



Distribution Code Review Panel

Guideline for Product Approval in DCRP

Update: 27-06-2022

The Panel Established Pursuant to Article (90) of
Royal Decree 78/2004

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Introduction:

Distribution Code Review Panel (DCRP), welcomes all suppliers, agents & manufacturers to submit prequalification documents for DCRP Electrical Products Approval. Our aim is to approve products complying to national/international standards & to enhance distribution network with quality products of latest technology in Oman.

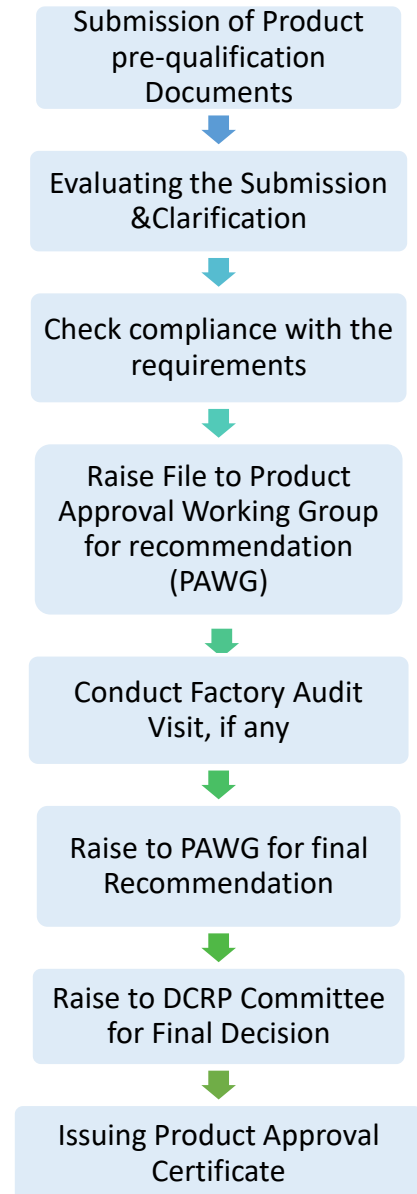
Our procedural framework depends upon distribution code regulations & Oman electrical standards (OES). The product approval process chart will illustrate the steps of the approval.

Requesters have to review Approved Products List & to assure that the product/s within the list category as per Annexure A.

Electrical products are classified into three categories, namely Class A, B & C.

The application file has a guideline titled minimum requirements which explains all requirements & must be complied with all documents submissions. Application file will be reviewed for submission completeness by Product Approval (PA) engineer with supplier representatives.

Product Approval Process:



For more information, kindly contact product approval section:

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Technical Evaluation stages

Product evaluation undergoes Seven major stages, four of them been indicated at guideline of minimum requirements. The progress of evaluation will depend mainly upon the supplier/agent/manufacturer's response. In so far as the DCRP is confident that the presented product is in line with the requirement of relevant OES standards and IEC & BS standards and under the condition that the supplier/agent/manufacturers has presented documents as per this procedure guideline, then evaluation would not encounter delay.

The evaluation stages are as follows:

Stage-1: Technical Requirements Review:

All Products shall comply with general Oman Electrical Specifications OES-11 and product's relative OES

At this stage manufacturers must comply with technical requirements & fill-in relative technical checklist of a product to prove it complies with OES. Product compliance to International standards like IEC, European, and DIN, IEEE and BSI technical requirements if demonstrated will add an important value to the technical stage.

Guaranteed Technical Particular (GTP) shall be submitted and deviation list shall be declared in case of any deviations to OES requirements as per **Annexure C**.

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Stage-2: Testing & certification review

1. Applicants must submit recent Type Tests Certificate, special tests, routine test certificates & reports from an internationally acclaimed independent third-party Laboratory which is ISO/IEC 17025 certified. The laboratory shall be certified in all operating standards. Test procedure / protocol / methodology shall be illustrated with schematic diagrams showing connectivity of equipment under test. The tests shall comply with OES testing requirements, IEC tests procedure & requirements as a minimum. **Partial testing shall not be acceptable. All type tests submitted shall be done under the name of manufacturer, model/ type, and country of origin.**
2. In case of independent third-party Laboratory is inspecting Type tests externally, it shall be ISO 17020 certified.
3. Type test certificates/reports for new products shall not exceed more than 5 years from the submission date.
4. Recalled /Renewed product with Type Tests passing more than 5 years shall be accompanied by Manufacturer's Undertaking letter confirming that no change or modification in design since it is type tested. However, in case of technical amendments in relative standard or in case of modification on product design, the manufacture/ supplier shall repeat the effected type tests.

All type tests submitted shall be done under unique manufacturer, model/type and country of origin.

5. In case manufacturer has not conducted type tests on the same specifications/model/ratings as per OES, then DCRP would advise conducting those type tests under DCRP officials witness supervision as per products approval procedure.

Stage-3: Technical Drawing & other Review

3.1 Product Technical Drawings

General assembly of product, Parts' drawings & Typical Connection arrangements shall be submitted. Drawings shall be very clear & self-explanatory. Legend & symbols explanation must be provided. For clarity purpose, all drawings from the manufacturer shall be presented with colour prints at A3 paper size.

3.2 Product/equipment sub-supplier/raw materials

DCRP insist to submit product/equipment sub-supplier/raw materials list as detailed in **Annexure D**.

3.3 Product Salient Features

Manufacturers are encouraged to highlight technical strengths & features of their products in term of design and other features. Therefore, salient features list of products shall be filled & submitted as per **Annexure E**.

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3.4 Manufacturer Undertaking letters

Manufacturer undertakes letters on product & factory location must be enclosed as per guide line of minimum requirement.

Stage-4: Product Performance review & Supply Reference:

4.1 Product performance

Products shall be subjected to installation in Oman or GCC for a period, if no reference of installation is provided in Oman or GCC. The DCRP has the right to request for a free of cost sample installation as per Annexure F.

The selection of location for sample installation shall be determined by DCRP.

4.2 Product Supply Details

Supplier/agent/manufacturer experience & list of clients in Oman, GCC, Middle East & Other countries with total number of Units installed on each country & year of supply has to be presented.

Product Specific Requirement Table (PSRT) may assist to classify minimum information & experience period required for each product to be eligible for use in Oman as per **Annexure F**

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Stage-5: Review & Recommendations

Technically completed application file is going to be reviewed by Product Approval Working Group (PAWG) for partially acceptance of application & recommendation for factory audit, if any, or for application rejection.

However, it shall be taking into consideration that in case of application rejection, it is not allowed to apply for the same product within **six months** from the date of rejection (all rejected applications are registered in DCRP records).

Stage 6: Factory Audit Visit & Feedback

Factory audit visits are required for products of **classes A & B**.

However, for products of **class C**, in some technical cases, PAWG has the right to recommend for factory audit.

Products are classified in **Annexure A**.

PAWG recommendation shall be transferred officially to the supplier /manufacturer through PAWG Secretary.

If it is recommended to conduct Factory Audit Visit, PAWG Secretary shall officially inform the supplier/ manufacturer to be prepared for the visit.

Manufacturer/ Supplier shall cover travel expenses & its arrangement according to the Product Approval Procedure.

Stage 7: PAWG Final Review & Recommendation

After conducting factory audit visit, the outcomes of visit shall be presented to the PAWG members in their next meeting for final recommendation.

PAWG members will review the results & would provide recommendation.

PAWG recommendation shall not to be considered as an approval. The final decision is going to be finalized by DCRP Committee members, which, in turn, would formally convey the same to the manufacturer.

Approval Granting

➤ Products New Approval

The final approval shall be granted by DCRP members and DCRP Certificate of Approval along with all product details is going to be issued as per DCRP Meeting recommendation.

The following shall be considered regarding DCRP Certificate of Approval:

DCRP Certificate of Approval will be issued after paying the required registration fees according to clause 5 and shall be signed by DCRP Chairman.

The Certificate of Approval is valid for five years.

The following shall be attached along with the certificate & shall never be separated:

- Technical Checklist
- Technical Guaranteed Particulars
- Detailed Drawings
- Summary of Tests
- Major Part's sub-supplier list, if applicable.
- Salient Features

(Note: all attachments should be sealed by DCRP)

Six months prior to the expiry date of the certificate, local agent/supplier & manufacturer are responsible to furnish to DCRP all relevant documentations for the renewal of certificate.

➤ Products Approval Renewal

The renewal of product approval is going to consider the following:

- Product Performance in the distribution network.
- Approved design & if there is any modification on it.
- Update in related standards and specifications.
- DCRP has the right to request for factory audit if the product has negative feedback collected from distribution companies, as per clause 2 Stage 6.
- Expired product approval certificate for more than 2 years the product shall be considered as a new application for approval.
- Registration / Renewal fees are the same as that for new registration.
- DCRP has the right to request for conducting type tests partially or fully, in case of design modification or quality issue.

➤ Adding/ Changing Major Parts in

Approved Major parts sub supplier list

According to manufacturer request to add new major parts or to remove major parts from the approved Major Parts sub-supplier list within validity period of DCRP Certificate of Approval, the following shall be complied:

- Manufacturer shall submit official request letter describing the need to include new parts or removed parts from the approved Major Parts sub-supplier list.

- Manufacturer shall submit recent type test reports of the new requested major parts.
- Manufacturer request shall be presented to PAWG for acceptance or rejection.
- Fees to be paid according to clause 5 item 3.

➤ Adding new product type/Rating/ Model/ series

- According to manufacturer request to add new product type/Model/ Series to the approved product within validity period of DCRP Certificate of Approval, the following shall be complied:
 - New product type/Rating/Model/ Series shall be according to products_classes Table in Annexure A.
 - Manufacturer shall submit official request letter describing the need to include new type/Rating/Model/ Series to the approved certificate.
 - Manufacturer shall submit recent type test reports of the new requested type/Rating/Model/ Series.
 - Manufacturer request shall be presented to PAWG for acceptance or rejection.
 - According to PAWG recommendation & DCRP committee decision, Approved Certificate will be amended accordingly with same validity date.
 - Fees to be paid according to clause 5 item 3

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➤ **Change approved Agent's name or Approved Manufacturer's name / Add new Agent**

▪ **Changing approved agent's name or approved manufacturer's name**

- Changing approved agent name or approved manufacturer name for the same approved product within 5 years of approval certificate validity, the certificate & it's all documents shall be updated as required with new name of manufacturer/ agent with same original certificate validity date.
- Fees to be paid according to clause 5 item 3.

▪ **Adding new agent for the same approved product, within 5 years of approval certificate validity, the following shall be met:**

- Ministry of Commerce, Industry, and Investment Promotion regulations.
- Manufacturer shall submit official request letter highlighting the details of new agent and supported by Valid Agency Certificate.
- The new agent shall submit the following documents:
 1. Request Letter and valid copy of Agency Agreement.
 2. All certificated documents attested by the manufacturer.

3. Declaration that technical support is available specially for Class A and B products, according to Products Table in Annexure A.

- Fees to be paid according to clause 5 item 3.

▪ **Change/ Shifting Approved Factory location**

1. In case Approved manufacturer is shifting the factory to another location within same country, then it shall notify the DCRP by submitting the following:
 - Official letter describing the new factory location, and details of factory capability & production capacity,
 - Copies of valid ISO certificates of the new factory.
 - DCRP has the right to request for conduct factory audit to ensure the requirements.

2. In case the manufacturer shift factory location to another country, the product may undergo all evaluation process including requesting new type test certificate according to Stage 2 Item 1.

Product Suspension

DCRP suspension of an approved product is going to be issued with prior notification in the following cases:

- Supplier/agent/manufacturer is manipulated on approved type tested design,
- Supplier/agent/manufacturer is not supplied approved model,
- The approved product has quality issues, or cause failures in the network.

Moreover, it shall be noted that removal of suspension for any product shall undergoes of **complete process of evaluation.**

Fees

All fees shall be paid at DCRP bank account & it is non-refundable at any case including product rejection.

Description	Product Class		
	A	B	C
Application file Fees (OMR)	15	10	5

Description	Product Class		
	A	B	C
Registration Fees (OMR)			
Pre-qualification Fees	1000	1000	1000
Approval Fees	1500	1000	500
Total (OMR)	2500	2000	1500

Description	Fees(OMR)
Adding/ changing major parts in approved Major parts sub supplier list	500
Adding new product Type/Rating/Model/ series).	500
Change Agent name / or Manufacturer name	500
Adding new Agent for the same approved product.	500

***Notes:**

1. VAT 5% of all above fees is applied & shall be considered.
2. Changing agency or changing manufacturer name within 5 years of approval certificate validity, the certificate & it's all documents shall be updated as required with new name of manufacturer/ agent without affecting existing certificate validity date.

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Attachments

Annexure A: Products Table

S. no.	Product	Class	Checklist Availability
1	Switchgears		
-	33KV Indoor Switchgears	A	Yes
-	11KV Indoor Switchgears	A	Yes
-	33KV Outdoor Circuit Breakers	A	Yes
-	11KV Outdoor Circuit Breakers	A	Yes
2	Auto Recloser		
-	33KV Type	A	Yes
-	11KV Type	A	Yes
3	Metal Enclosure Package Substation	A	Yes
4	Capacitor Banks		
-	33KV Capacitor Banks (20MVAR)	A	Yes
-	11KV Capacitor Banks (5 MAVR)	A	Yes
-	11KV Capacitor Banks (3MVAR)	A	Yes
5	Protection Relays	A	Yes
6	Auxiliary Relays	A	Yes
7	Battery Chargers	A	Yes
8	33/11.5 KV Power Transformers		
-	20MVA Ratings	A	Yes
-	10MVA Ratings	A	Yes
-	1, 3, & 6MVA Ratings	A	Yes
9	Cables		
-	33KV XLPE Cables Complying with OES-2	A	Yes
-	11KV XLPE Cables Complying with OES-2	A	Yes
-	LV XLPE Cables Complying with OES-2	B	Yes
-	Fiber Optics Cables	B	

S. no.	Product	Class	Checklist Availability
10	Air Break Switches (On- Load Disconnectors)		
-	33 KV Air Break Switches	B	Yes
-	11 KV Air Break Switches	B	Yes
11	11KV Ring Main Unit	B	Yes
12	Distribution Transformers		
-	Oil Type 11/0.433KV 2000KVA.	B	Yes
-	Oil Type 11/0.433KV 500 and 1000KVA	B	Yes
-	Oil Type 33/0.433KV & 11/0.433KV, 100, 200 & 315KVA	B	Yes
-	Dry Type 11/0.433 KV 500 KVA, 630 KVA, 1000 KVA, 1600KVA & 2000KVA	B	Yes
13	Conductors		
-	ACSR Conductors Complying with OES-1	B	Yes
-	XLPE Al. Conductors Complying with OES-3	B	Yes
-	All Aluminum Alloy (AAA) Conductors	B	Yes
14	Termination & Joints (LV, 11KV & 33KV)	B	
15	Electrical Poles		
-	Wooden Poles-Complying with OES-1	B	Yes
-	Concrete Poles	B	Yes
16	Dropout Fuse Set (11KV) with Arcing Horns Complying with OES-1	B	Yes
17	11KV & 33KV Lightning Arrestor with Porcelain Insulation (Gapless Type)	B	Yes
18	11KV & 33KV Lightning Arrestor with Polymeric Insulation	B	
19	D.C System Batteries	B	Yes
20	Distribution Feeder Pillar		
-	1600 A 8 Ways	B	Yes

S. no.	Product	Class	Checklist Availability
-	800A 6 Ways	B	
-	Mini Feeder Pillar -400A (6 Ways)	C	Yes
-	400A Cutout Box With "J" Type Fuse Complying with OES3	C	Yes
21	Consumer Units & Accessories		
-	Electromechanical Meters (Single Phase & Three Phase)	B	Yes
-	Electronic Meters (Single Phase & Three Phase)	B	Yes
-	Metering Panels	C	Yes
-	MCCB	C	
-	House Service Cutout	C	Yes
-	Tariff Metering Panels	C	
22	Porcelain Insulators		
-	DISC Insulators - Complying with OES-1	C	Yes
-	33KV & 11KV Line Post Top Insulators Complying with OES-1	C	Yes
-	Shackle Insulators for L.T. (Complying with OES-3)	C	Yes
-	L.T. Stay Insulators Sets	C	Yes
-	11 KV Stay Insulators.	C	Yes
-	33KV Stay Insulators.	C	Yes
-	33KV Fiber Glass Stain Insulators.	C	Yes
23	Silicon Rubber Insulators		
-	11KV & 33KV Tension insulator (long rod type).	C	Yes
-	11KV & 33KV Line Post Top Insulators.	C	Yes
24	Overhead Line Hardware		

S. no.	Product	Class	Checklist Availability
-	Anti Clamping Device	C	
-	4 Bolt Tension Clamp	C	
-	Cross Arms for 11KV & 33KV	C	
-	Tie Brackets for 11KV & 33KV	C	
-	Cable Support Channel	C	
-	Transformer Support Channel	C	
-	Adjustable Arcing Horns for D.O Fuse Unit	C	
-	Bolt for Reel Insulators	C	
-	Pilot Plate	C	
-	Gusset Plate	C	
25	Stay Set Materials		
-	Stay wire - LT	C	
-	Stay wire - HT	C	
-	Pole Top Make Off (H.T) & (L.T)	C	Yes
-	Guy Grip End (H.T) & (L.T)	C	Yes
-	Stay Rod L.T	C	
-	Stay Rod H.T	C	
26	Cables Tiles 11KV & 33KV		
-	Polyethylene Cable Tiles	C	Yes
-	Concrete Cable Tiles	C	
27	Fuses		
-	J Type Fuses for Distribution Feeders & Cutout Box	C	
-	DIN Type Fuses for Distribution Feeders & Cutout Box	C	
-	Fuse Links for D.O Fuse Set (11KV&33KV)	C	

S. no.	Product	Class	Checklist Availability
-	HV HRC Fuses for AB Switch	C	
-	RMU Fuses	C	
-	Capacitor Banks Fuses	C	
-	House Cut-Out Fuse Links (100A & 80A)	C	
28	Electrical Signs & Aluminum Plates		
-	Danger Plate & Substation Identification Plates	C	
-	Numbering Plates	C	
29	Cable Trays & Accessories.		
30	Earthing Materials		
-	Earthing Chamber	C	
-	Earth Rod & Accessories	C	
31	Connectors		
-	P.G. Clamps	C	
-	Copper Lugs	C	
-	BI-Metallic Lugs	C	
-	Ferrules	C	
-	MID Span Joint	C	
-	Wedge Type Connector	C	

Annexure B: List of OMAN ELECTRICAL STANDARDS (OES)

Srl	OES details	OES – No.
1	33KV & 11KV Overhead Lines	OES-1
2	CABLES & ACCESSORIES 3 RD EDITION	OES- 2, 3RD EDITION
3	Underground Cable Installation 2nd edition	OES -2, 2nd Edition
4	L.T. OVERHEAD LINES	OES- 3
5	Electrical Installations in Buildings	OES-4, Third Edition 3.1
6	TRANSFORMERS	OES 5, 5A & 6
7	L.T. EQUIPMENT & MATERIALS	OES 7, 21, 22, 23, 28 & 31
8	Overhead Line Material & Equipment	OES 8,9,10,16,17,18,20,25, 26, 29 & 33
9	General Specifications Electrical Equipment & Materials	OES- 11
10	Switchgear & Associated Equipment	OES- 12A, 12B, 13, 14, 15, 19, 34 & 35
11	Single Phase kWh Digital Meter	OES 22D
12	Three Phase kWh Digital Meter	OES 22E
13	Three Phase kWh Digital Meter with CT	OES 22F
14	33/11 KV INDOOR SUBSTATION	OES -24
15	33/11 KV OUTDOOR SUBSTATION	OES -30
16	INDOOR DISTRIBUTION SUBSTATIONS	OES- 36
17	Dry Type Transformer	OES -37
18	Volume 1 - 132 33KV Substations	OES 27
19	Volume 2 - 132 33KV Substations	OES 27

Note:

- All standards available in the website for Authority for Public Services Regulation:

<https://www.apsr.om/en/node/81>

Annexure C: Schedule of Deviations

It is brought to the attention of the pre-qualifier that all deviations w.r.t. the specifications shall be presented against the enclosed schedules. In the event this sheet is not filled up by the bidder, it shall be deemed to be understood that the pre-qualifier complies with the specifications, without any conditions / deviations.

Srl.	OES No.	Clause No.	Precise Details of Deviations	Justification for the deviation and the merit achieved

Signature:

Designation:

Name of Manufacturer:

Company Seal:

Manufacturer may submit multiple sheets, if required so

Annexure D: Major parts sub-suppliers list

The following tabular format shall be filled up by the manufacturer during the evaluation of the product with the PAWG:

Product Description: Manufacturer:						
Sr	Major Part or Raw Material	Model /Type	Manufacturer	Country Origin	Testing Laboratory	Testing Date

Signature:

Designation:

Company Seal:

Annexure E: Salient Feature

Distribution Code Review Panel		
Product Approval Working Group		
Salient Feature		
Product Description:		
Manufacturer:		
SI No.	Description of features	Added technical values to product

Signature:

Designation:

Company Seal:

Annexure F: Products Specific Requirement Table

Item	Requirements	Class-A	Class-B	Class-C
1	Checklist	Required	Required	Required
2	Type Test certificate & report	Required	Required	Required
2.1	Type Test witnessing	If requested	If requested	If requested
2.2	Special tests	Required	Required	Required
2.3	Special tests witnessing	If requested	If requested	If requested
2.4	Routine Tests Not older than (6) months	Required	Required	Required
2.5	Routine Tests witnessing	Required	Required	Required
3	General Assembly Drawings	Required	Required	Required
3.1	Typical connection arrangements	Required	Required	Required
3.2	Parts Drawings	Required	Required	Required
4	Products Main Parts List	Required	Required	If applicable
5	Experience in GCC	Required	Required	Required
5.1	Experience in Middle East	Required	Required	Preferred
5.2	Experience in Other Places	Required	Required	Required
6	Certificates form Other Network Operators	Required	Required	If requested
7	Factory Site Visit	Required	Required	If requested
8	Other Site Visits	If requested	If requested	If requested
9	Sample Submission	Case-by-Case basis	Required	Required
10	Technical support	Required	Required	Required