

Why should I study this course?

Battery storage has an important role in reducing greenhouse gas emissions by storing renewable energy and mitigating climate change, which is critical to protecting humans, wildlife, and ecosystems.

As a result of increase demand there are currently not enough solar panel and battery installers, which has created a skills gap in the market. This introductory skills course will help to give you the basics about renewable energy battery storage and help you decide if this is a career you might be suited for. Or perhaps you are considering having batteries added to your solar system and want a short course to give you more information.

What does this course lead to?

As this is a short modular course and it is designed to lead to next steps training.

If you are already a trained plumber or electrician this will act a steppingstone to a longer, further renewable suite of qualifications. If you are new to renewables this course will act as opportunity to sample the industry and consider a change in career to look at electrical or plumbing pathways at Level 2.

Who is this course for?

Adults who are interested in learning more about renewables, specifically battery storage. Learners do not need to have any prerequisite knowledge, we just ask for a willingness to learn and have functional English and mathematical skills.



Riverside College

Widnes & Runcorn



Learning Plan

Introduction To Renewables

Battery Storage Principles

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Battery Storage Principles

This course is one of a range introducing learners to renewables systems that can be applied to their homes, workplace or as a means to develop their businesses in this area. The course has been developed in collaboration with other colleges in the Liverpool City Region.

Engineering Level 3

Programme	Introduction to Renewables
Unit(s)	Unit 1: Battery Electrical Principles and battery storage principles in renewables systems.
Who is the course for?	The course is aimed at those looking to choose, operate and/or maintain a renewable energy system, either in the home, workplace or customers' premises. It is also for those learners wishing to consider further courses which lead to accreditation in the installation industry. The course is delivered at a systems level, however basic, relevant electrical theory will also be taught.
Outcomes	<ul style="list-style-type: none"> • An understanding of how electricity is made in the generating mix. • To be aware of the carbon production of the mix. • To know the daily demand cycle and how to make use of it • Understand how batteries can be charged from low carbon sources. • Be able to estimate the size of a battery system to be installed and its possible yield. • Understand the maintenance required in battery systems to ensure continuous yield. • To have an awareness of the Health and Safety implications of the installation of a complete battery system.

UNIT 1 Battery Storage Principles

Lesson No	Topics
1	<p>An introduction to electrical principles that apply to batteries and renewable systems:</p> <ul style="list-style-type: none"> • Making electricity • Storing electricity • Voltage • Current • Power and Energy • AC and DC as applied to battery storage systems • Calculating electricity costs • Electrical health and safety
2	<ul style="list-style-type: none"> • A history of batteries • Cells and batteries • Battery construction • Configuring battery capacity • Battery and electricity costs in a system • Batteries in series and parallel • Applications in renewables systems • Matching to an inverter • Battery health and safety

Assessment

Learners will be assessed at the end of the course with an on-line multi choice exam. Success in this will lead to a college-issued certificate of completion.