

MAINTENANCE AND ENGINEERING | COURSE BROCHURE

Battery Energy Storage Systems

5 days | Classroom training | English

SMART HORIZON

info@smart-horizon.eu
Amsterdam
The Netherlands

Explore current programmes

https://smart-horizon.eu



Course content

Why attend

Battery energy storage is transforming power systems, supporting renewables, peak shaving and backup power. This course covers battery technologies, system components, sizing for applications, integration with solar and the grid, battery management systems, safety and fire risks, operation, maintenance and performance monitoring.

Energy storage projects are growing rapidly but require specialist knowledge. You will learn to plan and operate battery systems safely and effectively.

Professional Problems This Course Is Designed to Solve

• Difficulty translating subject knowledge into practical workplace decisions.
• Inconsistent approaches to the activities covered in the course outline.
• Lack of a structured plan for applying and reviewing new skills.

Course methodology

Technology briefings, sizing exercises, safety case studies and maintenance planning.

Course objectives

By the end of this course, participants will be able to:
• Explain battery chemistries and characteristics
• Describe system components and architecture
• Size battery systems for applications
• Integrate storage with renewables and the grid
• Manage safety and fire risks
• Operate, maintain and monitor battery systems

Target audience

This course is suitable for:
• Electrical and energy engineers
• Renewable energy project staff
• Facility and utility engineers
• Maintenance technicians
• Energy managers



Course content

Target competencies

Participants will develop competencies in:

- Technology selection
- System sizing
- Integration
- Safety management
- Performance monitoring

Course outline

Day 1: Battery Technologies

09:00–10:08	Lithium-ion and alternatives
10:08–11:00	Performance characteristics
11:00–11:30	**Coffee break**
11:30–11:45	Performance characteristics (continued)
11:45–12:53	Degradation
12:53–14:00	Exercise

Day 2: System Components

09:00–10:08	Battery modules
10:08–11:00	Inverters and BMS
11:00–11:30	**Coffee break**
11:30–11:45	Inverters and BMS (continued)
11:45–12:53	Thermal management
12:53–14:00	Workshop

Day 3: Applications and Sizing

09:00–10:08	Peak shaving
10:08–11:00	Renewable integration
11:00–11:30	**Coffee break**



Course content

11:30–11:45	Renewable integration (continued)
11:45–12:53	Backup power
12:53–14:00	Sizing exercise

Day 4: Safety

09:00–10:08	Thermal runaway
10:08–11:00	Fire protection
11:00–11:30	**Coffee break**
11:30–11:45	Fire protection (continued)
11:45–12:53	Standards
12:53–14:00	Case study

Day 5: Operation and Maintenance

09:00–10:08	Monitoring
10:08–11:00	Maintenance tasks
11:00–11:30	**Coffee break**
11:30–11:45	Maintenance tasks (continued)
11:45–12:53	Performance tracking
12:53–14:00	Action plan

The timings provided are estimates and may vary depending on the number of participants and the discussions taking place during the sessions. They are indicative only and do not constitute a binding commitment.



Course content

Dates, venues and fees

Current published course plans. Fees are per participant in EUR, excluding unconfirmed taxes.

Venue	Start date	End date	Fee (EUR)
Cape Town Confirmed dates	16 Nov 2026	20 Nov 2026	**€3,780.–**
Online Confirmed dates	16 Nov 2026	20 Nov 2026	**€1,250.–**
Kuala Lumpur Confirmed dates	30 Nov 2026	4 Dec 2026	**€2,900.–**
Online Confirmed dates	30 Nov 2026	4 Dec 2026	**€1,250.–**
Cape Town Confirmed dates	4 Jan 2027	8 Jan 2027	**€3,780.–**
Online Confirmed dates	4 Jan 2027	8 Jan 2027	**€1,250.–**
Vienna Confirmed dates	25 Jan 2027	29 Jan 2027	**€5,880.–**
Online Confirmed dates	25 Jan 2027	29 Jan 2027	**€1,250.–**
Rome Confirmed dates	15 Feb 2027	19 Feb 2027	**€4,900.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	15 Feb 2027	19 Feb 2027	**€1,250.–**
Barcelona Confirmed dates	8 Mar 2027	12 Mar 2027	**€5,680.–**
Online Confirmed dates	8 Mar 2027	12 Mar 2027	**€1,250.–**
Istanbul Confirmed dates	22 Mar 2027	26 Mar 2027	**€5,300.–**
Online Confirmed dates	22 Mar 2027	26 Mar 2027	**€1,250.–**
Rome Confirmed dates	12 Apr 2027	16 Apr 2027	**€4,900.–**
Online Confirmed dates	12 Apr 2027	16 Apr 2027	**€1,250.–**
Barcelona Confirmed dates	3 May 2027	7 May 2027	**€5,680.–**
Online Confirmed dates	3 May 2027	7 May 2027	**€1,250.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Dubai Confirmed dates	24 May 2027	28 May 2027	**€6,300.-**
Online Confirmed dates	24 May 2027	28 May 2027	**€1,250.-**
Vienna Confirmed dates	14 Jun 2027	18 Jun 2027	**€5,880.-**
Online Confirmed dates	14 Jun 2027	18 Jun 2027	**€1,250.-**
Amsterdam Confirmed dates	28 Jun 2027	2 Jul 2027	**€5,080.-**
Online Confirmed dates	28 Jun 2027	2 Jul 2027	**€1,250.-**
Rome Confirmed dates	19 Jul 2027	23 Jul 2027	**€4,900.-**
Online Confirmed dates	19 Jul 2027	23 Jul 2027	**€1,250.-**
London Confirmed dates	9 Aug 2027	13 Aug 2027	**€4,900.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	9 Aug 2027	13 Aug 2027	**€1,250.-**
Dubai Confirmed dates	30 Aug 2027	3 Sept 2027	**€6,300.-**
Online Confirmed dates	30 Aug 2027	3 Sept 2027	**€1,250.-**
Frankfurt Confirmed dates	20 Sept 2027	24 Sept 2027	**€5,300.-**
Online Confirmed dates	20 Sept 2027	24 Sept 2027	**€1,250.-**
London Confirmed dates	4 Oct 2027	8 Oct 2027	**€4,900.-**
Online Confirmed dates	4 Oct 2027	8 Oct 2027	**€1,250.-**
Paris Confirmed dates	25 Oct 2027	29 Oct 2027	**€5,720.-**
Online Confirmed dates	25 Oct 2027	29 Oct 2027	**€1,250.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Dubai Confirmed dates	15 Nov 2027	19 Nov 2027	**€6,300.-**
Online Confirmed dates	15 Nov 2027	19 Nov 2027	**€1,250.-**
Cape Town Confirmed dates	6 Dec 2027	10 Dec 2027	**€3,780.-**
Online Confirmed dates	6 Dec 2027	10 Dec 2027	**€1,250.-**

Plan your next step

Dates, availability, exact venue, taxes, inclusions and payment terms require written confirmation. This brochure is not a quotation, registration, booking confirmation or visa invitation. Participants receive a Smart Horizon certificate of attendance; programmes are not externally accredited and do not award a professional qualification or designation. Confirm arrangements before booking travel.

For group or in-house training, contact our learning team to discuss your objectives and delivery arrangements.

Contact Smart Horizon

info@smart-horizon.eu
Amsterdam
The Netherlands

View the latest course details online