www.esc.org.uk

Issue 30 | Autumn 2013 | £5.00

SwitchedOn

News for the industry from **The Electrical Safety Council**

ELECTRICAL SAFETY COUNCIL

Switched On goes digital

FROM THE DG'S DESK

Well, what a summer we had. And with it we saw some great successes for British sport, including that memorable men's singles win at Wimbledon by Andy Murray.

Success in sport is not a given. It comes from having total commitment and dedication, and of course a strategy on how to achieve sustained success.

Similarly, success in business is not achieved by chance. Yes, there is an element of serendipity to it, but to rely on luck would not provide a sustainable blueprint for a successful business. You need strategic thinking, a well-thought-out strategy and a good business plan. But most of all you need a dedicated team that's prepared to go that extra mile to make sure the business succeeds.

Reading this issue of *Switched On* you'll see that the ESC is continuing to build on its successes, whether in the field of public affairs, through our campaigning activity on important issues such as product safety, or improving the lot of tenants in the private rented sector.

Our achievements, like those of all successful businesses, have resulted from the blueprint that I just mentioned, particularly because the ESC has a committed team of Trustees and staff without whom we would not have made the impact we have. So I thank all involved for their continued support.

It's also important to acknowledge the support we receive from our funders, Ascertiva Group Ltd and Certsure LLP. I also appreciate the support received from those of our readers who are clients of these businesses, as much of the surplus they generate is gift-aided to the ESC.

Looking to the future, the ESC has, through its sustained success in raising awareness amongst Government and politicians, caused other organisations to want to be seen to have a voice on electrical safety issues. In terms of more voices lending their weight to concerns about electrical safety, I can only welcome the interest that other bodies are now taking. But I would urge those that want to take up our cause to collaborate with us and not compete.

We all have limited funds and it's important that the ESC is able to continue to focus on activities that bring direct benefit to the vulnerable - such as through our Fire Safety Fund and Home Improvement Grants - rather than having to respond to politicians who have been lobbied by organisations that choose to hide their commercial ambitions behind a veil of electrical safety concerns.

This autumn, to ensure that the ESC continues to keep electrical safety high on the agenda of Government and politicians, we are reviewing our five year strategy. The outcome will inform and condition our priorities for the period the revised strategy will cover.

Part of our strategic development has already been completed. I'm pleased to say that in July, our Trustees agreed to a new campaigning name for the Electrical Safety Council. From April next year we will be known as '**Electrical Safety First**' in all our consumer and stakeholder-facing activities, and the new name will be underpinned by the strapline '**UK's Electrical Safety Experts**'.

The decision was not taken lightly, but research and focus groups showed that, in order to create greater behavioural change amongst consumers, we needed to have a name that instilled greater trust. We engaged with consumers throughout the process, testing many names. **Electrical Safety First** was their preference.

Further information about our name change and how it will be implemented will be published during the period leading up to next April.

As always, we would welcome feedback on the content of *Switched On*. Email **feedback@esc.org.uk**

Phil Buckle Director General

Safe as houses: An ESC perspective on regulation of the private rented sector - see page 13.

switched**on**

issue 30 Autumn 2013

your insight into the electrical safety industry

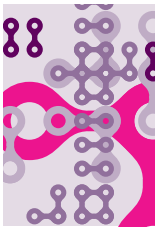
news

technical

Letters

I'm sure that there are many within the electrical industry that will have strong feelings about some of the issues raised in *Switched On*. So feel free to shout about them.

Please email your letters to the **Editor** of *Switched On* at: **mcswitchedon@gmail.com**



features

ELECTRICAL SAFETY COUNCIL

Published by:
The Electrical Safety Council
Unit 331, Great Guildford Business Square
30 Great Guildford Street
London SE1 0HS
www.**esc**.org.uk
www.**twothirtyvolts**.org.uk
www.**switchedonkids**.org.uk
Tel: 0203 463 5100 Fax: 0203 463 5139
email: switchedon@**esc**.org.uk

→ IN BRIEF

International liaison – Fisuel

At the end of May, the ESC attended the Annual General Meeting of Fisuel - the International Federation for the Safety of Users of Electricity – held this year in Lisbon.

The ESC has been an active member of Fisuel for almost ten years. Its main aim is to improve the safety of electrical installations, particularly in developing countries, through the sharing of knowledge and experience.

Martyn Allen, the ESC's Head of Technical Development, gave three presentations to the assembly on the subjects of counterfeit electrical products, electrical accident and injury statistics in the UK, and the five essential safety requirements for any electrical installation.

Further details of Fisuel's aims and objectives can be found on their website **www.fisuel.org**

Lift company fined after electrocution of employee

In April, a lift and elevator company was sentenced for breaches of the *Health and Safety at Work etc. Act 1974* and the *Provision and Use of Work Equipment Regulations 1998*.

53 year-old Steven Loake, an employee of the company, was electrocuted in 2010 while trying to fix a fault on a lift. Mr Loake was working on equipment to which the electrical supply had not been isolated, using a multimeter.

Insulation had been removed from the probes of the multimeter, which allowed Mr Loake to come into simultaneous contact with a live conductor and parts of the lift structure connected to Earth and so receive the fatal electric shock.

The HSE found in their investigation that ThyssenKrupp Elevator UK Ltd (TKE) had failed to provide:

- a safe system of work, sufficient information and instruction or adequate supervision for its employees who may carry out work on live electrical systems
- work equipment that was suitable for use, maintained in good repair.

Although it was never contended that these breaches directly caused Mr Loake's death, ThyssenKrupp Elevator UK Ltd was fined £100,000 and ordered to pay full costs of £25,748.

As indicated in the test lead article in the winter 2012 issue of *Switched On*, the length of exposed tip on test probes should be kept as short as possible to minimise the risks of arcing, flashover and electric shock.

HSE Guidance Note GS38 – Electrical Test Equipment for Use by Electricians – recommends that probes are insulated to leave no more than 4 mm and, where practicable, 2 mm or less, of exposed tip. Alternatively, spring loaded, retracting shields may be used. (Paragraph 9 of *GS 38* refers)

Section 2(1) of the *Health and Safety at Work etc. Act 1974* states that: *It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees.*

Regulation 5(1) of the *Provision and Use of Work Equipment Regulations 1998* states that: *Every employer shall ensure that work equipment is maintained in an efficient state, in efficient working order and in good repair.*

British Standard for domestic fire alarm systems updated

BSI has published an updated version of *BS 5939-6*. It replaces *BS 5839-6: 2004*, which is withdrawn

Amongst other changes, the title of the 2013 version is now *Part 6: Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises*. This more accurately reflects the scope and content of this Part of the *BS 5839* series.

The 2013 version introduces a number of technical and other changes, including:

- A smoke detector rather than a heat detector is now recommended for installation in any principal habitable rooms of new premises
- Suitable carbon monoxide fire detectors are now an acceptable alternative to smoke detectors in principal habitable room(s) of premises
- The scope of the standard has been extended to include the common parts and facilities within premises used for sheltered housing as well as the individual dwellings in those premises
- Addressable fire detection and fire alarm systems are now recommended for use in sheltered housing where the detectors in individual dwellings are connected to a fire alarm system covering common parts of the premises.
- Greater emphasis is given to the need to avoid delay in summoning the Fire and Rescue service when the fire alarm system in sheltered housing is activated
- Three new definitions are given: 'competent person', 'domestic premises' and 'shared house'
- The term 'premises' is generally used in preference to the previously-used term 'dwelling'

This Part of *BS 5839* will be fully revised at some future date.

BS 7671: 2008 continues to develop

As anticipated in the winter issue of *Switched On*, Amendment No. 2 to *BS 7671: 2008* was published on 1 August 2013.

The amendment comprises a new section (Section 722) *Electric vehicle charging installations*. It can be viewed on the IET website free of charge, or downloaded in a printable format for a £6 fee (£3.90 for IET members).

The new section modifies the general requirements of *BS 7671* for protection against electric shock, and includes specific requirements relating to PME supplies, socket-outlets and connectors, external influences, isolation and switching, and RCD protection. The requirements do not apply to wireless (inductive) charging, or to the charging of mobility scooters and similar vehicles of 10 A or less.

The more wide-ranging amendment of *BS 7671* – which will be Amendment No.3 - is due to be published in January 2015 in accordance with the three-year revision cycle.

A corrigendum has also been issued to replace Section *710 Medical Locations of BS 7671: 2008*. Available as a free download, the ten page document takes account of the technical requirements published in the European harmonization document *HD 60364-7-710: 2012*, and incorporates changes to some of the regulations which are intended to make the technical requirements more clear.

Both Amendment 2 and the corrigendum can be viewed or downloaded from the IET website at:

http://electrical.theiet.org/wiring-regulations/updates/index.cfm?

Tool supply firm fined for endangering lives

In April, a plant and tool hire company from Hertfordshire was found guilty of endangering workers and others after a routine inspection by the Health and Safety Executive (HSE) identified significant failings.

Arrow Tools (UK) Limited, based in Waltham Abbey, was instructed to pay £27,000 at Watford Magistrates' Court after it heard that some power tools and grinding machines, as well as fixed electrical systems at its premises, were so poorly maintained they presented an immediate and potentially fatal risk to persons.

The HSE served four Improvement Notices on the company, one of which required improved management arrangements. The company failed to act on them however, and despite being granted two extensions to comply with the terms of the notices, subsequent HSE inspections found that some management practices still remained unsatisfactory.

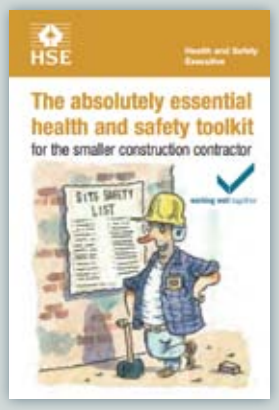
After admitting a breach of regulation 4(2) of the *Electricity at Work Regulations 1989** and not acting on Improvement Notices, Arrow Tools (UK) Limited of Waltham Abbey was fined a total of £24,000 and ordered to pay court costs of £3,000.

*Regulation 4(2) of the *Electricity at Work Regulations 1989* requires that: '*as may be necessary to prevent danger, all systems shall be maintained so as to prevent, so far as is reasonably practicable, such danger*'.

HSE clamp down on construction site safety

Earlier this year, the Health and Safety Executive (HSE) carried out a nationwide initiative intended to reduce deaths, injuries and ill-health resulting from incidents at construction sites, which resulted in enforcement action for one in five of those sites.

During February and March, the HSE made unannounced visits to 2,363 construction sites where refurbishment or repair work was taking place. As a result of these inspections 631 enforcement notices, including 451 prohibition notices, were served on 433 sites where practices that could endanger workers were discovered.



In 2011/12, 49 workers were killed and 2,884 major injuries reported on construction sites in Britain.

Information about safe working in construction can be found online at: **www.hse.gov.uk/construction**

ESC ATTENDS TRADING STANDARDS CONFERENCE IN BRIGHTON

Building on the success of the ESC's Electrical Product Safety Conference in May, we once again attended the Trading Standards Conference, which was held at the Brighton Centre in June. As on prior occasions, the conference proved to be a successful event for the ESC.

The two ESC workshop sessions, presented by our Product Safety Manager, Steve Curtler, focused on the ten-point checklist we created to help Trading Standards Officers identify unsafe electrical products during their market surveillance visits. Both workshops were very well attended, with around 70 people attending each.

In addition, our stand attracted over 200 visitors and provided us with an opportunity to build relationships with professionals from the wider product safety arena.

Promotional materials distributed over the course of the event included information about our product recall widget*, our work in relation to appliance safety, and our recently-published product safety research report '*Safer Products, Better Business*'.

With the ESC team also attending the plenary and mini-theatre sessions, we had an interactive and very successful few days in Brighton.

Should you wish to read or download our appliance safety research report or any of our other safety literature, please visit our website: **www.esc.org.uk**. Alternatively, paper copies can be requested by emailing: **enquiries@esc.org.uk**

The ESC's online product recall checker can be found at **www.esc.org.uk/recall. Simple instructions for including the checker on other websites can be found at: **www.esc.org.uk/generatecode**.*

ESC SPONSORS SAFETY INITIATIVE AWARD

The ESC has continued to support safety best practice within the industry by sponsoring a safety award at the ECA Electric Event in June.

The ESC 'Best Electrical Safety Initiative Award' was won by Imtech G & H Ltd for their Behavioural Safety, Hazard and Accident Reduction Programme (BE SHARP). The programme, which was developed in-house, focuses on the reasoning people use when choosing to work in an unsafe manner.

Based in Nottingham, Imtech provides electrical and mechanical engineering services for major industrial, commercial and public sector new-build and refurbishment projects.

Imtech GAH Ltd receiving their award. L-R Marcus Brigstocke Awards host, Robin Hazeldine Imtech G&H Ltd, Mike Clark ESC Technical Director, Phil Fagg ECA President

BE SHARP is not about risk assessment, method statements or legislation. Instead, it emphasises key safety messages, using a range of communication techniques – from videos to group discussions - by making them personal and relevant to those attending the training.

"We are delighted to receive this award from the ESC", says Robin Hazeldine, Health, Safety, Environment & Quality Manager at Imtech. "We view safety as fundamental to all our activities and there's no doubt that the BE SHARP programme has had a positive effect - and not just on our workforce."

Imtech has seen the programme directly impact on its accident rate, which fell to zero in 2012. And, as Imtech invite their subcontractors and customers to join them in the training, the programme has also increased safety awareness throughout their supply chain.

"Sponsoring this kind of award gives us the opportunity to highlight and celebrate those companies that are championing electrical safety through their working practice", said Phil Buckle, ESC Director General. "Awards are all about identifying and highlighting examples of best practice so that industry can continue to raise the bar for all."

FREE SAFETY CHECK APP
NOW LINKS TO THE ELECTRICAL SAFETY REGISTER

Following the launch of the Electrical Safety Register, the ESC's free smartphone app has been updated to add links to **www.electricalsafetyregister.com** – enabling householders to search for a local registered electrician if they discover an electrical safety problem in their home.

The ESC 'Home Electrical Safety Check' app, which is available for iPhone and Android devices, guides householders through a range of simple visual safety checks on the electrics in their home to look out for any basic hazards that can easily be avoided. These include overloaded sockets, appliances that have damaged leads, and flammable materials being stored near electrical intake equipment (consumer units, service fuse assemblies and electricity meters).

The app also helps householders to identify more serious electrical safety issues and then advises them to call in a registered electrician to investigate and carry out any necessary remedial work.

Since its launch in November 2011 the app has been downloaded over 30,000 times, and Fire and Rescue Services across the UK have been recommending it to householders during their home safety visits.

With an increasing number of people becoming landlords, the app has also been designed to cater for electrical safety checks on multiple properties – keeping a separate record of flagged issues for each address. The app also connects with email so that users can send a summary of their visual checks to themselves, a family member or, for tenants, directly to their landlord for attention.

The updated app is available now in the App Store and Android Market – search for 'Home Electrical Safety Check'.

THE END OF AN ERA - SWITCHED ON IS FINALLY GOING DIGITAL

Launched in the summer of 2006, Switched On has continued to bring you the most up-to-date technical and safety advice, details of changes to standards and regulations, reports on the work of the Electrical Safety Council and much, much more.

Seven years and 30 issues later, the magazine is still going strong - with an ever-expanding readership.

However, as advised in the summer issue, this is the last issue of Switched On to be distributed in paper form free of charge, either as an insert in magazines or via our direct mailing list.

So, from the winter issue on, the alternative digital page-turning version, introduced earlier this year with the spring issue, will be the only version to be freely available.

If you wish to continue to receive printed copies without interruption, please **email enquiries@esc.org.uk** before the end of September to set up a subscription. Annual subscriptions for four paper issues cost £18 inclusive of postage.

But don't worry if you miss the subscription deadline for the winter issue. You will still be able to read the free digital version of that issue and subscribe later on to once again begin receiving paper issues through your letterbox. We regret we will be unable to provide paper copies of any back issues you might miss though.

For further information about subscribing to Switched On, please go to **www.esc.org.uk/subscribe**

Please also go to that web page to sign up if you wish to be alerted by email immediately each new digital issue of Switched On becomes available.

Digital versions of all the back issues of Switched On are available at **www.esc.org.uk/switchedon**

If you wish to continue to receive printed copies without interruption, please email enquiries@esc.org.uk

ESC GRANT SCHEMES REACH MILESTONE

Now entering their fifth year, the ESC's Electrical Fire Safety Fund and Home Improvement Grants Scheme continue to provide an opportunity for us to work with funded partners, with particular focus on high-risk and vulnerable groups.

The funding provided over the past five years has reached the milestone figure of £1,000,000, reaching over 2.5 million people in the process. In 2012-13, the Electrical Fire Safety Fund alone reached nearly 1.5 million people – more than its combined total for the previous three years.

This year, there were 177 applications for funding for projects across the UK. £130,000 was awarded to 29 partners through the Electrical Fire Safety Fund, and £80,000 was awarded to 26 partners through the Home Improvement Grants Scheme.

The Electrical Fire Safety Fund supports community safety services including Fire and Rescue Services and Trading Standards teams in the delivery of fire prevention initiatives at local level that aim to effectively tackle the causes of electrical fires.

Grants of up to £5,000 are awarded for each project, with the majority this year involving the testing and replacement of products including electric blankets and hair straighteners, and tackling the problem of counterfeit and sub-standard products. There is also an emphasis on educating children about electrical safety through a variety of initiatives, including school tours and open days.

The Home Improvement Grants Scheme is open to Home Improvement and Care and Repair Agencies to provide direct support to older vulnerable and younger disabled homeowners, to enable them to have essential minor electrical works carried out in their homes. The Scheme is operated with the support of the national bodies for Home Improvement and Care and Repair Agencies - Foundations (England), Care & Repair Scotland, Care & Repair Cymru, and Gable (Shelter) in Northern Ireland.

Phil Buckle ESC Director General presents an award to Wynn Roberts, Gofal a Thrwsio Gwynedd (Care & Repair)

Their support enables the Scheme to reach every eligible agency in the UK, giving them the opportunity to apply for funding.

In July, awards ceremonies for this year's successful applicants were held in London and Glasgow to enable representatives from all over the UK to attend. The ceremonies were hosted by the ESC's Director General, Phil Buckle.

MSP Richard Lyle joined the Glasgow event, at which he welcomed the funding shared between Scottish organisations. Previously-funded partners shared their experiences and provided an insight into just how beneficial the funding had been to their projects.

RoSPA (Northern IrelandI) also shared their experiences of the Fire Safety Fund at the Glasgow event. Their campaign, "Too Hot to Handle", focused on the risks that hair straighteners present, particularly to young

Successful applicants gathered for the Awards ceremony in London

This year's funded partners will carry out their projects until March next year. Full details can be found on the ESC's website at: www.esc.org.uk/funding

SAFE START FOR TRAINEE SCOTTISH ELECTRICIANS

The next generation of Scottish electricians will have a safe start to their career - thanks to the ESC and the Scottish Electrical Charitable Training Trust* (SECTT).

Almost four hundred young trainees are being supplied with free 'lockout kits' by the ESC and SECTT. Worth £30, the kit will help the young electricians carry out the essential safe isolation procedure before starting work on an electrical installation, which could potentially save their lives.

Scottish trainees receiving their lockout kits

"We believe it's vital that safe working practices and procedures are undertaken right across the industry", explained Phil Buckle, ESC Director General. "To be properly effective, this needs to be established right at the start of an electrician's career. These free lockout kits don't just provide trainees with essential safety equipment - which we hope will make safe isolation an ingrained habit. They could also make the difference between life and death".

"The kits will be provided to students from the Shetland Isles to the Borders who are studying at 20 Approved Centres across Scotland", added Anne Galbraith, Chief Executive of SECTT. "Our continuing partnership with the ESC means we've been able to share the cost of these indispensible safety kits and help safeguard the next generation of Scottish electricians."

The Scottish Electrical Charitable Trust (SECTT) is a registered charity whose sole remit is the management of the Scottish Joint Industry Board for the Electrical Contracting Training Schemes. The SECTT website (www.sectt.org**) provides essential information about careers in the electrical industry and useful guidance for employers and individuals.*

children, including providing warnings and leaflets in A&E departments.

In London, we were joined by Alex Mills of the South Yorkshire Fire and Rescue Service which had launched their first ever electrical safety campaign. We were also joined by Russell Carr of Peterborough Care & Repair, which last year received funding under the Home Improvement Grant Scheme. With the funding received, they were able help more vulnerable people to stay safe in their homes.

Wayne Mackay ESC (centre) with Sharon Cox and Stewart Wilson from Tighean Innse Gall (Barra Care and Repair)

The ESC White Paper – a joined-up approach

The Electrical Safety Council's Industry Summit in March - reported on in the previous issue of Switched On - was a milestone for the electrical industry, establishing a collaborative approach to policy issues.

Now the next step has been taken: the distribution of a White Paper - developed from the ideas and opinions expressed by Summit delegates - to relevant government departments and other key organisations.

The Industry Summit brought together a range of stakeholders to discuss consumer safety and the changing industry landscape, with the production of the White Paper a key outcome of the event. It is the first document of its kind to be developed with the aim of giving the industry one voice when addressing the impact of regulatory changes and emerging public policy programmes.

"Obviously we can't dictate the political agenda, but we may be able to influence it by offering expert comment that will help improve consumer safety and reinforce industry best practice", explains Phil Buckle, ESC Director General. "The Summit was designed to capture a range of industry views because, as our keynote speaker at the event – Don Foster MP, the Minister for Building Regulations - noted, we will be more effective if we all work together. To put it simply, collaboration is fundamental to consumer safety and industry success."

The ESC White Paper focuses on the three significant developments explored at the Summit: the changes to Part P and the ongoing review of the Building Regulations for England; what the Green Deal means for electrical contractors; and how the installation of smart meters is likely to affect the safety of domestic electrical installations.

The paper emphasises the need for greater collaboration across the sector, from manufacturers to retailers, to improve consumer awareness of Part P. It also strongly recommends partnership working to gather data on the effectiveness of Part P in relation to safety and best practice. And it calls for further investigation into the scope of third-party inspection and testing of notifiable electrical work.

Other recommendations relate to ensuring Green Deal assessors engage with householders to highlight home safety issues, and developing the smart meter roll-out to promote electrical safety to both consumers and contractors.

The latter recommendation includes checking the adequacy of the earthing arrangement in homes as part of the smart meter installation process, and developing a mechanism for electricians to temporarily de-energise domestic electrical installations themselves in an authorised manner when necessary for safe working. As mentioned elsewhere in this issue, the current authorised process is both impractical and costly, as electricians are expected to arrange for the electricity supplier or their meter operator to carry out such de-energisations.

Commenting on the Summit and the White Paper, Don Foster said: "I was delighted to speak at the ESC's Industry Summit. It allowed me to emphasise the importance of consumer education and awareness to ensure safety, and highlight the need for increased industry engagement and collaboration. Just as important, however, was the fact that it gave us the opportunity to hear the views of the industry. I will read the White Paper's recommendations with interest."

'...the first document of its kind to be developed with the aim of giving the industry one voice...'

The White Paper includes the following recommendations:

- *Part P Competent Person Scheme (CPS) operators should contact the Department for Communities and Local Government (DCLG) and flag any additional indicators they believe need to be included in a future review of the Part P requirements for England.*
- *Part P CPS operators and the ESC should liaise to create an incidents register, documenting evidence of any drop in standards or increase in injuries thought to have resulted from the changes to Part P. Relevant parties should coordinate to share this data as appropriate with DCLG, the CLG Select Committee, and Local Authority Building Control.*
- *DCLG and its Third Party Certification Working Group should investigate the feasibility of making Third Party Certification an exclusively not-for-trade route to certification.*
- *Industry should work with the ESC to research and identify the key drivers for householders when engaging registered electricians.*
- *Retailer support for messages around engaging competent electricians should be proactively sought.*
- *A common Mark, along with agreed messages, should be developed by Competent Person's Forum (CPF) members, to help consumers more easily recognise and select competent persons whatever trade they undertake.*
- *Industry and the ESC should liaise with relevant parties on the Independent Regulatory Challenge Panel, in order to reiterate the importance of existing requirements relating to electrical safety.*
- *The Department for Energy and Climate Change (DECC) should investigate the possibility of requiring Green Deal assessors to be trained in the basic principles of the Housing Health and Safety Rating System.*
- *Industry should work with companies carrying out Green Deal assessments, to help establish procedures for poor conditions to be identified and discussed with householders.*
- *DECC should investigate through engagement with industry how to ensure that smart meter installers check the adequacy of earthing arrangements during their installation visits.*
- *DECC should include a requirement for smart meter installers to leave generic electrical safety information with consumers as part of their installation visit. (The ESC has offered to develop this information).Training on safety should be included in the relevant Level 2 Diploma for Smart Metering.*
- *DECC should broker a solution that permits competent electricians to access cut-out fuses themselves, in order to provide a less costly and time-consuming alternative authorised procedure for the temporary de-energisation of domestic electrical installations than the only currently authorised method.*

'...the current authorised process is both impractical and costly...'

The full ESC White Paper can be found at: **www.esc.org.uk/whitepapers**

ESC CALLS FOR HIGHER SAFETY STANDARDS IN SCOTLAND'S PRIVATE RENTED SECTOR

The past 18 months have seen significant steps taken in Scotland towards improving standards in the private rented sector (PRS).

The sector has more than doubled in size since 1999 and demand for private rented accommodation is expected to grow even further, especially among families, young people and low income households.

To meet the challenges the demand is creating, the Scottish Government has taken the initiative to regulate and improve standards, which the ESC applauds.

There are still areas to be improved upon however, and the ESC has been actively campaigning for electrical safety standards to be enhanced to help keep tenants protected.

In May, the Scottish Parliament debated the issue of electrical safety in the private rented sector in a motion put forward by Clare Adamson MSP. The debate drew contributions from across the political spectrum, signifying strong cross-party support for improving safety standards in the sector.

In her opening address, Adamson expressed her concerns about private tenants living in poorly maintained homes that often have dangerous electrical installations. She also backed the ESC's calls for residual current devices (RCDs) to be installed in the consumer unit of all rented properties to protect the electrics and all the electrical appliances supplied by landlords.

Bob Doris, MSP for Glasgow, added his support for the use of RCDs and suggested that the Scottish Government consider fitting the devices as part of any energy efficiency programmes available to the social and private rented sectors.

Malcolm Chisholm MSP, a Labour representative for the Edinburgh region, argued that the Scottish Housing Quality Standard had significantly improved safety standards for social housing and that a similar standard should be introduced for the PRS.

He also suggested that one way to ensure that standards were properly enforced was to strengthen the Private Rented Housing Panel, which offers a mechanism for Scottish tenants to access support if landlords fail to meet their obligations. In his closing remarks, he added "that the Tenant Information Pack could also be an important part of the way forward."

Clare Adamson MSP with ESC's Director General Phil Buckle

The Scottish Conservative Party spokesperson on housing, Alex Johnstone MSP, also contributed to the debate, voicing his support for the Scottish Government's work to increase safety levels in the PRS but warning that any new regulation should not add requirements which might encourage some landlords to operate outside the law.

Housing and Welfare Minister Margaret Burgess MSP closed the discussion with some encouraging words: "The Electrical Safety Council should be commended for raising awareness of the issue and actively campaigning for improvements in safety standards."

The ESC believes that housing standards in the PRS can be improved without creating a disproportionate regulatory burden on landlords. Through our responses to recent Scottish Government consultations, we have offered proposals for improving electrical safety in the home, which combine good business sense with enhanced consumer safety.

The ESC favours inclusion of the following measures in any new regulation covering the private rented sector:

- Mandatory five-yearly safety checks by a competent person of electrical installations and any electrical appliances supplied with lettings
- Mandatory provision of RCD protection in all properties.

A number of key housing sector stakeholders support these proposals including the Scottish Association of Landlords, Shelter Scotland, the Chartered Institute of Housing Scotland, Royal Institute of Chartered Surveyors Scotland and Home Safety Scotland.

Later this year we will join a Scottish Government working group to consider whether a single minimum condition standard should be applied across all housing tenures and, if so, how safety requirements should be incorporated. With a new Housing Bill also due around the same time, there will be ample opportunities for the ESC to continue to put its views forward. Given the support and encouragement we have received so far, we are more confident than ever of attaining our goal to make rented homes safer.

SAFE AS HOUSES: AN ESC PERSPECTIVE ON REGULATION OF THE PRIVATE RENTED SECTOR

The Private Rented Sector (PRS) now accounts for 17% of all the housing in England, with an estimated 8.5 million people using it for their housing needs.

Recent research has indicated that those who live in the sector are more likely to be exposed to substandard, dangerous conditions than in any other type of tenure. The sector itself is widely viewed as seriously under-regulated, with allegations that some parts of it are a "wild west" not uncommon[1]. Parts of the sector have been largely left to self-regulate, but the rising level of complaints, poor standards and increasing costs show that this uneven approach is producing unsatisfactory outcomes.

The ESC has been meeting with Parliamentarians and other stakeholders to discuss the possible introduction of a legal requirement for what has long been recognised as best practice - five-yearly inspections of the electrical installation and any appliances supplied by the landlord in privately rented properties, supplemented by visual checks on change of tenancy.

These requirements would bring rules for electrical safety more in line with those for gas. By law, gas installations in rented properties must be inspected by a registered gas engineer on an annual basis, and a certificate confirming the safety of the installation given to the tenant.

The ESC has been gathering support for this positive change and joining many other concerned organisations in calling for reform and improvement in the sector. To that end, the ESC has contributed written evidence to the Communities and Local Government (CLG) Select Committee inquiry into the Private Rented Sector[2], and given oral evidence to a similar exercise by the PRS All-Party Parliamentary Group.

Indeed, concerns over electrical safety were raised by the CLG Select Committee directly with Housing Minister Mark Prisk in an evidence session in May. When asked why it is that all PRS properties must have a gas safety certificate but not one for electrical safety, the Minister said that incidents involving electricity are less prevalent than gas.

Regrettably that response did not take into account evidence from the ESC showing that the dangers associated with the two energy sources are equivalent[3] and that, whilst gas is usually provided to only one or two appliances in the typical home, electricity is supplied to every area of the house and so potentially is a far more pervasive concern.

Putting the opposite argument, Labour recently published a policy review paper, "*Private Rented Housing: Improving standards for all*"[4], calling for urgent change to the sector's governance and putting forward a number of key options to improve conditions, including a national private rented property standard and tougher sanctions for bad landlords. The paper carried a comment from ESC Director General, Phil Buckle, alongside other high profile campaign groups such as Crisis and Which? and represents an important divergence in policy between the two main political parties ahead of the 2015 General Election.

In the absence of change at a national level, the ESC has joined calls for more powers to be given to local authorities to improve conditions in the private rented sector. Research we conducted earlier this year with the Local Government Information Unit found that a third of local authorities are considering the adoption of a licensing scheme for landlords in their area.

Currently, such schemes can only be set up in areas with high anti-social behaviour or exceptionally low demand but several stakeholders, including Labour MP Graham Jones, have called for this to be broadened out to include areas with a high number of homes in poor condition. The Department for Communities and Local Government has pledged to look at how licensing schemes can be used to improve conditions for tenants, and the ESC plans to contribute to this exercise.

Increasing levels of interest in the PRS are symptomatic both of its continuing problems and on society's increased reliance on renting. With calls for improved standards and licensing schemes coming from an increasing number of organisations, there is clearly growing desire for decisive reform to make where private tenants live as safe as houses.

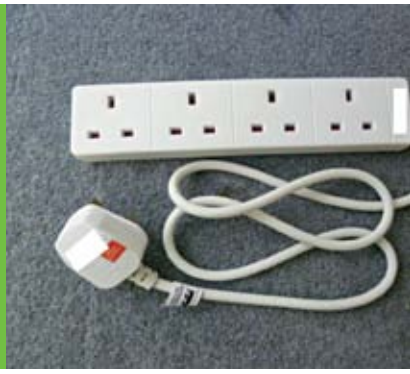
[1] *The Guardian: http://www.guardian.co.uk/housing-network/2013/jul/08/council-powers-improve-private-rent-standards*

[2] *http://www.publications.parliament.uk/pa/cm201213/cmselect/cmcomloc/writev/953/prs148.htm*

[3] *ESC Core Data Set: http://www.esc.org.uk/industry/policies-and-research/statistics/ - Estimated 40-50 deaths from electrical fires and 20-30 estimated electrocutions per annum. Carbon monoxide deaths estimated at 40 and estimated 20 deaths from fires of gas origin per annum.*

[4] *http://www.labouremail.org.uk/files/uploads/de53c925-9161-a774-e94f-2b79704f7c44.pdf?utm_source=taomail&utm_medium=email&utm_campaign=11136+EMBARGOED+NEWS+FROM+LABOUR%3A+Labour%27s+Policy+Review+explores+new+ideas+on+the+private+rented+sector&tmtid=47727-11136-2-15-486585*

Overloading of extension leads and cable reels rated at 5A and 10A



In 2010, the ESC investigated overloading of four-way extension leads. The results, which were published in Issue 18 of *Switched On*, revealed that the standard UK 13 A plug was the weakest link in the product due to the thermal damage caused by the integral BS 1362 fuse. As a result of that investigation, the UK Technical Committee introduced new overload test procedures into the British Standards for UK plugs and adaptors.

Our 2010 investigation only covered extension leads rated at 13 A. However, more recent reports of overheating relate to extension leads having current ratings less than 13 A.

Therefore, as part of our ongoing electrical product safety screening programme, we commissioned a test laboratory to replicate overloading of extension leads rated at 5 A and 10 A. We also asked the laboratory to test cord reels rated at 5 A and 10 A, as some changes to the requirements in the product standard for these became effective in March 2011.

Background

Despite the presence of permanent markings on the product warning against exceeding the maximum current rating, it is foreseeable in our opinion that several high-current-using appliances might be plugged into the available socket-outlets. Also, it is often found that the rating of extension leads is moulded into the back of the product enclosure, making it almost impossible to read at a glance, as shown.

Also, based on anecdotal evidence from consumers and reports from Fire and Rescue Services, it is reasonable to assume that the general public, if asked, would expect an extension lead fitted with a 13 A socket-outlet to be rated at 13 Amps.

The aim of the testing was therefore to determine the safety implications of loading 5 A and 10 A rated extension leads and cable reels at 13 A, on the premise that it is foreseeable that consumers are unlikely to calculate the total rated current of the appliances they plug in, and might not expect the product to be rated at less than 13 A.

Furthermore in our opinion, it is forseeable that an extension lead rated at less than 13 A might be used to supply on a continuous basis an appliance having a current rating higher than that of the lead.

Almost a decade ago, European Technical Committees dealing with electrical safety reported fires involving cable reels. At that time, cable reel manufacturers insisted that, for the UK market, their products could rely on the fuse fitted in the 13 A plug to afford protection against potential fire hazards caused by overloading. This was disputed by several EU Member States, which led to a drive to improve safety standards across Europe and ultimately resulted in an amendment to the European product standard for cable reels*(BS EN 61242:1997)*.

The amendment introduced, amongst other things, enhanced temperature rise tests under normal and overload conditions - recognising intended and foreseeable conditions of use - and a requirement for cable reels to incorporate a thermal or current cut-out, or a weak link, to prevent hazards that might arise from excessive temperatures.

However, the UK Technical Committee responsible for the safety of cable reels voted against the provisions of the amendment and upheld the opinion that *"the level of protection introduced by the amendment is afforded in the UK, under normal use, by the mandatory use of fused plugs in accordance with BS 1363-1"*.

Product testing

A limited sample size of three extension leads and five cable reels were randomly selected and purchased. The samples were subjected to testing based on the following standards:

Extension leads: *BS 1363-2:1995 + Amendment A4:2012*

Cable reels: *BS EN 61242:1997 + Amendment A1:2008*

The test laboratory was asked to confirm the product classification and evaluate product markings and user instructions. Temperature rise testing was then conducted under overload conditions.

The product standard for extension leads prescribes a test current appropriate to the flexible cable fitted to the product. For the three extension lead samples purchased, a test current of between 6 A and 10 A would normally be applied. However, the test laboratory was asked to apply a test current of 14 A in each case. While recognising that this is a non-standard test, it was intended to replicate foreseeable conditions of overload.

The *BS EN 61242* standard for cable reels prescribes two overload test regimes. The first test applies the highest possible current at which the thermal or current cut-out, or weak point, will not operate. The product is tested both fully-reeled and unreeled. The second test is applied with the product fully reeled and with a test load corresponding to 1.5 times the rated current of the socket-outlets in which the plug of the cable reel may be inserted. In the UK, this is 13 A x 1.5 = 19.5 A. In each case the load is applied until steady conditions are reached.

Product testing results

Extension leads

All samples satisfied standard marking requirements and were provided with adequate instructions for safe connection of the appropriate three-core flexible cable and fitted plug.

All recorded temperatures were within standard limits and no hazards were identified. However, the test laboratory concluded that the

same might not be the case for samples that are designed to be closer to the limits of the standard under normal operating conditions.

Cable reels

In general, all of the cable reel samples satisfied the standard marking requirements. One sample had particularly small markings on the back of the enclosure, making them difficult to read.

Four of the five samples had thermal cut-outs. The fifth sample relied for protection against excessive temperatures on the *BS 1362* fuse fitted in the plug.

Test loads were adjusted throughout testing to simulate the most onerous conditions. If a fuse operated during the test, it was replaced with a 13 A *BS 1362* fuse.

Only one of the four samples having a thermal cut-out exceeded the standard temperature rise limits. When fully reeled, the flexible cord exceeded the maximum temperature by approximately 4°C. Overall, the samples incorporating a thermal cut-out were within standard temperature rise limits, with no other hazards being identified. The test laboratory did comment however on the plug fitted on one of the samples, which was suspected of being counterfeit.

The sample without the thermal cut-out began to overheat during the overload test. Recorded temperatures for the line terminal, flexible cable and enclosure were substantially above standard limits.

Subsequent inspection revealed that the flexible PVC cable within the reel had melted, fusing into a solid mass. The line and neutral conductors had come into contact with each other, resulting in operation of the fuse in the fitted plug. The enclosure of the cable reel had deformed, but not to the extent that live parts became accessible. The fitted plug showed extensive internal overheating and deformation around the line pin. The photos below show the extent of the overheating damage.

The cord reel was considered hazardous under foreseeable conditions of use. The melting of the cable presented a further hazard in that a user might inadvertently attempt to unreel the cable at the time of the overload, effectively stripping the softened sheathing and insulation from live wires as the cable is pulled out.

Conclusions

This investigation has shown that, in general, the overloading of extension leads and cable reels rated at 5 A and 10 A does not necessarily pose a hazard. The limited test programme and test duration applied to the extension leads in a laboratory environment did not reveal any signs of damage similar to those in the incidents reported to us.

However, the test laboratory concluded that cable reels without thermal cut-out protection are more likely to reach hazardous temperatures, resulting in damage and the potential to present a fire and/or electric shock risk.

The cable reel not having a thermal cut-out was clearly hazardous, demonstrating that, in this case, the fuse fitted in the plug could not be relied upon to prevent the damage caused by excessive temperature rise. Furthermore, as a result of the change in the standard for cable reels that became effective in March 2011, the sample no longer complied with the safety standard, indicating that the manufacturer is not fully aware of its obligations under the *UK Electrical Equipment (Safety) Regulations 1994*.

Based on the findings of our investigation, the ESC recommends that consumers check for the presence of a thermal cut-out when buying cable reels. If in any doubt about exceeding the maximum rated current of 5 A and 10 A extension leads and cable reels, it is advisable to buy those having a 13 A rating.

To help raise awareness of the risks of overloading sockets, the ESC has created a simple to use, web-based load calculator to check whether sockets are being overloaded. For details, visit our website at **www.esc.org.uk/overloadingsockets**.

As with all our product safety screening projects, the findings will be shared with industry representatives and regulators, and we will liaise directly with local authorities on matters of immediate concern.

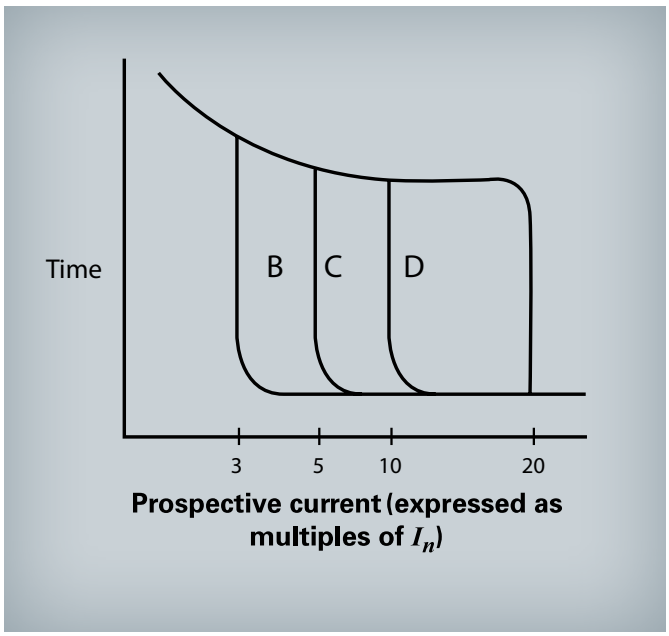
Furthermore, discussions are being held within the UK Technical Committee responsible for the maintenance of the product standard for cable reels, to help ensure that the safety requirements regarding protection against excessive temperature rise are understood by both manufacturers and test laboratories. The outcome of these discussions will be reported in a future issue of *Switched On*.

The laboratory test report is available to view in the 'Industry' section of our website: **www.esc.org.uk**

Can I replace a Type B circuit-breaker with one of another Type?

A circuit-breaker is designed to carry its rated current continuously and to trip automatically under specified conditions of fault current or overload current. However, to avoid unwanted operation, a circuit-breaker must also be selected such that its operating characteristics are compatible with the characteristics of the load it is intended to protect.

In particular, certain types of electrical load such as discharge lighting, a.c. induction motors and transformers require a much higher current during starting or initial energisation than during normal operation. Consequently, a circuit-breaker protecting such a load must be carefully selected to ensure that it will not be operated by such 'starting currents'.



Classification of circuit-breakers

To cater for loads having differing magnitudes of starting current, circuit-breakers designed to *BS EN 60898-1* are classified into three distinct types - B, C, and D - according to the magnitude of current required to trip the device within 0.1 s. This is referred to as the 'instantaneous tripping current' of the device.

In accordance with *BS EN 60898-1*, each type of device is designed to disconnect instantaneously within a given current range. As shown in **Table 1**, the respective current ranges are expressed as a multiple of the rated current of the circuit-breaker, I_n.

Manufacturers are free to design circuit-breakers so that they operate 'instantaneously' within ranges of current that are smaller than, but still fall within, the standard ranges permitted by the relevant product standard. Therefore, when selecting a circuit-breaker to protect a circuit supplying a particular load, it is advisable to refer to the manufacturer's technical literature or to obtain their advice.

Protection against electric shock

To provide protection against electric shock, the earth fault loop impedance of the circuit (Z_s) must be sufficiently low to permit the device to operate under earth fault conditions within the appropriate time specified in *BS 7671*, irrespective of the Type of circuit-breaker selected.

As the following comparative examples illustrate, where a higher level of fault current (I_a) is necessary to achieve the disconnection time required by *BS 7671*, the maximum permitted value of earth fault loop impedance is correspondingly lower.

Examples

To ensure the automatic operation of a 32 A Type B circuit-breaker under earth fault conditions, the highest current value of the

Table 1: Standard ranges of instantaneous tripping current for circuit-breakers for household and similar installations

Type	Range	Typical applications
B	From 3 I_n up to and including 5 I_n	Domestic and similar general applications where starting currents are low.
C	From 5 I_n up to and including 10 I_n	Commercial and industrial applications where inductive loads may cause high starting (inrush) currents. (Examples include multiple discharge luminaires, a.c. induction motors and transformers)
D	From 10 I_n up to and including 20 I_n	Very high starting current applications. For example, the protection of circuits supplying welding or X-ray equipment.

standard range shown in **Table 1** is used. Therefore the minimum earth fault current required to ensure instantaneous tripping is:

$$I_a = 5\,I_n = (5 \times 32\text{ A}) = 160\text{ A}.$$

Consequently, for a circuit having a nominal voltage to Earth of 230 V, the impedance of the earth fault loop, Zs, (before correction for temperature) must not exceed:

$$Z_S = 230\text{ V} / 160\text{ A} = 1.44\ \Omega$$

Should a Type C circuit-breaker be selected instead of a Type B, the minimum current required to provide instantaneous tripping, based on the highest current in the range shown in Table 1, is ten times the rating of the circuit-breaker (10 I_n), or 320 A. Consequently, to ensure this magnitude of current is achieved under earth fault conditions, the earth fault loop impedance of the circuit must be no greater than half the maximum value permitted for the Type B device:

$$Z_S = 230\text{ V} / 320\text{ A} = 0.72\ \Omega$$

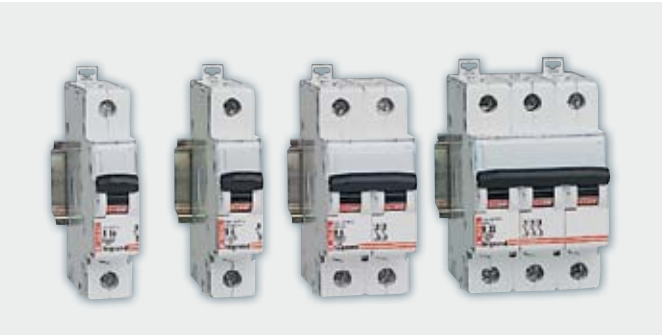
Should a Type D circuit-breaker be selected, the minimum current required to achieve instantaneous tripping, based on the highest current in the range shown in Table 1, is 20 I_n, or 640 A. Consequently, the earth fault loop impedance of the circuit must be no greater than half the maximum value permitted for the Type C device:

$$Z_S = 230\text{ V} / 640\text{ A} = 0.36\ \Omega$$

NOTE: Maximum permitted values of earth fault loop impedance for circuit-breakers are shown in Table 41.3 of BS 7671. Manufacturers may also publish particular values of earth fault loop impedance that are applicable to their range of devices.

Circuit-breaker replacement

It can be seen from these examples that the replacement of a circuit-breaker for one of a different type, albeit of the same current rating, significantly affects the magnitude of current required to operate the device instantaneously, and consequently the maximum permitted earth fault loop impedance. Therefore, before replacing a circuit-breaker with one of another type, it must be confirmed that the proposed device would provide automatic disconnection within the time specified in *BS 7671*.



Summary

To minimise the risk of unwanted tripping, the type of circuit-breaker chosen to protect a circuit must be compatible with the connected loads, particularly the starting currents associated with those loads.

It must also be recognised that the replacement of a circuit-breaker with one having the same current rating but of a different type is not a 'like-for-like' replacement, and that such a replacement device might fail to provide automatic disconnection under earth fault conditions in accordance with *BS 7671*.

Temporary de-energisation issue rumbles on

Electricians currently have a number of options, authorised and otherwise, when needing to temporarily de-energise domestic properties.

The two authorised options are for the electrician to arrange in advance for the operator to withdraw and later replace the cut-out fuse, or for the supplier/meter operator to install, or enable the electrician to install, an isolator between the meter and the consumer unit.

Both of these options incur additional indirect costs for the customer. Both are also time consuming and reportedly frustrating for electricians, adding unnecessary bureaucracy and direct costs to a task generally considered to be well within the competence of any competent electrician.

The unauthorised options for electricians are to remove and replace the cut-out fuse themselves (believed to be by far the most commonly used of any option), or to work live – the most dangerous option.

Every day, with an estimated 400,000* or more jobs every year in Britain requiring temporary isolation of the electricity supply for safety reasons, thousands of electricians face this conundrum – either try to make arrangements with the authorised parties in advance, or take the far quicker, easier and cost-free - but unauthorised - direct route of removing the cut-out fuse themselves. It is easy to understand why many, if not by far the most, electricians evidently choose this option.

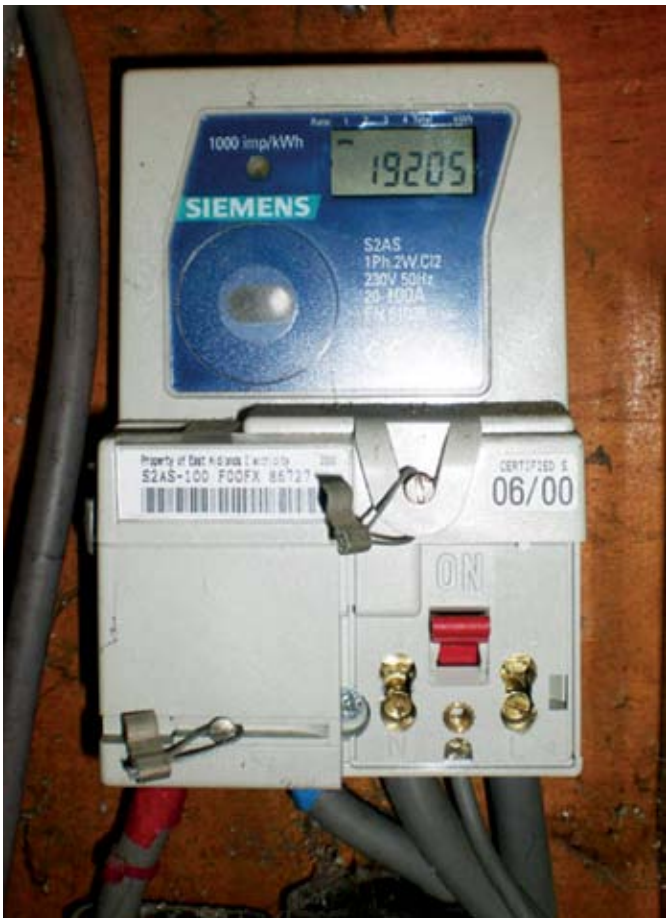
With the government's smart meter programme aiming to replace the electricity meter in all British homes by 2020, the ESC in collaboration with others took the opportunity to propose a simple engineering solution to the conundrum – which electricians have been faced with now for well over a decade. That solution was for the government to include a requirement for an integral isolator in their minimum technical specification for smart electricity meters.

But even though there was a clear business case for it, that proposal was rejected by the Department of Energy and Climate Change (DECC). And although DECC pledged to try to broker a suitable alternative solution with the interested parties, little tangible progress appears to have been made.

Against this background, the ESC is still trying to broker a solution. Our latest efforts have been aimed at persuading government to include a convenient route to safe isolation as a Part P 'bolt-on', whereby the right to remove cut-out fuses would be granted to all registered electricians, contingent upon them successfully completing a short training course.

Such an arrangement is not without precedent. Several Distribution Network Operators used to operate schemes that authorised competent electrical contractors to remove and replace cut-out fuses, and indeed the energy supplier SSE still operates such a scheme.

Following a roundtable discussion involving the Energy Networks Association and OFGEM, some progress toward a solution has



been made. However, there is still some way to go in achieving a satisfactory solution that will saves time and money for electricians and consumers.

For the time being, we are encouraged that representations from Parliament on this matter have continued, with recent written questions from Lord Harrison pressing the government on how they plan to keep their pledge. And the ESC will continue to work towards the provision of a safe, viable solution.

**Based on Part P notification data*

Have you ever been asked...

...does a cable supplying an emergency escape lighting luminaire have to be fire resistant ?

Emergency escape lighting is designed to operate (or continue to operate) should the normal lighting system fail, enabling occupants to move to a place of safety in an emergency.

Whether or not a cable supplying an emergency lighting luminaire needs to be fire resistant is primarily dependent on the type of emergency lighting system.

Centrally-supplied emergency lighting system

With such systems, the supply to the emergency lighting luminaires is usually provided by a bank of batteries located remotely. The circuit connecting a luminaire to such a central source of supply is classed as an emergency lighting circuit. Consequently the cable or wiring system must be of a type that is designed to resist the effects of fire so that, even during the conditions of fire, the supply to the emergency lighting luminaires is assured for the period of time deemed necessary to achieve safe evacuation from the premises.

Self-contained emergency lighting luminaires

A self-contained emergency lighting luminaire is powered by a rechargeable battery contained within, or in close proximity to, the luminaire. Circuits supplying such self-contained luminaires are not classed as emergency circuits and should employ cables having the same degree of fire-resistance as the cables supplying the normal lighting in that part of the building. (Clause 8.1 of BS 5266-1: 2011 - *Code of practice for the emergency escape lighting of premises* refers).

It is important that circuits supplying self-contained emergency lighting luminaires have no greater resistance to fire than circuits supplying the normal lighting because, otherwise, the circuits to the normal lighting would be likely to fail long before the circuits to the emergency lighting luminaires, leaving the area without any lighting.

HOME TRUTHS FOR LANDLORDS

With the rise of 'Generation Rent', the Private Rented Sector (PRS) is predicted to continue to grow over the coming decade, resulting in an increasingly urgent need to address preventable accidents in rented homes.

In June, the ESC ran a media campaign that focused on landlords. It highlighted not only the risks to the safety of their tenants caused by ignoring their electrical safety obligations, but also the significant financial risks. It also promoted the Electrical Safety Register as the one stop shop for finding a registered electrician to carry out any electrical work they need on their rental properties.

Research to support the campaign found that nearly one in five (1.7 million) private tenants had reported electrical concerns to their landlord that were either ignored or acted on too slowly, and that 1.3 million were waiting for electrical issues to be resolved. More than 2 million expressed concern about electrical safety in their home.

The ESC investigation aimed to gauge landlords' awareness of the fact that fines for failing to maintain adequate electrical safety have risen from £5,000 to £20,000. But instead it found that a fifth - around 300,000 private landlords - still believed there were no fines at all. Added to this, many landlords were unaware that their insurance might be invalidated if they fail to comply with their legal obligations.

And almost half of all landlords and tenants admitted they had no idea who was responsible for electrical safety!

The media campaign stressed that landlords are legally obliged to ensure that the electrical installations in their properties remain in a safe condition throughout a tenancy.

The ESC recommends that landlords have electrical appliances and installations checked at least every five years by a registered electrician, using the Electrical Safety Register to find a contractor local to them.

Phil Buckle, Director General, said: "We've found that many landlords are ignorant of their responsibilities. In the long term, we'd like to see tighter guidelines for landlords on electrical safety but with the number of non-professional landlords increasing every day, we also need to address the problem now".

The ESC has produced a free guide to help landlords understand their responsibilities for electrical safety in their rental properties and to provide practical advice on what is required to ensure the safety of their tenants, which can be found at: **www.esc.org.uk/landlords**

'Nearly one in five (1.7 million) private tenants had reported electrical concerns to their landlord that were either ignored or acted on too slowly...'

BACK ISSUES OF SWITCHED ON

All the previous issues of Switched On are available to read or download from the 'Industry' section of our website.

www.**esc**.org.uk/switchedon