

REFLECTIVE ELECTRICAL ENGINEERING LEARNING (REEL2026)

Building Skills and Professionalism through
Industrial Training

SKILLS



REEL2026
Reflective
Electrical Engineering Learning

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BUILDING SKILLS AND PROFESSIONALISM THROUGH INDUSTRIAL TRAINING



REEL 2026

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*"Building Skills and Professionalism
through Industrial Training"*

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*Reflection transforms
experience into meaningful learning*

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A Reflective Study on Industrial Training Experience

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Industrial training is an important component in electrical engineering education as it allows students to gain practical experience in real working environments. Through this training, students are able to apply theoretical knowledge learned at university and develop technical and professional skills required in the industry. This article discusses my industrial training experience at Chenderoh Hydroelectric Power Station. During this period, I was exposed to operation activities, system monitoring, and maintenance work related to power generation. This experience helped me understand how electrical power systems operate in real situations.

During my industrial training, I was assigned to the operation unit where I was introduced to the workflow and responsibilities of the team. My daily tasks included observing system operations, understanding single line diagrams (SLD), and monitoring electrical parameters such as voltage, current, and power. I also followed technicians to check all the readings and learned how data is collected from the system.



Figure 1: Observing System Operations and Monitoring Electrical Parameters

One of the technical exposures I gained was understanding the single line diagram (SLD), which represents the overall electrical system in the power station. Through this, I was able to identify components such as generators, transformers, and busbars. This helped me understand how electrical energy is generated and transmitted within the system. I also learned how operators use the Human Machine Interface (HMI) to monitor system performance in real time.

In addition, I was involved in collecting operational data by copying HMI graphics. This process has important analysis purposes. I learned that accuracy in recording data is important to ensure proper monitoring and decision making in system operations.

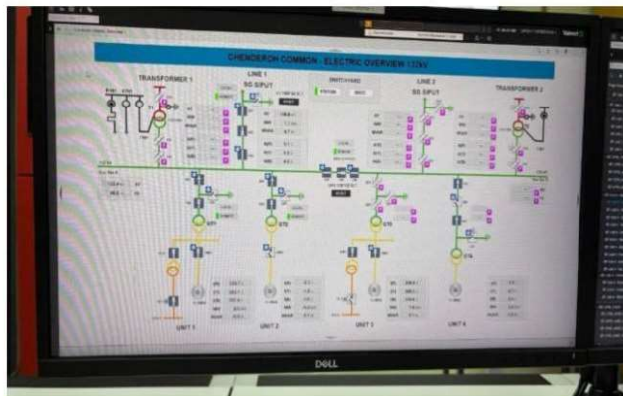


Figure 2: Examples of Single Line Diagram (SLD)



Figure 3: Human Machine Interface (HMI)

Another important task that I was exposed was inspecting the emergency diesel generator. This generator serves as a backup power supply in case of system failure or power interruption. The generator is checked monthly to make sure it is always in good condition. During the inspection, I observed the checking of generator components and understood the importance of maintenance to ensure reliability during emergencies.



Figure 4: Emergency Diesel Generator Inspection

During the early stage of my industrial training, I had to adapt to the working environment and understand the workflow of the operation team. Initially, it was hard to understand the system and technical terms, but with guidance from the staff, I gradually improved my understanding and confidence.

Through this industrial training experience, I got to know some knowledge in power system operation, maintenance and safety practices. I also developed better communication and teamwork skills when working with technicians and engineers. This experience helped me relate theoretical knowledge to real world applications.

In conclusion, industrial training provides significant exposure to real engineering practices and helps students develop their skills. My experience at Chenderoh Power Station has enhanced my understanding of electrical power systems and prepared me for future challenges in the engineering field.

Authors' Biography



Azaryl Iman bin Md Azhari is currently pursuing a Diploma in Electrical Engineering at Universiti Teknologi MARA (UiTM) Cawangan Pulau Pinang. As part the academic programmed, he is undergoing industrial training in the Chenderoh Hydroelectric Power Station. Through this training experience, he gained valuable hands-on experience during his internship, particularly in the operation and maintenance of power generation systems, including hydroelectric power stations. This internship enhanced his knowledge of the electrical engineering field and strengthened his interest in pursuing a career in the industry.



Wan Salha binti Saidon, has been working in Universiti Teknologi MARA (UiTM) Permatang Pauh since February 1998 having a long experience in the area of electrical engineering. She received a Bachelor Science in Electrical Engineering (Hons) degree at the University Missouri. Her speciality is in the field of technology engineering, especially electrical and electronic engineering. She is a member of the Energy and Environment (EE) research nexus at UiTM, and her work is in the field of electrical and electronic engineering.

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