

DEENDAYAL PORT AUTHORITY
An ISO 9001 : 2008 & ISO 14001 : 2004 Certified Port



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No.: EL/AC/SCADA

Date: 24/08/2022

EXPRESSION OF INTEREST [EOI] for

“Pilot project of implementation of SCADA System at 66/11kV Substation Kandla including all the required Hardware, Software and system integration”

Executive Engineer (Electrical), DPA invites Expression of Interest for the work of “Pilot project of implementation of SCADA System at 66/11kV Substation Kandla including all the required Hardware, Software and system integration” from the reputed firms from those who have executed similar work in Government/public sectors and other leading private organizations. The Expression of Interest (EOI) documents containing details of Scope of Work and technical specifications are enclosed herewith.

The interested firms are requested to submit budgetary quotation for the said work in format enclosed at Annexure I. The completed EOI (Expression of Interest) shall be submitted to the office of the undersigned on or before 31/08/2022.

Executive Engineer (E)
Deendayal Port Authority

Annexure I

Bill of Quantities

Name of Work: "Pilot project of implementation of SCADA System at 66/11kV Substation Kandla including all the required Hardware, Software and system integration".

Sr NO	Description	Qty	Unit	Per Unit Rate in INR	Total Price
1	Supply, Installation, Testing and Commissioning of Energy Monitoring Software With 1200 Tag with USB License Key for 20 Energy Meters & 20 IDMT Relay - software - development and system Integration as per technical specification no.1	1	Complete Job		
2	Supply, Installation, Testing and Commissioning of RS485 port to Ethernet Converter -3 no. and Ethernet Switch - 2 nos. (1 connected & 1 Spare) as per technical specification no.2	1	Set		
3	Supply, Installation, Testing and Commissioning of Computer System For SCADA Core-i5 or latest, 8 GB RAM, 1 TB HDD, Windows 11 & 22" Monitor	1	Set		
GRAND TOTAL					

(In Words: Rupees _____)

(NOTE: The rates should be inclusive of all taxes, duties, fees, cess etc. and all incidental charges; but exclusive of GST)

**Signature & Seal
of Contractor**

**Executive Engineer (E)
Deendayal Port Authority**

DETAILED SCOPE OF WORK

The scope of work includes Pilot project of implementation of SCADA System at 66/11kV Substation Kandla including all the required Hardware, Software and system intergration.

The general scope of work will include:

- i. Designing of complete SCADA system at 66/11kV Substation, Kandla and relevant.
- ii. SCADA System supply, installation, testing and commissioning as per the submitted design after due approval of the design and system from Engineer-in-Charge Deendayal Port Authority.
- iii. The work includes all the manpower, tools and tackles, transport, etc. all in the scope of the contractor.
- iv. The work also includes necessary modification in the existing system at site, if necessary for SCADA system installation and it would be completely in the scope of the contractor without any additional cost. The contractor is advised to visit the site to envisage the requirements of modifications, if any.
- v. All the module cabinet housing, power and control cable supply, connection and laying, appropriate laying through the conduits, supply and installation of cable conduits, etc. All the necessary accessories and arrangements on the site is under the scope the scope of the contractor at no extra cost.

Technical Specification No.1

Supply, Installation, Testing and Commissioning of Energy Monitoring Software With 1200 Tag with USB License Key for 20 Energy Meters & 20 IDMT Relay - software - development and system Integration.

It also include one License for one computer standalone system.

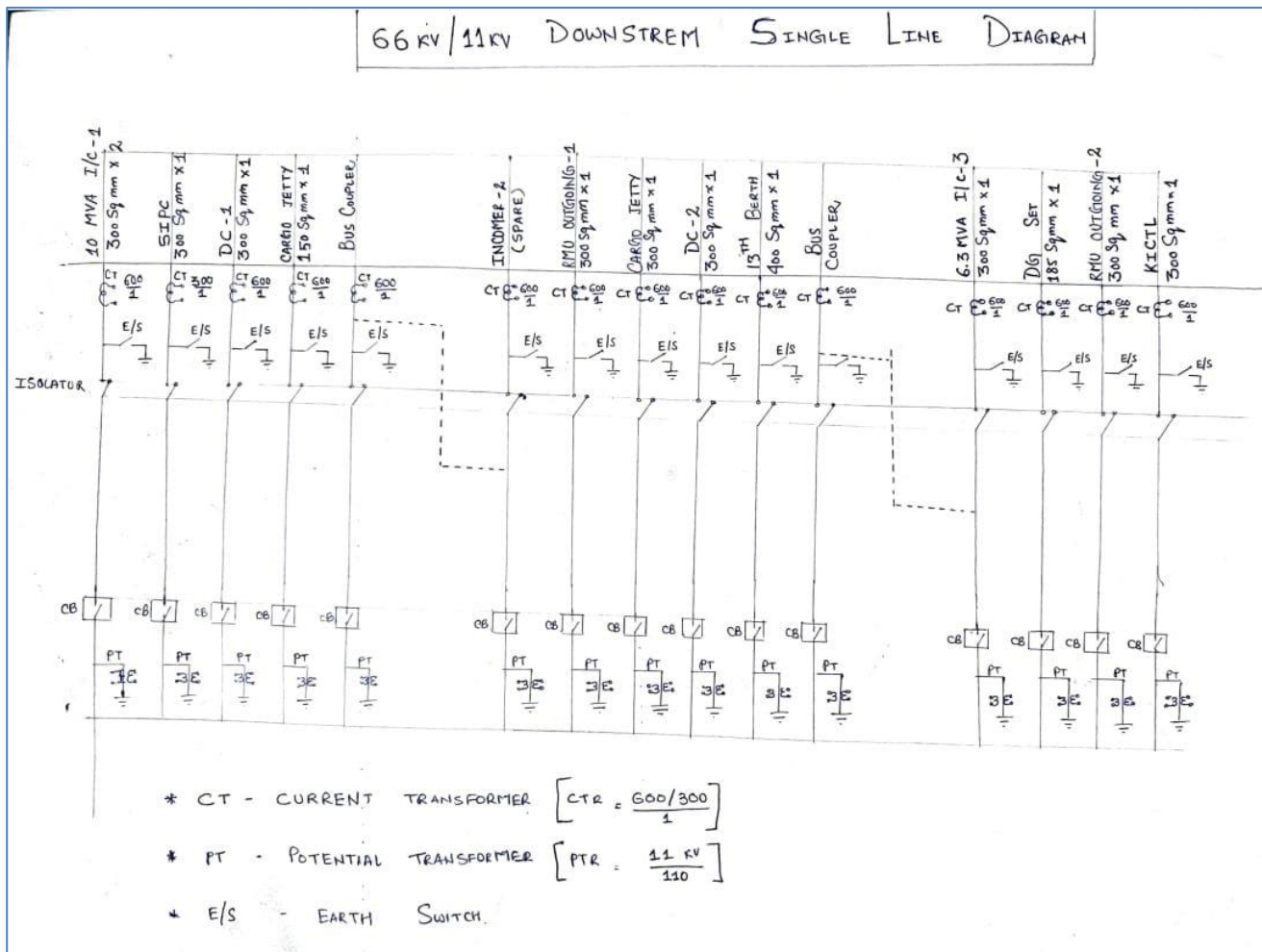
The software must be capable of representing (not limited to):

- Mimic Diagram, SLD Layout View
- Current & Historical Trends,
- Current & Historical Alarm,
- Reports(15Min/Hourly/Shift/Daily/Monthly/Yearly)

The general tentative (but not limited to) features of the Energy Monitoring software are as under:

- Comprehensive dashboard
- Interactive charts
- Customize GUI

- Graphical Reporting
- Tabular monitoring
- Automatic E-Mails
- Cloud storage
- Capable to work in static IP
- Capable to work in local
- Customize reports
- User authentication
- Automatic SMS alerts against set values of load and other parameter
- Accurate data.
- Automatic E-Mail of reports for MIS reporting.
- Machine Runtime and Downtime reports.
- User can monitor data from iOS and Android application.



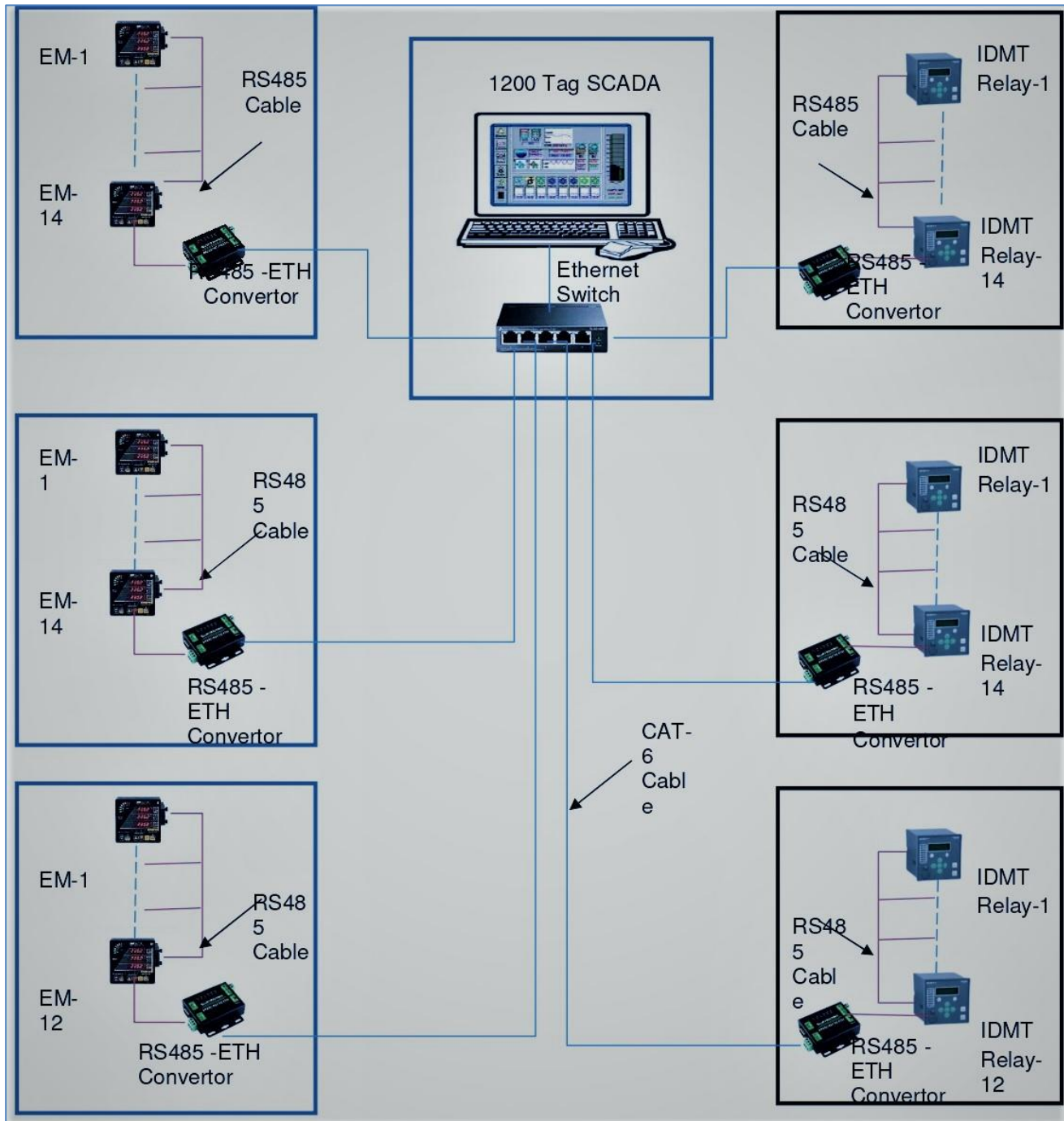
SLD - Single Line Diagram of 66/11kV Substation for reference (Actual SLD may vary)

This work includes all labour, tools & tackles as directed by Engineer in charge

Technical Specification No.2

Supply, Installation, Testing and Commissioning of RS485 port to Ethernet Converter - 3 no. And Ethernet Switch – 2 nos. (1 connected & 1 Spare)

This work includes all labour, tools & tackles as directed by Engineer in charge



Tentative Block Diagram of SCADA system (Actual Block Diagram may vary)

Technical Specification No.3

Supply, Installation, Testing and Commissioning (SITC) of Computer System with all the accessories for SCADA with Core-i5 or latest, 8 GB RAM, 1 TB HDD, Windows 11 & 22" Monitor, Colour Printer+Scanner. This also includes SITC of lockable cabinet specifically designed to lock CPU, 1000VA UPS and Printer to ensure unauthorized usage.

This work includes all labour, tools & tackles as directed by Engineer in charge

NOTE:

Expected Outcome of the SCADA System (but not limited to):

- The system should be capable of capturing, representing and storing various data related to the Electrical Systems like Voltage, Current, Power Factor, Interruptions, Fault current, Peak loads, Deviations, faults, real time and historical details of the system, etc.
- There should be a provision of data accessibility through cloud for remote accessibility if required in the future.
- There should be a feature of report generation in various modes / layout.
- The SCADA system should have a modular design, so as to ensure feasibility of future extension.
- The system should raise Alarm / Alerts during abnormal operations and the same should be recorded with the time stamp and relevant data.

Make List for Electrical Items

Sr. No.	Description	Recommended Makes
1	HV VCB	SIEMENS / CROMPTON GREAVES/ABB/Schneider
1(a)	HV Gas Insulated Breakers	SIEMENS /Schneider/ABB
2	POWER TRANSFORMERS	VOLTAMP/CROMPTON GREAVES /BHARAT BIJLEE/ BHEL/ SIEMENS/ABB/ Schneider/T&R
3	DISTRIBUTION TRANSFORMERS	EMCO/KIRLOSKAR/PATSON/VOLTAMP/ABB/Schneider/T&R
4	RESIN CAST TRANSFORMERS	
	A) RESIN CAST IMPREGNATED	VOLTAMP / KIRLOSKAR / EMCO
	B) DRY CAST	VOLTAMP/KIRLOSKAR/EMCO
5	HT XLPE CABLES	POLYCAB/TORRENT/RPG ASIAN/ NICCO/GLOSTER/ UNISTAR/ UNIVERSAL
6	LT XLPE CABLES	POLYCAB/TORRENT/RPG ASIAN/ NICCO/ RALLISON/PRIMECAB/ HAVELLS/ UNIVERSAL/ UNISTAR/AVOCAB
7	LT ACB	SIEMENS/L&T/SCHNEIDER/C&S
8	PROTECTION RELAYS	AREVA/L&T/SIEMENS/ABB/C&S
9	LT PANEL	CPRI APPROVED
10	CHANGE OVER SWITCH	SIEMENS/L&T/ABB/C&S/SCHNIDER/ LEGRAND / INDOASIAN
11	SFU FOR MAIN LT DISTRIBUTION PANELS	SIEMENS/L&T/ABB/C&S
12	SFU FOR DISTRIBUTION PANELS & FEEDER PILLERS	SIEMENS/L&T/ABB/C&S/ SCHNEIDER/ LEGRAND/ INDOASIAN/HAVELLS
13	MCCB FOR MAIN LT DISTRIBUTION PANELS	SIEMENS/L&T/ABB
14	MCCB FOR DISTRIBUTION PANELS AND FEEDER PILLERS	SIEMENS/L&T/ABB/C&S/ SCHNIDER/ LEGRAND/ INDOASIAN/HAVELLS
15	MCB/ELCB/RCCB/ RCCBO FOR MAIN LT DISTRIBUTION PANELS	SIEMENS/HAGER L&T/ABB
16	MCB FOR DISTRIBUTION PANELS AND FEEDER PILLERS	SIEMENS/L&T/ABB/C&S/ SCHNEIDER/ LEGRAND/ INDOASIAN/ HAVELLS/ STANDARD

17	MCB DISTRIBUTION BOARD	STANDARD / HENSEL/LEGRAND / INDOASIAN / HAVELLS
18	MULTI FUNCTION DIGITAL METER FOR MAIN LT DISTRIBUTION PANELS/DIGITAL KWH METERS	L&T/ENERCON/SECURE/L&G/ RISHABH
19	ANALOG VOLT/AMPARE METER FOR DISTRIBUTION PANELS AND FEEDER PILLERS	RISHABH/AE/ENERCON/L&T
20	SLECTOR SWITCH FOR VOLTMETER/AMPARE METER	L&T/SIEMENS/C&S
21	POWER CONTACTOR & OVER LOAD RELAYS	L&T/SIEMENS/ABB
22	QUARTZ TIME CLOCK SWITCH	L&T/INDOASIAN/SIEMENS
23	PVC WIRE WITH COPPER CONDUCTOR	RR KABEL/KEI/POLYCAB/MILEX/GUJCAB/ STANDARD/ FINOLEX/ ANCHOR
24	FLUSH TYPE SWITCHES, SOCKETS, HOLDERS AND CEILING ROSES & ELECTRONIC REGULATORS	ANCHOR/MK/NORTHWEST/VINAY/PANAMA/HAVELLS
25	DOOR BELLS/CALL BELLS	ANCHOR/LEGEND/MK/NORTHWEST
26	MODULAR SWITCHES, SOCKETS, PLATES & BOXES	ANCHOR / MK / NORTHWEST / LEGRAND /HAVELLS/ INDOASIAN/ SIEMENS
27	PVC CONDUIT/OVAL CONDUIT & CASSING CAPPING AND ACCESSORIES	PRECISION/VULCAN/FINOLEX/ GARWARE/ RESTOPLAST/ SWASTIK/ BPI
28	GLS LAMPS & FLUORESCENT LAMPS	PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES / OSRAM / SURYA ROSHNI /GE
29	HPSV, HPMV & METAL HELIDE LAMPS	PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES / OSRAM / SURYA ROSHNI /GE
30	IGNITORS FOR HPSV, METAL HELIDE LAMPS	PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES / OSRAM / SURYA ROSHNI /GE
31	LUMINARIES	PHILIPS/BAJAJ/WIPRO/CROMPTON GREAVES / OSRAM / SURYA ROSHNI /GE
31a	LED Luminaries	Philips /Bajaj/Wipro/CG/Surya/Pyrotech/Syska/Nessa having surge Protection $\geq 10KV$ for fittings & internal Surge protection for Driver of $\geq 4KV$, LED Chip only OSRAM/CREE/Philips Lumileds/Citizen/Nicia with LM-79,80 CERTIFICATION

32	CEILING FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC
33	WALL MOUNTING FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC
34	EXHUAUST FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC
35	HEAVY DUTY INDUSTRIAL WALL MOUNTING FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC
36	WATER COOLER	VOLTAS/SHRIRAM USHA/BLUE STAR
37	AIR CONDITIONERS	VOLTAS/CARRIER/BLUESTAR/USHA/ HITACHI/LG/ SAMSUNG/ONIDA
38	REFRIGERATORS	VOLTAS/CARRIER/BLUESTAR/USHA/ HITACHI/LG/ SAMSUNG/WHIRLPOOL
39	VOLTAGE STABILIZER	VEELINE / CAPRI
40	INVERTERS	SUKAM / MICROTEK Note: Havells, ABB, SMA, Fronius, Delta or equivalent make Inverters are subject to submission of relevant documents of successful operation in various Government Orgnizations
41	D.G. SETS A) ENGINE B) ALTERNATOR	CUMMINS/GREAVES/KIRLOSKAR/ CATERPILLAR/ ASHOK LEYLAND/VOLVO STAMFORD/CROMPTON GREAVES /JYOTI/ KIRLOSKAR ELECTRIC
42	ELECTRIC MOTOR	ALSTOM/CROMPTON GREAVES /SIEMENS/ KIRLOSKAR/ABB
43	WATER PUMPS	SWASTIK / KSB
44	WATER GEYSER	BAJAJ/USHA / CROMPTON GREAVES / SPHEREHOT / RACOLD
45	LUGS & CABLE GLANDS	DOWELLS / JAINSON / BRACO
46	Computer System	HP, DELL, Lenono or equivalent
47	UPS	Wipro, Emerson, Luminous, Microteck or equivalent
48	Printer + Scanner	Canon, HP or equivalent