

No X-94012/4/2016-NHP-1769
Government of India
Ministry of Water Resources, RD & GR
National Hydrology Project

2nd Floor, Rear Wing, MDSS (MTNL) Building
9, CGO Complex, Lodi Road
New Delhi - 110003


Dated the 14th March, 2017

Subject: Training on "SCADA Systems - Understanding and Bid Preparation" from 23rd to 25th March, 2017 at New Delhi under NHP- reg.

Sir/Madam,

Under National Hydrology Project (NHP), some of the State and Central Implementing Agencies are planning to install SCADA system in their barrages and reservoirs. In order to have a prior understanding of the system, it is proposed to organize a Training on "SCADA Systems - Understanding and Bid Preparation" from 23rd to 25th March, 2017 at the World Bank Office (Room No.300, H.T. Building, K.G. Marg, New Delhi, 110001). The 3 days Training on SCADA systems is targeted for engineers who would be involved in designing of Bid Documents for SCADA, its Implementation, Maintenance and Project Management. The training programme also includes Field Visit to Narora barrage in Uttar Pradesh.

It is proposed that, participants from the relevant State/Central Implementing Agencies who intend to install SCADA in the near future, may attend the training. The Nomination may be registered in the MIS (indiawrm.org) at the earliest. Due to a very short Notice period of the training, there would be no shortlisting of candidate. All the candidates Nominated by their State/Central agencies & Registered in the MIS would be considered for participation and may make their travel plans immediately on Nomination by their respective agencies.



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To,

1. **Principal Secretaries, Project Coordinator & Nodal Officer** of the State Implementing Agencies.
2. **Head of the Organisation** of the Central Implementing Agencies.

Copy for information to:

1. **Dr. Anju Gaur, Task Team Leader (NHP), the World Bank**, H.T. Building, New Delhi

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Training on SCADA systems - Understanding and Bid Preparation		
Day: 1		
Morning	Sub-session 1	Introduction
	1.	Introduction to modern Digital Electronics 15 min
	2.	Introduction to Computers/ Microcontrollers 15 min
	3.	Introduction to Software 15 min
	4.	Introduction to Communication (Wired/Wireless) 15 min
	5.	Introduction to Control Systems 15 min
	6.	Introduction to Data Acquisition Systems 15 min
Tea Break		
Morning	Sub-session 2	SCADA
	1.	Introduction to SCADA 15 min
	2.	SCADA Building Blocks 15 min
	3.	SCADA Host/HMI 30 min
	4.	SCADA Protocols 30 min
Lunch Break		
Afternoon	Sub-session 1	Controllers
	1.	Introduction to Controllers 15 min
	2.	RTU 30 min
	3.	PLC 30 min
	4.	Development Platforms and Tools 15 min
Tea- Break		
Afternoon	Sub-session 2	Sensors & Actuators
	1.	Digital Control of Gates 20 min
	2.	Modern Sensors 10 min
	3.	Measurement of angle of rotation 15 min
	5.	Modern AWS 15 min
	6.	Water Level Sensing & Measurement 15 min
	7.	Profiling and Water Flow Calibration 15 min
Day 2		
Morning	Sub-session 1	Designing a SCADA for Reservoir Automation
	1.	Reservoir Parameters to be considered 05 min
	2.	Power Supply 10 min
	3.	Cabling 10 min
	4.	Choice of SCADA software 10 min
	5.	Choice of Computer Hardware 10 min
	6.	Choice of Controllers (RTU/PLC etc.) 10 min
	7.	Choice of Communication System 10 min
	8.	Choice of AWS 10 min
	9.	Choice of redundancy 10 min
	10.	Security considerations 05 min
Tea Break		
Morning	Sub-session 2	SCADA Installation & Maintenance
	1.	Site Planning 10 min
	2.	Installation Planning 30 min
	3.	Maintenance Planning 30 min
	4.	Performance Criteria 20 min
Lunch Break		
Afternoon	Sub-session 1	Bid Document Preparation
	1.	Document format 20 min
	2.	Technical Specifications 60 min
	3.	Other Issues 10 min
Tea- Break		
Afternoon	Sub-session 2	Case Study & Interactive Session
	1.	Case Study 30 min
	2.	Interactive Q & R Session 60 min
Day 3	Field Visit to Narora Barrage, U.P.	

J. Parshat
14/3/2017