

SAUDI ARABIAN OIL COMPANY (Saudi Aramco) GENERAL INSTRUCTION MANUAL ISSUING ORG. POWER DISTRIBUTION DEPARTMENT SUBJECT: ELECTRICAL LOAD PLANNING AND CONNECTION/ DISCONNECTION OF LOADS TO SAUDI ARAMCO'S DISTRIBUTION SYSTEM		G.I. NUMBER 2.703 Approved	
		ISSUE DATE 06/16/2002	REPLACES 01/04/1994
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CONTENT

This instruction outlines the rules and regulations governing the proposed electrical connections or disconnection to or from Saudi Aramco's power distribution facilities. This instruction also is applicable to any modifications to the existing electrical connections. The text includes:

1. Definitions
2. Responsibilities
3. Procedural Matters
4. SCECO Coordination

1.0 DEFINITIONS

- 1.1 Electrical Connections: Any connection or planned future load additions to the existing or new underground, overhead, substation, transformer or service equipment of the power system network for the purpose of obtaining new or additional electrical power.
- 1.2 Electrical Disconnection: Any disconnection or removal of a load from Saudi Aramco's Distribution facilities. This includes mothballing of facilities
- 1.3 Proponent of Power Source Facility: This is the proponent organization that owns the electrical distribution network to which the electrical connection is to be made. Normally for industrial facilities, it is the proponent owning the plant facilities where as, for communities, it is the Power Distribution Department.

2.0 RESPONSIBILITIES FOR ELECTRICAL CONNECTION

- 2.1 For any project planned under Capital (major and BI-1900), Expense, MAMI, Net Direct Expenditure or Non-Capital requiring electrical connections or additional power requirements for existing facilities, the Power Distribution Department's Relay & Operations Engineering Division (R&OED) shall be informed by the proponent in writing during its conceptual planning stage.
- 2.2 This power requirement information shall consist of the amount of the power required in kVA, Voltage at which the power is required, location and the date by which the power will be required. (See Attached Form PDD-001/94). This information shall be furnished in triplicate to Power Distribution Department.
- 2.3 Power Distribution Department's Relay & Operations Engineering Division will be responsible for making any further distribution of the electrical connection request to other responsible Saudi Aramco organizations.

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- 2.4 Power Distribution Department shall be the responsible agency for approval/determination of the most viable source of power connection for all new projects or expansion of existing facilities planned under corporate major capital outlay.
- 2.5 The Power Distribution Department shall be the responsible agency for approval/determination of the most viable source of power connection for all new projects or expansion of existing facilities planned under corporate expense MAMI Funds; BI-1900; Net Direct, and Non-capital.
- 2.6 The proponent of a power source facility shall be responsible for obtaining approval for connection of any additional electrical load to that facility prior to starting any construction efforts for the addition of any electrical load from the Manager of Power Distribution Department or his designee.
- 2.7 For all projects planned under expense budgets, the Manager of the proponent organization and the proponent owning the power source facility shall have the responsibility of approving requests for electrical connections required for additional loads and/or reconfiguration of existing loads when an existing panel feeder or transformer capacity is exceeded. These changes shall be concurred by the Relay & Operations Engineering Division of Power Distribution Department.
- 2.8 The Relay & Operations Engineering Division, with the concurrence of the Superintendent of PDD's respective Operating Division shall be responsible for approval of the use of switches, transformers, wiring devices, checking of load requirements, approve the proposed method of installation for the electrical connections, determine fuse sizes and relay settings etc. Before the final electrical connection is made and the facility is energized, it should be inspected and approved by the representatives of the Proponent Organization, Projects Inspection Division and the respective PDD Operating Division.
- 2.9 The Manager of PDD or his designee shall be responsible for approval of all requests for connections, including temporary connections, to be made to electric overhead lines and underground distribution systems regardless of the voltage class at all service points.
- 2.10 Nothing in this Instruction shall be interpreted as prohibiting the attachment of portable electric tools equipped with approved attachment plugs to the convenience outlets provided at the unit or facility. The user of such tools shall be responsible for the satisfactory and safe operating condition of his equipment.
- 2.11 In addition to meeting the requirements of the Saudi Aramco Drafting Manual, the requester of the connection shall have the responsibility to assure that "As Built" drawings are furnished to PDD together with completed, and updated, drawings of new installations.

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3.0 PROCEDURAL MATTERS

3.1 During the conceptual planning stage of the project, PDD Form #001/94 shall be completed by the project's proponent (See Attachment). All supporting documents shall be attached in triplicate to this form and the entire package shall be submitted to Power Distribution Department/Relay & Operations Engineering Division for further action and distribution.

3.1.1 PDD Form #001/94 can be obtained from the offices of Coordinator, Relay & Operations Engineering Division, Room A-235, Building No. 3150 LIP, Dhahran.

3.2 Prior to making any electrical connection, the Department, Division, Section or Unit Head desiring to make the connection shall comply with the following:

3.2.1 Proposed electrical connections without drawings or project proposal shall require the preparation of an engineering package consisting of a work order (with preliminary sketches) or memorandum setting forth the proposed connection to be made, the type of connection required, i.e., permanent or temporary, and the kind and type of load for which the service is desired.

This engineering package shall be reviewed and approved by the competent authority within the proponent organization prior to being routed to the Coordinator, R&OE Division for approval.

3.2.2 Approval for new electrical connections on projects designed within the proponent's operating areas will be indicated by having the signature of the Manager of PDD or the Superintendent of PDD's Operating Division or their designated representative on the proposed project documents.

3.2.3 Approval authority for electrical connections, internal to PDD, will be implied when the Superintendent, PDD Operating Division, and the Coordinator of Relay and Operations Engineering Division approve the general electrical layouts, one lines and schematic drawings presented in the project proposal review for their authorized area of responsibility.

3.2.4 Subsequent design changes in electrical connections after the project proposal review shall require the concurrence of the Superintendent, PDD Operating Division and the Coordinator of the Relay & Operations Engineering Division, by written correspondence. The procedure outlined in Paragraph 3.2.1 above shall be followed in this case.

3.2.5 Revisions to previously approved electrical connections caused by construction difficulties, unforeseen obstructions, or other reasons shall be reviewed and approved jointly by the proponent's engineering staff and PDD Coordinator of Relay & Operations Engineering Division and by the Superintendent of the respective PDD Operating Division. (Approval shall be indicated by a letter of approval, meeting minutes or red lined prints showing the proposed changes. The red-lined prints shall be transmitted to the appropriate Engineering Office for revision of the original drawings).

3.2.6 It must be recognized that switching operations that are necessary to make the proposed electrical connections require notification to various operating organizations, and that it

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is the responsibility of the organization requesting the connection to provide sufficient prior notice to the concerned Superintendent, of the PDD Operating Division, who will schedule these operations accordingly. The responsible inspection authority shall notify the PDD Operating Division that the facility has been installed according to Saudi Aramco standards and is ready to be energized.

- 3.2.7 Circuit energization request form shall be completed and forwarded to the concerned PDD Operating Area Superintendent (See Attachment II).

4.0 ELECTRICAL DISCONNECTION

- 4.1 The Procedure to be followed for electrical disconnection is the same as for electrical connection requirement. An organization requiring disconnection shall complete PDD Form No.001/94 and send it in triplicate to the Power Distribution Department/Relay & Operations Engineering Division for further action and distribution.

5.0 SCECO COORDINATION/ENERGIZATION

- 5.1 Facilities Planning Department shall be the single point contact agency for Saudi Aramco request for power connections to the SCECO network during the initial design phase of a capital project.
- 5.2 Initial requests for energization on a project shall come from Project Management or the Proponent by letter to SCECO's Customer and Public Relations Department through Saudi Aramco Government Affairs. The Power Distribution Department shall be copied on such a request.
- 5.3 Energization requirements by SCECO for Saudi Aramco facilities shall be coordinated through the Power Distribution Department.
- 5.4 Saudi Aramco Government Affairs Department shall be the liaison agency for SCECO's request for power connections to Saudi Aramco power distribution network and coordination of all such requests between the two Corporations.
- 5.5 No connections to Saudi Aramco power distribution network per SCECO request shall be made unless concurred and approved by the Manager of Power Distribution Department and the concerned area Operating Superintendents.

Concur:
Manager, Facilities Planning Department

Approved:
Executive Director, Supply & Transportation

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**ATTACHMENT - I

REFER TO SAUDI ARAMCO FORM (PDD-001/94)

POWER DISTRIBUTION DEPARTMENT
AUTHORIZATION TO ENERGIZE

B.I. NO. _____ J.O. NO. _____ W.O. NO. _____

SUBSTATION _____ LOCATION _____
EQUIPMENT _____
CIRCUIT _____

The above facility is mechanically complete and all pre-commissioning checks have been carried out satisfactorily. All required spare parts are cataloged and recommended spare parts lists provided. Signatories must indicate their exceptions below:

CONSTRUCTION /PROJECT ENGINEER	TEL:
ORGANIZATION	DATE
ELECTRICAL INSPECTION	DATE
FOREMAN, RELAY UNIT	DATE
FOREMAN, POWER SERVICES UNIT	DATE
FOREMAN, POWER LINE MAINTENANCE UNIT	DATE
FOREMAN, CABLE SPLICING UNIT	DATE
FOREMAN, SERVICE DISPATCH UNIT	DATE
PDD DIVISION ENGINEER	DATE

EXCEPTION/REMARKS*

(CONTINUE OVERLEAF)

PDD SUPERINTENDENT/
ASST. SUPT. NAME: _____ SIGNATURE: _____

_____ AREA POWER DISTRIBUTION DIVISION DATE: _____

DATE ENERGIZED: _____

*Additional information is/is not attached.

AUTHORIZATION TO ENERGIZE

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.