



Exploration & Production

GENERAL SPECIFICATION

ELECTRICAL

GS ELE 091

Minimum CONTRACTOR document requirements

00	12/03	First issue
Rev.	Date	Notes



Contents

1. Scope	3
2. Reference documents.....	3
3. Legend	4
4. Minimum CONTRACTOR document requirements	4



1. Scope

This document is intended to define the minimum requirements for CONTRACTOR Documents to be prepared and issued for COMPANY review or approval.

The list is not intended to be exhaustive and any document necessary for the complete execution of the Basic Design and/or Detailed Engineering as applicable, shall be prepared by the CONTRACTOR and be made available for COMPANY review.

2. Reference documents

The reference documents listed below form an integral part of this General Specification. Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the EFFECTIVE DATE of the CONTRACT.

Standards

Reference	Title
Not applicable	

Professional Documents

Reference	Title
Not applicable	

Regulations

Reference	Title
Not applicable	

Codes

Reference	Title
Not applicable	

Other documents

Reference	Title
Not applicable	

Total General Specifications

Reference	Title
Not applicable	

3. Legend

Class 1 for Approval

CONTRACTOR may not proceed until written comments have been given by COMPANY.

Class 2 for Review

CONTRACTOR may proceed if COMPANY has made no comment after contractual response time by COMPANY.

Class 3 for Reference Only

COMPANY reserves the right to comment but CONTRACTOR may continue his work.

CONTRACTOR is required to mark each document issued with a stamp for "Documentation Class" and to enter the appropriate Class Number. Where the assignment of a particular class is in doubt, CONTRACTOR shall refer to COMPANY for agreement.

4. Minimum CONTRACTOR document requirements

Document	Basic Design	Detailed Design/EPC	Class
Electrical Deliverable List	X	X	1
Basis of Electrical System Design, Protection and Control Philosophy	X	X	1
Electrical Consumer Lists and Load Balances	X	X	2
Electrical Equipment List (can be combined with previous document)	X	X	2
Equipment Particular Specifications	X	X	1
Equipment Data-Sheets	X	X	1
Long Lead Item Specifications, Data-Sheets, Requisition	X	X	1
Long Lead Item Technical Bid Evaluation	X		1
Electrical Equipment Requisition		X	1
Electrical Equipment Technical Bid Evaluation		X	1
Single line Diagrams	X	X	1
Typical Protection Diagrams (*)	X		1
Detailed Protection Diagrams		X	1
Interlocking and Intertripping Diagrams (*)	X	X	1
Logic Diagrams (including Automatic Transfer Diagrams)	X Typical	X	1
HV & LV Typical Schematic Diagrams (*)	X		1
Complete HV & LV Schematic Diagrams		X	2



Document	Basic Design	Detailed Design/EPC	Class
Interconnection and External Wiring Diagrams (Typical)		X	1
Complete Interconnection and External Wiring Diagrams		X	2
Trouble Shooting Diagrams		X	2
Load Shedding Specification	To be defined in Elec. Basis of system design	X	1
Motor Reacceleration and Starting/Restarting Study/Specifications		X	2
Black Start Specification	X	X	1
Definition of Interface with the DCS	X	X	1
VDU Graphic Displays Requirements on ICSS and/or ECS for Electrical System	X Typical	X	1
Electrical Control System Design Specifications and relevant documents (exchange tables, Architecture, etc.)	X	X	1
Sizing of Main Equipment (Power generation, distribution equipment, etc.)	X	X	1
UPS sizing (c/w calculation justifying the size)	X	X	1
Batteries and Chargers Sizing (c/w calculation note)	X	X	1
Load Flow and Short-Circuit Calculation	X	X	2
Dynamic Stability Study (if applicable)	X	X	2
Models, transfer function block diagrams for main and essential power generation (governor and AVR)	X	X	3
Cable Sizing Calculation note and Charts	X	X	1
Harmonic Calculation (if applicable)	X	X	2
Selectivity Study and relay setting booklets for all AC and DC systems		X	2
Earthing Grid Sizing Calculation Note	X	X	1
Lightning Protection Specification c/w sizing calculation note (to be performed by an approved SUBCONTRACTOR)	X	X	1
Substation Location drawings and main cable routings	X	X	2



Document	Basic Design	Detailed Design/EPC	Class
Substation Layout	X	X	2
Complete cable routings and routing cross sections including MCT schedule/arrangement		X	2
Electrical Installation Works Specification		X	2
Heat tracing particular specification	X	X	2
Heat tracing System Layout		X	2
Earthing and Bonding System Particular Specification		X	2
Bulk Material Specifications (lighting fixtures, Junction Boxes, Control Stations, Cable Glands, MCTs, etc.).		X	2
Bulk Material Requisition		X	3
Typical Installation Standards (Earthing, Power, Lighting)	X		2
Detailed Installation Standards (Earthing, Power, Lighting) for Construction		X	2
Earthing and Lightning Layout	X Main	X Detailed	3
Lighting layout		X	2
Lighting circuit diagrams		X	3
Lighting Calculation (illumination level, etc.)		X	3
Main Switchgear Schedule	X	X	2
Small Power Distribution Single Line Diagrams (AC, DC, etc.)	X		1
Small Power Distribution (AC, DC, etc.) Distribution Board schedule	X	X	2
Cable Schedule	X	X	2
EPC scope of work	X		2
Material Take Off (Preliminary)	X		2
Earthing, Lighting and Power Material Take Off		X	3
Inspection and Test Plans	X	X	2
Electrical System Operating Manuals		X	1
VENDOR Documentation and data book including equipment Certification Dossiers, Handling, Preservation, Erection, Commissioning, Operation and Maintenance Manuals		X	2



Document	Basic Design	Detailed Design/EPC	Class
Certification Dossiers for Equipment intended for potentially explosive gas atmospheres		X	1
As Built documentation and drawings (including VENDOR's ones)		X	2
Spare parts lists		X	2
Precommissioning and Commissioning Procedures and Testing Record Sheets		X	1