

Field Visit Report - Saudi Electricity Company

Issued by: Quality Team

Date: Thursday, October 2, 2025

Time: 09:00 AM - 11:00 AM

Introduction:

As part of the Quality Team's commitment to monitoring and documenting field activities to enhance trainees' knowledge and practical application, a field visit was conducted to the Saudi Electricity Company. The visit aimed to familiarize participants with the company's core operations in power generation, transmission, and distribution, and to explore the training workshops and practical applications related to these areas.

Visit Details:

1. Company Introduction

- One of the company's engineers provided a comprehensive overview of the Saudi Electricity Company's mission and its role in serving consumers through three main stages:

Generation: Utilizing gas power plants, hydroelectric stations (such as dams), nuclear facilities, and combined-cycle power plants.

Transmission: By stepping up voltage using step-up transformers to minimize energy loss during transmission, with aluminum conductors serving as the main transmission medium.

Distribution: By stepping down the voltage using step-down transformers to deliver power safely to end users.

2. Training Workshops

Starting at 10:00 AM, the team moved to the workshop area, where the visit included the following:

1. Generators Workshop: Demonstration of the process of converting mechanical energy into electrical energy.
2. Meters Workshop: Introduction to smart meters and the company's remote monitoring and control systems.
3. Renewable Energy Workshop: Overview of electric vehicle chargers — DC fast chargers (approximately 25 minutes) and AC slow chargers (6–8 hours).

4. Solar Panels Workshop: Explanation of how solar panels generate direct current (DC) electricity.
5. RMU (Ring Main Unit) Workshop: Clarification of its role in feeding loads from two power sources to ensure service continuity in case of a fault in one source.
6. Safety Workshop: Presentation of key safety tools, including a fiberglass rod equipped with a loop used to rescue individuals exposed to electric shock.
7. Protection Workshop: Introduction to protection devices such as Relays, CTs, PTs (VTs), and testing devices like the Megger.

Quality Team Observations :

The visit was well-organized and diverse, significantly enhancing the trainees' technical and practical understanding.

The hands-on workshops added great value by linking theoretical concepts with real-world applications.

The Quality Team recommends continuing such field visits due to their positive impact on the quality of educational and training outcomes.

Conclusion:

The Quality Team extends its sincere thanks and appreciation to the Saudi Electricity Company for its warm reception, cooperation, and the opportunity to explore the latest technologies and practices in the electrical energy sector.

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