Kicking goals

Look up and live awareness is hitting the mark across Victoria with support from regional footy
Assess the situation before you start. Be aware of any powerlines nearby. What are the possible dangers? Could this branch hit the powerline?

Always know the No Go Zone for your specific job. Different jobs have different requirements. Be informed.

If you’re unsure, don’t proceed. Call and ask the relevant distribution business for advice. SP AusNet 1300 360 795, Powercor 13 22 06, CitiPower 1300 301 101, Jemena 1300 131 971, United Energy 1300 131 689

A young Victorian vegetation worker died recently when a branch he was trimming for a home owner fell on to high voltage powerlines. This happened even though he was outside the regulatory clearance space. Be aware of the No Go Zone rules and cutting and clearance requirements, and always ensure appropriate branch control. Don’t take chances with your safety – it’s not worth putting your life on the line. For more information go to esv.vic.gov.au
Features

Country footy stops to look up and live

Public comment: The RIS for the proposed new Electric Line Clearance Regulations has been released and you can have your say.

Colorful history: One of the oldest electrical companies in Victoria, Greenwood Electrical, marks a significant milestone.

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For further information go to www.esv.vic.gov.au

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From the editor

I’ve got a confession to make—I love the Royal Melbourne Show. And it’s got nothing to do with the rides, the showbags or the donuts (although they’re all pretty good—particularly Lou’s Donuts).

For the past three years, ESV has had a stand in the Grand Pavilion at the Show, giving our team the opportunity to talk to Victorians about what we do, and to share a range of our safety information.

During the 12 days, more than 460,000 people attended the Show and I’m sure at least half of them dropped by our stand to give Plugger a hug (he’s the star of our PowerSafe Buddies children’s electrical safety website and the big blue character in the centre of the photo below).

We spoke to thousands of people and distributed a range of promotional items including sunscreen and soapy water bottles to remind Victorians to barbecue safely this summer, kids’ wristbands so they can become PowerSafe Buddies, fridge magnets about the need to get heaters serviced before winter and brochures that explain the dangers when working around powerlines.

The importance of these messages was brought home to all of us at ESV again as this edition of EnergySafe was about to be released. News reports carried the devastating story that a truck driver had died near Sydney when a crane he was hauling to a building site hit powerlines in the early hours of the morning.

It doesn’t have to be dark and foggy for powerlines to pose a danger, and many of the incidents reported to ESV occur in daylight. As we come into summer, it’s important to remember that powerlines sag with heat and load and sway in the wind so you can never assume you know where they are. You need to always be vigilant—whether you drive a truck, work on a building site or are installing a flag pole in your front yard.

ESV has been working to spread the look up and live message for many years and, as our cover story in this issue details, we’re once again partnering with AFL Victoria to help raise further awareness about this issue with the next generation of drivers and tradies.

As we approach Christmas and look forward to spending time with family and friends, the most important reasons for workplace safety come into sharper focus.

Sharon Rainsbury
srainsbury@esv.vic.gov.au

Have you changed address and forgotten to tell us?

All licence and registration holders are required to ensure ESV has their current information at all times.

It is a requirement of the regulations that we are advised of any changes within 10 business days.

A large number of copies of the July issue of EnergySafe were returned to sender because licence holders had changed their address and failed to let us know.

It is very important that we always have your current details!

Please don’t forget ESV when changing your address!
**Country footy stops to look up and live**

By Michelle Robertson, Senior Media and Communications Advisor

Country footballers were reminded to look up and live at the annual Energy Safe Victoria round of AFL Vic matches in August.

At country footy matches around the state, ESV distributed look up and live re-usable coffee cups in the hope that those working near electricity will keep the cups handy and remember this vital message.

Leongatha Football Netball Club took things a step further by hosting a special Look up and Live round event, with giveaways and activities at their game against Traralgon.

The match was attended by the Minister for Energy, The Hon. Russell Northe, himself a champion country footballer with a long association with Traralgon Football Club and whose son was playing on the day. Minister Northe is pictured (below right) with Mal Mackie of the Leongatha Football Club and ESV’s Director of Energy Safety, Paul Fearon.

ESV has an ongoing partnership with AFL Victoria and a commitment to reaching country workers with its safety messages. By educating country workers to steer clear of the 3m no go zone, ESV is aiming to reduce the number of electricity-related injuries and deaths.

As part of its ongoing association with AFL Vic, ESV also sponsored the under 19s country team in the annual VAFA versus Vic Country match.

AFL Victoria Country’s U19s were too strong for the VAFA’s U19 side, reclaiming the Brian Molony Cup with a thumping victory that saw them emerge victorious by 106 points at the St Albans Reserve in Geelong.

It was a tight contest early with the VAFA’s pressure in the first term causing Vic Country to turn over the ball far too regularly. Despite kicking into the breeze, the VAFA led the Country team at quarter time by four points.

But it was all Vic Country from then on as the players asserted their authority on the contest. The VAFA team was held scoreless in both the second and third quarters while Vic Country kicked 11.12 in the same period. It didn’t get much better in the last. Restricted to only one behind, the VAFA couldn’t stop the margin blowing out to more than 100 points as the Country team powered home for a memorable win.

The final scores were AFL Vic County 18.19.127 defeating VAFA 3.3.21.
Proposed new electric line clearance regulations

By Sharon Rainsbury, Executive Manager Media and Communications

The Minister for Energy and Resources, the Hon Russell Northe, has released the Regulatory Impact Statement and proposed 2015 Electric Line Clearance Regulations and incorporated Code for electric line clearance in Victoria.

The draft regulations are open for public consultation until 13 January.

The proposed 2015 regulations include a number of changes that are generally intended to provide greater options for those managing line clearance, thereby reducing aesthetic costs (particularly in low bushfire risk areas) without compromising the safety and reliability of supply.

The key changes include:

Amended method of specifying minimum clearance distances
A linear relationship will be established between span distance and required clearance distance between trees and electric lines. This change will reduce required clearance distances in many circumstances, without compromising safety performance. Required distances will now be represented on linear graphs rather than in tables.

Provision of alternative compliance mechanisms and exceptions to minimum clearance spaces
The Code will allow responsible persons to propose alternative engineering solutions to allow reduced clearance distances around electric lines while maintaining safety. It is also proposed to re-introduce provisions that would allow certain small and structural tree branches to remain within the specified minimum clearance distance of the electric line in low bushfire risk areas, under a number of specific conditions.

Expanded definition of insulated cable
ESV has redefined insulated cables to include a broader range of electric line insulations and coverings. This will reduce the required clearance distances around some types of electric lines without compromising safety. This change enhances flexibility and provides opportunities to limit the aesthetic impact of pruning.

Enhanced notification, consultation and dispute resolution
MECs will be required to write to relevant persons notifying them of intended pruning or tree removal. This is in addition to the current requirement to publish notices in a newspaper. Fuller disclosure of their dispute resolution provisions will also need to be provided.

These changes are intended to encourage more open and transparent communication between MECs, those occupying or managing the land on which the trees are located, and the community.

Electricity companies will be required to give advice to councils with respect to clearance distances in limited circumstances and also to provide guidance on working safely near electric lines, but only when asked.

The regulations also include a 12-month transitional period to enable responsible persons to comply with the changes in the regime.

ESV’s Director of Energy Safety, Paul Fearon, said ESV was conscious of the need to balance the regime’s three key policy goals—safety, reliability and fire prevention—with amenity and the environment, while moving towards practical compliance and good safety management in the longer term.

A growing problem: Powerlines and vegetation need adequate separation to ensure safety and reliability of supply.

“ESV recognises that improving compliance, especially in urban areas, presents a major challenge for some councils where there is a legacy of non-compliance over many years,” he said.

“ESV will work with responsible persons to develop approaches that will address and prioritise the most serious instances of non-compliance over an agreed timeframe, but ESV will take enforcement action if necessary.”

Submissions close 13 January.

Click here to read the RIS and for details on how to lodge a submission, or go to www.esv.vic.gov.au

Experts in electrical safety

www.eivic.com.au For more information call us today 03 9739 4216
New information sheet details safe levels of CO exposure in the workplace

By Enzo Alfonsetti, Manager
Type A Gas Appliance Safety

In response to concerns from gasfitters, ESV has released a new Gas Information Sheet setting out safe levels of workplace carbon monoxide exposure.

Gas practitioners can come into contact with CO when testing open flued gas appliances (such as space heaters and indoor water heaters) for combustion product spillage.

As a result, ESV developed Gas Information Sheet no. 44, Carbon Monoxide Safe Working Level, which is available by clicking here or going to the Technical Information Sheets section on the ESV website.

According to Safe Work Australia, the allowable limit for CO exposure over eight hours is 30ppm. Further information is available by clicking here or going to www.safeworkaustralia.gov.au and in particular refer to the document titled Workplace exposure standards for airborne contaminants (18 April 2013).

The eight-hour, time-weighted average is the average airborne concentration of a substance when calculated over an eight-hour working day, for a five day working week:
\[
TWA_{8\text{hour}} = \frac{\text{[Exposure time (min.)} \times \text{CO (ppm)}]}{480} \quad \text{(480 minutes is equivalent to 8 hours)}
\]

The new information sheet also provides guidance about measuring your CO exposure. It has examples of how to calculate your exposure to CO over an eight-hour day and how you can monitor your exposure level, progressively, as you move from job to job.

Short-term exposure to CO (exceeding 30ppm CO concentration) is permitted as follows:

<table>
<thead>
<tr>
<th>Concentration (a) (ppm)</th>
<th>Total exposure (b) (min.)</th>
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<tr>
<td>200</td>
<td>15</td>
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<td>100</td>
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Table supplied by Safe Work Australia.

Short-term excursions should never exceed 400ppm. This represents the sum of exposures at this level over an eight-hour workday, and assumes no other exposure to CO.

Even though it is unlikely that you will be exposed to CO at every job you attend, it is important to your health and wellbeing that you consider the information provided here.

Click here to access Gas Information Sheet no. 44 Carbon Monoxide Safe Working Level.

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ESV sponsored the Master Plumbers Gold Medal and Training Awards, which were held at Federation Square in June. It was the 107th time the awards have been presented and 10 Victorian plumbing apprentices received awards for excellence in their pre-apprenticeship or apprenticeship studies and on-the-job performance. The Hon. Nick Wakeling, Minister for Higher Education and Skills, was in attendance and presented the awards. Congratulations to Aaron Williams who received the Energy Safe Victoria Encouragement Award. Aaron is pictured above with ESV’s Director of Energy Safety, Paul Fearon (right), and Mark Squirell, who was a guest speaker on the night. Aaron was also nominated for the top award of the night, The Andrew Letten Gold Medal Award, which was won by another outstanding Victorian apprentice, Benjamin Cheng of Scoresby.
Infinity Cable recall update

By Goran Sokoleski, Compliance Officer

On 27 August this year, the Australian Consumer Competition Commission (ACCC) announced a recall on various sizes and configurations of TPS and Orange round Infinity mains power cables. Olsent power cables sourced from Infinity Cable Co Pty Ltd were also included in the recall.

A total of 18 national suppliers were involved in the recall and six suppliers in Victoria were identified to have bought this product from Infinity Cables. ESV advised Victorian electrical contractors of the recall on 27 August via email. To view this notification, click here or go to www.esv.vic.gov.au/Portals/0/Alerts-and-Recalls/infinity.htm

Since the national recall, all Victorian suppliers that had supplied the affected cables have voluntarily recalled the product: They are:
- ABC Arian Electrical Suppliers
- Norcab Electrical Wholesale
- Titan Trading
- Wholesale Electrical Supplies Pty Ltd
- Phoenix Wholesalers

All 4 Tradies Pty Ltd had already completed the recall on the cables they supplied.

L&O Technology, which initially advised ESV that it had purchased cable from Infinity, has since confirmed that it did not supply or install any of the recalled products.

Electricians who installed this product should contact any affected customers to advise of the recall. Electricians may also receive calls from customers inquiring if this product was used at their premises.

Ecables non-compliance

And in a second recall relating to electrical cable, ESV is investigating Ecables copper clad aluminium (CCA) power cables with RE 110 elastomer insulation.

The issue identified to date is that the insulation of the cables does not comply with the requirements of AS/NZS 3808.

The non-compliance is due to the elastomer insulation not being correctly cross-linked during its manufacturing process and, when heated, the insulation can soften and deform.

ESV is continuing with this investigation to assess specific electrical safety risks involved with this non-compliance.

Ecables is cooperating with ESV’s investigation. The supplier stopped offering the cable from the beginning of July 2014.

More information is available at www.esv.vic.gov.au/Electricity-Professionals/Infinity-recall-information-for-electricians

Don’t buy cheap electrical goods

As Christmas approaches, ESV will be running its annual awareness campaign to remind Victorians of the need to ensure electrical and gas appliances they buy are approved and safe for use.

This year’s campaign includes radio and online ads with the message “how much are you willing to pay”.

This message is particularly relevant this Christmas following the death in NSW earlier this year of a woman who was using a faulty USB charger that had not been approved for use in Australia.

Always look for the regulatory compliance mark on all electrical products to ensure your family has a safe Christmas.

Christmas office closure

ESV’s Southbank and Glen Waverley offices will close for Christmas at 1pm on Wednesday 24 December and will re-open at 8.30am on 5 January, 2015. During this time ESV staff will be available to respond to gas and electrical emergencies.

New VPI lock system introduced

By Simon O’Leary, Enforcement Officer

This year a new Victorian Power Industry (VPI) lock was introduced by the Victorian Service and Installation Rules (VSIR) management committee.

The new VPI lock provides greater security for building owners and tenants and also allows stakeholders to have dedicated locks and key codes.

Electricians, builders, developers and other relevant stakeholders can now purchase and install keyed alike locks, effectively meaning they will be able to have one key coded for their own use for all the VPI locks installed at a particular site or multiple sites.

This means that, essentially, a REC can purchase multiple locks all keyed-alike for individual or multiple sites and only require one key type for all locks.

This system needs to be managed carefully by building owners and managers as the registration and allocation of a code means that the lock and key code is owned by the original lock purchaser.

A card and number are issued with the lock and this number will need to be quoted when purchasing additional locks or keys. Should, for example, a building change ownership, the card would need to be passed on to the new owner so that they have control over the locks coded for that premises.

Under the new system, all occupants have common rights of access to their occupancy’s meter equipment, located in a group meter location within a multiple occupancy electrical installation.

For additional information regarding the new VPI locking system, please go to www.lockweb.com.au/vpi
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An Australian government funded initiative under the Digital Business Kits Program. Presented by Master Electricians Australia.
New tool to help electrical industry get online

Advertorial

Master Electricians Australia has launched a new online resource to help electrical business owners embrace technology and take advantage of the digital economy.

The Electrician’s Digital Business Kit takes business owners through a range of digital topics including how to build an effective website, social media opportunities and using cloud applications.

The kit features how-to guides, downloadable templates and real-life case studies. Electrical contracting business Platinum Electrical took part in a video case study showing how it uses social media to complement marketing efforts.

Malcolm Richards, chief executive officer at Master Electricians Australia, officially launched the kit in September at the Electrical Industry Conference in Noosa.

“The kit is a vital resource for business owners across our industry and provides step-by-step guidance on how to grow an electrical business using digital tools,” Mr Richards said.

“We have tailored the kit specifically for the electrical industry and we believe it will help businesses to stay ahead of the game,” he said.

“Businesses can access the kit through a custom-built website and can go through the topics at their own pace.”

Ten module topics are available now with more to come in 2015. Information is suitable for everyone from the beginner to the tech savvy. MEA will distribute the kit in 2014 throughout industry and online channels. The kit will be regularly updated to incorporate new ways of making use of digital tools as these emerge in the sector.

The kit is available for free by clicking here or going to digital.masterelectricians.com.au

ESV releases Morwell report

By Michelle Robertson, Senior Media and Communications Adviser

ESV has released its final report into the incident at the Morwell Terminal Station on 4 April that led to a dramatic flashover and loss of supply to 100,000 customers in Gippsland.

The investigation found the incident was rare and was the result of a short-circuit on one phase of a 66kV powerline and that two protection systems that were designed to stop the flow of electricity in the event of a fault failed to operate.

ESV was unable to determine the primary cause of the short-circuit but the investigation found the network’s primary protection system did not operate due to an incorrect relay setting that had not been reset, while the secondary system failed due to a faulty component.

No link was found between the fault and the fire at the Hazelwood Mine earlier this year.

When the protection systems failed to operate as designed the flow of electricity was not isolated and this caused the conductor to overheat, melt and fall into other electrical infrastructure assets, including a 66kV powerline, a 22kV powerline and infrastructure within the Terminal Station.

The report makes a number of findings on the operation of protection schemes by SP AusNet (now AusNet Services) in its terminal stations.

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Installing LED globes safely

By Bronwyn Hellings, ESV Customer Service Technical Officer

There is a misconception that anyone can change a downlight and associated transformers installed in an electrical installation. ESV provides the following advice.

Light fittings are sometimes reinstalled in a way that causes the cables and the transformers to be too close to the metal housing of the fitting, resulting in overheating of the transformer and potentially a fire.

A competent person is permitted to change a light globe in a light fitting without an electrical licence provided they are not disturbing the electrical cabling or using a tool to remove covers or guards.

The removal of a light fitting for any reason, however, is considered electrical installation work and is required to be performed by a licensed electrician who is then required to verify the compliance of the installation work and provide a Certificate of Electrical Safety (COES).

Removal of a light fitting, including taking it down to inspect the transformer to establish if it will be suitable for LED conversion, is effectively an alteration to the configuration of the electrical circuit by changing the location of the cables, fittings and transformers.

To meet the requirements of the Electricity Safety Act 1998 and the Electricity Safety (Installations) Regulations 2009, the Electricity Safety (COES). Removal of a light fitting for any reason, however, is considered electrical installation work and is required to be performed by a licensed electrician who is then required to verify the compliance of the installation work and provide a Certificate of Electrical Safety (COES). Removal of a light fitting, including taking it down to inspect the transformer to establish if it will be suitable for LED conversion, is effectively an alteration to the configuration of the electrical circuit by changing the location of the cables, fittings and transformers.

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Legislative framework

All electrical installation work must comply in all respects to the Electricity Safety Act 1998 and the Electricity Safety (Installations) Regulations 2009.

The current version of AS/NZS 3000 the Australian and New Zealand Wiring Rules and associated Standards becomes a legislative requirement for electrical installation work through the Electricity Safety (Installations) Regulations 2009.

Clause 1.4.7.2 of AS/NZS 3000:2007 defines a point (in wiring) as a “termination of installation wiring, intended for the connection of current using equipment”.

Clause 1.9.3 of AS/NZS 3000:2007 states the repairs can be effected using the methods that were acceptable when the part of the electrical installation was originally installed providing the methods used complied with the basic safety principles of section 1 of AS/NZS 3000:2007.

Clause 5.4.1 of AS/NZS 3000:2007 requires exposed metallic parts of electrical equipment to be earthed.

Clause 5.4.4 of AS/NZS 3000:2007 requires the earth to be provided at the LV transformer and exempts the earthing of exposed metallic parts for luminaires that operate at ELV.
Competency-based completion for apprentice electricians

By Sue Sizer, ESV Compliance Officer

Electrical apprentices who commenced their apprenticeships from 1 January 2011 are under the competency-based completion (CBC) model, rather than the traditional time-served approach. This means that the apprenticeship ends once the apprentice is found competent by the RTO and this is confirmed by the employer in the workplace.

Under the Electrical Safety Act 1998, an electrical contractor must not employ a worker to carry out electrical work unless that worker holds the appropriate electrical licence. Apprentice electricians are deemed to be licensed as electrical workers while under a contract of training.

Once the apprenticeship is completed, the apprentice must gain an electrical licence to be able to continue to carry out electrical work. If they do not obtain a licence within three months of the completion of their apprenticeship, they are considered to be working unlicensed, and both the contractor and apprentice may be subject to significant fines. Electrical contractors who employ unlicensed workers may be fined up to $7380 for sole traders or partnerships, and up to $36,900 for companies. The individual worker may be fined up to $7380.

The Victorian Electricity Safety (Registration & Licensing) Regulations 2010 state, in part, that a person applying for an electrician’s licence must complete a four-year contract of training (48 months) as an electrician, or equivalent. ESV continues to apply a ruling made by the Director of Energy Safety that applications for an electrician’s licence will only be considered once a person has completed a minimum of 42 months of training.

In addition, the regulations state that an applicant for an electrician’s licence must complete an examination suitable to ESV. In Victoria, this examination is currently known as the Licensed Electrician’s Assessment, or LEA. This examination sits outside the Certificate III Electrotechnology qualification the apprentice completes at their RTO.

Ensure your apprentices have completed all the requirements for an electrical licence, before signing the apprentice out of his or her apprenticeship.

It is therefore possible for an apprentice to complete their apprenticeship under the CBC model, but they may not be eligible to apply for an electrician’s licence in Victoria, due to not having completed their LEA, or not having completed the minimum standard required by demonstrating at least 42 months under the contract of training. Apprentices signed out of their contract of training, who are not eligible to apply for an electrician’s licence will be required to apply for and hold a supervised worker’s licence. This will allow them to continue to carry out electrical work, under supervision, until they can complete the minimum

Energise Oz trials competency model

Energise Oz is trialling competency-based progression for the electrical industry.

There are more than 1500 apprentices undergoing a system whereby they will move through four phases of training at their own pace. To ensure a robust model, E-Oz Energy Skills Australia has involved industry stakeholders to build the phases and milestone benchmarks. The pilot program ends mid-2015 and the results will inform the future of apprenticeship training.

You can contact your local Energise Oz Mentor-Adviser for further information or advice on 1300 11 EMAP. Alternatively, visit www.energiseoz.com.au/thefuture to view some videos on competency-based progression and what it means for stakeholders.
History turns up in surprising places. **Charlotte Roseby** meets licensed electricians Paul Hobden and Simon Choate of Greenwood Electrical Group and discovers a treasure trove of electrical history.

As Australia commemorates 100 years since the beginning of World War 1, Greenwood Electrical Group is celebrating its century this year—100 years of unbroken electrical business.

With its REC number of 95, Greenwoods is one of the oldest electrical companies in Victoria (the REC numbers have now reached five digits!)

Rather than be weighed down by the long legacy, licensed electricians and company co-directors Paul Hobden and Simon Choate have embraced it.

“We feel a responsibility toward the history of the business. It’s quite an honour to keep the company going all those years. Our customers really respond to the long-standing nature of our company, so we promote it … a lot of people trust us.

“We’re not part of the original Greenwood family, but Greenwood Electrical is still a family business … our families!”

**Living history**

Part of the responsibility that Paul and Simon feel to the history of the company is to preserve as many of the original electrical artefacts as they can. The history really springs to life in their Reservoir workshop: you can see the decades of hard work in the heavy pedestal press drill with leather belts and the worn anvil from a time when electricians did their own manufacturing and fabricating.

Their most precious historical item is one that is still in use: the original 500 Volt wind up “Megger” insulation and resistance tester. It is kept on Paul’s van and called into action every couple of days, just as it has for years.

“It runs rings around the new digital Meggers,” says Paul. “The batteries just never go flat! It’s the number-one tester for rectifying any RCD faults we get called out to diagnose; it breaks the resistance down in a flash.”

Paul and Simon have also collected their own little shop of horrors of illegally and dangerously wired switches, as well as a collection of original porcelain throw switches with copper contacts and live terminations behind a screwed brass cover, which would certainly not meet safe earthing requirements these days.

“They had these in my local pub until very recently,” says Simon, who looks suitably horrified at the memory.

**1914: war, electricity, light and power**

The story of Greenwoods, as it tracks through history, is certainly an insight into Melbourne’s past. In 1914 Abel Francis Greenwood—son of a prominent Coburg grain merchant and local councillor—first acquired what was then a lift maintenance company.

In 1914 Abel Francis Greenwood—son of a prominent Coburg grain merchant and local councillor—first acquired what was then a lift maintenance company.

Paul says that Abel Francis bought the business “from a German fellow who was no longer allowed to own a business here”. This was a common story. In 1914 when Australia joined the British Empire in the First World War, anti-German sentiment was rife. Germans and Austrians who were old enough to join the army were put into internment camps, and many Germans lost their jobs and were forced to sell their businesses.

Meanwhile, electricity was booming in Marvellous Melbourne. The Victorian government authorised the electrification of Melbourne’s suburban railway network in 1912 and in 1913 work began on construction of the Newport railway power station.

By 1915, Melbourne boasted 285km of illuminated streets. Electric lights were a symbol of prestige, progress and social advancement. The National Council of Women lobbied for improved lighting in city parks and gardens to promote safety and “purity”.

The demand for electricity skyrocketed. The State Electricity Commission of Victoria (SECV) was formed in 1921, with Sir John Monash as the first chairman—a significant moment for the unregulated industry, and certainly a significant step towards our excellent electrical safety in Victoria.

According to the Encyclopedia of Melbourne (Cambridge University Press): “The four main organisations generating electricity in Melbourne—the Melbourne City Council, the Melbourne Electric Supply Co., the North Melbourne Electric Tramways and Lighting Co. and the Newport power station of the Railway Commissioners—had neither a standard voltage, phase or current, and tariffs varied as much as the Melbourne weather”.

In the following years, the SECV introduced uniform standards, acquired the two main

*Electrical news*
Freehold of the company's 100 years, including these colourful cases that definitely didn't come from Ikea.

Independent companies, and eventually incorporated Spencer Street and Newport power stations into the state system.

Going up!
Abel Francis, electrical engineer, successfully ran the Greenwood Electrical Engineering Company, specialising in lift maintenance, in central Melbourne from 1914 until 1931.

The bill of sale of the company boasts an impressive list of plant and equipment: "a Colchester lathe, a leg vice, anvil and tongs, a swage block, a German jack and shafting, hangars and belting".

Abel Francis also had an impressive list of ongoing maintenance commitments for 13 new buildings in the city. At the top of the list was the new AMP building in Collins St, Melbourne. The decorative "commercial palazzo" 10-storey building was built to the maximum allowable height limit of 132 feet—an impressive sight at the time—featuring a wire cage lift.

Abel Francis must have been a forward-thinking electrical engineer; electric lifts were a relatively recent innovation and Melbourne was one of the first cities in the world to introduce them into "high rise" city buildings.

The first early hydraulic lifts in the 1880s were powered by water (and when the town water pressure was low, the lifts wouldn't run, according to Stephen Downes in Going up: How Yarra-powered lifts raised Melbourne into the modern age). Electric lifts were installed in the early 1900s when the Melbourne City Council began connecting electric power to buildings.

New partnerships, new chapters
Abel Francis Greenwood sold his successful company in 1931 for 100 pounds. Thomas Mills and Stanley Warren bought the business and eventually Thomas' son, Kevin, took over.

Paul Hobden and Simon Choate were both apprentices to Kevin in Greenwood Electrical in the late 1980s and early '90s, and ended up becoming partners in the business.

"Kevin came to see me at home, which was very unusual. I thought I was about to get the sack", Simon says, laughing. "It turns out he offered me a share in the company."

Paul and Simon took over the company from Kevin in 2001. "We offered Kevin a lifeline for Greenwoods. We couldn't bear to see it close its doors," says Paul. "Not after all that time."

Into the future
Now Greenwoods has a large customer base ranging from minor domestic electrical work through to commercial/industrial works. Simon is particularly proud of its commercial work at the Abbotsford Convent. They have been working closely with the Abbotsford Convent Foundation since it first began transforming the convent into an arts precinct 12 years ago. The Greenwoods team completely rewired the infrastructure in the difficult heritage-listed buildings to bring them up to standard.

Paul's favourite job? Their 25 years of electrical work at the University of Melbourne. Powering offices, libraries, lecture theatres and science labs is hugely satisfying, says Paul. They have significant and complicated power demands and strong, green power-saving requirements. This kind of hi-tech work calls upon a wide range of skills, says Paul: lighting control systems, security and CCTV, fire and thermal detection, data works and audio/visual installations.

The Greenwoods team has certainly inherited the Abel Francis work ethic along with the company. They switch from installing a new industrial plant with safety module relays and E stop circuits to the smallest domestic electrical job without missing a beat. And they work safely. "It's always safety first. That's important," says Paul.

So is loving the job: "I wake up every morning looking forward to going to work. I love my job. I've been doing this for 28 years, and we take high pride in our work. We set ourselves high standards. We put our heart and soul into the business every day."

Happy centenary Greenwood Electrical!
Business names and corporation names—attention electrical contractors!

By Kelly Stalker, Manager Licensing

Following the consolidation of the Business Names Register to the Australian Securities and Investment Commission (ASIC), electrical contractors appear to have dropped the light bulb, so to speak, on maintaining their business names, as well as advising ESV when their corporations have been wound up or deregistered by ASIC.

The number of deficiencies found by the ESV Licensing team through its review of contractor registrations is very concerning. ESV Licensing cannot process your renewal where the trading entity does not exist! Disappointingly, the team has received renewals that indicate that there have been no changes to the registration, only to find that when validated the business name has been removed or the company has been deregistered some time ago. In some cases it has been years!

With the change to five-year registrations, ESV does require you to be across these business requirements as you are no longer receiving your yearly renewal notice to remind you. Should these problems continue, matters will be referred to ESV’s Compliance Officers for further investigation. ESV cannot renew an unregistered entity and you cannot conduct business or trade as an unregistered entity. ESV could immediately suspend your registration due to the entity not being viable and therefore you will fail the requirement to maintain registration.

Australian Recognised Trades Certificate Program Closes

By Kelly Stalker, Manager Licensing

Trades Recognition Australia (TRA) ceased accepting Australian Recognised Trade Certificate (ARTC) applications from 30 September 2014.

Under the new Trades Recognition Service (TRS) introduced from 1 October, those applying for an electrical licence with ESV must first be assessed by TRA or their nominated training providers—Vetassess, Victoria University or Future Skills International.

ESV continues to accept the ARTC Certificates issued by TRA. The new TRS program will ensure that regardless of where a person is trained, the qualification outcome will be the same. ESV regards this as an excellent mechanism to streamline overseas skill sets and recognition of qualifications in accordance with the qualifications and national training framework.


Are you issuing a Certificate of Electrical Safety for every job you complete?

The Electricity Safety Act 1998 and Electricity Safety (Installations) Regulations 2009 require a certificate to be issued for all electrical installation work. This includes addition, alteration, repair or maintenance of an electrical installation.

Failure to comply is an offence that could result in penalties.

Certificates can be purchased and lodged via the ESV website. You’ll find more information at www.esv.vic.gov.au
Join Australia’s fastest growing electrical contractor association and benefit from first-rate industry advice, expertise and services.

Membership starts from just $865

Be part of something BIG

Join Australia’s fastest growing electrical contractor association and reap the rewards.

Master Electricians Australia (MEA) is a dynamic and modern trade association recognised by industry, government and the community as the electrical industry’s leading business partner, knowledge source and advocate.

We support members by delivering first-rate industry services including technical and workplace relations advice, training and education, industry news, networking opportunities and more.

Rochester Farm and Road Safety Expo draws a crowd

By Jean-Marie Ntahonkiriye, Compliance Officer Equipment Safety

ESV took part in the Rochester Farm and Road Safety Expo in August, sharing its safety messages with around 700 primary school children from the greater Bendigo area.

The Expo is an annual event organised by the Rotary Club of Rochester and designed to share safety displays and messages relating to the farm, the road and home.

Students who visited the ESV tent were able to ask questions and try out its children’s safety website, PowerSafe Buddies, which promotes electrical safety inside the home, outdoors and at school.

They also took home showbags to share with family members that included gifts and information about various safety topics including look up and live, which encourages safe work around powerlines and it is especially relevant to farmers and country workers.

Participating primary schools included Rochester Primary, Rochester Secondary, St Joseph’s Rochester, Girgarre Primary, Cohuna Consolidated, Cobinabbin Primary, Kyabram P-12, Merrigum Primary, Nanneella Primary, River City Christian College (Echuca) and St Joseph’s College (Echuca).

PowerSafe Buddies is aimed at primary school children and features animated videos, games and challenges plus resources for teachers.

PowerSafe: ESV’s Jean-Marie Ntahonkiriye explains some key electrical safety rules to primary school children from the Bendigo area.

Clipson industrial plug hazard alert

By Adam Murdoch, Manager Equipment Safety and Energy Efficiency

ESV has recently investigated an electric shock incident involving a 32A Clipsal 56P432 industrial plug.

It was found that the internal pin assembly was incorrectly inserted into the plug body meaning the earth pin was not in the correct position. Consequently, when the plug was inserted into its socket and energised, the frame of the supplied equipment became live.

Affected products

Clipson has advised that this type of fault is possible with the following products supplied to the market during May to August 2012:

**32A Versions**
- Straight plugs—56P332, 56P432, 56P532
- Angled plugs—56PA332, 56PA432 and 56PA532
- Socket connectors—56CSC332, 56CSC432 and 56CSC532
- Pendant outlets—56PO432 and 56PO532.

**40A Versions**
- Straight plugs—56P540
- Angled plugs—56PA540
- Socket connectors—56CSC540
- Pendant outlets—56PO540

**50A Versions**
- Straight plugs—56P550
- Angled plugs—56PA550
- Socket connectors—56CSC550
- Pendant outlets—56PO550

It is important to note that the affected product was, and still is, compliant to AS/NZS 3123:2005.

In order to mitigate any chance of incorrect assembly happening again, Clipson has implemented a design change where the key has been increased in diameter, meaning that it is now impossible (even with reasonable force) to incorrectly assemble the plug.

In 2012 Clipson also advised all electrical distributors nationally to ensure no sales of this product could occur until the product and the product’s instructions were reworked to make the user aware of the correct orientation of the plug.

This latest incident shows that message didn’t reach all electricians and some plugs with this type of construction are still in the market. ESV is warning all electricians to be mindful when fitting this type of product.

For more information contact Clipson by Schneider Electric on 1300 202 925, press 2 and 2.
## Your electrical questions answered!

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Standard</th>
<th>Clause</th>
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<tbody>
<tr>
<td>I have been issued a defect notice from my electricity distributor stating that the one pole of my two pole private overhead electric line only has 30mm of sound wood. I am further advised because the area is rated as having a high fire risk and I cannot replace the pole and need to install an underground supply, is this correct?</td>
<td>Yes, a private overhead electric line that is to be constructed or substantially reconstructed in a hazardous bushfire risk area must be placed underground. Substantial reconstruction means in case of a private overhead electric line the replacement of more than 20 per cent of the wiring or more that 20 per cent of the poles in a line supporting the wiring. The replacement of one pole of a two pole overhead private electric line is 50 per cent and exceeds the 20 per cent.</td>
<td>Electricity Safety (Installations) Regulations 2009</td>
<td>Regulation 220</td>
</tr>
<tr>
<td>I have been asked to install an enclosed spray painting booth. I have been told there are no electrical components installed directly in the hazardous area but it does have electrical control equipment installed for the protection of the hazardous area. Is the installation non-prescribed?</td>
<td>No, all electrical equipment installed within the hazardous area and all electrical equipment installed outside the hazardous area that is associated with the protection of the hazardous area is prescribed electrical installation work.</td>
<td>Electricity Safety (Installations) Regulations 2009</td>
<td>Regulation 238(1) (ii)</td>
</tr>
<tr>
<td>Can I install underground consumer’s mains at a depth of 300mm under a concrete driveway in compliance with clause 3.11.3 of AS/NZS 3000:2007?</td>
<td>No, consumer’s mains are required to be installed with a minimum depth of cover of 500mm from the top of the additional protection to the surface of the ground.</td>
<td>Electricity Safety (Installations) Regulations 2009</td>
<td>Regulation 216(c)</td>
</tr>
<tr>
<td>Am I required to issue a Certificate of Electrical Safety for minor repair work such as the replacement of a socket outlet or an architrave switch?</td>
<td>Yes, doing minor repairs is electrical installation work, and the person who is responsible for the carrying out of electrical installation work must ensure that a Certificate of Electrical Safety is completed in the required timeframe in respect of that work and give the completed copy to the person for whom the work was done and provide a copy to ESV.</td>
<td>Electricity Safety Act 1998</td>
<td>Section 45A (1)</td>
</tr>
<tr>
<td>I recently bought a quantity of 1mm² 3 core double insulated cable and found it has a solid 1mm² earth conductor. Is this cable compliant?</td>
<td>Yes, AS/NZS 5000.2:2006—Electric cables—Polymeric insulated. Part 2: For working voltages up to and including 450/750 V allows 1mm² cables with a solid 1mm² earth conductor.</td>
<td>AS/NZS 5000.2:2006</td>
<td>Clause 5</td>
</tr>
<tr>
<td>Is the replacement of a main switchboard in an emergency situation prescribed or non-prescribed electrical work?</td>
<td>The replacement of a main switchboard regardless of it being an emergency is prescribed electrical installation work and requires the mandatory inspection.</td>
<td>Electricity Safety (Installations) Regulations 2009</td>
<td>Regulation 238</td>
</tr>
<tr>
<td>What Standards apply for the installation of electrical equipment in a high voltage customer-owned substation?</td>
<td>AS 2067:2008 Substations and high voltage installations exceeding 1kV a.c. and Appendix K of AS/NZS 3000:2007 Wiring Rules except for the following provisions— Clause K11.4.2; Clause K11.5.2. and the note in Clause K2.</td>
<td>Electricity Safety (Installations) Regulations 2009</td>
<td>Regulation 202</td>
</tr>
<tr>
<td>Must I install wiring that originates from a single point and supplies individual lots of a subdivision in common property or can the wiring pass through other lots?</td>
<td>No, the individual wiring supplying a lot or occupancy must be placed in common property or common area.</td>
<td>Electricity Safety (Installations) Regulations 2009</td>
<td>Regulation 209 (a) &amp; (b)</td>
</tr>
<tr>
<td>The catenary between the house and shed was brought down by the limb of a tree. I have been advised that the line cannot be repaired and has to be installed underground because of the location of my property.</td>
<td>Private electric line aerial wiring systems to be constructed or substantially reconstructed in locations designated as high fire risk by the fire control authority shall be placed underground. Substantially reconstruction means, in the case of private aerial lines supported by catenary, the replacement of more than 20 per cent of the cable supported by the catenary, or catenaries or replacement of more than 20 per cent of the poles for the catenary or catenaries supporting a cable.</td>
<td>Electrical Safety (Installations) Regulations 2009</td>
<td>Regulation 220</td>
</tr>
</tbody>
</table>
Let us remove the stress of managing your apprentice

Employing an apprentice can be rewarding. You get to pass on your knowledge to future generations, watch them grow and develop and celebrate the success of projects.

But there is also the stress of payroll, schooling and are they up-to-date, mentoring, profiling and have they been trained in a broad range of skills, and most of all, will I have enough work?

NECA Apprenticeships can remove all this stress by managing your apprentice. We take care of payroll, superannuation, WorkCover, schooling, profiling plus we provide mentoring and advise on OHS.

We will ensure your apprentice is job-ready, including a medical, Scissors Lift certification, Construction Induction Card, tools and Personal Protective Equipment.

PLUS, if you experience a quiet period you can let us know and we can re-deploy your apprentice until you need them again!

Give our team a call and see how we can remove your stress today on 9389 9959.
Conducting business in the Electrical Contracting industry is tough! Today's economic environment has resulted in massive numbers of electrical worker redundancies and businesses going to the wall, and there are no indicators to point to a change anytime soon.

In Victoria, electrical contracting businesses who have union enterprise agreements are finding it particularly hard to win work. The high cost of labour associated with these companies is fast making them uncompetitive. A worker who is employed by such companies is paid $45.66 per hour for a 36 hour week, receives double time for any overtime and shift work, receives 26 rostered days off a year, and on top of that also has over $120 per week paid on their behalf into a redundancy and income protection fund. These conditions are great for workers but are costing jobs on a daily basis.

There has been three other significant developments in the Victorian electrical contracting industry over the past two years. The first is the growing influx of interstate contractors competing directly with Victorian contractors for the little work that is available. These interstate contractors operate from a far lower cost base as they are not weighed down by the high costs associated with union enterprise agreements. More and more we are seeing interstate contractors winning work from Victorian contractors as they are cheaper by far. Builders these days are displaying a preference for contractors tendering on a lower price, rather than by the type of enterprise agreement they have.

The second major development in the industry has been the growing trend for contractors to deal directly with their employees to negotiate enterprise agreements. These companies tend to position themselves on a more competitive footing in the part of the industry in which they operate in. They manage to do this whilst at the same time maintaining wages and conditions that keep their employees happy. Due to their competitiveness, these companies are also winning a sizable slice of available work in the Victorian market. They tend not to have redundancies, in fact in many cases they are growing in their size and capability.

A further trend which is enormously concerning is the drop off of employing apprentices. The main reason again for this dilemma is again due to cost! Whilst a junior apprentice in a union enterprise agreement starts their career at $14.55 an hour for a 36 hour week in their first year, they quickly rise to $33.02 an hour in their final year. The repercussions of apprentice redundancies and lower employment levels will be realised in a few years' time when the industry will face a massive shortage in qualified electricians.

In the face of these concerning trends, the Electrical Trades Union has launched its ‘Follow the Leaders Contracting EBA Campaign 2014’.

For all of the above reasons, the IR Committee of NECA recently unanimously formed a view to recommend to the entire electrical contracting industry that employers should pursue enterprise agreements directly with their employees. This is the only viable option that can provide Victorian electrical contracting businesses with the ability to compete in today's market and to offer some degree of job security for Victorian electrical workers.

Kevin McCosh
Executive Director
National Electrical and Communications Association (Victoria)
South West TAFE

With the expansion of gas and renewable energy industries, the demand for skilled plumbing tradespeople continues to grow. South West TAFE has risen to this challenge and now provides comprehensive training for plumbers and apprentices.

Make an impact and progress your career with a plumbing qualification at South West TAFE. South West TAFE’s plumbing courses provide the training you need while undergoing your industry apprenticeship.

If you don’t have a job, don’t worry—South West TAFE’s pre-apprenticeship courses will prepare you for industry employment.

South West TAFE will help you develop a broad range of skills and knowledge associated with drainage, water supply, sanitary, backflow, gasfitting, roofing and business-based units. Gain employment in the plumbing industry as a journeyman plumber or pursue further education and become a licensed plumber.

You will be trained using the latest tools and equipment in purpose-built industry workshops. TAFE teachers have industry experience and close ties with business networks, ensuring students gain the skills and knowledge that employers need. Benefits of undertaking training with South West TAFE include:

- widest range of industry-specific programs on offer across the south west
- experienced, skilled trainers who have relevant industry experience
- opportunity for customised delivery to meet specific training needs
- training available on-site in the workplace
- up-to-date training materials and resources
- Flexible delivery approach

To find out more click here or visit www.swtafe.vic.edu.au

Meet the plumbing team: James Langston, Chris Lawlor, Peter Mentha and Scott Hetherington

TAKE YOUR PLUMBING CAREER TO THE NEXT LEVEL

CERTIFICATE IV IN PLUMBING - DESIGN & SIZE CONSUMER GAS INSTALLATIONS (CPCPGS4011A)

South West TAFE’s Certificate IV in Plumbing (CPC40912) provides plumbers with training required to qualify for several licences with the Victorian Building Authority: Plumbing Division (formerly the Plumbing Industry Commission).

This course will equip you with additional technical knowledge and skills at a supervisory level in the gas fitting, mechanical services, waste disposal, water supply and roof plumbing trades. This course is required to become a licensed plumber.

For more information please contact 1300 648 911 or email info@swtafe.vic.edu.au.

www.swtafe.vic.edu.au | 1300 648 911
New options for compliance of gas installations under AS/NZS 5601

By Jason Treseder,
Type A Gas Engineer

All gasfitters should be aware that AS/NZS 5601 was published late last year and is now called up in Victoria. One of the more obvious changes from the 2004 edition was the introduction of a new Section Two—Performance-based design and other essential requirements.

The additional section provides a new path for compliance, based on demonstrating compliance with performance-based requirements for installations where Means of Compliance requirements in sections three to six are not possible or necessary to achieve.

While it is expected that Means of Compliance will remain the default method for most installations, performance requirements provide a new path for installations with innovative technology or other reasons for not being able to directly comply with the Means of Compliance requirements.

Means of Compliance

The Means of Compliance sections contain prescriptive requirements, for which a combination of experience, history and calculations have already shown will produce safe and reliable installations. In contrast, performance-based requirements are based on the level of responsibility and operational objectives that must be achieved, without specifying or limiting how the objective may be achieved. This provides a high level of flexibility for the installation, although an equally high level of responsibility is placed on the installer to ensure all aspects of the performance base requirement have been addressed, without causing detriment to other aspects of the installation. It is important to be aware that performance-based requirements offer an alternative means for demonstrating compliance and are not an option for installations that are simply not compliant.

In particular, the installer using performance-based requirements is obliged to ensure that the level of safety, convenience and efficiency of operation for installations is not less than for installations that comply with the prescribed means of compliance.

Exemption process

In the past installations that did not comply with the prescriptive means of compliance requirements required an application for exemptions (schedule 6) under the Gas Safety Act. The exemption process still exists and remains the only option for installations that are directly non-compliant. For installations where performance-based and exemption application approaches are both possible, it is up to the installer to choose which path they prefer.

Alternative solutions for complex gas installations must be assessed by ESV to ensure they meet the performance requirements of the installation. The Victorian Building Authority (VBA) should be contacted when considering alternative solutions for standard gas installations.

ESV requirements for alternative solutions

ESV requires all alternative solutions that are based on performance requirements to be accompanied by documentation. The documentation should outline the scope of work the alternative solution relates to as well as:

- the performance requirements that the alternative solution is required to meet
- identification of the relevant deemed-to-satisfy clause
- documents relied on to substantiate the alternative solution proposal including, where relevant, NATA-accredited test reports and expert judgments
- other evidence that is being relied upon to support the alternative solution.

The level of documentation and evidence required will depend on the nature of the installation and the performance requirement being addressed. All documentation must be kept by the gasfitter for seven years.

Assessment methods

Assessment methods for each installation are determined based on the complexity of the alternative solution design and performance requirements to be achieved.

- Assessment methods may include:
  - review of documentary evidence
  - verification of methods
  - independent expert judgment methods
  - comparison to the deemed-to-satisfy requirements.

Submissions will be reviewed on a case-by-case basis and no guarantee is given that a performance-based approach will be accepted by ESV. If a performance-based approach is being considered it is recommended that ESV be contacted and advised early on in the process.

Please contact the Gas Technical Information Helpline on 1800 625 563 for further information.

NMIT: Training gasfitters for today and tomorrow

By Doug Rennie, ESV Gas Inspector

From modest beginnings, the Northern Melbourne Institute of TAFE (NMIT) recently celebrated 100 years of quality trade training. Today NMIT is one of Victoria’s leading training providers for gasfitters. With the continued partnership and support of ESV, NMIT’s dedicated staff are proud to offer a variety of courses in gasfitting.

NMIT training provides:
- plumbing and gasfitting apprenticeships
- registration with the Victorian Building Authority in gasfitting
- the opportunity to obtain a licence with the Victorian Building Authority in gasfitting
- gas conversion work
- licence renewal with the Victorian Building Authority for previously licenced gasfitters. NMIT’s teaching staff are fully qualified in all areas of plumbing and gasfitting.

NMIT facilities include state-of-the-art work stations and equipment. Training is focused on a combination of technical information and hands-on practice, and at all times the NMIT teaching staff seek the advice and support of ESV.

For more information on existing courses or new courses contact the plumbing and gasfitting staff at NMIT on (03) 9269 8633.
Holmesglen to offer Type A appliance servicing course

Holmesglen is one of Victoria’s largest providers of vocational and higher education.

Today, Holmesglen Chadstone Campus delivers education and training to more than 800 plumbing apprentices and registered plumbers across Certificate II, Certificate III and Certificate IV. There is also further education and training in specialty fields related to the plumbing industry including appliance servicing, which is a major growth area.

To accommodate appliance servicing, Holmesglen will run a new Type A gas appliance servicing course in October 2014. It will also deliver eight Certificate IV Gas courses during the year with the option of both day and night time classes.

ESV and Holmesglen have always recognised a need for quality training in all fields of the gas industry but more recently in the area of appliance servicing.

Staffed by 30 general, mechanical services and specialist teachers, Holmesglen is well equipped to deliver the quality and depth of training needed in our community.

Launched in 1982, it quickly developed in to the leading provider of plumbing and mechanical services training in Victoria and is still a leader in plumbing skills training 32 years later.

Holmesglen’s Plumbing and Mechanical Services Department has enjoyed a long and proud history of partnership and collaboration, including the support of ESV and industry partners, and continues to identify and develop industry best-practice along with the appropriate education and training necessary to support it.

Gas Servicing Type ‘A’

Upgrade your plumbing qualification with the next course starting on Monday 13 October 2014.

- Covers domestic and commercial gas appliances
- Theoretical and hands on training
- Disconnect/reconnect composite appliances training
- ESV practical assessment upon completion
- Pathways to the Restricted Electrical Workers Licence, (Class 2 Disconnect/Reconnect)

Holmesglen is now taking bookings!

ENQUIRE NOW! 03 9564 1697 or 9564 2699
E: PEU@holmesglen.edu.au

For further information click here or go to holmesglen.edu.au
Gas incident data: learning from New Zealand

By Michael Weber, Technical Communicator

Energy Safety New Zealand has long been recognised by the Gas Technical Regulators Committee (GTRC) as a producer of high quality gas incident statistics.

The GTRC is an association of government departments responsible for the safe use of gas and includes representatives from every state and territory in Australia and New Zealand.

Early in September, Michael Weber of ESV’s Gas Installation and Appliance Safety (GIAS) Division met with Mark Wogan, Manager Energy Safety – High Hazards & Specialist Services, and Vallabhi Patel, Senior Research Analyst at Energy Safety NZ offices in Wellington, over a two-day period, to discuss and exchange ideas for the collection, analysis and distribution of gas incident data.

It was also an opportunity to make comparisons and identify improvements for ESV’s GIAS data recording and analysis.

Similar yet different

Some similarities exist between Energy Safety NZ and ESV. Energy Safety NZ enjoys a similar role in that it also monitors and enforces compliance with the laws related to electricity and gas supply. Energy Safety NZ is a part of WorkSafe New Zealand.

New Zealand’s North Island uses natural gas and LPG while the South Island uses only LPG. Natural gas on the North Island is reticulated through piping networks in urban areas.

With a small workforce of only 12, Energy Safety NZ covers gas issues from the city gate to the consumer. This area of responsibility is equivalent to ESV’s Gas and Pipeline Infrastructure Safety (GPIS) and GIAS combined.

Phone enquiries to Energy Safety NZ are handled by a call centre that processes about 85 per cent of calls, while the more difficult enquiries are passed to Energy Safety NZ technical experts for processing.

Differences between our two organisations begin to show when it comes to recording gas incidents. Differences are seen in the description of equipment types, cause codes, type of accident or incident and the notification of accidents and incidents.

Energy Safety NZ does not distinguish between Type A and Type B gas appliances as ESV does, nor does Energy Safety NZ distinguish between gas incidents before or after the gas meter.

Energy Safety NZ collects gas incident data from government agencies, gas supply companies, appliance companies and industry associations and also from hospitals, consumers and public notification and the news media. ESV operates with similar industry and consumer relationships for gas incident data collection.

Energy Safety NZ investigates accidents, and records at least a basic level of data for all reported accidents, regardless of the scale of the investigation. More comprehensive information is recorded for significant accidents. These accidents are analysed for severity and frequency of similar types of accidents.

Energy Safety NZ further enhances its records by using a matrix for assessing the cost of damage or repair to property as a whole or a portion thereof, based on damage due to fire, water or smoke.

Case management system

Accident information is prepared through a case management system known as ESI (Energy Safety Intelligence). This integrated case management system brings electricity and gas accident information into a single database allowing reports of a variety of topics to be produced.

ESV employs a similar case management system known as CIMS (Complaint Incident Management System) however the current structure of the CIMS Advanced Search report is less flexible for reporting gas incident outcomes even though more information is captured than is displayed.

Energy Safety NZ accident data is analysed and categorised with the use of Excel pivot tables. SAP Crystal Reports are used for data reporting with tables and graphs of electrical and gas accidents.

Energy Safety NZ produces gas accident statistics quarterly and on a calendar year basis, which it says allows it to stay in line with the rest of the world. It benchmarks internationally. Energy Safety NZ produces a detailed report of accidents each year, including the level of consequence and frequency.

Recently GIAS began geographically plotting gas incidents. On a map of Victoria gas incidents relating to gas type or appliance type can be marked.

Areas where there is a greater frequency of gas incidents are easily identified and can be targeted for future safety campaigns.

ESV is striving to improve its documenting and reporting of statistics. The two-day meeting was an excellent opportunity to compare processes and learn from benchmarking against the New Zealand gas regulator.

Energy Safety NZ is proactive and works hard at producing detailed statistics of gas and electrical accidents. There are a number of similarities between Energy Safety NZ and ESV however it is from the differences that lessons can be learned.
### Your gas questions answered!

Compiled by ESV’s Gas Installations and Appliance Safety team.

As per previous issues of Energysafe, we are pleased to provide answers for a varied range of frequently asked questions received on ESV’s Gas Technical Helpline, 1800 652 563.

**Note** The technical regulator may require notification before work commences and confirmation that completed work is in accordance with this Standard (AS 5601—2013) and any other relevant requirements.

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<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Clause</th>
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<tbody>
<tr>
<td><strong>Before commencing your gas installation what do you need to establish?</strong></td>
<td>You need to establish:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) the gas type available</td>
<td>AS 5601:1:2013</td>
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<td></td>
<td>(b) whether the gas supply is adequate to satisfy likely simultaneous demands or peak loading</td>
<td>3.1 Gas supply</td>
</tr>
<tr>
<td></td>
<td>(c) whether the gas meter or cylinder supply is sufficient to meet the anticipated maximum demand</td>
<td>3.2 Gas demand</td>
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<td></td>
<td>(d) the gas pressure at the inlet to the consumer piping</td>
<td></td>
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<tr>
<td></td>
<td>(e) the maximum pressure supplied at the outlet of the gas meter or cylinder in the event of a failure of the supply regulator or control</td>
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<td></td>
<td>(f) the location of the gas meter.</td>
<td></td>
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<td></td>
<td>Also you need to establish the gas pressure and flow requirements for all gas appliances including existing gas appliances.</td>
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</tbody>
</table>

| **Before sealing or connecting the pipework of your installation what must you check for?** | You must check that your pipework is clear of any debris and dry before sealing it.                                                                              | AS 5601:1:2013 3.4.1 Removal of debris                                 |

| **In a situation (while work is in progress) where you are required to remove of a gas fitting or appliance from consumer piping, or required to cut an installed pipe what must you do to the open ends of the pipe?** | The open ends (other than those of the immediate work area) of the pipe must be sealed prior to, and for the duration of, the work. When you vacate the work site you must make sure all open pipe ends have been sealed. The closing of a shut-off valve will not satisfy this requirement unless the outlet of the valve is sealed. | AS 5601:1:2013 3.4.2 Open ends to be sealed while work is in progress |

| **In a situation where you provide an outlet in consumer piping (not fitted with a quick-connect device) for the future connection of a gas appliance what are acceptable methods for sealing the pipe?** | The pipe outlet can be sealed using a plug, a cap, a blank flange or a capped or plugged manual shut-off valve. | AS 5601:1:2013 3.4.3 Outlet provided for future connection to be sealed |

| **Before you put any new gas installation or altered existing consumer piping into operation what must you do?** | You must test the consumer piping, the installed gas appliances and the valve trains for gas leakage. Leakage tests also apply to consumer piping that has been altered, repaired or extended. | AS 5601:1:2013 3.5.1 Testing a new gas installation 3.5.2 Testing consumer piping after alteration, repair or extension |
**Prosecutions and infringements**

ESV has recently taken legal proceedings against the following individuals and companies.

- Aaron Valladares of Essendon, unlicensed, was prosecuted in Werribee Magistrates’ Court for offering to carry out work when not registered, carrying out electrical installation work when not licensed and installing unsafe electrical equipment. Valladares was released on an undertaking to be of good behaviour for one year with a payment of $500 to the Court Fund.

- Tim Horvat of Brisbane, company director, was prosecuted in Whittington Magistrates’ Court for offering to carry out electrical contracting work when not registered. Horvat was fined $7500 without conviction and ordered to pay an additional $1800 in costs.

- Glen Calvert of Bairnsdale, LEIW meter installer, was prosecuted in Orbost Magistrates’ Court for installing unsafe electrical equipment and failing to comply with the provisions of an Order in Council. Calvert was released on an undertaking to be of good behaviour for six months and ordered to pay $1000 costs.

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**Infringement notice summary**

**Infringement notices 2014**

**Types of infringement notices issued**

<table>
<thead>
<tr>
<th>Date</th>
<th>Code</th>
<th>Offence Code</th>
<th>Offence</th>
<th>Penalty</th>
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<tbody>
<tr>
<td>Jan 14</td>
<td>REC</td>
<td>6253</td>
<td>Supply equipment not approved</td>
<td>$577</td>
</tr>
<tr>
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<tr>
<td>Dec 14</td>
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<td>6384</td>
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<tr>
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<tr>
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<td>6381</td>
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<tr>
<td>Sep 14</td>
<td>LEW</td>
<td>6212</td>
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<td>3592</td>
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</tbody>
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**Handyman who made his own COES prosecuted and fined**

By John Murphy, ESV Solicitor

ESV has successfully prosecuted a handyman for carrying out defective electrical work and making his own Certificates of Electrical Safety (COES).

Naray Oczakmak, from St Albans, was charged with two counts of offering and carrying out electrical contract work, two counts of offering and carrying out electrical installation work while unlicensed, one count of numerous instances of installing unsafe electrical equipment and one of employing Nazim Karim to carry out electrical installation work when Karim was not an electrician and Oczakmak was not a REC.

He was convicted and the Magistrate fined him $4100 plus $1500 in costs.

ESV was alerted to the illegal operations after receiving a complaint in March alleging that a person trading as NAZCON Building and Maintenance had delivered a document titled Customer Copy of eCOES to a builder for the installation of a builder’s pole at a building site at King St, Airport West.

The document was a fraudulent compilation showing the ESV logo of what purported to be a Certificate of Electrical Safety. ESV has the sole statutory power to prescribe the format of and supply COES under section 45A (4) of the Electricity Safety Act 1998.

The document supplied to the builder carried the name Naray Oczakmak and an electrical contractor licence number. That number belonged to a licensed electrical installation worker who had no connection with Oczakmak and who had not authorised the accused to use his number.

The court heard Oczakmak was not a licensed installation worker nor was he a registered electrical contractor.

ESV began an investigation and, while that was taking place, a further a complaint was made about another customer copy of eCOES being given to the owner of units at Moonee Ponds for electrical work carried out by the accused.

The customer copy of eCOES given by Oczakmak was a doctored version of a certificate shown on the Queensland Government Electrical Safety website on which ESV’s logo had been pasted.

Once the builder was told that the accused was not a licensed electrician he engaged a licensed electrical inspector to check the work. The inspector reported numerous faults, some of which were unsafe. A registered electrical contractor was engaged to rectify the faults and a COES for prescribed electrical installation work was completed and the work inspected. That additional work was carried out at the builder’s expense as well as having paid the accused $770 for the defective work.
Never work live on switchboards and electrical installations.

Even when you’re under the pump, there’s no excuse to cut corners. Don’t risk electrocution or serious injury - you may not get a second chance.