

**ANNEXURE - 3A DCS, VMS etc, FOR 2X800 MW KODERMA CHP, BHP, LHP, GHP**

Scope	Description	Terminal Point
DDCMIS for CHP System	<b>BHEL DCS</b> <b>(Following details are required for sizing of CHP DCS)</b> -Control room locations and layout( of all electrical areas ) -Routing distance of cable from one control room to another. - Total count of IOs at each location with Types of IO's (AI/AO/DI/DO)  <b>For detailed engineering the following needs to be submitted by vendor</b> P&ID diagrams (with KKS for drives and IO's) IO List (including KKS, Description, Type of signal, Alarm limits, Ranges, units, JB grouping, control location, voltage ratings etc) Drive List Drive control philosophy JB grouping (including cable details) Alarm Schedule SOE list Logic diagrams (block diagram) Control write up (with KKS tags included) Plant graphics )	- Cable scope (all power, control, instrumentation cables along with glands and lugs in EPC -Bidder scope) - UPS,ACDB/DCDB in all CHP control rooms, in EPC Bidder scope - Erection and commissioning of DCS, VMS, UPS, 24V DC system, ACDB, DCDB etc shall be in bidders scope. Only commissioning supervision will be provided by EDN for DCS and VMS
CHP Process LAN Connectivity	with SG/TG/BOP DDCMIS using BHEL DCS potocol	FO Terminal point at CCR( SG/TG/BOP Control room)
CHP PLC's Connectivity	with STATION LAN	FO Terminal Point at CCR/ Wireless Terminal Point at CCR
CHP Network Management LAN Connectivity	with CCR StationLAN	FO terminal point at CCR
Access Control, IPS Firewall, IDS Firewall, DMZ connectvity & StationLAN	To CCR( SG/TG/BOP Control room) StationLAN	FO terminal point at CCR
Administrative LAN Connectivity, Domain Controller, Cyber Securiy Package,SIEM,WSUS(Patching)	To CCR i-DMZ	FO terminal point at CCR
LVS, DESK& Furniture , miniUPS, FOC, HDPE, Wireless	CHP EPC Bidder's scope unless explicitly procure from BHEL EDN along with the BHEL DCS to maintain uniformity.	
<b>Communication Protocols for connectivity with</b>		
WT1 PLC ( if applicable)	OPC UA	StationLAN at CCR
Wagon Tippler-2 PLC ( if applicable)	OPC UA	StationLAN at CCR
Stacker Reclaimer PLC ( if applicable)	OPC UA	StationLAN at CCR
COAL SAMPLING UNIT ( if applicable)	* See Note	* See Note
* Note: As per TECHNICAL SPECIFICATIONS SECTION – VI, PART-A ,SUB-SECTION-IIC, Clause 9.00.00 :For certain systems where small / micro PLC is integrally mounted on the equipment, Contractor's standard and proven practice shall be acceptable. This shall be finalized during detailed engineering.		