

Taking the right steps to deliver clients environmental technologies requirements



Led by:

Summit SKILLS

Founding sponsors:

Briggs & Forrester Group Ltd, Cleaner Air Solutions UK Ltd, DPL Energy, Environmental Skills Network, M&E Maintenance Solutions Ltd, Microgeneration Ltd, Nu-Heat UK Ltd, Smith & Byford Ltd, Stella Maintenance Technologies Ltd, The Low Carbon Energy Company, Trade Training Associates (NE) Ltd, Yorkshire Solar, Zero Carbon Hub

Rob Wellman
Network Operations Manager

Association for Public Service Excellence

Thursday 31 May 2012
Manchester

Preparing for Green Deal

Review

Insulate

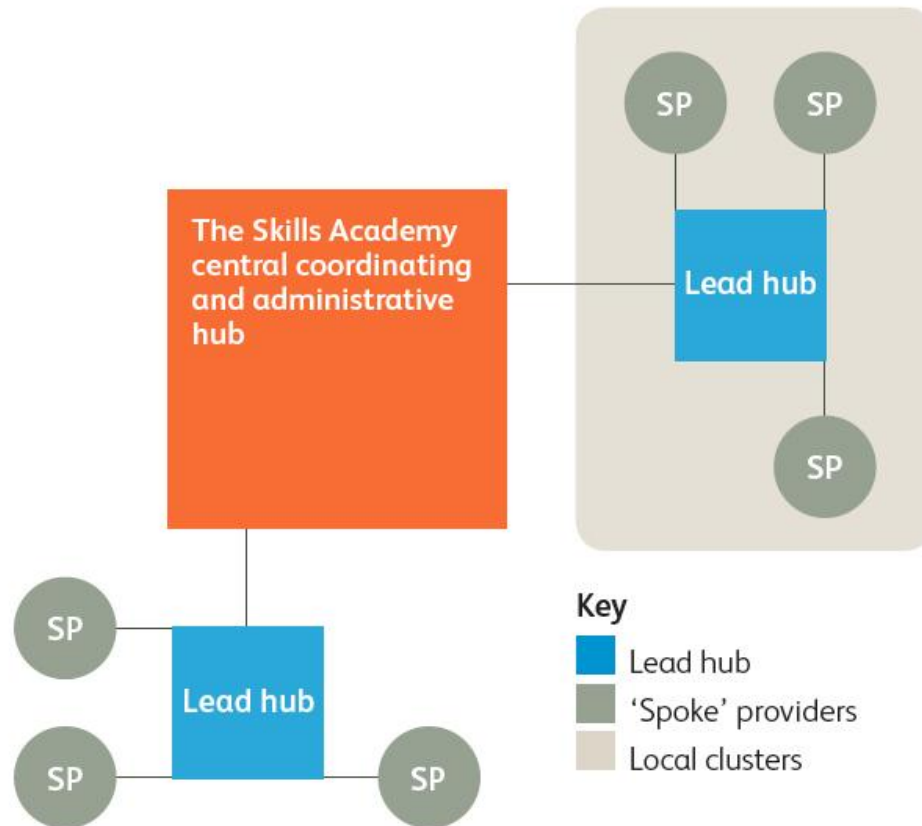
Moderate

Generate



Scope of the Skills Academy

How does the Skills Academy operate?



Hub Provision

Skills Academy Vision

**The National Skills Academy for Environmental Technologies
will transform the way the UK plans,
develops and delivers skills in renewable and
environmental technologies**

It will transform the current system into one which is
*demand-driven, quality-focused, accessible,
progressive and recognised.*

Microgeneration Strategy



Training of Trainers

- Master Trainer Network
- Trainers

Staff development programme including CPD

Sector Footprint

Preparing for Green Deal

Review

Building Energy Assessment, Building Energy Management, Energy Efficiency, Thermal Imaging, Specification, Design

Insulate

Insulation of Building, Insulation of BSE Systems, Fenestration

Moderate

Building Energy Management, Voltage Optimisation, Low Energy Lighting, Wireless Control Technology, Water Conservation, Passive Ventilation, Fenestration

Generate

Heat: Solar Thermal, CHP, Heat Pumps, Biomass, Bio Fuels, Hybrid Systems, Anaerobic Digestion
Power: Solar PV, Micro Wind, Micro Hydro
Water: Rainwater Harvesting, Grey Water, Water Conservation

Building Services Engineering Sector Footprint Guide

Typical Job Roles	Occupational Area					
	Electrotechnical	Electrical and Electronic Servicing	Heating and Ventilation	Domestic Heating	Plumbing	Refrigeration and Air Conditioning
Skilled Worker	<ul style="list-style-type: none"> Electrical Installation Electrical Maintenance Audio Visual Systems Installation Electrical Instrumentation Installation Data/Communications Systems Installation Electrical Panel Building Electrical Machine Rewind and Repair Building Management Systems Installation and Maintenance Security Systems Installation 	<ul style="list-style-type: none"> Domestic Appliance Installation Commercial Electronic Equipment Installation Domestic Electronic Equipment Installation Signal Reception Systems Installation 	<ul style="list-style-type: none"> Heating and Ventilating Ductwork Installation Heating and Ventilating Industrial and Commercial Installation Heating and Ventilation Systems Maintenance Heating and Ventilation Systems Servicing and Commissioning 	<ul style="list-style-type: none"> Domestic Heating Systems Installation and Maintenance 	<ul style="list-style-type: none"> Domestic Plumbing Systems Installation and Maintenance Industrial and Commercial Plumbing Systems Installation and Maintenance 	<ul style="list-style-type: none"> Refrigeration Systems Installation Refrigeration Systems Testing and Commissioning Refrigeration Systems Service and Maintenance Air Conditioning Systems Installation Air Conditioning Systems Testing and Commissioning Air Conditioning Systems Service and Maintenance
Technical worker (Roles stated may be across occupational areas)	<ul style="list-style-type: none"> Building Services Engineer Building Services Engineering Commissioning Engineer Building Services Estimator Building Services Engineering Contract or Project Engineer 			<ul style="list-style-type: none"> Building Services Engineering Computer Aided Design Technician Building Services Engineering Service and Maintenance Engineer Building Services Engineering Quantity Surveyor Building Services Engineering Site Supervisor 		
Professional worker	<ul style="list-style-type: none"> Higher Level roles as stated for technical worker Building Services Engineering Contract or Project Manager 			<ul style="list-style-type: none"> Building Services Engineering Consulting Engineer 		
Environmental Technologies/ Microgeneration	<p><i>The environmental technologies include a range of functions and systems integrated into buildings and building services engineering operating systems, including the specification, design, installation, commissioning, repair and maintenance of systems employing the following environmental technologies. The environmental technologies include renewable, low and zero carbon technologies and are designed to minimise energy waste, assist water conservation, help reduce fuel and resource poverty across green installations for commercial properties, domestic premises and small community projects with key technologies including :</i></p> <ul style="list-style-type: none"> Solar Water and Heating Combined Heat and Power Ground Source Heat Pumps Air Source Heat Pumps Biomass Mechanical Heat Recovery Ventilation Bio-Fuels (Liquid) Rainwater Harvesting Grey Water Water Conservation Photovoltaics for Microgeneration Micro Wind Energy Micro Hydro Generation Systems Fuel Cell Technology Wireless Control Technology Passive ventilation and light systems Integrated and Hybrid systems technologies Anaerobic Digestion Energy Efficiency Low Energy Lighting Building Energy Assessment Building Energy Management Insulation of Buildings Building Thermal imaging WEEE (Waste Electrical and Electronic Equipment Directive) Voltage Optimisation <p><i>In relation to the above technologies, the footprint that is primarily covered by SummitSkills is typically associated with the production of electrical energy up to 50 kilowatts, and the production of heat up to 45 kilowatts thermal. The environmental technologies are additions to the above job roles and require a threshold of competence in building services engineering in addition to the technology specific competence. There may not be a standalone qualification for each technology indicated.</i></p>					

Scope of the Skills Academy

Launched to date

- Level 3 Award in Understanding the Fundamental Principles and Requirements of Environmental Technology Systems
- Level 3 Award in the Installation and Maintenance of Solar Thermal Hot Water Systems
- Level 3 Award in the Installation and Maintenance of Small Scale Solar Photovoltaic Systems
- Level 3 Award in the Installation and Maintenance of Heat Pump Systems (Non-Refrigerant Circuits)
- Level 3 Award in the Installation and Maintenance of Water Harvesting and Recycling Systems

Future Legislation

Legislation in place December 2012

Applicable to:

- Green Deal
- Building Regulations Competent Persons Scheme
- MCS (Microgeneration Certification Scheme)

Training with the Skills Academy

Skills Academy quality offer, save time and money

Skills Needs Analysis

- Identify and credit existing competence
- BSE Pre-Requisites
- Environmental Technologies existing skills and competence

- Individual Competence Assessment Only

- Top up Training and Assessment

- Full Training and Assessment
Includes pathways in Advanced Apprenticeships

- Bespoke Training provision
- Awareness, Technical, Business Management and associated provision

Training with the Skills Academy

Bespoke Provision

Awareness

- Client liaison
 - Procurement Decisions
 - Planning
 - Building Control
 - Departmental Efficiency
-
- Level 3 Award in Understanding the Fundamental Principles and Requirements of Environmental Technology Systems

No Pre-requisite qualification or experience

Training with the Skills Academy Bespoke Provision

Technical knowledge
(non Technical Installer/Specifier)

- Awareness
- Skills Academy Technical CPD Units

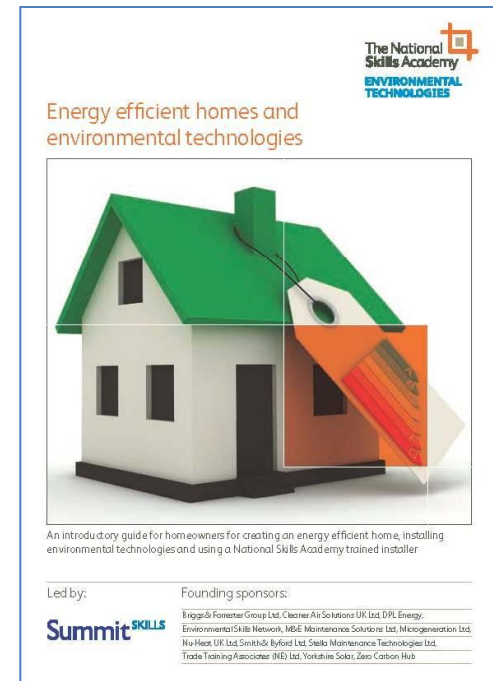
All Skills Academy CPD Units
are derived from and matched to the Full Level 3 Awards

Could be used for credit to full Award, in conjunction
with appropriate Technical Pre-Requisites

Supporting the local community

Energy efficient homes and environmental technologies

- An introductory guide for homeowners for creating an energy efficient home, installing environmental technologies and using a National Skills Academy trained installer.
- ISBN 978-1-908606-17-4 £4.99



Training with the Skills Academy

Full Course Training and Assessment

- **Skills Needs Analysis**
Identify and credit existing competence
BSE Pre-Requisites
Environmental Technologies existing skills and competence
- **Individual Competence, Training and Assessment Programme**
- **Knowledge Training and Assessment**
Use “Skills Academy Learner packs” to support learning, prior to assessment
- **Practical Training and Assessment**
Approx 5 days attendance at Skills Academy Centre

Individual Training or Assessment information

Following Skills Needs Analysis

- Centre instructions on pre-learning
- Centre instructions for delivered learning
 - Data Protection
 - Health and Safety
- Skills Academy Learner Material
- Awarding Body Registration, Assessment and Certification
- Skills Academy Register of Individual Competence
- When, where, what

Skills Academy Learner Packs

LEARNER MANUAL

The National Skills Academy
ENVIRONMENTAL TECHNOLOGIES

Installation & Commissioning of Solar Thermal Hot Water Systems

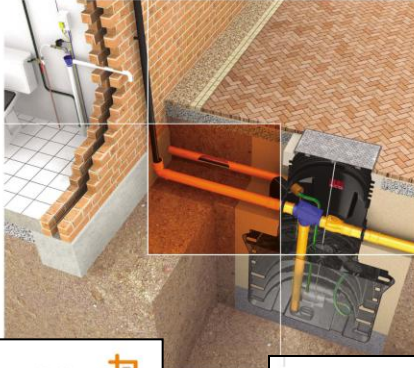


These materials have been developed for the Level 3 (QCF) Award in the Installation and maintenance of Solar Thermal Hot Water Systems.

LEARNER MANUAL

The National Skills Academy
ENVIRONMENTAL TECHNOLOGIES

Installation & Commissioning of Water Harvesting & Re-use Systems



Level 3 (QCF) Award in the Installation of Water Harvesting & Re-use Systems

LEARNER MANUAL

The National Skills Academy
ENVIRONMENTAL TECHNOLOGIES

Installation & Commissioning of Small-scale Solar Photovoltaic Systems



Level 3 (QCF) Award in the Installation of Small-scale Solar Photovoltaic Systems

LEARNER MANUAL

The National Skills Academy
ENVIRONMENTAL TECHNOLOGIES

Introduction to Environmental Technology Systems



These materials have been developed for the Level 3 (QCF) Award in Understanding the fundamental principles and requirements of environmental technology systems.

LEARNER MANUAL

The National Skills Academy
ENVIRONMENTAL TECHNOLOGIES

Installation & Commissioning of Heat Pump Systems (Non-refrigerant circuits)



These materials have been developed for the Level 3 (QCF) Award in the Installation of Heat Pump Systems (Non-refrigerant Circuits)

Installation
£29.99

Repair & Maintenance
£19.99

Skills PQQ and Tendering Packs

The National Skills Academy
ENVIRONMENTAL TECHNOLOGIES

Tendering – an overview



Guidance points on winning contracts - for small businesses

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£5.99

The National Skills Academy
ENVIRONMENTAL TECHNOLOGIES

Developing new business streams



The complete support portfolio for completing a pre-qualification questionnaire

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£24.99

Skills Academy Register of Individual Competence

Trained installer

The National 
Skills Academy

**ENVIRONMENTAL
TECHNOLOGIES**

Heat pumps

Trained installer

The National 
Skills Academy

**ENVIRONMENTAL
TECHNOLOGIES**

Solar thermal

Trained installer

The National 
Skills Academy

**ENVIRONMENTAL
TECHNOLOGIES**

Photovoltaics

Trained installer

The National 
Skills Academy

**ENVIRONMENTAL
TECHNOLOGIES**

Rainwater harvesting
& recycling

Summary and Evaluation

Questions

**Feedback to Employer Steering Group
and Board Members**

Please register at

www.nsaet.org.uk

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Thank you