Bank hereby agrees to act as such and to accept all payments and other amounts to be delivered to and held by the Escrow Bank pursuant to the provisions of this Agreement. The Escrow Bank shall hold and safeguard the Escrow Account during the term of this Agreement and shall treat the amount in the Escrow Account as monies deposited by the Concessionaire, Senior Lenders or the Authority with the Escrow Bank. In performing its functions and duties under this Agreement, the Escrow Bank shall act in trust for the benefit of, and as agent for, the Authority, the Lenders' Representative and the Concessionaire or their nominees, successors or assigns, in accordance with the provisions of this Agreement.

2.3. Establishment and operation of Escrow Account

2.3.1. Within 30 (thirty) days from the date of this Agreement, and in any case prior to the Appointed Date, the Concessionaire shall open and establish the Escrow Account with the (name of Branch) Branch of the Escrow Bank. The Escrow Account shall be denominated in Rupees.

2.3.2. The Escrow Bank shall maintain the Escrow Account in accordance with the terms of this Agreement and its usual practices and applicable regulations, and pay the maximum rate of interest payable to similar customers on the balance in the said account from time to time.

2.3.3. The Escrow Bank and the Concessionaire shall, after consultation with the Lenders' Representative, agree on the detailed mandates, terms and conditions, and operating procedures for the Escrow Account, but in the event of any conflict or inconsistency between this Agreement and such mandates, terms and conditions, or procedures, this Agreement shall prevail.

2.4. Escrow Bank's fee The Escrow Bank shall be entitled to receive its fee and expenses in an amount, and at such times, as may be agreed between the Escrow Bank and the Concessionaire. For the avoidance of doubt, such fee and expenses shall form part of the O&M Expenses and shall be appropriated from the Escrow Account in accordance with Clause 4.1.

2.5. Rights of the Parties Save and except as otherwise provided in the Concession Agreement, the rights of the Authority, the Lenders' Representative and the Concessionaire in the monies held in the Escrow Account are set forth in their entirety in this Agreement and the Authority, the Lenders' Representative and the Concessionaire shall have no other rights against or to the monies in the Escrow Account.

2.6. Substitution of the Concessionaire The Parties hereto acknowledge and agree that upon substitution of the Concessionaire with the Nominated Company, pursuant to the Substitution Agreement, it shall be deemed for the purposes of this Agreement that the Nominated Company is a Party hereto and the Nominated Company shall accordingly be deemed to have succeeded to the rights and obligations of the Concessionaire under this Agreement on and with effect from the date of substitution of the Concessionaire with the Nominated Company.

3. DEPOSITS INTO ESCROW ACCOUNT

3.1. Deposits by the Concessionaire

3.1.1. The Concessionaire agrees and undertakes that it shall deposit into and/or credit the Escrow Account with:

a. All monies received in relation to the Project from any source, including the Senior Lenders, lenders of Subordinated Debt and the Authority;

- b. All funds received by the Concessionaire from its shareholders, in any manner or form;
- c. Any other revenues; rentals, deposits or capital receipts, as the case may be, from or in respect of the Project; and
- d. All proceeds received pursuant to any insurance claims

3.1.2. The Concessionaire may at any time make deposits of its other funds into the Escrow Account, provided that the provisions of this Agreement shall apply to such deposits.

3.2. Deposits by the Authority

3.2.1. The Authority agrees and undertakes that, as and when due and payable, it shall deposit into and/or credit the Escrow Account with:

- a. Grant and any other monies disbursed by the Authority to the Concessionaire;
- b. All revenues collected by the Authority in exercise of its rights under the Concession Agreement; and
- c. Termination Payments

Provided that, notwithstanding the provisions of Clause 4.1.1, the Authority shall be entitled to appropriate from the aforesaid amounts, any amounts due and payable to it by the Concessionaire, and the balance remaining shall be deposited into the Escrow Account.

3.3. Deposits by Senior Lenders

The Lenders' Representative agrees, confirms and undertakes that the Senior Lenders shall deposit into and/or credit the Escrow Account with all disbursements made by them in relation to or in respect of the Project; provided that notwithstanding anything to the contrary contained in this Agreement, the Senior Lenders shall be entitled to make direct payments to the EPC Contractor under and in accordance with the express provisions contained in this behalf in the Financing Agreements.

3.4. Interest on deposits

The Escrow Bank agrees and undertakes that all interest accruing on the balances of the Escrow Account shall be credited to the Escrow Account; provided that the Escrow Bank shall be entitled to appropriate therefrom the fee and expenses due to it from the Concessionaire in relation to the Escrow Account and credit the balance remaining to the Escrow Account.

4. WITHDRAWALS FROM ESCROW ACCOUNT

4.1. Withdrawals during Concession Period

4.1.1. At the beginning of every month, or at such shorter intervals as the Lenders' Representative and the Concessionaire may by written instructions determine, the Escrow Bank shall withdraw amounts from the Escrow Account and appropriate them in the following order by depositing such amounts in the relevant Sub-Accounts for making due payments, and if such payments are not due in any month, then retain such monies in such Sub-Accounts and pay out therefrom on the Payment Date(s):

- a. All taxes due and payable by the Concessionaire for and in respect of the Project;
- b. Deleted;
- c. All payments relating to construction of Project Facilities, subject to and in accordance with the conditions, if any, set forth in the Financing Agreements;
- d. O&M Expenses, subject to the ceiling, if any, set forth in the Financing Agreements;

- e. O&M Expenses and other costs and expenses incurred by the Authority in accordance with the provisions of the Concession Agreement, and certified by the Authority as due and payable to it;
- f. Any amounts due and payable to the Authority;
- g. Monthly proportionate provision of Debt Service due in an Accounting Year;
- h. all payments and Damages certified by the Authority as due and payable to it by the Concessionaire pursuant to the Concession Agreement;
- i. Monthly proportionate provision of debt service payments due in an Accounting Year in respect of Subordinated Debt;
- j. any reserve requirements set forth in the Financing Agreements; and
- k. Balance, if any, in accordance with the instructions of the Concessionaire and the Authority.

4.1.2. No later than 60 (sixty) days prior to the commencement of each Accounting Year, the Concessionaire shall provide to the Escrow Bank, with prior written approval of the Lenders' Representative, details of the amounts likely to be required for each of the payment obligations set forth in this Clause 4.1; provided that such amounts may be subsequently modified, with prior written approval of the Lenders' Representative, if fresh information received during the course of the year makes such modification necessary.

4.2. Withdrawals upon Termination upon Termination of the Concession Agreement, all amounts standing to the credit of the Escrow Account shall, notwithstanding anything in this Agreement, be appropriated and dealt with in the following order:

- a. All taxes due and payable by the Concessionaire for and in respect of the Project;
- b. Deleted;
- c. amount of the Debt Due approved by the Authority as part of the Termination Payment, excluding Subordinated Debt;
- d. all payments and Damages certified by the Authority as due and payable to it by the Concessionaire pursuant to the Concession Agreement, including any claims in connection with or arising out of Termination;
- e. Retention and payments arising out of, or in relation to, liability for defects and deficiencies set forth in Article 33 of the Concession Agreement;
- f. Outstanding Debt Service including the balance of Debt Due;
- g. Outstanding Subordinated Debt;
- h. Incurred or accrued O&M Expenses;
- i. Any other payments required to be made under the Concession Agreement; and
- j. Balance, if any, in accordance with the instructions of the Concessionaire and the Authority:

Provided that the disbursements specified in Sub-clause (i) of this Clause 4.2 shall be undertaken only after the Vesting Certificate has been issued by the Authority.

4.3. Application of insufficient funds:

Funds in the Escrow Account shall be applied in the serial order of priority set forth in Clauses 4.1 and 4.2, as the case may be. If the funds available are not sufficient to meet all the requirements, the Escrow Bank shall apply such funds in the serial order of priority until

exhaustion thereof.

4.4. Application of insurance proceeds

Notwithstanding anything in this Agreement, the proceeds from all insurance claims, except life and injury, shall be deposited into and/or credited to the Escrow Account and utilized for any necessary repair, reconstruction, reinstatement, replacement, improvement, delivery or installation of the Project, and the balance remaining, if any, shall be applied in accordance with the provisions contained in this behalf in the Financing Agreements.

4.5. Withdrawals during Suspension

Notwithstanding anything to the contrary contained in this Agreement, the Authority may exercise all or any of the rights of the Concessionaire during the period of Suspension under Article 30 of the Concession Agreement. Any instructions given by the Authority to the Escrow Bank during such period shall be complied with as if such instructions were given by the Concessionaire under this Agreement and all actions of the Authority hereunder shall be deemed to have been taken for and on behalf of the Concessionaire.

5. OBLIGATIONS OF THE ESCROW BANK

5.1. Segregation of funds

Monies and other property received by the Escrow Bank under this Agreement shall, until used or applied in accordance with this Agreement, be held by the Escrow Bank in trust for the purposes for which they were received, and shall be segregated from other funds and property of the Escrow Bank.

5.2. Notification of balances

7 (Seven) business days prior to each Payment Date (and for this purpose the Escrow Bank shall be entitled to rely on an affirmation by the Concessionaire and/or the Lenders' Representative as to the relevant Payment Dates), the Escrow Bank shall notify the Lenders' Representative of the balances in the Escrow Account and Sub-Accounts as at the close of business on the immediately preceding business day.

5.3. Communications and notices

In discharge of its duties and obligations hereunder, the Escrow Bank:

- a. May, in the absence of bad faith or gross negligence on its part, rely as to any matters of fact which might reasonably be expected to be within the knowledge of the Concessionaire upon a certificate signed by or on behalf of the Concessionaire;
- b. may, in the absence of bad faith or gross negligence on its part, rely upon the authenticity of any communication or document believed by it to be authentic;
- c. shall, within 5 (five) business days after receipt, deliver a copy to the Lenders' Representative of any notice or document received by it in its capacity as the Escrow Bank from the Concessionaire or any other person hereunder or in connection herewith; and
- d. shall, within 5 (five) business days after receipt, deliver a copy to the Concessionaire of any notice or document received by it from the Lenders' Representative in connection herewith.

5.4. No set off

The Escrow Bank agrees not to claim or exercise any right of set off, banker's lien or other right or remedy with respect to amounts standing to the credit of the Escrow Account. For the avoidance of doubt, it is hereby acknowledged and agreed by the Escrow Bank that the

monies and properties held by the Escrow Bank in the Escrow Account shall not be considered as part of the assets of the Escrow Bank and being trust property, shall in the case of bankruptcy or liquidation of the Escrow Bank, be wholly excluded from the assets of the Escrow Bank in such bankruptcy or liquidation.

5.5. Regulatory approvals

The Escrow Bank shall use its best efforts to procure, and thereafter maintain and comply with, all regulatory approvals required for it to establish and operate the Escrow Account. The Escrow Bank represents and warrants that it is not aware of any reason why such regulatory approvals will not ordinarily be granted to the Escrow Bank.

6. ESCROW DEFAULT

6.1. Escrow Default

6.1.1. Following events shall constitute an event of default by the Concessionaire (an "Escrow Default") unless such event of default has occurred as a result of Force Majeure or any act or omission of the Authority or the Lenders' Representative:

- a. the Concessionaire commits breach of this Agreement by failing to deposit any receipts into the Escrow Account as provided herein and fails to cure such breach by depositing the same into the Escrow Account within a Cure Period of 5 (five) business days;
- b. the Concessionaire causes the Escrow Bank to transfer funds to any account of the Concessionaire in breach of the terms of this Agreement and fails to cure such breach by depositing the relevant funds into the Escrow Account or any SubAccount in which such transfer should have been made, within a Cure Period of 5 (five) business days; or
- c. the Concessionaire commits or causes any other breach of the provisions of this Agreement and fails to cure the same within a Cure Period of 5 (five) business days.

6.1.2. Upon occurrence of an Escrow Default, the consequences thereof shall be dealt with under and in accordance with the provisions of the Concession Agreement.

7. Termination of Escrow Agreement

7.1. Duration of Escrow Agreement

This Agreement shall remain in full force and effect so long as any sum remains to be advanced or is outstanding from the Concessionaire in respect of the debt, guarantee or financial assistance received by it from the Senior Lenders, or any of its obligations to the Authority remain to be discharged, unless terminated earlier by consent of all the Parties or otherwise in accordance with the provisions of this Agreement.

7.2. Substitution of Escrow Bank

The Concessionaire may, by not less than 45 (forty five) days prior notice to the Escrow Bank, the Authority and the Lenders' Representative, terminate this Agreement and appoint a new Escrow Bank, provided that the new Escrow Bank is acceptable to the Lenders' Representative and arrangements are made satisfactory to the Lenders' Representative for transfer of amounts deposited in the Escrow Account to a new Escrow Account established with the successor Escrow Bank.

The termination of this Agreement shall take effect only upon coming into force of an Escrow Agreement with the substitute Escrow Bank.

7.3. Closure of Escrow Account

The Escrow Bank shall, at the request of the Concessionaire and the Lenders' Representative made on or after the payment by the Concessionaire of all outstanding amounts under the Concession Agreement and the Financing Agreements including the

payments specified in Clause 4.2, and upon confirmation of receipt of such payments, close the Escrow Account and Sub- Accounts and pay any amount standing to the credit thereof to the Concessionaire. Upon closure of the Escrow Account hereunder, the Escrow Agreement shall be deemed to be terminated.

8. SUPPLEMENTARY ESCROW AGREEMENT

8.1. Supplementary escrow agreement

The Lenders' Representative and the Concessionaire shall be entitled to enter into a supplementary escrow agreement with the Escrow Bank providing, inter alia, for detailed procedures and documentation for withdrawals from Sub- Accounts pursuant to Clause 4.1.1 and for matters not covered under this Agreement such as the rights and obligations of Senior Lenders and lenders of Subordinated Debt, investment of surplus funds, restrictions on withdrawals by the Concessionaire in the event of breach of this Agreement or upon occurrence of an Escrow Default, procedures relating to operation of the Escrow Account and withdrawal therefrom, reporting requirements and any matters incidental thereto; provided that such supplementary escrow agreement shall not contain any provision which is inconsistent with this Agreement and in the event of any conflict or inconsistency between provisions of this Agreement and such supplementary escrow agreement, the provisions of this Agreement shall prevail.

9. INDEMNITIES

9.1. General indemnity

9.1.1. The Concessionaire will indemnify, defend and hold the Authority, Escrow Bank and the Senior Lenders, acting through the Lenders' Representative, harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of any breach by the Concessionaire of any of its obligations under this Agreement or on account of failure of the Concessionaire to comply with Applicable Laws and Applicable Permits.

9.1.2. The Authority will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of failure of the Authority to fulfil any of its obligations under this Agreement materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement or this Agreement other than any loss, damage, cost and expense arising out of acts done in discharge of their lawful functions by the Authority, its officers, servants and agents.

9.1.3. The Escrow Bank will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of failure of the Escrow Bank to fulfil its obligations under this Agreement materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement other than any loss, damage, cost and expense, arising out of acts done in discharge of their lawful functions by the Escrow Bank, its officers, servants and agents.

9.2. Notice and contest of claims

In the event that any Party hereto receives a claim from a third party in respect of which it is entitled to the benefit of an indemnity under Clause 9.1 or in respect of which it is entitled to reimbursement (the "Indemnified Party"), it shall notify the other Party responsible for indemnifying such claim hereunder (the "Indemnifying Party") within 15 (fifteen) days of receipt of the claim and shall not settle or pay the claim without the prior approval of the Indemnifying Party, which approval shall not be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim, it may conduct the

proceedings in the name of the Indemnified Party and shall bear all costs involved in contesting the same. The Indemnified Party shall provide all cooperation and assistance in contesting any claim and shall sign all such writings and documents as the Indemnifying Party may reasonably require.

10. DISPUTE RESOLUTION

10.1. Dispute resolution

10.1.1. Any dispute, difference or claim arising out of or in connection with this Agreement, which is not resolved amicably, shall be decided finally by reference to arbitration to a Board of Arbitrators comprising one nominee of each Party to the dispute, and where the number of such nominees is an even number, the nominees shall elect another person to such Board. Such arbitration shall be held in accordance with the Rules of Arbitration of the International Centre for Alternative Dispute Resolution, New Delhi (the "Rules") or such other rules as may be mutually agreed by the Parties, and shall be subject to the provisions of the Arbitration and Conciliation Act, 1996.

10.1.2. The Arbitrators shall issue a reasoned award and such award shall be final and binding on the Parties. The place of arbitration shall be the capital of the State and the language of arbitration shall be English.

11. MISCELLANEOUS PROVISIONS

11.1. Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts in Chennai shall have jurisdiction over all matters arising out of or relating to this Agreement.

11.2. Waiver of sovereign immunity The Authority unconditionally and irrevocably:

- a.** agrees that the execution, delivery and performance by it of this Agreement constitute commercial acts done and performed for commercial purpose;
- b.** agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Agreement or any transaction contemplated by this Agreement, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of the Authority with respect to its assets;
- c.** waives any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and
- d.** consents generally in respect of the enforcement of any judgment or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgment that may be made or given in connection therewith).

11.3. Priority of agreements

In the event of any conflict between the Concession Agreement and this Agreement, the provisions contained in the Concession Agreement shall prevail over this Agreement.

11.4. Alteration of term

All additions, amendments, modifications and variations to this Agreement shall be effectual and binding only if in writing and signed by the duly authorized representatives of the Parties.

11.5. Waiver

11.5.1. Waiver by any Party of a default by another Party in the observance and performance of any provision of or obligations under this Agreement:

- a. Shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;
- b. shall not be effective unless it is in writing and executed by a duly authorized representative of the Party; and
- c. shall not affect the validity or enforceability of this Agreement in any manner

11.5.2. Neither the failure by any Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by any Party to another Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

11.6. No third party beneficiaries This Agreement is solely for the benefit of the Parties and no other person or entity shall have any rights hereunder.

11.7. Survival

11.7.1. Termination of this Agreement

- a. shall not relieve the Parties of any obligations hereunder which expressly or by implication survive termination hereof; and
- b. except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of, or caused by, acts or omissions of such Party prior to the effectiveness of such termination or arising out of such termination.

11.7.2. All obligations surviving the cancellation, expiration or termination of this Agreement shall only survive for a period of 3 (three) years following the date of such termination or expiry of this Agreement.

11.8. Severability

If for any reason whatever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to dispute resolution under Clause 10.1 of this Agreement or otherwise.

11.9. Successors and assigns

This Agreement shall be binding on and shall inure to the benefit of the Parties and their respective successors and permitted assigns.

11.10. Notices

All notices or other communications to be given or made under this Agreement shall be in writing and shall either be delivered personally or sent by courier or registered post with an additional copy to be sent by facsimile or e-mail. The address for service of each Party, its facsimile number and e-mail are set out under its name on the signing pages hereto. A notice shall be effective upon actual receipt thereof, save that where it is received after 5.30 (five

thirty) p.m. on a business day, or on a day that is not a business day, the notice shall be deemed to be received on the first business day following the date of actual receipt. Without prejudice to the foregoing, a Party giving or making a notice or communication by facsimile or e-mail shall promptly deliver a copy thereof personally, or send it by courier or registered post to the addressee of such notice or communication. It is hereby agreed and acknowledged that any Party may by notice change the address to which such notices and communications to it are to be delivered or mailed. Such change shall be effective when all the Parties have notice of it.

11.11. Language

All notices, certificates, correspondence and proceedings under or in connection with this Agreement shall be in English.

11.12. Authorized representatives

Each of the Parties shall, by notice in writing, designate their respective authorized representatives through whom only all communications shall be made. A Party hereto shall be entitled to remove and/or substitute or make fresh appointment of such authorized representative by similar notice.

11.13. Original Document

This Agreement may be executed in four counterparts, each of which when executed and delivered shall constitute an original of this Agreement.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

THE COMMON SEAL OF CONCESSIONAIRE has been affixed pursuant to the resolution passed by the Board of Directors of the Concessionaire at its meeting held on the day of 20 hereunto affixed in the presence of , Director, who has signed these presents in token thereof and Company Secretary / Authorized Officer who has countersigned the same in token thereof⁷.

SIGNED SEALED AND DELIVERED
For and on behalf of SENIOR
LENDERS by the Lender's
representative:

⁷ To be affixed in accordance with the articles of association of the Concessionaire and the resolution passed by its Board of Directors

(Signature)
(Name)
(Designation)
(Address)
(Fax No.)
(E-mail address)

(Signature)
(Name)
(Designation)
(Address)
(Fax No.)
(E-mail address)

SIGNED, SEALED AND
DELIVERED

SIGNED, SEALED AND
DELIVERED

For and on behalf of
THE ESCROW BANK by

for and on behalf of
THE AUTHORITY by:

(Signature)
(Name)
(Designation)
(Address)
(Fax No.)
(E-mail address)

(Signature)
(Name)
(Designation)
(Address)
(Fax No.)
(E-mail address)

SIGNED, SEALED In the presence of:

SCHEDULE O: PANEL OF CHARTERED ACCOUNTANTS

1 Panel of Chartered Accountants

Pursuant to the provisions of Article 27.2.1 of the Agreement, the Authority and the Concessionaire shall prepare a mutually agreed panel of 5 (five) reputable firms of Chartered Accountants having their registered offices in India (the "Panel of Chartered Accountants"). The criteria for preparing such Panel and the procedure to be adopted in this behalf shall be as set forth in this Schedule-O.

2 Invitation for empanelment

2.1 The Authority shall invite offers from all reputed firms of Chartered Accountants who fulfil the following eligibility criteria, namely:

- a) the firm should have conducted statutory audit of the annual accounts of at least fifty companies registered under the Companies Act, 1956, including any re-enactment or amendment thereof, of which at least ten should have been public sector undertakings;
- b) The firm should have at least 5 (five) practicing Chartered Accountants on its rolls, each with a minimum experience of ten years in the profession;
- c) The firm or any of its partners should not have been disqualified or black-listed by the Comptroller and Auditor General of India or the Authority; and
- d) The firm should have an office in the State or in an adjacent State with at least 2 (two) practicing Chartered Accountants on its rolls in such State.

2.2 Interested firms meeting the eligibility criteria shall be required to submit a statement of their capability including the bio-data of all the practicing Chartered Accountants on its rolls. In particular, each firm shall be required to furnish year-wise information relating to the names of all the companies with an annual turnover exceeding Rs. 25,00,00,000 (Rs. twenty five crore) whose annual accounts were audited by such firm in any of the preceding 5 (five) Accounting Years

3 Evaluation and selection

3.1 The information furnished by each firm shall be scrutinized and evaluated by the Authority and 1 (one) point shall be awarded for each annual audit of the companies specified in Paragraph 2.2 above. (For the avoidance of doubt and by way of illustration, a firm which has conducted audit of the annual accounts of any such company for 5 (five) years shall be awarded 5 (five) points).

3.2 The Authority shall prepare a list of all the eligible firms along with the points scored by each such firm and 5 (five) firms scoring the highest points shall be identified and included in the draft Panel of Chartered Accountants.

4 Consultation with the Concessionaire

The Authority shall convey the aforesaid panel of firms to the Concessionaire for scrutiny and comments, if any. The Concessionaire shall be entitled to scrutinize the relevant records of the Authority to ascertain whether the selection of firms has been undertaken in accordance with the prescribed procedure and it shall send its comments, if any, to the Authority within 15 (fifteen) days of receiving the aforesaid panel.

5 Mutually agreed panel

5.1 The Authority shall, after considering all relevant factors including the comments, if any, of the Concessionaire, finalize and constitute a panel of 5 (five) firms which shall be deemed to be the mutually agreed Panel of Chartered Accountants.

5.2 After completion of every 5 (five) years from the date of preparing the mutually agreed Panel of Chartered Accountants, or such earlier period as may be agreed between the Authority and the Concessionaire, a new panel shall be prepared in accordance with the provisions of this Schedule-O.

SCHEDULE P: VESTING CERTIFICATE

1. The _____, _____ (the "Authority") refers to the Concession Agreement dated (the "Agreement") entered into between the Authority and (the "Concessionaire") for _____ on HAM mode in the state of Tamil Nadu. (the "Project") on design, build, operate and transfer ("DBFOT Annuity or Hybrid Annuity") basis.

2. The Authority hereby acknowledges compliance and fulfilment by the Concessionaire of the Divestment Requirements set forth in Article 32.1 of the Agreement on the basis that upon issue of this Vesting Certificate, the Authority shall be deemed to have acquired, and all title and interest of the Concessionaire in or about the Project shall be deemed to have vested unto the Authority, free from any encumbrances, charges and liens whatsoever.

3. Notwithstanding anything to the contrary contained hereinabove, it shall be a condition of this Vesting Certificate that nothing contained herein shall be construed or interpreted as waiving the obligation of the Concessionaire to rectify and remedy any defect or deficiency in any of the Divestment Requirements and/or relieving the Concessionaire in any manner of the same.

Signed this..... day of....., 20..... At.....

AGREED, ACCEPTED AND
SIGNED

For and on behalf of for and on
behalf of

CONCESSIONAIRE by:

(Signature)

(Name)

(Designation)

(Address)

In the presence of:

1.

2

AGREED, ACCEPTED AND
SIGNED

For and on behalf of for and
on behalf of

AUTHORITY by:

(Signature)

(Name)

(Designation)

(Address)

SCHEDULE Q: SUBSTITUTION AGREEMENT

THIS SUBSTITUTION AGREEMENT is entered into on this the.....day of.....20.....

AMONGST

1 The _____, established under the _____ Act _____, represented by its _____ and having its principal offices at _____ (Hereinafter referred to as the "Authority" which expression shall unless repugnant to the context or meaning thereof include its administrators, successors and assigns);

2Limited, a company incorporated under the provisions of the Companies Act, 2013 and having its registered office at (Hereinafter referred to as the "Concessionaire" which expression shall unless repugnant to the context or meaning thereof include its successors and permitted assigns and substitutes);

3 (insert name and particulars of Lenders' Representative) and having its registered office at....., acting for and on behalf of the Senior Lenders as their duly authorized agent with regard to matters arising out of or in relation to this Agreement (hereinafter referred to as the "Lenders' Representative", which expression shall unless repugnant to the context or meaning thereof include its successors and substitutes);

WHEREAS:

A. The Authority has entered into a Concession Agreement dated..... With the Concessionaire (the "Concession Agreement") for _____ on HAM mode in the state of Tamilnadu. (the "Project") on design, build, operate and transfer basis (the "DBFOT Annuity or Hybrid Annuity"), and a copy of which is annexed hereto and marked as Annex-A to form part of this Agreement.

B. Senior Lenders have agreed to finance the Project in accordance with the terms and conditions set forth in the Financing Agreements.

C. Senior Lenders have requested the Authority to enter into this Substitution Agreement for securing their interests through assignment, transfer and substitution of the Concession to a Nominated Company in accordance with the provisions of this Agreement and the Concession Agreement.

D. In order to enable implementation of the Project including its financing, construction, operation and maintenance, the Authority has agreed and undertaken to transfer and assign the Concession to a Nominated Company in accordance with the terms and conditions set forth in this Agreement and the Concession Agreement.

NOW, THEREFORE, in consideration of the foregoing and the respective covenants and agreements set forth in this Agreement, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Parties agree as follows:

1. DEFINITIONS AND INTERPRETATION

1.1. Definitions

In this Substitution Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively assigned to them: "Agreement" means this Substitution Agreement and any amendment thereto made in accordance with the provisions contained in this Agreement;

"Financial Default" means occurrence of a material breach of the terms and conditions of the

Financing Agreements or a continuous default in Debt Service by the Concessionaire for a minimum period of 3 (three) months;

“Lenders’ Representative” means the person referred to as the Lenders’ Representative in the foregoing Recitals;

“Nominated Company” means a company, incorporated under the provisions of the Companies Act, 1956, including any re-enactment or amendment thereof, selected by the Lenders’ Representative, on behalf of Senior Lenders, and proposed to the Authority for assignment/transfer of the Concession as provided in this Agreement;

“Notice of Financial Default” shall have the meaning ascribed thereto in Clause 3.2.1; and

“Parties” means the parties to this Agreement collectively and “Party” shall mean any of the Parties to this Agreement individually.

1.2. Interpretation

1.2.1. References to Lenders’ Representative shall, unless repugnant to the context or meaning thereof, mean references to the Lenders’ Representative, acting for and on behalf of Senior Lenders.

1.2.2. References to Clauses are, unless stated otherwise, references to Clauses of this Agreement.

1.2.3. The words and expressions beginning with capital letters and defined in this Agreement shall have the meaning ascribed thereto herein, and the words and expressions used in this Agreement and not defined herein but defined in the Concession Agreement shall, unless repugnant to the context, have the meaning ascribed thereto in the Concession Agreement.

1.2.4. The rules of interpretation stated in Clauses 1.2, 1.3 and 1.4 of the Concession Agreement shall apply, mutatis mutandis, to this Agreement.

2. ASSIGNMENT

2.1. Assignment of rights and title

The Concessionaire hereby agrees to assign the rights, title and interest in the Concession to, and in favor of, the Lenders’ Representative pursuant to and in accordance with the provisions of this Agreement and the Concession Agreement by way of security in respect of financing by the Senior Lenders under the Financing Agreements.

3. SUBSTITUTION OF THE CONCESSIONAIRE

3.1. Rights of substitution

3.1.1. Pursuant to the rights, title and interest assigned under Clause 2.1, the Lenders’ Representative shall be entitled to substitute the Concessionaire by a Nominated Company under and in accordance with the provisions of this Agreement and the Concession Agreement.

3.1.2. The Authority hereby agrees to substitute the Concessionaire by endorsement on the Concession Agreement in favor of the Nominated Company selected by the Lenders’ Representative in accordance with this Agreement. For the avoidance of doubt, the Senior Lenders or the Lenders’ Representative shall not be entitled to operate and maintain the Project as Concessionaire either individually or collectively.

3.2. Substitution upon occurrence of Financial Default

3.2.1. Upon occurrence of a Financial Default, the Lenders’ Representative may issue a notice to the Concessionaire (the “Notice of Financial Default”) along with particulars thereof, and send a copy to the Authority for its information and record. A Notice of Financial Default under this Clause 3 shall be conclusive evidence of such Financial Default and it shall be final and binding upon the Concessionaire for the purposes of this Agreement.

3.2.2. Upon issue of a Notice of Financial Default hereunder, the Lenders' Representative may, without prejudice to any of its rights or remedies under this Agreement or the Financing Agreements, substitute the Concessionaire by a Nominated Company in accordance with the provisions of this Agreement.

3.2.3. At any time after the Lenders' Representative has issued a Notice of Financial Default, it may by notice require the Authority to suspend all the rights of the Concessionaire and undertake the operation and maintenance of the Project in accordance with the provisions of Article 30 of the Concession Agreement, and upon receipt of such notice, the Authority shall undertake Suspension under and in accordance with the provisions of the Concession Agreement. The aforesaid Suspension shall be revoked upon substitution of the Concessionaire by a Nominated Company, and in the event such substitution is not completed within 180 (one hundred and eighty) days from the date of such Suspension, the Authority may terminate the Concession Agreement forthwith by issuing a Termination Notice in accordance with the provisions of the Concession Agreement; provided that upon written request from the Lenders' Representative and the Concessionaire, the Authority may extend the aforesaid period of 180 (one hundred and eighty) days by a period not exceeding 90 (ninety) days. For the avoidance of doubt, the Authority expressly agrees and undertakes to terminate the Concession Agreement forthwith, upon receipt of a written request from the Lenders' Representative at any time after 240 (two hundred and forty) days from the date of Suspension hereunder.

3.3. Substitution upon occurrence of Concessionaire Default

3.3.1. Upon occurrence of a Concessionaire Default, the Authority shall by a notice inform the Lenders' Representative of its intention to issue a Termination Notice and grant 15 (fifteen) days' time to the Lenders' Representative to make a representation, stating the intention to substitute the Concessionaire by a Nominated Company.

3.3.2. In the event that the Lenders' Representative makes a representation to the Authority within the period of 15 (fifteen) days specified in Clause 3.3.1, stating that it intends to substitute the Concessionaire by a Nominated Company, the Lenders' Representative shall be entitled to undertake and complete the substitution of the Concessionaire by a Nominated Company in accordance with the provisions of this Agreement within a period of 180 (one hundred and eighty) days from the date of such representation, and the Authority shall either withhold Termination or undertake Suspension for the aforesaid period of 180 (one hundred and eighty) days; provided that upon written request from the Lenders' Representative and the Concessionaire, the Authority shall extend the aforesaid period of 180 (one hundred and eighty) days by a period not exceeding 90 (ninety) days; provided further that the Lenders' Representative may at any time withdraw its representation hereunder and upon such withdrawal, the Authority may terminate this Agreement in accordance with the provisions hereof.

3.4. Procedure for substitution

3.4.1. The Authority and the Concessionaire hereby agree that on or after the date of Notice of Financial Default or the date of representation to the Authority under Clause 3.3.2, as the case may be, the Lenders' Representative may, without prejudice to any of the other rights or remedies of the Senior Lenders, invite, negotiate and procure offers, either by private negotiations or public auction or tenders for the take over and transfer of the Project including the Concession to the Nominated Company upon such Nominated Company's assumption of the liabilities and obligations of the Concessionaire towards the Authority under the Concession Agreement and towards the Senior Lenders under the Financing Agreements.

3.4.2. To be eligible for substitution in place of the Concessionaire, the Nominated Company shall be required to fulfil the eligibility criteria that were laid down by the Authority for short listing the bidders for award of the Concession; provided that the Lenders' Representative

may represent to the Authority that all or any of such criteria may be waived in the interest of the Project, and if the Authority determines that such waiver shall not have any material adverse effect on the Project, it may waive all or any of such eligibility criteria.

3.4.3. Upon selection of a Nominated Company, the Lenders' Representative shall request the Authority to:

- a. Accede to transfer to the Nominated Company the right to construct, operate and maintain the Project in accordance with the provisions of the Concession Agreement;
- b. Endorse and transfer the Concession to the Nominated Company, on the same terms and conditions, for the residual Concession Period; and
- c. Enter into a Substitution Agreement with the Lenders' Representative and the Nominated Company on the same terms as are contained in this Agreement.

3.4.4. If the Authority has any objection to the transfer of Concession in favor of the Nominated Company in accordance with this Agreement, it shall within 15 (fifteen) days from the date of proposal made by the Lenders' Representative, give a reasoned order after hearing the Lenders' Representative. If no such objection is raised by the Authority, the Nominated Company shall be deemed to have been accepted. The Authority shall thereupon transfer and endorse the Concession within 15 (fifteen) days of its acceptance/deemed acceptance of the Nominated Company; provided that in the event of such objection by the Authority, the Lenders' Representative may propose another Nominated Company whereupon the procedure set forth in this Clause 3.4 shall be followed for substitution of such Nominated Company in place of the Concessionaire.

3.4.5. The transfer of Concession hereunder to a Nominated Company may, notwithstanding anything to the contrary in this Agreement and the Concession Agreement, be undertaken by transfer of no less than 75% (seventy five per cent) of the equity of the Concessionaire to the Nominated Company, and upon such transfer hereunder, the Concessionaire shall be deemed to be the Nominated Company under and in accordance with the provisions of this Agreement and the Concession Agreement.

3.5. Selection to be binding

The decision of the Lenders' Representative and the Authority in selection of the Nominated Company shall be final and binding on the Concessionaire. The Concessionaire irrevocably agrees and waives any right to challenge the actions of the Lenders' Representative or the Senior Lenders or the Authority taken pursuant to this Agreement including the transfer/assignment of the Concession in favor of the Nominated Company. The Concessionaire agrees and confirms that it shall not have any right to seek revaluation of assets of the Project or the Concessionaire's shares. It is hereby acknowledged by the Parties that the rights of the Lenders' Representative are irrevocable and shall not be contested in any proceedings before any court or Authority and the Concessionaire shall have no right or remedy to prevent, obstruct or restrain the Authority or the Lenders' Representative from effecting or causing the transfer by substitution and endorsement of the Concession as requested by the Lenders' Representative.

4. PROJECT AGREEMENTS

4.1. Substitution of Nominated Company in Project Agreements

The Concessionaire shall ensure and procure that each Project Agreement contains provisions that entitle the Nominated Company to step into such Project Agreement, in its discretion, in place and substitution of the Concessionaire in the event of such Nominated Company's assumption of the liabilities and obligations of the Concessionaire under the Concession Agreement.

5. TERMINATION OF CONCESSION AGREEMENT

5.1. Termination upon occurrence of Financial Default

At any time after issue of a Notice of Financial Default, the Lenders' Representative may by a notice in writing require the Authority to terminate the Concession Agreement forthwith, and upon receipt of such notice, the Authority shall undertake Termination under and in accordance with the provisions of Article 31 of the Concession Agreement.

5.2. Termination when no Nominated Company is selected

In the event that no Nominated Company acceptable to the Authority is selected and recommended by the Lenders' Representative within the period of 180 (one hundred and eighty) days or any extension thereof as set forth in Clause 3.3.2, the Authority may terminate the Concession Agreement forthwith in accordance with the provisions thereof.

5.3. Realization of Debt Due

The Authority and the Concessionaire hereby acknowledge and agree that, without prejudice to their any other right or remedy, the Lenders' Representative is entitled to receive from the Concessionaire, without any further reference to or consent of the Concessionaire, the Debt Due upon Termination of the Concession Agreement. For realization of the Debt Due, the Lenders' Representative shall be entitled to make its claim from the Escrow Account in accordance with the provisions of the Concession Agreement and the Escrow Agreement.

6. DURATION OF THE AGREEMENT

6.1. Duration of the Agreement

This Agreement shall come into force from the date hereof and shall expire at the earliest to occur of the following events:

- A. Termination of the Agreement; or
- B. No sum remains to be advanced and no sum are outstanding to the Senior Lenders, under the Financing Agreements.

7. INDEMNITY

7.1. General indemnity

7.1.1. The Concessionaire will indemnify, defend and hold the Authority and the Lenders' Representative harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense of whatever kind and nature arising out of any breach by the Concessionaire of any of its obligations under this Agreement or on account of failure of the Concessionaire to comply with Applicable Laws and Applicable Permits.

7.1.2. The Authority will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of failure of the Authority to fulfil any of its obligations under this Agreement, materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement or this Agreement, other than any loss, damage, cost and expense, arising out of acts done in discharge of their lawful functions by the Authority, its officers, servants and agents.

7.1.3. The Lenders' Representative will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of failure of the Lenders' Representative to fulfil its obligations under this Agreement, materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement, other than any loss, damage, cost and expense, arising out of acts done in discharge of their lawful functions by the Lenders' Representative, its officers, servants and agents.

7.2. Notice and contest of claims

In the event that any Party hereto receives a claim from a third party in respect of which it is entitled to the benefit of an indemnity under Clause 7.1 or in respect of which it is entitled to reimbursement (the "Indemnified Party"), it shall notify the other Party responsible for indemnifying such claim hereunder (the "Indemnifying Party") within 15 (fifteen) days of receipt of the claim and shall not settle or pay the claim without the prior approval of the Indemnifying Party, such approval not to be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim, it may conduct the proceedings in the name of the Indemnified Party and shall bear all costs involved in contesting the same. The Indemnified Party shall provide all cooperation and assistance in contesting any claim and shall sign all such writings and documents as the Indemnifying Party may reasonably require.

8. DISPUTE RESOLUTION

8.1. Dispute resolution

8.1.1. Any dispute, difference or claim arising out of or in connection with this Agreement which is not resolved amicably shall be decided by reference to arbitration to a Board of Arbitrators comprising one nominee each of the Authority, Concessionaire and the Lenders' Representative. Such arbitration shall be held in accordance with the Rules of Arbitration of the International Centre for Alternative Dispute Resolution, New Delhi (the "Rules") or such other rules as may be mutually agreed by the Parties, and shall be subject to provisions of the Arbitration and Conciliation Act, 1996.

8.1.2. The Arbitrators shall issue a reasoned award and such award shall be final and binding on the Parties. The place of arbitration shall be the capital of the State and the language of arbitration shall be English.

9. MISCELLANEOUS PROVISIONS

9.1. Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts in the New Delhi shall have jurisdiction over all matters arising out of or relating to this Agreement.

9.2. Waiver of sovereign immunity

The Authority unconditionally and irrevocably:

- a) agrees that the execution, delivery and performance by it of this Agreement constitute commercial acts done and performed for commercial purpose;
- b) agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Agreement or any transaction contemplated by this Agreement, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of the Authority with respect to its assets;
- c) waives any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and
- d) consents generally in respect of the enforcement of any judgment or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgment that may be made or given in connection therewith).

9.3. Priority of agreements

In the event of any conflict between the Concession Agreement and this Agreement, the provisions contained in the Concession Agreement shall prevail over this Agreement.

9.4. Alteration of terms

All additions, amendments, modifications and variations to this Agreement shall be effectual and binding only if in writing and signed by the duly authorized representatives of the Parties.

9.5. Waiver

9.5.1. Waiver by any Party of a default by another Party in the observance and performance of any provision of or obligations under this Agreement:

- a) Shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;
- b) Shall not be effective unless it is in writing and executed by a duly authorized representative of the Party; and
- c) Shall not affect the validity or enforceability of this Agreement in any manner.

9.5.2. Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to another Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

9.6. No third party beneficiaries

This Agreement is solely for the benefit of the Parties and no other person or entity shall have any rights hereunder.

9.7. Survival

9.7.1. Termination of this Agreement:

- a) Shall not relieve the Parties of any obligations hereunder which expressly or by implication survive termination hereof; and
- b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such termination or arising out of such termination.

9.7.2. All obligations surviving the cancellation, expiration or termination of this Agreement shall only survive for a period of 3 (three) years following the date of such termination or expiry of this Agreement.

9.8. Severability

If for any reason whatever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to dispute resolution under Clause 8 of this Agreement or otherwise.

9.9. Successors and assigns

This Agreement shall be binding on and shall inure to the benefit of the Parties and their respective successors and permitted assigns.

9.10. Notices

All notices or other communications to be given or made under this Agreement shall be in writing, shall either be delivered personally or sent by courier or registered post with an additional copy to be sent by facsimile or e-mail. The address for service of each Party, its

facsimile number and e-mail address are set out under its name on the signing pages hereto. A notice shall be effective upon actual receipt thereof, save that where it is received after 5.30 (five thirty) p.m. on any day, or on a day that is a public holiday, the notice shall be deemed to be received on the first working day following the date of actual receipt. Without prejudice to the foregoing, a Party giving or making a notice or communication by facsimile or e-mail shall promptly deliver a copy thereof personally, or send it by courier or registered post to the addressee of such notice or communication. It is hereby agreed and acknowledged that any Party may by notice change the address to which such notices and communications to it are to be delivered or mailed. Such change shall be effective when all the Parties have notice of it.

9.11. Language

All notices, certificates, correspondence and proceedings under or in connection with this Agreement shall be in English.

9.12. Authorized representatives

Each of the Parties shall by notice in writing designate their respective authorized representatives through whom only all communications shall be made. A Party hereto shall be entitled to remove and/or substitute or make fresh appointment of such authorized representative by similar notice.

9.13. Original Document

This Agreement may be executed in three counterparts, each of which when executed and delivered shall constitute an original of this Agreement.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN

THE COMMON SEAL OF CONCESSIONAIRE has been affixed pursuant to the resolution passed by the Board of Directors of the Concessionaire at its meeting held on the.....day of the20.....here unto affixed in to the presence of.....the Director, who has signed these presents in token thereof,Company Secretary /Authorized Officer who has countersigned the same in token thereof	SIGNED, SEALED AND DELIVERED For and behalf of THE AUTHORITY by:
(Signature) (Name) (Designation) (Address) (Fax No.) (e-mail address)	(Signature) (Name) (Designation) (Address) (Fax No.) (e-mail address)

SIGNED, SEALED AND DELIVERED

For and on behalf of
SENIOR LENDERS by the

Lenders' Representative:

(Signature)

(Name)

(Designation)

(Address)

(Fax No.)

(E-mail address)

In the presence of:

1.

2.

SCHEDULE R: ENVIRONMENT SOCIAL HEALTH & SAFETY (ESHS) REQUIREMENTS

The project “Procurement, Testing, Installation, Commissioning, Operation, and Maintenance of 1.0 Lakh Water Meters with Associated Communication and Billing System in Chennai City Under Hybrid Annuity Model (HAM) for a period of 12 Years including 2 years of Progressive installation” is part of Chennai City Partnership; the Chennai Sustainable Urban Services Program “C-SUSP” program which is being implemented as a Program-for-Results “P for R” operation of the World Bank. Hence all activities under the program needs to be comply with Environmental and Social Systems Assessment (ESSA) Report of the Program. In this regard, the following Environment Social Management Plan (ESMP) requirements have been formulated to comply with the ESSA and the same needs to be adhered by the Authority and the Concessionaire (as applicable) as part of the project during the currency of this agreement.

1. Excluded Locations for various activities:

- 1.1. Sites/ locations which should be excluded as per applicable siting criteria prescribed by TNPCB, Master plan, Excluded Disaster Zones, or other applicable criteria set out by National, State, Local Body will not be included in the Project.
- 1.2. Activities that involve (i) purchase, storage, and use of banned pesticides/ insecticides/chemicals/asbestos, (ii) Contaminated Areas, not conducive for the proposed activity or use, will not be allowed.
- 1.3. No pipeline laying activities, its operation & maintenance works, or disposal of wastes / wastewater or other activities shall affect demarcated forest area, natural habitats, archaeologically protected monuments/areas, cultural heritage areas, or area under Coastal Regulation Zone (“CRZ”) notification or any other National / State / Local regulations or guidance. The Authority shall ascertain and take required permissions for any activity under the Program.
- 1.4. Sites/ locations which should be excluded as per applicable siting criteria prescribed by TNPCB, master plan, excluded disaster zones, or other applicable criteria set out by National, State, Local Body will not be included in the Operation & Maintenance activity.
- 1.5. Activities that involve (i) purchase, storage, and use of banned pesticides/ insecticides/chemicals/asbestos, (ii) Contaminated Areas, not conducive for the proposed activity or use, will not be allowed.
- 1.6. Repairs/replacement and operation & maintenance of pipelines network shall be strictly in line with regulations, without any pollutants, waste, wastewater discharge or safety concerns affecting any cultural resources, religious activities or sensitive areas including waterbodies, nalas, canals.

Environment & Social Management Plan (ESMP)

Project: Procurement, Testing, Installation, Commissioning, Operation, and Maintenance of 1.0 Lakh Water Meters with Associated Communication and Billing System in Chennai City Under Hybrid Annuity Model (HAM) for a period of 12 Years including 2 years of Progressive installation.

PRE-CONSTRUCTION STAGE		
SL No	Environment & Social Issues	Management Measures
P1	NOC/Consents/License	Necessary permission/license/NoCs (if required) will be obtained by the concessionaire prior to commencement of work.
P2	Labor Requirements	The concessionaire preferably will use unskilled labor from local communities and will mobilize skilled labors from it's pool to give the maximum benefit to the local community. Necessary license (Labor license / BoCW) shall be obtained by the concessionaire.
P3	Arrangement of water	To avoid disruption/disturbance to other water users, the concessionaire will arrange required construction water on its own.
P4	Pollution Under Control (PUC) Certificate	The concessionaire will obtain the PUC certificates of vehicles, which will be used for construction purpose.
P5	Utility Shifting	Not Applicable
CONSTRUCTION STAGE		
SL No	Environment & Social Issues	Management Measures
C1	Traffic Management and Accessibility	<p>The project involves activities only within the independent private premises and no activities is envisaged along the roads / public / common areas which will act as hindrance to traffic or accessibility. However if need arises, the concessionaire shall undertake the following.</p> <ul style="list-style-type: none"> • The concessionaire will provide safe and convenient passage for vehicles, pedestrians, and livestock. • The concessionaire will also ensure that the work on / at existing accesses will not be undertaken without providing adequate provisions. • Appropriate barricades shall be provided for pits / closed pits, so that there is no risk of fall or other hazards. • The concessionaire shall take care that residences, school, hospitals and religious places are accessible (safely without risk of hazards) for the occupiers and visitors.

C2	Worker Facilities and Health & Safety	<ul style="list-style-type: none"> • All worker facilities shall be ensured as per regulations by the authority (for its employees employed for the project under this Agreement) & the concessionaire for its work force under the project. It is the obligation of the concessionaire to comply with Factories Act/ other National / State regulations throughout the project period. This includes (but not limited to) provision of clean and safe rest area, first aid kit, potable water, & toilets etc. and connected to sewer system or septic tanks with appropriate water supply etc. • The concessionaire shall provide appropriate PPEs to all the workers and replace the damaged ones on time as required. • The concessionaire ensures safety of women during construction stage. Appropriate training on Gender safety needs to be conducted for the worker to handle safety of public/residence/occupants of the premises especially women, children, senior citizens and other vulnerable groups. • The concessionaire shall provide appropriate safety measures for women workers in the construction. • Concessionaire shall provide readily available first aid kit including an adequate supply of sterilized dressing materials and appliances as per the Factories Rules in every work zone. • Necessary firefighting equipment (fire extinguishers/sand buckets) will be provided by the concessionaire and ensure firefighting trainings.
C3	Material Handling	<ul style="list-style-type: none"> • All vehicles delivering fine materials (if any) to the site shall be covered to avoid spillage of materials and dust.
C4	Waste Management	<ul style="list-style-type: none"> • Concessionaire shall use C&D waste / recycled material as much as possible in the project area, but strictly following regulations and without any harm to people / occupants of the premise or environment. • The waste and other disposable materials will be stored in a safe manner. • Solid waste (including dry & wet if any), Construction & Demolition (C&D) wastes, hazardous wastes, e-wastes, shall be segregated at source & stored in different color-coded bins, and treatment and disposed shall be arranged in municipal / other approved facilities as in corresponding rules. No dumping of waste around the project or any other area shall be permitted.

C5	Pollution Control and Management	<ul style="list-style-type: none"> • Appropriate dust, noise, water pollution (if any) prevention mechanisms shall be adopted so that there is no disturbance to communities or sensitive receptors such as schools, hospitals etc. nearby. • The concessionaire shall take all precautions to reduce the level of dust from construction sites involving earthwork by measures such as sprinkling of water, encapsulation of dust source and by erection of screen / net. • Concessionaire shall strictly conform to the CPCB noise standards for its construction activities, vehicle and machinery (if any)
C6	Special Situations and Emergencies	<ul style="list-style-type: none"> • Chance finds procedures to be followed in line with applicable regulations. • All safety requirements shall be followed during emergencies. Hazards shall be identified & safety, emergency & fire response plans shall be prepared and followed during the project life cycle. • Emergency Response Plan will be prepared & followed by the concessionaire. All workers will be trained at intervals in emergency related response measures including fire safety.
C7	Drainage	<ul style="list-style-type: none"> • Concessionaire will ensure that no construction materials like earth, stone or appendage is disposed of in a manner that blocks the flow of water of any water course and cross drainage channels. • Concessionaire will take all-necessary measures to prevent any blockage to water flow.
C8	Housekeeping and Cleanliness	<ul style="list-style-type: none"> • Good housekeeping shall be always maintained at construction zones/ individual premises; without posing hazards, pollution or safety issues to the environment or occupants /people.
C9	Excavation of Pit	<ul style="list-style-type: none"> • The concessionaire shall ensure that all the opened pits will be closed immediately after works pertaining to that pit and / or before workers leaving the site. In case any open pits are there, that must be barricaded. • The concessionaire shall ensure the meter chamber is covered with appropriate manhole cover / any other material as specified in the concession agreement after installation of meters. • Excavated materials including debris shall not be piled up so close to the pit with the possibility of its slippage. All excavated material and debris shall be transferred within 24 hours to C&D disposal facility or safe storage area. • Storage of excavated material or fine materials for works (at site or in disposal area) shall be with proper cover (to prevent dust), berm (to prevent erosion), lighting and barricading. • No material shall fall into waterbodies or forest areas, community owned/used areas or the like.

C10	Monitoring & Record Keeping	<ul style="list-style-type: none"> • All Wastes shall be disposed in line with National/ State Regulations and the record shall be maintained. • All records shall be kept at the project office including incident reports, monitoring results, waste quantity generated etc. All permits and clearances shall be obtained and copy of records maintained on site. • Incidents (Severe, Serious and Indicative) records shall be maintained on site. All severe & serious incidents (on project workers, communities) shall be reported to the Client immediately after arranging timely support to the injured.
C11	Information Meetings	<ul style="list-style-type: none"> • The concessionaire shall organize information meetings in the vicinity of project site (minimum one in each section) for public to consult and inform people about his plans covering overall work schedule, and management plans of debris disposal, drainage protection during construction, pollution abatement and other plans, measures to minimize disruption, damage. • The concessionaire shall maintain a channel of communication with the communities through his designated Environment and Safety Officer to address any concern or grievances. • Periodic meetings will also be conducted during the construction period to take feedback from the occupants / owners / users of the premises or their representatives to ensure minimum disturbance.
C12	Clean-up Operations, Restoration and Rehabilitation	<ul style="list-style-type: none"> • Immediate closure of work will be ensured after installation & testing
OPERATION STAGE		
SL No	Environment & Social Issues	Management Measures
O1	During any construction and maintenance activities during operation and maintenance phase, the concessionaire shall prepare and follow the ESMP as specified for construction phase.	

ESMP Activities for the Project:

Sl. No	Item	Unit	Quantity	Remarks
ESMP BUDGET - Construction Phase				
1.	Medical health checkups of workers (Twice a 2 year)	Number	300 x 2	Rate considered in consultation with physician (doctor) for half yearly health check. Two times health check-up of 150 nos. of labourers on average.
2.	Three EHS module training for capacity building of Construction staff / laborers etc.	Number	6	Training can be conducted at site or at CMWSSB zonal premises clubbing up to three work fronts. The cost would include training, material, refreshments etc.
3.	3 Stakeholders Consultation at appropriate stages	Number	6	Stakeholder's Meeting shall be conducted at CMWSSB premises and will include agenda notes / writing pads / refreshments etc.
4.	Worker's GRM	Number	8	The Grievance Redressal Committee (GRC) to have a meeting once in every quarter during the overall project period. Allocate amount required for Meeting expenditure, transportation of the GRC members. Including IEC materials such as pamphlets, writing pads etc.
5.	Capacity building and awareness among contractors' workers and community members on SEA/SH prevention, community health and safety, labor management, etc.	Number	8	Awareness programs to be conducted once every quarter during the overall project period. Allocate amount required for awareness program including expenditure on IEC materials such as pamphlets, guest felicitations, flyers, standees etc.

The bidder has to include the cost for the above activities in its quoted bid price.