

W-11042/172/2020-JJM-IV-DDWS  
Government of India  
Ministry of Jal Shakti  
Department of Drinking Water and Sanitation  
(National Jal Jeevan Mission)

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Pt. Deendayal Antyodaya Bhawan,  
CGO Complex, Lodhi Road,  
New Delhi-110 003  
Date: 10<sup>th</sup> April, 2021

To

Add. Chief Secretary/ Principal Secretary/ Secretary  
In-charge of Rural Drinking Water Supply,  
States of Andhra Pradesh, Gujarat, Haryana, Karnataka, Maharashtra Manipur, Rajasthan and Uttar Pradesh.

**Sub:** ICT Grand Challenge to develop "Smart Water Supply Measurement and Monitoring System" – implementation of 'IoT-pilot' in selected villages.

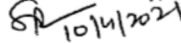
Sir,

I am directed to convey the appreciation for partnering in the ICT Grand Challenge to develop "Smart Water Supply Measurement and Monitoring System" and for taking prompt action in identifying & providing the list of villages for demonstrating through pilots. It is to inform that the four participants that have successfully demonstrated the proof of concept on a prototype test-bed in CDAC facility at Bangalore. The participants will now have to demonstrate the solution in villages through pilots.

2. In order to facilitate the implementation, it is requested:

- i.) assign a nodal officer and a 'small team' to work closely on 'IoT-pilots'. This will also build the capacity in the State for implementation of smart water supply monitoring systems through exposure to sensor-IoT technology. This team may lead the implantation of IoT in the State;
- ii.) facilitate the visit and meeting of participants in the identified villages for collecting preliminary information about piped water supply for installation of IoT sensors for quality and quality parameters;
- iii.) provide drawings/ maps/ schematic drawings and details of pipe water supply system to participants. A format provided in Annex II is also prepared to facilitate the design. This format has already been shared earlier as well; and
- iv.) allow installation of devices in the pipeline/ extension/ ESR/ Household delivery point etc.

3. In view of above it requested to constituted a small team as mentioned and provide details of Nodal officer may be provided to this department at the earliest.

Yours Sincerely,  
  
(Pradeep Singh)  
Director

Encl.: As above

email: pradeep.singh78@gov.in

**Copy f.w.c. to:** Director C-DAC, Bangalore to provide copy of the letter to participants for liaising with states and take further necessary action to deploy the pilots.

Different nodes for deploying IoT devices in the villages identified for pilot/ filed test as per ICT Grand Challenge:

Sl.No	Node Name	Functionality	IoT Devices	Numbers
1.	<b>Service Reservoir</b>	Source Node assesses the quality, quantity, flow control and time of water supply at the supply points (Source Points).	Bulk Flow Meter	2
			pH Sensor	1
			TDS Sensor	1
		Source nodes must contain sensors for pH value, TDS, residual chlorine, nitrate and a flow meter to determine the quantity.	Residual Chlorine Sensor	1
			Nitrate Sensor	1
			Fluoride Sensor (given the pilot location)	1
			Arsenic Sensor (given the pilot location)	1
2.	<b>Branch/DMA A Node</b>	Branch/DMA assesses the quantity in the main branches leading to major hub/clusters of houses.	Bulk flow meters	Max 5, as per the site requirements
3	<b>Household furthest point in network</b>	Household (at last house in water distribution system) must contain a sensor for a flow meter and pressure sensor to determine the quantity and pressure regularity;	Consumer Flow meter	1
			Pressure sensor	1

## Annex.II

Following water supply details may be furnished for the various schemes in the tabular as well as layout drawing forms for ease in understanding the schemes.

Village Name:		
Block Name:		
District Name:		
EE Name and Contact Number:		
JE Name and Contact Number:		
Sarpanch Name and Number:		
Name of the Scheme:		
Sl.no.	Descriptions	Remarks
1	Number of Sources	
2	Source Name	
3	Source Location	Name of Place and Co-ordinates
4	Source Type – Natural Stream / Tube well/ Intake	Outgoing pipeline details from Inlet chambers
5	Raw Water Pipe Mains	Diameter, Material, Length
6	Water Treatment Plant Capacity	In MLD
7	No of Clear Water Mains	Pipelines from outgoing from WTP
8	Clear Water Mains Details	Diameter, Material, Length
9	Tube Well Details	Name of Place and Co-ordinates
6	Number of Tube Well (TW)	Numbers
7	Pumps Discharge	In LMP
8	Pump Head	In Meters
9	Pump Running Timing in a day	In Hours
10	Rising Main – outgoing from TW	Alignments
11	OHSR Location and Elevation	Name of Place, Co-ordinates and Elevation in Meters
12	OHSR Capacities	In Kilo Litre
13	Distribution Network from Source or OHSR to Households	Map showing pipelines alignments with Pipe Material, Diameter and Lengths. Outgoing lines from Source, Incoming and Outgoing Line of OHSR/GLR needs to be clearly shown along with the
14	Supply Hours	In Hours
15	Households in Villages	Numbers
16	HH with FHTCs	Numbers
17	Present Water Service level	In Litres
18	Water Quality Reports	From Laboratory for water monitoring
19	Pressures in distribution system	In Meters

Note: 1) Any other details or DPRs may also be furnished, if required, for ease in understanding schemes. 2) All Villages/Scheme/Locations identified are must have good mobile networks.