

A bulletin for Electrical, Gas and Plumbing industry workers brought to you by the Office of the Technical Regulator

Electrical

Bulletin

Gas

Bulletin

Bulletin

04

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Message from the **Technical Regulator**

Welcome to the 52nd edition of Regulation Roundup.

Infrastructure

Some Important Changes to the Electricity and Gas Regulations commencing Monday 18 September 2023



Electrical P: (08) 8226 5518 | (8:00am - 4:30pm) Gas

P: (08) 8226 5722 | (8:00am - 4:30pm) Plumbing

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



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Plumbing 17

Message from the Technical Regulator

Welcome to issue 52 of Regulation Roundup.

With our roadshow series coming to an end, I would like to thank all those who attended. We trust that these were beneficial for the industry. Our team always values feedback from industry at these events.

Regulation Roundup has again been filled with the current topical issues. There are a number of articles that provide an update to regulatory requirements.

It is important that if these impact on your role, you familiarise yourself with these updates.

We hope you get a lot out of this edition.

Robert Faunt, Technical Regulator

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CONSUMER LAW REQUIREMENTS

GETTING IT RIGHT FOR YOUR CUSTOMERS

Most tradespeople are keen to get on with the job of installing, fixing and replacing things correctly and safely. But there are other requirements that tradies must meet, which are just as important under the law.

The Australian Consumer Law (ACL) applies to how tradespeople advertise and promote their business, the sales process and the documents that must be provided to customers.

Advertising and promotion

The information you provide in any form of advertising or promotion must be true and not misleading in any way. Check that all the information you display is correct in relation to:

- the description of your business
- your experience in performing certain work
- being a member of an organisation
- customer reviews
- awards you've won
- special offers for customers and any conditions that apply.

This applies to all online promotions such as your website, social media activity and via any other online platform. It also applies to your trade vehicle and to advertising with traditional media such as radio, television, and local newspapers.

Also make sure you include your licence number in any advertising, as required under the *Plumbers, Gas Fitters and Electricians Act* 1995.

Consumer and Business Services (CBS) has an ongoing monitoring program of the building and trades industry. In addition to site visits, CBS monitors advertising and promotional activities. CBS also receives and assesses complaints from consumers and members of the public. Businesses that don't comply with the law could face compliance action such as a warning letter, fine, disciplinary action or even prosecution.

Providing quotes

It's best if you provide each quote in writing so there's a clear record of what the job is, what's included, the price, and any likely extra costs. The information contained in the quote must also be accurate and not misleading. Once a customer accepts your quote you will generally have a contract with them.

The ACL also requires that businesses are fair in their dealings with customers. It can be an offence to pressure customers through coercion or undue harassment to get them to agree to hire your services or to have additional products and services supplied that aren't part of their contract with you.

Cooling off periods

Did you know that customers may be entitled to a 10-day cooling off period in some circumstances?

For example, if a customer asks an electrical company to quote for supplying and installing lights for a shed, garden, and outdoor entertaining space:

- the agreement would be an unsolicited consumer agreement if the trader negotiates a sale at the time of providing the quote. Therefore, the trader should not start any work or take any payment during the 10-day cooling off period. In this scenario, the customer has only asked for a quote, and has not solicited the supplier to sell them the goods or services right there and then.
- the agreement would not be an unsolicited consumer agreement if the trader leaves a quote with the consumer, and the consumer initiates contact with the trader to accept the quote or negotiate different terms.

Invoices and receipts

The ACL also requires that you give customers a proof of transaction – such as a receipt or GST tax invoice–when the job costs over \$75, which means this requirement applies to most trade jobs.

The invoice or receipt must include:

- your business name and ABN or ACN
- · the products and services provided to the customer
- · the date the job was done
- the price of the job.

It should also provide an accurate and clear description of the job. If the customer asks for an itemised bill, you must provide it within seven days.

Licensing reminder

Industry members are reminded to make sure you only work within the scope of your licence or registration.

CBS recently took prosecution action against a trader after he performed defective plumbing and gas fitting work for two consumers. The trader held a restricted gas fitting workers registration and a restricted plumbing workers registration. He was not authorised to perform gas fitting and plumbing work outside of a contract of training. The trader was convicted and given a 12-month good behaviour bond. The court also ordered him to pay compensation totalling \$7,175 to the consumers and to pay prosecution costs of \$1,100.

Further information

For more information about licensing and registration contact CBS via <u>occupational@sa.gov.au</u> or phone 131 882.

For more information about consumer laws and advertising, see the guide 'Avoiding unfair business practices' which is available on the CBS website at <u>cbs.sa.gov.au</u>.



Electrical Bulletin

Adding a large load?

Electrical installations are becoming more complex and larger than ever before. When adding any loads but more specifically large loads such as electrical vehicle chargers, air conditioners, spas, and pool equipment a maximum demand calculation or assessment is needed to know if the installation can handle it. Clause 2.2.2 of AS/NZS 3000:2018 gives you 4 different ways to achieve compliance.

- a. Calculation This method allows the designer to calculate maximum demand by using guidance in appendix C of AS/ NZS 3000 and/or any other relevant information available for any installation.
- Assessment This allows the designer to consider duty cycles and intermittent loading of equipment considering large and complex installations and special types of occupancy
- c. Measurement This allows the designer to utilise the highest rate of consumption by using a maximum demand recorder over a span of 30 minutes when demand is at its highest.
- d. Limitation This can be achieved by load limiting parts of, or the whole installation with the use of circuit breakers.

In most cases for residential applications provision a) and d) will be most applicable and it is the certifying electrician's responsibility to ensure the installation can handle the load being added. **Scenario** – An electrician has been called to a job where they are adding a 32 amp electric vehicle (EV) charger and has noticed that the consumer mains is only 10mm with no meter isolator. Using appendix C in AS/NZS 3000 they have calculated that there is already significant loading on the site and adding the EV charger will overload the consumer mains. For the electrician to achieve compliance they will have to either upgrade the service or load limit the consumer mains with the use of a circuit breaker as the main switch.

Note: Load limiting the consumer mains may have an impact on how the installation functions correctly as intended, in breach of clause 1.6.1(d) of AS/NZS 3000:2018. This also may cause problems between you and your customer when their main switch keeps tripping on overload.

Additionally, SA Power Networks (SAPN) have requirements around switching loads above 20A for single phase and 25A for 3 phase and approval from SAPN shall be sought. An exemption for EV chargers may apply if approval is sought through SA Power Networks SmartApply application process.

Below is a photograph of an overloaded overhead service. Thankfully this fire was limited to the exterior of the home and did not cause any further damage.



Existing non-compliant work?

OTR have received numerous calls from Electrical workers on what they're required to do when they find existing noncompliant work. Electrical workers have no obligation to repair existing non-compliance unless it relates to your part of the alteration or repair, however you do have an obligation to make the homeowner aware that there is an issue. This can be done on your eCoC in "section B".

Scenario 1: An electrician is called to a job to install a water pump on a dedicated circuit on a home. When they arrive, they notice the whole switchboard is not labelled. They are not required to label the whole board, just the circuit they are installing. They then note in the eCoC in section B that the switchboard needs to be labelled. It is now the homeowner's responsibility to employ the services of an electrician to undertake the necessary repairs. **Scenario 2:** An electrician is called to a job to install a water pump on a dedicated circuit on a home. When they arrive, they notice there are not enough terminals in the Neutral bar for the addition of another circuit. This will breach clause 2.10.4.3(d) of AS/NZS 3000:2018. The electrician will have to do additional work and configure the board, so their new circuit neutral has its own terminal.

If an electrical worker finds aspects of the electrical installation to be an immediate risk of fire and/or shock (e.g. a live cable hanging out of a wall or a smouldering connection) OTR recommends isolating and having an immediate discussion with the owner or operator of the electrical installation to see if you can make it permanently safe. If this is unable to be done contact the OTR emergency line that's prompted when you select "Immediately dangerous" in eCoC, and we will guide you on appropriate steps.

Warning

Please Note th

Owners & operators of electrical installations must take reasonable steps to ensure that the electrical installation is safe. Maximum penalty \$250,000. Listed below are any items considered to be unsafe or requiring remedy.

To report an immediately dangerous electrical/gas incident please phone 1800 558 811

Severity *	Immediately Dangerous	~
Details *		

-* I confirm that I have read the above information and understand the requirement to report an immediately dangerous installation by phone call

Solar Module Clearance

The OTR has found several solar installations where the earth clamp is touching the underside of the PV module. This could damage the PV module and cause an earth fault and tracking. There are multiple PV modules on the market that have various depths, because of this it is important to check with manufacturer's instructions that your PV modules are compatible with your racking system; See clause 1.7.1 (c) AS/NZS3000. Also see clause 1.7.2 (a) AS/NZS3000 regarding protection against mechanical, environmental, or other external influences.



[Above Photo: shows earth clamp touching the underside of the PV module. The PV module has been damaged by the bolt during installation. The product could be configured differently, or another product may need to be used.]

Electric Shock Incident List

Shock Source	Cause	Contributing Factors	Injuries	Action to Make Safe
Lighting cable in ceiling space.	Cable energised but not terminated correctly.	Apprentice installing ceiling mounted speakers contacted cable in roof that had not been terminated.	Worker received electric shock to hand.	Electrical contractor isolated light circuit and terminated cable correctly.
Switchboard ceramic fuse base.	Occupiers hand contacted live parts of fuse base.	Whilst attempting to identify why the power had gone off homeowner removed fuse wedge and contacted the live fuse base parts.	Homeowner received electric shock to hand.	Network Operator attended and advised homeowner of why they received an electric shock resolving the issue.
Underground consumer mains.	Consumers mains cable shorted.	Occupier contacting shower taps would not have known mains cable had shorted livening up the neutral and hence the earthing system.	Occupier received electric shock to hands and feet.	Network Operator attended and disconnected power until an Electrical Contractor could affect repairs.
Emergency light fitting.	Light fitting not supplied by linked circuit breaker.	Electrical worker was replacing light fitting and had isolated the circuit breaker, there was a second supply to the light but not from the same circuit breaker.	Electrical worker received electric shock to hands.	Electrical worker traced other circuits for light fitting and isolated that supply.
Switchboard mounted Residual Current Device.	The RCD had overheated causing the case to melt and allowing tracking of electricity.	Homeowner had been attempting to reset RCD and did not recognise the dangers of a melted cover.	Owner received electric shock to hand.	Electrical contractor replaced damaged switchgear.
Shower Taps.	The terminal screw at the main neutral was not tightened correctly.	Homeowner was using the shower which had earthed metallic taps unaware the main neutral connection had burnt out.	Homeowner received electric shock between hand and foot.	Network Operator attended and re-terminated main neutral conductor resolving issue.
Caravan Park lighting pole.	Cable termination had overheated burning through insulation and eventually shorted to the pole.	Plumber was picking up piece of timber from ground and steadied himself by placing his hand on the adjacent light pole.	Tradesman received electric shock to hands.	Electrical Contractor repaired failed cable termination and upgraded circuit with R.C.D. protection.
Portable polishing machine.	Faulty power tool permitted voltage to track to metal case.	Metal polisher was using the portable polishing power tool and contacted the earthed metal work bench with his other hand simultaneously.	Victim received electric shock between hands.	Electrical Contractor investigated and removed faulty power tool from service.
Mains Connection Box located on the eaves of a house.	M.C.B. terminals were contaminated with wet paint.	Painter whilst standing on an aluminium ladder painted the underside of the M.C.B. allowing the electricity to track.	Painter received an electric shock to his hands.	Network Operator repaired main connection box resolving issue.
Shower taps.	Main neutral had been disconnected from revenue metering device.	Owner reported receiving shocks when using the shower taps unaware that someone had tampered with the revenue meter.	Owner received electric shocks to hands.	Network Operator corrected wiring and reported issue to energy retailer.
Gas pipework.	Plug top for water pump cord had failed shorting active to earth.	Homeowner would not have realised an electrical fault with the pumps plug top had occurred livening all earthed surfaces.	Victim received electric shock to hands.	Network Operator removed pumps cord and plug top from socket outlet resolving issue.
Metal frypan.	Cable exposed in kitchen cupboard was unterminated and live.	Homeowner was storing a frypan in cupboard when they contacted live cable end.	Victim received electric shock to hands.	Network operator isolated circuit.
Overhead service supply cable.	Tree trimming saw cut service line.	Homeowner decided to trim trees and did not see the service line passing through the tree branches.	Victim received electric shock between hand and foot.	Network Operator replaced overhead service line and educated homeowner.
Oven.	Wiring in oven had shorted livening up the earthed surfaces.	Homeowner had no warning of cable fault and attempted to use the oven as normal.	Victim received electric shock between hands and feet.	Network Operator disconnected stove until homeowner could have a new one installed.
Conductive wall of shed.	Substandard wiring in shed had resulted in livening the shed frame.	Owner leant on sheds galvanised steel wall when using shed.	Victim received electric shock between hands and feet.	Network Operator isolate supply to entire site until multiple repairs completed.

Clause 7.5.2 Service and Installation Rules 2023

SA Power Networks has reviewed the use of unfused connection points (pits) installed in public land, including footpaths, with the objective to support public safety by minimising the length of unprotected consumer mains extending into these areas.

Consumer mains installed in these areas are not documented in the "Before You Dig Australia" database and are potentially at risk of being damaged by others excavating within these areas.



To help mitigate the risk of "electric shock" caused by a **damaged consumer mains**, SA Power Networks may provide a "fused" connection point in the public land/footpath, with the use of submersible fuses, as shown. These submersible fuses, up to and including 100A, can be installed within a P7 or P8 pit. In certain situations where unprotected consumer mains are installed, additional requirements have been included in the latest (2023) revision of Service and Installation Rules, clause 7.5.2.

Additional requirements for unprotected consumer mains, (no short circuit protection at the connection point)

- Minimum cable size shall be 16mm², and
- Cables shall be double insulated, as per AS/NZS 3000
 requirements, and
- · Cables shall be installed,
 - For services less than 100A only on the customer's private property, and only extending to the SA Power Networks pit installed immediately adjacent the property boundary on road reserve/ public land, or

With reference to the below drawing and table "immediately adjacent" is described as:

Is the pit immediately adjacent to the block				Note		
Pit	Block 1	Block 2	Block 3	Block 4	Block 5	
1	Yes	Yes	No	No	No	
2	No	Yes	Yes	No	No	
3	No	No	No	Yes	No	
4	No	No	No	No	No	Pit is greater than 1 metre from the front boundary of the block.

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SA Power Networks Service and Installation Rules

[Changes to SA Power Networks Service and Installation Rules for unprotected consumer mains ≤ 100A] cont...



Due to the space limitations within the P7 and P8 pits, the number of "fused" connections is limited. The connections options are displayed in the below diagram.





Electronic certificates of compliance

All gas fitters are obliged to complete and submit a gas electronic certificate of compliance (eCoC) for all gas installation work. The Gas Act 1997 requires an eCoC to be issued to the owner or operator of a gas installation within 30 days of completing the job.

The OTR receives new connection data from the network operator APA Group, this data provides the installation address, the gas contractor, builder, and the owners details. With this data we simply put the address into the eCoC system to verify if a gas eCoC has been submitted. Results so far are disappointing, showing approximately 40% of new installs are not receiving a gas eCoC.

Not only are gas workers required to submit eCoCs, but it is also an important document for owners for building insurance purposes, assuring the gas work is certified and safe for operation. The OTR will now target new installations where gas eCoCs have not been submitted. Section 56 (2) from the Act requires registered gas fitting workers who carry out work on a gas installation to ensure that the requirements of the regulations are met by submitting a gas eCoC to the owner or operator. Failure to comply may result in a fine; explation fee of \$315 + levy of \$99 = totalling \$414.

Spending 2 minutes on your mobile phone, laptop, or tablet submitting an eCoC could save you \$414, I know what I would do, I prefer my money in my pocket!

Please ensure you submit a gas eCoC after you have completed every gas installation job.

Installing freestanding commercial cookers

If you install freestanding commercial cookers, ensure compliance with the requirements of AS/NZS 5601.1:2022 **Clause 6.10.2.7 Connecting free-standing commercial cookers with a hose assembly**. These details were explained in Regulation Roundup 51 and include the following:

Appliance be designed and certified for hose assembly

- Only Class B or Class D hose assemblies to be used
- Hose installed in U shape configuration, similar to a domestic upright cooker installation

- · Both connection points to face downwards
- Hose restraint fitted, no longer than 80% of the hose assembly
- Stoppers installed to prevent the appliances from being pushed up against gas components and hoses
- With the appliance in the installed position, no part of the hose assembly is to be within 50mm of the ground or floor.



Compliant diagrammatical example for hose assembly connection for a commercial cooking appliance.



Non-compliant hose assembly connection - under cooker connection and hose laying on the ground.



Non-compliant hose assembly connection - hose laying on the ground.

[Are you fulfilling your responsibility when installing gas appliances?]

If a licensed gas contractor or worker installs additional or replacement gas equipment and/ or Type A appliances, and gas is connected to the premises, they must ensure installation is tested, purged, and equipment *commissioned* as per manufacturers' requirements and AS/ NZS5601 Standards.

Failure to commission appliances will not only result in failure to comply with your responsibility, but also has the potential to result in an unsafe operation of an appliance or equipment. Audits continue to identify failure to commission as a source of non-compliance. Returning to rectify non-compliance will cost you time, may damage your reputation, and cost you financially if issued with an expiation. AS/NZS5601.1:2022 Clause 6.11.4 provides the following direction *"Commissioning of appliances* shall only be performed after the installation of all equipment that may impact appliance operation (e.g. air movement and extraction systems). *Commissioning of appliances* shall take full account of the *manufacturer's instructions* and all aspects of the *gas installation* that may impact appliance operation." What does commissioning include? Find out by reviewing clause 6.11.4 and Appendix N in your copy of AS/NZS5601.1:2022.

Commissioning of gas equipment isn't limited to appliances. When installing specific gas equipment this too needs to be commissioned. Regulators (whether 2-stage integral or appliance regulators) and over-pressure protection devices (OPP) need setting up and commissioning (see image below). Pressure Proving Systems are now mandated in applications such as school laboratories (clause 5.2.9.1) and in certain instances when installing multilayer pipe (clause 5.2.11), as well as commercial kitchens (clause 5.2.9.2). It can't be assumed that these are 'factory set', they need to be commissioned and tested in the field, otherwise, in the event of activation, the integrity of the installation and safety of the premises could well be at risk.



Regulator with OPSO.

Pressure proving with emergency stop.



Changes for general installations

The OTR, on numerous occasions, has made registered contractors and workers aware of the newest Gas Installations Standard (AS/NZS 5601.1) released in Oct 2022.

A grace period of six months was allowed for contractors and workers to gain access to the new standard and get themselves up to speed with these changes.

This grace period expired as of the 31 March of this year, and we have now begun enforcing these changes.

It has been impressive to see that some contractors and workers have adapted and are implementing the new changes, but we have also seen others who have not.

A few notable changes that we have come across for domestic situations that you may not have been aware of are:

Isolation for flexible hose assemblies

When installing a gas appliance with a gas flexible hose, you will now need to install an isolation (shut off) valve, unless it is stated in the manufacturers instruction that this is not required. The valve is required to be in an accessible position. Clause 5.9.6 Hose assembly connecting an appliance (part a) covers the new change. Although it is not required when using a solid connection (copper) for single residential buildings, we do recommend it for emergency and maintenance reasons.





Isolation valve fitted for hotplate using a hose assembly (note test point and regulator adjustment accessible).

Recommended isolation valves fitted for cookers with hard pipe connections in single residential buildings.

Rangehood requirements

The new requirements for new installations (new homes and building extensions) and new kitchen installs (kitchen renovations in existing homes) state the required clearance between a gas cooking appliance and a rangehood shall be in accordance with the appliance manufacturer's instruction. Where that clearance is not specified, the minimum clearance is required to be 650mm measured from the trivets to the rangehood (750mm if an exhaust fan is fitted). If the manufacturer requires a greater clearance, that greater clearance must be abided by.

When replacing cooking appliances in existing kitchens built prior to the adaptation of the new standard, the required clearance between a gas cooking appliance and a rangehood shall be in accordance with the appliance manufacturers instruction. Where that clearance is not specified, the minimum clearance is required to be no less than 600mm measured from the highest burner on the appliance to the rangehood (750mm if an exhaust fan is fitted). Please note if the replacement cooking appliance manufacturer requires a clearance greater than 600mm, that greater clearance must be abided by. These requirements are covered in Clause 6.10.1.1 Clearance around a gas cooking appliance.

Composite piping (multilayer piping)

When installing composite pipe as part of a gas service, it is now a requirement that metallic pipe is to be used within the last 1m to the nearest part of the appliance. This is to prevent heat transfer from the appliance causing damage to the pipe. For example, if a dropper is running down a cavity, it must transition to a metallic pipe at least 1m from the appliance. Simply put, there is now an exclusion zone of 1 metre around gas appliances from composite gas pipework. For appliance connection points, we recommend running a galvanised steel or copper dropper from the ceiling cavity down to the appliance connection point.



Recommended metallic dropper from the ceiling cavity to the appliance connection point.

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Changes for general installations cont...



Composite piping (multilayer piping) continued...

Composite piping is no longer allowed to be used externally above ground; all consumer piping external to the building must be metallic and must extend at least 1m inside the building before transitioning into composite piping. From a gas meter box, the metallic pipework must extend at least 1m inside the cavity.



Excess Flow Valves

One of the standout changes to the standard is in relation to installing an Excess Flow Valve when multilayer pipe has been used in residential Class 1a buildings. We have previously covered this change, and as of the 30th of June we have begun enforcing clause 5.2.11. Information regarding provision of fire emergency isolation for multilayer pipe in residential Class 1a buildings can be accessed by clicking on the link:

Provision of fire emergency isolation

Finally

By following these few changes and any others in AS/NZS5601.1-2022 that you have found while reading your new copy of the standard, you can be sure your installations are compliant, and you will not have to return to the job.

The use of quick connect devices on caravans

Since the publication of the AS/NZS5601.2–2010 LP Gas installations in caravans and boats for non-propulsive purposes on the 23rd of December 2010, it has been a requirement for all appliances installed in caravans and boats (including commercial catering vans and trailers) to be fitted with flame safeguard systems to all burners.

This 2010 standard was replaced with the new AS/NZS5601.2– 2020 LP Gas installations in caravans and boats for nonpropulsive purposes, published on the 1st of October 2020. This current standard also requires all appliances to be fitted with flame safeguard systems to all burners, with an addition now including all appliances connecting to quick connect devices. This means appliances connecting to a quick connect device (including barbeques) are required to have flame safeguards to all burners.

If a caravan was manufactured prior to the publication of the new AS/NZS5601.2:2020 standard, and the owner decides to engage a gas fitter to install a quick connect device after the publication of the standard, appliances (new or old) connecting to that quick connect device are required to have flame safeguards to all burners.



Quick connect device located external of a caravan, note dust cap fitted.

Immediately Dangerous reports

The OTR often receive eCoC Immediately Dangerous Reports (IDRs) from gas fitters performing gas fitting work. Once an IDR eCoC is submitted, our office receives a notification, this is so we can follow up with the situation. An OTR inspector will contact the gas fitter who has submitted the IDR for background information on what prompted this action, the inspector will then follow up with the customer explaining their responsibility under Section 55 from the *Gas Act 1997*.

Most IDRs we receive from gas fitters turn out to be unwarranted, this is because the immediately dangerous situation has been safely dealt with by the gas fitter. For instance, a gas fitter has identified a gas leak, after discussion with the owner the gas fitter has capped off the gas service and made safe. There no longer is a danger as the hazard has been mitigated. All the gas fitter needs to do is submit a regular eCoC, and note that the service has been capped off due to a leak. Remember, if you are capping a service or an appliance off, you are required to add a danger tag with your details.

In other situations, following discussions with the homeowner, where they instruct you to leave and you are unable to make the installation safe, the hazard has not been mitigated. This is where you would submit an IDR eCoC. If you feel the need to call the OTR due to the severity of the IDR, then please do so as we may not receive the notification until the next day (depending on when you submit the eCoC). You can even call the out of hours **emergency** number if you deem the situation extremely dangerous. The out of hours number is as follows – 1800 558 811.

Owners have an obligation to ensure their gas installation is safe, Section 55 of *The Gas Act 1997* explains their responsibility:

Part 5—Safety and technical issues

55—Responsibility of owner or operator of infrastructure or installation

- (1) A person who owns or operates gas infrastructure must take reasonable steps to ensure that—
 - (a) the infrastructure complies with, and is operated in accordance with, technical and safety requirements imposed under the regulations; and
 - (b) the infrastructure is safe and safely operated.

Maximum penalty: \$250,000

(2) For the purpose of ensuring under this section that a gas installation complies with the technical and safety requirements, a person may, subject to the regulations, rely on a certificate of compliance issued under this Division in relation to the installation.

Wrapping piping

When using galvanised steel as a standpipe for your meter connection, we cannot stress enough the importance of wrapping the leg to protect it from corrosion. You may think the pipe is protected due to its galvanised coating, but where the pipe is threaded isn't. Not only does the galvanized protection get cut away when threading, you reduce the core thickness of the pipe leaving it susceptible to premature failure. The image below shows a meter installation with a galvanised steel standpipe, which has been in the ground for less than 2 years. There is no wrapping present and corrosion has set in. Table 4.2 of AS/NZS5601.1:2022 explains the requirements around piping, fittings and jointing for various materials.

	Table 4.2 - Consumer piping materials (continued)					
Operating	Pipe		Fittings		Jointing	
limit, kPa	Pipe	Limiting conditions	Fitting	Limiting conditions	Method	Limiting conditions
100	Galvanized	Not permitted in the ground beneath a building	Up to 7 kPa,	Fitting shall be	Taper external	Up to 7 kPa, maximum
	steel		malleable cast	galvanized	and parallel	permissible size is DN
	conforming		iron fitting		internal threads	100
	to AS 1074		conforming to		conforming to AS	
			ISO 49		ISO 7.1	Over 7 kPa, maximum
	Medium					permissible size is DN
	grade		Over 7 kPa			80
			wrought steel			
	Screwed		fitting			External corrosion
	ends or plain		conforming to			protection of bare
	ends		EN 10241			threads is required
						where installed in the
						ground



It also important to note that Polyethalene (PE) pipe shall terminate horizon tally in the ground at least 300mm deep. If a PE elbow is welded onto the PE pipe for a metallic stand pipe, then this would be deemed non-compliant as the elbow that forms part of the installation is actually terminated vertically. You can use a PE socket with a brass transition thread to a metallic elbow, or the preferred method of at least 1 metre of horizontal copper pipe with a 90° bend. If there is movement in the ground, this method with help prevent stress fractures forming.

See right >

Gas trades website

For information on compliance, reporting, approvals, audits, standards as well as contacting OTR's Gas Installation and Appliance Safety team, please visit our gas trades website:

Gas trades | Energy & Mining (energymining.sa.gov.au)



PE pipe transition to metallic riser 1 metre back from riser to give support. Piece of PE on upstand.





Backflow prevention Requirements – 2023 Update

Since the publication and adoption of the 2019 Plumbing Code of Australia (PCA), backflow requirements are no longer found in AS/NZS 3500.1

When determining the required backflow for the containment, Zone or individual device plumbers need to check in the PCA under **Specification 41**, which is free and available online.

(Note: The PCA also contains all State and Territory plumbing variations)

https://ncc.abcb.gov.au/system/files/ncc/ncc2022-volumethree-20230501.pdf

Backflow requirements at the water meter

Our office has witnessed an increased amount of noncompliant connections during construction of new properties. The PCA calls for a minimum low hazard containment backflow prevention device on a class one building under Specification 41. Failure to install a low hazard containment device poses an increased backflow risk and potentially contaminating the drinking water utility network.

SA Water allows for the temporary connection to the water supply without a water meter, but a backflow prevention device is still required. If this device has not been provided plumbers need to install a backflow prevention containment device suitable for the building classification and use. Most new homes will require a low hazard device at the boundary such as a dual check non-testable device.

Containment protection in the 2022 PCA has been simplified and in most cases determines the requirements according to the class of building.

Specification 41

The following are **Low Hazard** for the purpose of containment protection:

 A water service provided to a Class 1, Class 2, Class 7a or Class 10 building where –

(i) not more than 12 persons reside; and

(ii) the building may only use non-commercial amounts of cleaning products.

- b. Premises served by a rainwater harvesting system, not including any rainwater storage tanks that are buried tanks.
- c. A water service where there are no non-drinking water services within the property.

The following are **Medium Hazard** for the purpose of containment protection:

- a. A water service provided to a Class 3, Class 4, Class 5, Class 6 or Class 7b building where chemicals are not stored.
- b. A water service provided to a property that has -

(i) other non-drinking water services; or

(ii) a separate fire water service. (3)

The following are **High Hazard** for the purpose of containment protection:

- a. A water service provided to a Class 7b building where chemicals may be stored.
- b. A water service provided to a Class 8 or Class 9 building.
- c. A water service provided to a property used for commercial agriculture, farming, turf irrigation, industrial, processing, or chemical industries. (d) A water service provided to a property that has non-drinking water services from multiple sources with potential for health-related contamination



Backflow prevention Requirements - 2023 Update cont...



Figure 1: Non-Compliant connection to water connection no backflow installed.

Do I need to install backflow on a class 1 dwelling now?

SA WATER in conjunction with the OTR have determined that water meters with integral dual check valves (As shown in Figure 3) meet the backflow requirements of AS2845.1:2010 so no additional backflow is required. However, some older water meters do not contain an integral dual check, in this instance the meter must be upgraded by SA WATER or a backflow device must be installed downstream suitable to the building classification.



Figure 2: SA WATER supplied low hazard backflow device suitable for temporary connection.



Figure 3: Water meter installed contains an integral low hazard backflow device.

Office of the Technical Regulator

Backflow prevention containment protection

Plumbing Advisory Note Revised July 2023

Containment protection must be provided at the property boundary to protect the network utility operator's water supply. No branches are to be taken between the network utility operator's connection or water meter and the Backflow Prevention Containment Device.

Where a site is served by a Network Utility Operator's drinking water supply, appropriate containment protection must be selected by using Specification 41 in the Plumbing Code of Australia (PCA) and installed in accordance with Section 4 of AS/NZS 3550.1 – Table 4.4.1 Suitability of devices.

Understanding the NCC – Building classifications

The National Construction Code (NCC) sets out the minimum technical requirements for new buildings (and new building work in existing buildings) in Australia.

In doing so, it groups buildings by their use. These groups are assigned a classification which is then how buildings are referred to throughout the NCC. This information is crucial for all NCC users.

More information about building classifications can be found on the <u>Australian Buildings Codes Board</u> website

Legislative requirements

The National Construction Code Series -Volume Three, Plumbing Code of Australia (PCA) sets out the cross-connection hazards and corresponding Hazard Ratings in Specification 41.

This specification only prescribes Hazard Ratings for a limited list of known hazards. It does not cover every potential crossconnection that may arise from time to time.

Where a situation arises which is not listed in this specification, the appropriate Hazard Rating may be determined as a Performance Solution, such as a Performance Solution developed using Verification Method B5V1.



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Continued over page...

Containment protection

(1) The following are Low Hazard for the purpose of containment protection:

(a) A water service provided to a Class 1, Class 2, Class 7a or Class 10 building where - (i) not more than 12 persons reside; and (ii) the building may only use noncommercial amounts of cleaning products.

(b) Premises served by a rainwater harvesting system, not including any rainwater storage tanks that are buried tanks.

(c) A water service where there are no non-drinking water services within the property.

Exemptions - Clause (1)(c) does not apply to a nondrinking water service provided to the property by a Network Utility Operator (1) as part of a dual water supply.



Low Hazard – Dual-check valve (DUAL CV)

(2) The following are Medium Hazard for the purpose of containment protection:

(a) A water service provided to a Class 3, Class 4, Class 5, Class 6 or Class 7b building where chemicals are not stored.

(b) A water service provided to a property that has - (i) other non-drinking water services; or (ii) a separate fire water service.

Exemptions - Clause (2)(b)(i) does not apply to a nondrinking water service provided to the property by a Network Utility Operator.



Medium Hazard – Double-check valve (DCV)

(3) The following are High Hazard for the purpose of containment protection:

(a) A water service provided to a Class 7b building where chemicals may be stored

(b) A water service provided to a Class 8 or Class 9 building

(c) A water service provided to a property used for commercial agriculture, farming, turf irrigation, industrial, (c) processing or chemical industries.

(d) A water service provided to a property that has non-drinking water services from multiple sources with potential (d) for health-related contamination.



High Hazard – Reduced pressure zone device (RPZD)

Class 1a domestic dwellings

Class 1a buildings (domestic dwellings) require a minimum low hazard containment device.

Water meters supplied and installed by the water entity (SA WATER) may contain an integral dual check valve (Dual CV) that has been tested and conforms to the backflow product standard (AS2845.1). This means that when no other hazards exist on the premises no additional backflow is required.

Plumbers must confirm that the water meter installed does contain the integral Dual CV. If not, a low hazard device must be installed immediately downstream of the water meter.

Contact the Office of the Technical Regulator for more information

Online otr.sa.gov.au Email otrplumbenquiries@sa.gov.au Phone 1300 760 311



Plumbing practitioners and designers are often still unsure on when they need to upgrade from a Single Check Valve Testable (SCVT) to a Double Check Valve Testable (DCV) on a fire service. The information provided below will hopefully clarify these requirements.

Explanatory Information

1. A fire-fighting water service is considered to be a low hazard if:

- it has a direct connection to the network utility operators drinking water supply. This is commonly referred to as a dedicated fire main that has its own independent connection to the network utility operators drinking water supply and does not share the same supply connection as the dedicated on-site drinking water supply or any other water supply.

Other criteria to be considered as low hazard:

The fire-fighting water service -

- does not contain a tank. This is referring to a tank stored with water that comes from a source other than a dedicated fire main connection to the network utility operators drinking water supply.
- does not contain a reservoir. This is referring to examples such as but not limited to water sourced from a dam, reservoir, or other open water sources.
- does not contain a connection to another water supply. This is referring to an interconnection with any alternative water supply that comes from a source other than the dedicated fire main connection to the network utility operators drinking water supply. This could include but not limited to non-drinking water, rainwater, sea water, bore water, river water etc.
- does not contain antifreeze or other additives. This is referring to but not limited to chemical additives like foaming agents or anti-freeze additives.
- without a fire brigade booster connection from an auxiliary water supply. This is referring to water that is being drawn from a source other than a network utility operator drinking water supply which is then introduced into the fire service via a booster assembly.

Other fire services also considered to be low hazard:

- Domestic fire sprinkler systems installed in class 1 buildings.
- FPAA101D fire sprinkler systems.
- Firefighting water storage tanks are low hazard. This refers to firefighting water storage tanks that are fed via a dedicated fire main connection to the network utility operators drinking water supply.
- Wall drenchers connected to a dedicated fire service main.

Fire services that are not low hazard:

2. Any firefighting water service not referred to in (1) are Medium. This is referring to any fire service that is not listed as low hazard or does not meet the criteria to be deemed as low hazard within S41C7. (Specification 41 from the Plumbing Code of Australia 2022)

An example of this could be but not limited to a fire hydrant service that is pump fed via on site water storage tank(s) with water sourced from a shared-on site drinking water supply (plumbing installation) that is connected to the network utility operators drinking water supply. This type of fire service would be deemed as a **medium** hazard as it does not have a direct independent connection to the network utility operators drinking water supply so therefore does not meet the criteria of S41C7 (1). However, the site backflow prevention containment device requirement would need to be selected based on the criteria listed within S41C6 for the sites drinking water supply. This could also result in a medium or high classification for the purpose of individual, zone and containment device requirements depending on the nominated cross-connection hazards within the site itself and the site classification as listed within specification 41.



Wall Drenching sprinklers.

Wall drenchers maybe installed from the drinking water supply or connected to a fire service. Typically, they are a building requirement when windows or openings are close to boundary lines to prevent spread of fire to an adjoining property and maybe installed on properties without a dedicated fire system.

Wall wetting sprinkler connected to –	WaterMark material used	Non-WaterMark material used
dedicated firefighting water	Zone backflow not required*	Zone backflow not required*
drinking water	Low Hazard (zone)	Medium hazard (zone)

*Ensure sufficient containment backflow has been selected.

Another example of a medium hazard scenario is a wall drenching system that is fed via an on-site plumbing installation. In this example the wall drenching system does not have a direct connection to the network utility operators drinking water supply as it is fed via the on-site plumbing installation. This means that it shares a drinking water connection to the network utility operators drinking water supply. Therefore, as it is not listed within S41C7 (1) it is nominated as being a medium hazard. This scenario would require a medium hazard individual backflow prevention device for an individual water supply to a single drencher or medium hazard zone device for the branch offtake to a set of drenchers. The wall drenching system would be then considered as a fire service as it is separated from the plumbing installation via a testable backflow prevention device. However, if the wall drenching system is installed and certified by an appropriately licenced plumbing worker and or sprinkler fitter with WaterMarked materials used for its construction it could be reduced in hazard rating to low.

Fire hose reels:

Backflow prevention requirements for fire hose reels are determined by the hazards in which the hose reels can reach. The list of know hazards and their associated hazard ratings are within Specification 41 for the purpose of individual, zone and containment. Specification 41 should be referred to when determining the hazard rating, this could be low, medium, or high depending on the hazard that it is within reach.



[Can I Install it? - Bidet toilet seats]

With recent changes in the Plumbing Code of Australia (PCA) 2022 and backflow changes, the office has recently updated our plumbing advisory note on the installation of douche toilet seats and suites.

Most plumbers will be aware that up until recently a douche seat (smart toilet) needed to be installed with a high hazard backflow device to meet the requirements of the PCA. The biggest change is that now a backflow device can be integral or integrated into a plumbing device, this is a great outcome for consumers as they are not required to be annually tested while still maintaining safe quality drinking water.

This Advisory note is available below on our website.

Office of the Technical Regulator

Backflow requirements for bidet toilet seats and flexible hoses

Plumbing Advisory Note

Revised July 2023

The Office of Technical regulator (OTR) has revised this advisory note to reflect changes in the Plumbing Code of Australia and toilet seat bidet technology.

Specification 41 in the Plumbing Code of Australia (PCA) outlines cross-connection hazards and corresponding hazard ratings.

The PCA has determined a **"high hazard"** for the purpose of individual protection for:

(f) Bidets and toilet douche seats where the outlet in any position is not 25 mm above the overflow level of the pan.

(g) Bidets installed without a minimum 25 mm air gap

(h) Handheld bidet hoses and trigger sprays.

Note: For point (f) a high hazard backflow prevention device can be part of the toilet douche seat or installed separately.

Bidets with integral backflow

Compliant integral backflow

Currently there are two types of integral high hazard backflow devices that comply with the PCA 2022 without the requirement for an additional high hazard backflow device.

- 1. A bidet douche with an integral airgap that complies with *AS2845.2 Registered air gaps and registered break tanks.*
- A bidet douche that has an integral atmospheric vacuum breaker (AVB) tested to AS2845.1 as per WMTS-051.

Legislative requirements

The National Construction Code Series Volume Three, Plumbing Code of Australia (PCA) sets out the requirements for plumbing installations in Australia.

When you install a plumbing system that meets the requirements of **AS/NZS 3500** you are meeting the deemed to satisfy requirements in the PCA.

AS/NZS 3500.1 Water services details suitable backflow devices depending on the hazard rating of Low/Medium/High.

All Bidet douche seats, suites and bidet hoses must be WaterMark compliant and display the WaterMark Logo



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How do I know if my bidet has integral backflow?

You can search the WaterMark website (figure 1) for the licence of the bidet product, to determine if there is compliant integral backflow:

watermark.abcb.gov.au



Figure 1: The WaterMark website

Below is an example of a WaterMark licence with compliant integral backflow:

Certificate

000000

Model ID

11111111

Model Name Bidet douche

Brand Name Examplor

DtS Installation Yes

Categories

Water closet pan

Description

4.5/3L WH IN-WASH. **Includes air-gap assessed and found to comply with the requirements of a registered break tank of AS 2845.2.** Also includes Backflow Prevention device in accordance with AS2845.1. Includes integral bidet seat in compliance with WMTS 051.

Scope of Use

Pans intended for use with flushing cisterns and other flushing devices complying with AS 1172.2

If you are still unsure, please contact the OTR for clarification.

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Bidets without integral backflow

When installing a bidet douche suite, or seat without compliant integral backflow, a high hazard individual backflow device must be installed upstream of the bidet to comply with *AS/NZS 3500.1*.



Figure 2: Example of an individual backflow prevention device fitted upstream of a water connection point servicing a toilet seat bidet/douche or a flexible hose adjacent to a toilet.

Handheld bidet hoses and trigger sprays

When a bidet hose has been installed, a "high hazard" backflow device must be installed upstream for the purpose of individual protection. The backflow device must comply with *AS/NZS 2845.1* or *AS 2845.2* and be installed to the requirements of *AS/NZS 3500.1*.



Figure 3: Example of 20 mm reduced pressure zone (RPZ) device valve assemblies installed upstream of a flexi-spray outlet in a domestic setting.

Page 3 of 4

Bidettes

A bidette is a sanitary fixture equipped with a mixer tap over the bowl of the pan. Bidettes can be installed as an alternative to toilet seat douches and flexible hoses. The water outlet of all bidettes are at least 25mm above the overflow level of the fixture and does not require testable backflow devices to be fitted to the water supply to the fixture.



Figure 4: Example of a bidette with an outlet more than 25mm above the rim of the pan.

Testing and commissioning backflow prevention devices

All installations of backflow prevention devices must be tested and commissioned by a licensed plumber. Results must be recorded in the OTR's official 'Commission, inspection and maintenance' report.

All testable backflow prevention devices must also be tested annually by a licensed plumber and the results recorded in the OTR's official 'Commission, inspection and maintenance' report.

Reports must be completed and forwarded to the OTR within seven days of testing:

Email

otr.plumbbackflow@sa.gov.au

Post

Office of the Technical Regulator Plumbing Trades GPO Box 320 Adelaide SA 5001

Contact the Office of the Technical Regulator for more information

Online otr.sa.gov.au Email otr.plumbregulator@sa.gov.au Phone 1300 760 311



Flexible braided hoses

Braided flexible hoses pose one of the biggest risks to building owners, property managers and insurance companies with the possibility of flood damage due to bursts.

When installing flexible hoses, it's important to ensure they are WaterMarked and certified to *AS3499:2022 Water supply-flexible hose assemblies*. This standard requires that hoses are labelled depending on their required usage.

- H Flexible hoses for water application up to 90 degree C
- L Flexible hoses for water application up to 70 degrees C

Note: H are also suitable for cold water.

To prevent braided hose failures, it is crucial to adhere to the manufacturer's installation guidelines. Following these instructions is essential for ensuring the hoses' optimal performance and longevity. Most manufacturers explicitly advise against subjecting the hoses to stress, such as stretching, kinking, or twisting, as these actions can weaken the hose structure and lead to potential issues. Additionally, it is essential not to exert excessive force on the end fittings during installation to achieve a watertight seal. Applying unnecessary pressure can compromise the integrity of the fittings and cause leaks.

Furthermore, it's vital to avoid exposing the hoses to corrosive agents that could degrade the materials and weaken their overall durability. By avoiding contact with such substances, the braided hoses can maintain their effectiveness and reliability over time. Statistically, flexible hoses more commonly fail in the laundry area where they may be exposed to stored cleaning agents. It has always been a recommendation of braided hose manufactures to periodically inspect hoses and replace when showing signs or damage such as rust or after certain periods of time as recommended by each manufacturer.



Figure 1: Example of manufactures installation requirements for flexible hoses



Figure 2: Example of label from manufacturer

[Farewell: Reflecting on a Remarkable Plumbing Career]

In June the Office of the Technical regulator said farewell to Robert Beard. A remarkable individual whose contributions have left an indelible mark on plumbing in South Australia. After an illustrious 46-year career in the plumbing industry, Robert Beard, a name synonymous with plumbing in South Australia, has decided to hang up his boots and bid adieu to the professional world he has known so well.

Robert's journey began with the establishment of his own plumbing business, following seven years with SA Plumbing. For 19 years, he skilfully undertook plumbing projects for various small building companies, specialising in architectural designed homes and small commercial building development. Simultaneously, he ran a highly successful plumbing maintenance business catering to a select clientele.

In 2003, Robert's expertise caught the attention of SA Water, where he embarked on a new chapter as a plumbing inspector. His keen eye for detail and unparalleled knowledge soon earned him the role of Senior Plumbing Inspector. Alongside his colleague Keith Roberts, Robert took charge of complex plumbing audits, including significant projects such as the new Royal Adelaide Hospital and the Adelaide Airport.

In 2012, as the plumbing regulatory group transitioned from SA Water to the Office of the Technical Regulator (OTR), Robert seamlessly moved into the role of the inaugural Plumbing Regulation Manager. His expertise and experience played a pivotal role in ensuring a smooth transition, and he continued to be a driving force in upholding regulatory standards.

Reflecting on his illustrious plumbing career, Robert acknowledges the physical challenges he encountered early on as a badge of honour. However, it was his transition into a plumbing administrator that truly marked a period of growth and personal fulfilment. As a member of Australia's peak plumbing committee, the Plumbing Codes Committee, Robert actively contributed to shaping the national direction of the plumbing industry. His work on this esteemed committee further exemplified his commitment to excellence and his desire to leave a lasting impact.

As Robert embarks on this new chapter of his life, he expresses his deep gratitude for the opportunities he has been given throughout his career. He looks back on his journey with a sense of fulfilment, knowing that he has made a significant contribution to the plumbing industry. With pride, he will remember the hard work, the challenges overcome, and the moments of triumph that have defined his professional legacy.

While Robert may be bidding farewell to the plumbing industry, his impact and influence will remain. We express our heartfelt appreciation for his dedication, leadership, and the positive influence he has had on our organisation and the plumbing community. We wish him the very best as he embarks on a welldeserved retirement, confident in the knowledge that his legacy will endure for years to come.



Figure 1: From left Tom Ascroft (Standards Australia), Anne-Maree Campbell (Director WaterMark), Robert Beard, Tom Roberts (Director of Plumbing ABCB), Peter McLennan (Assistant Director Plumbing ABCB)

Some Important Changes to the Electricity and Gas Regulations commencing Monday 18 September 2023

- The definition of an "Electrical Installation" will include installations at public events and caravans. This change will class these as electrical installations rather than electrical equipment.
- Electricity meter changeovers now occur at the request of retailers and through metering installers. The changes to the regulations will reflect this. They will require metering installers to obtain Technical Regulator approval for their metering installation procedure, or to use one the Technical Regulator will publish.
- The recording of testing results will become a requirement on an electronic Certificate of Compliance.
- An electrical worker will need to provide an electronic Certificate of Compliance to certify an electrical installation prior to it being made available for energisation. The change will require this whether a person does work as an electrical worker for a contractor, or in any other circumstance.
- The changes will specify a yearly requirement for rescue and resuscitation training. The Technical Regulator has published this requirement in earlier editions of Regulation Roundup.
- The time frame for record keeping of tests of testing instruments will increase from 2 years to 5 years. The new 5 year requirement for record keeping will only apply to tests of testing instruments taking place after 18 September 2023.

 The Gas Regulations will now refer to the Australian Standard AS 4670 Commercial Propane and Commercial Butane for Heating Purposes as the relevant specifications for LPG.

Ground mounted solar farm maintenance

Fire danger season will be upon us before we know it, so it is timely to remind ground mounted solar farm operators and electricians to regularly inspect these assets, following the manufacturer's recommendations. Check whether plugs show any signs of corrosion or damage and manage vegetation underneath the panels.

Attention solar installers – Make sure you understand new requirements affecting new solar generation systems from 1 July 2023

The SA Government has introduced <u>Dynamic Export Requirements</u>, requiring most new and upgraded exporting solar generation systems to be capable of remotely updating their export limits.

Coinciding with these requirements, SA Power Networks has commenced the progressive rollout of the <u>Flexible</u> <u>Exports</u> connection option, which allows sites in eligible areas to export up to 10kW per phase. The offering is available in <u>37 suburbs</u>. The offering will be expanded to cover the state by mid-2024.

What you need to do

- Find out what solar export options are available for your customer in <u>SmartApply</u> or <u>Flexible Exports</u> <u>Eligibility Checker</u> using the customer's address or NMI.
- Ensure a system you're selling/ installing meets the Dynamic Export Requirements.
- Apply through <u>SmartApply</u> for instant approval then close out installation using <u>SmartInstall</u>.
- For Flexible Exports sites,
 - Register the system with SA Power Networks. Refer to inverter manufacturers' guides for the specific process for your inverter of choice.
 - Complete the onsite capability test within <u>SmartInstall</u>. You will be prompted to run a short test to confirm if the system is operating correctly. The capability test cannot be completed until the system has been registered.
 - A failed registration and capability test will result in the application being non-compliant and customer's export will be limited to 1.5kW per phase.
- Ensure compliance find out how these requirements affect your compliance rate <u>here</u>.

For more information

Check out <u>Installer Information</u> <u>for Flexible Exports</u> on SA Power Networks website Phone on 13 12 61 (during officer hours Monday – Friday from 9am to 5pm), or Email at <u>newenergyservices@</u> <u>sapowernetworks.com.au</u>

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List of Common Australian Standards

Australian Standard	Current Publication Date	Public comment / Open/ Closed		
ELECTRICAL STANDARDS				
AS/NZS 3000: 2018 + A1:2020 + A2:2021 + A3:2023	26/06/2018	New version published		
Wiring Rules	20/00/2018	New Version published		
AS/NZS 3001.1:2022				
(Caravan) Electrical Installations – Site supplies for Connectable electrical Installations	18/11/2022			
AS/NZS 3001.2:2022	18/11/2022			
(Caravan) Electrical Installations – Connectable electrical Installations	10/11/2022			
AS/NZS 3002:2021	25/06/2021			
Shows, Carnivals and Events	20,00,2021			
AS/NZS 3003:2018 + A1:2019	29/06/2019			
Patient Areas	27,00,2017			
AS/NZS 3004.1:2014	27/06/2014			
Marinas and Boats				
AS/NZS 3004.2:2014 + A1:2015	17/07/2015			
Boat Installations	17,07,2010			
AS/NZS 3008.1.1:2017	01/02/2017	Open to public comment		
Selection of Cables	0., 02, 20			
AS/NZS 3010:2017 + A1:2020	24/04/2020			
Electrical Installations–Generation Sets	, • ., _•==			
AS/NZS 3012: 2019 + Amend 1:2020	20/03/2020			
Electrical Installations–Construction and Demolition Sites				
AS/NZS 3017:2022	02/12/2022			
Electrical installations – Verification by inspection and testing	02, 12, 2022			
AS/NZS 3019:2022	09/09/2022			
Electrical installations – Periodic assessment	07,07,2022			
AS/NZS 4836:2023 Safe working on or near low-voltage and extra-low voltage electrical installations and equipment	03/03/2023	New version published		
		Currently under		
Grid connection of energy systems via Inverters	30/09/2016	revision		
AS/NZS 4777.2:2020 + A1:2021 Grid connection of energy systems via Inverters – Inverter requirements	01/10/2021			
AS/NZS 4836:2023				
Safe working on or near Low-Voltage and Extra Low-Voltage Installations & Equipment	03/03/2023	New version published		
AS/NZS 5033:2021	10/11/0001			
Installation Safety requirements for Photovoltaic (PV)arrays	19/11/2021			
AS/NZS 5139:2019		Currently under		
Electrical Installations – Safety of Battery systems for the use with power conversion equipment	11/10/2019	revision		
AS/NZS IEC 60479.1:2022	25/02/2022			
Effects of Current on the Human beings & Livestock: General	20/03/2022			
SAPN Service & Installation Rules	01/05/2023	New version published		

List of Common Australian Standards continued...



List of Common Australian Standards cont...

Australian Standard	Current Publication Date	Public comment / Open/Closed		
GAS STANDARDS				
AS/NZS 5601 Part 1	31/03/2023			
General Installations				
AS/NZS 500 Part 2 Amend 1 P Gas Installations in Caravans & Boats non-propulsive purposes	26/02/2021			
AS 4575				
Gas Appliances – Servicing Type A Appliances	09/08/2019			
AS 3814	25/10/2018			
Industrial & Commercial gas-fired appliances				
AS 1375	25/10/2013			
AS/N7S 4645 1				
Gas distribution networks – Network Management	28/02/2018			
AS/NZS 4645.2				
Gas distribution networks – Steel Pipe systems	28/02/2018			
AS/NZS 4645.3	20/02/2010			
Gas distribution networks – Plastic Pipe systems	28/02/2018			
AS/NZS 1596 Amend 2	01/10/2020			
The Storage & Handling of LP Gas				
AS 4041 Pressure Piping	18/11/2016			
PLUMBING STANDA	4803			
*Plumbing Code of Australia	February 2019	(adopted 1 May 2023)		
Plumbing Standard Issued by the Technical Regulator	20/11/2020	New Version 1 May 2023		
AS/NZS 3500 Plumbing and drainage Part 0-	14/05/0001			
Glossary of terms	14/05/2021			
AS/NZS 3500 Plumbing and drainage Part 1:				
Water services	28/05/2021			
AS/NZS 2500 Dlumbing and drainage Dart 2:				
	28/05/2021			
Sanitary plumbing and drainage				
AS/NZS 3500 Plumbing and drainage Part 4:	28/05/2021			
Heated water services				
AS/NZS 2845.2 Water supply- Backflow prevention devices	20/06/2010	Currently under review		
Part 2: Registered air gaps and break tanks	30/00/2010	ouncitity under review		
AS/NZS 2845.3 Water supply- Backflow prevention devices				
Part 3: Field testing and maintenance of testable devices	14/02/2020	Currently under review		
AS 2419.1 Fire hydrant installations				
Part 1: System design installation and commissioning	03/09/2021			
AS 2441 Installation of fire hose reals (incorporating amendment 1)	May 2000	Reconfirmed 2018		
EDA A 101D Automotio Fire Operiodes Quede D alter alte	ividy 2009			
FPAA101D Automatic Fire Sprinkler System Design and Installation - Drinking Water Supply	December 2021			

At Standards Australia you can view the draft with latest comments and provide your feedback here: https://comment.standards.org.au/.

[Contact List]

Electrical Technical Advice

Office of the Technical Regulator Level 8, 11 Waymouth Street, Adelaide (Reception on Level 4) Phone: (08) 8226 5518 (8:00am-4:30pm) Fax: (08) 8226 5529 Email: otrmail@sa.gov.au

Gas Technical Advice

Office of the Technical Regulator Level 8, 11 Waymouth Street, Adelaide (Reception on Level 4) Phone: (08) 8226 5722 (8:30am-4:30pm) Fax: (08) 8226 5866 Email: otr@sa.gov.au

Plumbing Technical Advice

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

eCoC Team

Department for Energy and Mining Phone: 8429 3394 Email: otr.ecoc@sa.gov.au

General Information

Licence and Address Change **Consumer & Business Services** Phone: 131 882 Email: occupational@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 213 Greenhill Road, Eastwood SA 5063 (PO Box 145, Fullarton SA 5063) Phone: (08) 8292 4000 Fax: (08) 8292 4040

Gas Services SA

2/16 Staite St, Wingfield Phone: 1300 139 093 Fax: (08) 8162 5638

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

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 5667

SA Power Networks

General Enguiries: 13 12 61 Faults and emergencies including shocks: 13 13 66 Email: customer.service@ sapowernetworks.com.au

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)

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 hours / 7 days

(South Australia 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 Gas Distribution Network 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

Gas Energy Australia (formerly ALPGA) gasenergyaustralia.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

Australian Standards https://infostore.saiglobal.com/store/

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