



# PROCEDURES & GUIDELINES FOR MATERIAL / EQUIPMENT PRE-QUALIFICATION

Related To EtihadWE Electricity Network
(Transmission & Distribution)

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#### I. INTRODUCTION

Federal Electricity & Water Authority (EtihadWE) is committed to provide adequate, safe, reliable and efficient electric service as per international best practice and standards. As such, EtihadWE is continuously monitoring, assessing and evaluating all materials / equipment to be used in delivering its services to its consumers.

Pre-qualification approval for all materials / equipment issued by EtihadWE is mandatory for all the suppliers / manufacturers. Only those suppliers / manufacturers who meet EtihadWE requirements and having sufficient capability & experience will be considered pre-qualified and be included in EtihadWE's "Approved List of Materials / Equipment" and may be considered for supply and/or use in EtihadWE Electricity Transmission & Distribution Network in the Northern Emirate.

This document is intended to provide the general procedures and guidelines for all suppliers / manufacturers who would like to get pre-qualified with EtihadWE for their materials / equipment. Suppliers / Manufacturers interested in getting pre-qualified for inclusion in the "Approved List of Materials / Equipment" are requested to read carefully this procedures & guidelines and submit their "Materials / Equipment Pre-qualification Documents" in the format suggested in this document. All suppliers / manufacturers are advised to comply with this procedures and guidelines and no deviation shall be accepted by EtihadWE.

#### II. MATERIAL / EQUIPMENT MANUFACTURER REQUIREMENTS

(Kindly refer to Annexure A & B for the list of Materials / Equipment covered)

Materials / equipment proposed for pre-qualification and inclusion in ETIHADWE's "Approved List of Materials / Equipment" shall matched the latest International Standard & EtihadWE requirement and subject to but not limited to the following:

- A. Materials / equipments to be supplied to EtihadWE shall meet all the following requirements:
  - 1. Shall be manufactured by quality manufacturers in UAE, GCC Countries, Europe, North America, Japan and South Korea only.
  - 2. Shall have minimum three (3) years satisfactory experience record in Power Utilities / Authorities in UAE or GCC Countries (performance certificate from Power Utilities / Authorities to be submitted).
    - Materials / equipment manufactured in UAE having less than three (3) years satisfactory experience record in Power Utilities / Authorities in UAE or GCC Countries may also be considered provided that the manufacturer shall unconditionally extend the guarantee for six (6) years from date of energization or ten (10) years from date of supply (received by EtihadWE) whichever comes less in actual.
  - 3. Shall have valid Type Test Reports / Certificates not older than six (6) years from EtihadWE Approved Third Party Independent Test Laboratories (valid type test report to be submitted).
    - A type test older than six (6) years maybe accepted, subject to the criteria that the proposed manufacturer should submit proof stating that there is no change in design & components and shall comply with the latest relevant IEC standards.

- B. However, materials / equipment manufactured from other countries not mentioned above may also be considered subject to the following mandatory requirements:
  - 1. Shall have minimum five (5) years experience of proven successful operation in Power Utilities / Authorities in UAE or GCC Countries only (performance certificate from Power Utilities / Authorities to be submitted).
  - 2. Shall have valid Type Test Reports / Certificates not older than six (6) years from EtihadWE Approved Third Party Independent Test Laboratories only (valid type test report to be submitted). Moreover, the actual testing of the proposed material / equipment should have been performed at the corresponding EtihadWE Approved Third Party Independent Test Laboratory only.
    - In reference to the above, a type test report older than six (6) years maybe accepted, subject to the criteria that the proposed manufacturer should submit proof stating that there is no change in design & components and shall comply with the latest relevant IEC standards.
  - 3. Shall unconditionally extend the guarantee for six (6) years from date of energization or ten (10) years from date of supply (received by EtihadWE) whichever comes less in actual.

#### III. REQUIREMENT FOR TYPE TEST

A type test report shall be submitted for every proposed manufacturer / brand, material / equipment & type / model and subject to but not limited to the following:

A. Type test shall be conducted only by EtihadWE Approved Third Party Independent Test Laboratories (which are having valid IEC 17025 Accreditation Certificate) and at their corresponding testing laboratory. Valid accreditation certificate to be submitted.

Type test list and procedures shall be according to the latest International Standard and EtihadWE requirement.

Kindly refer to Annexure "C" for "EtihadWE Approved Third Party Independent Test Laboratories".

- B. If the Manufacturer (applicable for manufacturers in UAE, GCC Countries, Europe, North America, Japan and South Korea only) has its own test laboratory facility to carry out type test or proposes a test laboratory other than "EtihadWE Approved Third Party Independent Test Laboratories", then the following shall be mandatory requirements:
  - 1.) Shall have a valid IEC 17025 Accreditation Certificate for the proposed Test Laboratory (valid accreditation certificate to be submitted).
  - 2.) Type test list and procedures shall be according to the latest International Standard and EtihadWE requirement. In addition, the list and procedures shall be reviewed & approved by EtihadWE and corresponding "EtihadWE Third Party Independent Test Laboratory" as discussed in Item "A" above.
  - 3.) Type testing as per the approved list and procedure shall be conducted in the presence of the approving "EtihadWE Third Party Independent Test Laboratory" representative/s and shall be attended by EtihadWE Engineers at their discretion. All cost towards the transportation, accommodation and travel documentation (e.g. visa, etc.) shall be borne fully by the supplier / manufacturer.

- 4.) The approving "EtihadWE Third Party Independent Test Laboratory" shall review and approve the Type Test Reports and produce certificates for the offered material / equipment.
- C. For minor materials / equipment only (refer to Annexure "B"), EtihadWE does not have any preferred third party independent test laboratories. However, type testing list, procedures & test laboratories are subject to EtihadWE requirement & approval and shall be according to the latest international practice & standards.

## IV. PROCEDURE FOR APPLICATION OF MATERIAL / EQUIPMENT PRE-QUALIFICATION

- 1. Suppliers / Manufacturers proposing pre-qualification of material / equipment must have their Company registered with EtihadWE as a pre-requisite.
- 2. Supplier / Manufacturer to download the application form from EtihadWE web site (http://www.EtihadWE.gov.ae/). Annexure D is attached for your reference.
- 3. Fill the application form with complete information of the company duly signed & stamped and submit with all necessary pre-qualification supporting documents required to:

#### **DIRECTOR OF PURCHASES, CONTRACTS & STORES DEPARTMENT**

FEDERAL ELECTRICITY & WATER AUTHORITY
P.O. BOX 1672, DUBAI, UNITED ARAB EMIRATES

4. This pre-qualification documents shall accompany an Assessment Fee of <u>AED 1000</u> (per proposed manufacturer / brand, material / equipment and type / model) towards a non-refundable fee for the assessment of the proposed material / equipment for inclusion in ETIHADWE's "Approved List of Material / Equipment". <u>AED 1000 will be paid via online after submission of the documents to the PCS Dept.</u>

- 5.
- 6. ETIHADWE's "Purchases, Contracts & Stores Department (PCSD)" will collect all the applications submitted by various suppliers / manufacturers for pre-qualification process and carry out initial scrutiny of the applications against EtihadWE compliances and rules & regulations. Thereafter, PCSD will distribute the Pre-qualification Document internally within EtihadWE for review and comments.
- 7. Only "Purchases, Contracts & Stores Department" will be the point-of-contact between EtihadWE and the supplier / manufacturer. The supplier / manufacturer are advised not to deal / communicate directly with any EtihadWE employee/s involved in the pre-qualification assessment of the material / equipment, unless otherwise called officially by EtihadWE. If the supplier / manufacturer offers, or tries implicitly or explicitly, to influence EtihadWE or any of its employees in favour of the supplier /

manufacturer in any form such as donations, gifts, rewards, etc., EtihadWE has the right to immediately reject its application and/or ban the supplier / manufacturer indefinitely.

- 8. Whenever required and deemed necessary, EtihadWE through Purchases, Contracts & Stores Department may ask the Supplier / Manufacturer as part of the prequalification assessment to:
  - a meeting for material / equipment presentation, clarification and other discussions
  - submit the sample of the proposed material / equipment
  - visit their office / warehouse / factory
  - witness material / equipment testing

The supplier / manufacturer must comply and bear the responsibility to such expenses that may occur without any cost implication to EtihadWE.

- 9. The Pre-qualification Documents shall be assessed but not limited to the following criteria:
  - a. Compliance of material / equipment to the latest International Standards and EtihadWE requirements.
  - b. Performance of material / equipment in EtihadWE Network (if already existing) and from other Power Utilities / Authorities.
  - c. Result of Type Test and other test available.
  - d. After Sales Support / Services available for the proposed material / equipment.
- 10. The EtihadWE pre-qualification of material / equipment application shall have the following categories:
  - a. Materials / equipment "Approved"
  - b. Materials / equipment "Approved for Trial Orders with Limited quantity"
  - c. Material / equipment "Under Hold"
  - d. Materials / equipment "Rejected"
- 11. In case of material / equipment is found meeting all the requirements and to the satisfaction of EtihadWE then the material will be included in the "Approved List of Material / Equipment".

- 12. In case the outcome of the assessment is found unsuccessful then comments will be forwarded to the Supplier / Manufacturer by "Purchases, Contracts & Stores Department".
  - In addition, EtihadWE at its own discretion may reject a pre-qualification document application without assigning any reasons and/or justifications.
- 13. A pre-qualified material / equipment shall have a validity of THREE (3) years and must be renewed by the supplier by paying the renewal fees of AED 500 per manufacturer / brand, material / equipment and type / model. Documents shall be submitted as per the below checklist (Section V).
- 14. As part of the ongoing performance assessment, EtihadWE will consider the feedback from various EtihadWE Departments, other Utilities / Authorities, market, and other possible sources regarding the performance of the subject material / equipment and if the performance is found dissatisfactory then the approval of the material / equipment shall be revoked any time by EtihadWE and the same along with comments will be communicated to the Supplier / Manufacturer.
- 15. Any changes on address or contact details of the supplier / manufacturer should be relayed immediately to EtihadWE.

#### V. CHECKLIST FOR PRE-QUALIFICATION DOCUMENTS

For every proposed manufacturer / brand, material / equipment and type / model, a prequalification document shall be submitted in one (1) hard copy (with index tabs/dividers to separate each submittals/documents) and two (2) soft copy (clear scan copy in CD). **to PCS Dept.** Moreover, ensure that all pages of this document are signed and stamped accordingly.

The following shall serve as checklist for the materials / equipment pre-qualification document:

- 1. Cover Letter addressed to the Director of "Purchases, Contracts & Stores Department.
- 2. Application Form for Material / Equipment Pre-Qualification (Annexure D).
- 3. Valid EtihadWE Registration Card / Certificate (copy).
- 4. Manufacturer's Company Profile, Accreditation and Certifications.
- 5. Manufacturer's Certification for city and country of origin of Material / Equipment.
- 6. Material / Equipment brochure, operation & maintenance manual and detailed technical specifications.
- 7. List of available after sales support / services for the material /equipment.
- Type test reports / certificates (including valid accreditation certificate) and other test reports available.
- 9. Performance certificate from Utilities / Authorities (Annexure E).
- 10. List of other clients utilizing the material /equipment (Annexure F).
- 11. Other pertinent data and information deemed necessary for the assessment of the material / equipment pre-qualification.
- 12. Guarantee Extension Certificate, if applicable (Annexure G).
- 13. Assessment Fee (AED 1000 per proposed manufacturer / brand, material / equipment and type / model). AED 1000 will be paid via online after submission of the documents to the PCS Dept.

### **ANNEXURE - A**

LIST OF "MAJOR" MATERIAL / EQUIPMENT FOR PRE-QUALIFICATION

#### **ANNEXURE - A**

#### **LIST OF "MAJOR" MATERIAL / EQUIPMENT FOR PRE-QUALIFICATION**

#### SUBSTATION:

Material / Equipment	SAP Item Number
132kV System - Substation	
132 KV Gas Insulated Switchgear - GIS	
- Double bus bar system rated 2500A	
132 KV GIS - Local Control Cubicle (LCC)	
132 KV Control Panels	
132 KV Relay Panels	
132 KV Busbar Protection Panels	
Fault Recorder Panel	
SF6 Gas handling plant for 132kV	
132 KV Power Transformers	
- 60/90MVA	
- 50/63MVA	
- 35/50MVA	
33kV System - Substation	
33kV Neutral Earthing Switchgear (NES)	
33kV Neutral Earthing Resistor (NER)	
33 KV Gas Insulated Switchgear - GIS	
- Single bus bar system rated 2500A	
- Double bus bar system rated 2500A	
33 KV Combined Control & Relay Panels	
33 KV Busbar Protection Panels	
33 KV Plug in type terminations	
SF6 Gas handling plant for 33kV	
33 KV Power Transformers	
- 20MVA	
- 20/25MVA	
33 KV Reactors	
33 KV Capacitor Banks	
- 20.0MVAr	
	132kV System - Substation  132 KV Gas Insulated Switchgear - GIS

1	Sr.	Material / Equipment	SAP Item Number
2 11 KV Air Insulated Switchgear - AIS - Single bus bar system rated 2500A - Single bus bar system rated 3150A 3 11 KV Busbar Protection Panels 4 11 KV Capacitor Banks - 5.5MVAr, 1-Stage - 6.0MVAr, 3-Stage 5 Capacitor Control Panel 6 11/0.4kV Auxiliary Transformers - 500kVA - 630kVA  LVAC & DC System - Substation  1 Low Voltage Alternating Current (LVAC) System - LVAC Distribution Board (DB) - LVAC Essential Distribution Board (EDB)  2 Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Metering class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		11kV System - Substation	
- Single bus bar system rated 2500A - Single bus bar system rated 3150A  3	1	11kV Neutral Earthing Resistor (NER)	
- Single bus bar system rated 3150A  11 KV Busbar Protection Panels  11 KV Capacitor Banks - 5.5MVAr, 1-Stage - 6.0MVAr, 3-Stage  5 Capacitor Control Panel  11/0.4kV Auxiliary Transformers - 500kVA - 630kVA  LVAC & DC System - Substation  1 Low Voltage Alternating Current (LVAC) System - LVAC Distribution Board (DB) - LVAC Essential Distribution Board (EDB)  2 Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Metering class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays	2	11 KV Air Insulated Switchgear - AIS	
11 KV Busbar Protection Panels  11 KV Capacitor Banks - 5.5MVAr, 1-Stage - 6.0MVAr, 3-Stage  5 Capacitor Control Panel  11/0.4kV Auxiliary Transformers - 500kVA - 630kVA  LVAC & DC System - Substation  1 Low Voltage Alternating Current (LVAC) System - LVAC Distribution Board (DB) - LVAC Essential Distribution Board (EDB)  2 Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		- Single bus bar system rated 2500A	
4 11 KV Capacitor Banks		- Single bus bar system rated 3150A	
- 5.5MVAr, 1-Stage - 6.0MVAr, 3-Stage  5	3	11 KV Busbar Protection Panels	
- 6.0MVAr, 3-Stage  5 Capacitor Control Panel 6 11/0.4kV Auxiliary Transformers - 500kVA - 630kVA  LVAC & DC System - Substation  1 Low Voltage Alternating Current (LVAC) System - LVAC Distribution Board (DB) - LVAC Essential Distribution Board (EDB)  2 Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Metering class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays	4	11 KV Capacitor Banks	
5 Capacitor Control Panel 6 11/0.4kV Auxiliary Transformers - 500kVA - 630kVA  LVAC & DC System - Substation 1 Low Voltage Alternating Current (LVAC) System - LVAC Distribution Board (DB) - LVAC Essential Distribution Board (EDB) 2 Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation 1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		- 5.5MVAr, 1-Stage	
6 11/0.4kV Auxiliary Transformers - 500kVA - 630kVA  LVAC & DC System - Substation  1 Low Voltage Alternating Current (LVAC) System - LVAC Distribution Board (DB) - LVAC Essential Distribution Board (EDB)  2 Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Metering class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		- 6.0MVAr, 3-Stage	
- 500kVA - 630kVA  LVAC & DC System - Substation  Low Voltage Alternating Current (LVAC) System - LVAC Distribution Board (DB) - LVAC Essential Distribution Board (EDB)  Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  Protection Relays Relay and Control panels Current Transformers - Protection class Current Transformers - Metering class Voltage Transformers - Metering class Voltage Transformers - Metering class Fault Monitoring panels Bay Controller Unit (BCU) Bay Controller and Protection Unit (BCPU) Auxiliary relays	5	Capacitor Control Panel	
LVAC & DC System - Substation  Low Voltage Alternating Current (LVAC) System - LVAC Distribution Board (DB) - LVAC Essential Distribution Board (EDB)  Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  Protection Relays Relay and Control panels Current Transformers - Protection class Current Transformers - Metering class Voltage Transformers - Metering class Voltage Transformers - Metering class Fault Monitoring panels Bay Controller Unit (BCU) Bay Controller and Protection Unit (BCPU) Auxiliary relays	6	11/0.4kV Auxiliary Transformers	
LVAC & DC System - Substation  1		- 500kVA	
1 Low Voltage Alternating Current (LVAC) System - LVAC Distribution Board (DB) - LVAC Essential Distribution Board (EDB)  2 Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Metering class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		- 630kVA	
- LVAC Distribution Board (DB) - LVAC Essential Distribution Board (EDB)  2 Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		LVAC & DC System - Substation	
- LVAC Essential Distribution Board (EDB)  2 Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays	1	Low Voltage Alternating Current (LVAC) System	
Direct Current (DC) System - 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Metering class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		- LVAC Distribution Board (DB)	
- 110V Batteries - Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		- LVAC Essential Distribution Board (EDB)	
- Battery Charger - Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays	2	Direct Current (DC) System	
- Direct Current Distribution Board (DCDB) - Inverter  Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		- 110V Batteries	
Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		- Battery Charger	
Protection Equipment - Substation  1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		- Direct Current Distribution Board (DCDB)	
1 Protection Relays 2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		- Inverter	
2 Relay and Control panels 3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays		Protection Equipment - Substation	
3 Current Transformers - Protection class 4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays	1	Protection Relays	
4 Current Transformers - Metering class 5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays	2	Relay and Control panels	
5 Voltage Transformers - Protection class 6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays	3	Current Transformers - Protection class	
6 Voltage Transformers - Metering class 7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays	4	Current Transformers - Metering class	
7 Fault Monitoring panels 8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays	5	Voltage Transformers - Protection class	
8 Bay Controller Unit (BCU) 9 Bay Controller and Protection Unit (BCPU) 10 Auxiliary relays	6	Voltage Transformers - Metering class	
9 Bay Controller and Protection Unit (BCPU)  10 Auxiliary relays	7	Fault Monitoring panels	
10 Auxiliary relays	8	Bay Controller Unit (BCU)	
	9	Bay Controller and Protection Unit (BCPU)	
11 CT Shorting links	10	Auxiliary relays	
	11	CT Shorting links	

Sr.	Material / Equipment	SAP Item Number
12	Terminal Blocks	
13	Indicating lamps & switches	
14	Earthing & Lightning Protection System	
	- Surge Arresters	
	- Lightning Arresters	
	- Earthing Cables	
	Telecom & SCADA Equipment - Substation	n
1	Pilot Cables & Related Equipments	
2	Fiber Optic Cables (FOC)	
3	Optical Ground Wire (OPGW)	
4	Communication accessories - Fiber Distribution Panel	
	(FDP)	
5	Communication accessories – FOC/OPGW joints	
	enclosures	
6	Telecom Equipment - Plesiochronous Digital Hierarchy	
	(PDH)	
7	Telecom Equipment - Synchronous Digital Hierarchy	
	(SDH)	
8	PABX – Telephone Exchange & Telephones	
9	PLC – Power Line Communication System	
10	FEP – Front End Processing Equipment	
11	Networking Devices	
	(Ex. Modems, Router, Switches, etc.)	
12	Wireless Communication System & Devices	
13	Remote Terminal Unit (RTU) and accessories	
14	Cross Connection Cubicle (CCC) and accessories	
15	Direct Current (DC) System for SCADA equipments	
	- 48V <sub>DC</sub> Batteries	
	- 48V <sub>DC</sub> Battery Charger	
	- 48V <sub>DC</sub> Direct Current Distribution Board (DCDB)	
16	Transducers	
17	Temperature and Humidity Acquisition Devices	
	Mechanical Equipment - Substation	
1	Fire Protection & Detection System	

Sr.	Material / Equipment	SAP Item Number
	- Fire Hydrant System	
	- Fixed Water Spray System	
	- Clean Agent System	
	- Automatic Fire Detection and Alarm System	
	- Portable Fire Extinguishers	
	- Fire Stopping Material	
2	Heating, Ventilation & Air Conditioning (HVAC) Units	
3	Crane & Hoist System	
	- Electrical Overhead Travelling (EOT) Crane	
	- Electric Monorail Hoists	
4	Service Water System	
	Other Common Equipment - Substation	
1	Remote Tap Changer Control (RTCC) Panels	
2	Transformer Oil	
3	Cable trays and Ladders	
4	LV Power and Control Cables	
5	Electronic Energy Meters	
6	Filter Reactors	
	- Gapped-Iron Core, Indoor type	

#### **UNDERGROUND CABLES (UGC) AND OVERHEAD LINES (OHL):**

Sr.	Material / Equipment	SAP Item Number	
	Cables, Conductors and Accessories		
1	132 KV Cable, Single Core		
	- 1200mm²		
	- 630mm²		
2	33 KV Cable, Single Core		
	- 500mm²		
3	132 KV Cable Terminations		
4	132 KV Cable Joints		
5	132 KV Outdoor Sealing Ends		
6	Earth Link Disconnecting Box		
7	33 KV Cable Terminations		
8	33 KV Cable Joints		

Sr.	Material / Equipment	SAP Item Number
9	Cable Cover Tiles & Warning tapes	
10	Bonding Cables	
11	Towers	
12	OHL Insulators	
13	OHL Insulator fittings	
14	132KV OHL conductor	
	- 400mm²	
15	33KV OHL conductor	
	- 400mm²	
16	OHL conductor fittings	
17	Aircraft Warning Spheres / Aircraft Warning lighting	

#### 11kV & Low Voltage (LV):

Sr.	Material / Equipment	SAP Item Number	
	Distribution Transformers (11/0.433kV)		
1	50KVA Dist. Transformer		
2	100KVA Dist. Transformer		
3	200KVA Dist. Transformer		
4	250KVA Dist. Transformer		
5	500KVA Dist. Transformer		
6	1000KVA Dist. Transformer		
7	1500KVA Dist. Transformer		
8	2000KVA Dist. Transformer		
9	2500KVA Dist. Transformer		
10	GRP Enclosures for Substation		
	11kV Cables		
1	3x95mm² Al XLPE Cable 11KV		
2	3x185mm² Al XLPE Cable 11KV		
3	3x300mm² Al XLPE Cable 11KV		
4	3x300mm² Cu XLPE Cable 11KV		
5	3x400mm² Cu XLPE Cable 11KV		
11kV Ring Main Unit (RMU)			
1	Fused Ring Main Unit Non Extensible (FRMU)		
2	Fused Ring Main Unit Extensible (FRMUE)		

Sr.	Material / Equipment	SAP Item Number
3	Extensible Fuse Switch (EFS)	
4	Extensible Oil Switch (EOS)	
5	Double Extensible Oil Switch (DEOS)	
6	SF6 RMU	
7	SF6 RMU - Vacuum Circuit Breaker (VCB)	
8	Bus Bar Coupling Clamp	
	Overhead Line Materials	
1	100mm² All Aloy Al. Conductor	
2	150mm² All Aloy Al. Conductor	
3	150mm² Bare Al. STD Steel Conductor	
4	300mm² All Aloy Al. Conductor	
5	11kV Intermediate Cross Arm	
6	11kV Section Cross Arm	
7	11kV Line Support Assembly	
8	11kV Disc Insulator W/Fitting	
9	11kV Pin Insulator W/Pin	
10	11kV Earth Rod Assembly	
11	11kV Dropout Fuse Unit	
12	11kV Lightning Arrestor	
13	11kV Wooden Pole 10.5M	
14	L.V Wooden Pole 9M	
15	70mm copper Earthing Cable	
	Low Voltage (LV) Cables	
1	2x25mm² Al XLPE Cable L.V	
2	4x25mm² Al XLPE Cable L.V	
3	4x35mm² Al XLPE Cable L.V	
4	4x50mm² Al XLPE Cable L.V	
5	4x70mm² Al XLPE Cable L.V	
6	4x95mm² Al XLPE Cable L.V	
7	4x185mm² Al XLPE Cable L.V	
8	4x300mm² Al XLPE Cable L.V	
9	1x630mm² Cu XLPE Cable L.V	
	Service & Feeder Pillar (LV)	
1	400A Service Pillar	

Sr.	Material / Equipment	SAP Item Number
2	Type "A" Feeder Pillar 2000A	
3	Type "B" Feeder Pillar 1000A	
4	Type "C" Feeder Pillar 500A	
	Joints & Cable Terminations (11kV & LV)	
1	HS/J/X/4/25 LV	
2	HS/J/X/4/35 LV	
3	HS/J/X/4/50 LV	
4	HS/J/X/4/70 LV	
5	HS/J/X/4/95 LV	
6	HS/J/X/4/185 LV	
7	HS/J/X/4/300 LV	
8	HS/J/X/11/3/95	
9	HS/J/X/11/3/185	
10	HS/J/X/11/3/300	
11	HS/IT/R/X /11/3/185	
12	HS/IT/R/X /11/3/300	
13	HS/IT/S/X /11/3/95	
14	HS/IT/S/X /11/3/185	
15	HS/IT/S/X /11/3/300	
16	HS/IT/S/X /33/1/500 (Single Core Plug in Type)	
17	HS/OT/X /11/3/95	
18	HS/OT/X /11/3/185	
19	HS/OT/X /11/3/300	
20	HS/OT/P /11/3/95	
21	HS/OT/P /11/3/185	
22	HS/OT/P /11/3/300	
	Fuses - High Rupturing Capacity (HRC) / RM	<b>NU</b>
1	100A NHOO HRC Fuse	
2	100A NH2 HRC Fuse	
3	160A NH2 HRC Fuse	
4	200A NH2 HRC Fuse	
5	300A NH2 HRC Fuse	
6	400A NH2 HRC Fuse	
7	200A W3KF HRC Fuse	

Sr.	Material / Equipment	SAP Item Number
8	300A W3K HRC Fuse	
9	400A W3K HRC Fuse	
10	400A BIJS HRC Fuse (Open)	
11	100A NHOO Fuse Base	
12	400A NH2 Fuse Base	
13	25A RMU Fuse	
14	50A RMU Fuse	
15	90A RMU Fuse	
16	125A RMU Fuse	
17	Tow Way pole mounted fuse box	
	KWH Meter / Cabinet /	
Mi	niature Circuit Breaker (MCB) / Moulded Case Circuit I	Breaker (MCCB)
1	Single Phase kwH Meter 20/80A	
2	Single Phase kwH Electronic Meter 20/80A	
3	3 Phase kwH Meter 25/100A	
4	3 Phase kwH Electronic Meter 25/100A	
5	200/5A C.T Metering Cabinet	
6	400/5A C.T Metering Cabinet	
7	3 Phase Busbar Metering Unit 200-100/5A	
8	3 Phase Busbar Metering Unit 300-150/5A	
9	P/M Fuse Box L.V 200A/2Way	
10	70A. 1 Pole MCB (Quick Log)	
11	100A Multi -9- 1Pole MCB	
12	1 Phase MCCB 60A	
13	3 Phase MCCB 60A	
14	3 Phase MCCB 100A	

### **ANNEXURE - B**

LIST OF "MINOR" MATERIAL / EQUIPMENT FOR PRE-QUALIFICATION

#### **ANNEXURE - B**

#### **LIST OF "MINOR" MATERIAL / EQUIPMENT FOR PRE-QUALIFICATION**

#### 11kV & Low Voltage (LV):

Sr.	Material / Equipment	SAP Item Number	
	Cable Lugs		
1	25mm² Copper Lug		
2	35mm² Copper Lug		
3	50mm <sup>2</sup> Copper Lug		
4	70mm² Copper Lug		
5	95mm² Copper Lug		
6	150mm <sup>2</sup> Copper Lug		
7	185mm <sup>2</sup> Copper Lug		
8	240mm <sup>2</sup> Copper Lug		
9	300mm <sup>2</sup> Copper Lug		
10	500mm <sup>2</sup> Copper Lug		
11	630mm <sup>2</sup> Copper Lug		
12	25mm² Bi-metallic Lug		
13	35mm² Bi-metallic Lug		
14	50mm² Bi-metallic Lug		
15	70mm² Bi-metallic Lug		
16	95mm² Bi-metallic Lug		
17	150mm² Bi-metallic Lug		
18	185mm² Bi-metallic Lug		
19	300mm <sup>2</sup> Bi-metallic Lug		

## **ANNEXURE - C**

## EtihadWE APPROVED THIRD PARTY INDEPENDENT TEST LABORATORIES

#### **ANNEXURE - C**

#### **EtihadWE APPROVED THIRD PARTY INDEPENDEDNT TEST LABORATORIES**

Substation Equipment &	Conductors, Cables &		
Accessories	Accessories		
1. KEMA	1. KEMA		
2. EDF	2. Lloyd		
3. CESI	3. Bureau Veritas		
4. VDE	4. SGS		
5. ASTA	5. CESI		
6. IPH	6. EGU		
	7. Kinectrics		

## **ANNEXURE - D**

## MATERIAL / EQUIPMENT PRE-QUALIFICATION APPLICATION FORM





#### **MATERIAL / EQUIPMENT PRE-QUALIFICATION APPLICATION FORM**

(Electricity Network: Transmission & Distribution)

[ For t	the use of "EtihadWE Purchases."	Contracts & Stores Department" only ]		
Application Date (DD/MM/YYYY)	<i>(</i> ):	Type of Application:		
		New [ ] Renewal [	] Others [ ]	
Application Number:		[ for others, state purpose ]		
[ P.	LEASE FILL THE FORM FLECT	RONICALLY, AND NOT BY HAND ]		
-				
EtihadWE Registration Details Registration No	of Manufacturer's Local	Agent / Representative / Sup Expiry Date (DD/MM/YYYY)	plier:	
Registration No		Expiry Date (DD/WW/1111)		
Manufacturer's Local Agent / R	Representative / Supplier	Details:		
Company Name				
Complete Address				
D 0 D		le:,		
P.O. Box		Emirate		
Business Office Number(s)				
Contact Person & Position				
Contact Person Mobile No.				
Business E-mail Address				
Business Website Address				
Material / Equipment Applied for	or Pre-qualification:			
Manufacturer / Brand Name				
Manufacturing City				
Manufacturing Country				
Material / Equipment				
Type / Model				
Brief Description				
I, the undersigned, certify that I have read and understood fully the "Procedures & Guidelines for Material / Equipment Pre-Qualification" and all fees paid in accordance with this application is considered non-refundable regardless of the result of the Pre-qualification Assessment. In addition, I am aware that EtihadWE is not bound to pre-qualify and may reject this pre-qualification document without assigning any reasons and/or justifications which is the sole discretion of EtihadWE. Moreover, I understand that any wilful misstatement written herein or any part of the Pre-qualification Document may lead to the Rejection of our application.				
		[ Authorized Signature & Stamp o	f Supplier / Manufacturer 1	
		[ PRINTED NAME &	& POSITION ]	

ص.ب. 1672 . دبي. الإمارات العربية الـمتحدة هــا تف 5555 1672 . وبي. الإمارات العربية الـمتحدة الـمتحدة PO Box 1672 United Arab Emirates

## **ANNEXURE - E**

PERFORMANCE CERTIFICATE (SAMPLE)

[ Power Utility / Authority Letterhead ]

[Date]

[ Supplier / Manufacturer Name ]

[ Supplier / Manufacturer Address ]

Subject: Performance Certificate of [Manufacturer/Brand - Material/Equipment - Type/Model]

To Whom It May Concern,

[ Power Utility / Authority Name ] certifies that the [ Manufacturer / Brand - Material / Equipment - Type / Model ] is installed / utilized and satisfactorily in operation in our electricity network since [ Energization / Utilization Date ]. This Certificate is issued upon the request of [ Supplier / Manufacturer Name ] without any responsibility to be undertaken by this Utility / Authority towards others.

Yours faithfully,

[ Authorized Signature & Stamp of Power Utility / Authority ]

[ Printed Name & Position ]

## **ANNEXURE - F**

SUPPLIER / MANUFACTURER CLIENT REFERENCE LIST

## SUPPLIER / MANUFACTURER CLIENT REFERENCE LIST (To be filled by the Supplier / Manufacturer)

Material / Equipment Supplied:	[ indicate Material / Equipment and its Type / Model ]

S. No.	Client	Country	Type of Industry	General Quantity of Order (indicate unit)	Order Year	Delivery Year	Performance Certificate Attached (Yes / No)

## **ANNEXURE - G**

**GUARANTEE EXTENSION CERTIFICATE (SAMPLE)** 

[ Supplier / Manufacturer Letterhead ]

[Date]

Federal Electricity & Water Authority

P.O. Box 1672 Dubai

**United Arab Emirates** 

Subject: Guarantee Extension for [ Manufacturer/Brand - Material/Equipment - Type/Model ]

Dear Sir.

We refer to the "Material / Equipment Pre-qualification" procedures & guidelines related to EtihadWE Electricity Transmission & Distribution Network, under Article II: "Material / Equipment Manufacturer Requirements".

[Supplier / Manufacturer Company Name] hereby confirms unconditional extension of the guarantee for six (6) years from date of energization or ten (10) years from date of supply (received by EtihadWE) whichever comes less in actual for the [indicate Material / Equipment and its Type / Model] in the event that this material / equipment be pre-qualified by EtihadWE, included in the "Approved List of Materials / Equipment" and a purchase order or supply agreement is made to EtihadWE or its Legal Representative/s.

This is in consideration that the above mentioned material / equipment is being manufactured [ in UAE having less than three (3) years satisfactory experience record in Power Utilities / Authorities in UAE or GCC Countries. ] or [ from other countries not mentioned in Article II: "Material / Equipment Manufacturer Requirements. ]

We hope that this meets with your requirement for pre-qualification assessment of the above mentioned material / equipment.

Yours faithfully,

[ Authorized Signature & Stamp of Supplier / Manufacturer ]

[ Printed Name & Position ]