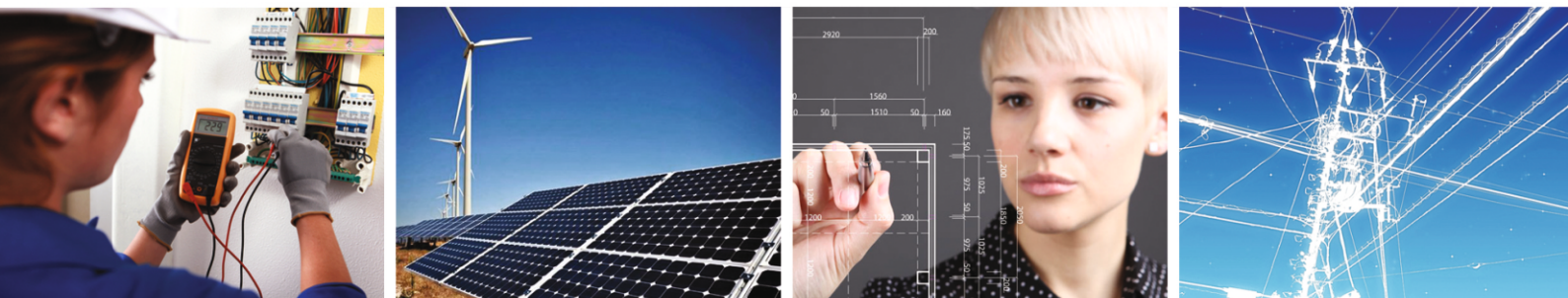


Advance Electrical Design & Engineering Institute (AEDEI)

**(ISO 9001:2015 CERTIFIED INSTITUTE) : NEW DELHI
(ONLINE GREEN HYDROGEN PLANT DESIGN TRAINING)**



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About us :

Advance Electrical Design & Engineering Institute (AEDEI) ISO certified 9001:2015 Electrical Design & Engineering training programs for Dedicated to Electrical Engineers. AEDEI is latest venture for providing the quality education in the best possible facilities is a key aim of Skill developments for various verticals in Electrical Engineering design.

Our Mission :

Our Technical Institute offers a full range of training in electrical ,Electronics & communication and mechanical design courses full fill requirement of current industries ,

These courses which encompass all aspects of core electricity from fundamentals to in-depth of design knowledge are based on several value adding pillars.

Our trainers share their know-how and design experience through demonstrations on dedicated equipment on industries. Courses include training dedicated documents and the possibility of follow-up with regular /internship /e-learning modules. Over one to 45 days depending on the topic, trainees get in-depth, hands-on instruction and the opportunity to practice their acquired know-how.

We cover all the range of engineering industries skills disciplines Online and Offline :

- Online Green Hydrogen plant Design Training
- Battery Energy Storage System (BESS)
- Substation Design Training(AIS and GIS)
- Electrical System Design
- Solar Power Plant Design(KW and MW)
- Technical Transformer Design
- Mechanical Electrical and Plumbing (MEP) design
- HVAC Design
- Piping Power Plant Design
- Solar Structure Design Training (MMS Design)
- Electric Vehicle Charging Station Design
- QA/QC Electrical
- Power System Software
- Hybrid Electric vehicle Design Training
- Railway Traction Design (OHE DESIGN)
- Floating Solar Power Plant Design

Green Hydrogen Plant Design Training :

This introductory course in design fundamentals will guide you through a step-by-step study of Electrical System design. You will consider all phases, from initial site review and selection to Designing Electrical Equipments

Experienced Instructors :

Your instructors, professional engineers with many years of field and design experience, will train you through theory calculation practical, instructor having expertise electrical system design .

Duration : 2 Months

Mode: Regular /online (LIVE Session)

key Features of Green Hydrogen plant Design Training :

When you complete this course you will be able to:

- selection & sizing hydrogen tank
- Selection & sizing electrolyzers
- selection & Detailing compressors
- Implementation of hydrogen plant
- Methodology of lower cost Hydrogen production& source of power supply

Study Materials :

You will receive extensive course materials and Standards that will serve as valuable references in your work.

Green Hydrogen Plant Design (Syllabus)

Module-1: Hydrogen Application

- The Use of Hydrogen in Industries
- Hydrogen Safety
- Oil Refineries
- Petrochemicals
- The Use of Hydrogen in the Chemicals Industry
- Mobility

Module-2: Methodology of lower cost Hydrogen production& source of power supply

- Methodology of lower cost Hydrogen production& source of power supply
- Production from Solar power plant energy
- Production from wind energy
- Selection of back up power source

Module-3: Implementation of hydrogen plant

- Introduction
- Calculation of renewable energy (solar , wind) requirement
- Calculation of hydrogen production equipment load
- **Sizing of solar/wind power plant capacity to meet hydrogen load demand**
- Selection of site to fulfill demand of energy for hydrogen production
- Selection of hydrogen plant location
- Identification of electrical network
- Energy storage system

Module-4: Selection & Sizing Electrolyzers

- Type of electrolyzers and capacity and sizing
- Difference between polymer electrolyte or protonexchange membrane (PEM) electrolyzers
- Sizing and selection membrane for hydrogen production
- Selection of alkaline electrolysis cells and PEM electrolysis
- Selection Solid oxide electrolysis cells
- Key selection parameters of electrolysis : current density ,work pressure , operating temperature, hydrogen purity , Export component and Volume and weight.
- Working of hydrogen separator and oxygen separator
- Selection of water quality for hydrogen production

Module-5: Selection & sizing hydrogen tank

- Specification of hydrogen tank
- Calculate capacity of hydrogen tank
- Selection of storage hydrogen tank
- Key parameters of hydrogen tank selection : max pressure withstand , temperature, storage capacity, type of material,Design Temperature
- Protection from leakage of storage tank

Module-6: Selection & Detailing of compressors for Hydrogen Plant

- Architecture of Piping Arrangement
- Selection of Compressors
- Pressure Valve ,Pressure indicators, Gas Outlet & Inlets Valves.
- Tank Placement and Size

Module-7: The Mass shipping of hydrogen and storage

- Cost of Ships and Shipping
- Transport of Hydrogen as an Intermediate - Ammonia and hydrocarbons

Module-8: The Mass shipping of hydrogen and storage

- Selection switchgear of hydrogen equipment
- Sizing of cabling for electrical equipment's
- Illumination system design
- Earthing design of hydrogen plant
- Selection and sizing auxiliary supply and main supply system

Module-9: Case study

- Preparation of electrical power distribution scheme
- Preparation of electrical power distribution scheme
- Preparation of one line diagram of hydrogen plant
- Preparation of lay outing of hydrogen plant