



Renewable Energy Institute - Accredited Training Courses



Renewable Energy Institute

Professional Body for Education in Renewable Energy

<https://www.renewableinstitute.org/>

What is the Renewable Energy Institute?

The Renewable Energy Institute works to promote best practice and knowledge-sharing in Renewable Energy and Energy Efficiency topics, by working with leading universities and the United Nations (UNEP) to deliver a range of educational opportunities: professional training courses, qualifications, conferences, publications, European Projects, Global Partnerships, Membership Programmes and the internationally recognised Galileo Master Certificate.

The Renewable Energy Institute is an independent professional body and training provider, which works with leading universities, and has been running courses since 1975. Every year, the Renewable Energy Institute trains over 5000 individuals in 150 countries all over the world in the latest in Renewable Energy and Energy Efficiency. All Renewable Energy Institute course lecturers are university academics and industry experts with many years of experience in their field. The accredited courses take place in the classroom, online in virtual classrooms, or online on-demand through an innovative learning platform.

In collaboration with the United Nations (UNEP), the Renewable Energy Institute works to promote best practice in Renewable Energy and Energy Efficiency among individuals and companies both locally and internationally.

The Galileo Master Certificate GMC

The Galileo Master Certificate (GMC) is an internationally recognised certificate in Renewable Energy and Energy Efficiency, awarded directly by the Renewable Energy Institute. For every course that you study, you have the opportunity to achieve a GMC. If you study an Expert Certificate or the Accredited Master in Renewable Energy Award, you can achieve multiple GMCs.

Previous GMC achievers include the National Grid, the World Bank, the BBC, Volkswagen, IBM and many more.



All courses are accredited by the CDP accreditation service.

You can log your Continuous Professional Development hours to boost your career.

GMC Course Exams

The exams for the internationally recognised Galileo Master Certificate will all be sat online from your own location; you will not attend an exam centre. During your studies when you feel ready, you will book your exam time slot accordingly to availability.

Typically, the exams will be 30 minutes in duration, multiple choice, 10 – 15 questions and open book.

We have a high success rate of participants passing the exams the first time, as the exams are designed to test you on the core knowledge of the course. In the event that a participant should need to retake an exam, we are happy to discuss options for this.

Course Duration

Depending on the **individual course**, we recommend approximately **20 – 30hrs** of study to review all of the course videos, course slides, and any additional course materials that are provided. You will have up to **3-months** to complete the course at your own pace, but you can complete the course and sit the exam for the GMC as quickly as you would like within this period.

For an Expert Certificate Pathway (**3 courses**), we recommend approximately **80 – 90 hrs** of study to review all of the course videos, course slides, and any additional course materials that are provided. You will have up to **6-months** to complete the course at your own pace, but you can complete the course and sit the exam for the GMC as quickly as you would like within this period.

For the full Master in Renewable Energy Award (**12 - 15 courses**), we recommend approximately **280+ hours** of study to review all of the course videos, course slides, and any additional course materials that are provided. You will have up to **18-months** to complete a minimum of 12 courses at your own pace, but you can complete the courses and sit the exams for the GMC as quickly as you would like within this period.

ACCREDITED MASTER IN RENEWABLE ENERGY AWARD

Combine classroom and online study of 13 Renewable Courses



12 - 15 COURSE MASTER PATHWAY

- Renewable Energy Management & Finance
- Solar Photovoltaic
- Carbon Finance
- Renewable Energy Solutions
- Hydrogen Energy
- Wind Power
- Energy Efficiency in Buildings
- Electrics for Renewables
- Biomass
- Wave & Hydro Power
- Solar Water Heating
- Combined Heat & Power
- Energy Storage
- Electric Vehicles
- Heat Pumps

HOW IT WORKS

Master in Renewable Energy Award: to become a Master in Renewable Energy, candidates must achieve a minimum of 12 Galileo Master Certificates (GMCs) within an 18-month period.

Up to 3 of these courses can be taken in the virtual classroom, subject to REI Approval.

INTERNATIONAL CERTIFICATE

- Minimum 12 GMC's
- 280+ CPD hours
- Master Award Status

Current part-funded price: £3,330



To enquire or book on this course please email:

training@RenewableInstitute.org

or call +44 (0) 131 623 1938

ACCREDITED ENERGY CONSULTANT EXPERT CERTIFICATE

Combine classroom and online study of 3 Renewable Courses



Combination of 3 courses - choose from:

- Renewable Energy Management & Finance
- Solar Photovoltaic
- Carbon Finance
- Renewable Energy Solutions
- Hydrogen Energy
- Wind Power
- Energy Efficiency in Buildings
- Electrics for Renewables
- Biomass
- Wave & Hydro Power
- Solar Water Heating
- Combined Heat & Power
- Energy Storage
- Electric Vehicles
- Heat Pumps

HOW IT WORKS

The Pathway to become an Energy Consultant Expert is via online distance learning. You must complete 3 courses over a study period of 6 months. Up to 2 of these courses can be taken in the Live Virtual Classroom, subject to REI Approval.

INTERNATIONAL CERTIFICATE

- 3 GMC
- 80-90 CPD hours
- Expert Status

Current part-funded price:

Online On-demand - £972

Live Virtual Classroom – £1295



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RENEWABLE ENERGY MANAGEMENT & FINANCE

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- Introduction to Renewable Energy Finance and Sustainable Design
- Methods of Financing: FiT / RHI / ROCs / CfD / PPA / ESCO / EPC
- Project Risk and Financial Management
- Basic Project Finance & Technical calculations – e.g. energy, economics, emissions, NPV, IRR
- Life Cycle Assessment (LCA) and approach
- Incentives and barriers to Investment
- Government Policy and Support Schemes – UN, EU, UK
- Project Finance examples
- Practical International Case Studies

Course Cost

Online On-demand - £540

Live Virtual Classroom - £795



“The lecturer was very knowledgeable and provided real-life examples”

– Jack McKellar, Aecom



SOLAR PHOTOVOLTAIC QUALIFICATION

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- Composition of light
- Photovoltaic effect
- Photovoltaic cells
- Materials
- Daily/annual energy
- Positioning of the modules
- Photovoltaic energy
- Photovoltaic illumination
- Planning and designing a photovoltaic installation
- The electric load
- Costs and evaluation of the economical solutions
- Maintenance and reliability
- Practical solutions
- Typologies and modality of installation
- Integration of the photovoltaic modules in the building structure
- Payback time
- Economical perspectives

Course Cost

Online On-demand - £540



“After being on numerous PV courses with a number of companies, I found this course to be the most professional, in every way - tutor, exams, information given & explained” – *Geoffrey Otto, Recent Participant*



CARBON FINANCE

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- Corporate emissions and decarbonisation strategies.
- Introduction to greenhouse gases (GHG) and climate change.
- ESG corporate principles and reporting.
- Corporate carbon emissions accounting.
- Types of emission-reduction commitments.
- Designing a corporate decarbonisation strategy.
- Carbon markets in Europe.
- Compliance carbon markets:
- Voluntary carbon markets:
- Opportunities in carbon trading and management strategies

Course Cost

Online On-demand - £540

Live Virtual Classroom Course - £795



“The lecturer was very knowledgeable and provided real-life examples”

– Jack McKellar, Aecom



RENEWABLE ENERGY SOLUTIONS

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- Introduction of the module and overview of the different renewable technologies
- Government incentive, climate change, energy, assessment (LEED, BREEAM, EPC)
- Choosing the best renewable energy options
- Benefits, applications and case studies for each technology:
- Solar Water Heating
- Fuel Cell, Earth duct: Canadian/Provencal Wheel, Light pipe
- Review of each technology
- Payback time considerations
- Combining renewable energy technologies
- Software available
- Conclusion

Course Cost

Online On-demand - £540



“I gained a good background to all renewable technologies, and there were good real world examples included in the course.” – Andrew McMullen, LEGO



HYDROGEN ENERGY

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- Environmentally Sustainable Hydrogen
- Hydrogen as Part of a Climate Neutral Strategy.
- Hydrogen Production and Conversion
- Fuel Cells
- Hydrogen for Mobility Applications & Vehicles
- Hydrogen Technologies
- Modelling and Simulation
- Hydrogen Economy & Financial Market Opportunities
- Storage & Carbon Capture
- LCSA, Recycling and Eco-design
- Distribution & Grid Infrastructure
- Government Legislation & Policies – UK, EU (including European Green Deal), Worldwide
- Case Studies

Course Cost:

Online On-demand - £540

Live Virtual Classroom - £795



“I chose the REI based on a colleague’s recommendation and was impressed by what the curriculum offered.” – Kyle Coulam, The Clinton Foundation



WIND POWER

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- Small and micro wind power plants
- Scenery adaptation
- The environmental impact
- Hybrid systems
- Incentives for wind power adoption
- Economical aspects
- Policies and procedures
- Running and maintenance of plants
- Design criteria
- Tuning the plants
- Technologies of machines
- The wind market
- Classification and types of plants
- Concepts of aerodynamics and aeraulic machines
- How wind power works

Course Cost

Online On-demand - £410



“I gained a good understanding of wind energy generation and related topics.”

– Lin Gao – E.On



ENERGY EFFICIENCY IN BUILDINGS

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- Energy context
- Physical principles
- Building envelope
- Building services
- Energy Performance Certificate
- Simulation tools – Energy modelling software
- Building design best practice

Course Cost

Online On-demand - £540



“Excellent course material and knowledgeable tutor.”

– Lawrence Avery, Department of Energy and Climate Change



ELECTRICS FOR RENEWABLES

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- Review of electrical fundamentals including:
 - Voltage, current and how they are measured,
 - AC and DC,
 - Resistance
 - Inductance and Capacitance in AC and DC circuits
 - Impact and calculation of Voltage drops
 - DC-based Renewable Systems (off-grid):
 - Earthing and over current protection
 - Grid-connected systems:
 - Safety considerations
 - The impact of power factor
 - PV installation guidelines and installation standards
 - Connection and Wiring standards
 - AC safety:
 - Earthing arrangements and their implications

Course Cost

Online On-demand - £410



“I would like to underline the instructors’ high level of preparation, alongside their good spirit of collaboration, dedication, flexibility and professionalism” – Mrs. Lorenza Vecchio, NATO



BIOMASS

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- What is biomass?
- Market, resources and targets overview
- The physics principles
- How biomass works (energy content, types of technologies, PCI, humidity content)
- Design guidance (sizing, selecting, autonomy, storage, manufacturers)
- Types of technologies: anaerobic digestion (bio-methane), gasification
- Environmental impact and analysis
- Finance, regulation and incentives (RHI, MCS, ROCs, DECC)
- Case studies, best practice analysis, manufacturers
- Simulation tools
- Standards
- References and further reading
- Trade bodies and support

Course Cost

Online On-demand - £410



“It was a great cover of all products and I will use my knowledge to apply to projects I am working on” – *Melanie Horbury, Pleydell Smithyman Ltd*



SOLAR WATER HEATING

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- Climatic data capture
- Types of solar systems. Storage of energy
- Calculation of the thermal requirements, occupancy, sanitary hot water
- Passive components
- Calculation of the designing surface required for the system
- Calculation of volume of accumulation (ground storing)
- Budgets
- Regulations
- Data and costs of installations
- Savings achieved
- Installation of the system, the tank, solar regulating switchboards, hydronic circuit of solar

Course Cost

Online On-demand - £410



“I won a project with the United Nations Industrial Development Organization with the help of the courses I took .”*Alhaji Cham – National Water and Electricity Company Ltd*



WAVE & HYDRO POWER

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- What is Wave / Tidal Power
- What is Hydro Power
- Market, resources and targets overview
- The physics principles (energy content, types of technologies)
- Design guidance (types, sizing, selecting, manufacturers)
- Environmental impact and analysis
- Finance, regulation and incentives (MCS, RHI, CCL, ECA)
- Case studies, best practice analysis
- Simulation tools
- Standards, References and further reading

Course Cost

Online On-demand - £410



“The course was very well presented and it was clear that the instructor had a great deal of experience and knowledge.”

– Phil Coulston , Environment Agency



COMBINED HEAT & POWER

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- What is CHP?
- Market, resources and targets overview
- The physics principles (energy content, types of technologies)
- Design guidance (types, sizing, selecting, manufacturers)
- Environmental impact and analysis
- Finance, regulation and incentives (MCS, RHI, CCL, ECA)
- Case studies, best practice analysis
- Simulation tools
- Standards, References and further reading

Course Cost

Online On-demand - £410



“This course has given me experience and knowledge which I’ll pass onto communities throughout Scotland” – Tom Young, Community Energy Scotland



ENERGY STORAGE

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- Types of electrical energy storage and key characteristics
- Parameters for electrical energy storage
- Operational characteristics of electrical storage
- Costs and pricing
- Integration of energy storage into electrical grids
- Off-grid systems, architecture and sizing
- Small scale battery storage systems
- Types and applications of thermal energy storage
- Future developments in energy storage

Course Cost

Online On-demand - £410



“The course has given me a wider knowledge and skill set of the wide choices of energy” – Jonathan Bell, Linskeldfield Bio Energy



ELECTRIC VEHICLES

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- EVs – cars, trucks, vans, scooters, bicycles
- EV technology
- Battery technology
- Battery recharging
- Renewable electricity recharging of EV batteries
- Recharging infrastructure
- Tailgate emissions
- Well to wheel LCA calculations
- EV financing and development

Course Cost

Online On-demand - £540



“The topics covered met my professional needs and provided a detailed course on Electric Vehicles”

– The NHS - Sathish Sethuraman



HEAT PUMPS

Online Learning with the Renewable Energy Institute

COURSE CONTENT

- What is heat
- Market, resources and targets overview
- The physics principles (components, types of technologies)
- Design guidance (sizing, selecting, autonomy, storage, manufacturers)
- Other types: Underground Thermal Energy Storage (UTES), Earth Ducts, Solar Assisted Ground Source heat pump
- Environmental impact and analysis
- Finance, regulation and incentives (MCS, RHI)
- Case studies, best practice analysis
- Simulation tools
- Standards
- References and further reading
- Trade bodies and support

Course Cost

Online On-demand - £410



“The topics covered met my professional needs and provided a detailed course on Electric Vehicles”

– The NHS - Sathish Sethuraman

CASE STUDY



The knowledge I have gained from this course will help identify opportunities for my company to engage our clients on new points in project life cycles.”

Marc David *The MET Office | Energy Account Manager*

1. What is your current expertise at the MET Office and how does this relate to the renewable energy field?

My work currently involves managing a cross Energy portfolio of accounts who utilise **Met Office’s commercial products** and data sets. This typically will include companies focused on larger generation type construction projects or O&M activities in the UK and Internationally. Specifically for Renewables, **the Met Office** looks to maximise the use of our world leading weather forecasting and climate science to better manage resource, mitigate health and safety risk and maximise economic recovery.

2. Why did you choose to train with the Renewable Energy Institute in order to take the exam for the internationally recognised Galileo Master Certificate?

Having the course delivered by industry professionals with a record of accomplishment in the renewable and low-carbon industries was something that was particularly important for me. Allowing the opportunity to question the course contents and get anecdotal evidence from those working directly in the industry was beneficial.

Read the full article from Marc here: <https://www.renewableinstitute.org/news/eec-alumnus-spotlight-the-met-office-marc-david/>



CASE STUDY



The course provided me with information that I'll be able to apply to the decisions I make with regard to the procurement of renewable energy"

Nancy Jones *BNY Mellon | Sustainability Research Analyst*

1. What is your current expertise and how does this relate to the renewable energy field?

I work as the Sustainability Research Analyst at BNY Mellon, a global investment company, where I manage the sustainable operations of the firm with the goal of reducing the company's impact on the environment in terms of its real estate, supply chain, and services provided to employees. This directly relates to renewable energy as the sustainable management of our energy portfolio is critical to our success in this space. As a carbon neutral company, BNY Mellon procures renewable energy credits and carbon offset projects for its energy portfolio.

2. Why did you choose to train with the Renewable Energy Institute at The George Washington University in order to take the exam for the internationally recognised Galileo Master Certificate?

I chose this course in order to augment my understanding of the dynamic and fluctuating energy markets. I wanted to gain a more thorough understanding of the factors that impact energy prices so that I can make more informed decisions. Furthermore, I signed up for this course with the intent to meet and network with other professionals in the field.

To read more from Nancy, visit: <https://www.Renewableinstitute.org/news/eec-alumnus-spotlight-bny-mellon-nancy-jones/>



CASE STUDY



The skills and knowledge obtained through attending the courses offered by the REI are crucial for my current role and future career.”

Nar Bahadur Khatiwora *United Nations UNDP*

1. Why did you choose to attend a course at the Renewable Energy Institute?

In addition to my qualifications, experience and background in **leading successful projects for top clients at the United Nations Development Programme**, I am also passionate about learning new things and continuously increasing my knowledge. I see training courses as an opportunity to continue to develop both professionally and personally. I am driven to deliver high-quality work and therefore, **internationally recognised courses are appropriate and helpful for me to keep abreast of new innovations and adapt to the changing dynamics** and new developments in the areas of Climate Change, Renewable Energy and Energy Efficiency, the core area of my work. **The [courses offered by the Renewable Energy Institute at world-class Universities](#) in the United Kingdom are appropriately delivered with practical case studies to demonstrate the latest developments** in the growing field of climate change, renewable energy and energy efficiency.

I can hardly describe the rewarding feeling that one gets when obtaining the **internationally recognised Galileo Master Certificate (GMC)**, which takes the level of your competency to a greater height and gives you more confidence to work much harder independently, in improving the health of our planet and the livelihood of the world's population.

To read the full article with Nar visit: <https://www.renewableinstitute.org/news/eec-alumnus-spotlight-united-nations-undp-nar-bahadur-khatiwora/>



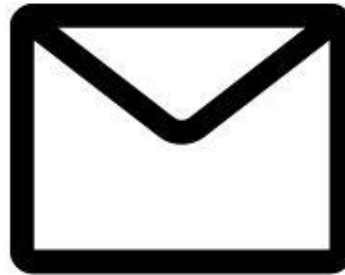
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(9am - 5pm GMT)

Email Us

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Fill Out a Form

www.renewableinstitute.org



Register Today

We look forward to getting you started with your
Professional Development!