

**Request for proposal of  
INTELLGNET STREET POLE  
Selection of Bidder for Implementing Smart  
City Pan City Projects in Bhopal under PPP on  
BOOT model**

**PART- 1**



**Reference No.: NIT 3**

**Date: 14/05/2016**

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**Bhopal Smart City Development Co. Ltd, Bhopal**

**Madhya Pradesh**

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## **DISCLAIMER**

The information contained in this Request for Proposal document (the “RFP”) or subsequently provided to Bidder(s), whether verbally or in documentary or any other form by or on behalf of the Authority or any of its employees or advisors, is provided to Bidder(s) on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP is not an Agreement and is neither an offer nor invitation by the Authority to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in making their financial offers (BIDs) pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the Authority in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This RFP may not be appropriate for all persons, and it is not possible for the Authority, its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in the Bidding Documents, especially the Feasibility Report, may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this RFP and obtain independent advice from appropriate sources.

Information provided in this RFP to the Bidder(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Authority accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

The Authority, its employees and advisors make no representation or warranty and shall have no liability to any person, including any Applicant or Bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way for participation in this BID Stage.

The Authority also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statements contained in this RFP. The Authority may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP.

The issue of this RFP does not imply that the Authority is bound to select a Bidder or to appoint the Successful Bidder JV or Contractor, as the case may be, for the Project and the Authority reserves the right to reject all or any of the Bidders or BIDs without assigning any reason whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its BID including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the Authority or any other costs incurred in connection with or relating to its BID. All such costs and expenses will remain with the Bidder and the Authority shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation or submission of the BID, regardless of the conduct or outcome of the Bidding Process.



## **DEFINITIONS**

Agreement: As defined in Clause 1.1.5

Authority: As defined in Clause 1.1.2

BID(s): As defined in Clause 1.2.2

Bidders: As defined in Clause 1.2.2

Bidding Documents: As defined in Clause 1.1.7

BID Due Date: As defined in Clause 1.2.2

Bidding Process: As defined in Clause 1.2.1

BID Security: As defined in Clause 1.2.4

Conflict of Interest: As defined in Clause 2.1.10

Government: Government of Madhya Pradesh

Highest Bidder: As defined in Clause 1.2.6

LOA: As defined in Clause 3.5.6

Project: As defined in Clause 1.1.4

Re. or Rs. or INR: Indian Rupee

RFP or Request for Proposals: As defined in the Disclaimer

The words and expressions beginning with capital letters and defined in this document shall, unless repugnant to the context, have the meaning ascribed thereto herein.

## 1. INTRODUCTION

**Competitive Bidding under Single Stage Bidding Process for Build, Own, Operate and Transfer of Smart City Pan city Project(hereinafter referred to as “Project”) in the State of Madhya Pradesh on Public Private Partnership (PPP) Basis**

### 1.1. Background Information

1.1.1. Bhopal has a total population of 23, 71, 061 (as per Census, 2011) with municipal area of 413 sq km. The literacy percent within the city is around 85%. City’s economy is driven primarily by cotton, electrical goods, jewelry and chemical industry. Over 1200 MSMEs are currently existent in Bhopal. Tourism is also a thriving industry with several tourist spots such as UNESCO heritage site, lakes etc open for tourists. Over a period of time Bhopal has faced many challenges including;

- Low energy efficiency
- Lack of city infrastructure
- Citizen safety, etc

To mitigate aforementioned challenges pan-city smart solutions are considered to benefit the entire city through application of ICT and resulting improvement in local governance and delivery of public services.

1.1.2. In line to the guidelines issued by Ministry of Urban Development (MoUD)/ Government of India (GoI) Government of Madhya Pradesh has created a Special Purpose Vehicle (SPV) Bhopal Smart City Development Co. Ltd (BSCDCL) for implementing the Smart City mission at the city level. BSCDCL will plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate the Smart City development projects. BSCDCL is headed by a full time CEO and have nominees of Central Government, State Government and ULB on its Board.

1.1.3. The key functions and responsibilities of BSCDCL are to;

- Approve and sanction the projects including their technical appraisal
- Take measures to comply with the requirements of MoUD with respect to the implementation of the Smart Cities programme
- Undertake review of activities of the Mission including budget, implementation of projects, etc and co-ordination with other missions / schemes and activities of various ministries

1.1.4. Bhopal Smart City Development Co. Ltd (Hereinafter referred to as “**Authority**” or “**BSCDCL**”) intends to appoint a Concessionaire for implementing Smart City Pan city projects in Bhopal on **Build, Own, Operate and Transfer (BOOT) model** on Public Private

Partnership (PPP) Basis (the “**Project**”) for a specified Concession Period i.e. implementation period of 9 months and operation and maintenance period of 15 years (the “**Concession Period**”).

- 1.1.5. The Successful Bidder (the “**Concessionaire**”), shall be responsible for designing, engineering, financing, procurement, construction, operation and maintenance of the Project under and in accordance with the provisions of a long-term concession agreement (the “**Concession Agreement**”) to be entered into between the Successful Bidder and the Authority in the form provided by the Authority as part of the Bidding Documents pursuant hereto.
- 1.1.6. The scope of work includes construction of the Project on the Site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule-C and in conformity with the Specifications and Standards set forth in **Annexure 11** of this RFP.
- 1.1.7. An Agreement will be drawn up between the Authority and the Successful Bidder on PPP basis (the “**Concession Agreement**”). The Concession Agreement sets forth the detailed terms and conditions for grant of the concession to the Concessionaire, including the scope of the Concessionaire’s services and obligations (the “**Concession**”). Revenues from the proposed Project will accrue to the Successful Bidder undertaking the Project (the “**Project Company**” or the “**Concessionaire**”) and would be appropriated as per the provisions of the Concession Agreement.
- 1.1.8. The statements and explanations contained in this RFP are intended to provide a better understanding to the Bidders about the subject matter of this RFP and should not be construed or interpreted as limiting in any way or manner the scope of services and obligations of the Concessionaire set forth in the Concession Agreement or the Authority’s rights to amend, alter, change, supplement or clarify the scope of work, the Concession to be awarded pursuant to this RFP or the terms thereof or herein contained. Consequently, any omissions, conflicts or contradictions in the Bidding Documents including this RFP are to be noted, interpreted and applied appropriately to give effect to this intent, and no claims on that account shall be entertained by the Authority.
- 1.1.9. The Authority shall receive Bids pursuant to this RFP in accordance with the terms set forth in this RFP and other documents to be provided by the Authority pursuant to this RFP, as modified, altered, amended and clarified from time to time by the Authority (collectively the “**Bidding Documents**”), and all Bids shall be prepared and submitted in accordance with such terms on or before the date specified in Clause 1.3 for submission of Bids (the “**Bid Due Date**”).
- 1.1.10. A Bidder shall be considered as a Successful Bidder for the projects of the Authority, where the Letter of Awards (LOA) has been issued.

## **1.2. Brief description of Bidding Process**

1.2.1. The Authority has adopted a single stage bidding process wherein the interested parties are required to submit the Bid (collectively referred to as the “**Bidding Process**”) for selection of the Bidder for award of the Project. The Bid in response to the RFP is to be submitted in two parts, viz.:

**PART 1: Qualification/Technical Bid**

**PART 2: Financial Bid**

The evaluation of the Bids would be carried out in two stages.

**PART 1:** The first stage would involve test of responsiveness, technical and financial capability for undertaking the Project based on the Qualification Bid. Only those Bids that meet the Qualification Criteria, as set out in this RFP would be qualified for opening of Financial Bid.

**PART 2 :** Opening and Evaluation of Financial Bid.

On the basis of this evaluation process, Authority will issue a Letter of Award to the Successful Bidder.

[GOI has issued guidelines (see **Annexure 12** of RFP) for qualification of bidders seeking to acquire stakes in any public sector enterprise through the process of disinvestment. These guidelines shall apply mutatis mutandis to this Bidding Process. The Authority shall be entitled to disqualify an Applicant in accordance with the aforesaid guidelines at any stage of the Bidding Process. Applicants must satisfy themselves that they are qualified to bid, and should give an undertaking to this effect in the form at **Annexure 1**]

1.2.2. In the Bid Stage, the aforesaid short-listed Applicants, including their successors, (the “**Bidders**”, which expression shall, unless repugnant to the context, include the Members of the Consortium) are being called upon to submit their financial offers (the “**Bids**”) in accordance with the terms specified in the Bidding Documents. The Bid shall be valid for a period of not less than 120 days from the date specified in Clause 1.3 for submission of bids (the “**Bid Due Date**”).

1.2.3. The Bidding Documents also include the draft Concession Agreement for the Project which is enclosed. The aforesaid documents and any addenda issued subsequent to this RFP Document, will be deemed to form part of the Bidding Documents.

1.2.4. A Bidder is required to deposit, along with its Bid, bid security of Rs. 10,00,000 (Rupees Ten lakhs only) (the “**Bid Security**”) in the form of online payment in authorities account (BSCDCL).

1.2.5. During the Bid Stage, Bidders are invited to examine the Project in greater detail, and to carry out, at their cost, such studies as may be required for submitting their respective Bids for award of the Concession including implementation of the Project.

- 1.2.6. Subject to Clause 2.15, the Project will be awarded to the Bidder scoring Highest Financial Score (the “**Highest Bidder**”) based on evaluation of bids on technical and financial criteria as set out in this RFP. In the event of a tie, the bid with the highest technical score ( $T_h$ ) will be rated as the best bid as per provisions of Clause 3.5.3 of the RFP.
- 1.2.7. The Concessionaire shall be entitled to levy and charge a pre-determined user fee from users of the Project.
- 1.2.8. Further and other details of the process to be followed at the Bid Stage and the terms thereof are spelt out in this RFP. Any queries or request for additional information concerning this RFP shall be submitted in writing or by fax and e-mail to the officer designated in Clause 1.3 below. The envelopes/ communication shall clearly bear the following identification/ title:  
“Queries/Request for Additional Information: **RFP for appointment of a Concessionaire for implementing Smart City Pan city projects in Bhopal on Build, Own, Operate and Transfer (BOOT) model on Public Private Partnership (PPP) Basis**”.
- 1.2.9. Interested parties may obtain the RFP document from the *www.mpeproc.gov.in* with non-refundable fee of INR 20,000 (INR Twenty Thousand only) by way of an online payment to CEO, BSCDCL bank account no. 50327343809, IFSC - ALLA0210197 (Allahabad bank)
- 1.2.10. Further, all the parts of the Bid (PART 1: Qualification Bid, PART 2: Financial Bid) must be submitted online and in hard bound form.

### **1.3. Schedule of Bidding Process**

The Authority shall endeavour to adhere to the following schedule:

#	Information	Details
1.	RFP No. and Date	NIT no. 3 Dated - 14/05/2016

**Request for Proposal for Selection of Concessionaire for Smart City Pan City Project in Bhopal under PPP**

#	Information	Details
2.	Last date for submission of written queries for clarifications along with email for sending queries	23/05/2016 at smartcitycell@bmconline.gov.in
3.	Date and venue of pre-bid conference	23/05/2016 12.30 a.m. Bhopal Smart City Development Corporation Limited, Zone 14, near Tatpar petrol pump, BHEL Govindpura, Bhopal, Madhya Pradesh- 462023
4.	Release of response to clarifications	26/05/2016
5.	Bid validity period	120 days from the last date (deadline) for submission of Bids.
6.	Last date (deadline) for submission of bids	1/06/2016 , 17.30 HRS.
7.	Opening of Technical Bids	2/06/2016, 15.00 HRS
8.	Technical Presentation by the Bidder	Will be intimated later
9.	Place, Time and Date of opening of Financial Bids received in response to the RFP notice	Bhopal Smart City Development Corporation Limited, Zone 14, near Tatpar petrol pump, BHEL Govindpura, Bhopal, Madhya Pradesh- 462023
10.	Website for downloading RFP	www.mpeproc.gov.in
11.	Submission of Bid	<ul style="list-style-type: none"> <li>• Online</li> <li>• Physical Hard copy</li> </ul>
12.	Letter of Award (LOA)	Will be intimated later
13.	Validity of Bids	120 days of Bid Due Date
14.	Signing of Concession Agreement	Within 30 days of award of LOA
15.	Contact person	AK Nanda (City Engineer) 9826244950, 9424499884, Tarun Chaurasiya 9424499800, Harshit Tiwari (Deputy Commissioner) 9424499881

## 2. INSTRUCTION TO BIDDERS

### A. GENERAL

#### 2.1 General Terms for Bidding

- 2.1.1 No Bidder shall submit more than one Bid for the Project. A Bidder bidding individually or as a member of a Consortium shall not be entitled to submit another bid either individually or as a member of any Consortium, as the case may be.
- 2.1.2 Notwithstanding anything to the contrary contained in this RFP, the detailed terms specified in the draft Concession Agreement shall have overriding effect; provided, however, that any conditions or obligations imposed on the Bidder hereunder shall continue to have effect in addition to its obligations under the Concession Agreement.
- 2.1.3 The Bid should be furnished in the format at **Annexure 1**, clearly indicating the bid amount in both figures and words, in Indian Rupees, and signed by the Bidder's authorized signatory. In the event of any difference between figures and words, the amount indicated in words shall be taken into account.
- 2.1.4 The Bid shall consist of a Grant and a Revenue Share to be quoted by the Bidder. Grant shall be payable by the Authority to the Concessionaire and the Revenue Share shall be payable by the Concessionaire to the Authority, as the case may be, as per the terms and conditions of this RFP and the provisions of the Concession Agreement.
- 2.1.5 The Bidder may be a sole applicant (Single Entity) or a group of entities (hereinafter referred to as 'Consortium'), coming together to implement the Project. The term Bidder used hereinafter would therefore apply to both a Single Entity and a Consortium who have submitted the Bid. The Successful Bidder is the one selected by Authority to develop this Project and who has been issued LOA by the Authority. The Successful Bidder would be liable for the execution of the Project in accordance with the terms of the Concession Agreement.
- 2.1.6 In case the Successful Bidder is a Consortium, the equity holding of the Consortium Members in the Concessionaire would be as per the requirements of this RFP and the Concession Agreement.
- 2.1.7 Any condition or qualification or any other stipulation contained in the Bid shall render the Bid liable to rejection as a non-responsive Bid.
- 2.1.8 The Bid and all communications in relation to or concerning the Bidding Documents and the Bid shall be in English language.
- 2.1.9 The documents including this RFP and all attached documents, provided by the Authority are and shall remain or become the property of the Authority and are transmitted to the Bidders solely for

the purpose of preparation and the submission of a Bid in accordance herewith. Bidders are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their Bid. The provisions of this Clause 2.1.9 shall also apply *mutatis mutandis* to Bids and all other documents submitted by the Bidders, and the Authority will not return to the Bidders any Bid, document or any information provided along therewith.

- 2.1.10 A Bidder shall not have a conflict of interest (the “**Conflict of Interest**”) that affects the Bidding Process. Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, the Authority shall forfeit and appropriate 5% of the value of the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, inter alia, the time, cost and effort of the Authority, including consideration of such Bidder’s Bid, without prejudice to any other right or remedy that may be available to the Authority hereunder or otherwise. Without limiting the generality of the above, a Bidder shall be considered to have a Conflict of Interest that affects the Bidding Process, if:
- (i) the Bidder, its Member or Associate (or any constituent thereof) and any other Bidder, its Member or any Associate thereof (or any constituent thereof) have common controlling shareholders or other ownership interest; provided that this disqualification shall not apply in cases where the direct or indirect shareholding of a Bidder, its Member or an Associate thereof (or any shareholder thereof having a shareholding of not more than 25% (twenty five per cent) of the paid up and subscribed share capital; of such Bidder, Member or Associate, as the case may be) in the other Bidder, its Member or Associate, is not more than 25% (Twenty five per cent) of the subscribed and paid up equity share capital thereof; provided further that this disqualification shall not apply to any ownership by a bank, insurance company, pension fund or a public financial institution referred to in section 4A of the Companies Act, 1956. For the purposes of this Clause 2.1.10, indirect shareholding held through one or more intermediate persons shall be computed as follows: (aa) where any intermediary is controlled by a person through management control or otherwise, the entire shareholding held by such controlled intermediary in any other person (the “Subject Person”) shall be taken into account for computing the shareholding of such controlling person in the Subject Person; and (bb) subject always to sub-clause (aa) above, where a person does not exercise control over an intermediary, which has shareholding in the Subject Person, the computation of indirect shareholding of such person in the Subject Person shall be undertaken on a proportionate basis; provided, however, that no such shareholding shall be reckoned under this sub-clause (bb) if the shareholding of such person in the intermediary is less than 26% of the subscribed and paid up equity shareholding of such intermediary; or
  - (ii) a constituent of such Bidder is also a constituent of another Bidder; or
  - (iii) such Bidder, its Member or any Associate thereof receives or has received any direct or indirect subsidy, grant, concessional loan or subordinated debt from any other Bidder, its Member or



Associate, or has provided any such subsidy, grant, concessional loan or subordinated debt to any other Bidder, its Member or any Associate thereof; or

- (iv) such Bidder has the same legal representative for purposes of this Bid as any other Bidder; or
- (v) such Bidder, or any Associate thereof, has a relationship with another Bidder, or any Associate thereof, directly or through common third party/ parties, that puts either or both of them in a position to have access to each others' information about, or to influence the Bid of either or each other; or
- (vi) such Bidder or any Associate thereof has participated as a consultant to the Authority in the preparation of any documents, design or technical specifications of the Project.

Notwithstanding anything stated herein a conflict of interest situation arising at the prequalification stage will be deemed to subsist only, as between such Applicants attracting conflict of interest provisions on account of shareholdings, submit bids under this document.

*Explanation:*

In case a Bidder is a Consortium, then the term Bidder as used in this Clause 2.1.10, shall include each member of such Consortium. For purpose of this RFP Associate means, in relation to the Bidder/ Consortium Member, a person who controls, is controlled by, or is under the common control with such Bidder/ Consortium Member (the “**Associate**”). 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 50% (Fifty percent) 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, by operation of law.

2.1.11 This RFP is not transferable.

2.1.12 Any award of Concession pursuant to this RFP shall be subject to the terms of Bidding Documents.

2.1.13 The Bidder would provide an undertaking to the Authority that EPC works of the project would be executed only by such EPC Contractors who have completed atleast one single package of atleast Rs. 200 Cr. An undertaking to this effect shall be provided by the Bidder.

## **2.2 Minimum Equity Requirement in case of Consortium**

2.2.1 Where the Bidder is a Consortium, change in composition of the Consortium may be permitted by the Authority during the Bid Stage, only where:

- a) the Lead Member continues to be the Lead Member of the Consortium;

- b) the substitute is at least equal, in terms of Technical Capacity or Financial Capacity, to the Consortium Member who is sought to be substituted and the modified Consortium shall continue to meet the pre-qualification and short-listing criteria for Applicants; and
  - c) the new Member(s) expressly adopt(s) the Application already made on behalf of the Consortium as if it were a party to it originally, and is not an Applicant Member/ Associate of any other Consortium bidding for this Project.
- 2.2.2 Approval for change in the composition of a Consortium shall be at the sole discretion of the Authority and must be approved by the Authority in writing. The Bidder must submit its application for change in composition of the Consortium no later than 15 (fifteen) days prior to the Bid Due Date.
- 2.2.3 The modified/ reconstituted Consortium shall submit a revised Jt. Bidding Agreement and a Power of Attorney and other documents, substantially in the formats at Annexures provided in this RFP, prior to the Bid Due Date.
- 2.2.4 The respective holding of each Consortium Member conforms to the representation made by the Consortium and accepted by the Authority as part of the Bid and that no member of the Consortium shall hold less than 25% (twenty five per cent) of such Equity during the Construction Period;

### **2.3 Change in Ownership**

- 2.3.1 By submitting the Bid, the Bidder acknowledges that it was pre-qualified and short-listed on the basis of Technical Capacity and Financial Capacity of those of its Consortium Members who shall, until the 2nd (second) anniversary of the date of commercial operation of the Project, hold equity share capital representing not less than 25% (twenty six per cent) of the subscribed and paid-up equity of the Concessionaire. The Bidder further acknowledges and agrees that the aforesaid obligation shall be the minimum, and shall be in addition to such other obligations as may be contained in the Concession Agreement, and a breach hereof shall, notwithstanding anything to the contrary contained in the Concession Agreement, be deemed to be a breach of the Concession Agreement and dealt with as such thereunder. For the avoidance of doubt, the provisions of this Clause 2.3.1 shall apply only when the Bidder is a Consortium.
- 2.3.2 By submitting the Bid, the Bidder shall also be deemed to have acknowledged and agreed that in the event of a change in control of a Consortium Member or an Associate whose Technical Capacity and/ or Financial Capacity was taken into consideration for the purposes of short-listing and pre-qualification under and in accordance with this RFP, the Bidder shall be deemed to have knowledge of the same and shall be required to inform the Authority forthwith along with all relevant particulars about the same and the Authority may, in its sole discretion, disqualify the Bidder or withdraw the LOA from the Successful Bidder, as the case may be. In the event such change in control occurs after signing of the Concession Agreement but prior to Financial Close of the Project, it would, notwithstanding anything to the contrary contained in the Concession

Agreement, be deemed to be a breach of the Concession Agreement, and the same shall be liable to be terminated without the Authority being liable in any manner whatsoever to the Concessionaire. In such an event, notwithstanding anything to the contrary contained in the Concession Agreement, the Authority shall be entitled to forfeit and appropriate the Bid Security or Performance Security, as the case may be, as Damages, without prejudice to any other right or remedy that may be available to the Authority under the Bidding Documents and/ or the Concession Agreement or otherwise.

## **2.4 Cost of Bidding**

The Bidders shall be responsible for all of the costs associated with the preparation of their Bids and their participation in the Bidding Process. The Authority will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Bidding Process.

## **2.5 Site visit and verification of information**

2.5.1 Bidders are encouraged to submit their respective Bids after visiting the Project site and ascertaining for themselves the site conditions, traffic, location, surroundings, climate, availability of power, water and other utilities for construction, access to site, handling and storage of materials, weather data, applicable laws and regulations, and any other matter considered relevant by them.

2.5.2 It shall be deemed that by submitting a Bid, the Bidder has:

- (a) made a complete and careful examination of the Bidding Documents;
- (b) received all relevant information requested from the Authority;
- (c) accepted the risk of inadequacy, error or mistake in the information provided in the Bidding Documents or furnished by or on behalf of the Authority relating to any of the matters referred to in Clause 2.5.1 above;
- (d) satisfied itself about all matters, things and information including matters referred to in Clause 2.5.1 hereinabove necessary and required for submitting an informed Bid, execution of the Project in accordance with the Bidding Documents and performance of all of its obligations thereunder;
- (e) acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in the Bidding Documents or ignorance of any of the matters referred to in Clause 2.5.1 hereinabove shall not be a basis for any claim for compensation, damages, extension of time for performance of its obligations, loss of profits etc. from the Authority, or a ground for termination of the Concession Agreement by the Concessionaire
- (f) acknowledged that it does not have a Conflict of Interest; and

(g) agreed to be bound by the undertakings provided by it under and in terms hereof.

2.5.3 The Authority shall not be liable for any omission, mistake or error in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to RFP, the Bidding Documents or the Bidding Process, including any error or mistake therein or in any information or data given by the Authority.

## **2.6 Verification and Disqualification**

2.6.1 The Authority reserves the right to verify all statements, information and documents submitted by the Bidder in response to the RFP or the Bidding Documents and the Bidder shall, when so required by the Authority, make available all such information, evidence and documents as may be necessary for such verification. Any such verification, or lack of such verification, by the Authority shall not relieve the Bidder of its obligations or liabilities hereunder nor will it affect any rights of the Authority thereunder.

2.6.2 The Authority reserves the right to reject any Bid and appropriate the Bid Security if:

(a) at any time, a material misrepresentation is made or uncovered, or

(b) the Bidder does not provide, within the time specified by the Authority, the supplemental information sought by the Authority for evaluation of the Bid.

(c) Such misrepresentation/ improper response shall lead to the disqualification of the Bidder. If the Bidder is a Consortium, then the entire Consortium and each Member may be disqualified/ rejected. If such disqualification / rejection occurs after the Bids have been opened and the Highest Bidder gets disqualified / rejected, then the Authority reserves the right to:

(i) take any such measure as may be deemed fit in the sole discretion of the Authority, including annulment of the Bidding Process subject to provisions of Section 3 of this RFP.

2.6.3 In case it is found during the evaluation or at any time before signing of the Concession Agreement or after its execution and during the period of subsistence thereof, including the Concession thereby granted by the Authority, that one or more of the pre-qualification conditions have not been met by the Bidder, or the Bidder has made material misrepresentation or has given any materially incorrect or false information, the Bidder shall be disqualified forthwith if not yet appointed as the Concessionaire either by issue of the LOA or entering into of the Concession Agreement, and if the Successful Bidder has already been issued the LOA or has entered into the Concession Agreement, as the case may be, the same shall, notwithstanding anything to the contrary contained therein or in this RFP, be liable to be terminated, by a communication in writing by the Authority to the Successful Bidder or the Concessionaire, as the case may be, without the

Authority being liable in any manner whatsoever to the Successful Bidder or Concessionaire In such an event, the Authority shall be entitled to forfeit and appropriate the Bid Security or Performance Security, as the case may be, as Damages, without prejudice to any other right or remedy that may be available to the Authority under the Bidding Documents and/ or the Concession Agreement, or otherwise.

## **B. DOCUMENTS**

### **2.7 Contents of RFP**

This RFP comprises the Disclaimer set forth hereinabove, the contents as listed below, and will additionally include any Addenda issued in accordance with Clause 2.9.

<b>Section1</b>	Introduction
<b>Section 2</b>	Instructions to Bidders
<b>Section 3</b>	Evaluation of Bids
<b>Section 4</b>	Fraud and Corrupt Practices
<b>Section 5</b>	Pre-bid Conference
<b>Section 6</b>	Miscellaneous
<b>Annexures</b>	

2.7.1 The draft Concession Agreement provided by the Authority as part of the Bid Documents shall be deemed to be part of this RFP.

### **2.8 Clarifications**

2.8.1 Bidders requiring any clarification on the RFP may notify the Authority in writing or by fax and e-mail in accordance with Clause 1.3. They should send in their queries on or before the date mentioned in the Schedule of Bidding Process specified in Clause 1.3. The Authority shall endeavour to respond to the queries within the period specified therein, but no later than 15 (fifteen) days prior to the Bid Due Date. The responses will be sent by fax or e-mail. The Authority will forward all the queries and its responses thereto, to all Bidders without identifying the source of queries.

2.8.2 The Authority shall endeavour to respond to the questions raised or clarifications sought by the Bidders. However, the Authority reserves the right not to respond to any question or provide any clarification, in its sole discretion, and nothing in this Clause shall be taken or read as compelling or requiring the Authority to respond to any question or to provide any clarification.

2.8.3 The Authority may also on its own motion, if deemed necessary, issue interpretations and clarifications to all Bidders. All clarifications and interpretations issued by the Authority shall be deemed to be part of the Bidding Documents. Verbal clarifications and information given by Authority or its employees or representatives shall not in any way or manner be binding on the Authority.

## **2.9 Amendment of RFP**

2.9.1 At any time prior to the Bid Due Date, the Authority may, for any reason, whether at its own initiative or in response to clarifications requested by a Bidder, modify the RFP by the issuance of Addenda.

2.9.2 Any Addendum issued hereunder will be in writing and shall be sent to all the Bidders.

2.9.3 In order to afford the Bidders a reasonable time for taking an Addendum into account, or for any other reason, the Authority may, in its sole discretion, extend the Bid Due Date.

## **C. PREPARATION AND SUBMISSION OF BIDS**

### **2.10 Format and Signing of Bid**

2.10.1 The Bidder would provide all the information as per this RFP. Authority reserves the right to evaluate only those Bids that are received in the required format, complete in all respects and in line with the instructions contained in this RFP.

2.10.2 The Bid and its copy shall be typed or written in indelible ink and signed by the authorized signatory of the Bidder who shall also initial each page, in blue ink. In case of printed and published documents, only the cover shall be initialled. All the alterations, omissions, additions or any other amendments made to the Bid shall be initialled by the person(s) signing the Bid.

2.10.3 The Bidders will submit their Technical Bids online as well as in the physical format, however the financial bid will be submitted only online subject to following conditions:

- a) The online submission shall be according to e-procurement guidelines issued by GoMP as provided in **Annexure 10**.
- b) Bidders can prepare and edit their offers number of times before final submission. Once finally submitted, Bidder cannot edit their offers submitted in any case. No written or online request in this regards shall be granted/entertained.
- c) Bidder shall submit their offer i.e. Technical bid as well as financial bid in electronic format on the website as mentioned in the RFP.

- d) Bid should be duly signed by the person who holds the power of attorney for this particular bid.
  - e) Financial Bid shall be submitted in the same format as provided in sample format in **Annexure 5** of the RFP.
  - f) Financial bid should not be submitted in physical form.
- 2.10.4 For Technical Bid, the Bidder shall prepare and submit one original Bid along with an additional copy.
- 2.10.5 The pages and volumes of each part of the Bid shall be clearly numbered and stamped and the contents of the Bid shall be duly indexed.
- 2.10.6 For physical submission of Technical Bids, all documents should be submitted in a hard bound form separately (hard bound implies binding between two covers through stitching or otherwise whereby it may not be possible to replace any paper without disturbing the document) (spiral bound form, loose form, etc. will be not accepted), either singularly or with several documents bound together. The Bid should not include any loose papers.
- 2.10.7 The Bid shall be typed or printed. The Bid shall be signed and each page of the Bid shall be initialed by a person or persons duly authorized to sign on behalf of the Bidder and holding the Power of Attorney.
- 2.10.8 The Bid shall contain no alterations or additions, except those to comply with instructions issued by Authority or as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.
- 2.11 Sealing and Marking of Bids**
- 2.11.1 The Bidder shall seal Technical Bid in separate envelopes duly marking each envelope as **“TECHNICAL BID or QUALIFICATION BID”**. The Technical Bid shall include completely filled information in the formats attached as Annexures 1, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 4A, 6, 7,8 and signed copies of this RFP including the draft Concession Agreement, all addenda, corrigenda and other applicable documents.
- 2.11.2 The Bid Security details of online submission by the bidder **“BID SECURITY”** shall be provided in separate envelope and this envelope placed inside Envelope marked **"Part I: TECHNICAL BID"**.
- 2.11.3 The Bidder shall put the above two separate envelopes in a single outer envelope and seal the envelope.
- 2.11.4 The outer envelope shall clearly bear the following identification.

**“Bid for Selection of Concessionaire for Implementing Smart City Pan City Projects in Bhopal under Public Private Partnership based on Built, Own, Operate and Transfer Model”**

2.11.5 Each Envelope shall be addressed to:

CEO, Bhopal Smart City Development Corporation Limited  
Zone 14, near Tatpar petrol pump, BHEL  
Govindpura, Bhopal  
Madhya Pradesh- 462023

2.11.6 Each of the envelopes shall indicate the complete name, address, telephone number and facsimile number of the Bidder.

**2.12 Bid Due Date and Time**

2.12.1 Bids should be submitted on or before the Bid Due Date at the address provided in Clause 2.11.5 in the manner and form as detailed in this RFP.

2.12.2 Authority may, at its sole discretion, extend the BidDue Date by issuing an Addendum uniformly for all Bidders.

**2.13 Modifications / Substitution / Withdrawal of Bids**

2.13.1 The Bidder may modify, substitute or withdraw its Bid after submission, provided that written notice of the modification, substitution or withdrawal is received by the Authority prior to the Bid Due Date. No Bid shall be modified, substituted or withdrawn by the Bidder on or after the Bid Due Date.

2.13.2 The modification, substitution or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with Clause 2.11, with the envelopes being additionally marked “MODIFICATION”, “SUBSTITUTION” or “WITHDRAWAL”, as appropriate.

2.13.3 Any alteration/ modification in the Bid or additional information supplied subsequent to the Bid Due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.

**2.14 LateBids**

2.14.1 Bids received by the Authority after the specified time on the Bid Due Date shall not be eligible for consideration and shall be summarily rejected.

**2.15 Rejection of Bids**



- 2.15.1 Notwithstanding anything contained in this RFP, the Authority reserves the right to reject any Bid and to annul the Bidding Process and reject all Bids at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons therefor. In the event that the Authority rejects or annuls all the Bids, it may, in its discretion, invite all eligible Bidders to submit fresh Bids hereunder.
- 2.15.2 The Authority reserves the right not to proceed with the Bidding Process at any time, without notice or liability, and to reject any Bid without assigning any reasons.

## **2.16 Validity of Bids**

- 2.16.1 The Bids shall be valid for a period of not less than 120 (one hundred and twenty) days from the Bid Due Date. The validity of Bids may be extended by mutual consent of the respective Bidders and the Authority.

## **2.17 Confidentiality**

- 2.17.1 Information relating to the examination, clarification, evaluation and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional advisor advising the Authority in relation to, or matters arising out of, or concerning the Bidding Process. The Authority will treat all information, submitted as part of the Bid, in confidence and will require all those who have access to such material to treat the same in confidence. The Authority may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or the Authority or as may be required by law or in connection with any legal process.

## **2.18 Correspondence with the Bidder**

- 2.18.1 Save and except as provided in this RFP, the Authority shall not entertain any correspondence with any Bidder in relation to acceptance or rejection of any Bid.

## **D. BID SECURITY**

### **2.19 Bid Security**

- 2.19.1 Bids need to be accompanied by a Bid Security mentioned in the Data Sheet. The Bid Security shall be kept valid for 180 days beyond the Bid Validity period including any extensions in the Bid Validity Period inclusive of a claim period of 60 (sixty) days, and may be extended as may be mutually agreed between the Authority and the Bidder from time to time.
- 2.19.2 The Bid Security shall be in the following form:

An irrevocable Bank Guarantee issued by a Bank in favour of the Authority, as per the format set out in **Annexure 3**. Bank Guarantee issued by any Scheduled Bank will be accepted, provided it has been issued by a branch located in the State of M.P. Guarantees issued by Urban Cooperative Banks shall not be accepted.

2.19.3 Authority shall reject the Bid, which does not include the Bid Security.

2.19.4 The entire Bid Security shall be forfeited in the following cases:

- (i) If the Bidder withdraws any of its Bid within the Bid Validity Period;
- (ii) In case of a successful Bidder, if the Bidder fails:
  - (a) To furnish acceptance of the LoA within 15 days from the issue or
  - (b) To furnish Performance Security within 30 working days from the date of issue of LoA or
  - (c) To sign the Concession Agreement within 30 working days from the date of issue of LoA or
  - (d) If the Bidder is found to be involved in fraudulent practices.
- (iii) As per the provisions of the Concession Agreement

#### **E. CONCESSION PERIOD, CONSTRUCTION PERIOD AND ESTIMATED PROJECT COST**

The Concession Period, Construction Period and Estimated Project Cost (EPC) for the Project are provided in the **Data Sheet**.

### 3. EVALUATION OF BIDS

#### 3.1 Opening and Evaluation of Bids

- 3.1.1 The Authority shall open the Bids at 1130 hours on the Bid Due Date, at the place specified in Clause 2.11.5 and in the presence of the Bidders who choose to attend.
- 3.1.2 The Authority will subsequently examine and evaluate the Bids in accordance with the provisions set out in this Section 3.
- 3.1.3 To facilitate evaluation of Bids, the Authority may, at its sole discretion, seek clarifications in writing from any Bidder regarding its Bid.

#### 3.2 Tests of responsiveness

- 3.2.1 Prior to evaluation of Bids, the Authority shall determine whether each Bid is responsive to the requirements of this RFP. A Bid shall be considered responsive only if:
- (a) it is received as per the formats as mentioned in this RFP;
  - (b) it is received by the Bid Due Date including any extension thereof pursuant to Clause 2.12.2;
  - (c) it is signed, sealed, bound together in hard cover and marked as stipulated in Clauses 2.10 and 2.11;
  - (d) it is accompanied by the Bid Security as specified in Clause 2.19;
  - (e) The purchaser of the RFP document must be the Bidder itself or a Member of the Consortium submitting the Bid. The Bidder should submit a Power of Attorney as per the format enclosed at **Annexure 2A**, authorising the signatory of the Bid to commit the Bid.
  - (f) In case the Bidder is a Consortium, the members of the Consortium shall furnish a Power of Attorney in the format prescribed at **Annexure 2B** designating one of the Members, as per the Memorandum of Understanding (MoU), as their Lead Member.
  - (g) Any entity, which has been barred, by Authority and the bar subsists as on the Bid Due Date would not be eligible to submit the Bid, either individually or as Member of a Consortium. An Affidavit as per the format in **Annexure 2C** should be submitted along with the Bid.

- (h) The Bid shall be accompanied with an Anti Collusion Certificate on the letter head of the Lead Member (in case of a Consortium) or the Single Entity as the case may be substantially in the format provided at **Annexure 2D**.
  - (i) The Bid shall also be accompanied with a Project Undertaking on the letter head of the Lead Member (in case of a Consortium) or the Single entity as the case may be substantially in the format provided at **Annexure 2E**.
  - (j) Members of the Consortium shall submit a Memorandum of Understanding (MoU), specific to this Project, for the purpose of submitting the Bid as per format provided in **Annexure 2F**. The MoU shall be furnished on a non-judicial stamp paper of Rs. 100/-, duly attested by notary public.
  - (k) The Bid should be accompanied by the Board Resolutions (in case of corporate members) and/or undertakings (in case of individual members) of the Consortium, giving authority /undertaking to enter into an MoU with other Members for submitting Bid for the Project and, if successful, to participate and undertake the Project and in case of corporate members nominating and authorising an authorised representative of the member to sign and enter into the MoU and execute Power of Attorneys for the Project. The format for the Board Resolutions / Undertaking that must be submitted as provided at **Annexure 2G**.
  - (l) it contains all the information (complete in all respects) as requested in this RFP and/or Bidding Documents (in formats same as those specified);
  - (m) it does not contain any condition or qualification; and
  - (n) it is not non-responsive in terms hereof.
- 3.2.2 The Authority reserves the right to reject any Bid which is non-responsive and no request for alteration, modification, substitution or withdrawal shall be entertained by the Authority in respect of such Bid.
- 3.3 Selection of Bidder**
- 3.3.1 Subject to the provisions of Clause 2.16.1, the Bidder whose Bid is adjudged as responsive in terms of Clause 3.2.1, the Bidder who scores the highest Final Score shall be declared as the Successful Bidder subject to fulfilment of all other provisions of this RFP.
- 3.3.2 The technical and financial capability of the Bidders would be assessed based on the evaluation process and minimum requirements as set by Authority as per **Annexure 4A**, to be submitted by the Bidders in formats as per **Annexure 4B Forms 1 to 10**.

3.3.3 Technical Bid is to judge the Bidder's capability and is proposed to be established by the following parameters:

- (a) **Technical capability:** The Bidder should have executed 'Eligible Projects' as provided in **Annexure 4B (Form 1 to Form 10 excluding Form 3)**.
- (b) **Financial capability:** The financial capability of the Bidder shall be evaluated in terms of criteria mentioned in **Annexure 4B - Form 3**:

3.3.4 A Bid that is substantially responsive is one that conforms to the preceding requirements without material deviation or reservation. A material deviation or reservation is one

- (i) Which affects in any substantial way the scope, quality, or performance of the Project, or
- (ii) Which limits in any substantial way or is, inconsistent with the RFP, rights of Authority or the obligations of the Bidder under the Concession Agreement, or
- (iii) Which would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

3.3.5 Authority reserves the right to reject any Bid which is non-responsive and no request for alteration, modification, substitution or withdrawal shall be entertained in respect of such Bids.

3.3.6 Bidders whose Qualification Bids meet the minimum technical and financial capability requirements as set out in **Annexure 4A** shall be given Technical Score (T ) based on following methodology:

$$T = (T_b/T_h) \times 100,$$

**where**

- T is the Technical Bid Score
- Value of T shall be considered upto two decimal places
- $T_b$  = Total technical bid marks of the bid under consideration
- $T_h$  = Highest total technical bid marks amongst all evaluated bids.

3.3.7 The Technical Score (T) shall be determined only for those Bidders who have scored minimum qualifying marks (50 Marks) in Phase I of evaluation based on minimum technical and financial capability requirements as set out in **Annexure 4A**.

3.3.8 The Bids meeting minimum qualifying marks shall be opened and evaluated in Stage II of the Evaluation Process.

### 3.4 Evaluation of Financial Bids (Stage II)

3.4.1 Authority will open 'FINANCIAL BID' of the Bidders, who pass the Qualification stage (Stage I) as stated, in the presence of the Bidder's authorised representatives who choose to attend.

3.4.2 Upon opening of the Financial Bid, the Bidders shall be given Financial Score based on Grant from the Authority for meeting capital investment requirements and Revenue Share with the Authority. The Bidder is expected to quote for Grant and Revenue Share in the format attached as **Annexure 5**. The Financial Score (F) shall be assigned based on following methodology:

- $F = [NR_b / NR_h] \times 100$
- $NR = R - G$ , where
- $NR_b$  is the Net Revenue Share proposed by the Bidder for bid under consideration
- $NR_h$  is the Highest Net Revenue Share with the Authority amongst all technically qualified bids
- R is the Net Present Value of the Revenue Share with the Authority by the bid under consideration
- G is the support for capital investment in form of Grant quoted by the Bidder for bid under consideration
- For better understanding, following illustration may be referred as an example:

Bidder	Quoted Grant (Rs. Cr.) G	NPV of Revenue Share (Rs. Cr.) R	NR=R-G	F*
A	0	200	200	<b>74.07</b> [(200÷270)X100]
B	15	100	85	<b>31.48</b> [(85÷270)X100]
C	30	300	270	<b>100.00</b> [(270÷270)X100]

‘\*’ Bidder C has Highest Financial Score

### 3.5 Successful Bidder

3.5.1 Authority will determine Final Score (FS) based on scores obtained by Bidders in Stage I and II on the basis of following methodology:

$$\text{Final Score (FS)} = [80\% \times T] + [20\% \times F]$$

3.5.2 The Bid of the Bidder, who obtains the highest FS value, will be rated as the best bid and the contract will be awarded to that Bidder.

3.5.3 In the event that two or more Bidders get same Final Score (the “**Tie Bidders**”), the Bidder with highest technical score (Th) shall be identified as the Successful Bidder.

3.5.4 In the event that the Highest Bidder withdraws or is not selected for any reason in the first instance (the “**first round of bidding**”), the Authority may invite the Bidder with next highest final score for consideration as Successful Bidder;

3.5.5 The Successful Bidder shall be notified on its selection in writing or by fax or email. The Successful Bidder shall also be issued Letter of Acceptance confirming its selection.

3.5.6 After selection, a Letter of Award (the “**LOA**”) shall be issued, in duplicate, by the Authority to the Successful Bidder and the Successful Bidder shall, within 7 (seven) days of the receipt of the LOA, sign and return the duplicate copy of the LOA in acknowledgement thereof. In the event the duplicate copy of the LOA duly signed by the Successful Bidder is not received by the stipulated date, the Authority may, unless it consents to extension of time for submission thereof, appropriate the Bid Security of such Bidder as Damages on account of failure of the Successful Bidder to acknowledge the LOA, and the next eligible Bidder may be considered.

3.5.7 After acknowledgement of the LOA as aforesaid by the Successful Bidder, it shall cause the Concessionaire to execute the Concession Agreement within thirty (30) days of the issue of LOA. The Successful Bidder shall not be entitled to seek any deviation, modification or amendment in the Concession Agreement.

3.5.8 In case, the Concession Agreement does not get executed within the period mentioned in Clause 3.5.7., Authority reserves the right to take any such measure as it may deem fit including to annul the bidding process and may invite fresh Bid for the Project. In such a case the entire Bid Security submitted by the Successful Bidder shall be forfeited. However, Authority on receiving request from the Successful Bidder may at its discretion, permit extension of time for execution of the Concession Agreement.

3.5.9 Authority will notify other Bidders that their Bids have been unsuccessful. Bid Security of other bidders will be returned within 15 days of signing of the agreement or expiry of validity period of Bids whichever is earlier.

### **3.6 Contacts during Bid Evaluation**

- 3.6.1 Bids shall be deemed to be under consideration immediately after they are opened and until such time the Authority makes official intimation of award/ rejection to the Bidders. While the Bids are under consideration, Bidders and/ or their representatives or other interested parties are advised to refrain, save and except as required under the Bidding Documents, from contacting by any means, the Authority and/ or their employees/representatives on matters related to the Bids under consideration.



## 4. FRAUD AND CORRUPT PRACTICES

- 4.1.1 The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process and subsequent to the issue of the LOA and during the subsistence of the Concession Agreement. Notwithstanding anything to the contrary contained herein, or in the LOA or the Concession Agreement, the Authority may reject a Bid, withdraw the LOA, or terminate the Concession Agreement, as the case may be, without being liable in any manner whatsoever to the Bidder or Concessionaire, as the case may be, if it determines that the Bidder or Concessionaire, as the case may be, has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process. In such an event, the Authority shall be entitled to forfeit and appropriate the Bid Security or Performance Security, as the case may be, as Damages, without prejudice to any other right or remedy that may be available to the Authority under the Bidding Documents and/ or the Concession Agreement, or otherwise.
- 4.1.2 Without prejudice to the rights of the Authority under Clause 4.1.1 hereinabove and the rights and remedies which the Authority may have under the LOA or the Concession Agreement, or otherwise if a Bidder or Concessionaire, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bidding Process, or after the issue of the LOA or the execution of the Concession Agreement, such Bidder or Concessionaire shall not be eligible to participate in any tender or RFP issued by the Authority during a period of 2 (two) years from the date such Bidder or Concessionaire, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practices, as the case may be.
- 4.1.3 For the purposes of this Clause 4, the following terms shall have the meaning hereinafter respectively assigned to them:
- (a) “**corrupt practice**” means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bidding Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the Authority who is or has been associated in any manner, directly or indirectly, with the Bidding Process or the LOA or has dealt with matters concerning the Concession Agreement or arising therefrom, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a person connected with the Bidding Process), engaging in any manner whatsoever, whether during the Bidding Process or after the issue of the LOA

or after the execution of the Concession Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOA or the Concession Agreement, who at any time has been or is a legal, financial or technical adviser of the Authority in relation to any matter concerning the Project;

- (b) “**fraudulent practice**” means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bidding Process;
- (c) “**coercive practice**” means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person’s participation or action in the Bidding Process;
- (d) “**undesirable practice**” means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest; and
- (e) “**restrictive practice**” means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Bidding Process.

## **5. PRE-BID CONFERENCE**

- 5.1.1 Pre-Bid conferences of the Bidders shall be convened at the designated date, time and place. Only those persons who have purchased the RFP document shall be allowed to participate in the Pre-Bid Conferences. A maximum of five representatives of each Bidder shall be allowed to participate on production of authority letter from the Bidder.
- 5.1.2 During the course of Pre-Bid conference(s), the Bidders will be free to seek clarifications and make suggestions for consideration of the Authority. The Authority shall endeavour to provide clarifications and such further information as it may, in its sole discretion, consider appropriate for facilitating a fair, transparent and competitive Bidding Process.

## **6. MISCELLANEOUS**

- 6.1.1 The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts in Madhya Pradesh shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or in connection with the Bidding Process.
- 6.1.2 The Authority, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to;
- (a) suspend and/ or cancel the Bidding Process and/ or amend and/ or supplement the Bidding Process or modify the dates or other terms and conditions relating thereto;
  - (b) consult with any Bidder in order to receive clarification or further information;
  - (c) retain any information and/ or evidence submitted to the Authority by, on behalf of, and/ or in relation to any Bidder; and/ or
  - (d) independently verify, disqualify, reject and/ or accept any and all submissions or other information and/ or evidence submitted by or on behalf of any Bidder.
- 6.1.3 It shall be deemed that by submitting the Bid, the Bidder agrees and releases the Authority, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/ or performance of any obligations hereunder, pursuant hereto and/ or in connection with the Bidding Process and waives, to the fullest extent permitted by applicable laws, any and all rights and/or claims it may have in this respect, whether actual or contingent, whether present or in future.

### **6.2 Performance Security**

- a) The Concessionaire shall for due and faithful performance of its obligations shall submit a Performance Security by way of an irrevocable Bank Guarantee within 15 working days from the date of issue of LoA, for a value equivalent to sum of the following:
  - (i) one – fourth of Annual Revenue Share for corresponding year of the Concession Period,
  - (ii) Fifty percent of the Grant quoted by the Concessionaire in its Bid and committed to be paid by the Authority.

The Concessionaire shall be responsible for submission of the Performance Security fifteen (15) days prior to commencing of a particular year except the first year.

The Performance Security should be valid for a period of one year at a time and must be renewed every year as per provisions of the Concession Agreement. Such Performance Security shall be issued from any scheduled bank.

- 6.2.1 Till such time the Concessionaire provides the Performance Security, the Bid Security shall remain in full force and effect.
- 6.2.2 In case the Successful Bidder fails to submit Performance Security within the time stipulated, the Authority at its discretion may cancel the LoA placed on the Successful Bidder without giving any notice. Authority shall invoke Performance Security in case the Successful Bidder fails to discharge their contractual obligations during the period or Authority incurs any loss due to Bidder's negligence in carrying out the project implementation as per the agreed terms & conditions.
- 6.2.3 The Performance Security should be issued by any nationalized/scheduled bank as per the format provided in the Concession Agreement.

## **7. ANNEXURES**

### **1.1 Checklist for Submission of Qualification Bid**

This shall consist of:

1. Annexure 1: Covering letter for Bid submission
2. Annexure 2A: Power of attorney for signing of Bid
3. Annexure 2B: Power of attorney for lead member of consortium
4. Annexure 2C: Affidavit
5. Annexure 2D: Anti-collusion certificate
6. Annexure 2E: Project undertaking
7. Annexure 2F: Memorandum of understanding (mou)
8. Annexure 2G: Board resolution for companies
9. Annexure 3: Bid security
10. Annexure4A : Guidelines for evaluating qualification/Technical Bid
  - a. Form 1: Format for submission for providing information regarding qualification capability of the Bidder
  - b. Form 2: Eligible project details
  - c. Form 3: Financial capability of the Sole Bidder/Lead Member of the Consortium
  - d. Form 4: Proposed Solution
  - e. Form 5: Proposed Implementation Work Plan
  - f. Form 6: Composition of Deployed Team
  - g. Form 7: Curriculum Vitae of Project Manager (dedicated on-site)
  - h. Form 8: Deployment of Personnel
  - i. Form 9: Manufacturer's/Producer's Authorization From
  - j. Form 10: Declaration against Blacklisting

11. Annexure 5: Sample price bid format
12. Annexure 6: Undertaking on Service Level Compliance
13. Annexure 7: Undertaking on Exit Management and Transition
14. Annexure 8: Undertaking to open an office in Bhopal
15. Annexure 9: Project Data Sheet
16. Annexure 10: MP E-procurement Guidelines
17. Annexure 11: Project Details, Specifications and Scope of Work
18. Annexure 12: Government of the Department of Disinvestment

**ANNEXURE 1**

**FORMAT FOR COVERING LETTER FOR BID SUBMISSION**

**(On the Letter head of the Bidder or Lead Member in case of a Consortium)**

To

Date:

Name & Address of the Authority

**Subject: Bid Submission for Selection of Bidder for implementing Smart City Pan City Projects in Bhopal under PPP BOOT Model**

**Tender Specification No.....**

Dear Sir,

With reference to your RFP document dated \*\*\*\*\*. I/we, having examined the Bidding Documents and understood their contents, hereby submit my/our Bid for the aforesaid Project. The Bid is unconditional and unqualified.

2. I/We acknowledge that the Authority will be relying on the information provided in the Bid and the documents accompanying the Bid for selection of the Concessionaire for the aforesaid Project, and we certify that all information provided therein is true and correct: nothing has been omitted which renders such information misleading; and all documents accompanying the Bid are true copies of their respective originals.
3. This statement is made for the express purpose of our selection as Concessionaire for the development, construction, operation and maintenance of the aforesaid Project.
4. I/We shall make available to the Authority any additional information it may find necessary or require to supplement or authenticate the Bid.
5. I/We acknowledge the right of the Authority to reject our Bid without assigning any reasons or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.



6. I/We certify that in the last three years, we/any of the Consortium Members or our/their Associates have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award, nor been expelled from any project or contract by any public authority nor have had any contract terminated by any public authority for breach on our part.
7. I/We declare that:
  - (a) I/We have examined and have no reservations to the Bidding Documents, including any Addendum issued by the Authority; and
  - (b) I/We do not have any conflict of interest in accordance with Clauses 2.1.10 of the RFP document; and
  - (c) I/We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as defined in Clause 4.3 of the RFP document, in respect of any tender or request for proposal issued by or any agreement entered into with the Authority or any other public sector enterprise or any government. Central or State; and
  - (d) I/We hereby certify that we have taken steps to ensure that in conformity with the provisions of Section 4 of the RFP, no person acting for us or on our behalf has engaged or will engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice; and
  - (e) the undertakings given by us along with the Application in response to the RFP for the Project are true and correct as on the date of making the Application and are also true and correct as on the Bid Due Date and I/We shall continue to abide by them.
8. I/We understand that you may cancel the Bidding Process at any time and that you are neither bound to accept any Bid that you may receive nor to invite the Bidders to Bid for the Project, without incurring any liability to the Bidders, in accordance with Clause 2.15 of the RFP document.
9. I/We believe that we/our Consortium satisfy(s) the Net Worth criteria and meet(s) the requirements as specified in the RFP document.
10. I/We declare that we/any Member of the Consortium, or our/its Associates are not a Member of a/any other Consortium submitting a Bid for the Project.
11. I/We certify that in regard to matters other than security and integrity of the country, we/any Member of the Consortium or any of our/their Associates have not been convicted by a Court of

Law or indicted or adverse orders passed by a regulatory authority which could cast a doubt on our ability to undertake the Project or which relates to a grave offence that outrages the moral sense of the community.

12. I/We further certify that in regard to matters relating to security and integrity of the country, we/any Member of the Consortium or any of our/their Associate have not been charge-sheeted by any agency of the Government or convicted by a Court of Law.
13. I/We further certify that no investigation by a regulatory authority is pending either against us or against our Associates or against our CEO or any of our directors/managers/employees.
14. I/We further certify that we are not disqualified in terms of the additional criteria specified by the Department of Disinvestment in their OM No. 6/4/2001-DD-II dated July 13, 2001, a copy of which forms part of the RFP at Annexure 12 thereof.
15. I/We undertake that in case due to any change in facts or circumstances during the Bidding Process, we are attracted by the provisions of disqualification in terms of the guidelines referred to above, we shall intimate the Authority of the same immediately.
16. I/We acknowledge and undertake that our Consortium was pre-qualified and short-listed on the basis of Technical Capacity and Financial Capacity of those of its Members who shall, for a period of 2(two) years from the date of commercial operation of the Project, hold equity share capital not less than: (i) 26% (twenty six per cent) of the subscribed and paid-up equity of the Concessionaire. We further agree and acknowledge that the aforesaid obligation shall be in addition to the obligations contained in the Concession Agreement in respect of Change in Ownership.
17. I/We acknowledge and agree that in the event of a change in control of an Associate whose Technical Capacity and/or Financial Capacity was taken into consideration for the purposes of short-listing and pre-qualification under and in accordance with the RFP. I/We shall inform the Authority forthwith along with all relevant particulars and the Authority may, in its sole discretion, disqualify our Consortium or withdraw the Letter of Award, as the case may be. I/We further acknowledge and agree that in the event such change in control occurs after signing of the Concession Agreement but prior to Financial Close of the Project, it would, notwithstanding anything to the contrary contained in the Agreement, be deemed a breach of thereof and the Concession Agreement shall be liable to be terminated without the Authority being liable to us in any manner whatsoever.
18. I/We understand that the Successful Bidder shall either be an existing Company incorporated under the Indian Companies Act, 1956/2013 or shall incorporate as such prior to execution of the Concession Agreement.

19. I/We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority in connection with the selection of the Bidder, or in connection with the Bidding Process itself, in respect of the above mentioned Project and the terms and implementation thereof.
20. In the event of my/our being declared as the Successful Bidder, I/we agree to enter into a Concession Agreement in accordance with the draft that has been provided to me/us prior to the Bid Due Date. We agree not to seek any changes in the aforesaid draft and agree to abide by the same.
21. I /We have studied all the Bidding Documents carefully and also surveyed the Project highway and the traffic. We understand that except to the extent as expressly set forth in the Concession Agreement, we shall have no claim, right or title arising out of any documents or information provided to us by the Authority or in respect of any matter arising out of or relating to the Bidding Process including the award of Concession.
22. I/We offer a Bid Security of Rs. \*\*\*\*\* (Rupees \*\*\*\*\* only) to the Authority in accordance with the RFP Document.
23. The Bid Security in the form of a Bank Guarantee is attached.
24. The documents accompanying the Bid, as specified in Clause 2.11.1 of the RFP, have been submitted in a separate envelope and marked as “Enclosures of the Bid”.
25. I/We agree and understand that the Bid is subject to the provisions of the Bidding Documents. In no case, I /We shall have any claim or right of whatsoever nature if the Project/Concession is not awarded to me/us or our Bid is not opened or rejected.
26. The Premium /Grant has been quoted by me/us after taking into consideration all the terms and conditions stated in the RFP, draft Concession Agreement, our own estimates of costs and traffic and after a careful assessment of the site and all the conditions that may affect the project cost and implementation of the Project.
27. I/We agree and undertake to abide by all the terms and conditions of the RFP document.
28. {We, the Consortium Members agree and undertake to be jointly and severally liable for all the obligations of the Concessionaire under the Concession Agreement till occurrence of Financial Close in accordance with the Concession Agreement. }
29. I/We shall keep this offer valid for 120 (one hundred and twenty) days from the Bid Due Date specified in the RFP.

30. I/We hereby submit our Bid and offer a Premium in the form of Rs. ....(in words) out of **the gross revenues of the Project** as share of the Authority/require a Grant of Rs..... (Rupees.....only) (Strike out whichever is not applicable) for undertaking the aforesaid Project in accordance with the Bidding Documents and the Concession Agreement.
31. (a) The EPC contractor/s who would be executing the EPC works of the project are \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and it is confirmed that these contractors meet the minimum criterion set out in Clause 2.1.13 of the RFP for this project.
- (b) it is irrevocably agreed that the value of any contract for EPC works awarded shall not be less than Rs. 200 Cr..
- (c) it is also agreed that any change in the name(s) of EPC contractor(s) would be with prior consent of the Authority. We agree that Authority shall grant such permission only and only if the substitute proposed is of the required technical capability as applicable.

In witness thereof, I/We submit this Bid under and in accordance with the terms of the RFP document.

Dated this.....Day of..... 20\_\_

Place:.....

Name of the Lead Member/Person

Name, Designation &Signature of the Authorised Person



## **Annexure – D: Financial Proposal Submission Form**

To the attention of the CEO, BSCDCL[Place + Date]

From:[Name and address of the Bidding Company/ Lead Member]

Tel:

Fax:

Email:

**Re:** 'Citywide Implementation of Energy Efficient 20000 NOS of Street Lighting LED in the MC of Bhopal'

Dear Sir,

Please find below our Financial Bid for 'Citywide Implementation of Energy Efficient Street Lighting in the City of Bhopal' (the Project) in response to the Request for Proposal ("RFP") issued by BSCDCL on (date).

We hereby confirm the following:

- (a) This Financial Bid is being submitted by [name of bidder] in accordance with the conditions stipulated in the RFP.
- (b) We have examined in detail and understand and agree to abide by all terms and conditions stipulated in the RFP Documents issued by BSCDCL, as amended, and in any subsequent communication sent by BSCDCL. Our Financial Bid is consistent with all requirements of submission stated in the RFP and in any subsequent communication sent by BSCDCL.
- (c) Our Financial Bid is as follows:  
**Our Quoted Guaranteed Energy Savings in Bhopalcity for the duration of the CONCESSIONAIRE Project is [xx] percent [(...)%].**The percentage savings will be always be computed as a difference of baseline kWh and actual kWh consumed.
- (d) We also agree to share [XX] percent (...%) of the Quoted Guaranteed Energy Savings with BSCDCL/BMC.
- (e) We are solely responsible for any errors or omissions in our Financial Bid.

Duly authorized to sign the bid for and on behalf of

[ Signature]

Name:

Title: Date:

Place:

(NAME, signature and title of the Authorized Person in whose name a power of attorney was issued)

**ANNEXURE 2 A**

**FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF BID**

**(On Non – judicial stamp paper of Rs 100 duly attested by notary public)**

**POWER OF ATTORNEY**

Know all men by these presents, we (name and address of the registered office of the Single Entity / Lead Member) do hereby constitute, appoint and authorize Mr. / Ms. \_ S/o, D/o, W/o R/o .... (name and address of residence) who is presently employed with us and holding the position of \_\_\_\_\_ as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to the bid of the consortium consisting of \_\_\_\_\_, and (please state the name and address of the Members of the Consortium) for submitting bid for Selection of Bidder for implementing Smart City Pan City Projects in Bhopal under PPP BOOT Model (the “Project”), including signing and submission of all documents and providing information / responses to Authority, representing us in all matters in connection with our bid for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For

(Signature)

(Name, Title and Address)

Accept

.....(Signature)

(Name, Title and Address of the Attorney)

Notes:

- To be executed by the Single Entity or the Lead Member in case of a Consortium.
- The mode of execution of Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law.
- Also, wherever required, the executant(s) should submit for verification the certified documents such as a resolution / Power of attorney in favour of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the executant(s).

**ANNEXURE 2 B**

**FORMAT FOR POWER OF ATTORNEY FOR LEAD MEMBER OF  
CONSORTIUM**

**POWER OF ATTORNEY**

**(On Non – judicial stamp paper of Rs 100 duly attested by notary public)**

Whereas the Authority has invited applications from interested parties for **Bid for Selection of Bidder for implementing Smart City Pan City Projects in Bhopal under PPP BOOT Model** called the “Project” for a specified Concession period (the “Concession Period”).

Whereas, M/s \_\_\_\_\_, M/s \_\_\_\_\_, and M/s (the respective names of the Members along with address of their registered offices) have formed a Consortium and are interested in bidding for the Project and implementing the Project in accordance with the terms and conditions of the Request for Proposal (RFP), Concession Agreement and other connected documents in respect of the Project, and

Whereas, it is necessary under the RFP for the members of the Consortium to designate one of them as the Lead Member and its said employees, as with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium’s bid for the Project and to appoint one of them as the Lead Member who, acting jointly, would have all necessary power and authority to do all acts, deeds and things on behalf of the Consortium, as may be necessary in connection with the Consortium’s bid for the Project. The Lead Member is hereby authorized to delegate the said powers to any of its employees duly approved by the Board of Directors of the Lead Member.

**NOW THIS POWER OF ATTORNEY WITNESSETH THAT:**

We, M/s \_\_\_\_\_ M/s \_\_\_\_\_, and M/s (the respective names of the Members along with address of their registered offices) do hereby designate M/s (name along with address of the registered office) being one of the members of the Consortium, as the Lead Member of the Consortium, to do on behalf of the Consortium, all or any of the acts, deed or things necessary or incidental to the Consortium’s bid for the Project, including submission of Bid, participating in conference, responding to queries, submission of information / documents and generally to represent the Consortium in all its dealings with \_\_\_\_\_, any other Government Agency or any person, in connection with Project until culmination of the process of bidding and thereafter till the Concession Agreement is entered into with \_\_\_\_\_.



We hereby agree to ratify all acts, deeds and things lawfully done by Lead Member our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney, shall be deemed to have been done by us

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 200\_.

[Executant(s)]

(To be executed by all the members in the Consortium)

- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law.
- Also wherever required, the executant(s) should submit for verification the certified documents such as resolution/ Power of attorney in favour of the person executing this Power of attorney for the designation of power hereunder on behalf of the Bidder.

**ANNEXURE 2 C**

**FORMAT FOR AFFIDAVIT  
(To be furnished by the Bidder  
In case of Consortium to be given separately by each Member)**

**(On Non – judicial stamp paper duly attested by notary public)**

1. I, the undersigned, do hereby certify that all the statements made and/or any information provided in our Bid are true and correct and complete in all aspects.
2. The undersigned hereby certifies that neither our firm M/s nor any of its directors/constituent partners have abandoned any work nor any contract awarded to us for such works have been terminated for reasons attributable to us, during last five years prior to the date of this application.
3. The undersigned also hereby certifies that neither our firm M/s nor any of its directors/constituent partners have been debarred by State/Central/Authority/Any other Statutory Body for any work or from bidding.
4. The undersigned hereby authorize(s) and request(s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested to verify this statement or regarding my( our ) competence and general reputation.
5. The undersigned understands and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the Authority.

Signed by an authorized Officer of the firm

Title of Officer

Name of Firm

Date

**ANNEXURE 2 D**

**FORMAT FOR ANTI-COLLUSION CERTIFICATE**

**(On the letter head of the Lead Member / Single Entity)**

**Ref: Bid for Selection of Bidder for implementing Smart City Pan City Projects in Bhopal under PPP BOOT Model**

**ANTI-COLLUSION CERTIFICATE**

We hereby certify and confirm that in the preparation and submission of this Bid, we have not acted in concert or in collusion with any other Bidder or other person(s) and also not done any act, deed or thing which is or could be regarded as anti-competitive.

We further confirm that we have not offered nor paid nor will offer nor pay, directly or indirectly, any illegal gratification, in cash or kind, to any person or agency in connection with the instant Bid.

Date this .....Day of .....200\_.

Name of the Bidder

Signature of the Authorised Person

Name of the Authorised Person

Note:

To be executed by the lead member, in case of a Consortium

**ANNEXURE 2 E**

**FORMAT FOR PROJECT UNDERTAKING**

**(On the Letter head of the Single Entity/ Lead Member)**

**PROJECT UNDERTAKING**

**Date:**

To: \_\_\_\_\_  
Name & Address of the Authority

**Ref: Bid for Selection of Bidder for implementing Smart City Pan City Projects in Bhopal under PPP BOOT Model**

We have read and understood the Request for Proposal (RFP) in respect of the captioned Project provided to us by the Authority.

We hereby agree and undertake as under:

Notwithstanding any qualifications of conditions, whether implied or otherwise, contained in our Bid we hereby represent and confirm that our Bid is unqualified and unconditional in all respects and we agree to the terms of the proposed Concession Agreement, a draft of which also forms a part of the RFP provided to us.

Dated this ..... Day of ..... 200\_

Name of the Bidder

Signature of the Authorised Person

Name of the Authorised Person

Note: To be signed by the Lead Member, in case of a Consortium, authorised to submit the bid

**ANNEXURE 2 F**

**FORMAT FOR MEMORANDUM OF UNDERSTANDING (MoU)**

<To be printed on a stamp paper and signed by authorized signatories of the Lead Bidder and Consortium Members>

This Memorandum of Understanding is made in \_\_\_\_\_ on the \_\_ Day of \_\_, 20 \_\_\_\_

By and Between

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as \_\_\_\_\_) acting as the Lead Partner of the first part,

And

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as \_\_\_\_\_) in the capacity of a Joint Partner of the other part

And

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as \_\_\_\_\_) in the capacity of a Joint Partner of the other part

And

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as \_\_\_\_\_) in the capacity of a Joint Partner of the other part

The expressions of \_\_\_\_\_ and \_\_\_\_\_ shall wherever the context admits, mean and include their respective legal representatives, successors-in-interest and assigns and shall collectively be referred to as “the Parties” and individually as “the Party”

WHEREAS:

Bhopal Smart City Development Co. Ltd (BSCDCL) [hereinafter referred to as “Purchaser”] has invited bids for Selection of Bidder for Implementing Smart City Pan City Projects in Bhopal under PPP on BOOT model .

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

The following documents shall be deemed to form and be read and construed as an integral part of this MOU.

RFP comprising

Any corrigendum/addendum issued by Purchaser

The bid submitted on our behalf jointly by the Lead Partner

The 'Parties' have studied the documents and have agreed to participate in submitting a 'bid' jointly.

M/s \_\_\_\_\_ shall be the lead partner of the Consortium for all intents and purpose and shall represent the Consortium in its dealing with the Purchaser. For the purpose of submission of bid proposals, the parties agree to nominate \_\_\_\_\_ as the Leader duly authorized to sign and submit all documents and subsequent clarifications, if any, to the Purchaser. However M/s \_\_\_\_\_ shall not submit any such Bids, clarifications or commitments before securing the written clearance of the other partner which shall be expeditiously given by M/s \_\_\_\_\_, M/s \_\_\_\_\_ and M/s \_\_\_\_\_ to M/s \_\_\_\_\_.

The lead partner shall be authorized to incur the liabilities and receive instructions for and on behalf of any and all partners of consortium. The lead partner will be solely responsible for the entire project implementation.

The 'Parties' have resolved that the following distribution of responsibilities will be followed in the event that the Consortium Bid is accepted by BSCDCL.

Lead Partner share \_\_\_ %;

Responsibilities

--  
--  
--

Consortium Partner 1 share \_\_\_ %;

Responsibilities

--  
--  
--

Consortium Partner 2 share \_\_\_ %;

Responsibilities

--  
--

—

Consortium Partner 2 share \_\_\_ %;

Responsibilities

--

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—

### **Assignment and Third Parties**

The parties shall co-operate throughout the entire period of this MOU on the basis of exclusivity and neither of the Parties shall make arrangement or enter into agreement either directly or indirectly with any other party or group of parties on matters relating to the Project except with prior written consent of the other party and Purchaser.

### **Responsibilities**

All partners of the Consortium shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms,

### **Executive Authority**

The said Consortium through its authorized representative shall receive instructions, payments from the Purchaser. The management structure for the project shall be prepared by mutual consultations to enable completion of project to quality requirements within permitted cost and time.

### **Guarantees and Bonds**

Till the award of the work, the lead partner shall furnish bid bond and all other bonds/guarantees to the Purchaser on behalf of the Consortium which shall be legally binding on all the partners of the Consortium.

### **Bid Submission**

Each Party shall bear its own cost and expenses for preparation and submission of the bid and all costs until conclusion of a contract with the Purchaser for the Project. Common expenses shall be shared by both the parties in the ratio of their actual participation.

### **Indemnity**

Each party hereto agrees to indemnify the other party against its respective parts in case of breach/default of the respective party of the contract works of any liabilities sustained by the Consortium.

For the execution of the respective portions of works, the parties shall make their own arrangements to bring the required finance, plants and equipment, materials, manpower and other resources. All the payments from BSCDCL will be received by the Lead partner.

### **Documents and Confidentiality**

Each Party shall maintain in confidence and not use for any purpose related to the Project all commercial and technical information received or generated in the course of preparation and submission of the bid.

### **Arbitration**

Any dispute, controversy or claim arising out of or relating to this agreement shall be settled in the first instance amicably between the parties. If an amicable settlement cannot be reached as above, it will be settled by Executive Director (BSCDCL) and Executive directors decision will be final, even if the concessionaire does not agree, arbitration in accordance with the Indian Arbitration and Conciliation Act 1996 or any amendments thereof. The venue of the arbitration shall be Bhopal.

### **Validity**

This Agreement shall remain in force till the occurrence of the earliest to occur of the following, unless by mutual consent, the Parties agree in writing to extend the validity for a further period.

The bid submitted by the Consortium is declared unsuccessful, or

Cancellation/shelving of the Project by the Purchaser for any reasons prior to award of work

Execution of detailed Consortium agreement by the parties, setting out detailed terms after award of work by the Purchaser.

This MoU is drawn in \_\_\_ number of copies with equal legal strength and status.

This MoU shall be construed under the laws of India.

### **Notices**

Notices shall be given in writing by fax confirmed by registered mail or commercial courier to the following fax numbers and addresses:

### **Lead Partner**

\_\_\_\_\_



**(Name & Address)**

**Consortium Partner 1**

\_\_\_\_\_  
\_\_\_\_\_

**(Name & Address)**

**Consortium Partner 2**

\_\_\_\_\_  
\_\_\_\_\_

**(Name & Address)**

**Consortium Partner 3**

\_\_\_\_\_  
\_\_\_\_\_

**(Name & Address)**

**IN WITNESS WHEREOF, THE PARTIES have executed this MOU the day, month and year first before written.**

M/s \_\_\_\_\_

**(Seal)**

**Witness**

\_\_\_\_\_ **(Name & Address)**

\_\_\_\_\_ **(Name & Address)** M/s \_\_\_\_\_

**(Seal)**

M/s \_\_\_\_\_

**(Seal)**

M/s \_\_\_\_\_

**(Seal)**

## ANNEXURE 2 G

### FORMAT FOR BOARD RESOLUTION FOR COMPANIES

#### Format for Lead Member

“**RESOLVED THAT** approval of the Board be and is hereby granted to join the consortium with , and (name and address of the consortium members) for joint submission of bids to \_\_\_\_\_ for “**Bid for Selection of Bidder for implementing Smart City Pan City Projects in Bhopal under PPP BOOT Model** (the “Project”)”.

“**RESOLVED FURTHER THAT** the “draft” Memorandum of Understanding (“MoU) to be entered into with the consortium partners (a copy whereof duly initialled by the Chairman is tabled in the meeting) be and is hereby approved.”

“**RESOLVED FURTHER THAT** Mr. \_\_\_\_\_ (name),(designation) be and is hereby authorised to enter into an MoU, on behalf of the company, with the consortium members and to sign the bidding documents on behalf of the consortium for submission of the bidding documents and execute a power of attorney in favour of the Company as Lead Member.”

#### Format for Members

“**RESOLVED THAT** approval of the Board be and is hereby granted to join the consortium with , and (name and address of the consortium members) for joint submission of bids to \_\_\_\_\_ for the Project.

“**RESOLVED FURTHER THAT** the “draft” Memorandum of Understanding (“MoU) to be entered into with the consortium partners (a copy whereof duly initialled by the Chairman is tabled in the meeting) be and is hereby approved.”

“**RESOLVED FURTHER THAT** Mr. \_\_\_\_\_ (name),(designation)be and is hereby authorised to enter into an MoU with the consortium members and execute a power of attorney in favour of \_\_\_\_\_ to act as the Lead Member”

### **Format for Members**

I/We \_\_\_\_\_ hereby agree to join the consortium with \_\_\_\_\_ ,and ..... (name and address of the consortium members) for joint submission of bids to \_\_\_\_\_ for **Bid for Selection of Bidder for implementing Smart City Pan City Projects in Bhopal under PPP BOOT Model**(the “Project”).

I /We also approve the Memorandum of Understanding (“MoU) to be entered into with the consortium partners

I/We also authorise Mr. \_\_\_\_\_(name),(designation) to enter into an MoU with the consortium members and execute a Power of Attorney in favour of \_\_\_ to act as the Lead Member”

*Each member of the Consortium will have to attach its Board Resolution/ Undertaking as the case may be, approving the participation in the consortium, bidding for the Project and authorizing a company official to sign the bidding documents / Power of Attorney to the Lead Member.*

## ANNEXURE 3

### FORMAT FOR BID SECURITY

#### BID SECURITY

**(Since, the payment has to be online, aforesaid annexure is not applicable)**

1. In consideration of the (hereinafter called “Authority” which expression shall include any entity which Authority may designate for the purpose) having agreed, inter alia, to consider the bid of (hereinafter referred to the “Bidder” which expression shall include their respective successors and assigns) which will be furnished in accordance with the terms of the Request for Proposals for the Project **for Selection of Bidder for implementing Smart City Pan City Projects in Bhopal under PPP BOOT Model** (hereinafter called the “RFP”) in lieu of the Bidder being required to make a cash deposit, we [name of the Bank and address of the issuing branch], hereinafter called the “Bank” which expression shall include our successors and assigns, as to bind ourselves our successors and assigns do at the instance of the Bidder hereby unconditionally and irrevocably undertake to pay as primary obligor and not as surety only to Authority without protest or demand and without any proof or condition the sum of Rs. 10,00,000 (ten lakhs only).
2. We, the Bank, do hereby unconditionally and irrevocably undertake to pay forthwith (and in any event within five days) the amounts due and payable under this Guarantee without any delay or demur merely on a written demand from Authority stating that the amount claimed is due by reason of the occurrence of any of the events referred to in the RFP. Any such demand made on the Bank by Authority shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, the Bank’s liability under ‘this Guarantee shall be restricted to an amount not exceeding Rs \_\_\_\_\_ (in words).
3. We, the Bank unconditionally undertake to pay to Authority any money so demanded under this Guarantee notwithstanding any dispute or disputes raised by the Bidder or any other party including in any suit or proceeding pending before any court or tribunal relating thereto or any instructions or purported instructions by the Bidder or any other party to the Bank not to pay or for any cause to withhold or defer payment to Authority under this Guarantee. The Bank’s liability under this Guarantee is irrevocable, unconditional, absolute and unequivocal. The payment so made by the Bank under this Guarantee shall be a valid discharge of the bank’s liability for payment hereunder and the Bidder shall have no claim against the Bank for making such payment.
4. We, the Bank further agree that the Guarantee herein contained shall remain in full force and effect upto and until 1700 hours on the date i.e. (hereinafter called “the End Date”). Unless a demand or claim under this Guarantee is made on the Bank by Authority in writing on or before the said End Date the Bank shall be discharged from all liability under this Guarantee thereafter unless extended in writing.
5. We, the Bank further agree that Authority shall have the fullest liberty without

the Bank's consent and without affecting in any manner the Bank's obligation hereunder to vary any of the terms and conditions of the RFP or to extend or postpone the time of performance by the Bidder or any other party from time to time or postpone for any time or from time to time any of the powers exercisable by Authority against the Bidder or any of them and to enforce or to forbear from enforcing any of the terms and conditions relating to the RFP and the Bank shall not be relieved from its liability by reason or any forbearance act or omission on the part of Authority, or any indulgence given by Authority to the Bidder or any other party or by any such matter or thing whatsoever which under the law relating to securities would, but for this provision, have the effect of so relieving the Bank.

6. To give full effect to the obligations herein contained, Authority shall be entitled to act against the Bank as primary obligor in respect of all claims subject of this Guarantee and it shall not be necessary for Authority to proceed against the Bidder or any other party before proceeding against the Bank under this Guarantee and the Guarantee herein contained shall be enforceable against the bank as principal obligor.
7. This Guarantee will not be discharged or affected in any way by the liquidation or winding up or dissolution or change of constitution or insolvency of the Bidder or of any individual member of the Bidder or any other party or any change in the legal constitution or insolvency of the Bidder or any other party or any change in the legal constitution of the Bank or Authority.
8. In case the bank delays in making payment within 15 days of invocation of the guarantee, the bank is liable to pay interest on the amount due @ Bank PLR plus 2% beyond the 15 days from the date of receipt of invocation letter by the bank.
9. We, the bank undertake not to assign or revoke this Guarantee during its currency except with the previous consent of Authority in writing.

Notwithstanding anything contained herein.

- a) Our liability under the Bank Guarantee shall not exceed ... (in word).
- b) The Bank Guarantee shall be valid upto [date], 200\_.
- c) Unless acclaimed or a demand in writing is made upon us on or before \_\_ , all our liability under this guarantee shall cease.

IN WITNESS WHEREOF THE BANK HAS SET ITS HANDS HERETO ON THE DAY, MONTH AND YEAR MENTIONED HEREUNDER.

Signed and Delivered

On behalf of.....(Bank name)

(Signature with Date)

by the hand of Mr .....

(Name of Authorized Signatory)

[SEAL OF THE BANK]

**Designation**

Address of the controlling office of the issuing branch with phone number and fax number to be provided.

**ANNEXURE 4A**

**GUIDELINES FOR EVALUATING QUALIFICATION/TECHNICAL BID:  
TECHNICAL AND FINANCIAL CAPABILITY OF THE BIDDER TO UNDERTAKE  
THE PROJECT**

**A. Evaluation Parameters for Qualification Requirements**

1. The Qualification Requirements is to judge the Bidder’s competence and capability and will be established by the following phases:

**Phase I: Pre-Qualification**

**(a) Step 1: Bidder’s Experience-**

The Bidders experience shall be evaluated based on following parameters:

#	Prequalification Requirement	Supporting Documents to be attached
1.	<b>Legal Entity</b> The Sole Bidder/Lead Member/ Member of Consortium should be Indian Registered Company registered under Indian Companies Act 1956.	<ul style="list-style-type: none"> <li>• Certificate of Incorporation from Registrar of Companies.</li> <li>• Articles and Memorandum of Association.</li> <li>• Annual Report for the last three financial years.</li> </ul>
2.	<b>Presence in India</b> The Sole/Lead Bidder should have been present in India for the least 7 years carrying out business in India as on 31.03.2015	<ul style="list-style-type: none"> <li>• Certificate of Incorporation</li> </ul>
3.	<b>Bidder’s Experience – Can be met by any Member in case of Consortium</b> Bidder should have delivered/or under delivery a contract at least 3 IT/Telecom services projects in that last 3 years each of value greater than 200 Crores in India or Global.	<ul style="list-style-type: none"> <li>• Work Order/Completion Certificate/ Self certificate (duly signed by the Power of Attorney holder for signing the bid)</li> </ul>
4.	The Bidder should have experience of managing Services of Telecom /IT Networks in India for any service providers	
5.	Bidder should have implemented Intelligent poles project in India or Globally. Definition of intelligent poles is Telecom integrated street lights	



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#	Prequalification Requirement		Supporting Documents to be attached
6.		Parent Company experience would be considered for only 95% subsidiary or above	
		Bidder should have successfully done O&M of minimum 75,000 street lights in India.	
7.	<b>Certifications</b>	The Bidder must possess the following certificate at the time of bidding; <ul style="list-style-type: none"> <li>• ISO-9001:2008</li> <li>• ISO 14001</li> </ul>	<ul style="list-style-type: none"> <li>• ISO 9001:2008 certificate</li> <li>• ISO 14001 certificate</li> </ul>
8.	<b>IP1 License</b>	The Bidder should have IP1 license and fulfil all ISP regulatory obligations	<ul style="list-style-type: none"> <li>• IP1 License</li> </ul>
9.	<b>CAT A ISP/UASL</b>	The Bidder should have CAT A ISP/UASL License	<ul style="list-style-type: none"> <li>• CAT A ISP/UASL License</li> </ul>
10.	<b>Human Resources</b>	Bidder or any Member of the Consortium in India should have full time employed an average of 2000 personnel over last 3 years ending on 31st March 2015 in India. Bidder should have min full time 30 PMP certified professionals	<ul style="list-style-type: none"> <li>• Self-Certificate on the number of personal duly signed the Power of Attorney holder for signing the bid</li> </ul>
11.	<b>Blacklisting</b>	Sole Bidder or any Member of the Consortium shall submit a self-declaration of not having been black listed to provide similar services to any State or Central Government Department or Ministry as on bid submission date	<ul style="list-style-type: none"> <li>• Self-declaration duly signed by PoA holder for signing the bid</li> </ul>

(b) **Step 2:** Financial capability shall be evaluated based on following parameters:

#	Prequalification Requirement	Supporting Documents to be attached
1.	<b>Financial: Turnover from IT/ ITes/Telecom</b>	Average Annual Turnover of the Sole/Lead Bidder from IT/ ITes/Telecom from hardware, software and services during the last three financial years, i.e., 2012-2013, 2013-2014 and 2014-2015 (as per the last published audited balance sheets), should be at least Rs.2000 Cr.
		<ul style="list-style-type: none"> <li>• Audited balance sheet for the last three years</li> </ul>

#		Prequalification Requirement	Supporting Documents to be attached
2.	<b>Profitability</b>	The Sole/Lead Bidder should be profitable company with average annual profit greater than 100 Crores for the past three years	<ul style="list-style-type: none"> <li>Audited balance sheet for the last three years</li> </ul>
3.	<b>Financial-Solvency</b>	The Sole/Lead Bidder should provide a solvency certificate from their bankers for an amount not less than 200 Crores	<ul style="list-style-type: none"> <li>Solvency certificate from any scheduled bank</li> </ul>

**(c) Step 3: Availability of Human Resources**

#		Prequalification Requirement	Supporting Documents to be attached
1.	<b>Human Resources</b>	Bidder in India should have full time employed an average of 2000 personnel over last 3 years ending on 31st March 2015 in India. Bidder should have min full time 30 PMP certified professionals	<ul style="list-style-type: none"> <li>Self-Certificate on the number of personal duly signed the Power of Attorney holder for signing the bid</li> </ul>

**(d) Step 4: Blacklisting**

#		Prequalification Requirement	Supporting Documents to be attached
1.	<b>Blacklisting</b>	Sole/Lead Bidder shall submit a self-declaration of not having been black listed to provide similar services to any State or Central Government Department or Ministry as on bid submission date	<ul style="list-style-type: none"> <li>Self-declaration duly signed by PoA holder for signing the bid</li> </ul>

**Phase II: Presentation with Approach & Methodology with Proof of Concept/Authority Visit:**

The Proof of Concept (PoC) will be evaluated along with presentation to be given by Bidders:

- a) Each shortlisted Bidder for Technical Evaluation shall demonstrate the PoC on No Cost No Commitment basis (NCNC) at a location defined by the Authority
- b) The Bidder is desired to demonstrate for complete solution as per RFP. The solution must be;
  - i. integrated and can function simultaneously
  - ii. Interface with each other on a common communication platform

- iii. can communicate back and forth with the centralized Command and Control Centre and comply to all the Scope, Requirements, Standards etc. mentioned in the RFP
- c) The Bidder is expected to demonstrate PoC in the city of Bhopal at a location indicated by Authority for minimum 3 modules where in Smart Pole module is mandatory in addition any other 2 modules. One smart pole or as required is to be brought by Bidder to the site indicated by Authority. Weightage of the modules is mentioned hereunder;
  - i. Smart Poles: 10
  - ii. Other Modules: 2.5
  - iii. The list of modules that is being considered for the Purpose of POC is as Indicated in Scope of Work.
- d) The demonstration/presentation should provide a representative solution to integrate various aspects of the project as per the scope
- e) The Bidder is expected to bear the cost of demonstrating the PoC and would also be responsible for making the demonstration in India.
- f) PoC shall be demonstrated in English.

BSCDCL may visit various project sites (national or global) to validate the project citations and implementation experience quoted by the Bidder. The Bidder is expected to bear all the expenses towards demonstration at Bidders Premises locally/globally and facilitate for the same. The visit charges including to and fro, boarding and lodging shall be to the account of Authority.

2. Based on parameters identified above, the Technical Bid will be evaluated based on specific experience of the Bidder, competence of key personnel and adequacy of the proposed approach and methodology as per the following marking matrix.

#	Evaluation Criteria	Maximum Marks Allotted
1.	Turnover	5
2.	Profitability	5
3.	Financial Solvency	5
4.	Relevant Experience	20
5.	Presentation along with Approach & Methodology	30
6.	FRS Compliance	30
7.	Human Resource	5
<b>Total</b>		<b>100</b>

- (a) The minimum technical score required to qualify is: 50 Marks. In this part, the technical bid will be analysed and evaluated and the technical bid marks (Tb) shall be assigned to each bid.
- (b) Technical Bids receiving marks greater than or equal to cut-off marks in each competency group will be eligible for consideration in the subsequent round of evaluation. If required, BSCDCL may seek specific clarifications from any or all Bidder(s) at this stage.
- (c) Evaluation Committee will evaluate the technical Bid of the Bidder with regard to the solutions offered, technology proposed, technical professional(s) and time-frame etc.
- (d) Evaluation Committee will invite the Bidder for technical presentation and discussions on the project.
- (e) Bidder is expected to depute only those officials for technical presentations who will be responsible for providing the leadership to the project.

(f) Evaluators of Technical Bids shall have no access to the Financial Bids until the technical evaluation is concluded.

(g) Detailed Marking Scheme for evaluation of Technical Bids is mentioned below:

#	Evaluation Criteria	Maximum Marks Allotted	Documents/Forms required
<b>1</b>	<b>Bidder's Turnover</b>	<b>5</b>	<ul style="list-style-type: none"> <li>• Audited balance sheet for the last three years</li> <li>• Statutory Auditor Certificate</li> </ul>
1.1	Average Annual Turnover of the Sole/Lead Bidder from IT/ ITeS/Telecom from active hardware, software and services during the last three financial years, i.e., 2012-2013, 2013-2014 and 2014-2015 (as per the last published audited balance sheets), should be at least Rs.2000 Crores. <ul style="list-style-type: none"> <li>• <math>\geq 6000</math> crores = 5</li> <li>• <math>\geq 4000</math> &amp; <math>&lt; 6000</math> crores = 3</li> <li>• <math>\geq 2000</math> &amp; <math>&lt; 4000</math> cores = 1</li> </ul>	5	
<b>2</b>	<b>Profitability</b>	<b>5</b>	<ul style="list-style-type: none"> <li>• Audited balance sheet for the last three years</li> <li>• Statutory Auditor Certificate</li> </ul>
2.1	The Sole/Lead Bidder should be profitable company with average annual profit greater than 100 Crores for the past three years <ul style="list-style-type: none"> <li>• <math>\geq 200</math> crores = 5</li> <li>• <math>\geq 150</math> &amp; <math>&lt; 200</math> crores = 3</li> <li>• <math>\geq 100</math> ^ <math>&lt; 150</math> crores = 1</li> </ul>	5	
<b>3</b>	<b>Financial Solvency</b>	<b>5</b>	<ul style="list-style-type: none"> <li>• Solvency certificate from any scheduled bank to be provided</li> </ul>
3.1	The Sole/Lead Bidder should provide a solvency certificate from their bankers for an amount not less than 200 Crores <ul style="list-style-type: none"> <li>• <math>\geq 400</math> crores = 5</li> <li>• <math>\geq 300</math> &amp; <math>&lt; 400</math> crores = 3</li> <li>• <math>\geq 200</math> &amp; <math>&lt; 300</math> cores = 1</li> </ul>	5	
<b>4</b>	<b>Bidder's Experience</b>	<b>20</b>	

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#	Evaluation Criteria	Maximum Marks Allotted	Documents/Forms required
4.1	Bidder should have delivered or being delivered for at least 3 IT/Telecom services projects in that last 3 years each of value greater than 200 Crores in India or Global. <ul style="list-style-type: none"> <li>Cumulative value &gt;= 1500 crores = 5</li> <li>Cumulative value &gt;= 1000 &amp;&lt; 1500 crores = 3</li> <li>Cumulative value &gt;= 600 &amp;&lt; 1000 cores = 1</li> </ul>	5	<ul style="list-style-type: none"> <li>Work Order/Completion Certificate/ Self certificate (duly signed by the Power of Attorney holder for signing the bid)</li> </ul>
4.2	The Bidder should have experience of managing Services of Telecom /IT Networks in India for any service providers <ul style="list-style-type: none"> <li>2 Service Provider = 5</li> <li>1 Service Provider = 3</li> </ul>	5	
4.3	Bidder should have implemented Intelligent poles project in India or Globally. Definition of intelligent poles is Telecom integrated street lights Parent Company experience would be considered for only 95% subsidiary or above. <ul style="list-style-type: none"> <li>&gt;3 citations = 5</li> <li>&gt; 1 citation &amp;&lt;= 3 citations =3</li> <li>1 Citation = 1</li> </ul>	5	
4.4	Bidder should have successfully done O&M of minimum 75000 street lights in India. <ul style="list-style-type: none"> <li>&gt;= 1,45,000 = 5</li> <li>&gt;= 1,00,000 &amp;&lt; 1,45,000 = 3</li> <li>&gt;= 75,000 &amp;&lt; 1,00,000 = 1</li> </ul>	5	
5	<b>Presentation with Approach &amp; Methodology</b>	<b>30</b>	
5.1	Technical Presentation of the overall solution including the Approach & Methodology indicating the sources of revenue and implementation schedule	15	<ul style="list-style-type: none"> <li>Technical Presentation with Approach &amp; Methodology</li> <li>PoC</li> </ul>
5.2	POC: Live demo of the Proposed solution at the location preferred by BSCDCL	15	
6	<b>FRS Compliance</b>	<b>30</b>	<ul style="list-style-type: none"> <li>FRS Compliance Sheet</li> </ul>
6.1	Criticality: Each module has requirement which has been classified and given score based on the following criticality:	30	

**Request for Proposal for Selection of Concessionaire for Smart City Pan City Project in Bhopal under PPP**

#	Evaluation Criteria	Maximum Marks Allotted	Documents/Forms required
	<ul style="list-style-type: none"> <li>• Vital: 3</li> <li>• Essential: 2</li> <li>• Desirable: 1</li> </ul> <p>Option Available: Bidder shall submit their response (as per the format mentioned in FRS ) against the requirement and score shall be given as per the following options:</p> <ul style="list-style-type: none"> <li>• Non-complaint: 0 marks</li> <li>• Compliant on Customization:1 marks</li> <li>• Fully compliant: 2 marks</li> </ul> <p>Final FRS Score: FRS = [FRSb/FRSh]*30 (where FRSb is the score of bid under consideration and FRSh is the highest marks)</p> <p>Bidder to score minimum 50% marks or else the score will be reduced to 0</p>		
7	<b>Human Resources</b>	5	<ul style="list-style-type: none"> <li>• Self-Certificate on the number of personal duly signed the Power of Attorney holder for signing the bid</li> </ul>
7.1	<p>Bidder in India should have full time employed an average of 2000 personnel over last 3 years ending on 31st March 2015 in India. Further, Bidder should have min full time 30 PMP certified professionals.</p> <ul style="list-style-type: none"> <li>• &gt;= 2000 personnel &amp; 50 PMP personnel: 5</li> <li>• &gt;= 1500 personnel &amp; 40 PMP personnel: 3</li> <li>• &gt;= 750 personnel &amp; 30 PMP personnel: 1</li> </ul>	5	

**Annexure 4B**

**Form 1**

**FORMAT FOR SUBMISSION FOR PROVIDING INFORMATION  
REGARDING QUALIFICATION CAPABILITY OF THE BIDDER**

**Experience of the Bidder**

<b>General Information</b>	
Name of the project	
Client for which the project was executed	
Name and contact details of the client	
<b>Project Details</b>	
Name of Executing Agency	
Description of the project	
Scope of services	
Technologies used	
Outcomes of the project	
<b>Other Details</b>	
Total cost of the project	
Total cost of the services provided by the Bidder	
Duration of the project (no. of months, start date, completion date, current status)	
<b>Other Relevant Information</b>	
Letter from the client to indicate the successful completion of the projects	

**NOTE:**

1. A separate sheet should be filled for each of the Eligible Projects.
2. Role of Member would be Single Entity or in case of Consortium would be Lead Member or Member



3. Please provide Copies of Work Orders/Completion Certificate duly attested by the Authorised Signatory or Self Certificate duly signed by the authorized signatory of the company
4. The Bidder should provide the experience details of Projects undertaken by it only. Project experience of the Single Entity's parent company or its subsidiary or Consortium Members parent company or its subsidiary (who are not Members of the Consortium) will not be considered.

**FINANCIAL CAPABILITY OF THE SOLE BIDDER/LEAD MEMBER**

(in Rs. Cr.)

S.N.	Financial information at the end of concerned year	Year-1	Year-2	Year-3
1	Turnover			
2	Profit After Tax			

This is to certify that above information is true and correct for above mentioned Years .....  
(name of the Applicant).

Date:

(Signature, name and designation of the authorised signatory)

Name and seal of the audit firm:

**Note:** This information should be extracted from the Annual Financial Statement / Balance Sheet which should be enclosed and this response sheet shall be certified by the Statutory Auditor of the Sole Bidder or Lead Member of the Consortium

## **Proposed Solution**

Technical approach, methodology and work plan are key components of the Technical Bid. This needs to be provided for implementation of;

- (i) Smart Pole with LED street light
- (ii) WI-FI Services in 100 Hot Spots identified by BSCDCL
- (iii) Optical Fiber
- (iv) Surveillance
- (v) Environmental Sensors
- (vi) EV Charging Points
- (vii) Smart Bill Board
- (viii) SOS Application
- (ix) Mobile Application
- (x) Central command and control Centre (NOC)
- (xi) Managing the Complete Network

You are suggested to present Approach and Methodology divided into the following sections for each of the above areas:

- a) Solution Proposed
- b) Understanding of the project (how the solution proposed is relevant to the understanding)
- c) Technical Approach and Methodology

**Proposed Implementation Work plan**

#	Activity	Months												
		1	2	3	4	5	6	7	8	9	...	...	...	...
1														
2														
3														
4														
5														
6														
7														
8														
9														
...														
...														
...														
...														
...														

**Note:**

1. Indicate all main activities and drill down to sub-activities of the assignment, including delivery of reports and other benchmarks.
2. Duration of activities shall be indicated in the form of a bar chart.

**Composition of Deployed Team**

<b>Name of Staff with Qualification and Experience</b>	<b>Area of Expertise</b>	<b>Position Assigned</b>	<b>Task Assigned</b>	<b>Time committed for the engagement</b>

**Curriculum Vitae (CV) of Project Manager (dedicated on-site)**

General Information	
Name of the person	
Current Designation/Job Title	
Current job responsibilities	
Proposed Role in the Project	
Proposed Responsibilities in the Project	
Academic Qualifications: <ul style="list-style-type: none"><li>• Degree</li><li>• Academic institution graduated from</li><li>• Year of graduation</li><li>• Specialization (if any)</li><li>• Key achievements and other relevant information (if any)</li></ul>	
Professional Certifications (if any)	
Total number of years of experience	
Number of years with the current company	
Summary of the Professional/Domain Experience	
Number of complete life cycle implementations carried out	
The names of customers (Please provide the relevant names)	

General Information	
<p>Past assignment details (For each assignment provide details regarding name of organizations worked for, designation, responsibilities, tenure)</p> <p>Prior Professional Experience covering:</p> <ul style="list-style-type: none"><li>• Organizations worked for in the past</li><li>• Duration and dates of entry and exit</li><li>• Designation Location(s)</li><li>• Key responsibilities</li></ul>	
<p>Prior project experience</p> <ul style="list-style-type: none"><li>• Project name</li><li>• Client</li><li>• Key project features in brief</li><li>• Location of the project</li><li>• Designation</li><li>• Role</li><li>• Responsibilities and activities</li><li>• Duration of the project</li></ul> <p>Please provide only relevant projects.</p>	
<p>Proficient in languages (Against each language listed indicate speak/read/write)</p>	

**Deployment of Personnel**

#	Name of Staff	Staff input in Months (in the form of a bar chart) <sup>2</sup>													Full Time	Part Time	Total staff man-months proposed	
		1	2	3	4	5	6	7	8	9	10	11	12	n				Total
1																		
2																		
3																		
N																		
											Total							

**Note:**

1. For professional staff the input should be indicated individually; for support staff it should be indicated by category
2. Months are counted from the date of signing of contract.



**Manufacturers'/Producers' Authorisation Form**

(This form has to be provided by the OEMs of the products proposed on its letterhead)

No.:

Date:

To:

OEM Authorisation Letter

Dear Sir:

**Ref:** Your RFP Ref: dated

We who are established and reputable manufacturers/producers of having factories/development facilities at (address of factory/facility) do hereby authorize M/s (Name and address of Agent) to submit a Bid, and sign the contract with you against the above Bid Invitation.

We hereby extend our full guarantee and warranty for the Solution, Products and services offered by the above firm against this Bid Invitation.

We hereby declare that we are not insolvent, in receivership, bankrupt or being wound up, our affairs are not being administered by a court or a judicial officer, our business activities have not been suspended and we are not the subject of legal proceedings for any of the foregoing.

We also undertake to provide any or all of the following materials, notifications, and information pertaining to the Products manufactured or distributed by the Supplier:

- a) Such Products as the Bank may opt to purchase from the Supplier, provided, that this option shall not relieve the Supplier of any warranty obligations under the Contract; and in the event of termination of production of such Products:
  - i. advance notification to the Bank of the pending termination, in sufficient time to permit the Bank to procure needed requirements; and
  - ii. Following such termination, furnishing at no cost to the Bank, the blueprints, design documents, operations manuals, standards, source codes and specifications of the Products, if requested.

We duly authorize the said firm to act on our behalf in fulfilling all installations, Technical support and maintenance obligations required by the contract.

Yours faithfully,

(Name)

(Name of Producers)

**Note:**

- This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. The Bidder in its Bid should include it.

### Technical Compliance – FRS

The Client will randomly check the compliance provided by the Bidder against the functionality during PoC and in case of any discrepancy the marks will be reduced to zero for this section.

#### 1) Smart Pole with LED Street Lights

a) *Smart LED Lights (20,000 poles)*

#.	Clause	Criticality	Compliance  (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
1	<p>Certification CE</p> <ul style="list-style-type: none"> <li>• Metering: EN 61326-1</li> <li>• Safety: EN 60950-1</li> <li>• Lighting: EN 61000</li> <li>• EMC: ETSI EN 301 489-3</li> <li>• Radio &amp; RF Spectrum Efficiency: ETSI EN 300 220-1</li> <li>• RoHS</li> <li>• R&amp;TTE 1999/5/EC</li> <li>• Applicable FCC Title 47 part 15 classes</li> </ul> <p>The wireless transmission system needs to comply with the European maximum transmission power of 10mW (+10dBm) or 500mW (+27dBm), and a receive sensibility of -110dBm IP 55 (integrated controller, IP68 for external enclosure) and RoHS approved.</p> <p>The system needs to be based on the IETF open standard.</p>	Vital		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
2	Power: 110-256 VAC 50/60Hz.	Essential		
3	Optional backup power for external mounting: NiMh 600mAh battery (with an average 10 years expected life).	Desirable		
4	Intellectual Property: The Bidder's technology needs to own 100% of the solution's IP	Essential		
5	Low power consumption: The Luminaire Controller should consume less than 2watts.	Essential		
6	<p>Integrated in the fixture: The Luminaire Controller should be Internal mounting in the fixture. Node dimensions (Max) 110 x 77 x 36 mm (for internal mounting).</p> <p>For the non-integrated option for ad-hoc basis. Dimensions (Max) would then be: 150 x 108 x 55 mm. Operating temperature: -30°C et +70°C.</p> <p>The antenna could be integrated in the fixture (which would reduce the transmission/reception power) or external (TNC/SMA or via an RF coax cable)</p>	Vital		
7	Autonomous clock: The Luminaire Controller must store scheduled ON, OFF and stepless dimming command that it received from the Central Management	Vital		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	<p>Software and execute them with the light point.</p> <p>The Luminaire Controller should have an astronomical clock to define lighting schedules based on seasons. Those schedules could be defined from relative and absolute commands.</p> <p>The Luminaire Controller should manage the luminaire even in case of a network outage (i.e. the stored lighting schedule should apply even if the controller can't communicate with the Central Management System).</p>			
8	<p>Control of the luminaire and Manual override: The Luminaire Controller must be able to receive and execute real time ON/OFF (via mechanical 8A relay) and stepless dimming commands that it receives from the Central Management Software.</p> <p>The controller's schedule table should support up to 16 programmable commands, in an integrated non-volatile method.</p> <p>A local override port on the controller should be available for future use.</p>	Vital		
9	Any type of Dimming is not allowed.	Vital		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
10	Communicate using a wireless mesh protocol: The Luminaire Controllers must communicate using a wireless mesh protocol. This protocol should be open, based on the 6LoWPAN standard (802.15.4), with an IPv6 addressing scheme, on the ISM band (433MHz, 868MHz and 915MHz) or any other free band	Essential		
11	Broadcast communication: The wireless mesh protocol shall support broadcast (one command to target a group of Luminaire Controllers) and unicast (one command sent to a single Luminaire Controller).	Essential		
12	Integrated in a Smart City environment: The Luminaire Controllers must integrated seamlessly in a Smart City wireless meshed network (a dedicated city-wide network to manage urban connected devices such as meters, waste bins, parking sensors, traffic lights, pollution sensors).	Vital		
13	Communication specifications: 128bit AES encryption Transmission power < 27dBm  Full duplex communication. Radio modulation: GFSK / GMSK/ 2FSK/ MSK/ OOK/ ASK. Fully meshed	Desirable		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	wireless, self-configuration and self-healing network.			
14	Remote management: The Luminaire Controllers must be controlled and managed remotely.	Essential		
15	<p>Seamless installation and commissioning: The Luminaire Controllers must integrated seamlessly and automatically to an existing Luminaire Controllers network.</p> <p>The Luminaire Controllers must communicate seamlessly and automatically with an existing gateway. The Luminaire Controllers must be able to roam between gateways for redundancy and seamless installation purposes.</p>	Essential		
16	Communication performance: The fully meshed wireless network should support a bandwidth of up to 200Kbps.	Desirable		
17	Detect and report failures: The Luminaire Controllers must be able to detect and report alarms such as: lamp failures, ballast failure, low/high voltage, low/high current, low capacitor, flickering lamps, etc.	Desirable		
18	Measuring electrical values: The Luminaire Controllers must be able to	Desirable		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	measure mains voltage (RMS), current (RMS), frequency, power factor, active and reactive power, active and reactive energy; in real-time or not, with an accuracy equal or better than 2%.Integrated temperature meter. The load's electrical consumption measurement is up to 1,5kVA			
19	Measure cumulated energy consumption: The Luminaire Controller must measure and store the cumulated energy consumption.	Desirable		
20	Measure number of burning hours: The Luminaire Controllers must measure and store the number of lamp burning hours	Desirable		
21	Additional I/O port for future use: The Luminaire Controllers must have at least 2 local I/O programmable ports for future use	Desirable		
<b>Gateway</b>				
1	Certification CE <ul style="list-style-type: none"> <li>• Metering: EN 61326-1,</li> <li>• Health: EN 50385</li> <li>• Safety: EN 60950-1</li> <li>• Lighting: EN 61000</li> <li>• EMC EN 301 489-1, ETSI EN 301 489-3, ETSI EN 301 489-17</li> <li>• Radio &amp; RF Spectrum Efficiency: ETSI EN 300 220-2 v2.3.1, ETSI EN</li> </ul>	Vital		



#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
	<p>300 328, ETSI EN 301 893</p> <ul style="list-style-type: none"> <li>• RoHS</li> <li>• R&amp;TTE 1999/5/EC</li> <li>• Applicable FCC Title 47 part 15 classes</li> </ul> <p>The narrowband wireless transmission system needs to comply with the European maximum transmission power of 10mW (+10dBm) or 500mW (+27dBm) and a receive sensibility of -98dBm (for the 6LoWPAN 802.15.4 communication standard), as well as 500mW (+27dBm) and a receive sensibility of -119/-115/-107 dBm (for the EN 13757-4 – Wireless M-Bus).</p> <p>The broadband Wi-Fi transmission system needs to comply with the Wi-Fi power transmissions standards: 200mW (+23dBm) – 802.11 a/n/s and 100mW (+20dBm) – 802.11 b/g</p> <p>The system needs to be based on the IETF open standard. IP 40 (integrated gateway) or IP67 (for external enclosure) and RoHS approved.</p>			
2	<p>Power: 85-256 VAC 50/60Hz.12/24 DC. POE – IEEE 802.3at – 48VDC. Power consumption: 5W max.</p>	Desirable		
3	<p>Number of LED Lights to be considered: 60% of light are 250W and 40% of lights</p>			

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	are 150W. Total number of poles for housing LED lights are 10,000.			
4	Intellectual Property: The Bidder's technology needs to own 100% of the solution's IP.	Essential		
5	<p>Environmental Dimension: 269 x 239 x 82 mm (rugged metal case) or 330 x 204 x 55 mm (anodized metal case)</p> <p>Operating temperature: -30°C et +60°C. Case:</p> <ol style="list-style-type: none"> <li>1) External mounting: IP 67, rugged metal, resistant to oils/greases/fuels, diesel, paraffin/ozone and RoHS approved.</li> <li>2) Internal mounting: IP40 anodized metal.</li> </ol>	Desirable		
6	<p>Wireless fully meshed communication protocol The gateway should be able to communicate in broadband and narrow band networks:</p> <ol style="list-style-type: none"> <li>1) Narrowband networks (IPv6): The open standard 6LoWPAN (802.15.4) IPv6 should be supported on the ISM frequency band (433MHz, 868 MHz and 915MHz).</li> <li>2) Broadband network (IPv4): The following standards should be supported:</li> </ol>	Vital		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
	<p>a) Wi-Fi 802.11 a/b/g/n/s standard on the 2.4GHz, 5.4GHz or 5.8GHz frequency bands</p> <p>b) GSM/GPRS/EDGE/UMTS/3G on the 850/900/1800/1900 MHz frequency bands</p> <p>c) RJ-45 10/100Mb base-TX Ethernet port</p> <p>The gateway needs to communicate and route traffic between the different networks automatically and in real-time.</p>			
7	<p>Communication performance</p> <p>1) Narrowband network: The fully meshed wireless network should support a bandwidth of up to 200Kbps</p> <p>2) Broadband network: The fully meshed wireless network should support a bandwidth of up to 300Mbps.</p>	Essential		
8	<p>Broadcast communication: The wireless mesh protocol shall support broadcast (one command to target a group of Controllers/Nodes) and unicast (one command sent to a single Controller/Nodes).</p>	Essential		
9	<p>Integrated in a Smart City environment: The gateway must integrated seamlessly in a Smart City wireless meshed network (a dedicated city-wide network to manage urban connected devices such as meters,</p>	Vital		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	waste bins, parking sensors, traffic lights, pollution sensors).			
10	Remote management: The gateway must be controlled and managed remotely	Essential		
11	<p>Seamless installation and commissioning: The gateway must integrated seamlessly and automatically to an existing network. The gateway must communicate seamlessly and automatically with an existing gateway.</p> <p>The gateway should support the controllers/nodes roaming feature for redundancy and seamless installation purposes.</p>	Essential		
12	<p>Maximum number of nodes supported by the gateway:</p> <p>The gateway should be able to at least manage 200 nodes/controllers.</p>	Essential		
13	<p>Communication specifications:</p> <ul style="list-style-type: none"> <li>• 256bit AES encryption for the broadband communication</li> <li>• 128bit AES encryption for the narrowband communication</li> <li>• Radio modulation: BPSK, DBPSK, QPSK, DQPSK, 16-QAM, 64-QAM, GFSK, FHSS</li> <li>• Full duplex communication.</li> </ul>	Essential		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	Fully meshed wireless, self-configuration and self-healing features on the narrowband and the broadband networks			
<b>Central Management Software</b>				
1	Intellectual Property. The Bidder's technology needs to own 100% of the solution's IP.	Essential		
2	Multi-User Web Application Server The CMS shall be based on an open Web Application Server. Its user interface shall be 100% Web-based and accessible from any computer on the network through a Microsoft Internet Explorer, SAFARI or Chrome web browser	Vital		
3	Enterprise server The CMS shall be installed on a server that belongs to the organization/customer or to one of our local service or IT sub-contractor. Cloud-based, SaaS model or any server that is web-hosted by a Bidder of a part of the solution is not accepted.	Vital		
4	100% Web Interface Web user interfaces shall run and be supported on Microsoft Internet Explorer, SAFARI and Chrome on WINDOWS-based PC and MAC OS.	Desirable		
5	Based on open technologies The CMS must be developed with open and standardized languages including Java,	Vital		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	XML configuration files and SQL database. It shall enable the development of additional features without the need to acquire any development software license.			
6	Open database engine The CMS shall record all the data in a centralized SQL database and shall be compatible with MYSQL to avoid being obliged to purchase additional software license for database engine.	Vital		
7	User authentication system The CMS shall enable administrator to create, modify and delete users, passwords, groups and access controls. The CMS shall automatically close connections after X mns (configurable) of inactivity.  Tiered level access and management.	Desirable		
8	Integrated CMS The CMS shall be an integrated and ready-to-use application that does not require any specific development before being deployed.  The CMS should be a flexible and modular application, supporting the management of any type of Smart City services: a dedicated city-wide central management system to manage all types of urban connected devices such as	Essential		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	meters, waste bins, parking sensors, traffic lights, pollution sensors.			
9	<p>Support multiple types of Control Systems, i.e. Gateways The CMS shall manage and communicate with different types of network devices as listed in the previous sections (gateways, nodes )</p> <p>It should also support different heterogeneous Control Systems, including power line systems and wireless systems.</p>	Desirable		
10	<p>Network management The CMS should support and enable:</p> <ul style="list-style-type: none"> <li>• The management of the narrowband networks</li> <li>• The management of the broadband networks</li> <li>• The management of the applications</li> <li>• The management of the networks configurations</li> <li>• The management of the data generated by the nodes and gateways (network data and user data)</li> <li>• The Monitoring and configuration of network objects</li> <li>• The management of the network links and provide link status, link quality and link reporting</li> <li>• Detailed broadband network reporting: wireless transmission power, TCP/IP usage, link utilization,</li> <li>• The management of the network as a</li> </ul>	Vital		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	<p>whole, with network status and network quality</p> <p>The CMS should provide automatically or on request, the status and the related critical events of each managed objects. Those critical events could be: wireless link quality, usage of the objects, outages, battery life-time,</p>			
11	<p>CMS shall provide a user and object management system The CMS shall provide ways to create user profiles, users and access rights to web applications as well as to groups of objects.</p> <p>The CMS shall manage the objects individually or by groups of objects.</p>	Essential		
12	<p>CMS shall log all actions The CMS shall log all the actions from all the users.</p> <p>Recording Node and device history (linking network Nodes, lamps/meters, customer accounts) and keeping track of adds, moves or changes</p>	Desirable		
13	<p>CMS shall provide map-based inventory features The CMS shall enable users to group objects per geographical zone, to move objects, to delete objects and to duplicate objects on the maps.</p> <p>The CMS should display the network topology (objects, links, status) on a map,</p>	Essential		



#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	in a tree format, and other graphical views to ease the management of the network			
14	<p>CMS shall support multiple types of objects, enable new attributes to be created and provide inventory import/export features. The CMS shall support Light Points, Segment Controllers, Sensors, Electrical Vehicle Charging Stations, Weather Stations, Energy Meters and other types of objects.</p> <p>It shall enable the import/export of the inventory in a the following formats:</p> <ul style="list-style-type: none"> <li>• standardized CSV formatted file</li> <li>• ODBC and text export</li> <li>• Via the XML server</li> <li>• Via SQL queries into the database.</li> </ul>	Vital		
15	<p>Configuration of all the parameters of the Gateway and the nodes The CMS shall enable end-users to configure all the parameters of the Gateway and the nodes, including the IP communication parameters, astronomical clock, real time clock, schedulers, Gateway's inputs/outputs and associated scenario, etc.</p> <p>Auto-discovery of the networks' objects.</p>	Vital		
16	Management and configuration of the services The CMS shall enable the	Essential		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	management and configuration of the Smart City services, such as the street lighting, parking spaces, meters			
17	Automatic installation process The CMS shall provide end-users with processes and tools to automatically process the installation and configuration of the Nodes.	Essential		
18	Gateways shall “PUSH” data to CMS The data logs (all data read by the Gateway on the Nodes) generated on the Gateway shall be pushed by Gateways to the CMS rather than pulled by the CMS to provide a higher scalability. The data collect process shall not require any manual operation.  The data presented by the CMS (related to the network or the services) should be updated dynamically.	Vital		
19	Ready-to-use Web Reports The CMS shall provide ready-to-use web reports to analyze failures, energy consumption and lamp age. It shall provide a way to display historical values for any measured attribute of any device in the database.	Desirable		
20	Customized desktop of Web Reports and Applications The CMS shall manage access control depending on the user profile and provide the according list of	Essential		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	web reports and applications on a web desktop. Each application shall display only the geographical zone, devices and data that the user is authorized to access.			
21	<p>Alarm management The CMS shall enable the administrator to create complex alarm scenario based on the data collected from the Nodes through the Gateways. Such alarms aim at sending only effective alarms to the right end-user.</p> <p>The CMS shall perform and support the following alarm features:</p> <ul style="list-style-type: none"> <li>• Receiving/capturing successful/unsuccessful readings from any node-connected devices, at scheduled timings/intervals or on demand;</li> <li>• Reporting about alarms and status indicators, tamper/thefts, consumption / usage trends from node-connected devices</li> <li>• Identifying and reporting critical events from Nodes and devices (failures, memory capacity issues, communication link or network failures, power failures,)</li> <li>• Notify of events via <ul style="list-style-type: none"> <li>○ Email and distribution lists</li> <li>○ SMS</li> </ul> </li> </ul>	Essential		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	<ul style="list-style-type: none"> <li>○ The execution of a process</li> </ul> <p>An alarm warning on the CMS</p>			
22	<p>Real-time control on maps The CMS shall enable authorized users to control, command and monitor each objects in real-time. It shall provide instantaneous (less than 20 seconds in average) communication (sending commands and/or receiving data) between the nodes/controllers, the gateways and the CMS.</p> <p>Multi-level network topology hierarchy and map visualization to ease the management of the network and the services,</p>	Vital		
23	<p>Provide web service interface for 3rd party software to leverage the CMS features The CMS shall provide with XML, API and SQL access as well as a set of web service interface to enable third party authorized software to use the CMS features.</p>	Vital		
24	<p>Maximum number of managed objects The CMS should be able to support and manage an unlimited number of objects.</p>	Essential		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
25	<p>Backup server and server farms The CMS should have a backup function with a live standby server and automated failover</p> <p>The CMS application and the SQL database should be able to run on different servers, if needed, to manage growth.</p> <p>The CMS application and the SQL database should be able to run on their respective server farms, if needed, to manage growth.</p>	Essential		

*b) Smart Pole (Minimum 400 Smart Poles including digital information panel)*

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
1	Smart pole should able to meet city aesthetic requirement and it should visual appealing. It should easily blend-in into city light pole master plan.	Essential		
2	Maximum height requirement is up-to 12 meter. However for covering the important area the height required would be 25 meter.	Desirable		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
3	It should be possible to house minimum 3-4 telecom technologies (GSM, WCDMA, LTE and Wi-Fi etc) simultaneously with minimum 2-3 sectors. It should also be possible to support future technologies such as 5G.	Vital		
4	Site passive infra (space and power) sharing among telecom operators is mandatory requirement.	Essential		
5	It should be possible to support LED luminaries from reputed OEMs as per city lighting master plan	Essential		
6	Smart pole should able to support city as well telecom standards for India such as wind speed, climate ,aesthetic etc	Essential		
7	It should be possible to support both Fiber as well Microwave connectivity for smart pole	Vital		
8	The maximum allowed diameter (at bottom section) is 250mm	Vital		
9	All cabling, cooling/heating etc should be via/inside the pole and it should not be visible from outside due to aesthetic and security reasons	Vital		
10	It should meet EMC requirement of telecom sites as per Indian regulations	Essential		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
11	The minimum power backup requirement is 3.5 hrs for telecom equipment	Essential		
12	The structure should be free from any passive intermodulation. Passive intermodulation (PIM) value should be < -150 dBc @ 2 x 43 dBm	Vital		
13	It should be possible to provide multiple color options as asked by municipality/user as per city light pole colors	Desirable		
14	It should be possible to house radio units with integrated antenna ,MW /optical transmission unit , SMPS (AC to DC convertor) ,batteries ,controllers ,power distribution etc inside the smart pole	Vital		
15	It should be possible to house telecom equipment's from all reputed OEMs.	Essential		
16	It should be possible to provide light connection in daisy chain with separate MCB for lighting and telecom part	Vital		
17	There should be provision to have separate connection for light as well for telecom equipment for maintenance purpose.	Essential		
18	The camouflaging material for covering the antenna /RF equipment's should be	Essential		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	hard material with a minimum life of 10 years			
19	The paint material (to cover the RF section ) should complied to RF /Telecom requirements	Vital		
20	It should be possible to color the complete body (including RF equipment camouflaging) by any paint color	Essential		
21	The camouflaging material (to cover RF equipment's) should have RF transparency with maximum 0.5db of attenuation covering all the radio frequency bands available in India	Vital		
22	The cooling/heating equipment's to cool /heat telecom equipment should be integral part of smart pole Maximum allowable limit for cooling equipment is 100W for cooling solution, efforts should be made to reduce the power consumption as much as possible.	Vital		
23	The smart pole structure should be IP67 up-to 1 meter height from reference ground level.	Vital		
24	There should be suitable mounting options for Radio /Antenna unit mounting	Essential		



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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
25	Hanging of telecom equipment's boxes at bottom level (outside of structure) is not allowed	Vital		
26	It should be possible to support other societal/smart city applications such as surveillance camera , Wi-Fi by smart telecom light pole	Essential		
27	The camera when procured should be integrated inside the light arm and should have feature of night vision	Vital		
28	The ambient temperature requirement is 0-50 deg	Essential		
29	The overall power budget for smart pole should not exceed 2KW (telecom + lights)	Desirable		
30	It should be possible to support 1 light arm/2 light arm option by smart pole	Essential		
31	Underground space (2x2x1M , WxDxH max) should be used for telecom equipment's with suitable telecom grade enclosure box with IP67 protection, size of box not more than 1600x1200x700mm (WxDxH)	Vital		
32	The smart pole should be preventive maintenance free for minimum 2 years.	Essential		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
33	The minimum life requirement of above smart pole structure is 15 years (metal parts)	Vital		
34	The Bidder should not use any banned /restricted material as per Indian regulations	Essential		
35	Pole hat mounting should have suitable option for GPS antenna, small MW antenna (up-to 0.3m diameter).	Essential		
36	The smart pole should support Environmental sensors	Desirable		
37.	For putting the advertisement on Smart poles and all other electric poles bidder shall require to refer Hoarding policy (UADD/BMC/MPMKVVCL)	Vital		

**2) Wi-Fi services in 100 hotspots identified by BSCDCL (Minimum of 1000 Access points)**

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
1	Fully redundant cloud based AAA services to be provided (with OTP/ Password), to support Retail and campus network topologies	Vital		
2	Full AAA to AAA integration (Radius/Diameter) required to enable international roaming with Wi-Fi operators.	Vital		
3	Full web based real time NMS system to monitor services working	Essential		
4	Full capability for EAP/SIM, EAP/AKA etc. Mobile Data Offload to be done with Mobile Operators.	Essential		
5	In built NMS to monitor all the network & IT infrastructure against availability, usability & performance	Desirable		
6	To allow BSCDCL to download/ view performance of services utilised by subscribers with key information of Username, MAC, IP, Location, Duration, Upload/ Download & Disconnection reason	Vital		
7	Multiple templates for Captive Portal which will be selectable by venue owners to customise	Essential		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
8	Multiple payment gateway integration required so subscribers can make the payments using online/ offline mode, including prepaid mobile balance & wallet applications	Vital		
9	Advertising platform integration -AAA to support advertisements from multiple parties	Vital		
10	IOS & Android Applications to be given for seamless connectivity to network – auto detect/auto login	Vital		
11	High speed micro-caching solution integrated to Wi-Fi network to deliver entertainment and content with zero broadband cost to user	Vital		
12	The content delivery solution should not use internet bandwidth and support minimum of 500 Movies and 1000 songs and provide web/app based interface to download the content with seamless integration with the deployed Wi-Fi Network	Vital		
13	Bidder should share usage data analytics from all monetization across all SSID's with BSCDCL on a monthly basis	Vital		
14	Bidder shall offer multiple monetizing of Wi-Fi Services such as:  a) Online advertising	Essential		

**Request for Proposal for Selection of Concessionaire for Smart City Pan City Project in Bhopal under PPP**

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	<ul style="list-style-type: none"> <li>b) Partnership with content developers</li> <li>c) Video sponsorships including high speed downloads (1Gb data in less than 5 minutes)</li> <li>d) Wi-Fi sponsorships</li> <li>e) Mobile data offloading for National and/or International Operators (including iPass, Boingo, Aicent, Comfone etc.) that meet commercial terms.</li> <li>f) Exciting Premium Service offers such as hourly package, monthly package, half yearly packages, family packages etc.</li> <li>g) Other ways to monetize Wi-Fi Service</li> <li>h) Neutral Hosting: Bidder should allow any service provider to provide Wi-Fi service by providing SSID at a pre-define rate in a non-prohibitory manner (till 16 SSID)</li> </ul>			
15	International Roaming Experience: The Bidder shall have tie-ups with the international roaming Wi-Fi Service provider such as iPass, Boingo, Aicent and Comfone etc.	Vital		
16	1 SSID for e-governance is mandatory	Vital		
17	Bidder should be able to provide minimum 6 SSID for operator data offload, and can be monetized by Bidder at his discretion and at rates which the Bidder deems fit	Desirable		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
18	Bidder shall supply a Connection Manager App (Android & iOS) which the Govt. can distribute to subscribers.	Vital		
19	<p>Service 1 – Complimentary Service (Free)</p> <p>Passenger will receive free Wi-fi for 20 minutes with maximum download limit of 50 MB per day and an aggregate limit of 200 MB per month. In this Service, the passenger can browse the Internet, social media sites, download text documents and answer emails. The passenger shall not be able to stream/download any video, audio or any high end application. The speed of surfing shall be restricted upto 1 Mbps. The Bidder shall insert advertisement (s) of a maximum duration of 20 seconds per 10 minute of browsing. The secured Wi-Fi service shall be low speed of upto 1Mbps, user-friendly, easily accessible and provide customer service support.</p>	Essential		
20	<p>Service 2 – Premium Service (Paid)</p> <p>Passenger can avail the Premium Service based on the Wi-Fi Premium service plan. In this service, the passengers can browse the internet, respond to emails as well as download emails, documents, music, movies, any high-speed application and play movie or song</p>	Essential		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	without buffering and advertisement. The payment for the plan shall be done online as well as via physical coupons. The speed of surfing shall be 10 mbps. The secure Wi-Fi service shall be high speed, user- friendly, easily accessible and shall provide customer service support			
21	<p>The Bidder shall also provide the following services:</p> <ul style="list-style-type: none"> <li>i. Bidder shall authenticate the passenger before logging-in at Wi-Fi Services as per present regulatory guidelines.</li> <li>ii. Bidder shall provide the secured pathway for accessing the Wi-Fi.</li> <li>iii. No malicious contents shall be allowed at Wi-Fi network.</li> <li>iv. Bidder shall follow the guidelines for providing the public</li> <li>v. Wi-Fi Service given by government.</li> <li>vi. Bidder should cover minimum 100 Hotspots by providing at-least 1000 Access points (80/20) IP65 outdoor etc</li> </ul>	Essential		
22	Bidder would be responsible for providing backhaul and internet bandwidth	Essential		
23	BSCDCL will be responsible only for providing ROW, space and power for deployment	Essential		





**3) Optical Fibre (Min 200 kms)**

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
1	OFC being supplied for the project will adhere to ITU-T G.655 standards for Non-zero dispersion shifted Metal-free unarmoured optical fiber cable conforming to TEC specification GR/OFC-07/02. Jul 2007 or latest and the raw material used in its manufacture will conform to TEC Specification TEC/GR/TX/ORM 01/04 Sep 09 or latest.	Vital		
2	Technical Specifications of HDPE Pipe. The HDPE pipe will conform to TEC specification GR/CDS - 08/02 Nov 2004 and latest amendments thereof or better. The HDPE pipe used will be of 40 mm outer diameter with minimum wall thickness of 3.5 mm.	Essential		
3	100% of the network shall be built underground through an appropriate methodology which is non-disruptive, quick to deploy and does not disturb the existing electrical and other cabling installed in the median...	Vital		
4	Alternate methods like Open Trenching/Aerial Cabling/Moiling/Wall Installations etc. shall be allowed only in exceptional cases like bridges, flyovers, subways, crossings, water bodies, or any	Essential		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	location where underground drilling is not possible. Approvals shall be issued by the highest levels of the governing board for these exception requests.			
5	Manholes (MH) and Hand Holes (HH) shall be installed at every alternate interval of 250 Meters.	Vital		
6	All the MH and HH shall be pre-fabricated types.	Essential		
7	A minimum of 1 Duct shall be installed on all routes. In cases, where more number of ducts are required based upon the commercial prospects, exceptional decisions shall be taken at the time of the occurrence of the event.	Essential		
8	In cases of bridge/flyover/culvert etc. crossings, GI Pipes of 200mm Diameter shall only be used.	Vital		
9	Electronic Route Markers (ERM) shall be installed in each MH/HH for robust records and location detections.	Vital		
10	For exceptional cases of Open Trenching, minimum depth shall be 0.3 m to 0.5m in median of the street. All the ducts shall be encased in a DWC Pipe of 200mm Outer Diameter.	Vital		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
11	For exceptional cases of Aerial Cabling, 48F ADSS cable shall only be used. Distance between poles shall not be more than 50-60 meters and height of installation shall not be less than 5 meters.	Vital		
<b>Operation &amp; Maintenance</b>				
12	Periodic maintenance of ducts/Joint Closures (JC)/MH/HH shall be carried out to ensure the upkeep of the buried asset at all times.	Essential		
13	Fault Repair Teams (FRTs) shall be deployed at every 30-40 KMs of the route length on round the clock basis.	Vital		
14	Patrollers shall be deployed at every 30 KM interval on 12 hours day time shift basis.	Vital		
15	KPIs; <ul style="list-style-type: none"> <li>• 5% FTs &lt; 2 Hours</li> <li>• 15% FTs &lt; 4 Hours</li> <li>• 60% FTs &lt; 8 Hours</li> <li>• 15% FTs &lt; 48 Hours</li> <li>• 5% FTs &gt; 48 Hours</li> </ul>	Vital		

**4) Environmental Sensors (Min 100 Nos)**

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
1	Environmental sensor should be able to measure Air pressure	Vital		
2	Environmental sensor should be able to measure Humidity	Vital		
3	Environmental sensor should be able to measure temperature	Vital		
4	Environmental sensor should be able to measure Gas	Vital		
5	The sensors should provide dual feed, 1 for local display and one for centralized command and control display	Vital		
6	It should be possible to store the data from sensors, in a hard disk or computer at command and control center	Essential		

**5) Electronic Vehicle Charging (Min 50 Nos)**

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
1	EV Charging station ports should be able to supply upto 7.2kW	Essential		
2	There should be no need for drivers to coil up the cord and should have the self-retracting cord management system, ensuring that the cord is always off the ground when not in use	Vital		
3	It should be Pole mounted	Essential		
4	It should be rugged and should be of vandal proof construction	Essential		
5	It should have dual charging port	Essential		
6	It should have fast charging upto 30 mins	Vital		
7	It should support input voltage of 200-280V	Essential		
8	Output DC voltage 32V	Vital		
9	It should have LCD Display, daylight readable	Essential		
10	It should have minimum 640x480 resolution	Essential		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
11	It should support 3 languages(English, Hindi, Local language)	Essential		
12	It should support real time energy management	Vital		
13	It should have RFID Card Reader	Vital		
14	It should support payments via e wallet, Debit card, Credit card and vouchers	Vital		

**6) Smart Billboard (Min 700 Nos)**

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
1	Smart Billboard should be able to house small cell or limited macro main remote telecom sites and site build solution with space for all necessary equipment and functions that radio sites in mobile networks require. This should be self-contained, multi-application intelligent site that is aesthetically unique and functionally viable.	Vital		
2	Height of smart billboard should be of 9-10 mtr height	Essential		
3	It should provide Space for telecom equipment, should be able to support 2G, 3G, LTE, Wi-Fi, 5G etc.	Vital		
4	It should have ability to house power plant and battery	Essential		
5	It should have provision for incoming power input cables and fiber connectivity	Essential		
6	It can be Floor or Ground Mounted	Essential		
7	It should be Vandal Proof	Essential		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
8	It should have display of minimum 60 inch.	Essential		
10	It should be Aesthetical & Camouflaged finish with respect to environment	Vital		



**7) Advertisement Panel Billboard-Conventional Advertisement Panel (for Covering Minimum of 19600 Poles of 20000 Nos)**

#.	Clause	Criticality	Compliance (Non Compliance/ Compliance on Customization. Fully Compliant)	Remarks
1	Bidders are required to provide conventional advertisement panel	Vital		
2	The Dimension of these panels shall be minimum of 4 feet Vertical x 3 feet Horizontal or vice versa and should be able to sustain high wind speed	Vital		
3	The total media available on each pole shall not be less than 24 sq feet	Vital		
4	The material used for these panels shall be galvanized iron and shall not be less than 1 Inch	Vital		
5	These panels should improve the aesthetics of the city	Essential		

**8) Central Command and Control Centre (Video Wall) - 2x 2 Cubes -01 No**

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
1	<p>Bidders are required to provide application software for managing and controlling the LED lights through a controller from a centralized location located in the NOC. The location for Centralized command and control center shall be provided by BSCDCL.</p> <p>Only the necessary EMS for monitoring the LED street lights needs to be provided as part of this Project.</p>	Vital		
2	<p>The Bidder shall provide a video projection system based on modular DLP (Digital Light Processing) based high resolution LED based rear projection technology. The VPS will be used to project displays of feed from Cameras Camouflaged in the smart poles. The VPS shall also be able to display Video signals (CCTV/DTH) and other</p>	Essential		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	Laptop Computer Feeds. The VPS shall enable users to display inputs from multiple sources/ applications simultaneously in freely resizable and repositionable windows on entire display area to enable effective collaboration and faster decision making. The Bidder shall supply all necessary hardware and software, including panel, multiscreen drivers, adapters and memory to seamlessly integrate the video projection system with the user interface requirements described in the specification.			
3	The video projection systems shall be rear projection systems and shall be complete with all projection modules, supporting structures, cooling system and cabling. Design & installation of the video projection systems shall be coordinated with the Employer during project implementation. The VPS controller shall have SNTP Clients for synchronizing its time. A panel matching with VPS	Essential		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	panel shall be supplied for installation of VPS Controller as well as Time and Frequency Display System.			
4	<p>The requirements for each modular VPS wall are as follows:</p> <ul style="list-style-type: none"> <li>• Video Projection System (VPS), -70" LED Lit, Full HD resolution with 4 nos. Projection modules along with installation service - Module 2x2</li> <li>• The screens shall be capable of displaying full resolution of the source.</li> <li>• The configuration of the VPS wall (no. of cubes and size of each cube) is defined in the Bill of Quantity. The height of VPS above the ground level shall be decided during detailed engineering based on the layout of the control room and available clear height</li> <li>• The VPS wall should be rugged in nature and shall be designed for 24X7 operational environments Necessary cooling arrangement for VPS</li> </ul>	Essential		

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	shall be provided with the VPS VPS. The air-conditioned environment in the Control room shall be provided by the BSCDCL			
5	The VPS shall be designed to prevent dust ingress.	Essential		
6	VPS wall Management Software shall be provided	Essential		
7	The Bidder shall provide a video projection system based on modular DLP (Digital Light Processing) based high resolution LED based rear projection technology. The VPS will be used to project displays of feed from Cameras Camouflaged in the smart poles. The VPS shall also be able to display Video signals (CCTV/DTH) and other Laptop Computer Feeds. The VPS shall enable users to display inputs from multiple sources/applications simultaneously in freely resizable and repositionable windows on entire display area to enable effective collaboration and faster	Essential		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
	decision making. The Bidder shall supply all necessary hardware and software, including panel, multiscreen drivers, adapters and memory to seamlessly integrate the video projection system with the user interface requirements described in the specification.			

**9) Surveillance Camera (Min 100 Nos)**

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
1	All the cameras proposed shall support Smart coding Technology i.e. Group of Pictures (GOP) control function removes unnecessary information from the frame for realizing efficient encoding, Multi process Noise Reduction and FDF(Frequency Divided Filter) etc. to reduce the network bandwidth and the disk space of recorder.	Vital		
2	The camera shall be able to setup and stream out atleast four (4) stream of H.264 High profiles simultaneously. Each stream profile can has its own compression, resolution, frame rate and quality independently.	Essential		
3	The camera shall have Wide Dynamic Range of 133 dB or better	Essential		
4	The camera shall have Image Cropping (4 Areas) and Picture in Picture Function	Essential		
5	The camera shall have minimum 8 Region of Interest Areas to retain higher image quality while the excluded area will have a decreased image quality, which enables to use lower image file size and bit rate	Desirable		
6	The PTZ Camera shall have Wide Dynamic Range of 105dB or Better	Essential		

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#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
7	The PTZ camera shall have Tilt Range of -15° to 195° or better with 360° continuous Panning	Essential		
8	PTZ Camera shall have Rain Wash Coating, Fog and Sandstorm compensation	Essential		
9	The camera shall have Full duplex bi-directional audio allows interactive communication between camera site and monitoring site and 3 alarm Inputs.	Essential		



### 10) Mobile & SoS Application

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance)	Remarks
1	Viewing and paying utility bills Gas, Water, Electricity etc	Vital		
2	View complaint status	Vital		
3	Filing of RTI	Essential		
4	Submitting Citizen Grievances	Vital		
5	Provision of eMandi (market rates of pulses etc)	Essential		
6	Payment for traffic challans	Vital		
7	About Bhopal City	Desirable		
8	Finding nearest police station, fire station, post office etc	Vital		
9	Information about Birth/Death certificate, ration card, voter id etc	Desirable		
10	Online forms	Desirable		
11	Government tenders	Desirable		
12	Government Job Opportunities	Essential		
13	Citizen Facilities	Vital		

**Request for Proposal for Selection of Concessionaire for Smart City Pan City Project in Bhopal under PPP**

#.	Clause	Criticality	Compliance (Non-Compliance/ Compliant on Customization/ Fully Compliance	Remarks
14	Information about Elected and Admin wing	Desirable		
15	Pollution details	Essential		
16	SoS toolkit	Vital		
17	Online Medical Services	Vital		



## ANNEXURE 5

## Sample Price Bid Format for Reference Purposes

Bidder need to fill the price in the following format;

**1. Grant (Gb) required from BSCDCL:**

Bidder need to fill the Grant sought from BSCDCL in the following table;

Grant	Amount (in figures and words)

**1.1. Bill of Quantity (BoQ) for the Grant:**

Following is the minimum BoQ requirement for the project implementation. The total BoQ cost should match with the aforementioned Grant sought from BSCDCL

S. No	Item	Unit of Measurement	Minimum Qty	Unit Price (INR)	Total Price (without tax) (INR)	Taxes, Duties as applicable	Total Price	Remarks
1	Camera	No.	50					Please note the quantities indicated
2	Industrial grade 10/100 MBPS 8 Port POE Switch with 2 SFP Combo	No.	50					

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S. No	Item	Unit of Measurement	Minimum Qty	Unit Price (INR)	Total Price (without tax) (INR)	Taxes, Duties as applicable	Total Price	Remarks
3	Field Aggregation switch	No.	10					in Row 1 to 7 may not be installed at one go and it is only a minimum indicative number. Bidders are required to quote as per actual requirement
4	Mobile Application	Software	1					
5	Fibre	Kms	500					
6	Environmental Sensors	No.	50					
<b>Command and Control Centre</b>								

S. No	Item	Unit of Measurement	Minimum Qty	Unit Price (INR)	Total Price (without tax) (INR)	Taxes, Duties as applicable	Total Price	Remarks
7	VMS for the number cameras as indicated in Ser No 1	No.	1					
8	IT infrastructure (Server and Storage as required for Ser No 7)	As required						
9	Router	No.	2					
10	Switches	No.	2					
11	Firewall	No.	2					
12	19 inch rack-42 U Rack	No.	1					
13	Video Wall (2x 2 Cubes)	No.	1					
<b>14</b>	<b>Installation and commissioning of above</b>		<b>Lumpsum</b>					
		<b>Total BoQ Cost inclusive of all Taxes and Duties for Serial No1 to 14</b>						

**2. Revenue from the project**

Revenue (INR)	Year														
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Revenue generated by the Bidder															
Quoted Revenue Share															
Revenue Share for the Authority															
NPV															
Total Revenue Share with BSCDCL over Concession Period															

Note:

- The amount should be INR
- The rate of discounting factor shall be 10% for determination of NPV
- The prices quoted should be in Indian Rupees

## ANNEXURE 6

### Undertaking on Service Level Compliance

No.

Date:

To,

<insert name and address>

Dear Sir,

**Subject:** Undertaking on Service Level Compliance

1. I/We as Bidder do hereby undertake that we shall monitor, maintain, and comply with the service levels stated in the RFP to provide quality service to BSCDCL

Yours faithfully,

(Signature of the Authorized signatory of the Bidding Organisation)

Name :

Designation :

Date :

Time :

Seal :

Business Address :



## ANNEXURE 7

### Undertaking on Exit Management and Transition

No.

Date:

To,

<insert name and address>

Dear Sir,

**Subject:** Undertaking on Exit Management and Transition

1. I/We hereby undertake that at the time of completion of our engagement with the Department, either at the End of Contract or termination of Contract before planned Contract Period for any reason, we shall successfully carry out the exit management and transition of this Project to the BSCDCL or to an agency identified by BSCDCL to the satisfaction of the Department. I/We further undertake to complete the following as part of the Exit management and transition:
  - a) We undertake to complete the updation of all Project documents and other artefacts and handover the same to BSCDCL before transition.
  - b) We undertake to design standard operating procedures to manage system (including application and IT systems), document the same and train BSCDCL personnel on the same.
  - c) If Department decides to take over the operations and maintenance of the Project on its own or identifies or selects any other agency for providing operations & maintenance services on this Project, then we shall provide necessary handholding and transition support, which shall include but not be limited to, conducting detailed walkthrough and demonstrations for the IT Infrastructure, handing over all relevant documentation, addressing the queries/clarifications of the new agency with respect to the working/performance levels of the infrastructure, conducting Training sessions etc.
2. I/We also understand that the Exit management and transition will be considered complete on the basis of approval from BSCDCL.

Yours faithfully,

(Signature of the Authorized signatory of the Bidding Organisation)

Name :

Designation :

Date :

Time :

Seal :

Business Address :

**ANNEXURE 8**

**Undertaking to open an office in Bhopal**

To,

<insert name and address>

**Ref:** “Selection of Bidder for implementing Smart City Pan City Projects in Bhopal under PPP BOOT model”.

**Bid Reference No:**

**Sub:** Undertaking to Open an Office in Bhopal

Dear Sir,

We hereby undertake that:

We are willing to open an office in Bhopal within 1 month in case we are declared successful in the bidding process.

We have carefully read and understood the entire tender document. We do agree to all the terms and conditions mentioned in the RFP.

Yours faithfully,

Signature:

Name:

Designation:

Address:

Date:

Company Seal

**ANNEXURE 9**

**Data Sheet**

<b>Name of the Project:</b>	Selection of Bidder for implementing Smart City Pan City Projects in Bhopal under PPP BOOT model
<b>Construction Period:</b>	1 year
<b>Concession Period:</b>	15 years
<b>Performance Security:</b>	-
<b>Language:</b>	English
<b>Currency:</b>	Indian Rupees
<b>Bid Security:</b>	Bid Security of amount INR 10,00, 000/- (Ten lakhs Only) through online payment.
<b>Tender Document Fee</b>	Tender fee of amount INR 20,000 (Rupees Twenty Thousand Only) in the form of online payment.
<b>Method of selection</b>	The method of selection of the Bidder shall be quality cum cost with 90:10 weightages for technical and financial score. Financial bids of only those Bidders would be opened who qualify the minimum technical score as laid out in this tender

**ANNEXURE 10**

**MP E-procurement guidelines**

## ANNEXURE 11

### Project Background, Project Objective, Project Description, Specifications and Scope of Work

#### 1. Project Background

City of Bhopal participated in the Smart City Challenge (Phase 1) and is one of the 20 shortlisted cities by MoUD for implementing Smart City projects. Bhopal is also one of the 3 cities selected from Madhya Pradesh.

The selected Smart City Proposal (SCP) is to leverage the available resources and focus on larger development amounting to large share of public investment for smart implementing smart solutions.

The SCP has a compelling three pronged vision of improving public life through quantum jump in quality of services, simplifying governance and aligning incentives of city functionaries. The idea is to:

- i. Maximize reuse of existing infrastructure (ICT/non ICT)
- ii. Creating a backbone for smarter initiatives in the future.
- iii. Modernize service delivery.

The vision is to Transforming Bhopal, a City of Lakes, Tradition and Heritage into a leading destination for Smart, Connected and Eco Friendly communities focused on Education, Research, Entrepreneurship and Tourism.

The themes and opportunities emerging from above vision include:

##### i. Advancing Potential for Industry and Business

- Bhopal has a mature industrial base with Govindpura Industrial Area housing around 1200 Micro Small and Medium Enterprises (MSME). The Industrial areas of BHEL, Govindpura and Mandideep collectively accounted 36% of the Bhopal's GDP.
- To illustrate, Electrical Machinery and Transport equipment together account for the largest investment employing around 8400 people. Metal based production (is second largest employing around 907 people in the last few years.
- Existing potential for Employment, Industrial Growth and Business Development needs is leveraged through SCP. Several factors in the Economy contribute to one another and promise to create an environment of greater economic growth. This can be an advantage in a scenario where the Country as a whole is facing a challenge of jobless growth.

**ii. Leveraging Educational Hub**

- High literacy rate (85%) of Bhopal, which is the 3rd largest in Madhya Pradesh complements the situation. Added advantage of having over 1300 schools and colleges in the City can help in creating a knowledge base which is a pre-requisite for any expanding economy. With proper training and skilling of the youth relevant to economy of the area, the demand supply gap in the employment market can be bridged gradually.
- Additionally, Bhopal has a pool of over 10,000 retired people (Age group of 60-70) who are trained in the area of Power equipment. This human capital could be effectively utilized for their Engineering expertise.

**iii. Creating Opportunities for Small Business**

- Old City is home to several artisans involved in producing handicrafts like Zardozis, Batuas and Jute items. Such small scale business can be promoted by providing a platform to market local products in markets beyond Bhopal.
- This involves use of ICT for promotion, entrepreneurship training of artisans and also through setting up information dissemination systems catering to their purpose.
- Considering, there is a scope for generating both Skilled and Unskilled Employment, the City plans to increase consumption capacity subsequently leading to more demand and higher production.

**iv. Tourism Promotion**

- In the last decade, Bhopal has witnessed a splurge in Tourists with the yearly inflow crossing 10.80 lakhs (Domestic & Foreign) which was the highest in Madhya Pradesh. About 98.91% of Tourists visiting Bhopal are domestic.
- This along with the advantage of being the 3rd Greenest City in the country with low pollution levels reiterates the focus of Tourism in the overall economic development.

All the above activities will align with smart city goals and improve livability and sustainability in the area and can be measured by:

- Increase in availability of jobs, services and retail
- Increase in disposable income, recreation and leisure time
- Availability of affordable housing and diversity of housing types in the city
- Improvement in air quality, water quality, parks and open spaces

- Availability of multi-modal connected networks, increased mobility, safety, streetscape attractiveness
- Reasonable and reliable transport
- Equitable distribution of amenities
- Improvement in sanitation with regular SW collection (residential) and treatment
- Opportunities for direct citizen participation in Governance

Following picture depicts the Aerial view of Area Based Development within Bhopal:



## 2. Project Objective

The objective is to provide city of Bhopal a core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions.

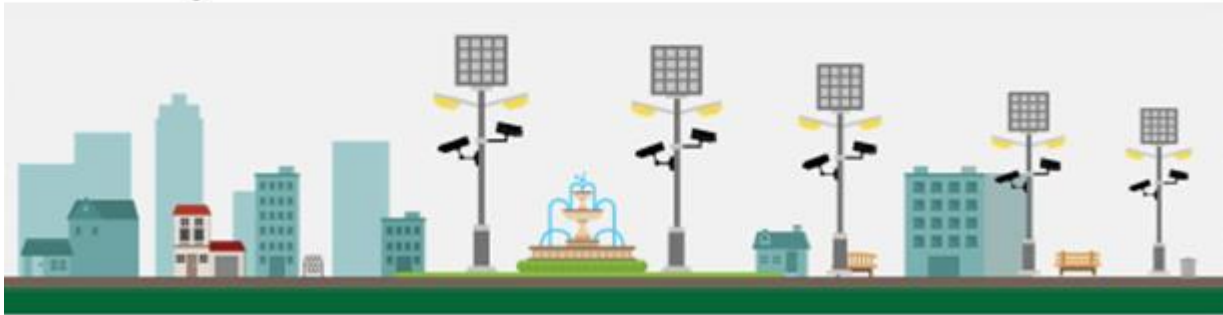


The focus is on sustainable and inclusive development and the idea is to look at compact areas, create a replicable model which will act like a light house to other aspiring cities.

### **3. Project Description**

The aim of the project is to Design, Develop, Implement, Manage, Operations and Maintenance of smart services to improve BSCDCL operation, delivers benefits to citizens and provide seamless integration of smart services & solution inter alia of following;

1. Smart Pole with LED Street light
2. Wi-Fi Services
3. Optical Fibre
4. Surveillance
5. Environmental Sensors
6. EV Charging Points
7. Smart Bill Board
8. SoS Application
9. Mobile Application
10. Central Command & Control Centre
11. Managing the Complete Network



The details of each module is provided in the Scope of Work.

### **4. Scope of Work for the Concessionaire**

- a) The Bidder shall be solely and exclusively responsible to design, implement and maintain on a BOOT (Build, Own, Operate, and Transfer) model the solution as mentioned in this RFP and to provide the services as specified.
- b) The Bidder shall have the exclusive right to use approx.40000 existing street Lighting Poles in BSCDCL area to create infrastructure to enable multiple digital services based on Wi-Fi/2G/3G/4G to be utilized by all/multiple service providers having valid license from Department of Telecom (DoT) on non-discriminatory basis. For this purpose the Bidder will be allowed to lay dedicated optical fiber cable at a depth of 35-60 Cms below the ground where these smart poles are going to be installed. ROW required for the propose shall be provided by Authority to Bidder free of cost as indicated elsewhere in this document.

- c) All existing lights to be converted to LED lights. Arm (LED light brackets) need to be changed. Earthing to be done where ever required.
- d) The area covered by BSCDCL is 440 sq. km.
- e) The Bidder will charge from service provider as per the business model of the Bidder for using these services.
- f) Design, Develop, Implement, Manage, Operations and Maintenance of following services to improve BSCDCL operation and delivers benefits to citizens and provide seamless integration of smart services and solution interalia of following:

#### **4.1. Smart Pole with LED Street light**

- a) Electric streetlights are essential elements of a municipal environment and services. They affect resident sense of safety while influencing a city's ability to create an inviting environment for business and tourism. Unfortunately, outdoor lights are also a major energy draw. Therefore following are desired in designing and implementation of street lightings:
  - Reduce energy consumption, cost, and its maintenance
  - Enhance situational awareness, real-time collaboration, and decision making across city
  - Add intelligent IT innovations to civic utilities, public safety without adding significantly more physical infrastructure
  - Real-time data communications with low latency (or minimal delay), to improve safety and security
- b) For the aforementioned reasons Bidders are requested to carry out a detailed site survey and replace all existing sodium vapor lamp or any other form of lights by LED lights.
- c) Also for achieving the above some of the poles need to be smart street poles which will house the telecom base stations, Wi-Fi, environmental sensor, camera and other related electronics.
- d) The number of smart street poles including digital signage shall not be less than 700. The actual quantity quoted shall be based on the actual site survey to be undertaken by the Bidder before the submission.
- e) Bidder will be responsible to provide space in smart pole with a period of 8 weeks of the placement of demand by Telecom Operators to the Authority at a pre-defined cost. This provision of space in the smart pole shall be non-prohibitory basis. It should be possible to monitor and control the LED lights from a centralized location via an EMS
- f) Bidder shall be responsible to provide the new site for sheltering the Telecom Base Stations with in a period of 8 weeks after all clearances are obtained from the Authority. In the event of non adherence of

the above there will be penalty to Bidder for not adhering to the schedule. Batteries for smart poles needs to be brought by Telecom Operators for these equipment.

- g) The number of smart street poles including digital signage shall not be less than 700. The actual quantity quoted shall be based on the actual site survey to be undertaken by the Bidder before the submission. In addition to the digital signage Bidders also need to provide for 4 feet x 3 feet standard advertisement panel for 9300 Numbers. These panels shall be both sided there by providing 24 sq feet of media for advertisement purpose.

#### **4.2. Wi-Fi Services in 100 Hot Spots identified by BSCDCL**

- a) Hot Spot Wi-Fi serves as the foundation for creating a connected city to access the wireless internet service with ease and convenience. For this purpose BSCDCL has identified 100 Locations within the Municipal limits of Bhopal where these services has to be provided to Citizens. As a part of this initiative free Wi-Fi need to be provided for free Wi-Fi shall be for the first 20 Minutes per Mobile subscriber per day or 50MB per day and an aggregate limit of 200 MB per month whichever is achieved first beyond that it is chargeable. Beyond the above specified limit the Bidder can earn revenue which will be shared on a revenue share model with BSCDCL. For implementing the same the Bidder will carry out survey at these 100 locations and will deploy the access points not less than 1000 Nos or as required for providing the Wi-Fi services. As a part of Wi-Fi solution the Bidder needs to provide e2e like Wi-Fi controller and, DNS, Internet bandwidth from Internet Service Provider (ISP). 1SSID for E governance (for Authority) shall be reserved.
- b) City Wi-Fi Hot Spot also helps cities provide citizens with Internet connectivity and access to a broad range of citywide service which has following benefits:
- More revenue and lower costs from infrastructure management
  - Better city planning and development
  - E-government services delivered to citizens, faster, and at a lower operating expense
  - Local economic development
  - Improved productivity and service
  - Access to city services and Internet connectivity
  - Improved quality of life
  - Increased access to online services

### **4.3. Optical Fiber**

- a) In order to provide better bandwidth to the Wi-Fi users/ providing Backhaul to Telecom operators 48 Core Fiber shall be laid across the city. Fiber shall be laid at a depth of 35-60 cms below the ground level.
- b) For this purpose it is envisaged that at least 500Kms of Fiber would be required to be laid across the city. Out of this 48 Core Fiber 4 fibers would be provided to BSCDCL for its internal purposes (For converging other Governmental Projects). Bidders could use the balance fiber for various applications, earn the revenue through leasing and shall share the revenue with BSCDCL. While laying fiber, Bidders shall use necessary protection material for making the deployment future proof.
- c) After laying the fiber, Bidder shall be responsible for making good the cuts if any made in the road.
- d) Bidder will make available 10% of the optical fibre lines for the use of BSCDCL.

### **4.4. Surveillance**

- a) City Safety and Security solution helps protect cities against crime, terrorism, and civil unrest, planning events, monitoring of infrastructure, encroachments etc. It helps law enforcement monitor public areas, analyze patterns, and track incidents and suspects enabling quicker response.
- b) Keeping the above perspective, BSCDCL for this purpose is intending to implement the Parking Violation through surveillance cameras installed in smart street poles. The cameras should be camouflaged in the smart poles. This camera installed shall capture the wrongly parked vehicles and upon getting information through a telephone call, traffic police shall dispatch the team to pick the wrongly parked vehicles. It shall also be possible to adjust the camera focus from a remote location. Bidder is required to carry out site survey prior to bidding and indicate the number of cameras required for providing this facility.
- c) As a part of surveillance BSCDCL may implement the following attributes at a futuristic time (Not part of this Project):
  - Help for More effective operations
  - Quick response to incidents
  - Increased situational awareness
  - Increased attractiveness to businesses and workers
  - Improved planning and resource allocation
  - Improved communications about incidents

#### **4.5. Environmental Sensors**

Bidders are required to integrate necessary sensors such as environmental sensor for providing air quality, temperature, humidity. These Sensors should be integrated into the smart poles for at least 7% of the total number of smart poles or Minimum of 50 Nos whichever is lesser. These sensors should be integrated in to the smart poles.

#### **4.6. EV Charging Points**

- a) As a part of this project Bidders are required to provide Electronic Vehicle charging points for charging the Electronic Vehicles( Auto Rickshaw and Two wheelers only). For this purpose necessary EV charging points needs to be provide as part of the solution.
- b) The number of EV charging points shall not be less than 50.

#### **4.7. Smart Bill Board: (Interactive digital information panel for traffic and business)**

- a) As a part of the beautification of certain specific locations in the city of Bhopal , Bidders are required to provide smart poles which could house telecom base stations of 2G/3G/4G and WI-FI.
- b) These poles will also house the display for providing advertisement. Revenue earned out of these advertisements shall be shared between BSCDCL and Bidder. BSCDCL shall provide exclusive advertisement rights to Bidder, according to law enforced in Bhopal or MP Advertisement policy.
- c) These sites could provide information about various schemes, policies of Government being implemented for the welfare of citizens of Bhopal. It shall be possible to change the advertisements /Messages in these smart bill boards from a centralized location.
- d) Bidders to consider minimum of 700 locations in the City of Bhopal for providing digital information panel.
- e) In addition to the digital information panel Bidders also need to provide for 4 feet x 3 feet standard advertisement panel for 19000 Numbers. These panels shall be both sided there by providing 24 sq feet of media for advertisement purpose
- f) BSCDCL will have rights for usage of advertisement display boards for a minimum of 10minutes per hour per day. Further, BSCDCL may step in for displaying new/information for public convenience in case of any natural calamity, emergency etc.

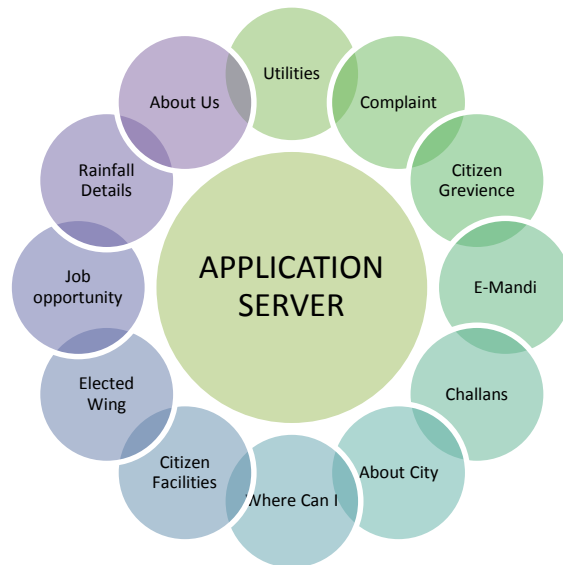
#### **4.8. SOS Application**

- a) In the event of Emergency, distress, citizens could call up the pre-defined support center for getting support. These support centres could be police support centres which could be reached by dialing 100.

This is basically a software application freely available for downloading to citizen with android/iOS/Windows platform.

#### **4.9. Mobile Application**

- a) Bidder is expected to develop Citizen Service and Convenience Mobile application. The application should have the following basic features:
- The Mobile application shall be connected with Google Map with voice based Local language directions (English & Hindi).
  - The mobile application shall work on all Latest versions of Android, iOS, Windows and all other platforms.
  - The application shall be limited to Bhopal city limit only. The application shall be free for download for all users.
  - The Wi-Fi service provider shall not charge for this Government application.
  - In addition to the above following features are desirable:



#### **4.10. Centralized Command and Control Centre**

- a) Bidders are required to provide application software for managing and controlling the LED lights through a controller from a centralized location. The location for Centralized command and control center shall be provided by BSCDCL.

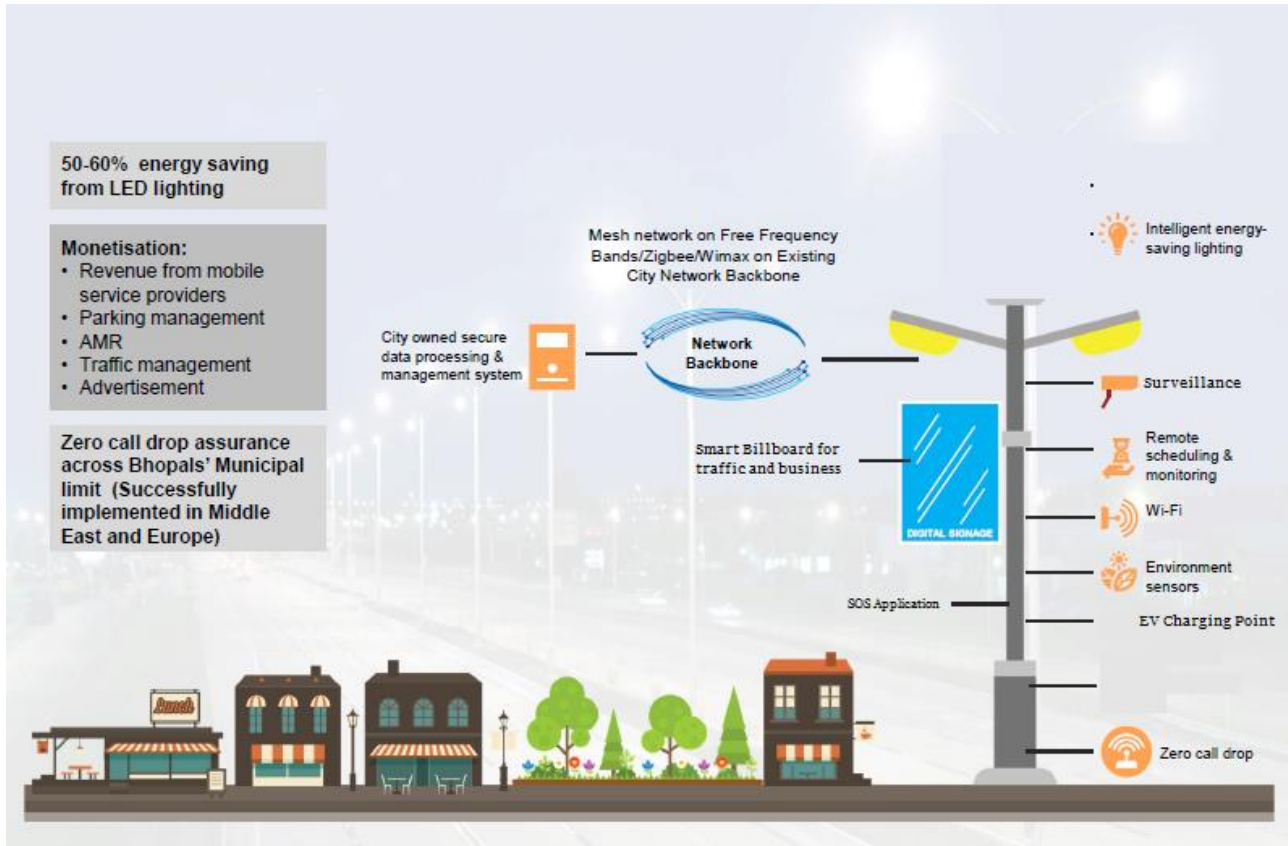
- b) Video Wall, the necessary IT infrastructure and EMS for monitoring the LED street lights needs to be provided as part of this Project.

#### **4.11.Managing the Complete Network**

- a) The complete network as envisaged in this document is managed for period of 15 Years. The Bidders need to quote for the revenue earned from this project and the same needs to be shared between the BSCDCL and Bidder.
- b) Implementation of the Project should be carried out within the period of nine months beyond which the Go live period will commence. Grant as support for capital investment would be paid by Authority upfront for the BoQ which is non-revenue earning.

## 4.12. Solution Architecture

The following picture depicts an indicative solution architecture of the proposed system;



The city of Bhopal has two big lakes which is the source of tourist attraction. The city has rich heritage and has several monuments which are being conserved by Archeological Survey of India (ASI). Further, in order to improve the quality of life for the citizens and to reduce the energy consumption BSCDCL intends to upgrade the existing infrastructure for lighting by LED lights.

These lights shall reduce the energy consumption, hence will reduce the electricity bill that would be saving to the Government. The smart light would be changed in phases. In all there are approx 40,000 street poles which comes under the jurisdiction of Bhopal Municipal Corporation extending over 440 sq kms of area.

Out of these street poles, a few of them are intended to be smart poles which could house all telecom equipment such base station, batteries, digital signages, Wi-Fi, surveillance camera etc. The telecom base stations for new sites shall be installed inside these poles.

As part of the smart city initiative BSCDCL intends providing the citizens at selected 100 locations with free Wi-Fi for 20 min per day subject to a maximum of 50 MB per day or 200 MB per month whichever is earlier.



Beyond the above limit the Bidders could earn revenue and share it with BSCDCL. In addition these street lights could also provide for digital information panel boards which could be source of revenue to be shared with BSCDCL.

These smart poles could house the surveillance camera and would be camouflaged inside the smart pole. These cameras can capture the image of the vehicles which are being wrongly parked in the streets. Upon telephonic call to the police, a traffic police will send the team to pick the vehicle for parking violation. These cameras and video management software required to manage these cameras will be procured as part of some other Project (Smart Convergence Project)

Further, the Government of Madhya Pradesh is committed to provide safety to its citizens. For this purpose special applications for android/iOS/Windows would be developed as a part of this project that could be free downloadable from the play store/App store etc. These applications upon being accessed by user will contact the control room from where support would be extended.

The city is expected to have electronic vehicles to reduce the pollution and reduce the GHG emission. For this purpose Bidders would be expected to provide number of charging station points for charging the electronic vehicles such as 2 wheelers and 3 wheelers only.

In order to improve the quality of life of the citizens, the citizen should be equipped with the latest information on the temperature, humidity etc at selected locations.

The city is moving towards digitalization as part of Smart City initiative and one of the initiative which is being addressed through this RFP is digitization of advertisement. These advertisements would be housed on digital information boards. In addition to the digital signage Bidders also need to provide for 4 feet x 3 feet standard advertisement panel for 19000 Numbers. These panels shall be both sided there by providing 24 sq feet of media for advertisement purpose

Mobile applications are also being envisaged as part of this RFP for providing futuristic functionalities to the citizens. It should be possible to monitor & control the above from a centralized location such as NOC. It should be possible to monitor the LED lights along with control from a centralized location through an EMS “Element Management System”.

## 4.13. Specifications

### 4.13.1. Smart Pole with LED Street light.

#### a) LED Street Lights

#.	Specifications
1	<p>Certification CE</p> <ul style="list-style-type: none"> <li>• Metering: EN 61326-1</li> <li>• Safety: EN 60950-1</li> <li>• Lighting: EN 61000</li> <li>• EMC: ETSI EN 301 489-3</li> <li>• Radio &amp; RF Spectrum Efficiency: ETSI EN 300 220-1</li> <li>• RoHS</li> <li>• R&amp;TTE 1999/5/EC</li> <li>• Applicable FCC Title 47 part 15 classes</li> </ul> <p>The wireless transmission system needs to comply with the European maximum transmission power of 10mW (+10dBm) or 500mW (+27dBm), and a receive sensibility of -110dBm</p> <p>IP 55 (integrated controller, IP68 for external enclosure) and RoHS approved.</p> <p>The system needs to be based on the IETF open standard.</p>
2	Power: 110-280 VAC 50 Hz.
3	Optional backup power for external mounting: NiMh 600mAh battery (with an average 10 years expected life).
4	Intellectual Property: The Bidder's technology needs to own 100% of the solution's IP
5	Low power consumption: The Luminaire Controller should consume less than 2watts.
6	<p>Integrated in the fixture: The Luminaire Controller should be Internal mounting in the fixture. Node dimensions (Max) 110 x 77 x 36 mm (for internal mounting).</p> <p>For the non-integrated option for ad-hoc basis. Dimensions (Max) would then be: 150 x 108 x 55 mm. Operating temperature: -30°C et +70°C.</p> <p>The antenna could be integrated in the fixture (which would reduce the transmission/reception power) or external (TNC/SMA or via an RF coax cable)</p>

#.	Specifications
7	<p>Autonomous clock: The Luminaire Controller must store scheduled ON, OFF and stepless dimming command that it received from the Central Management Software and execute them with the light point.</p> <p>The Luminaire Controller should have an astronomical clock to define lighting schedules based on seasons. Those schedules could be defined from relative and absolute commands.</p> <p>The Luminaire Controller should manage the luminaire even in case of a network outage (i.e. the stored lighting schedule should apply even if the controller can't communicate with the Central Management System).</p>
8	<p>Control of the luminaire and Manual override: The Luminaire Controller must be able to receive and execute real time ON/OFF (via mechanical 8A relay) and stepless dimming commands that it receives from the Central Management Software.</p> <p>The controller's schedule table should support up to 16 programmable commands, in an integrated non-volatile method.</p> <p>A local override port on the controller should be available for future use.</p>
9	<p><b>Stepless dimming: The Luminaire Controller must be capable of dimming an electronic ballast or a LED driver through a DALI, an analog 1-10V dimming interface or digital 0-10VDC PWM dimming. It must be able to execute stepless dimming from 0% to 100%, by step of 1%.</b></p>
10	<p>Communicate using a wireless mesh protocol: The Luminaire Controllers must communicate using a wireless mesh protocol. This protocol should be open, based on the 6LoWPAN standard (802.15.4), with an IPv6 addressing scheme, on the ISM band (433MHz, 868MHz and 915MHz) or any other free band</p>
11	<p>Broadcast communication: The wireless mesh protocol shall support broadcast (one command to target a group of Luminaire Controllers) and unicast (one command sent to a single Luminaire Controller).</p>
12	<p>Integrated in a Smart City environment: The Luminaire Controllers must integrated seamlessly in a Smart City wireless meshed network (a dedicated city-wide network to manage urban connected devices such as meters, waste bins, parking sensors, traffic lights, pollution sensors).</p>
13	<p>Communication specifications: 128bit AES encryption Transmission power &lt; 27dBm</p>

#.	Specifications
	Full duplex communication. Radio modulation: GFSK / GMSK/ 2FSK/ MSK/ OOK/ ASK. Fully meshed wireless, self-configuration and self-healing network.
14	Remote management: The Luminaire Controllers must be controlled and managed remotely.
15	Seamless installation and commissioning: The Luminaire Controllers must integrated seamlessly and automatically to an existing Luminaire Controllers network.  The Luminaire Controllers must communicate seamlessly and automatically with an existing gateway. The Luminaire Controllers must be able to roam between gateways for redundancy and seamless installation purposes.
16	Communication performance: The fully meshed wireless network should support a bandwidth of up to 200Kbps.
17	Detect and report failures: The Luminaire Controllers must be able to detect and report alarms such as: lamp failures, ballast failure, low/high voltage, low/high current, low capacitor, flickering lamps, etc.
18	Measuring electrical values: The Luminaire Controllers must be able to measure mains voltage (RMS), current (RMS), frequency, power factor, active and reactive power, active and reactive energy; in real-time or not, with an accuracy equal or better than 2%.Integrated temperature meter. The load's electrical consumption measurement is up to 1,5kVA
19	Measure cumulated energy consumption: The Luminaire Controller must measure and store the cumulated energy consumption.
20	Measure number of burning hours: The Luminaire Controllers must measure and store the number of lamp burning hours
21	Additional I/O port for future use: The Luminaire Controllers must have at least 2 local I/O programmable ports for future use
<b>Gateway</b>	
1	<p>Certification CE</p> <ul style="list-style-type: none"> <li>• Metering: EN 61326-1,</li> <li>• Health: EN 50385</li> <li>• Safety: EN 60950-1</li> <li>• Lighting: EN 61000</li> <li>• EMC EN 301 489-1, ETSI EN 301 489-3, ETSI EN 301 489-17</li> </ul>

#.	Specifications
	<ul style="list-style-type: none"> <li>• Radio &amp; RF Spectrum Efficiency: ETSI EN 300 220-2 v2.3.1, ETSI EN 300 328, ETSI EN 301 893</li> <li>• RoHS</li> <li>• R&amp;TTE 1999/5/EC</li> <li>• Applicable FCC Title 47 part 15 classes</li> </ul> <p>The narrowband wireless transmission system needs to comply with the European maximum transmission power of 10mW (+10dBm) or 500mW (+27dBm) and a receive sensibility of -98dBm (for the 6LoWPAN 802.15.4 communication standard), as well as 500mW (+27dBm) and a receive sensibility of -119/-115/-107 dBm (for the EN 13757-4 – Wireless M-Bus).</p> <p>The broadband Wi-Fi transmission system needs to comply with the Wi-Fi power transmissions standards: 200mW (+23dBm) – 802.11 a/n/s and 100mW (+20dBm) – 802.11 b/g</p> <p>The system needs to be based on the IETF open standard.</p> <p>IP 40 (integrated gateway) or IP67 (for external enclosure) and RoHS approved.</p>
2	Power: 85-256 VAC 50 Hz.12/24 DC. POE – IEEE 802.3at – 48VDC. Power consumption: 5W max.
3	Intellectual Property: The Bidder's technology needs to own 100% of the solution's IP.
4	<p>Environmental Dimension: 269 x 239 x 82 mm (rugged metal case) or 330 x 204 x 55 mm (anodized metal case)</p> <p>Operating temperature: -30°C et +60°C.</p> <p>Case:</p> <ol style="list-style-type: none"> <li>1) External mounting: IP 67, rugged metal, resistant to oils/greases/fuels, diesel, paraffin/ozone and RoHS approved.</li> <li>2) Internal mounting: IP40 anodized metal.</li> </ol>
5	<p>Wireless fully meshed communication protocol The gateway should be able to communicate in broadband and narrow band networks:</p> <ol style="list-style-type: none"> <li>1) Narrowband networks (IPv6): The open standard 6LoWPAN (802.15.4) IPv6 should be supported on the ISM frequency band (433MHz, 868 MHz and 915MHz).</li> <li>2) Broadband network (IPv4): The following standards should be supported: <ol style="list-style-type: none"> <li>d) Wi-Fi 802.11 a/b/g/n/s standard on the 2.4GHz, 5.4GHz or 5.8GHz frequency bands</li> </ol> </li> </ol>

#.	Specifications
	<p>e) GSM/GPRS/EDGE/UMTS/3G on the 850/900/1800/1900 MHz frequency bands f) RJ-45 10/100Mb base-TX Ethernet port</p> <p>The gateway needs to communicate and route traffic between the different networks automatically and in real-time.</p>
6	<p>Communication performance</p> <p>1) Narrowband network: The fully meshed wireless network should support a bandwidth of up to 200Kbps 2) 2) Broadband network: The fully meshed wireless network should support a bandwidth of up to 300Mbps.</p>
7	<p>Broadcast communication: The wireless mesh protocol shall support broadcast (one command to target a group of Controllers/Nodes) and unicast (one command sent to a single Controller/Nodes).</p>
8	<p>Integrated in a Smart City environment: The gateway must integrated seamlessly in a Smart City wireless meshed network (a dedicated city-wide network to manage urban connected devices such as meters, waste bins, parking sensors, traffic lights, pollution sensors).</p>
9	<p>Remote management: The gateway must be controlled and managed remotely</p>
10	<p>Seamless installation and commissioning:</p> <p>The gateway must integrated seamlessly and automatically to an existing network.</p> <p>The gateway must communicate seamlessly and automatically with an existing gateway.</p> <p>The gateway should support the controllers/nodes roaming feature for redundancy and seamless installation purposes.</p>
12	<p>Maximum number of nodes supported by the gateway:</p> <p>The gateway should be able to at least manage 200 nodes/controllers.</p>
13	<p>Communication specifications:</p> <ul style="list-style-type: none"> <li>• 256bit AES encryption for the broadband communication</li> <li>• 128bit AES encryption for the narrowband communication</li> <li>• Radio modulation: BPSK, DBPSK, QPSK, DQPSK, 16-QAM, 64-QAM, GFSK, FHSS</li> <li>• Full duplex communication.</li> </ul>

#.	Specifications
	<ul style="list-style-type: none"> <li>Fully meshed wireless, self-configuration and self-healing features on the narrowband and the broadband networks</li> </ul>
<b>Central Management Software</b>	
1	Intellectual Property. The Bidder's technology needs to own 100% of the solution's IP.
2	Multi-User Web Application Server The CMS shall be based on an open Web Application Server. Its user interface shall be 100% Web-based and accessible from any computer on the network through a Microsoft Internet Explorer, SAFARI or Chrome web browser
3	Enterprise server The CMS shall be installed on a server that belongs to the organization/customer or to one of our local service or IT sub-contractor.  Cloud-based, SaaS model or any server that is web-hosted by a Bidder of a part of the solution is not accepted.
4	100% Web Interface Web user interfaces shall run and be supported on Microsoft Internet Explorer, SAFARI and Chrome on WINDOWS-based PC and MAC OS.
5	Based on open technologies The CMS must be developed with open and standardized languages including Java, XML configuration files and SQL database. It shall enable the development of additional features without the need to acquire any development software license.
6	Open database engine The CMS shall record all the data in a centralized SQL database and shall be compatible with MYSQL to avoid being obliged to purchase additional software license for database engine.
7	User authentication system The CMS shall enable administrator to create, modify and delete users, passwords, groups and access controls.  The CMS shall automatically close connections after X mns (configurable) of inactivity.  Tiered level access and management.
8	Integrated CMS The CMS shall be an integrated and ready-to-use application that does not require any specific development before being deployed.  The CMS should be a flexible and modular application, supporting the management of any type of Smart City services: a dedicated city-wide central management system to manage all

#.	Specifications
	types of urban connected devices such as meters, waste bins, parking sensors, traffic lights, pollution sensors.
9	<p>Support multiple types of Control Systems, i.e. Gateways The CMS shall manage and communicate with different types of network devices as listed in the previous sections (gateways, nodes )</p> <p>It should also support different heterogeneous Control Systems, including power line systems and wireless systems.</p>
10	<p>Network management The CMS should support and enable:</p> <ul style="list-style-type: none"> <li>• The management of the narrowband networks</li> <li>• The management of the broadband networks</li> <li>• The management of the applications</li> <li>• The management of the networks configurations</li> <li>• The management of the data generated by the nodes and gateways (network data and user data)</li> <li>• The Monitoring and configuration of network objects</li> <li>• The management of the network links and provide link status, link quality and link reporting</li> <li>• Detailed broadband network reporting: wireless transmission power, TCP/IP usage, link utilization,</li> <li>• The management of the network as a whole, with network status and network quality</li> </ul> <p>The CMS should provide automatically or on request, the status and the related critical events of each managed objects. Those critical events could be: wireless link quality, usage of the objects, outages, battery life-time,</p>
11	<p>CMS shall provide a user and object management system The CMS shall provide ways to create user profiles, users and access rights to web applications as well as to groups of objects.</p> <p>The CMS shall manage the objects individually or by groups of objects.</p>
12	<p>CMS shall log all actions The CMS shall log all the actions from all the users.</p> <p>Recording Node and device history (linking network Nodes, lamps/meters, customer accounts) and keeping track of adds, moves or changes</p>
13	<p>CMS shall provide map-based inventory features The CMS shall enable users to group objects per geographical zone, to move objects, to delete objects and to duplicate objects on the maps.</p>



#.	Specifications
	The CMS should display the network topology (objects, links, status) on a map, in a tree format, and other graphical views to ease the management of the network
14	<p>CMS shall support multiple types of objects, enable new attributes to be created and provide inventory import/export features. The CMS shall support Light Points, Segment Controllers, Sensors, Electrical Vehicle Charging Stations, Weather Stations, Energy Meters and other types of objects.</p> <p>It shall enable the import/export of the inventory in a the following formats:</p> <ul style="list-style-type: none"> <li>• standardized CSV formatted file</li> <li>• ODBC and text export</li> <li>• Via the XML server</li> <li>• Via SQL queries into the database.</li> </ul>
15	<p>Configuration of all the parameters of the Gateway and the nodes The CMS shall enable end-users to configure all the parameters of the Gateway and the nodes, including the IP communication parameters, astronomical clock, real time clock, schedulers, Gateway's inputs/outputs and associated scenario, etc.</p> <p>Auto-discovery of the networks' objects.</p>
16	Management and configuration of the services The CMS shall enable the management and configuration of the Smart City services, such as the street lighting, parking spaces, meters
17	Automatic installation process The CMS shall provide end-users with processes and tools to automatically process the installation and configuration of the Nodes.
18	<p>Gateways shall "PUSH" data to CMS The data logs (all data read by the Gateway on the Nodes) generated on the Gateway shall be pushed by Gateways to the CMS rather than pulled by the CMS to provide a higher scalability. The data collect process shall not require any manual operation.</p> <p>The data presented by the CMS (related to the network or the services) should be updated dynamically.</p>
19	Ready-to-use Web Reports The CMS shall provide ready-to-use web reports to analyze failures, energy consumption and lamp age. It shall provide a way to display historical values for any measured attribute of any device in the database.
20	Customized desktop of Web Reports and Applications The CMS shall manage access control depending on the user profile and provide the according list of web reports and applications

#.	Specifications
	on a web desktop. Each application shall display only the geographical zone, devices and data that the user is authorized to access.
21	<p>Alarm management The CMS shall enable the administrator to create complex alarm scenario based on the data collected from the Nodes through the Gateways. Such alarms aim at sending only effective alarms to the right end-user.</p> <p>The CMS shall perform and support the following alarm features:</p> <ul style="list-style-type: none"> <li>• Receiving/capturing successful/unsuccessful readings from any node-connected devices, at scheduled timings/intervals or on demand;</li> <li>• Reporting about alarms and status indicators, tamper/thefts, consumption / usage trends from node-connected devices</li> <li>• Identifying and reporting critical events from Nodes and devices (failures, memory capacity issues, communication link or network failures, power failures,)</li> <li>• Notify of events via <ul style="list-style-type: none"> <li>○ Email and distribution lists</li> <li>○ SMS</li> <li>○ The execution of a process</li> <li>○ An alarm warning on the CMS</li> </ul> </li> </ul>
22	<p>Real-time control on maps The CMS shall enable authorized users to control, command and monitor each objects in real-time. It shall provide instantaneous (less than 20 seconds in average) communication (sending commands and/or receiving data) between the nodes/controllers, the gateways and the CMS.</p> <p>Multi-level network topology hierarchy and map visualization to ease the management of the network and the services,</p>
23	Provide web service interface for 3rd party software to leverage the CMS features The CMS shall provide with XML, API and SQL access as well as a set of web service interface to enable third party authorized software to use the CMS features.
24	Maximum number of managed objects The CMS should be able to support and manage an unlimited number of objects.
25	<p>Backup server and server farms The CMS should have a backup function with a live standby server and automated failover</p> <p>The CMS application and the SQL database should be able to run on different servers, if needed, to manage growth.</p>

#.	Specifications
	The CMS application and the SQL database should be able to run on their respective server farms, if needed, to manage growth.

**b) Smart Poles**

#.	Clause
1	Smart pole should able to meet city aesthetic requirement and it should visual appealing. It should easily blend-in into city light pole master plan.
2	Maximum height requirement is up-to 12 meter.
3	It should be possible to house minimum 3-4 telecom technologies (GSM, WCDMA, LTE and Wi-Fi etc) simultaneously with minimum 2-3 sectors. It should also be possible to support future technologies such as 5G.
4	Site passive infra (space and power) sharing among telecom operators is mandatory requirement.
5	It should be possible to support LED luminaries from reputed OEMs as per city lighting master plan
6	Smart pole should able to support city as well telecom standards for India such as wind speed, climate ,aesthetic etc
7	It should be possible to support both Fiber as well Microwave connectivity for smart pole
8	The maximum allowed diameter (at bottom section) is 250mm
9	All cabling, cooling/heating etc should be via/inside the pole and it should not be visible from outside due to aesthetic and security reasons
10	It should meet EMC requirement of telecom sites as per Indian regulations
11	The minimum power backup requirement is 3.5 hrs for telecom equipment
12	The structure should be free from any passive intermodulation. Passive intermodulation (PIM) value should be < -150 dBc @ 2 x 43 dBm

#.	Clause
13	It should be possible to provide multiple color options as asked by municipality/user as per city light pole colors
14	It should be possible to house radio units with integrated antenna ,MW /optical transmission unit , SMPS (AC to DC convertor) ,batteries ,controllers ,power distribution etc inside the smart pole
15	It should be possible to house telecom equipment's from all reputed OEMs.
16	It should be possible to provide light connection in daisy chain with separate MCB for lighting and telecom part
17	There should be provision to have separate connection for light as well for telecom equipment for maintenance purpose.
18	The camouflaging material for covering the antenna /RF equipment's should be hard material with a minimum life of 10 years
19	The paint material (to cover the RF section ) should complied to RF /Telecom requirements
20	It should be possible to color the complete body (including RF equipment camouflaging) by any paint color
21	The camouflaging material (to cover RF equipment's) should have RF transparency with maximum 0.5db of attenuation covering all the radio frequency bands available in India
22	The cooling/heating equipment's to cool /heat telecom equipment should be integral part of smart pole .Maximum allowable limit for cooling equipment is 100W for cooling solution, efforts should be made to reduce the power consumption as much as possible.
23	The smart pole structure should be IP67 up-to 1 meter height from reference ground level.
24	There should be suitable mounting options for Radio /Antenna unit mounting
25	Hanging of telecom equipment's boxes at bottom level (outside of structure) is not allowed
26	It should be possible to support other societal/smart city applications such as surveillance camera , Wi-Fi by smart telecom light pole

#.	Clause
27	The camera when procured should be integrated inside the light arm and should have feature of night vision
28	The ambient temperature requirement is 0-50 deg
29	The overall power budget for smart pole should not exceed 2KW (telecom + lights)
30	It should be possible to support 1 light arm/2 light arm option by smart pole
31	Underground space (2x2x1M , WxDxH max) should be used for telecom equipment's with suitable telecom grade enclosure box with IP67 protection, size of box not more than 1600x1200x700mm (WxDxH)
32	The smart pole should be preventive maintenance free for minimum 2 years.
33	The minimum life requirement of above smart pole structure is 15 years (metal parts)
34	The Bidder should not use any banned /restricted material as per Indian regulations
35	Pole hat mounting should have suitable option for GPS antenna, small MW antenna (up-to 0.3m diameter).
36	The smart pole should support Environmental sensors

**c) Wi-Fi Services in 100 Hot Spots identified by BSCDCL**

#.	Clause
1	Fully redundant cloud based AAA services to be provided (with OTP/ Password), to support Retail and campus network topologies
2	Full AAA to AAA integration (Radius/Diameter) required to enable international roaming with Wi-Fi operators.
3	Full web based real time NMS system to monitor services working
4	Full capability for EAP/SIM, EAP/AKA etc. Mobile Data Offload to be done with Mobile Operators.

#.	Clause
5	In built NMS to monitor all the network & IT infrastructure against availability, usability & performance
6	To allow BSCDCL to download/ view performance of services utilised by subscribers with key information of Username, MAC, IP, Location, Duration, Upload/ Download & Disconnection reason
7	Multiple templates for Captive Portal which will be selectable by venue owners to customize
8	Multiple payment gateway integration required so subscribers can make the payments using online/ offline mode, including prepaid mobile balance & wallet applications
9	Advertising platform integration -AAA to support advertisements from multiple parties
10	IOS & Android Applications to be given for seamless connectivity to network –auto detect/auto login
11	High speed micro-caching solution integrated to Wi-Fi network to deliver entertainment and content with zero broadband cost to user
12	The content delivery solution should not use internet bandwidth and support minimum of 500 Movies and 1000 songs and provide web/app based interface to download the content with seamless integration with the deployed Wi-Fi Network
13	Bidder should share usage data analytics from all monetization across all SSID's with BSCDCL on a monthly basis
14	Bidder shall offer multiple monetizing of Wi-Fi Services such as: <ul style="list-style-type: none"> <li>a) Online advertising</li> <li>b) Partnership with content developers</li> <li>c) Video sponsorships including high speed downloads (1Gb data in less than 5 minutes)</li> <li>d) Wi-Fi sponsorships</li> <li>e) Mobile data offloading for National and/or International Operators (including iPass, Boingo, Aicent, Comfone etc.) that meet commercial terms.</li> <li>f) Exciting Premium Service offers such as hourly package, monthly package, half yearly packages, family packages etc.</li> <li>g) Other ways to monetize Wi-Fi Service</li> <li>h) Neutral Hosting: Bidder should allow any service provider to provide Wi-Fi service by providing SSID at a pre-define rate in a non-prohibitory manner (till 16 SSID)</li> </ul>

#.	Clause
15	International Roaming Experience: The Bidder shall have tie-ups with the international roaming Wi-Fi Service provider such as iPass, Boingo, Aicent and Comfone etc.
16	1 SSID for e-governance is mandatory
17	Bidder should be able to provide minimum 6 SSID for operator data offload, and can be monetized by Bidder at his discretion and at rates which the Bidder deems fit
18	Bidder shall supply a Connection Manager App (Android & iOS) which the Govt. can distribute to subscribers.
19	<p>Service 1 – Complimentary Service (Free)</p> <p>Passenger will receive free Wi-fi for 20 minutes with maximum download limit of 50 MB per day and an aggregate limit of 200 MB per month. In this Service, the passenger can browse the Internet, social media sites, download text documents and answer emails. The passenger shall not be able to stream/download any video, audio or any high end application. The speed of surfing shall be restricted upto 1 Mbps. The Bidder shall insert advertisement (s) of a maximum duration of 20 seconds per 10 minute of browsing. The secured Wi-Fi service shall be low speed of upto 1Mbps, user-friendly, easily accessible and provide customer service support.</p>
20	<p>Service 2 – Premium Service (Paid)</p> <p>Passenger can avail the Premium Service based on the Wi-Fi Premium service plan. In this service, the passengers can browse the internet, respond to emails as well as download emails, documents, music, movies, any high-speed application and play movie or song without buffering and advertisement. The payment for the plan shall be done online as well as via physical coupons. The speed of surfing shall be 10 mbps. The secure Wi-Fi service shall be high speed, user- friendly, easily accessible and shall provide customer service support</p>
21	<p>The Bidder shall also provide the following services:</p> <ol style="list-style-type: none"> <li data-bbox="293 1587 1377 1661">i. Bidder shall authenticate the passenger before logging-in at Wi-Fi Services as per present regulatory guidelines.</li> <li data-bbox="293 1661 1377 1692">ii. Bidder shall provide the secured pathway for accessing the Wi-Fi.</li> <li data-bbox="293 1692 1377 1724">iii. No malicious contents shall be allowed at Wi-Fi network.</li> <li data-bbox="293 1724 1377 1755">iv. Bidder shall follow the guidelines for providing the public</li> <li data-bbox="293 1755 1377 1791">v. Wi-Fi Service given by government.</li> </ol>

#.	Clause
	vi. Bidder should cover minimum 100 Hotspots by providing at-least 1000 Access points (80/20) IP65 outdoor etc
22	Bidder would be responsible for providing backhaul and internet bandwidth
23	BSCDCL will be responsible only for providing ROW, space and power for deployment

**d) Optical Fiber**

#.	Clause
1	OFC being supplied for the project will adhere to ITU-T G.655 standards for Non-zero dispersion shifted Metal-free unarmoured optical fiber cable conforming to TEC specification GR/OFC-07/02. Jul 2007 or latest and the raw material used in its manufacture will conform to TEC Specification TEC/GR/TX/ORM 01/04 Sep 09 or latest.
2	Technical Specifications of HDPE Pipe. The HDPE pipe will conform to TEC specification GR/CDS - 08/02 Nov 2004 and latest amendments thereof or better. The HDPE pipe used will be of 40 mm outer diameter with minimum wall thickness of 3.5 mm.
3	100% of the network shall be built underground through an appropriate methodology which is non-disruptive, quick to deploy and does not disturb the existing electrical and other cabling installed in the median.
4	100% of the network shall be built underground through Horizontal Direction Drilling (HDD) Method only. The minimum depth shall be maintained at 35 cm to 60 cm for the entire network.
5	Alternate methods like Open Trenching/Aerial Cabling/Moiling/Wall Installations etc. shall be allowed only in exceptional cases like bridges, flyovers, subways, crossings, water bodies, or any location where underground drilling is not possible. Approvals shall be issued by the highest levels of the governing board for these exception requests.
6	Manholes (MH) and Hand Holes (HH) shall be installed at every alternate interval of 250 Meters.



#.	Clause
7	A minimum of 1 Duct shall be installed on all routes. In cases, where more number of ducts are required based upon the commercial prospects, exceptional decisions shall be taken at the time of the occurrence of the event.
8	All the MH and HH shall be pre-fabricated types.
9	A minimum of 1 HDPE PLB Ducts of 40mm Outer Diameter and 33mm Inner Diameter shall be installed on all routes. In cases, where more number of ducts are required based upon the commercial prospects, exceptional decisions shall be taken at the time of the occurrence of the event.
10	In cases of bridge/flyover/culvert etc. crossings, GI Pipes of 200mm Diameter shall only be used.
11	Electronic Route Markers (ERM) shall be installed in each MH/HH for robust records and location detections.
12	For exceptional cases of Open Trenching, minimum depth shall be 0.3 m to 0.4m in median of the street. All the ducts shall be encased in a DWC Pipe of 200mm Outer Diameter.
13	For exceptional cases of Aerial Cabling, 48F ADSS cable shall only be used. Distance between poles shall not be more than 50-60 meters and height of installation shall not be less than 5 meters.
<b>Operation &amp; Maintenance</b>	
14	Periodic maintenance of ducts/Joint Closures (JC)/MH/HH shall be carried out to ensure the upkeep of the buried asset at all times.
15	Fault Repair Teams (FRTs) shall be deployed at every 30-40 KMs of the route length on round the clock basis.
16	Patrollers shall be deployed at every 30 KM interval on 12 hours day time shift basis.
17	KPIs; <ul style="list-style-type: none"> <li>• 5% FTs &lt; 2 Hours</li> <li>• 15% FTs &lt; 4 Hours</li> <li>• 60% FTs &lt; 8 Hours</li> <li>• 15% FTs &lt; 48 Hours</li> <li>• 5% FTs &gt; 48 Hours</li> </ul>

**e) Environmental Sensors**

#.	Clause
1	Environmental sensor should be able to measure Air pressure
2	Environmental sensor should be able to measure Humidity
3	Environmental sensor should be able to measure temperature
4	Environmental sensor should be able to measure Gas

**f) Electronic Vehicle Charging Points**

#.	Clause
1	EV Charging station ports should be able to supply upto 7.2kW
2	There should be no need for drivers to coil up the cord and should have the self-retracting cord management system, ensuring that the cord is always off the ground when not in use
3	It should be Pole mounted
4	It should be rugged and should be of vandal proof construction
5	It should have dual charging port
6	It should have fast charging upto 30 mins
7	It should support input voltage of 200-280V
8	Output DC voltage 32V
9	It should have LCD Display, daylight readable
10	It should have minimum 640x480 resolution
11	It should support 3 languages(English, Hindi, Local language)
12	It should support real time energy management

#.	Clause
13	It should have RFID Card Reader
14	It should support payments via e wallet, Debit card, Credit card and vouchers

**g) Smart Bill Board**

#.	Clause
1	Smart Billboard should be able to house small cell or limited macro main remote telecom sites and site build solution with space for all necessary equipment and functions that radio sites in mobile networks require. This should be self-contained, multi-application intelligent site that is aesthetically unique and functionally viable.
2	Height of smart billboard should be of 9-10 mtr height
3	It should provide Space for telecom equipment, should be able to support 2G, 3G, LTE, Wi-Fi, 5G etc.
4	It should have ability to house power plant and battery
5	It should have provision for incoming power input cables and fiber connectivity
6	It can be Floor or Ground Mounted
7	It should be Vandal Proof
8	It should have display of minimum 60 inch.
10	It should be Aesthetical & Camouflaged finish with respect to environment

**h) Conventional Advertisement panel**

#.	Clause
1	Bidders are required to provide conventional advertisement panel

#.	Clause
2	The Dimension of these panels shall be minimum of 4 feet Vertical x 3 feet Horizontal or vice versa and should be able to sustain high wind speed
3	The total media available on each pole shall not be less than 24 sq feet
4	The material used for these panels shall be galvanized iron and shall not be less than 1 Inch
5	These panels should improve the aesthetics of the city

**i) Central command and control Centre**

#.	Clause
1	<p>Bidders are required to provide application software for managing and controlling the LED lights through a controller from a centralized location located in the NOC. The location for Centralized command and control center shall be provided by BSCDCL.</p> <p>Only the necessary EMS for monitoring the LED street lights needs to be provided as part of this Project.</p>
2	The Bidder shall provide a video projection system based on modular DLP (Digital Light Processing) based high resolution LED based rear projection technology. The VPS will be used to project displays of feed from Cameras Camouflaged in the smart poles. The VPS shall also be able to display Video signals (CCTV/DTH) and other Laptop Computer Feeds. The VPS shall enable users to display inputs from multiple sources/ applications simultaneously in freely resizable and repositionable windows on entire display area to enable effective collaboration and faster decision making. The Bidder shall supply all necessary hardware and software, including panel, multiscreen drivers, adapters and memory to seamlessly integrate the video projection system with the user interface requirements described in the specification.
3	The video projection systems shall be rear projection systems and shall be complete with all projection modules, supporting structures, cooling system and cabling. Design & installation of the video projection systems shall be coordinated with the Employer during project implementation. The VPS controller shall have SNTP Clients for synchronizing its time. A panel matching with VPS panel shall be supplied for installation of VPS Controller as well as Time and Frequency Display System.

#.	Clause
4	<p>The requirements for each modular VPS wall are as follows:</p> <p>Video Projection System (VPS), -70" LED Lit, Full HD resolution with 4 nos. Projection modules along with installation service - Module 2x2</p> <p>The screens shall be capable of displaying full resolution of the source.</p> <p>The configuration of the VPS wall (no. of cubes and size of each cube) is defined in the Bill of Quantity. The height of VPS above the ground level shall be decided during detailed engineering based on the layout of the control room and available clear height</p> <p>The VPS wall should be rugged in nature and shall be designed for 24X7 operational environments Necessary cooling arrangement for VPS shall be provided with the VPS VPS. The air-conditioned environment in the Control room shall be provided by the BSCDCL</p>
5	The VPS shall be designed to prevent dust ingress.
6	VPS wall Management Software shall be provided
7	<p>The Bidder shall provide a video projection system based on modular DLP (Digital Light Processing) based high resolution LED based rear projection technology. The VPS will be used to project displays of feed from Cameras Camouflaged in the smart poles. The VPS shall also be able to display Video signals (CCTV/DTH) and other Laptop Computer Feeds. The VPS shall enable users to display inputs from multiple sources/applications simultaneously in freely resizable and repositionable windows on entire display area to enable effective collaboration and faster decision making. The Bidder shall supply all necessary hardware and software, including panel, multiscreen drivers, adapters and memory to seamlessly integrate the video projection system with the user interface requirements described in the specification.</p>

**j) Mobile and SoS Application**

#.	Clause
1	Viewing and paying utility bills Gas, Water, Electricity etc
2	View complaint status
3	Filing of RTI

#.	Clause
4	Submitting Citizen Grievances
5	Provision of eMandi (market rates of pulses etc)
6	Payment for traffic challans
7	About Bhopal City
8	Finding nearest police station, fire station, post office etc
9	Information about Birth/Death certificate, ration card, voter id etc
10	Online forms
11	Government tenders
12	Government Job Opportunities
13	Citizen Facilities
14	Information about Elected and Admin wing
15	Pollution details
16	SoS toolkit
17	Online Medical Services

**k) Surveillance Camera**

#.	Clause
1	All the cameras proposed shall support Smart coding Technology i.e. Group of Pictures (GOP) control function removes unnecessary information from the frame for realizing

#.	Clause
	efficient encoding, Multi process Noise Reduction and FDF(Frequency Divided Filter) etc. to reduce the network bandwidth and the disk space of recorder.
2	The camera shall be able to setup and stream out atleast four (4) stream of H.264 High profiles simultaneously. Each stream profile can has its own compression, resolution, frame rate and quality independently.
3	The camera shall have Wide Dynamic Range of 133 dB or better
4	The camera shall have Image Cropping (4 Areas) and Picture in Picture Function
5	The camera shall have minimum 8 Region of Interest Areas to retain higher image quality while the excluded area will have a decreased image quality, which enables to use lower image file size and bit rate
6	The PTZ Camera shall have Wide Dynamic Range of 105dB or Better
7	The PTZ camera shall have Tilt Range of $-15^{\circ}$ to $195^{\circ}$ or better with $360^{\circ}$ continuous Panning
8	PTZ Camera shall have Rain Wash Coating, Fog and Sandstorm compensation
9	The camera shall have Full duplex bi-directional audio allows interactive communication between camera site and monitoring site and 3 alarm Inputs.

**1) Bill of Quantity (BOQ)**

Since the entire RFP is based on a BOOT model and minimum indicative quantities has been already indicated, it is imperative for the Bidders to carry out a proper site survey before bidding for the RFP to arrive at the exact BOQ.

#### **4.14.SLA and Penalties**

This section is to be agreed by the Successful Bidder as the Service Levels and key performance indicator for this engagement. The following section reflects the measurements to be used for tracking, monitoring and reporting of performance on a regular basis and imposition of penalties for non-performance as per the terms of this RFP.

The purpose of this section is to define the levels of service which shall be provided by the Bidder to for the duration of the contract. Service Level Agreement (SLA) shall become the part of contract between Client and the Bidder. The Bidder has to comply with Service Levels requirements to ensure adherence to project timelines, quality and availability of services, throughout the period of this contract i.e. during implementation phase of 9 months and for a period of fifteen (15) years, post Go-Live (extendable up to 15 years).

For purposes of the SLA, the definitions and terms as specified in the document along with the following terms shall have the meanings set forth below: “Total Time” - Total number of hours in the quarter being considered for evaluation of SLA performance.

- a) “Total Time” - Total number of hours in the quarter being considered for evaluation of SLA performance.
- b) "Uptime" – Time period for which the specified services/ outcomes are available in the quarter being considered for evaluation of SLA
- c) “Downtime”- Time period for which the specified services/ components/outcomes are available in the quarter being considered for evaluation of SLA
- d) “Scheduled Maintenance Time” : Time period for which the specified services/ components with specified technical and service standards are not available due to scheduled maintenance activity. The Bidder is required to take at least 10 days prior approval from Client for any such activity. This would be allowed in off peak hours- generally from midnight for a maximum of 4 hours and would be granted once in a quarter and exclude festive timings etc.
- e) “Incident” : Any event / abnormalities in the service being rendered, that may lead to disruption in normal operations and services to the end user.
- f) “Response Time” : Time elapsed from the moment an incident is reported in the Helpdesk over phone or by any applicable mode of communication, to the time when a resource is assigned for the resolution of the same.
- g) “Resolution Time” : Time elapsed from the moment incident is reported to Helpdesk either in person or automatically through system, to the time by which the incident is resolved completely and services as promised are restored.



#### 4.14.1. Timeline for Delivery

T=DateofSigningofContract

#	Project Activity	Deliverables	Responsibility	Timelines
1	Supply of Hardware / Software/equipment etc from the date of signing the Contract	<ul style="list-style-type: none"> <li>• Delivery Challan</li> <li>• Invoice Copy</li> <li>• Inspection report from authentic third party</li> <li>• Warranty certificate issued by respective OEMs for each hardware / software (back to back, in the name of Authority also)</li> <li>• License in case of software</li> <li>• MAF</li> </ul>	Bidder	T+20 weeks
2	Installation, Configuration Integration of Hardware/ Software/ systems	<ul style="list-style-type: none"> <li>• Device wise Configuration report stating IP Schema</li> <li>• Routing details</li> <li>• In case of Software, the report should consist of</li> <li>• Software Installation Guide and checklist.</li> <li>• Complete set of Technical/ Operation and Maintenance Manual.</li> <li>• Report formats for approval of Authority UAT/testing report</li> <li>• Helpdesk and SLA compliance report</li> <li>• Configuration change report</li> <li>• Inventory Reports</li> </ul>	Bidder	T+30 weeks
3	UAT and Commissioning of entire system as per scope of work	<ul style="list-style-type: none"> <li>• UAT Report and Successful Commissioning</li> <li>• Certificate/ Rectification activities</li> </ul>	Bidder	T+32
4	Rectifications based on UAT	<ul style="list-style-type: none"> <li>• Test reports and configurations</li> </ul>	Bidder	T+34
5	Go-Live	<ul style="list-style-type: none"> <li>• All project locations working successfully</li> </ul>	Bidder	T+35
6	Operations Satisfactory Phase Working Inspection	<ul style="list-style-type: none"> <li>• Inspection to be done by Authority followed by submission and approval of Satisfactory Working Inspection Report</li> </ul>	Authority	T+36
7	Comprehensive Annual operations period for 15 years	<p>All project locations in working condition (after satisfactory inspection)</p> <ul style="list-style-type: none"> <li>• Quarterly SLA compliance reports</li> <li>• Quarterly Preventive Maintenance reports</li> <li>• Quarterly Configuration change reports</li> <li>• Quarterly location wise Inventory reports</li> </ul>	Bidder	Quarterly after Go-live period

#	Project Activity	Deliverables	Responsibility	Timelines
		<ul style="list-style-type: none"> <li>• Other reports as desired</li> <li>• Quarterly user report- Location wise</li> <li>• Quarterly bandwidth utilization report- Location wise</li> <li>• Quarterly report indicating daily uptime-Location wise</li> <li>• Quarterly user feedback reports- Location wise</li> <li>• Quarterly report user complaint- Location wise showing complaint, complaint time &amp; date, solution given, complaint clear time &amp; date</li> </ul>		

The aforementioned schedule is indicative, however Bidders need to provide an exhaustive work plan in their Bid which would be evaluated during technical evaluation.

#### 4.14.2. Service Level Conditions

##### a) Pre-ImplementationSLAs:

TheseSLAs shall be used to evaluate the timelines for completion of deliverables that are listed in the deliverable. These SLAs for completion of the entire system commissioning till GO LIVE.

For delay of every week in completion & submission of the deliverable mentioned in the section of Deliverables & Timeline, the Bidder would be charged with a penalty as follows:

Delay (Weeks)	Penalty % on the contract value
1 week	1% per week for the undelivered supply/services
For every week thereafter	1% per week for the undelivered supply/services
Maximum for 10 weeks	10% for the undelivered supply/services

In case the Bidder reaches 10% SLA Penalties of the contract value in the form of penalty at any point of time during the duration of pre- implementation phase, Client shall provide relief by correcting timelines by giving a grace period of further 5 weeks. If Bidder fails to set the project schedule right even after the grace period, Client shall reserve the right to invoke the termination clause after following the due Termination Process.

##### b) Post-Implementation SLAs:

These SLAs shall be used to evaluate the performance of the services on weekly basis but penalties would be levied for cumulative performance for the quarter basis.

- a) The SLA parameters shall be measured for each of the sub systems' SLA parameter requirements and measurement methods, through appropriate SLA Measurement tools to be provided by the Bidder and audited by Client for accuracy and reliability. The Bidder would need to configure the SLA Measurement Tools such that all the parameters as defined under SLA matrix given below. Post-implementation SLAs, should be measured and appropriate reports be generated for monitoring the compliance.

#### 4.14.3. SLA for Internet Wi-Fi System

SLA and Penalty Deduction for Wi-Fi systems		
Availability of Wi-Fi on Internet through Access Points (AP) (Per AP Hour)		
Sr.No	Uptime For AP hours	SLA (Quarterly) Penalty values per qtr
1	Uptime up to $\geq 99.9\%$	No Deduction
2	$\geq 99.5\% \ \& \ < 99.9\%$	0.1% of the total value of this component in the Price bid.
3	$\geq 99\% \ \& \ < 99.5\%$	0.2% of the total value of this component in the Price bid.
4	$\geq 98.5\% \ \& \ < 99\%$	0.3% of the total value of this component in the Price bid.
5	$< 98.5\%$	0.9% of the payment due for the quarter for the component

**Note:**

For Internet Wi-Fi System:

- Downtime means non-working/non-availability of APs at all locations. Uptime shall be calculated as  $\{1 - (\text{no. of AP hours not available}) / (\text{Total no. of APs} * \text{Total hrs per quarter})\}$ . For ex, if 600 nos. of APs are deployed at various locations, and 20 AP do not work for 1 hour, the total non-working AP hours will be 20 and the uptime would be  $\{1 - (20 / (600 * 90 * 24))\}$ , 600 being the number of APs, for 90 days on 24 hours basis. This downtime will be used for penalty calculations on quarterly basis and debited from the quarterly payables. The penalties would be levied for every AP down time be it for non-availability of network, theft, damage or non-availability of power etc. because the Bidder is responsible for supply of all enabling components on end-to-end basis.
- Downtime for single AP at any location should not be greater than 12 hours. For every hour beyond this penalty of Rs.1000/- per AP per location would be applicable additional to penalty specify as per SLA and Penalty Deduction for Wi-Fi

#### 4.14.4. SLA for Internet through put

Throughput and Coverage: Minimum throughput and coverage has to 95% of prescribed values of each AP. The throughput will be measured at least 10 times on a random basis in a day by the Authority and it shall be acceptable and binding on the Bidder (Authority is open to Successful Bidders representative accompanying the Authority for such measurements). In case throughput falls below the guaranteed level, Authority will impose the penalty of Rs.1000/- (Rupees one thousand) per instance per location in addition to SLA and Penalty.

#### 4.14.5. SLAs for Environmental sensors, smart street lights with control and other systems such as EV Charging not explicitly covered in specific SLAs SLA and Penalty Deduction – Based on NON availability

#	Uptime SLA (Quarterly)	Penalty Clause
1	Uptime up to 99.9%	No Deduction
2	Between 99.9% to 99.5%	0.1% of the total value of the component in the Price bid.
3	Between 99.5% to 99%	0.2% of the total value of the component in the Price bid.
4	Between 99 % to 98.5%	0.3 % of the total value of the component in the Price bid.
5	Below 98.5%	0.5% of the total value of the component in the Price Bid

#### Note: Uptime definition:

- All devices have to be working and deliver the desired results. The no. of hours that the particular device/equipment does not work will be treated as down time. Uptime shall be calculated as  $\{1 - (\text{no. of hours the unit was not working}) / (\text{Total no. of units available} * \text{Total hr per quarter for that device})\}$ . For ex, if 10 nos. of Sensors for Digital display are deployed at various locations, and 2 device/units does not work for 5 Hrs, the total non-working device hours will be 10 unit hours (and the uptime would be  $\{1 - (10 / (10 * 90 * 24))\}$ , 10 being the number of units, for 90 days on 24 hours basis. This down time will be used for penalty calculation on quarterly basis and debited from the quarterly payables. The penalties would be levied for every unit downtime hour – be it for non-availability of network, theft, damage or non-availability of power etc. because the Bidder is responsible for supply of all enabling components on end to end basis. The same analogy applies to non-working street lights where 1 street light is 1 unit, and likewise for the control room, where 1 display screen is 1 unit, 1 server is 1 unit, 1 storage is 1 unit, 1 router/switch is 1 unit etc.)

#### 4.14.6. SLA and KPI for Optical Fiber

##### 4.14.6.1. MTTR Fiber restoration

Domain	KPI Type	KPI Parameter	Cycle	Performance Indicator	Service Level (Target)
Fiber	Corrective	MTTR for Intra-City Conventional Trenching laid Faults	Monthly	Hrs.	60% within 4Hr, 75 % within 8Hr
Fiber	Corrective	MTTR for Intra-City HDD laid Faults	Monthly	Hrs.	50% within 24Hr, 75% within 36Hr
Fiber	Corrective	MTTR for Aerial laid Faults	Monthly	Hrs.	60% within 4Hr, 75% within 8Hr
Fiber	Permanent Resolution	All Cases	Monthly	Hrs.	≤ 15 days.

##### 4.14.6.2. Fiber Cuts

Domain	KPI Type	KPI Parameter	Performance Indicator	KPI (Target)	
				Metro	Non Metro
Fiber	Fiber Cut	Intra-city Network (Conventional trenching) - Faults / 500 Kms / Month.	Nos.	≤ 14	≤ 12
Fiber	Fiber Cut	Intra-city Network (HDD) - Faults / 500 Kms / Month.	Nos.	≤ 9	≤ 7
Fiber	Fiber Cut	Intra-city Network (Aerial) - Faults / 500 Kms / Month.	Nos.	≤ 18	≤ 18

#### 4.14.7. Other SLAs

Domain	KPI Type	KPI Parameter	Performance Indicator	Target
Fiber	Functional	Compliance to Dark Fiber Monitoring	%	≥ 95%
Fiber	Functional	Compliance to OFC Route Surveillance Schedules.	%	≥ 95%
Fiber	Functional	Compliance to Link Handover and testing (in case of fiber leasing to other Telco's).	Nos.	Within 15 days of receipt of instructions.

#### 4.14.8. Other Penalties

- It is expected that the Bidders should comply with all the Policy/Procedural/ Regulatory Guidelines enforced by Government of India, Government of MP, Department of Science & Technology, Concern Agency, TRAI and other related bodies as on the date of signing the Contract.
- The Bidder should also safeguard the Application Security and Application Integrity.
- Penalty would be applicable for non-compliance of relevant security certifications.
- There would be Zero Tolerance policy against such breaches.
- The penalties across various breaches could be categorized as follows; (this includes but not limited to the following)
  - Information Security Breach: Any data leakage, information sharing, reports sharing without the consent of Concern Agency.
  - Network & System Security Breach: Any instance of hacking, information/data compromise, unauthorized access to public Wi-Fi.
  - Guidelines Breach: Non-compliance to guidelines shared by various government agencies such as complying with standards for website/mobile app development etc.

- For any of the breach for above mentioned category, a penalty would be levied on the Bidder for every instance of occurrence if not responded as per the timelines mentioned in the table below. The response of the same is desired to be provided in the timelines as specified in the table below. The details of the same are given below:

Type	Measurement (Unit)	Response Time (in unit)	Penalty on delay/Unit response w.r.t.
Information Security Breach	Hours	1	Rs.1,00,000/-
Network & System Security Breach	Hours	1	Rs.2,00,000/-
Guidelines Breach	Days	7	Rs.1,00,000/-

- The response time refers to immediate remedial action taken and preventive measures updated by the Bidder on occurrence of the event.
- In case the breaches are not responded to in the time frame as specified, penalties would be levied as per the table above and failing to address the breach in desired timeline, recurring penalties would be levied with respect to delay in units as mentioned. E.g. In case of an Information Security Breach, the Bidder has to respond within 1 hour of the event occurrence. If the Bidder responds in 2:15 hours, a penalty equivalent to 2 hours i.e. Rs. 2, 00,000/- would be imposed on the Bidder.
- In case of more than 5 instances of breach within the project year, Authority reserves the right to invoke the termination clause along with legal action would be initiated for serious offence as decided by Authority.
- Guidelines Breach includes non-compliance to certain guidelines as set by various agencies like DIT, DST etc. In such cases, resolution of the issue is also mandatory. The Bidder would be required to respond with the action plan / change request, as applicable, in order to resolve the guidelines breach with the specified response time.

#### **4.14.9. Manpower Availability**

- The Successful Bidder needs to supply the onsite manpower as per the defined scope of work. The supplied manpower needs to report on day to day basis to Authority.
- The successful Bidder needs to submit duly authorized attendance report along with the quarterly invoice.
- Penalty on non-deployment of required manpower: Rs. 500 per engineer per day on non-reporting or non-deployment of minimum required manpower.

#### 4.14.10. Helpdesk Response and Resolution time

SLA and Penalty Deduction For Helpdesk Response and resolution time		
SrNo	Particulars	Penalty Amount
1	For less than 1% of the calls not getting responded in less than or equal to 3 seconds per quarter	None
2	For every % calls beyond 1%, a penalty of Rs. 1 Lac per % calls or part thereof shall be levied calculated per quarter basis.	Rs. 1 Lacs per Percentage beyond 1%. Maximum penalty of Rs. 10 Lacs per quarter.
3	For Grievances and complaints from users, resolutions provided within 4 hours	No penalty
4	For Grievances/ complaints calls not resolved within 4 hrs for every 1% complaints/Grievances, a penalty will be levied.	Rs. 1 Lacs per Percentage beyond 1%. Maximum penalty of Rs. 10 Lacs per quarter.

#### **Penalties shall not be levied on the Bidder in the following cases:**

- There is a force majeure event effecting the SLA which is beyond the control of the Bidder. Force Majeure events shall be considered in line with the clause mentioned RFP.
- The non-compliance to the SLA has been due to reasons beyond the control of the Bidder.
- Theft cases by default/vandalism would be considered as “beyond the control of Bidder” and will be counted as Force Majeure Condition. However, the Bidders should be taking adequate anti-theft measures, spares strategy, Insurance as required to maintain the desired Required SLA.
- The maximum cumulative penalty that could be imposed on the Bidder for any or all SLA violation post implementation shall not exceed 5% of the revenue realized for the quarter of the year when the incident has occurred.
- The aforementioned penalty shall be the full and final compensation for any SLA violation.

#### 4.14.11. Acceptance Testing and Certification

The primary goal of Acceptance Testing and Certification is to ensure that the Project (including all the project components as discussed in the scope of work) meets



requirements, standards, specifications and performance, by ensuring that the following are associated with clear, quantifiable metrics for accountability:

- Infrastructure (Software, Hardware and Network) Compliance Review
- Availability of the project Services in the defined locations Performance Manageability
- SLA Reporting System
- Project Documentation

The Authority shall establish appropriate processes for notifying the Successful Bidder of any shortcomings from defined requirements at the earliest instance after noticing the same to enable the Successful Bidder to take corrective action. All gaps identified shall be addressed by the Successful Bidder immediately. It is the responsibility of the Successful Bidder to take any corrective action required to remove all shortcomings, before/during the roll out of the project.

The Authority may get the acceptance testing done either on its own or through a third party. It is to be noted that the involvement of the third party for acceptance testing and certification, does not absolve the selected Bidder of his responsibilities to meet SLAs as laid out in this RFP document.

The Authority shall ensure that the Bidder shall get the requisite permissions such as Right of Way (ROW) and all obligations of the Authority are fulfilled before the Acceptance Testing and Certification. Should any Acceptance get held up due to reasons attributable to the Authority, the Bidder shall not be held accountable for such delays or shortfalls on the part of Authority.

The Authority may also get the system audited either on its own or through a third party at any stage to ensure the success of the project.

Such third-party agency for carrying out the acceptance testing and certification of the entire solution shall be nominated by the Authority.

Following discuss the acceptance criteria to be adopted for the project as mentioned above. The list below is indicative and the activities shall include but not be limited to the following:

### **11) Infrastructure Compliance Review**

Audit agency shall perform the Infrastructure Compliance Review to verify the conformity of the Infrastructure (both IT, non IT as well as Network infrastructure) supplied by the Successful Bidder against the requirements and specifications provided in the RFP and/or as proposed in the Bid submitted by the Successful Bidder. Compliance review shall not absolve the Successful Bidder from ensuring that proposed infrastructure meets the SLA requirements.

## **12) Manageability Review**

The agency shall verify the manageability of the solution and its supporting infrastructure deployed using the Enterprise Management System (EMS) proposed by the Successful Bidder. The manageability requirements include requirements such as on line ticket monitoring, remote monitoring, administration, configuration, inventory management, fault identification etc.

## **13) SLA Reporting System**

The Successful Bidder shall design, implement/customize, deploy the Enterprise Management System (EMS) and shall develop any additional tools required to monitor the performance indicators listed as per the SLAs mentioned in the RFP. The Acceptance Testing and Certification agency shall verify the accuracy and completeness of the information captured by the SLA monitoring system implemented by the Successful Bidder and shall certify the same. The EMS deployed for the project, based on SLAs, shall be configured by the Successful Bidder to calculate the payment to be paid by the Authority after deducting the necessary penalties. EMS should be integrated with the toll free call center (established by the Bidder) for site fault reporting.

## **14) Project Documentation**

The Agency shall review the project documents developed by the Successful Bidder including installation, training and administration manuals, version control etc.

Any issues/gaps identified by the Agency, in any of the above areas, shall be addressed to the complete satisfaction of the Department.

## **5. Responsibility of BSCDCL**

Following will be the responsibilities of BSCDCL during the execution of project;

### **a) Fiber**

- Non Exclusive ROW (Right of way) free of cost for laying of fiber will be provided by the Authority within Municipal limits. This right shall be available for the duration of the contract (15 Years).
- The fiber so laid in this ROW can be monetized by the Bidder at his discretion and at rates which the Bidder deems fit.
- Apart from ROW permissions if any other permission is required for lying of fiber then Authority shall be responsible for obtaining the same from relevant authorities.
- While laying the new fiber if any other fiber is cut laid by utility which is already existing in the place where new fiber is being laid then BSCDCL will liaison with the other party to provide a window of eight

hours for rectification during the laying phase and six hours during the maintenance phase. During this period there will be not be any penalty to the Bidder.

- Similarly if any other entity cuts the fiber inadvertently which belonging to Bidder. BSCDCL will get the Bidders fiber rectified back to normalcy with in a period of 8 hours during implantation phase and six hours in the maintenance phase
- After laying the fiber, Bidder shall be responsible for making goof the cuts if any made in the road.
- Authority shall have right to use 10% of the fiber laid (10% of 48 Cores – 5 Fiber Strands) for its own purpose and other Governmental programs

**b) Smart Pole**

- Exclusive ROW, free of cost, for installation of Smart poles for Telecom Cell sites to be provided by the Authority within Municipal limits to the Bidder. This right shall be available for the duration of the contract (15 Years) to the Bidder.
- In order to make Bhopal as a Smart City it is envisaged to reduce the visual pollution and removal of Telecom Sites from Residential Area
- Authority will provide new Telecom site location only in the street Smart Poles envisaged as part of this Project. Authority will also issue necessary Government notifications/by-laws to this effect with a period of 6 months from the date of award of contract.
- In the event Authority fails to adhere to issue the necessary Governmental notification/ by-law, Authority shall compensate the Bidder by an amount as Indicated in the contract by the Bidder

**c) Wi-Fi Access point**

- Exclusive ROW, free of cost, for provisioning of Wi-Fi Services in 100 Locations to be provided by the Authority with in Municipal limits. This right shall be available for the duration of the contract (15 Years)

**d) Advertisement Rights**

- Authority shall provide exclusive advertisement rights to the Bidder to earn revenue out of advertisements, digital signage etc. from the equipment being supplied in this project and which form part of this Project

**e) Coordination Support**

- Authority shall coordinate with other governmental departments if any required for faster implementation of this Project. Such delays shall be excused from Bidders performance without any penalty.

**f) Other Support**

- Authority shall provide warehousing support in Bhopal.
- Authority will provide uninterrupted electricity free of cost to the Bidder for the smart poles, surveillance camera and Wi-Fi access points, cellular base stations, EV charging point, Environmental sensors and any other device which is the part of the RFP. Please note that the purpose of Energy Saving calculations, the electricity consumed for the aforementioned devices shall not be taken in to account.
- In the event of electricity not being made available the same shall not affect the Bidder's SLA and no penalty will be imposed.
- In case there are overhead cables exiting between street lights the same will be made underground by Bhopal Municipal Corporation.

## ANNEXURE 12

### Guidelines of the Department of Disinvestment

No.6/4/2001-DD-II  
Government of India  
Department of Disinvestment

Block 14, CGO Complex  
New Delhi  
Dated 13th July, 2001

#### OFFICE MEMORANDUM

Sub: Guidelines for qualification of Bidders seeking to acquire stakes in Public Sector Enterprises through the process of disinvestment.

Government has examined the issue of framing comprehensive and transparent guidelines defining the criteria for bidders interested in PSE-disinvestment so that the parties selected through competitive bidding could inspire public confidence. Earlier, criteria like net worth, experience etc, used to be prescribed. Based on experience and in consultation with concerned departments. Government has decided to prescribe the following additional criteria for the qualification/disqualification of the parties seeking to acquire stakes in public sector enterprises through disinvestment:

(a) In regard to matters other than the security and integrity of the country, any conviction by a Court of Law or indictment/adverse order by a regulatory authority that casts a doubt on the ability of the bidder to manage the public sector unit when it is disinvested, or which relates to a grave offence would constitute disqualification. Grave offence is defined to be of such a nature that it outrages the moral sense of the community. The decision in regard to the nature of the offence would be taken on case to case basis after considering the facts of the case and relevant legal principles, by the Government of India.

(b) In regard to matters relating to the security and integrity of the country, any charge-sheet by agency of the Government/conviction by a Court of Law for an offence committed by the bidding party or by any sister concern of the bidding party would result in disqualification. The decision in regard to the relationship between the sister concerns would be taken, based on the relevant facts and after examining whether the two concerns are substantially controlled by the same person/persons.

(c) In both (a) and (b), disqualification shall continue for a period that Government deems appropriate.

(d) Any entity, which is disqualified from participating in the disinvestment process, would not be allowed to remain associated with it or get associated merely because it has preferred an appeal against

the order based on which it has been disqualified. The mere pendency of appeal will have no effect on the disqualification.

(e) The disqualification criteria would come into effect immediately and would apply to all bidders for various disinvestment transactions, which have not been completed as yet.

(f) Before disqualifying a concern, a Show Cause Notice why it should not be disqualified would be issued to it and it would be given an opportunity to explain its position.

(g) Henceforth, these criteria will be prescribed in the advertisements seeking Expression of Interest (EOI) from the interested parties. The interested parties would be required to provide the information on the above criteria, along with their Expressions of Interest (EOI). The bidders shall be required to provide with their EOI an undertaking to the effect that no investigation by a regulatory authority is pending against them. In case any investigation is pending against the concern or its sister concern or against its CEO or any of its Directors/Managers/employees, full details of such investigation including the name of the investigating agency, the charge/offence for which the investigation has been launched, name and designation of persons against whom the investigation has been launched and other relevant information should be disclosed, to the satisfaction of the Government. For other criteria also, as similar undertaking shall be obtained along with EOI.

Sd/-

(A.K. Tiwari)

Under Secretary to the Government of India