

Spark

the newsletter for bright sparks

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ELECSA goes big on Microgeneration

Are you ready to join the ELECSA Microgeneration Certification Scheme?

If you supply, design, install and commission Microgeneration systems for the home, then you should consider joining the ELECSA Microgeneration Certification Scheme (MCS). In fact, you may already be installing some of these technologies that generate heat or power (or both) as an extension to your Part P work.

The Microgeneration Certification Scheme (MCS) is an independent certification scheme designed to certify microgeneration products and installers in accordance with consistent standards. The scheme has support from the Department of Energy and Climate Change, industry and non-governmental groups as a prime method for making a substantial contribution to cutting the UK's dependency on fossil fuels and carbon dioxide emissions.

Read all about MCS in this addition of Spark!



ELECSA
Awarded
UKAS
Accreditation!



ELECSA is proud to announce that it has just been awarded UKAS (United Kingdom Accreditation Service) accreditation for its Part P scheme.

Managing and Operations Director, Steve Mitchell said "We are the first to have achieved this national standard specifically for our Part P scheme and it is a testament to the high standards we apply in delivering our service."

The ELECSA Part P scheme has grown from strength to strength since becoming part of the ECA just over two years ago. UKAS accreditation means that we have been assessed against EN45011, an internationally recognised standard on certification. For our contractors it means that an ELECSA assessment has proven consistency, quality and impartiality.

Making your customers aware of ELECSA and Part P

ELECSA recently undertook a small survey of local authority building control departments in order to research the impact of Part P on them, to understand how they administer Part P and determine how widely known ELECSA is.

As most of you will already know from experience, the general feedback was that the introduction of Part P was rushed and there was a strong sense that the government didn't provide enough information prior to its introduction.

We'll be looking to use the research to develop tailored information for the local authorities about ELECSA and its approved contractors. The good news is that all the building control departments we spoke to had heard of ELECSA and were happy to accept your certification. However, we know that there are also people out there that you deal with where this is not necessarily the case.

From now on, when you come across situations where you think people are not accepting your certification, please call us to help. Specifically, ask to speak to Jean Mickle who loves helping to educate local authorities and housing associations who (wrongly) believe that certain other scheme providers are the only players in town!

We've already had great success in changing policies in Newcastle City Council and Ealing Borough Council as well as lobbying EAGA/Warmfront to ensure that ELECSA approved contractors have an equal chance in taking up these opportunities.

Call on **0845 634 9043** or email enquiries@elecsa.co.uk with all the details of the work involved and the people to contact.

LABC Part P Enforcement Initiative

In the last edition of Spark we reported that we were working with the other competent persons schemes and Local Authority Building Control (LABC) to report unsafe work or work suspected of being carried out by an unregistered person.

We have had a number of cases reported to us, through the general office number **0845 634 9043** and the dedicated email address bcproblem@elecsa.co.uk.

These have been passed on to LABC to investigate and we have had confirmation of work that has been passed across to Trading Standards for further investigation. We will monitor the progress of these cases and let you know the outcome.

If you find work that you think should be investigated, please let us know. It is crucial that such cases are reported as soon as possible as there is a better chance of building a case against a contractor if they know about it at the time the work is being undertaken. Equally important is giving as much information as possible about the work, including the full address of the installation and the nature of the problem. LABC will then investigate.

TrustMark



We have reached an agreement to offer TrustMark to ELECSA contractors through the ECA scheme license. There will be a charge of **£30 + VAT** for those wanting to join this scheme.

Applications and all the details for joining will appear on the contractors log in area of the website in due course, keep an eye out!

Do you require a Periodic Assessment?

Testing and inspection of electrical installations is necessary as they can sometimes deteriorate with age. Several factors can influence this including:

- Damage
- Corrosion
- Environmental Influences
- Wear and Tear
- Excessive Loading

This is particularly important for rental properties and the Landlord and Tenant Act 1985. This specifically states that the landlord is obligated to keep in repair and proper working order the supply services including electricity. There is a department for Communities and Local Government guidance document entitled "Repairs-a guide for landlords and tenants" that states that the landlord is required under The Landlord and Tenant Act 1985 to ensure that the installation is safe when the tenancy begins and that it is maintained in a safe condition throughout that tenancy.

Many licensing authorities, public bodies, insurance companies and mortgage lenders insist upon this. It is also a requirement of the Electricity at Work Regulations that electrical systems are maintained to prevent 'danger' as far as reasonably practical. Such electrical inspections are known as Periodic Inspection Reports (PIR's).

What do you need to have a Periodic Assessment?

It is agreed and generally accepted that an above average knowledge of electrical installations is required to carry out PIR's, usually gained through years of experience on top of a formal qualification (eg C&G 2391). Regulation 621.5 states that a PIR shall be undertaken by a competent person.

Before ELECSA undertakes a Periodic Assessment, the contractor being assessed will be expected to have:

- City & Guilds 2391.
- A minimum of 2 Periodic Inspection Reports for review.
- IEE Guidance Note 3 (Inspection & Testing).
- A site available to visit where a full and comprehensive Periodic Inspection has taken place.

Upon successful completion of the assessment:

- The contractor will then be able to electronically notify ELECSA of the inspection to be formally lodged. However,

as Periodic Inspections are not notifiable to Building Control, the work will not be notified to anyone else.

- The Landlord or other persons ordering the work will get the peace of mind that the inspection undertaken has been by an independently assessed company.
- A three yearly surveillance visit is required to assess ongoing performance (annual assessments are not necessary).

Contractors considering the Periodic Assessment should apply before their assessment is due in order to be carried out at the same time. The fee for Periodic + Part P assessment is **£600 + VAT**.

Common Questions from the Technical Helpline

Q. Can we certify other peoples work?

A. The only paperwork you can produce for other peoples installations in which you have had no input is a Periodic Inspection Report. If you have been asked to sign off another contractors work you can only do so with the local Building Control knowledge and agreement.

Q. What do I do if there is no earth present in the lighting circuits?

A. This is quite common, particularly in houses wired in the late 1960's – early 1970's. In the contractors log in area on the ELECSA website, go to the Technical Support page and follow the links to 'Best Practice Guides'. Download Best Practice Guide 1 – Replacing a consumer unit where lighting circuits have no protective conductor – it will give you all the guidance you need.

Q. How much testing is required for a change of distribution board?

A. All circuits to be reconnected to the new fuse board require testing to prove that they are suitable for reconnection. The parameters of the installation have been changed and we need to ensure that our new MCB's comply for disconnection times.

Top Tips!

- It is not a requirement to earth metal back boxes where they have one fixed lug.
- A list of notifiable and non-notifiable work can be downloaded from the ELECSA website and more information can be found on pages 7, 8 & 9 of Approved Document P.

ELEC SA launches new Microgeneration scheme



New Head of Certification, Chris Beedel, has recently joined the ELEC SA team. He has been instrumental in gaining our UKAS accreditation and is developing other certification schemes

to offer contractors in the domestic market new opportunities. The first of these new schemes is the Microgeneration Certification Scheme (MCS) for contractors installing domestic renewable technologies.

The primary aim of the MCS is to provide consumers with confidence and protection by guaranteeing that microgeneration products and installers who carry the mark meet, and will continue to meet, robust quality standards.

'Microgeneration' is defined as the generation of energy of up to 45 kW (heat) or up to 50kW (electricity), using technologies such as photovoltaic cells, solar thermal hot water, heat pumps, wind turbines and biomass systems.

The scheme aims to:

- Help build a rapidly growing Microgeneration industry based on quality and reliability.
- Make a substantial contribution to cutting the UK's dependency on fossil fuels and its carbon dioxide emissions.
- Provide consumer confidence that installers meet and continue to meet robust standards.

The scheme also provides homeowners with access to Government grants under the Low Carbon Buildings Programme.

About the technologies

Wind energy

In the UK we have 40% of Europe's total wind energy. But it's still largely untapped and only 0.5% of our electricity requirements are currently generated by wind power.

Wind power is proportional to the cube of the wind's speed, so relatively minor increases in speed result in large changes in potential output. Uses range from very small turbines supplying energy for battery charging systems (e.g. on boats or in homes), to turbines grouped on wind farms supplying electricity to the grid.

The wind speed itself is dependent on a number of factors, such as location within the UK, height of the turbine above ground level and nearby obstructions. Ideally, you should undertake a professional assessment of the local wind speed for a full year at the exact location where you plan to install a turbine before proceeding.

Biomass

Biomass is organic matter of recent origin. It doesn't include fossil fuels, which have taken millions of years to evolve. The CO₂ released when energy is generated from biomass is balanced by that absorbed during the fuel's production. This is why it is considered to be a carbon neutral process.

Biomass is often called 'bioenergy' or 'biofuels'. These biofuels are produced from organic materials, either directly from plants or indirectly from industrial, commercial, domestic or agricultural products. Biofuels fall into two main categories:



- Woody biomass includes forest products, untreated wood products, energy crops, short rotation coppice (SRC), e.g. willow.
- Non-woody biomass includes animal waste, industrial and biodegradable municipal products from food processing and high-energy crops, e.g. rape, sugar cane, maize.

For small-scale domestic applications of biomass the fuel usually takes the form of wood pellets, wood chips and wood logs.

There are two main ways of using biomass to heat a domestic property:

- Stand-alone stoves providing space heating for a single room. These can be fuelled by logs or pellets but only pellets are suitable for automatic feed. Generally they are 5-11 kW in output, and some models are often fitted with an integrated boiler.
- Boilers connected to central heating and hot water systems. These are suitable for pellets, logs or chips, and are generally larger than 15 kW. Stoves can be 80% efficient. They are normally used for background heating. They also add aesthetic value in the living area of the house itself.

Many wood burning stoves act as space heaters only. But the higher output versions can be fitted with an integral boiler to provide domestic hot water and central heating through radiators, if needed.

Solar Thermal

Solar water heating systems use heat from the sun to work alongside your conventional water heater. The technology is well developed with a large choice of equipment to suit many applications.

For domestic hot water there are three main components:

- Solar panels or collectors are fitted to your roof. They collect heat from the sun's radiation. There are two main types of collector:
 - Flat plate systems - which are comprised of an absorber plate with a transparent cover to collect the sun's heat, or

- Evacuated tube systems - which are comprised of a row of glass tubes that each contain an absorber plate feeding into a manifold which transports the heated fluid.
- A heat transfer system - uses the collected heat to heat water.
- Hot water cylinder - stores the hot water that is heated during the day and supplies it for use later.

Solar Photovoltaic (PV)

PV uses energy from the sun to create electricity to run appliances and lighting. PV requires only daylight - not direct sunlight - to generate electricity.

Photovoltaic systems use cells to convert solar radiation into electricity. The PV cell consists of one or two layers of a semi conducting material, usually silicon. When light shines on the cell it creates an electric field across the layers, causing electricity to flow. The greater the intensity of the light, the greater the flow of electricity.

PV arrays now come in a variety of shapes and colours, ranging from grey 'solar tiles' that look like roof tiles, to panels and transparent cells that you can use on conservatories and glass to provide shading as well as generating electricity.

You can use PV systems for a building with a roof or wall that faces within 90 degrees of south, as long as no other buildings or large trees overshadow it. If the roof surface is in shadow for parts of the day, the output of the system decreases.



Heat Pumps

The purpose of a heat pump is to absorb heat in one place where it is plentiful, then to transport and release it in another location where it can be used for space or water heating. Useful heat can be found in the air outdoors, in the ground, and is also present in water.

There are two principle locations in the transfer of heat; the place where heat is absorbed, (the source), and where it is rejected, (the destination). The compressor in the refrigeration system also produces waste heat, and a significant proportion of this can be recovered, thereby reducing running costs and the ultimate release of CO₂.

The mechanical refrigeration cycle consists of an arrangement of heat exchangers; one that absorbs heat, the other that rejects it. Absorbed heat is transported through a sealed system of pipes by a fluid, the refrigerant, circulated by a compressor. The refrigerant is a fluid that has a low boiling point. A metering device to control the flow of refrigerant completes the arrangement and it is all connected by pipes. As the refrigerant works under pressure, the whole system is sealed for life.

In order to absorb and release the heat into and from the refrigerant, we exploit the ability of the refrigerant fluid to boil from a liquid to a vapour and then to condense back into a liquid. This is a continual process while the compressor is running and circulating the refrigerant.

The Low Carbon Building Programme

Under the UK Government's Low Carbon Building

Programme (LCBP), grants of up to £2,500 per property are available for the installation of MCS certified microgeneration technologies by certified installers. The grant covers a range of buildings including households, community organisations, public, private and the non-profit sectors.

Levels of grants available vary according to the technology. For more information about the grant streams and eligibility criteria, or to apply visit www.lowcarbonbuildings.co.uk

Why should I join the ELECSA scheme

Government targets for the reduction of CO₂ output substantially by 2020 could require as many as one in four homes to have a renewable technology installed. This would require around 7 million homes in the UK to be fitted with a renewable technology. This would require 75,000 installers to be installing one or more of these technologies on a regular basis.

In times when traditional installation work is becoming more competitive, this represents an excellent opportunity for those already involved with installation of building services to include renewable technologies to the products they install. You'll be pleased to know that the ELECSA scheme operates in the same way as our successful Part P scheme, with an assessment of your office based practices plus a visit to see an installation.

For further information about the scheme or to apply now, please go to our website at www.elecsa.co.uk/microgeneration or complete the enclosed reply paid card to have these details sent out to you.

New online shopping experience

In order to make your online experience a more helpful and enjoyable one, we've been busy making some changes to the ELECSA webshop.

These include the introduction of pictures so that you can see exactly what you're buying.

The range of promotional items has been extended and we've also launched ELECSA branded 'CalCards', a credit card sized checkbox that can tell you if your test equipment is continuing to provide consistent measurements and results.

Now available for just **£20 incl VAT**. When used in accordance with the guidance provided, this could save you money on calibration services because if you can demonstrate that you get consistent readings, you may not need to produce calibration certificates at assessment.



ELECSA Welcomes its 4000th Contractor!

James Moore of Surge Electrical has helped ELECSA reach another significant milestone in becoming our 4000th Approved Contractor!

Steve Mitchell, Managing & Operations Director of ELECSA, wanted to meet James and thank him for choosing ELECSA. Steve said "It's always good to talk to contractors about what they're doing and how they're finding the market at the moment. It helps us to keep in touch with the issues that are affecting them and try to keep what we're doing relevant and valuable to the contractor."

Based at Worksop, James has come through the demanding training of being an apprentice at Maltby Colliery. He is also currently completing his HNC at Doncaster College and will also shortly complete his 2391 in Inspection and Testing. He's an ambitious contractor with a clear plan of what he wants to do and where he wants to go.

James decided to choose ELECSA because he wanted something different. He said "I didn't want to just join a money making scheme. The ELECSA assessment was really useful and the service and support I've had so far has been excellent."



Next Events

- **ELEX Harrogate:**
12th – 13th March (www.elexshow.info)
- **SPARKS Newbury:**
23rd – 24th April (www.sparksexpo.co.uk)
- **ELEX Exeter:**
30th April – 1st May (www.elexshow.info)

We are still running our '20 things you need to know about installing to the 17th Edition' seminar at venues around the country. Please check the ELECSA website www.elecsa.co.uk for details of up and coming events.

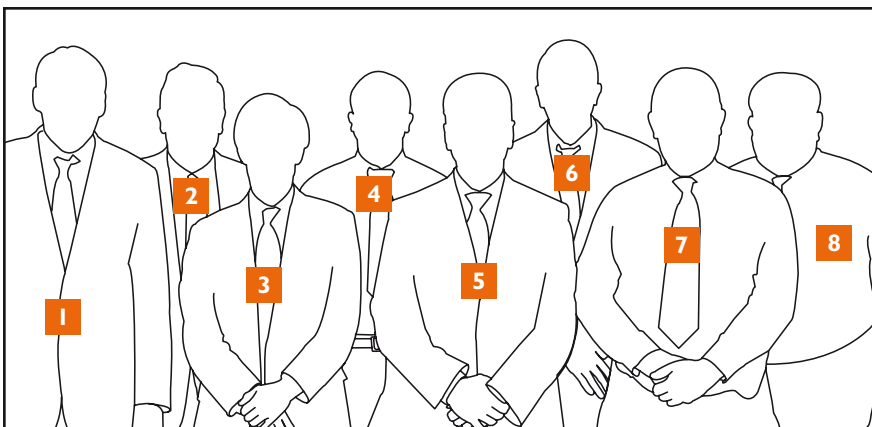


The other half of the team!

In the last edition of Spark we introduced you to one half of the assessment team. So, as promised here is the other half – we'll let you judge which bunch are the better looking!

Some of you may notice that Richard Giddings and Neil Hayden are both missing from this photo. Unfortunately they weren't available on the day, but they do sterling work covering the Bristol and Chester areas respectively. We have also recently added to the team David Busby to cover the Gloucestershire area.

We take pride in all members of our assessment team who not only carry out assessments but also get involved in manning the free technical helpline, drafting technical guidance and literature, presenting seminars and helping out at trade shows. They are the human face of ELECSA and believe in providing the practical support and advice you need in your everyday work.



1. **Alan Frost** North East
2. **Alan Jones** South Wales
3. **David Goddard** Southern Home Counties
4. **Paul Bennett** North West
5. **Gary Stevens** Midlands/North East
6. **Trevor Preston** Home Counties
7. **Brian Robinson** East Anglia
8. **Ray Chivers** East Midlands