

## Price proposal for U town

Bidders are requested to provide cost for each of the Project Area in the subsequent formats. The Bidders should take a note of following points while filling the Price proposal.

- 1) Bidder will be responsible for payment of Taxes (including local entry taxes), duties, cess, charges etc, including taxes, duties, cess, charges etc, to be paid by the Supplier pre- or post- delivery. Such taxes, duties, cess, charges etc, if not explicitly mentioned in the following tables, but applicable under law, should be included in the Quote under “Any other levies” column.
- 2) The Bidder will provide Tax rates assumed for the calculation at the time of proposal for each item in notes to respective table.
- 3) Please refer to GCC Clause 12.2 and the SCC for Price adjustments due to change in Tax rates (including local entry taxes), duties, cess, charges etc.
- 4) Purchaser reserves the right to deduct and pay to the government authorities the taxes at applicable rates from the price payable to the supplier.
- 5) The unit prices mentioned for various components should be the same for all Project Areas. In case of any discrepancy among unit prices of various Project Areas, the lowest unit price of equipment mentioned for any Project Area shall prevail.

### For Mehsana SCADA/DMS Town area (U Town)

Bidder should refer Appendix F to fill in following information:

Name of Project Area (town): -	Ahmedabad Peri area (Includes Gandhinagar Capital)
Location Data Centre: -	Gandhinagar
Number Subdivision Offices under the Project Area:	3
Number of Other Offices under the Project Area: -	3

	SCADA /DMS SYSTEM													
	NAME OF TOWN	Town code as per census	DISTRICT	CIRCLE SCADA CONTROL CENTRE(CCC)	CATEGORY	SCADA TOWN UNDER RAPDRP (Y/N)	population as per census 2011	CRITERIA MATCHED (Y/N)	s/s	Incoming feeders	outgoing feeders	RMU	SECT	FPI COMM
U1	Ahmedabad Peri area	802484	Ahmedabad and Gandhinagar	CCC	Non SPL	Y	5577940	Y	31	81	373	1000	0	870

Assets	QTY	Consideration for upgradation	ALREADY EXISTING
<b>Primary Sub-Station (HV distribution level)</b>			
Total Number of <b>Primary distribution Sub-stations</b> feeding the Project Area	Nos	<b>12</b>	<b>19</b>
Total Number of Power Transformers in primary distribution S/S	Nos	<b>56</b>	<b>24</b>

OLTC	Nos	56	24
No of I/C feeders	Nos	24	57
No of 11 kv O/G feeders	Nos	78	295
Length of o/g feeders	Nos	317	2660
<b>11 kV Distribution Network</b>			
AUTOMATED RMU	Nos	1000	411
AUTOMATED SECTIONLIZER	Nos	0	5
AUTO RECLOSER	Nos	0	0
COMMNUICABLE FPI	Nos	870	0

**A/ U TOWN SCADA CONTROL CENTRE WISE CONTROL CENTRE LOCATION  
DISASTER RECOVERY LOCATION: CONTROLLED TOWN/TOWNS**

**Form : 1 Project Management Cost (A Town:**

	<b>Project Management Cost Including all Taxes &amp; Duties</b>	Unit	
	Installation, Testing and Commissioning Cost to Integrate Entire SCADA & IT (relevant to SCADA) Infrastructure	Rs.	
	Integration with legacy applications & Data Migration	Rs.	
	Training for the Employees	Rs.	<b>Refer form 9</b>
	Sub-Total A1		
	Grand Total A	Rs.	

**\*Project management cost include applicable tax /GST etc.**

**Specific Exclusions**

- Land, Control Centre & various server rooms and other Civil & Structural Works including earthing.
- Infrastructures such as Air conditioning system,
- External & Internal electrification & Lighting,
- Firefighting system
- DG Set for meeting the SCADA/DMS Control Centre critical load requirements
- Any mobile equipment such as Crane, truck, Jeep, filter M/c, etc.
- Any T&P, testing equipments. etc.
- Furniture for the computers required for SCADA/DMS & SCADA system
- Any contract for IT/ Outsourcing of services of revenue expenditure type where there is no capital addition.
- Communication equipments such as mobile phone, telephone etc other than those specified in

MTS -SCADA/DMS

- DISCOM Manpower for managing SCADA/DMS system

## SCADA/DMS Control Centre Cost (BoQ)

Form : 2

S.No	Equipment	Unit	Quantity	Per Unit Cost (incl taxes & duties)	Total	FMS cost
				Rs. Lacs	Rs.	Rs.
<b>C1</b>	<b>Server/ workstation Hardware</b>					
	SCADA Server	No.	2			
	DMS Server	No.	2			
	OMS Server	No.	2			
	FEP server with interface switches	No.	2			
	ISR server	No.	2			
	NMS server	No.	2			
	DTS server	No.	1			
	Other Active Devices	no				
	Developmental server	No.	1			
	Communication Server	No.	2			
	Web/Directory server	No.	2			
	SMS gateway	No.	2			
	Workstation with dual TFT Monitors ( S/S monitoring)	No.	2			
	Workstation with dual TFT Monitors (Network monitoring)	No.	3			
	Remote VDUs with one TFT Monitors	No.	21			
	Developmental console with one TFT	No.	2			
	DTS/Workstation Console with dual TFTs	No.	2			
	DLP/ LED based Video Projection system with 3x4 Module configuration with each module at least 67" diagonal with common projector	No.	1			
	<b><u>Storage &amp; Backup Devices</u></b>					
	External RAID Mass storage device ( for 24 months online backup)	No.	1			
	Exteranl DAT drive	No.	1			
	<b><u>Switches</u></b>					

	Layer II switch (SCADA/DMS LAN)	No.	2			
	Layer II switch ( Planning & Development system LAN)	No.	2			
	<b><u>Routers</u></b>					
	Router for interfacing IT system & SCADA/DMS DR centre	No.	2			
	Router at remote VDU	No.	21			
	<b><u>Security system (DMZ)</u></b>					
	Web server with load balancing	No.	2			
	Mail server	No.	2			
	Router	No.	2			
	Firewall & network IDS/IPS	No.	2			
	Layer II switch	No.	2			
	<b><u>Other Active Devices</u></b>					
	GPS Time synchronisation system	Set	2			
	Time, day & date digital displays	Set	1			
	<b><u>Printers</u></b>					
	Color inkjet printer	Set	2			
	B/W Laser printer	Set	2			
	<b>Any other items required to meet functional /Performance requirement as per MTS</b>	Lot	1			
	<b>Sub-Total C1 (Hardware)</b>					
<b>C2</b>	<b>Software for Control Centre</b>					
	SCADA software	Lot	1			
	ISR Software	Lot	1			
	DMS software	Lot	1			
	OMS Software	Lot	1			
	DTS software	Lot	1			
	Developmental software	Lot	1			
	Network Management Software	Lot	1			
	WEB /Network security software (INCL IN WEBSERVER)	Lot	1			
	RDBMS package	Lot	1			
	GIS Adaptor/Engine for importing data from GIS system under IT system	Lot	1			

	Any other software to meet functional /performance requirement of MTS	Lot	1			
	<b>Sub-Total -B2 (Software)</b>					
<b>C3</b>	<b>Mandatory spares Max 5% of C1</b>					
	Mandatory spares	L/S	1			
	<b>Sub -Total C3 spares</b>					
	<b>Grand Total C</b>					

### SCADA/ Disaster Recovery Control Cost (BoQ)

Form : 3

S.No.	Equipment	Unit	Quantity	Per Unit Cost (incl taxes & duties)	Total	FMS cost
				Rs.	Rs.	Rs.
<b>D1</b>	<b>Server/ workstation Hardware</b>					
	SCADA Server	No.	0			
	DMS Server	No.	0			
	OMS Server	No.	0			
	FEP server with interface switches	No.	0			
	ISR server	No.	0			
	NMS server	No.	0			
	DTS server	No.	0			
	Other Active Devices		0			
	Developmental server	No.	0			
	Commnuication Server	No.	0			
	Web/Directory server	No.	0			
	SMS gaterway	No.	0			
	Workstation with dual TFT Monitors ( S/S monitoring)	No.	0			

	Workstation with dual TFT Monitors (Network monitoring)	No.	0			
	Remote VDUs with one TFT Monitors	No.	0			
	Developmental console with one TFT	No.	0			
	DTS/Workstation Console with dual TFTs	No.	0			
	DLP based Video Projection system with 3x4 Module configuration with each module at least 67" diagonal with common projector	No.	0			
	<b><u>Storage &amp; Backup Devices</u></b>		0			
	External RAID Mass storage device ( for24 months online backup)	No.	0			
	Exteranal DAT drive	No.	0			
	<b><u>Switches</u></b>		0			
	Layer II switch (SCADA/DMS LAN)	No.	0			
	Layer II switch ( Planning & Development system LAN)	No.	0			
	<b><u>Routers</u></b>		0			
	Router for interfacing IT system & SCADA/DMS DR centre	No.	0			
	Router at remote VDU	No.	0			
	<b><u>Security system (DMZ)</u></b>		0			
	Web server with load balancing	No.	0			
	Mail server	No.	0			
	Router	No.	0			
	Firewall & network IDS/IPS	No.	0			
	Layer II switch	No.	0			
	<b><u>Other Active Devices</u></b>		0			
	GPS Time synchronisation system	Set	0			
	Time, day & date digital displays	Set	0			

	<b>Printers</b>		0			
	Color inkjet printer	Set	0			
	B/W Laser printer	Set	0			
	<b>Any other items required to meet functional /Performance requirement as per MTS</b>	Lot	0			
	<b>Sub-Total D1 (Hardware)</b>		0			
<b>D2</b>	<b>Software for DR Centre</b>		0			
	SCADA software	Lot	0			
	ISR Software	Lot	0			
	DMS software	Lot	0			
	OMS Software	Lot	0			
	DTS software	Lot	0			
	Developmental software	Lot	0			
	Network Management Software	Lot	0			
	WEB /Network security software	Lot	0			
	RDBMS package	Lot	0			
	GIS Adaptor/Engine for importing data from GIS system under IT system	Lot	0			
	Any other software to meet functional /performance requirement of MTS	Lot	0			
	<b>Sub-Total D2 (Software)</b>					
<b>D3</b>	<b>Mandatory spares Max 5% of D1</b>					
	Mandatory spares	L/S	0			
	<b>Sub -Total D3 spares</b>					
	<b>Grand TotalD</b>					



S.No.	Equipment	Unit	Quantity	Total (per unit)	Total	FMS cost
				Rs.	Rs.	Rs.
<b>E1</b>	<b>RTUs</b>					
	RTU base equipment comprising panels, racks, sub-racks, Power Supply modules, CPU, interfacing equipment, required converters & all other required items/accessories including complete wiring for all modules for locations mentioned at Vol Vi	Set	31.00			
	Multifunctional transducers	No.	774.00			
	Contact Multiplying Relays (CMRs)	No.	13,155.00			
	Heavy duty relays for Control	No.	1,682.00			
	Dummy Breaker Latching Relays	No.	31.00			
	Transformer Transducers	No.	149			
	Single TFT PC for LDMS	No.	1			
	Any other hardware to meet functional /performance requirement of MTS	Lot				
	<b>Sub - Total (Hardware) -E1</b>					
<b>E2</b>	<b>Software for LDMS</b>					
	LDMS software	No.	31.00			
	Any other software to meet functional /performance requirement of MTS	Lot				
	<b>Sub - Total (test equipment) -E2</b>					
<b>E3</b>	<b>TEST EQUIPMENTS for RTU</b>					
	RTU Database Configuration & Maintenance Software tool	No.	2			
	Master Station cum RTU Simulator & Protocol analyser software tool	No.	2			
	Laptop PC for above software tools along with interfacing hardware including Hub	No.	2			
	<b>Sub - Total (test equipment) -E3</b>					
<b>E4</b>	<b>MANDATORY SPARES FOR RTU</b>					
	5% of E1					
	<b>Sub - Total (mandatory spare) -D4</b>					
	<b>Grand total E</b>					

S.No.	Equipment	Unit	Quantity	Total (per unit)	Total	FMS cost
				Rs.	Rs.	Rs.
<b>F1</b>	<b>FRTUs</b>					
	Mini pole mounted FRTU base equipment along with enclosure suitable to work in open environment (Adequate protection from water & dust) , racks, sub-racks, Power Supply modules with power backup , I/o modules, CPU, interfacing equipment, required converters & all other required items/accessories including complete wiring for all modules for locations mentioned at Vol Vi	No.	1,000.00			
	Contact Multiplying Relays (CMRs)	No.	32,142.00			
	Heavy duty relays for Control	No.	18,330.00			
	Multifunction trnasducer	No.	1,200.00			
	Any other hardware to meet functional /performance requirement of MTS	Lot	-			
	<b>Sub-Total (Hardware) F1</b>					
<b>F2</b>	<b>Test Equipments for FRTU</b>					
	FRTU Database Configuration & Maintenance Software tool	No.	10			
	Master Station cum FRTU Simulator & Protocol analyser software tool	No.	10			
	Laptop PC for above software tools along with interfacing hardware including Hub	No.	10			
	<b>Sub-Total (Test equipment) F2</b>					
<b>F3</b>	<b>MANDATORY SPARES FOR FRTU</b>					
	5% of E1					
	<b>Sub-Total (Spares) F3</b>					
	<b>Grand Total F</b>					

**Form 6**

S.No	Equipment	Unit	Quantity	Total (per unit)	Total	FMS cost
				Rs.	Rs.	Rs.
<b>G1</b>	<b>MPLS</b>					
	Annual charges for 100MBps Links with RTUs	No.	31			
	MPLS Router	No.	31			
	Any other hardware to meet functional /performance requirement of MTS					
	<b>Sub - Total g1</b>					
<b>G2</b>	<b>GPRS</b>					
	Annual charges for 2MBps Links with FRTUs /FPI	No.	1870			
	Modems	No.	1870			
	Any other hardware to meet functional /performance requirement of MTS					
	<b>Sub - Total g2</b>					
	<b>Mandatory spares 5% of g1,g2</b>					
<b>Grand Total G</b>						

**Form 7**

S.No	Survey	Type	Unit	Quantity	Total (per unit)	Total	FMS Cost
					Rs.	Rs.	Rs.
<b>H1</b>	<b>Main Equipments - Control centre</b>						
	UPS with suitable rating running in parallel redundant mode*		Set	1			
	VRLA type Battery banks for above UPS for minimum 30 min. backup duration	incl above	Set	1			
	<b>Sub- Total H1</b>						
<b>H2</b>	<b>Main Equipments - DR Centre</b>						
	<b>Main Equipments</b>			-			
	UPS with suitable rating running in parallel redundant mode*			1			
	VRLA type Battery banks for above UPS for minimum 30 min. backup duration	incl above		1			
	<b>Sub-Total H2</b>						
<b>H3</b>	<b>II For RTU / Data Concentrator / Communication Eqpts.</b>						
	DC Power Supply (DCPS) system based on SMPS			31			
	Battery bank for above DCPS (VRLA Type) for minimum 4 hrs backup	incl above		-			
	<b>Sub-Total H3</b>						
<b>H4</b>	<b>For FRTU</b>						
	48V DC Power Supply (DCPS) system based on SMPS			1000			
	Battery bank for above DCPS (VRLA Type) for minimum 4 hrs backup	incl above		-			
	<b>Sub-Total H4</b>						
<b>H5</b>	<b>Remote VDU location</b>						
	UPS (2 kVA )			-			
	<b>Sub-Total H5</b>						
<b>H6</b>	<b>Mandatory Spares for UPS</b>						
	5% of above H1 TO H5			-			
	<b>Sub-Total H6</b>						
	<b>Grand Total (H)</b>						

**Form 8**

S.No.	Survey	Type	Unit	Quantity	Total (per unit)	Total	FMS cost
					Rs.	Rs.	Rs.
<b>J1</b>	<b>RMU (WAY requirement)</b>	<b>No of WAYS</b>					
	RMU		No	0			
	<b>Sub- Total J1</b>						
<b>J2</b>	<b>SECTIONLIZER /RECLOSER</b>						
	Sectionlizer		No	-			
	Recloser		No				
	<b>Sub-Total J2</b>						
<b>J3</b>	<b>FPI</b>						
	Communicable		No	870			
	<b>Sub-Total J3</b>						
<b>J4</b>	<b>RECONDUTORING (Specify type of each conductor existing &amp; reconductoring )</b>						
			Km	-			
			Km	-			
	<b>Sub-Total J4</b>						
<b>J5</b>	<b>Control/power cable for RTUs from outdoor switchgear,if any at S/S and numerical relays</b>						
	control /power cable		Km	0			
	Numerical relay /BCPU		Nos	-			
	<b>Sub-Total J5</b>						
<b>J6</b>	<b>Mandatory Spares</b>						
	5% of above J1 TO J5			-			
	<b>Sub-Total J6</b>						
	<b>Grand Total (J)</b>						

**Form 9 : Training**

Sr. No.	Description	Duration in days	Total cost (rs.)
<b>A</b>	<b>Operator's Training</b>		
1.	Operator for SCADA/DMS Control Centre	5	
2.	Instructor for DTS	10	
<b>B.</b>	<b>Maintenance Training</b>		
1.	Computer Hardware & System Software	10	
2.	Application Software (SCADA/DMS)	10	
3.	RTU & FRTU	5	
4.	Database & display development	5	
5.	Auxiliary Power Supply	3	
6.	Communication System including NMS	5	

**Form10 : FMS**

S.No.	Description	Duration	Per Year cost	FOR 2YEARS	FOR 7YEARS
1	FMS charges for SCADA/DMS system (maintaining overall system availability as per TS)	Per year			
2	FMS charges for SCADA/DMS system (maintaining availability individual hardware & non –critical functions as per TS)	Five Year			
3	Total FMS charges	Five Year			

- The necessary spares required for maintenance of the system during FMS shall be provided by the contractor. However, the consumables shall be provided by the owner.
- FMS shall include all the supplied hardware & software under the project
- Cost of overall system availability/year shall not be less than 40 % and more than 60% of total FMS charges/year