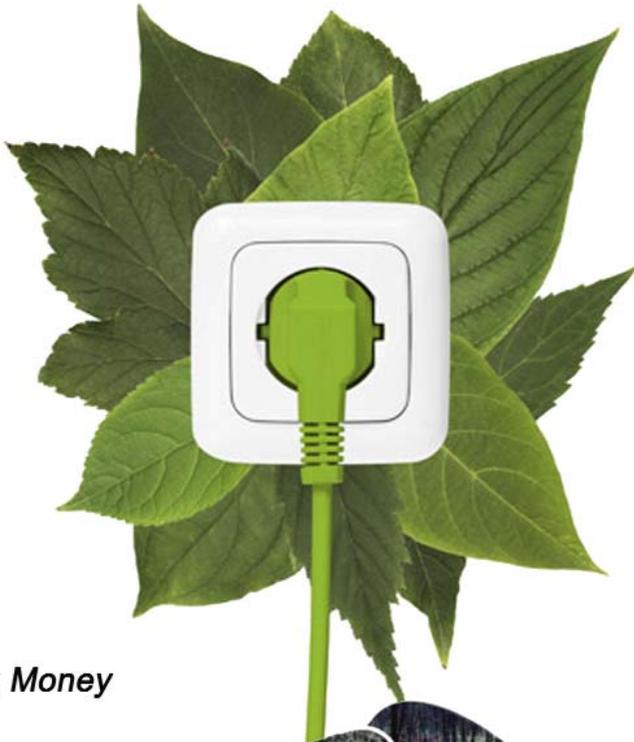


RENEWABLE ENERGY



Saving Money



Saving the Planet

INTRODUCTION

What is renewable energy?

Today we hear the phrase renewable energy more than ever. However, there are many people that are not sure what this really means. Some are not even sure what renewable energy sources are available today and what the pros and cons are to each one.

Anything that can be used to make heat or electricity without unsustainable fuels and which does not make a net contribution of carbon dioxide to the atmosphere. This includes wind power, waves and the tides, solar energy, geothermal energy and biomass. Nuclear power, although it is low-carbon, cannot be counted as a renewable source of energy because its fuel, uranium, is finite.

The drive towards a low carbon economy depends heavily upon the successful deployment of Renewable Technology. With growing concern about climate change, security of supply and the ever depleting reserves of useable fossil fuels, the need to harness energy from Renewable sources has never been greater.

While many renewable energy projects are large-scale, renewable technologies are also suited to rural and remote areas, where energy is often crucial in human development. Globally, an estimated 3 million households get power from small solar PV systems. Micro-hydro systems configured into village-scale or county-scale mini-grids serve many areas. More than 30 million rural households get lighting and cooking from biogas made in household-scale digesters.

Climate change concerns, coupled with high oil prices, peak oil, and increasing government support, are driving increasing renewable energy legislation, incentives and commercialisation. New government spending, regulation and policies helped the industry weather the 2009 economic crisis better than many other sectors.



RENEWABLE ENERGY WORKSHOP

Introduction

The renewable energy sector is expanding rapidly with the UK's commitment to reduce carbon emissions and our reliance on fossil fuels. Billions of pounds are being invested into the sector and there are exiting opportunities for businesses to meet the growing demand. renewable energy technologies for both domestic and commercial installations have become a huge growth market in the UK.

The need to drive down carbon emissions coupled with financial incentives like the Feed in Tariff Scheme (FITS) means that not only can renewables make a return in terms of energy savings and carbon reduction, they can also offer a significant, sustainable green income stream.

Course content:

- What is renewable energy?
 - Energy sources
 - Economic and environmental factors
- Overview of the main renewable energy technologies.
 - Solar Power – Thermal and Photovoltaic
 - Wind
 - Heat Pumps – Air and Ground Source
 - Combined Heat and Power (CHP)
 - Biomass
 - Grey water harvesting
- Finance
 - Feed In Tariff Scheme (FITS)
 - Renewable Heat Incentive (RHI)
 - Government initiatives
- Accreditation bodies including the Microgeneration Certification Scheme (MCS) and considerations when selecting an installer.
- Examples and case studies

Who should attend:

Those interested in renewable energy who would like to gain a greater understanding of the market and the different technologies available.

Course style:

This course follows an interactive workshop format . The course is designed to be informative, interesting and engaging with a mix of seminar, practical exercises, team activities and case study examples.

Duration

Duration of the course is ½ to 1 day



SOLAR PHOTOVOLTAIC COURSE

Installation and Commissioning of Domestic PV Systems

Overview

The renewable energy sector is expanding rapidly with the UK's commitment to reduce carbon emissions and our reliance on fossil fuels. The Feed In Tariff Scheme which pays householders and businesses for the energy they generate has brought about a rapid growth in Solar Photovoltaic installations. This course will give you a detailed understanding of modern Solar Photovoltaic systems, from the principles of how they work through to designing, installing and commissioning a domestic system successfully.

Entry Requirements

You must be a qualified practicing electrical professional. To install domestic systems in the UK you will also need IEE 17th Edition and Part P (Building Regulations) certification, if you do not already hold these qualifications they can also be offered.

Course Contents

- Solar PV - Operating principles
- Health & Safety and Applicable Regulations
- Planning and preparation
- Site Survey
- Principles of designing a system
- Mechanical installation - roofing principles
- Electrical installation - AC & DC
- Commissioning, test and verification
- Customer Handover
- Microgeneration Certification Scheme (MCS) accreditation requirements



Course Venue

At the Renewable Energy Centre at NETA in Billingham

Course Style

The course will include a mixture of classroom, practical and assessment activities to involve the learners and provide a relevant and engaging learning experience. There will be question and answer sessions throughout and the course will draw upon the learner's previous knowledge and experience. There will be an exam and practical assessments at the end of the programme

What qualification will I get?

Upon successful completion you will receive a City & Guilds 2372 Certificate

Course Duration

5 Days



SOLAR DOMESTIC HOT WATER SYSTEMS

Overview

Solar hot water systems use basic principles and components to capture incoming solar radiation and heat water for domestic and other uses. Over the years, a variety of system designs have been developed and tested to meet specific consumer needs and environmental conditions.

Solar hot water systems are most commonly used to heat water for basic household needs such as laundry, bathing, dishwashing and cooking. These systems are commonly referred to as "domestic hot water systems".

A solar domestic hot water system reduces fuel bills by collecting solar energy for heating water. This reduces the dependence on fossil fuels and cuts CO² emissions

Pre-requisites

Delegates must have current certificate for Unvented Hot Water System

Training and Assessment Covers: -

This course details two of the main system designs widely installed throughout the UK

Main topics include: -

- Solar Thermal Overview and considerations
- Solar Collector Types and British Standards
- Solar Thermal Store Options
- Solar Thermal Primary Circuit Designs
- Solar Primary Controls
- Solar Collector Sizing and Integration
- Installation Materials and Fittings
- Filling, Commissioning and Maintenance



The following are some of the areas covered under these topics

- Internal and external survey
- Design and Integration
- Health and Safety implications
- System sizing
- Position
- Planning and Access
- DHW storage size
- Electrical connections
- Location of solar components
- Efficient usage
- Fault finding



Certification

On successful completion of the course delegates will receive a logic certificate which can be used towards the Micro Regeneration Certification Scheme

Duration

Duration of the course is 2 days

THIS COURSE IS ONE OF MANY PROVIDED BY NETA

Other Courses include:-

ADR Hazchem
Scaffolding
Instrumentation
Electrical/Electronic
Mechanical/Fabrication
Welding/Welder Testing
Lifting/Slinging
Lorry Loader
Management/Supervisory
Health & Safety
Driver CPC
Pneumatics and Hydraulics
Bolt Tensioning
Hazardous Area Training (COMP'EX')
AM2
Commercial and Domestic Gas
Part P

For information on forthcoming Courses Examination Dates / Times
or a full range of courses contact:

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Meeting the needs and expectations of service users is of the highest priority to our staff. Therefore if you have any concerns or wish to make a comment about the service please contact: Barbara Seddon email b.seddon@neta.co.uk

Equal Opportunities Statement

It is our aim that there shall be equal opportunities in this organisation. There will be no discrimination on grounds of sex, being married, colour, race or disability which is not permitted by law; or on any grounds, including age, except where this is necessary to ensure that the job is done effectively. This principle will apply to recruitment, training, promotion, dismissal, transfer and all other benefits, terms and conditions of employment.

