



Regulation Roundup

A bulletin for electrical, gas and plumbing industry workers brought to you by the Office of the Technical Regulator
Issue 38 | August 2016

Message from the Technical Regulator:

Regulation Roundup Special Edition: Electronic Certificates of Compliance

The Office of the Technical Regulator (OTR) has undertaken a significant project to bring about a key change to the way the gas, plumbing and electrical industries meet compliance regulations. The Electronic Certificate of Compliance (eCoC) project will introduce a new, electronic method of issuing Certificates of Compliance through the eCoC system. This will eventually replace the paper forms currently in use.

This is an exciting change for the gas, plumbing and electrical industries, which will lead to improved business efficiency and better customer service.

The eCoC system will be used for registration of contractors and workers, and for completing, submitting, storing and retrieving eCoCs.

The eCoC system will be implemented in a phased approach. During the first phase in August 2016, contractors and workers will be able to register using their licence numbers and personal details. In the second phase, registered users will

be able to complete eCoC forms online and send them electronically to the OTR and other recipients, such as customers and industry entities. Legislation changes required for eCoC are expected to be completed later this year, and the OTR will launch eCoC creation through the system shortly after that.

The eCoC system will be accessed on sa.gov.au/otr/ecoc

Once the eCoC system is available it will enable the OTR to communicate with you directly by email and notify you when the second phase will go live.

The eCoC system will store a full record of all eCoCs completed so they can be easily accessed and referred to in the future. These can be created and saved in draft and accessed at a later stage to submit.

The online system will streamline businesses and administrative processes, and make it easier to communicate regulatory improvements, changes to standards, product and installation safety issues and safety reminders.

You'll also see future editions of Regulation Roundup magazine, which will be emailed to you.

Paper CoCs will be phased out slowly, with the transition period from paper to electronic beginning when the eCoC system is made available. The transition period will be for 18 months, although we would encourage you to make the change as soon as it becomes available.

I have no doubt you will see the vast benefits for your business, your customers, and for us as the regulators to have a complete online system, fully accessible on your tablet or smart phone.

To stay up-to-date with the progress of the eCoC transition and to learn more about how it may affect you, register your details at www.sa.gov.au/otr/ecoc or email OTR.eCoC@sa.gov.au – also see the **Frequently Asked Questions** on page 2 for more information.

Please enjoy this special edition of Regulation Roundup.

Robert Faunt, Technical Regulator

FOR TECHNICAL ENQUIRIES:

Electrical

P: (08) 8226 5518 | (8:30am - 4:30pm)

F: (08) 8226 5529

Gas

P: (08) 8226 5722 | (8:00am - 5:00pm)

F: (08) 8226 5866

Plumbing

P: 1300 760 311 | (8:30am - 4:30pm)

www.sa.gov.au/otr

eCoC Fast Facts

- Electronic Certificates of Compliance will be accessed online at sa.gov.au/otr/ecoc
- Enter your details now to receive updates on the process
- Fully accessible on your smart phone or tablet
- Receive Regulation Roundup, changes to standards, product and installation safety issues and safety reminders to your inbox
- Concerns? Questions?
Call: 8226 5500

In this issue

Message from the Technical Regulator:	1
eCoC Fast Facts	1
eCoC – Frequently Asked Questions	2
Electrical Bulletin	4
MEA 2016 Industry Forums	4
Bonding arrangements	4
Mains by others	5
Articles for all GAS and ELECTRICAL contractors	5
Product Safety Recall	6
Electric Shock Report Incidents	7
Gas Bulletin	8
Pressure Proving Systems (PPS)	8
Outdoor kitchens	8
Over Pressure Protection (OPP) – operation and use	8
Press-fit fittings – REMINDER	9
Appliances in caravans, catering vehicles, motor homes and boats	9
Pressure test points on appliances and regulators	9
Regulator breather or relief vent	9
Generators near LPG cylinders: Not allowed within 1.5 m	9
Low pressure water heaters in roof spaces	10
OTR representation on Standards committees	10
Are you turning meter valves “on” too fast?	10
Adjusting LPG regulators	10
Plumbing Bulletin	11
Plumbing Advisory Note – Issued May 2016	11
Legislative requirements	11
Non-drinking Water Guidelines released for Consultation	11
Important Information - Have You Changed Your Address?	11
Registration of Gas and Electrical CoC books	11
Contact list	12

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eCoC – Frequently Asked Questions

1. Why are we moving to an electronic system?

A: The driver for this initiative is to improve the efficiency of the process of issuing Certificates of Compliance and to achieve cost savings for many parties through the use of modern technology. These parties include: plumbing, gas, electrical contractors, network operators and the OTR. There have also been calls from industry for an electronic means of submitting Certificate of Compliance.

2. When will I be able to register and what will I need?

A: Registration on the eCoC system is scheduled to be opened in August 2016. You will need your license number and expiry date and your contact details.

3. Is there any training available to help me use the eCoC system?

A: Yes. Basic self-help “How To” guides will be made available on the system.

4. What if I have multiple licenses?

A: You can enter your license details for additional licenses in the *My Licenses* section of the eCoC system once you have registered.

5. If my license conditions change how will I upgrade them on the eCoC system and if required how will I delete my previous conditions?

A: After registering you can add and remove licenses. To change conditions of the license or for help contact the OTR on 8226 5500 or email otr.ecoc@sa.gov.au

6. How will I be kept up to date with changes if any are made to the eCoC system?

A: Once registered, the OTR will be able to communicate with you online and via email regarding changes.

7. What type of devices can I use to access the eCoC system?

A: The eCoC system can be accessed through a PC, phone or tablet with internet access. It will be web based built with compatibility in mind, so will work on a vast majority of PC's, smartphones and tablets.

8. Will there be a fee to access the eCoC system?

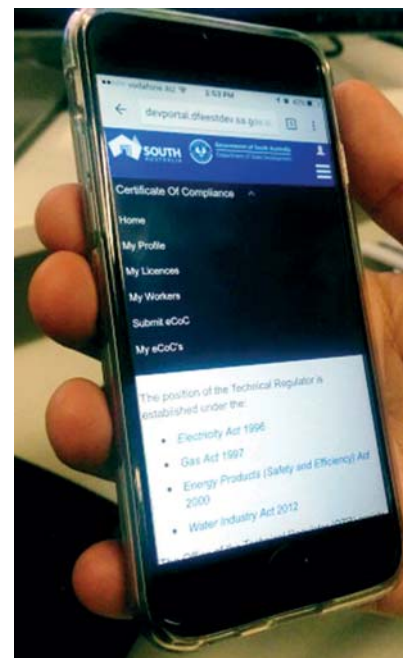
A: No. There will be no cost to access or use the eCoC system.

9. Who can I contact if I have problems with the eCoC system?

A: If you experience problems using the system or have questions, contact the OTR by phone on 8226 5500 or email otr.ecoc@sa.gov.au

10. When will I be able to use the eCoC system to create eCoCs?

A: Subject to legislation amendments required for the new eCoC system, eCoCs should be available to be issued later in 2016. Registering on the eCoC system before that point will allow the OTR to keep you up to date on the progress.



11. Will I be able to continue using the paper CoC forms?

A: There will be an 18 month transition period starting from when eCoCs become available. During this period the paper forms and eCoCs can be used. At the end of this period paper forms will no longer be valid for issuing.

12. How long do I have to submit eCoCs?

A: The regulations covering Gas will allow 30 days, Plumbing allows 7 days and Electrical will specify that the eCoC be issued before making the installation available for energisation, or as soon as practicable.

13. If I submit a CoC but made a mistake, can I go back and edit it?

A: As with paper CoCs, once a certificate is completed and submitted (or signed in the case of paper) it cannot be altered. If an error has been made, a worker or contractor would need to issue a new, corrected eCoC to replace the one issued in error.

14. How will I send the form to local councils and service providers, and do they have access to the eCoC system?

A: Councils and providers will not have access to the eCoC system. The eCoC allows you to select interested parties, as well as enter additional email addresses to which you want copies of the eCoC to be sent to automatically when you submit.

15. How are the eCoCs retrieved by SAPN on site in an area without coverage for a connection?

A: SAPN will automatically receive a pdf copy of the eCoC via email once it is issued.

16. What if a customer doesn't have an email address?

A: You will need to send an email copy to yourself (or authorised person) who will be able print a copy to give or post to customers.

17. Does the eCoC stay with the owner of the property at the time, or stay with the property?

A: An eCoC is issued to the owner/operator at the time. New owners can request a copy from the existing owner, or from the OTR through a Freedom of Information (FOI) request.

18. Do I use the eCoCs to list and report non-compliant / dangerous or potentially dangerous conditions on consumer installations?

A: Yes, the eCoC system has the capability to record dangerous conditions on installation. If there is immediate action necessary, you will need to call:

- Electrical and Gas–1800 558 811
- Power outages and reports of electric shocks–SA Power Networks on 131 366
- Gas escapes or emergencies–the National Response Centre on 1800 427 532
- Emergencies involving SA Water network systems–SA Water on 1300 883 121

Note: The eCoC system will send a notification email to the OTR.

19. Can workers submit eCoCs on my behalf?

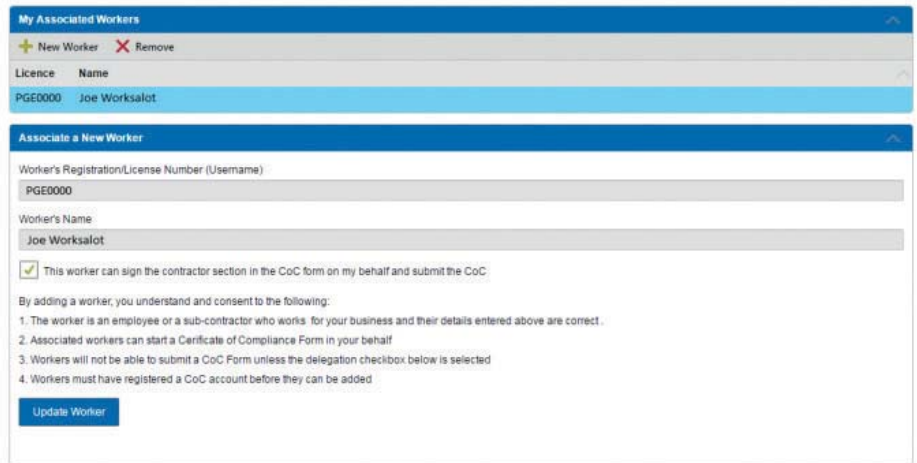
A: Yes, but as a contractor you must delegate authority to your workers so that they can submit eCoCs on your behalf.

20. Can my admin staff complete / submit eCoCs on my behalf?

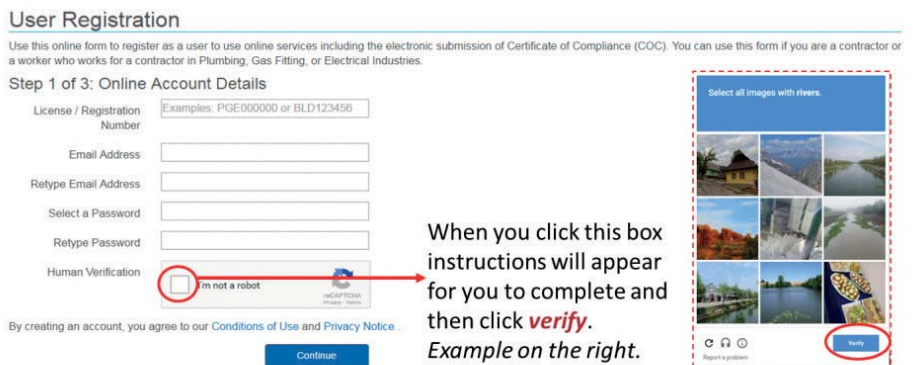
A: No. Contractors will be able to create profiles for admin staff; however they will have read only access.

21. What security is set up to protect against others using my details and gaining access to my information?

A: There is verification of details upon registration. There are various system securities in place to secure the system, as well as using CAPTCHA for 'human verification'.



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Electrical Bulletin

MEA 2016 Industry Forums

Master Electricians will again host a series of seminars throughout South Australia from late September as part of their ongoing industry engagement with the electrical industry.

You may be aware the new edition of the **AS/NZ3000 Wiring Rules** is expected to be published in the coming months. With the support of The Office of Technical Regulator, the forums will provide details on the new rules to be implemented.

Bonding arrangements

Some electrical workers are still utilising incorrect measures for earthing and bonding. There have been several complaints and a few discoveries by OTR officers that don't meet the requirements of section 5 in AS3000. We are still finding electrical workers are using self-tapping screws to bond, and 'looping' the conductor within the lug.

Some examples of some incorrect methods are shown as follows:

Right: This photograph shows a 6 mm cable being looped in a 16 mm lug that was supplied with the enclosure. The electrician has not installed the lug in accordance with the manufacturer's instructions.

Bottom Left: This photograph shows a bugle head wood screw with a star washer against the lug. The enclosure's earth pin was only 50 mm adjacent.

Bottom Right: This photograph shows a switchboard that's been neutralised by utilising a brass link which has been attached by tech screwing it to the enclosure.

With such a vast and broad review of AS/NZS3000, almost every electrical worker/contractor will be impacted as they carry out their work. The session from the OTR is a must for anyone that carries out electrical work to ensure you are informed of the changes to the wiring rules.

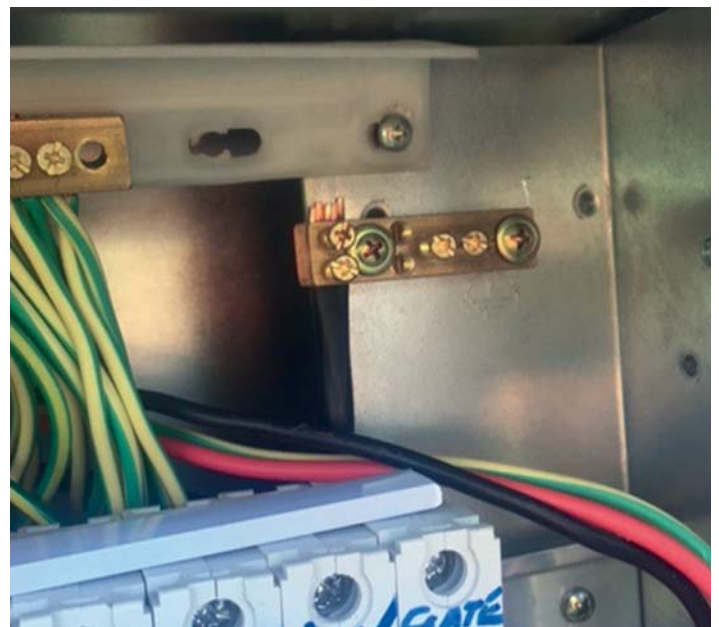
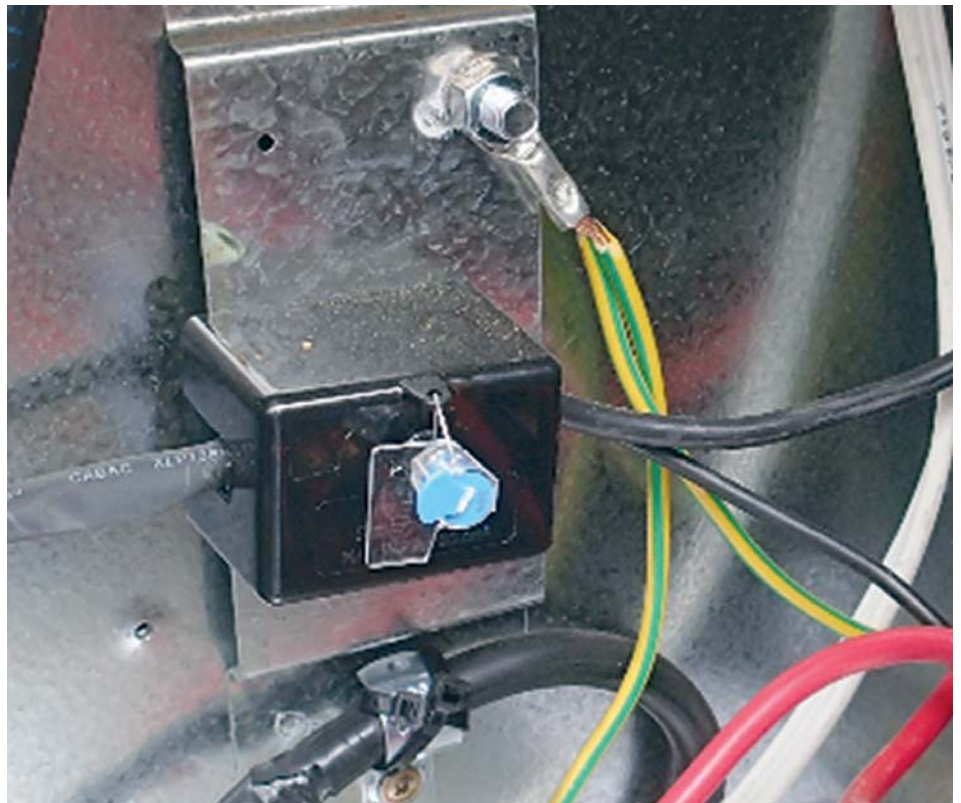
SA Power Networks will be in attendance to present the latest information and hear your concerns on matters that are affecting your business.

Industry suppliers, manufacturers and wholesalers will be in attendance showing the latest products for the industry.

Attending the MEA industry forums is an ideal way to keep up to date and network with colleagues and industry contacts.

To secure your place at one of the MEA Seminars simply visit the events page at www.masterelectricians.com.au and register.

For further information, please phone Master Electricians on **1300 889 198**.



Mains by others

It is becoming common practice to find two or even three different electrical contractors involved in the provision of a new electrical installation.

A contractor provides a quotation to the builder to supply the consumer mains, main switchboard and all the final sub circuit wiring, only to be informed that they are too expensive and the mains will be supplied by others.

Whilst this scenario can be detrimental to your profit margin, without careful control, design and planning it can also leave you trying to energise a non-compliant installation.

Here's why:

Clause 3.6.2 of AS/NZS 3000:2007

Wiring Rules requires that voltage drop does not exceed 5% of the nominal voltage from the point of supply to any point in the installation.

Clause 2.2 of AS/NZS 3008.1.1:2009

Selection of Cables stipulates that cable selection has to meet three separate criteria: current-carrying capacity, voltage drop, and short circuit temperature limit.

The limiting factor for cable selection on most installations is voltage drop. A typical three bedroom house would use around 4% volt drop on the final sub circuits with less than 1% volt drop on the consumer mains.

For example, a 16 mm consumer mains carrying 63 Amperes for 14 metres would have a voltage drop of 1%. A 2.5 mm cable carrying 20 Amperes for 25 metres would have a voltage drop of 3.9%, and a 1.5 mm cable carrying 10 Amperes for 28 metres has a voltage drop of 4%.

Once you try to increase any of these values then your voltage drop would exceed the 5% maximum. The Wiring Rules does not dictate how this 5% volt drop has to be apportioned over the installation. The size of the consumer mains could be increased to lower the percentage volt drop so that the final sub circuits can extend further, likewise the size of the final sub circuits could be increased so that the consumer mains could remain smaller.

This situation is further exacerbated where sub mains are installed such as a community title installation, where a consumer mains is installed to a stand-alone main switchboard. A metered sub

main then supplies the individual dwellings. The volt drop in the sub main has to be accounted for as part of the overall installation.

"Mains by others is not my problem" is a common reply. Not quite accurate, as the final sub circuits are normally the last circuits to be made available to energise. One of the checks that should be performed during the inspection and testing is that the installation is compliant in relation to voltage drop and the certification of the installation confirms this to be correct.

The OTR is finding a number of community title installations where the design does not meet the voltage drop requirements, and rectification after the fact is complicated and expensive.

Instances of consumer mains and metered sub mains totalling over 4% volt drop have been encountered and would make a compliant, standard three-bedroom house almost impossible to facilitate.

Don't get caught out. When you have a situation where the supply is being provided by others, consultation with all parties is essential.

Articles for all GAS and ELECTRICAL contractors

The OTR is often asked:

"What is the clearance between a gas cooking appliance and a power point (GPO)?"

There is no specific clearance in either the electrical or gas Standards AS/NZS 3000 or AS/NZS 5601 for gas cooking appliances. However, due to the effect of radiant heat and other hazards, the OTR recommends a horizontal clearance of 300 mm, and no electrical switch or device must be placed on the wall behind a gas or electrical cooker or between the cooking surface and range hood.

Electrical isolation for gas cooking appliances or electric cooktops

There are specific and related requirements in the gas and electric Standards regarding electrical isolation for cooking appliances where there are either burners or elements on an open cooking surface or an appliance with gas burners and electric elements.

All Gas Appliances

A gas appliance connected to the electricity supply shall be provided with a means of electrical isolation that is adjacent to the appliance location and is accessible with the appliance in the installed position.

A means of isolation must be provided with one of the following:

- a plug to a switched socket-outlet;
- a plug to a socket-outlet that may be located in an inaccessible position but has a separate switch operating in all live (active and neutral) conductors located in an accessible position; or
- a switch operating in all live (active and neutral) conductors.

Note: the gasfitter and the electrical contractor(s) are held responsible for this requirement. We recommend you liaise with the builder, customer or retailer prior to starting so they are aware of this requirement.

Electric cooking appliances

4.7.1 of AS/NZS 3000 Switching device (in part)

A circuit for a fixed or stationary cooking appliance having an open cooking surface incorporating electric heating, eg cooktop, deep fat fryer, barbecue griddle or similar, shall be provided with a switch, operating in all active conductors, mounted near the appliance in a visible and readily accessible position.

Exception: Where an electric cooktop is installed in a public park or other open area, the required switch may be installed adjacent to the cooktop and, to prevent damage by vandalism, may be placed under a lockable cover that is located so

that it is able to be operated as required for servicing and maintenance purposes of the cooktop.

Electric / Gas appliances

For appliances which have both electric and gas functions:

Switches shall be marked to identify the appliance controlled.

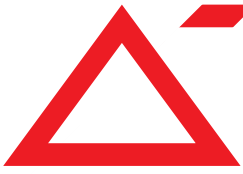
Where the open cooking surface is a combined gas/electric appliance (eg electric oven and gas hotplate upright cooker) incorporating both gas and electric cooking, the switching device shall operate in all live (active and neutral) conductors.

Refer to Clause 6.2.8 of AS/NZS 5601.1 or Clauses 4.18.1 and 4.7.1 of AS/NZS 3000.

Clearances from external Gas water heaters

Another common enquiry to the OTR is the clearance required from solar inverters, a/c compressors and the like, to external gas appliances. The minimum is 500 mm horizontally, but if the device has a fan that can force air in the direction of the appliance then 1500 mm is required.

In order for access and servicing to be carried out safely we **do not** recommend that compressors are installed below gas appliances.



Product Safety Recall

Searchlight Spotlights

Masters Home Improvement takes product safety seriously and wishes to advise Customers of a product recall on the following products:



DESCRIPTION:

- Searchlight - SEL Bolsena Single Spotlight, article number: 900038405
- Searchlight - SEL Bolsena 3Lt Bar Spotlight, article number: 900038406
- Searchlight - SEL Bolsena 4Lt Sqr Pit Spotlight, article number: 900038407

These products have been sold in Masters stores nationally from: 2nd September 2011 to 22nd February 2016.

DEFECT: The spotlights do not comply with the standard AS/NZS 60598.1

HAZARD: There is a potential risk of an electric shock.

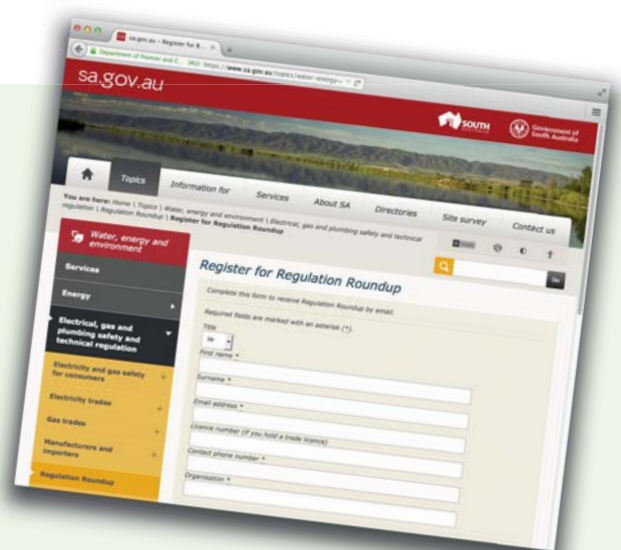
ACTION REQUIRED: Customers should immediately return the above uninstalled Searchlight Light Fittings to any Masters store for a full refund. Customers who have had the light fittings installed should immediately contact Masters' customer service, on the below number, where arrangements will be made for an inspection by an electrician. Customers should not touch or attempt to uninstall the light fittings themselves.

Masters apologises to its customers for any inconvenience caused by this recall.

For further information

Please direct all calls and any queries concerning this recall to Customer service on telephone: **1300 337 707**.

See www.recalls.gov.au for Australian Product Recall Information.



Register Online

You can register online to receive Regulation Roundup electronically by going to www.sa.gov.au/otr and clicking on the link in the Top 5 box on the left side of the page. Requests for electronic versions of Regulation Roundup can also be emailed to dsd.otr@sa.gov.au Include your name, licence number (if you hold a trade licence) and a contact phone number in case there are any difficulties with emailing. You will also see in this box a link where you can register your Electrical and Gas Certificate of Compliance books. **Remember to contact us if you change your email address!**

Electric Shock Report Incidents

Shock Source	Cause	Contributing Factors	Injuries	Action to make safe
On/Off control switch for high pressure water cleaner.	Moisture and ore dust had entered the control switch.	Control switch was mechanically damaged allowing ingress of water and dust.	Operator received electric shock to right arm.	Pressure cleaner removed from service until repairs completed.
Commercial bakery rounder appliance.	Flexible cord to appliance damaged.	Cleaner's floor polishing machine had damaged the flexible cord supplying the bakery equipment.	Operator received electric shock to hand.	Electrical contractor replaced cord for appliance, tested it and returned it to service.
Ceiling sweep fans.	Electrical worker contacted live terminals.	The two ceiling sweep fans were on different circuits even though they were adjacent to each other.	Electrical worker received electric shock to hand.	Electrical contractor to follow correct isolating procedure before making contact with equipment terminals.
Metal fascia of house.	Light had been installed on fascia.	Roofing contractor had relocated the light and failed to protect the cable as it passed through the metal fascia.	Owner received electric shock to hands when he placed an aluminium ladder on the fascia.	Electrical contractor correctly installed light fitting.
Cables hanging from ceiling.	Plumber moving aluminium ladder through area of building being renovated.	Cables hanging from ceiling were live and not terminated safely.	Plumber received electric shock between both hands.	Electrical contractor isolated the disused cables and correctly terminated them in a junction box.
Socket outlet.	Paper clip contacted live conductors.	Student fastened paper clip to wooden ruler and then inserted clip into socket outlet.	Fortunately the student only received a fright.	Electrical contractor replaced socket outlet. School to use plug-in covers for socket outlets.
Electrical portable outlet device. (Power board)	The power board was damaged and part of its housing was missing.	Having difficulty plugging in the printer to the power board, the victim took a firmer grip and contacted the exposed live parts.	Victim received electric shock and burn to left hand.	Damaged power board removed from service.
Pole top light fitting.	Water had entered light fitting.	The electrical worker had isolated the light fitting locally, however moisture in the fitting had permitted tracking of electricity.	Apprentice received electric shock to left hand.	Electrical contractor disconnected lights at their source of supply and repaired faulty underground connection.
Business management system control panel.	Extra low voltage control panel also had low voltage supplied to it.	Faulty circuit wiring supplying ceiling vent fan permitted supply voltage to be connected to control panel.	Technician received electric shock to hand.	Electrical contractor isolated equipment until fault repaired.
Electric security fence.	Induction from nearby fencing.	Whilst the correct fence was de-energised nearby electric fences caused voltage to rise on it.	Worker received electric shock to arm.	System redesigned so each of the fences is earthed when de-energised.
Socket outlet.	A pin was extruding from active terminal.	Plug-in charger had been removed but active pin broke off in the socket outlet.	Student received electric shock to hand.	Electrical contractor removed pin and tested socket outlet.
Electric bed.	Plug top damaged.	Electric bed had been unplugged and repositioned in aged care facility damaging plug top.	Worker received electric shock to hand.	Electrical contractor replaced damaged plug top for electric bed.
Shower rose.	Lighting fitting had active/earth fault but not a short circuit.	Neighbour's house had outdoor light fitting with an active to earth fault causing the adjacent property to have a raised voltage on the earthing system.	Owner received electric shock between hands and feet.	Neighbour's lighting circuit disconnected until repairs completed. Wind had caused roof damage allowing water to enter light. Earthing of both premises to be tested.
Lawnmower.	The fuse base in the street light had overheated permitting the active conductor to track to the metal of the light column.	The street light was direct earthed and this did not facilitate the fuse operating. When mowing the lawn the lawnmower touched the light column.	Home owner receive electric shock to both arms.	Network operator repaired street light.
Aquarium heater.	Heater controls had water spilt on them.	Research centre staff had been using a domestic style aquarium heater where the controls themselves were not IP rated.	Researcher received electric shock between right hand and left foot.	Review of equipment used and work procedures required.

Gas Bulletin

Pressure Proving Systems (PPS)

The AS/NZS 5601.1:2013 has specific requirements relating to the disruption of gas supply to appliances by the activation of fire extinguishing equipment and/or fire alarm systems to appliances without flame safeguards. The concern with such an installation is that when the fire system is reset, gas will flow to the burners that have been left "on" as a result of leaving the appliance due to the emergency situation. These appliances will most likely be in a high-rise apartment, commercial kitchen or an industrial complex.

Installing a PPS will meet the Standard's requirements of ensuring gas cannot be restored to the installation until all the burners have been turned off. The commissioning of a PPS is critical, and must be set up for the lowest gas rate on the lowest burner of an appliance, or in the case where there are multiple appliances, select the lowest gas rated burner amongst all of them, eg simmer burner turn down rate (lowest setting) of a hot plate.

It is imperative that the valve is set correctly and that it does not exceed this flow rate. This is to ensure that the quantity of gas being discharged into the pipework cannot exceed the gas escaping the system (if one or more appliances have been left on). If the valve is not set correctly and a larger flow enters the pipework, the pressure within the pipe will gradually build and potentially reach a level where the gas proving sensor is triggered.

Equally important, the duration of time for which the proving device attempts to charge the piping needs to be adjusted. There must be sufficient time for the device to charge the outlet service. The larger the service the longer it will take to establish pressure, subsequently the time must be of adequate duration to enable the valve to fully charge the pipework. Conversely the time should not be excessive, because if there is an open appliance in the system, uncontrolled gas will be released into the building or space. You must ensure to follow the commissioning procedure as supplied by the manufacturer.

Extract AS/NZS 5601.1:2013

6.5 GAS SHUT-OFF WHEN AUTOMATIC FIRE EQUIPMENT OPERATES

6.5.1 Interlock of automatic fire-extinguishing equipment with gas supply

Where operation of automatic fire-extinguishing equipment could extinguish a gas appliance flame —

- (a) all burners of the gas appliance shall have a flame safeguard system; or
- (b) the installation shall be fitted with a system which will shut off the gas supply when the fire extinguishing system operates. The system shall require pressure proving of the downstream installation prior to restoration of the gas supply.

6.5.3 Gas shut-off controls interfaced with fire alarm systems

Where automatic shut-off of gas supply occurs when the fire alarm system is activated, suitable measures shall be provided to prevent the release of unignited gas upon restoration of supply.

Note: Suitable measures include safeguarding of all burners, pressure proving or a burner shutoff system incorporating the automatic shut-off valve.

Outdoor kitchens

There is an increasing number of enquiries for requirements for outdoor kitchens, specifically the use of outdoor BBQs installed indoors. It is a requirement that the exhaust canopy fan must be interlocked through an air flow switch to the gas supply, to maintain sufficient ventilation and extract fumes and combustion products emitted by the BBQ. If the BBQ has no flame safeguard, then this installation must comply with PPS requirements. If you want information on outdoor kitchens look for **Bulletin 34a** on our website, or contact us if you are unable to download it.

Over Pressure Protection (OPP) – operation and use

Over Pressure Protection: a device or system for preventing the pressure in gas pipework or in gas appliances from exceeding a predetermined value.

OPP is a term that is often used when describing various devices that can provide such protection for downstream piping and appliances eg Over Pressure Shut-Off (OPSO) devices, active-monitor regulators, 2-stage regulators and pressure switches interlocked to solenoid valves.

In simple terms, if it is possible that a component, regulator or appliance may be exposed to a pressure that could cause an unsafe condition or damage to it, then a means of protection must be incorporated in the installation to safeguard from this occurring.

All appliances and components have a maximum pressure rating and you should seek this information from your supplier during design of a gas service, or upon installing an appliance.



A hot water heater exposed to an excessive inlet operating pressure, required a two-week old unit to be replaced.

Press-fit fittings – REMINDER

Press-fit fittings are **NOT** to be used on caravans, motorhomes, catering vehicles and boats.

The only acceptable methods of jointing are open flame brazing and flared compression.

Fittings must be copper alloy fittings to the AS3688 or DS26 Standards.

Appliances in caravans, catering vehicles, motor homes and boats

Gas appliances in new or updated caravans, catering vehicles, motor homes and boats *must have certified appliances with flame safeguards* fitted to all burners ie generally thermo-electric or electronic types.

Recent inspections of catering vehicles and trailers at community events has revealed that many of the newly constructed vehicles have not been fitted with certified appliances.

Retro-fitting appliances with flame safeguards requires modification and a separate safety assessment to be undertaken to maintain certification with significant costs involved.

If you are working on this type of vehicle or boat, there is an installation checklist available on our website or by contacting the OTR.

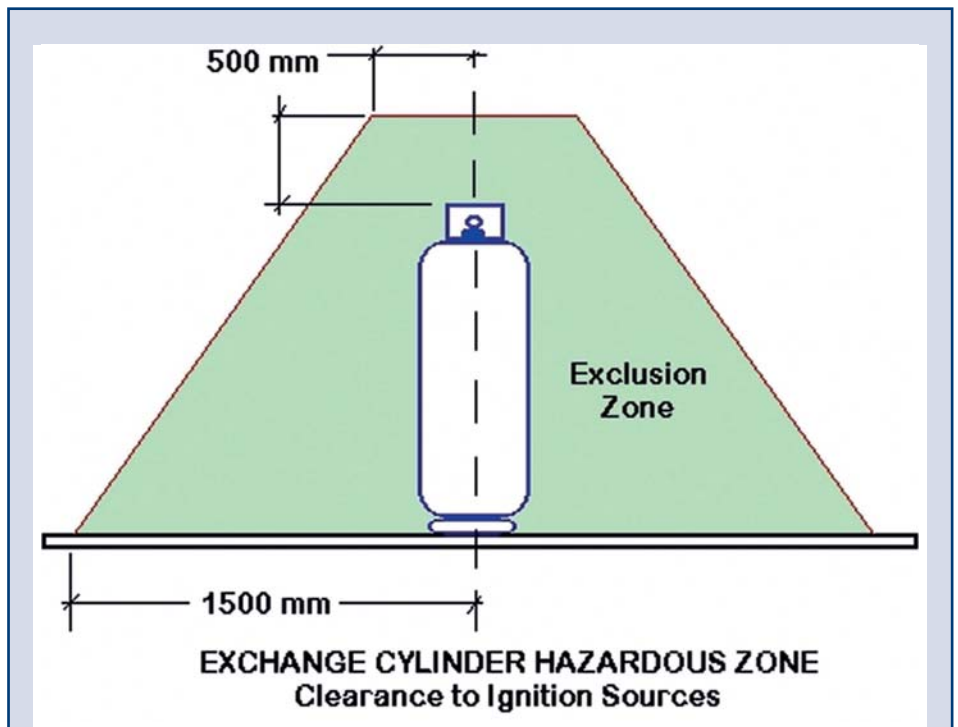
Pressure test points on appliances and regulators

It is a requirement that pressure test points for appliances are fitted in an accessible location, particularly for hot plates above under-bench ovens. Some appliances are supplied with regulators, even for LPG cookers. If not part of the regulator, fit the test point downstream of the regulator in an **accessible** location or an adjacent cupboard. Pressure testing and adjustments must be able to be carried out without having to remove under-bench ovens or other appliances.

The OTR continues to find NG and LPG regulators without pressure test points – ensure you fit them.

Regulator breather or relief vent

There are continual enquiries as to whether regulator vents are required to be vented to atmosphere. If the vent is a breather vent, you will need to refer to clause 5.11.5.7



Generators near LPG cylinders: Not allowed within 1.5 m

Generators, electrical switches, and pumps etc must not be installed within the ignition exclusion zone (minimum 1.5 metres) of LPG cylinders. This especially applies to caravans, motor homes and boats as well as fixed installations.

or 5.11.5.8 of AS/NZS5601.1:2013 and this will help you determine whether the breather requires venting. Otherwise if the regulator vent is a relief type, it must be vented to atmosphere.

Extract from AS/NZS5601.1:2013

5.11.5.2 Vent line terminating outside a building

When any of the following are installed inside a building, they shall be fitted with a vent line that terminates outside a building:

- A safety shut-off system which requires venting to atmosphere.
 - A gas pressure relief device.
- Note:** This does not apply to a relief device fitted to an LP Gas cylinder.
- A consumer piping gas pressure regulator incorporating a gas pressure relief device.
 - A breather vent except where Clause 5.11.5.7 or 5.11.5.8 applies.



Low pressure water heaters in roof spaces

Are you replacing or servicing low pressure gas (ceiling) water heaters? If so, then you must maintain adequate clearances from combustible materials. If the burner cover is not in place then radiant heat can affect nearby combustible materials.

See photo above. A recent incident has highlighted the need to keep adequate clearances from plastic safe trays and any other combustible materials such as timber rafters and joists, or other materials found or stored in the roof space.

OTR representation on Standards committees

A number of OTR employees represent the Gas Technical Regulators Committee, Electrical, and Plumbing, on a variety of Australian Standards committees.

Activities within these committees include:

- (a) Revision of the Gas Distribution Networks Standard AS/NZS 4645 parts 1, 2 and 3.
- (b) Amendments 1 and 2 to Part 1 and amendment 1 to Part 2 of the AS/NZS 5601 Gas Installation Standards.
- (c) Full revision of the AS 4575 Standard—Quality of Gas Servicing.

- (d) Commencing a revision of the AS 4566 Flue Cowl and AS 4567 Flue Standards.
- (e) Revisions to Various Appliance Standards AS 4551, 4552, 4553, 4554, 4557, 4558, 4560, 4563, 4565, 4643 and 2658.

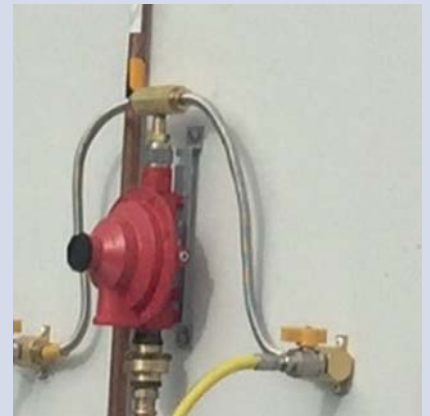
If you have any suggestions for changes to any of the gas Standards you have an opportunity to put forward your views by emailing your suggestions to the OTR on dsd.otr@sa.gov.au

Are you turning meter valves “on” too fast?

It has been reported to the OTR that some gasfitters are creating gas leaks from regulators by turning the meter valves on too quickly. This applies to both NG and LPG reticulated meter systems. This technique can result in the internal relief valve operating with the *sudden* increase in pressure and may not re-seat fully. Remember to turn “on” slowly and allow the system to pressurise.

Adjusting LPG regulators

The OTR inspectors are frequently finding regulators on LPG domestic and rural installations that are not set correctly, which is part of the commissioning process. This can lead to poor performance on hotplate burners and low hot water temperatures. This problem can lead to either increased gas usage and/or upset customers. It is recommended to follow manufacturer’s instructions or, if no instructions are available, then set the pressure with at least 50% of total load on eg a 4-burner hotplate may require 2 burners to be on full.



No test point

Plumbing Bulletin

Plumbing Advisory Note – Issued May 2016

This advisory note relates to a revision of AS/NZS 3500 Part 4 – Heated water services.

Alignment with the PCA

The revision of AS/NZS 3500.4:2015 – Heated water services has been drafted to meet the required protocols for standards referenced in the National Construction Code Series.

Velocity requirements

Refer to AS/NZS 3500.4:2015 – Table 1.8 for updated information about maximum water velocity in piping:

Table 1.8

Piping	Maximum flow velocities (m/s)	
	Copper pipes	Other materials
Circulatory	1.2	2.0
Other	3.0	3.0

Notes

- Circulatory piping means piping where there is forced circulation of heated water.
- Circulatory piping does not include:
 - systems where the circulatory flow only occurs in response to activation by a user; and
 - primary circulation in a solar water heater.
- In circulatory piping, the maximum flow velocity is derived from the sum of forced circulation and probable simultaneous demand flow in the relevant section of piping.

Solar water heaters

Significant changes have been made to AS/NZS 3500.4:2015, Section 6 –

Installation of solar water heaters. New requirements include:

- **Location of solar water heater systems**

The components of the system shall be located so as to maximise solar gain and minimise energy losses, and shall be positioned to facilitate maintenance and the choice of a suitable route for piping between the container and the collector.

- **Installation of collectors**

Collectors shall be located so that they are clear of shade for not less than three hours either side of solar noon at any time during the year. Partial shading by small objects such as chimneys, flues and TV antennas is permissible during this period.

- **Orientation**

Collectors shall be installed so that they face no more than 45° east or west of true north.

- **Inclination**

Collectors shall be inclined at an angle within 20° of the local latitude angle.

For thermosiphon systems, the minimum inclination angle shall be 10°.

Installation requirements – finding more information

For the requirements for designing, installing and commissioning heated water services, refer to AS/NZS 3500.4:2015.

For solar water heater installations on properties with up to 19 Class 1A buildings (domestic housing), refer to AS/NZS 3500.4:2015 – Heated water services or AS/NZS 3500.5:2012 – Housing installations.

Standards under revision

AS/NZS 3500.5:2012 – Housing installations is currently being revised to be consistent with the requirements of:

- AS/NZS 3500.1:2015 – Water services
- AS/NZS 3500.2:2015 – Sanitary plumbing and drainage
- AS/NZS 3500.3:2015 – Stormwater drainage
- AS/NZS 3500.4:2015 – Heated water services

It is anticipated that the changes for heated water service installations, including the requirements for solar water heaters as set out in AS/NZS 3500.4:2015 will apply to the revision of AS/NZS 3500.5:2012 – Housing installations.

It is recommended plumbers refer to the Plumbing Code of Australia 2016 and the AS/NZS 3500 plumbing and drainage standards for the current requirements for the design, installation and commissioning of heated water services.

IMPORTANT INFORMATION - Have You Changed Your Address?

Contact Consumer and Business Services (CBS) for any change of address or licence details.

Level 3, 91-97 Grenfell Street, Adelaide 5000, phone 131 882, email pge.bos@agd.sa.gov.au

Only contact the Office of the Technical Regulator for change of address notification if you receive Regulation Roundup but **do not** hold a trade licence.

Registration of Gas and Electrical CoC books

You can register your CoC books online by going to www.sa.gov.au/otr and clicking on the link in the Top 5 box on the left side of the page.

The link will bring you to a page where you can enter your details for the CoC book you are registering. Remember to enter the prefix letter of the book you are registering e.g. G200251.

Legislative requirements

The *National Construction Code Series Volume Three, Plumbing Code of Australia (PCA)* – Part B specifies performance requirements related to installing heated water services.

Water heater installations that comply with the AS/NZS 3500 plumbing and drainage standard are deemed to satisfy the performance requirements of the PCA.

Non-drinking Water Guidelines released for Consultation

The OTR has released the draft Non-drinking Water Guidelines for public consultation with feedback due by 30 September 2016.

Visit the OTR website for further information and to provide your comments and input.

Contact list

be energy safe

Electrical Technical Advice

Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide
Phone: (08) 8226 5518 (8:30am–4:30pm)
Fax: (08) 8226 5529
Email: dsd.otrmail@sa.gov.au

Electrical Certificates of Compliance

Available in person from the following agencies:

Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide

NECA
213 Greenhill Road, Eastwood
Phone: (08) 8272 2966

Lawrence & Hanson
All stores

MM Electrical
All stores

Middendorp
All Stores

Rexel Australia Ltd
All stores

P & R Electrical Wholesalers
All stores

CNW Wholesalers
All stores

Service SA Outlets
EDS Centre, 108 North Terrace, Adelaide
and Regional Areas

Gas Technical Advice

Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide.
Phone: (08) 8226 5722 (8:00am–5:00pm)
Fax: (08) 8226 5866
Email: dsd.otr@sa.gov.au

Gas Certificates of Compliance

Personal collection available from:

SA Water
250 Victoria Square, Adelaide

Gas Works
All stores

Gas Appliances Plus
Unley

Norm's Plumbing Supplies
John Street, Mt Gambier

Samios Plumbing Supplies
All stores

Scott's Plumbing
66 O.G. Road, Klemzig

Northern's Plumbing Supplies
All Stores

Tradelink
All stores

Reece Plumbing
All stores

Personal collection orders
available from:

Service SA Outlets
EDS Centre, 108 North Tce
Adelaide and
Regional Areas

General Information

Licence and Address Change
Consumer & Business Services
Phone: 131 882
Email: pge.bos@agd.sa.gov.au

Appointments and Information
SA Power Networks Builders & Contractors Line
Phone: 1300 6500 14
Fax: 1300 6500 16

Australian Standards
Standards Australia
www.standards.com.au

AGA
Phone: (03) 9580 4500
www.gas.asn.au

Training

Gas

Master Plumbers Association (formerly PIA)
1 South Road, Thebarton
Phone: (08) 8292 4000
Fax: (08) 8292 4040

Technical Advisory Centre P/L
4/543 Churchill Road, Kilburn
Phone: (08) 8162 5640
Fax: (08) 8162 5638
www.techad.com.au

Gastrain
U1 61-65 Tapleys Hill Road
Hendon 5014
(PO Box 83, Royal Park 5014)
Phone: (08) 8447 7783
Phone: 1300 955 583
Fax: (08) 8447 7753
www.gastrain.com.au

Electrical and Gas

TAFE info (for all training enquiries)
Phone: 1800 882 661

Peer Veet
Rescue and Resuscitation, First Aid
& other Industry related courses:
1042 Port Road, Albert Park
Phone: (08) 8348 1200
www.peer.com.au

Electrical

ATEC (Adelaide Training & Employment Centre)
Electrical Rescue & Resuscitation Certificate
Phone: (08) 8240 1233
www.atec.asn.au

Power Lines/Cables

Clearance Zones
Between vegetation and power lines or building/
structures and power lines contact the

Office of the Technical Regulator
Phone: (08) 8226 5521

SA Power Networks (SAPN)
Phone: 13 12 61



Government of South Australia
Department of State Development

www.sa.gov.au/otr

For Locations of Gas, Electricity or Telecommunications

"Dial Before You Dig"
This service is still available when doing
emergency excavations at short notice.
Phone: 1100
www.dialbeforeyoudig.com.au

For after hours locations or gas emergency (including LPG)

Natural Gas Network: 1800 808 526
Origin Energy LPG: 1800 808 526
Kleenheat: 1800 093 336
Elgas: 1800 819 783
APA Group Gas leaks: 1800 427 532
(1800 GAS LEAK)

For gas or electrical major incident reporting 24/7 (SA only)

Office of the Technical Regulator
Phone: 1800 558 811
This number also appears in the 24 hour
emergency numbers section at the front of the
South Australian White Pages

Gas Trade contact

APA Group system operator
Phone: 1300 001 001

Additional websites for further information

South Australian Parliament for Acts and Regulations
www.legislation.sa.gov.au

SafeWork SA
www.safework.sa.gov.au

Australian Liquefied Petroleum Gas Association (ALPGA)
www.alpga.asn.au

Australian Competition and Consumer Commission (ACCC)
www.accc.gov.au

Australian Gas Networks Ltd (formerly Envestra)
www.australiangasnetworks.com.au

Elgas
www.elgas.com.au

Origin Energy
www.originenergy.com.au

Kleenheat
www.kleenheat.com.au

Australian Standards
www.infostore.saiglobal.com/store/

Plumbing Technical Advice

Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide
Phone: 1300 760 311 (8:30am–4:30pm)
Email: otr.plumbenquiries@sa.gov.au
www.sa.gov.au/otrplumbing

Plumbing Certificate of Compliance

Available in person from:
Service SA Outlets