

A

Project Proposal on

**“Software Development for Emission and Effluent Data Dissemination & Report Generation in
CPCB”**



IT Division

Central Pollution Control Board

Parivesh Bhawan, East Arjun Nagar, Delhi – 1110032

Ver 1.0, 26th February'2015

Tender Document No. : C-12011/33/2015-Tech Serial No.02....

Revision and Signoff Sheet

Change Record

Date	Author	Version	Change reference
09 th January 2015	Aditya Sharma Sc. 'C'	1.0	Initial draft for review/discussion
24 th February 2015	Aditya Sharma Sc. 'C'	1.0	Final Draft Document

Reviewers

Name	Version approved	Position	Date
Sh. A Sudhakar	1.0	IT Division	09 th January'2015
Sh. A Sudhakar	1.0	IT Division	25 th February 2015

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Tender Document No. : C-12011/33/2015-Tech Serial No.02....

1. Important Information and Dates

1	Cost of Tender Document	Download the tender document from CPCB website (www.cpcb.nic.in) and submit to Central Pollution Control Board, Delhi.
2	Tender Issue Date	25.03.2015
4	Last Date of Submission of Tenders	20.04.2015
5	Date of opening of received tenders	21.04.2015 at 3:00pm Tentative shall be confirmed
6	EMD	DD of Rs25,000/- (Rs. Twenty Five Thousand only) drawn in favour of "Central Pollution Control Board, Delhi".
7	Venue	Central Pollution Control Board, 5 th Floor Committee Room, PCP Division, Parivesh Bhawan, East Arjun Nagar, Delhi-32
8	Date of Technical Presentations of the Action Plan (If required)	To be intimated separately
9	Proposal Submission System	a. Technical Proposals along with EMD in one sealed envelope b. Financial Proposals in another Sealed Envelope c. Both Proposals together in a Sealed Envelope
10	Bidding System	a. Technical Qualification b. Financial Qualification

Note: Submit the tender on or before due date and confirm participation at email:

asudhakar.cpcb@nic.in&aditya.cpcb@nic.in.

1. Introduction / Background

With the increase in anthropogenic activities, a large number of pollutants are discharged into the environment in the form of Air Pollution or Water Pollution. It is necessary to have cost effective and accurate pollution monitoring systems with a mechanism for real time data acquisition, handling and dissemination of the pollution parameters for successful pollution mitigation measures as well as safe guarding the public health. The data can also be used to meet various objectives like deriving Indices or Decision Supporting Systems (DSS).

Most of pollution monitoring programs in the recent past are trending towards the development of continuous data collection by online real time analysers and their real time data transmission. Meanwhile, CPCB issued directions to SPCBs/PCCs to in turn direct more than 3,000 units falling under 17 categories of highly polluting industries to install real-time emission and effluent monitoring systems and transmit online data to SPCB/PCCs and CPCB on or before 31 March, 2015.

Installation and operation of Real-time air/ water/ emission/ effluent/ noise monitoring systems is a challenging task. Most of the equipment and instruments used in monitoring are imported and the supporting software is patented by foreign organizations. There are number of manufacturers supplying instrumentation operating on different principles and the software suitable exclusively to the equipment supplied by them.

In view of existing heterogeneous systems in the country, CPCB opted for a bigger challenge of accepting the systems supplied by reputed manufacturers from World over. It could have been easy to opt for one single vendor or technology based products in the country. But, it has been observed that such monopolistic approach leads to inefficiency and collusion. The fair practices are also compromised. Hence, Central Board worked on a modified Public Private Partnership (PPP) model with the help of Polluters pay Principle.

The Central Board asked all major instruments' suppliers to install their **Central Servers of Instrument Suppliers herein referred as CS(IS)** along-with data processing systems at CPCB and SPCB/PCCs where presently data is being collected. These CS(IS) are responsible for data receiving, data verification, etc. The data is being collected at SPCBs/PCCs & CPCB simultaneously.

SPCBs/PCCs are validating data and forwarding validated data at CS(IS) installed at CPCB. CS(IS) at CPCB has raw as well as final (validated) databases. The CS(IS) are working as back end server & performing tamper-proof system checks with two way communication mechanism.

Now, it is proposed to develop a software which can collect data from all CS(IS) at CPCB. The proposed software will be installed in NIC domain with data connectivity from all CS(IS). Data and reports will be disseminated through a web portal. The **Proposed Software herein referred as PS** will have to be installed at Virtual Machine on cloud server in NIC domain. Data in the **PS** needs validation mechanism, so that final database could be generated at CPCB end and the database could be used as National Database.

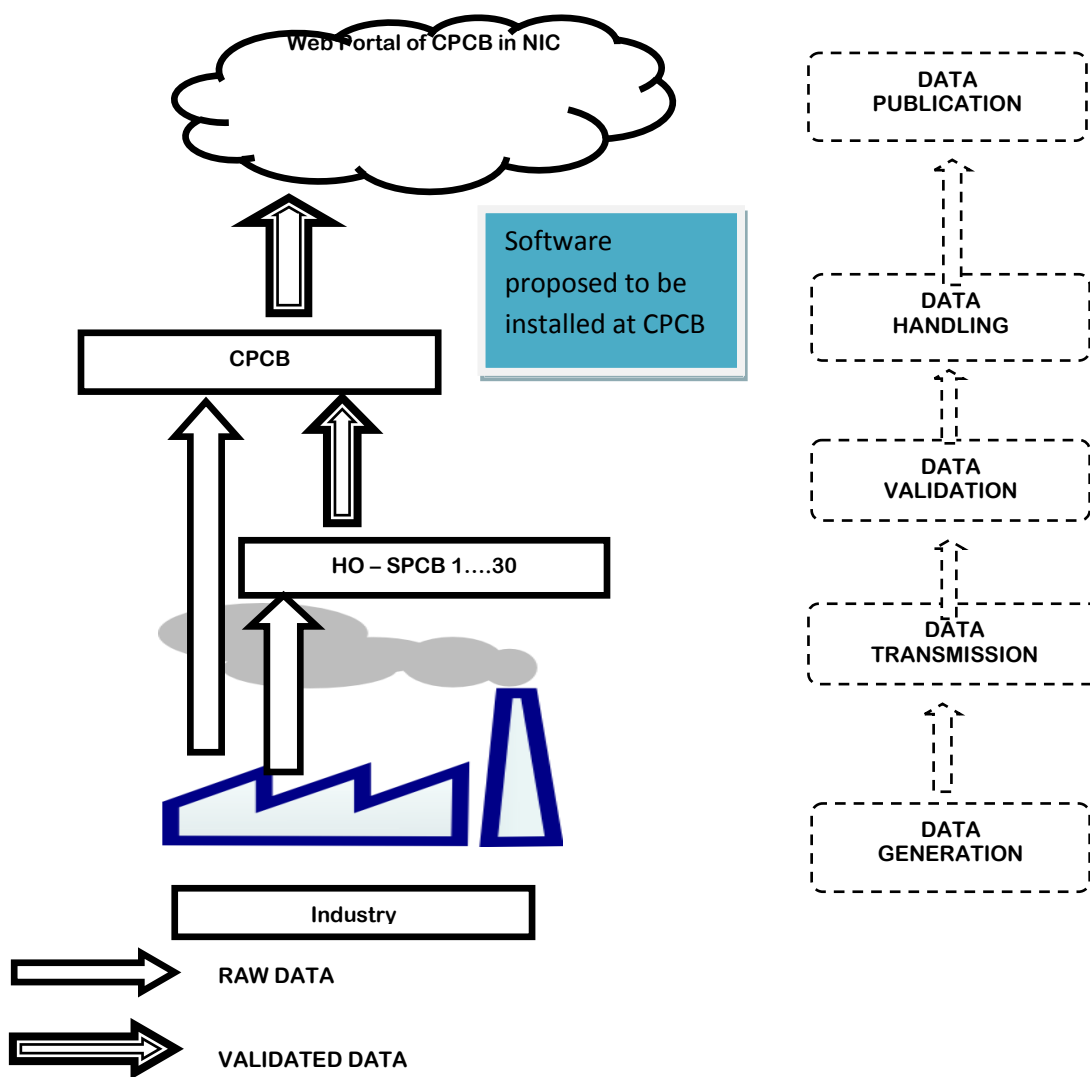


Figure 1: Schematic presentation of Data flow

PS needs to create a table of limits prescribed for each industry for different parameters with different timescales. The system has to generate alarms on exceedance of limits of a specific parameter for a given period of time.

The proposed system should provide different types of reports based on finished data. These reports shall contain various tables, graphs, texts, formulae, etc. using standard statistical tools. It will include Mean, Mode, Median, Daily, Yearly, Monthly, Diurnal variation etc. The Schematic representation of the data flow is shown in Figure 1.

2. Objectives

The overall objectives of the Project are:

- ✓ To develop a software application to collect data from all CS(IS) installed in CPCB by various firms presently 08 nos. (likely to increase) with a modular approach so that connecting new CS(IS) can be done easily by CPCB itself.
- ✓ The PS system should become a tool of data collection on real time basis from ambient air, emission, effluent monitoring systems.
- ✓ To develop an automatic system of data transmission, capable of connecting any server immediately using a common protocol as and when a new server is introduced.
- ✓ To develop a standard data verification mechanism.
- ✓ To provide window for data correction at CPCB.
- ✓ To input standards given to each category of industry for different parameters against which exceedances are computed and alarms be generated. The data input procedure should be simple.
- ✓ To generate 20 types of reports through which data needs to be disseminated in tabular, graphical formats using statistical tools.
- ✓ To provide query based system for generating reports by extracting the required/selected data.
- ✓ To develop a mobile based application through which data shall be visible on Android, windows and IOS based mobile phones.

3. Scope of Work

The major component of the project is the continuous collection and transmission of online real-time data from all CS(IS). It includes validation of received data, dissemination of data at NIC domain without human intervention and without delay. It requires tracking of delay in data transfer from

CS(IS). The Uniform protocol software will display the data on Google maps using Google services. Meaningful filters have to be developed so that data is filtered logically to draw valid conclusions of the data.

4. Project Tasks:

In order to efficiently collect the data without human intervention from CS(IS) and its transmission in NIC domain, the major tasks involved are:

- A. Development of software capable of collecting real time data within a period of **THREE MONTHS** from the date of final letter of award. First Prototype should be submitted within stipulated time and thereafter *three iterations* should be accepted for modification of software before finalization.
- B. Since, data collection is to be done from more than 3000 industries having many number of stacks (i.e. >5 stacks) and each stack having about 08 parameters, a fast and parallel processing is required.
- C. Verification of data collected and correction in the data before dissemination.
- D. To collect, collate and disseminate the data in unified formats.
- E. To generate reports (20 formats to be decided later).
- F. To provide audit certificate from CERT-in Empanelled firms within three months and host the system in NIC domain.
- G. To deploy the software with remote backup procedure etc. at NIC end.
- H. To provide training to CPCB officials (two) officials for five days for operating the proposed system software and integrating new industries, parameter channels etc.
- I. To maintain the system for three years (01yr warranty+ 02 yr Maintaining including development) by remote assistance.
- J. Keeping server software upto date.
- K. Daily backup and storage of data to be done automatically.
- L. Mechanism of calculating penalty in case of non-availability of data as defined in the document under section -**Penalty**.
- M. Mechanism of delayed data entries reports on real time basis. The mechanism should provide weekly reports of data entry delayed in the system automatically. These reports will be scrutinized for arriving at penalties as mentioned at section 7.
- N. Weekly reports will be submitted regarding th performance of the software designed outputs.

5. System Requirement Specifications

System has to integrate the data in Relational Database Management System (RDBMS). The system should be capable to acquire the data on real time basis and should report if delay occurs. It should also be capable to compare the parameter values with respect to prescribed standards alongwith daily/ weekly/monthly/ Yearly report periodic generation.

The data collected from different servers belongs to different states. Hence, state-wise data filtration is required. The data may further be filtered based on specific parameter on Google maps. Various modalities will be finalized at the time of actual development.

The firm will discuss the project requirements with CPCB officials and prepare SRS for the project. The SRS will be accepted by CPCB IT Division and firm will start writing code. The firm will provide Proto type and IT Division will analyse and provide its feedback. There will be three iterations for which firm will provide the change in source code without any additional cost. The firm will make final presentation before the CPCB Committee and Competent Authority, CPCB. Suggestions made by Committee or Authority will have to be incorporated by the firm and the system will be made GO LIVE! in NIC domain. NIC domain will be procured by CPCB team.

5.1 Data Acquisition & Availability

- a. Integration of data from existing servers (08 as on date and likely to increase to 20) having data from 300 locations using webservices based software development. The number of locations are likely to rise to the level of 3000 in the coming months.
- b. Providing dashboard based on type of data like a Statistical summary report on air quality, water quality, emission data etc.
- c. Configuring each parameter with every station in RDBMS.
- d. Configuring each station and each channel on Google maps.
- e. Developing 20 reports.
- f. Providing 95% data availability on real time basis, if the connectivity in between CS(IS) & VM is continuous.
- g. Communication with respective agencies involved in the monitoring and getting the connectivity & Configuration issues resolved.

5.2 Integration of New Stations

Installation of new stations and new servers is a continuous process. Different make instruments get installed at different locations in the country and similarly different Instrument Suppliers

place their servers at CPCB where data from these locations is made available on CS (IS). Data collection, transmission and dissemination from all such locations after reaching CS(IS) has to be managed through out the year.

The integration would mean deploying plug-in to capture the data from CS(IS) at CPCB and integrate data into database and display at specific longitude and latitude. The process will be continued through-out the year.

5.3 Deployment of system over dynamic Maps

- a. Google services have to be used for the purpose.

5.4 New Pages Development

- a. Since the system is still evolving there are requirements all the time to develop output in different formats. Hence, development of such ten web pages in each year (total 30 web pages) is anticipated.

5.5 Manpower Deliverables

- a. As and when required a programmer should be made available during three years of contract.
- b. Programmer should be capable to operate and create new pages in the system as per requirements of CPCB from time to time.
- c. The assistance through remote and over phone should be available on all week days (Monday to Friday 9 am to 6pm).

5.6 Intermediate Software required for data transmission if any

- a. Any intermediate software required for data transmission from these CS(IS) to central server at VM has to be provided by the firm.
- b. Presently CPCB is transferring data through SFTP for which software called SYSAX MultiServer is being used in NIC domain. The same can be utilized if found suitable.

6. CPCB Deliverables

- a. Working space to the Programmer.
- b. Access to IT Division during working hours.
- c. Procurement of NIC domain for hosting application
- d. Remote access of database/application.

7. Penalties:

a. Delay in completion of Project beyond the deadline of **THREEMONTHS**.

Penalty of Rs. 5000/- per week from the target date.

b. Non availability of data:

(i) *At any given remote station, programmed channels data is available and-If connectivity in between station computer at remote location and server at CPCB/NIC exists **but data is either not displayed or delayed by more than four hours at Server side web software**, then penalty calculation will be:*

*Penalty amount in Rupees = Number of channels (data not displayed or delayed by more than 04 hours) * Rs. 10 (ten rupees only) at all the stations connected in the portal.*

If data from 5% of channels connected with system at any point of time is not available, no penalty will be imposed at any point of scrutiny.

But if non availability of data exceeds 5% of number of channels connected in the system at any point of time, then penalty on number of channels exceeding 5%(of total channels connected) will attract penalty at a rate of Rs. 10/- per channel/parameter subject to a minimum penalty of Rs. 500/- per scrutiny.

Channel means any pollution parameter measured at monitoring location. Calculated parameter will also be considered as a channel. The CPCB has the right to deduct penalty from the running bills of the firm without notice.

c. Breakdown of system

i) *In case the system breaks down and software has stopped functioning (i.e. no output available on web site marked for the system) the same should be made functional within **maximum 8 (eight) hours of time** (for which no separate communication will be made from CPCB side) else penalty of Rs. 500/- every day (number of working days) will be levied on the firm and the Board shall have the right to deduct the same from the running bills of the firm.*

ii) *In case the system throws error messages on website and data is not displayed or wrong data are displayed on web site marked for the system, the same should be corrected within **eight hours time (08 hrs.)** (for which separate communication shall be made by CPCB with error message's snapshots) else penalty of Rs. 100/- (One hundred rupees only) per error message shall be imposed on per day basis.*

d. *Development of New pages and inclusion of new stations*

i) *Work assigned for new pages development or inclusion of new stations into the software will also attract penalty of Rs. 50/- per day separately, if not completed in time frame mutually agreed in writing in between CPCB and the firm.*

e. *Maximum Penalty applicable:*

The total penalties amount inclusive of all penalties shall not be more than 25% of the yearly contract value. If penalties amount happens to be more than 25% of yearly contract value, then CPCB shall have the right to terminate the contract and shall deduct the maximum of 25% amount of yearly contract value and release the balance payment to the firm.

8. Mode of Payments

- a. **Milestone 1:** 50% of Total project cost shall be released after third iteration (End of third month) and after GO LIVE!.
- b. **Milestone 2:** 15% of total project cost shall be released after 12 months from the date of GO LIVE!.
- c. **Milestone 3:** 15% of total project cost shall be released after 24 months from the date of GO LIVE!.
- d. **Milestone 4:** 20% of total project cost shall be released after 36 months from the date of GO LIVE!.

Any payment to be released under the project will be subject to following conditions:

- (i) Submission of final bill in triplicate,
- (ii) Submission of source code in soft copies
- (iii) Submission of two hard copies of software manual required for all its functionalities like installation of new server, installation of new channels, display at web page, connecting database with locations etc.
- (iv) Certification from IT Division verifying that system is functional.
- (v) Penalty if any shall be deducted from the payments without notice.

No advance payment of any nature will be paid. Cost of the project work should be clearly mentioned by the firm. The Cost should be inclusive of all taxes etc. However, taxes should be clearly mentioned in the financial proposal submitted by the firm to CPCB.

9. Exclusions

- a. Up-gradation of the infrastructure like hardware required for the operation of software, for which firm will provide proper justification with logical support.

- b. Failures and consequent data loss arised due to external factors.

10. Communication Methodology

Communication / Escalation Matrix for firm's Support Team: Level	Designation	Name	Email id	Contact no.
Complaint Registration	Support Desk	Firm's Desk		
<i>New web pages development / New Stations inclusion work</i>	<i>CPCB will organise meeting at CPCB to be attended by firms senior members and decisions are abiding to the firm in writing</i>			
Level 1	Team Lead			
Level 2	Project Manager			
Level 3	Sr. Manager if any			

The CPCB shall communicate issues over email and the firm is responsible to respond within three hours on any working day.

11. Terms and Conditions

A. Technical Terms and Conditions

- The server of system has been placed at Software Technology Parks of India, NICS I Shastri Park Data Centre, firm shall be responsible to provide software support on remote.
- Efforts have to be made by the firm to get the continuous data in the system.
- Responsibility lies with the firm for data availability from CS(IS) to VM and necessary co-ordination has to be made by the firm.
- The firm will diagnose the problem with reference to the incident registered through email except the data availability where software should have auto mechanism of calculation.
- In case of any bug / error in the existing functionalities the firm will provide resolution.

- f. The support Team should define the time required to resolve the incident & communicate the same to the contact person of **CPCB** through email.
- g. Once the incident is resolved an email statement for the same would be initiated by the firm & the incident be considered closed after acknowledged by **CPCB**.
- h. In case **CPCB** does not acknowledge within 2 working days then the incident would be considered as closed.
- i. In case of new functionality requirement, it should be communicated in writing through mail and the firm shall respond within two working days along with the roadmap of time estimate.
- j. There will be no additional Change Request management.
- k. The contract may be terminated any time, if CPCB desires to do so without assigning any reason with 15 days' notice to the firm in writing.
- l. The contract can be renewed only upon written request by the firm to continue the contract on mutually agreed terms and conditions in future.
- m. The firm will sign the standard agreement comprising this Contract document.
- n. The decision of Chairman, Central Board will be final and binding on both the parties.
- o. The software system / code developed shall become the property of CPCB and CPCB is free to replicate, reproduce, multiply or distribute and deploy the software at any other location. The CPCB will hold all the copyrights and IPR of the written code.
- p. It is expected that at least two members team will work on the project. The educational qualification and work experience of team members should essentially be:

Team Member 1: B.Tech., IT with at least two years of experience in the software development.

Team Member 2: B.Tech., IT/M.Sc. IT or equivalent with at least two years experience in software development.

The firm may propose bigger team with higher qualification mentioned above, as per their work requirement understanding.

B. Other Terms and Conditions

- a. The contract period will be for three years from the date of signing agreement.
- b. The quoted rates should be applicable for next threeyears.
- c. The rates quoted shall not change for the duration of threeyears.
- d. CPCB shall award the complete work to the lowest quotee on total value basis.
- e. The firm should quote in all works listed in the commercial document, otherwise bid will be disqualified / rejected.
- f. *There will be a team formed at CPCB IT Division to crosscheck the data availability, assessing the performance of the firm. This team will cross verify the data availability, new work*

assignment progress and any other related issue and shall communicate to the firm in writing. This team will also calculate the penalty as per mentioned clauses and recommend the amount of penalties considering all related issues of the software and other station related issues. The firm shall communicate with the team and should clarify each issue time to time.

- g. If there is no running bill pending the firm is liable to pay the penalty amount levied by CPCB on the firm as per penalty clauses of this document within 15 days time after the issue of the letter by CPCB to the firm else the CPCB shall have the right to take legal action against the firm.*

12. Eligibility Criteria and Selection Criteria

A. Eligibility Criteria

The software consultants/firms should fulfill the following criteria and submit the related documents:

- a. Must be in operation from last three years with software development skills. Firm must be registered and a copy of the registration document must be attached with the proposal.
- b. Firm should not have been blacklisted by any Government Agency. Self declaration should be attached.
- c. Firm should provide the customer list containing at-least two clients in Govt. /PSU /Semi Govt. Sector. The name, address, telephone of officials concerned, work award letter showing details (date of award, cost of project, project completion details, work details highlighted as desired only) should be enclosed.
- d. Firm should have a valid ISO certification for software development/IT enabled services/ data management of process industries. The firms having SEI-CMM level 3 certificate shall be preferred.
- e. Firm should have at least 05 (five) software professionals engaged in various software development activities. Provide names, address, mobile, designation and serving period in the firm.
- f. Firm should have turnover of at-least 25 Lakhs each year over the last two financial years (2012-13 & 2013-14) from software development and related specialized areas as mentioned in document.
- g. Balance sheets attested for each year specifically highlighting the related work revenue details for last two years.
- h. Fields in which firms should have worked are
 - i.1 Have developed operational software implementing communication protocols like http, ftp etc. and thereby making real time data available from different locations and its web display using maps with mathematical analytics

Or

i.2 Having developed software for data communication without human intervention with web display using maps with mathematical analytics

Or

i.3 Have developed ERP kind of software through which maintained activities of another institution or firm with web portal display & mathematical analytics

Or

i.4 Have integrated GPRS/GSM tracking systems to manage data availability at a specific location and displayed it through web display using maps with mathematical analytics

Or

i.5 Have developed software systems using SCADA by integrating measuring parameters desired and data transmitted to a central location for web display using maps with mathematical analytics.

Note: The system should have been developed using standard practices of software engineering: Feasibility study, Software Requirement Study, System analysis, System Design, Prototype product development, Testing, Implementation, Maintenance, Review.

- i. The firm must have its office in Delhi or NCR region. A document to this effect should be enclosed.

The bid of firms not providing details clearly and not submitting all the documents mentioned above will be considered as non responsive and firm shall be disqualified.

B. Selection Criteria

The software consultants/firms selection criteria is as follows:

- a. The firm has to qualify in mentioned eligibility criteria.
- b. The firms having similar system operating in CPCB where data acquisition and transmission from real time systems is being carried out will be preferred.
- c. On qualifying Eligibility Criteria, firm has to demonstrate the technical skills through presentation at CPCB. The technical eligibility and Technical presentation criteria are mentioned in table 1 and table 2.

Table 1: Technical eligibility

Sl. No.	Criteria	Parameter	Marks	Max. Marks	Score (Total 80)
1.	Specific Work Experience Firm should have developed software where real time data acquisition, integration, dissemination has been done using a. Software development Protocol based/ b. web development with statistical tools/ c. ERP based/ d. GPRS/GSM based / e. SCADA based	Upto2 nos.	5	15	
		2-5 nos.	10		
		>5 nos.	15		
2	Firm operating similar systems of collecting data from real time systems and transmitting	System operational as on date	20	20	
3	Salient features of software developed in the identified fields by the firm	s/w containing live data management	5	15	
		s/w containing live data management including statistical data analysis tool	10		
		s/w containing live data management including statistical data analysis tool and remote functions management	15		
4	Overall Response Understanding of scope, objectives and completeness of response; Overall concord between CPCB requirement and the proposal	Understanding the work/ scope proposed partially	5	10	
		Understanding is complete with Clear targets	10		
5.	Turnover Bidder should have annual turnover of INR 25 Lacs or more towards software development / Maintaining of software / Other related works as mentioned above. Verifying documents should	Min. 25 lacs	5	10	
		25 lacs - 2 crore	7		
		> 2 Core	10		

	be attached.				
6	Proposed Team Team Leader and Team Relevant experience, qualifications, Skills & responsibilities.	2 team memberswith at least two years experience each.	5	10	
		3 team memberswith more than two years experience each.	7		
		4 team memberswith more than three years of experience each.	10		
Sub Total (1)					

Table 2: Technical Presentation Criteria

S No.	Parameter	Max. Marks	Score (Total 20)
Name of the Company			
•	Understanding the task & approach	5	
•	Methodology	5	
•	Experience of the Key personnel proposed in the project	5	
•	Time management for completion of project	5	
Sub total (2)			
Total (1+2)			

- d. All firms meeting eligibility criteria will be called for technical presentations. Based on technical evaluation criteria, firms meeting the Benchmarks will be listed. The technical evaluation committee will decide the benchmark, the minimum qualifying marks. The financial bids of the technically qualified firms will be opened to determine the lowest bidder for awarding the work.
- e. On receipt of work award, firm has to submit the Agreement copy along-with Bank Guarantee of **10% (Ten percent) of total contract value** (Final Offer) mentioned by the firm in **Commercial proposal** submitted to CPCB within 07 days time. BG should be valid for a period of **42 (Forty Two) months**.
- f. If lowest bidder fails to submit the BG within stipulated time, the bid of the lowest bidder will be considered as non responsive.
- g. The firms are advised to attach one page summary of salient features for evaluating software developed by them as mentioned in technical eligibility in table 1, Sl. No. 3.

13. Commercial Proposal

Items	Cost including taxes(INR)	Tax Details(INR)
<p>A) Development of software and maintaining it for a period of three years from GO LIVE!</p> <ol style="list-style-type: none"> 1. SRS preparation by firm. 2. Development & coding of software till III iteration. 3. Deployment of software on Google map. 4. Integration and configuration of 50,000 channels during three years project duration. 5. Deployment of manpower for configuration of channels during entire project duration. 6. Software audit before deployment. 7. Development of 20 Report formats. 8. Development of thirty Web Pages (10/year). 9. Training of one week through experts in software development of project at CPCB. 10. Maintaining and configuring system for three years including one year warranty. 		
<p>B) Rate for Development of one Web Page (Other than stipulated 10 web pages/year) if required to be developed.</p>		
<p>C) Rate for Development of one dynamic Report (Other than 20 stipulated) for online display using database if required to be developed.</p>		
<p>D) Cost of Audit, subsequently after initial deployment within project duration if required.</p>		
<p>E) Rate of 5000 (five thousand) channels Integration & Configuration exceeding stipulated 50000 channels during project duration, if required.</p>		
<p>Final Offer (A+B+C+D+E)</p>		

Tax rates shall be governed as per Govt. of India rules.

Signature and Seal of Representative of the firm

14. Agreement

Agreement below is to be submitted by the Consultant after issue of letter of Intent by CPCB within 07(Seven) days.

AGREEMENT

An agreement is made on the _____ day of _____ 2015 between Central Pollution Control Board, 'Parivesh Bhawan', East Arjun Nagar, CBD-cum-Office Complex, Delhi-32 (herein referred to as the 'Board' which expression shall unless repugnant to the context or meaning thereof be deemed to include their successor and /or assignee) of the other part.

WHEREAS the party of the first part is a statutory body, created and established under an act of the parliament known as Water (Prevention & Control of Pollution) Act,1974 and the rules framed thereunder. Member Secretary of the Board is authorized person to sign the agreement on behalf of the Board.

AND WHEREAS the main objective of the board is to control the pollution of water and air at the same time take such measures as may be necessary to prevent pollution of water and air. One of the functions of the Board is to disseminate the information.

AND WHEREAS the Board, in pursuance of its objective and to carry out the functions, with regard to dissemination of information on environmental aspects, it is essential that all the relevant data are collected, collated and compiled in such way that these could be retrieved quickly and easily. In order to have effective implementation, Board has decided to develop a software related to Emission & Effluent data dissemination & report generation in CPCB, amounting to Rs. _____
_____ (.....Rupees only).

AND WHEREAS the party of the second part is a consultant M/s _____.

AND WHEREAS the consultants has approached the Board for the execution of the said work and have agreed to conduct and complete the work on the terms and conditions specified and agreed to between the parties hereto and as contained hereinafter.

AND NOW THEREFORE in consideration of the terms and mutual consent hereinafter mentioned, the parties hereby agree as follows:

1. DEFINITIONS

- i. Agreement means this agreement and all appendices, annexure attached, work order, and subsequent amendment, modifications and additions directed by the Board to be carried out, provided that such directions are given by the Board.
- ii. 'Work' means the total work to be conducted and completed by the consultant as specified in details in the scope of work.
- iii. The Board means the Central Pollution Control Board includes its Member Secretary and any other officials authorized to act and on behalf of the Board by the Member Secretary.
- iv. The consultant means M/s _____
_____.

2. OBLIGATIONS OF BOTH THE PARTIES

- i. The consultant should carry out the work from the date of issue of the final work order, as detailed in scope of work and as entrusted to them under the instructions of the Board and the consultant further undertakes to give full co-operation to the Board in this regard.
- ii. The Board shall have the right to depute its representative to work with the consultant and at all times such representative shall have access to the premises where and whenever the work is in progress. The consultant shall provide all facilities to the representative of the Board for inspection and/or assessment of work.
- iii. The consultant shall receive fees in the manner prescribed in the mode of payment . Fees for any additional work, not included in the scope of work at the time of issuing the work order and which shall have to be carried out by consultant under this agreement being due to amendments, modifications or additions as per clause 1(i) of this agreement, will be decided amicably and will be paid.
- iv. This agreement comprises of detailed and definite enumeration of the rights and duties of the parties to the contract and covers all previous correspondence or negotiations etc., which may be contrary to this agreement in any way.
- v. If one provision of this agreement should prove to be invalid or null, all remaining provisions shall remain effective without change. The contracting parties shall try to replace the invalid and null provisions by an admissible provision aiming of the same economic and legal rights.
- vi. Dimensions/standards and units wherever referred shall conform to the Indian Regulations wherever obligatory and in all other cases the same will be as per prevailing practice. If however, the Board specifies the dimensions and units of the work then same

shall be final and the consultant undertakes to adopt the same and to carry out the work in accordance with the instructions issued by the Board.

- vii. The consultants shall not engage or employ any sub-contractor for the execution of the work under this agreement without the prior consent in writing obtained from the Board. Any possible sub-contracts, which may be concluded by the consultant, shall be so concluded on the sole and full responsibility of the consultant. The fact of sub-contracting shall not absolve the consultant from his/her obligations and responsibilities under this agreement.
- viii. Subject to the provisions of this agreement the consultant shall not transfer or assign this agreement without the Board's prior consent in writing. In any case transfer or assignment that may be affected by the consultant shall not modify his/her liabilities under this agreement. In the event of assignment for transfer the assignees or transferee shall be responsible for the fulfilment of the conditions of this agreement.

3. SECRECY AND COPYRIGHT

- i. The consultant hereby undertakes to treat all the data, information, drawings and details etc., received by the consultants\ during the execution of the work, directly or indirectly, as exclusive property of the Board.
- ii. No publication shall be effected or caused to be effected by the consultant without the consent of the Board in writing. All the information and data received or collected by the consultant during the execution of the work or at any other time in pursuance of this agreement shall be strictly treated as confidential and shall not be divulged to no other party, person or organization at any point of time.

4. EXTENSION AND TERMINATION

- i. It is agreed between the parties that the Board may grant extension of time to the consultant for the completion of the work under this contract provided the Board is satisfied with the reasons for the extension stated by the consultant in his application in writing made to the Board, such extension stated would not entitle the consultant for any additional payment whatever under clause 2 of this agreement.
- ii. It is agreed by and between the parties that the Board shall have the right to terminate this agreement without assigning any reason thereof subject, however to the condition that it shall give seven days notice of termination in writing to the consultants.

- iii. In the event of termination of the agreement as provided herein, the consultant shall cease all further work and shall deliver to the Board all data, details, plans, specifications and other documents prepared or information collected upto the date of notice of treatment received thereof.
- iv. In the event of termination of the agreement as provided herein, the Board shall reimburse to the consultant a part of fees proportionate to the work carried out pursuant to this agreement upto the date of notice of termination.
- v. The consultant hereby undertakes and agrees to handover all the drawings, specifications, plans, sketches and other data and such other documents, alongwith complete information and report to the Board within 15 days of the completion of the work or the notice of termination of the contract as the case may be.
- vi. The Board has the right to terminate the contract with or without assigning any reason at any stage besides reserve its right for the damage or any claim that the Board may have against the consultant.
- vii. In case of such termination by the Board, if any payment in excess has been paid to the consultant, the consultant hereby undertakes and agrees to repay the excess payment within 15 days of the termination of the contract.

5. INDEMINITY

- i. The consultant hereby undertakes to indemnify the Board against any claim made by any person/persons or by a third party for any reason whatsoever such a claim or damage may arise because of a mistake, negligence and/or any other reason or an act of the consultant during the course of the work being carried out or after the work the work carried out by the consultant under this contract.
- ii. The parties to this agreement specifically agree that the Board shall have the right to withhold the payment of fees that may be due and payable to the consultant in the event of any breach committed by the consultant under this agreement and the payment withheld be paid whenever such breach is rectified.

6. ARBITRATION CLAUSE

The parties to the agreement hereby agree and consent that all disputes, claims etc., arising out of and touching upon clause of the agreement and their interpretation shall be submitted to the sole arbitrator to be appointed in the following manner:

“ The Chairman, Central Board shall appoint Director (CP Division), Ministry of Environment & Forests & Climate Change (MoEFCC), Government of India, New Delhi, or any other suitable person in the field of Software Engineering or IT field as the sole arbitrator to adjudicate and decide upon the dispute referred to him ”. The arbitrator shall state his decision in writing and if amount of claim in dispute is 50,000/- (fifty thousand rupees) and above, the arbitrator shall give reasons for award.

Subject as aforesaid, the provision of the arbitration & conciliation Act, 1996 or any other statutory modification or re-enactment there-of and the rules made there under and for the time being in force shall apply to the arbitration proceedings under the clause.

It is a term of contract that party invoking the arbitration shall specify the dispute or disputes to be referred to the arbitrator under this clause together with the amount or amounts claimed in respect of each dispute.

It is also a term of contract that if any of the party do not make any demand for arbitration in respect of any claim(s) in writing within 30 days of receiving the information from the Board that final bill is ready for the payment, the claim of the contracting party(s) will be deemed to have been waived and absolutely barred and the Central Pollution Control Board will be discharged of all liabilities under the contract in respect of these claims.

The decision of the arbitrator shall be final and binding upon the parties.

IN WITNESS WHEREOF THE parties of the first and second part of this agreement have subscribed their signatures on this agreement on the day and year herein above mentioned.

SIGNED IN THE PRESENCE OF

1. Witness:

(Dr. A. B. Akolkar)

Member Secretary

For: Central Pollution Control Board

“Parivesh Bhawan”, East Arjun Nagar,

Delhi-110 032

2. Witness:

For M/s . _____

15. Submission of Proposals

The proposal should contain technical as well as financial proposals.

- (i) Technical proposals should be enclosed in a separate sealed cover super scribing the words **Technical proposal for“Software Development for Emission & Effluent Data dissemination & Data Reports Generation”**
- (ii) Technical proposal should include brief profile of the company, year of establishment; organizational structure; list of relevant projects carried out along-with names of clients; CVs of the persons to be involved in this project; description of methodology and work plan for performing the assignments on the TOR; time frame for the completion of the assignment; and any other information, as desired in the Eligibility criteria and selection criteria of the proposal.

Please note that Technical proposal should not indicate prices

- (iii) Financial proposals should also be enclosed in a sealed cover super scribing the words **Financial proposal for“Software Development for Emission & Effluent Data dissemination & Data Reports Generation”**
- (iv) Financial proposal should include total cost of the proposal (including all taxes)

Please note that financial proposal should only indicate prices.

- (v) Both of the sealed covers i.e. technical proposal and financial proposal should again be enclosed in a sealed cover super scribing the words **Proposal for“Software Development for Emission & Effluent Data dissemination & Data Reports Generation”**.The proposal should be submitted to the “**Member Secretary**” Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Shahdra Delhi-32 latest by date mentioned and shall be dropped in the drop box kept at the gate of the CPCB office designated for the purpose.
- (vi) An authorized representative of the Consultant signs all pages of the proposals.
- (vii) Any proposal received after the closing time for submission of proposals shall not be entertained.
- (viii) The proposals must remain valid for 120 days at least after the submission date. During this period, the consultant is expected to keep available the professional staff proposed for the assignment. CPCB will make its best efforts to decide on the proposal within this period. If CPCB wishes to extend the validity period of the proposals, the consultants who do not agree have the right to not to extend the validity of their proposals.
- (ix) An Earnest Money Deposit of **Rs. 25000/- (Twenty Five thousand Rupees only)** (should be deposited) in the form of demand draft in the name of “Central Pollution Control Board, Delhi”, should be enclosed along-with the proposal. EMD of successful firm shall be returned on submission of BG.

- (x) The firms are advised to attach one page summary of salient features for evaluating software developed by them as mentioned in technical eligibility in Table 1: **Technical eligibility**, Sl. No. 3.

(Please do not keep the draft in the envelope containing financial proposals).