Accredited Africa Training Institute for Capacity Development
Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa
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COURSE BROCHURE

Wind Solar Hybrid System Design For Renewable Energy Training

Physical Planning and Construction / Electrical Infrastructure Construction

Unit Standard 113890 · NQF Level 4 · 5 Credits · 2 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to design wind-solar hybrid renewable energy systems. Participants will learn to assess site-specific resources, select appropriate components, and integrate wind and solar technologies for optimal performance.

Category	Physical Planning and Construction
Subfield	Electrical Infrastructure Construction
Unit Standard	113890
Accreditation	SAQA Accredited · NQF Level 4 · 5 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS — verifiable online

LEARNING OUTCOMES

- Analyze site-specific wind and solar resource data to determine hybrid system feasibility.
- Design a wind-solar hybrid system that meets specified energy demand and performance criteria.
- Evaluate component compatibility and system sizing for wind turbines, solar PV, and battery storage.
- Implement safety and regulatory standards in the design and installation of hybrid systems.
- Demonstrate proficiency in using design software and tools for hybrid system simulation.
- Assess the economic and environmental impact of proposed hybrid system designs.

WHO SHOULD ATTEND

- This course is ideal for engineers, technicians, and renewable energy practitioners seeking to design hybrid wind-solar systems.
- It is also suitable for project managers and consultants involved in renewable energy projects.

COURSE OUTLINE

Day 1: **Fundamentals of Wind and Solar Hybrid Systems**

- Overview of renewable energy technologies and hybrid systems
- Solar PV fundamentals: panels, inverters, charge controllers
- Wind turbine fundamentals: types, power curves, towers
- Resource assessment: solar irradiation, wind speed and direction data
- System configurations: AC/DC coupling, battery storage options
- Introduction to system sizing: load analysis and component matching
- Safety considerations for hybrid installations
- Case studies of existing hybrid systems in South Africa

Day 2: **Design, Simulation, and Practical Integration**

- Load profiling and demand-side management
- Component selection: PV modules, wind turbines, batteries, inverters
- System design using HOMER or similar simulation tools
- Battery bank sizing and energy management strategies
- Economic analysis: LCOE, payback period, subsidies
- Grid-tied vs off-grid hybrid system design
- Installation best practices and commissioning procedures
- Operation and maintenance of hybrid systems

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **5 NQF credits** at **NQF Level 4**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 15,400.00	**R 15,400.00**
1	In-House	R 20,000.00	**R 20,000.00**
1	On-Campus (Pretoria)	R 23,100.00	**R 23,100.00**

UPCOMING SESSIONS

Start	End	Method	Venue
23 Jun 2026	24 Jun 2026	On-Campus	Mombasa, Kenya
23 Jun 2026	24 Jun 2026	On-Campus	Nairobi, Kenya
23 Jun 2026	24 Jun 2026	In-House	—
25 Jun 2026	26 Jun 2026	On-Campus	Windhoek, Namibia
25 Jun 2026	26 Jun 2026	On-Campus	Maseru, Lesotho
25 Jun 2026	26 Jun 2026	On-Campus	Mbabane, Eswatini
29 Jun 2026	30 Jun 2026	On-Campus	Luanda, Angola
29 Jun 2026	30 Jun 2026	On-Campus	Mbabane, Eswatini

Contact us if no suitable date is listed — on-demand sessions can be arranged for groups.

HOW TO GET A QUOTE OR APPLY

1. **Get an instant quotation online:** visit **www.aaticd.co.za**, open the page for this course (Unit Standard 113890) and click **Get A Quote / Apply**. Select your training method and number of delegates — your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to **apply@aaticd.co.za** — our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call **+27 12 004 8389** or WhatsApp **+27 65 077 6310** and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically — the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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