

Government of Rajasthan
Local Self Government Department
(Directorate of Local Bodies, Rajasthan, Jaipur)

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Meeting Notice

A meeting is schedule to be held on dt. 28.05.2019 at 12:30 pm in conference hall of DLB, Jaipur under the Chairmanship of Secretary, LSGD, GoR to discuss "Term of Reference" for appointment of Technical Consultant for review of the water supply schemes of 08 towns transferred to ULBs in compliance to cabinet decisions of 4th October, 2012.

Following are requested to make it convenient to attend the meeting:

1. Executive Director, RUDSICO, Jaipur
2. APD, RUIDP, Jaipur.
3. Chief Engineer, PHED (Urban & NRW), Rajasthan, Jaipur.
4. Chief Engineer, DLB, Jaipur.
5. Deputy Director (Regional), LSGD Ajmer, Jaipur, Kota, Jodhpur, Bikaner, Udaipur and Bharatpur.
6. Chief Accounts Officer, DLB, Jaipur.
7. Commissioner/Executive Officer, Municipal Council/Board, Sriganganagar, Nagaur, Jaisalmer, Bundi, Karauli, Nokha, Nathdwara and Chomu.

(Pawan Arora)

Director cum Joint Secretary

No.F(55)/CE/DLB/WS/TOR/2019-20/ 20529-540

Date : 14.5.19

Copy to following for information and necessary action:

1. PS to Secretary, LSGD, GoR.
2. PS to Director cum Joint Secretary, DLB, GoR.
3. Executive Director, RUDSICO, Old Working Women Hostel, Behind Nehru Place, Lal Kothi, Tonk Road, Jaipur email: ruifdco@gmail.com.
4. APD, RUIDP, AVS building, Jawahar Circle, JLN Marg, Jaipur-302017 email: mailruidp@gmail.com and mail.ruidp@rajasthan.gov.in
5. Chief Engineer, PHED (Urban & NRW), Jal Bhawan, 2-Civil lines, Rajasthan, Jaipur.
6. Chief Engineer, DLB, Jaipur.
7. Deputy Director (Regional), Ajmer, Jaipur, Kota, Jodhpur, Bikaner, Udaipur and Bharatpur.
8. Chief Accounts Officer, DLB, Jaipur.
9. Commissioner/Executive Officer, Municipal Council/Board, Sriganganagar, Nagaur, Jaisalmer, Bundi, Karauli, Nokha, Nathdwara and Chomu.
10. Project Engineer (RUD), RUD Division, WAPCOS Limited, 76-C, Institutional Area, Sector-18, Gurgaon-122015 email: iwrm@wapcos.co.in is requested to send his representative/consultant to discuss on draft ToR submitted by you vide your letter no. WAP/RUD/LSG/08 towns/JPR/2018-19 dt. 16.03.2019 in aforesaid meeting.
11. Programmer, IT cell, DLB Jaipur to upload this meeting notice on website.
12. CMAR/OS, DLB, Jaipur for make necessary arrangements and refreshment in above meeting.
13. Guard file.

Encl : Draft TOR

(Bhupendra Mathur)
Chief Engineer

**Terms of Reference (ToR) for
Technical Consultant for Review of the Water Supply Schemes of 08 towns
transferred to ULBs**

1. Background

Cities make vital contribution to social and economic development of the country, as in India, 55-60% of GDP is contributed by cities. Cities absorb population growth and create jobs and wealth, and also provide essential services. They attract investments in economic activities and infrastructure.

Recent Government policies allow for greater community participation in planning and development of urban areas adopting the policy of decentralization. Institutions of local governance are being encouraged to experiment and introduce new practices. An important initiative in this regard is the enactment of 74th constitutional amendment, which defined the formal process of decentralized governance in ULBs. Provisions relating to ULBs which constitute the third layer of governance of the federal structure were added as a new part to the constitution to build up these institutions as democratic and participatory with broad based activity. Articles 243 W of the constitution authorised the State legislatures to enact laws to endow the local bodies with powers and authority as may be necessary to enable them to function as institutions of self-government and make provisions for devolutions of powers and responsibilities.

Water supply for domestic, industrial and commercial purposes is a function that is most appropriately managed by ULBs. The current state of urban water supply is quite dismal with regard to billing and collection, Operations & Maintenance cost connection coverage, non-revenue water etc. Again, the urban service delivery is the responsibility of State Government's agencies that are not answerable to ULBs and only to state governments. ULBs, answerable to their smaller jurisdiction, have little control on these agencies that operate on a larger scale; this complicates incentive structures, leading to poor outcomes.

As per decision taken in the cabinet meeting held on 4th October 2012 (available at Annexure-1), water supply schemes of the eight towns, namely, Chomu, Nathdwara, Nokha, Jaisalmer, Nagaur, Shri Ganganar, Karauli & Bundi were transferred from PHED to ULBs of the respective towns.

It is felt that mere transfer of the schemes from PHED to ULBs, the service delivery to the population served is not going to improve unless there is qualitative change in the management of the water supply system. Looking to the scarcity of water and it's availability from distant sources, reduction in non-revenue water and efficient management is the need of the hour.

As per the approved cabinet memo, following 3 stages of actions were proposed after transfer of the schemes to achieve the targeted improvements in the service delivery;

- a. Administrative and financial support to the ULBs for 5 years
- b. Appointment of a competent and experienced technical consultant with following broad scope of work;
 - i. Review of the existing water supply system.
 - ii. Estimation of existing NRW.
 - iii. Estimation of gap between existing service levels that required as per norms.
 - iv. Estimation of capital investments required to achieve the service levels as per norms.
 - v. To suggest the best suited option out of management contract or PPP contract for sustaining the improvement.
- c. Action towards awarding management contract or PPP contract for running the water supply schemes.

In light of above decision, LSG Department intends to avail consultancy services in Urban Water Supply Sector to analyse the existing system, assess the GAPS in service delivery and evolve strategies for improving the service delivery and suggest management strategies to achieve the objectives.

2. Objective

The primary objective of this study is to find the GAPS in service delivery in water supply sector in project cities and to arrive at most feasible and financially sustainable infrastructural interventions to improve the service delivery. The main components of this primary objective of this study are, as summarized below;

- ✓ Document the status of existing water supply system in terms of Physical infrastructure, its suitability for future requirements under this project and physical state.
- ✓ Collect & document the system efficiencies for water supply sector including coverage, service delivery (duration, frequency, pressure, quality), consumer grievance redress system, Electro-Mechanical equipment efficiencies, Non-Revenue Water etc from secondary data.
- ✓ Evaluating the present level of Non-Revenue Water from secondary data and suggest strategies to reduce the NRW at feasible levels.
- ✓ Preliminary design of various alternatives for water supply systems including up gradation of existing system & extension to additional areas for project horizon. The alternatives so framed shall be based on considerations of technical sustainability, land availability, economics & environmental considerations.
- ✓ Assess the operation & maintenance requirements for existing & proposed infrastructure in terms of human resources, tools & equipment, investments etc.
- ✓ Assess & document the financial health of water supply sector in project

towns including the capital & O&M expenditures, tariff structure & revenues, revenue collection efficiencies, accounting system etc based on secondary data.

- ✓ Develop suitable investment plan based on ball-park estimates (Capital as well as O&M) for proposed project towns in water supply (for different alternatives) with suitable prioritizing & phasing.
- ✓ Evaluate various options of managing the water supply services and recommending most efficient & feasible option.

3. Scope of Work

REVIEW OF THE EXISTING WATER SUPPLY SYSTEM

Site visits

A site visit shall be conducted by consultants' team along with field staff to get the first hand understanding of existing water supply system in project towns. This includes visit to production system, water treatment plant, transmission system, distribution centres and typical distribution networks. It will be consultants endeavour during these visits to gather knowledge regarding physical conditions of assets, requirement of assets rehabilitation/replacement, space availability for augmentation etc. During visits, the main features of water supply system will be captured by having photographs & videos of assets. Required infrastructural data & operation & maintenance data will also be collected during these visits, as much as available.

Discussions with PHED, RUIDP & LSGD officials

Consultants team will be held elaborate discussions with PHED, RUIDP & LSGD officials to get an insight into the physical infrastructure of water supply system & its performance. During these discussions, the perception of field officials will be obtained regarding the major deficiencies/gaps in the system, possible solutions in their understanding, expected performance from the system etc.

Data Collection

In the initial phase of this study, consultant shall collect all the data related to water supply system, but not limited to, as detailed below;

- All Design Reports/tender documents for existing/ongoing/prospective water supply system/projects
- Maps of existing water supply system including water treatment plants, pumping stations, distribution leadworks, distribution networks
- Operation & maintenance data of all components of water supply systems

- All existing Management Contract, Labour Contract, Rate Contracts contract documents
- All project reports for on-going & future infrastructural proposals
- Data regarding existing workforce employed for O&M of water supply system
- Asset inventory of water supply system of project town, if available

Assessment of existing system

Consultant shall assess, based on site visit, discussions with field officials & secondary data, physical condition of the existing water supply system such as tube wells raw water intake, water treatment plant, transmission pipe lines, storage reservoirs, pumping stations, pumps and motors, trunk and local distribution pipelines, connections and stand posts etc. to formulate conclusions and recommendations for a phased program of economic rehabilitation of all elements of the existing water supply system and bring those into sound operational performance conditions. The works may be of repairs or replacements. These conclusions and recommendations shall be based on, (i) the system service performance and condition (ii) the result of interviews which are to be conducted by the Consultant with the relevant PHED/RUIDP/LSGD staff. (ii) the system's future performance requirements and (iv) the results of such further inspections and investigations the Consultants as are necessary to formulate sound conclusions.

This assessment shall involve preliminary inspection, discussions with those responsible in the field for the day to day operation of these facilities and an assessment of technical performance, technical performance assessment in the case water quality, and any particular operational difficulties being experienced.

This assessment shall be made of the physical condition of the existing transmission and trunk and local distribution works, for the purpose of determination of the scope and nature of any replacement and/or modification and/or rehabilitation works needed to realize the optimal performance of these facilities.

In the assessment of existing works particular attention shall also be given to the prospective need for system meters (bulk meters), Automation & SCADA for the purpose of providing information to aid operation and management of the system and to provide an improved basis for future planning and design.

Study of on-going projects/ newly sanctioned projects.

Along with the existing system, all ongoing works under execution under different programmes and under different departments shall be studied to assess the GAPs that need to be addresses after implementation & commissioning of these systems. Further, their interface with the existing water supply system will also be studied to ensure its effectiveness & coherence.

Out of 8 project towns, Bundi & Nagaur town are covered under AMRUT project. Consultant shall study these project documents and assess their possible impact on water supply system on completion.

Similarly, Towns Chomu, Jaisalmer, Nokha & Karauli are being taken up under RUIDP Phase IV and Sriganganagar is being covered under RUIDP Phase III. Consultant shall also study the project documents and assess the GAPS, if any, that are likely to remain on completion.

Moreover, RUIDP has taken up improvement works in Pali and Tonk for providing 24x7 water supply system in these towns. Consultant shall visit these towns to study the work undertaken and document the effective measures as well as pitfalls.

Consultants shall review the study regarding Capacity Building being undertaken by RUIDP and identify the intervention those could be replicated in project towns for improved services in these towns.

Consultant shall take up an out-of-state visit to Karnataka to study the different type of contracts implemented in water supply sector and collect their experiences regarding measure undertaken & their relative effectiveness in achieving the objectives and suitably accommodate in its report & recommendations.

Consumer Survey

Consultant shall carry out a consumer survey for 1-2% of consumers to assess the performance of water supply system, their experiences & expectations. For this purpose, Consultant shall devise a simple questionnaire in local dialect to capture all the information required and get it approved from client. The data so collected shall be analysed by the consultant and shall be suitably incorporated in design report & its recommendations.

ESTIMATION OF EXISTING NRW.

Review of NRW assessment reports under Benchmarking studies by PHED and recent study by RUIDP

Benchmarking reports for all Urban towns was got prepared by PHED during a study carried out in year 2011-12. Similarly, RUIDP has also prepared NRW assessment reports for few towns in a recent study. These NRW Assessment reports will be thoroughly studied to determine the NRW levels in projects in year of study, the major contributing factors and improvement measures recommended in these reports.

The impact of any improvement works in intervening years in reduction of NRW will also be assessed.

Moreover, the operational secondary data of water supply system of project towns will be analysed for arriving at figures of water production, water consumption and consequent NRW quantities.

ESTIMATION OF GAP BETWEEN EXISTING SERVICE LEVELS AND THAT REQUIRED AS PER NORMS.

Water Demand Assessment

Based upon recommendations of CPHEEO Manual for water supply and Guidelines of PHED, the Consultant shall study the water demand forecast in other projects taken up in project towns & recommend the most promising forecast & further project it for horizon year, if required, which will be employed in the planning and design of system strengthening and improvements. These water demand forecast shall include: (a) demands for various classes of domestic institutional, commercial and industrial consumers: (b) the factors for unaccounted for water: and (c) public uses such as public gardens etc.

These forecasts shall give for every five-year block from 2021 to planning horizon year 2051 including the domestic water demand, the water demand for major industrial, commercial and institutional users. The demand for other industrial, commercial and institutional users shall be assessed, if sufficient secondary data will be available.

Assess current Service Level & Assessing the GAP

Consultant shall study the secondary data for water production and consumption for all the project town and assess the current service level in project towns keeping in view the Non-Revenue Water in water supply system.

Consultant shall compare the current service level and actual water demand in all project towns. Consultant shall also evaluate the gap in future water demand and future probable water production. While evaluating this gap consultant shall consider capacity enhancement by on-going / sanctioned and to be taken up water supply projects, reduction in MRW in future year and recycle of water.

ESTIMATION OF CAPITAL INVESTMENTS REQUIRED TO ACHIEVE THE SERVICE LEVELS AS PER NORMS.

Preliminary Designs and Ball-park Cost Estimates

Consultant shall prepare preliminary designs for proposed infrastructural investments required for all phases to improve the performance standards. Consultants shall carry out the preliminary design for infrastructural components proposed to be implemented in immediate future. While carrying out the designs, Consultant shall adhere to design parameters as recommended by CPHEEO Manual of Water Supply & PHED Guideline for framing proposals.

Consultants shall prepare the ball-park investment cost estimates for augmentation works to bridge the gap, rehabilitation works, measures to strengthen operation and

maintenance works shall be assembled in an integrated cost estimate indicating separately the base costs, physical and price contingencies. Preliminary estimates shall be prepared for all phases and works recommended to meet requirement of planning horizon. The consultant shall suggest the project implementation period. The project completion year and year wise investments for first phase and appropriate physical contingencies and engineering and supervision charges.

The Consultant shall also prepare details of operation and maintenance cost of the recommended water supply system.

Other Interventions

Consultant shall also identify the measures required to be implemented to improve the performance standards which may include following, but not limited to;

- Measures to improve Non-Revenue Water
- Measures to improve Energy Efficiency Improvement
- Measure to promote recycle & waste reduction
- institutional development including capacity building and technical assistance programs

TO SUGGEST THE BEST SUITED OPTION OUT OF MANAGEMENT CONTRACT OR PPP CONTRACT FOR SUSTAINING THE IMPROVEMENT.

Consultant will collect data on existing models on Management Contracts & PPP contracts, in operation, elsewhere in the country and will analyse their effectiveness in achieving the objectives vis-à-vis the specific conditions of the project under consideration.

Consultant shall also study MoUD guidelines on PPP contract in water supply distribution and its relevance to the project cities in consideration.

Consultant shall also study State Government's guide lines/policies, if any, on PPP, in general and in water supply distribution, in particular and also collect data on on-going contracts of such type, if any.

Based on these studies & its detailed analysis, consultant shall recommend procurement type for project towns or a combination of these for different components of investment and/or O&M plans/

STUDY EXISTING ORGANISATIONAL SYSTEM/CAPACITY AND PROPOSE IMPROVEMENTS/CHANGES REQUIRED.

In order to improve the quality and sustainability of the water supply services, its organisational system needs to be reformed, allowing for enhanced accountability, better planning, implementation and sector monitoring as well as, the provision of improved WSS services.

Consultant shall review the existing organisational setup for individual town, human resources & their capabilities vis-à-vis requirement to manage proposed water supply system. Consultant shall also review individual ULBs capacities in terms of Material resource i.e. tools, equipment, machines etc, data/information acquisition, storage & retrieval and its analysis etc

Consultant shall prepare a detailed proposal for the organisational setup for service delivery at the ULB level. This should take into account the principles of decentralization, ULB sizes and the accountability framework and should consider different modalities including public, private and mixed options.

Consultant shall outline a capacity building plan including training for existing and proposed institutions to improve their performance.

Consultant shall prepare an implementation action plan including costs, phases and timetable, and a recommended Organisational setup to carry it out.

Time Schedule

It is estimated that the study can be completed by the submission of the final report within 6 months period from the signing of the contract

Reporting requirements

The Consultants shall present the conclusions and recommendations of the work in his report and submit 10 copies of Final report. A summary of the data and analysis supporting the conclusions and recommendations shall be presented in Annexure to the report which should be appropriately referenced in the body of the main text.

Report Format:

The Consultants shall prepare reports presenting the data, the assumptions and their justification. the analysis and the conclusion and recommendation with respect to the study discussed in scope of work

All the reports required by the TOR shall provide a neat and clear presentations and include a table of contents an executive summary of not more than 20 pages, the main body of the text organized in sections and concentrating on the finding and recommendation and their justification Supporting data and analysis shall be contained in the Annexures which will be referenced as appropriate in the body of the text. All paragraphs in the executive summary, the text and the Annexures, shall be numbered to facilitate communication on the contents of reports.

The report shall be illustrated as appropriate with such drawings, sketches, tables, graphs and maps to aid comprehension and assimilation of their contents.

Schedule of Reports

The reports and products of the work required by these ToR and the timing of their being furnished to LSG is as follows:

S.No.	Description	Submission time from the date of signing of the agreement
1.	Inception Report	1 Month
2.	Interim Report	3 Months
3.	Draft Final Report	5 Months
4.	Final Report incorporating suggestions directions of LSG on the draft Final Report	6 Months

Data, service & facilities to be provided by LSG

Data

The LSG will provide the Consultants all maps, drawings, reports, accounts and other technical and financial data available with them and required for completing the work as per this TOR. The LSG will assist the consultants in collecting, wherever necessary data/information from other Government Department and Agencies for carrying out this study as mentioned in this TOR. LSG will provide liaison for consultant to meet other department officials.

The data/information that will be furnished by the LSG are:

- ✓ Previous reports, documents and data in connection with water sector in project town.
- ✓ Municipal Maps of project towns showing the ward boundary of Urban areas.
- ✓ Maps showing details of existing distribution & transfer network, headworks, pumping stations, water treatment plants etc.
- ✓ Population data from the Census records for the last several decades
- ✓ Raw water characteristics of the proposed source
- ✓ Metrological data for the past ten years.
- ✓ Water Production Data for last 5 years
- ✓ Details of Major Assets being used in water supply system
- ✓ Details of existing Human resources and Material resource with ULB
- ✓ Salaries of various categories of staff of ULBs
- ✓ Data needed for preparation of rate analysis and detailed cost estimates.
- ✓ Information about metering, billing and revenue collection for Project town.

Payment Schedule

The payment schedule linked to the specified deliverables is as give below:

S.No.	Description of deliverables	Payment
1	Inception Report	10%
2	Interim Report	30%
3	Draft Final Report	40%
4	Final Report	20%