

# energy

## Bulletin

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## Warning to Electrical Contractors

On 16 August 2013, the Australian Competition & Consumer Commission (ACCC) announced a voluntary recall by Infinity Cable Co Pty Ltd of three batches of Infinity brand thermoplastic sheathed electric cable – commonly known as TPS. Those were batches numbered INFH 190311, INFH 210912 and INF MEL 081112.

The reason behind the recall was because testing by Fair Trading NSW found “the plastic coating insulation on the cable can become brittle when exposed to high temperatures over time”. The recall notice mentioned that the cable has been sold at Masters Home Improvement from April 2012 to August 2013.

Go to [www.recalls.gov.au](http://www.recalls.gov.au) for a copy of the recall notice.

Since then, further testing of other samples from the supplier has been initiated by Fair Trading NSW. Test results found deficiencies in the manufacturing process of the cables.

As a result, in late September 2013, Infinity was notified of the growing concern about all of its flat TPS and orange round electrical cable and the possibility of a wider recall was discussed. However, on 27 September 2013, the company went into Administration.

In the absence of a formal recall, the Director of Energy Safety has issued a “stop sale notice” on:

- **All TPS** cable imported and sold by Infinity Cable Co Pty Ltd – All sizes and configurations of polymeric insulated electrical cable that is PVC sheathed, PVC insulated, flat and flexible low voltage electrical cable also commonly known as TPS; and
- **All orange round cable** imported and sold by Infinity Cable Co Pty Ltd – All sizes and configurations of polymeric insulated electrical cable that is PVC sheathed, PVC insulated, round and flexible low voltage electrical cable’ also commonly known as “orange round”.

**Electrical contractors are formally warned not to purchase or install Infinity branded TPS or “orange round” electrical cable.** All TPS and orange round cable sold by Infinity Cable Co Pty Ltd are branded with the words ‘Infinity’.

Unused Infinity cables should be returned to the place of purchase and none of the TPS or orange round cabling should be used by electrical contractors in doing electrical installation work.



KEN BOWRON  
DIRECTOR OF ENERGY SAFETY

# EnergySafety



## Reporting a lost or stolen electrical or gas licence/permit

If you have misplaced your electrical or gas licence or permit, it is important that you immediately notify EnergySafety and apply for a replacement by submitting a Declaration of Lost or Stolen Electrical Worker's Licence or Gasfitting Permit form to our Licensing Office. These forms can be downloaded from our website [www.energysafety.wa.gov.au](http://www.energysafety.wa.gov.au).

To support your application, you will need to briefly explain the circumstances surrounding the loss, as well as providing proof of identification and an application fee of \$25.

## Licence recognition in other states

Individuals registered to work in one state or territory are entitled to have their licence or permit recognised by another state or territory for an equivalent licence in that state or territory. This is known as mutual recognition.

Through the licence recognition website <http://www.licencerecognition.gov.au> individuals in the electrical industry can look up their licence entitlement for another state or territory based on their current licence by following these simple four steps:

The website also contains information on the relevant authority to contact when applying for a licence.

There may be some instances when a result of "no equivalent licence" is yielded. In such instances, individuals can apply for an individual assessment.

Mutual recognition will be in effect until the National Occupational Licensing Scheme is implemented. Further information on the development of a national licensing system is available at [www.nola.gov.au](http://www.nola.gov.au).

### Equivalent Licence Search



- Step 1:** Select the state or territory in which the licence was issued
- Step 2:** Select Occupation
- Step 3:** Select Licence currently held
- Step 4:** Select the state or territory in which you want to find the equivalent licence

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#### For enquiries:

Editor: Cathy Gildersleeve

Phone: 08 9422 5208

Fax: 08 9422 5244

Email: [cgildersleeve@commerce.wa.gov.au](mailto:cgildersleeve@commerce.wa.gov.au)

Internet: [www.energysafety.wa.gov.au](http://www.energysafety.wa.gov.au)

# electrical focus

## Update on the WAER review

As mentioned in the July 2013 edition of the "Energy Bulletin" (Electrical Focus No. 63), a comprehensive review of the Western Australian Electrical Requirements is underway. The closing date for submissions was 14 October 2013.

EnergySafety is conducting an initial assessment of submissions. An industry based committee has been set up to assist EnergySafety with any contentious issues.

The WAER industry working group consists of the following members:

- Peter Mattner – EnergySafety (Chairperson)
- Justin Murphy – Horizon Power
- Robert Rogerson – Western Power
- Shane Balch – Rio Tinto Iron Ore
- Jamie Reinhardt – BHP Billiton Iron Ore
- David Harrison – BHP Billiton Nickel
- Wayne Polmear – National Electrical and Communication Association (NECA)
- Anthony Mancini – Master Electricians Association (MEA)
- Peter Willis – Engineers Australia
- Craig Gianoli – Norman Disney & Young
- Chris Kirwin – WorkSafe

## Western Power fined \$35,000 for connecting an unsafe installation to the electricity supply

On 14 August 2013, Western Power pleaded guilty and was convicted and fined \$35,000 plus court costs of \$656.15, for connecting the electricity supply to a group of seven residential units in Bentley which caused the units to become unsafe.

As part of its Strategic Underground Power Project, Western Power engaged a contractor to replace the existing 415 volt ac overhead electricity supply to the premises with an underground supply. The work also involved the replacement of an existing mini-connection pillar with a larger universal connection pillar.

The site had distributed master metering arrangements. The seven residences were supplied from a main switchboard containing the service meters for each of the seven units.

After completion of the work, the contractor completed Western Power's "Service Connection Test Form", certified that all required tests had been carried out and that the service connection was safe and correctly connected to the network.

On completion of the testing, one of the contractor's workers failed to reconnect the line-neutral conductor at the main neutral link in the main switchboard before he turned on the electricity supply at the main switch. He only checked that the house services meter rotation was correct and left the site, leaving the installation unsafe.

The failure to terminate the line-neutral conductor at the main neutral link was discovered later in the evening after some of the residents at the property contacted Western Power to complain of dim lighting and problems with electrical appliances not working.

The "Service Connection Test Form" provided to the contractor, at the time of the incident, was not suitable for use for supplies to a distributed master metering system. Sections 10 and 20 of the form referred to the disconnection and reconnection of the load neutral conductor at the kWh meter connection terminal for testing purposes. The form was only suitable for installations featuring a single kWh meter.

Towards the end of 2011, Western Power introduced a "Service Connection Test Form" specifically for multiple master meter and distributed master meter installations. It also incorporates the disconnection and reconnection of the line neutral conductor from the main neutral link at the site main switchboard for testing purposes.

## Tougher enforcement measures for penalty evaders

An amendment to the *Electricity Act 1945* gazetted on 20 August 2013, has given the Fines Enforcement Registry greater powers for dealing with recipients of Infringement Notices who do not pay the modified penalty within twenty eight days.

The new changes under the *Fines, Penalties and Infringement Notices Enforcement Act 1994* will allow greater enforcement action when an Infringement Notice fine is not paid, including:

- the suspension of the offender's driver's licence.
- the suspension or cancellation of the offender's vehicle licence.
- the details of the offence may be published on a website.
- the offender's vehicle may be immobilised or have its number plates removed and property may be seized and sold.

## EnergySafety welcomes two new senior electrical inspectors

EnergySafety's recruitment campaign saw an encouraging number of applicants who were seeking a career change. Suitable applicants were interviewed and two were recently offered positions with EnergySafety.

EnergySafety is pleased to welcome our metropolitan-based Senior Electrical Inspector, Matthew Peacock and our regional Geraldton Senior Electrical Inspector, Matthew Abbott.

Matthew Abbott has been involved in construction and maintenance across domestic, commercial and

mining industries, including fly-in-fly-out and drive-in-drive-out work to remote mine sites and communities in the Geraldton region. He was previously an owner/operator of an electrical contracting business in Geraldton for five years. Matthew is looking forward to his new role.

Matthew Peacock has worked in many areas of the electrical industry, such as underground mines, manufacturing and industrial and commercial installations. He has spent the last five years in a Project Management role where he completed projects, with a train refuelling station being his most recent. Matthew now looks forward to an exciting and challenging role with EnergySafety.

Recruitment within the Electricity Compliance Directorate (Cannington, Bunbury or Kalgoorlie) runs until 26 November 2013.

Please refer to the Department of Commerce webpage [www.commerce.wa.gov.au/jobs](http://www.commerce.wa.gov.au/jobs) for further details on the role. Applicants are encouraged to apply online.

For more details, please contact Peter Johnston, Chief Electrical Inspector Utilisation for a confidential discussion on (08) 9422 5274.

## A reminder for electrical contractors carrying out work on Rottnest Island

Electrical contractors carrying out notifiable electrical installing work on the island are required to submit Preliminary Notices and Notices of Completion to EnergySafety. **The "Notices" must not be submitted to the Rottnest Island Authority.**

Recent inspections of the island revealed that some electrical contractors who had carried out work on the island had failed to submit "Notices" to EnergySafety. Several cases of substandard work were also discovered. EnergySafety inspectors are investigating these breaches.

Electrical contractors carrying out notifiable electrical work on the Island must submit "Notices" to EnergySafety by:

- Mail – send to EnergySafety  
Electricity Compliance  
Directorate  
PO Box 135  
CANNINGTON WA 6987; or
- Fax – (08) 9422 5262



Photograph: Exposed cables discovered at an electrical installation on Rottnest.

## \$20,000 fine for submitting a notice for unsafe electrical work

On 13 August 2013, electrical contractor McGlasson Pty Ltd T/As McGlasson's Electrical Refrigeration pleaded guilty to submitting a Notice of Completion to Western Power for unsafe electrical installing work carried out in Furnissdale. The electrical work included:

- a metal combination meter/switchboard enclosure at the front boundary of the property;
- the replacement of the existing overhead supply conductors with a new underground consumers mains; and
- the relocation of the permanent meter position to the new meter/switchboard enclosure at the front boundary of the property.

Upon inspection of the work, a Western Power Inspector identified that a multiple earthed neutral (MEN) connection had not been made at the main switchboard and that the switchboard enclosure was not effectively earthed. This left the installation in an unsafe condition.

The contractor was convicted and fined \$20,000 with court costs of \$998.80.

## EnergySafety's 2013 Electrical Installation Inspectors' Conference

EnergySafety's Electricity Compliance Directorate hosted the annual Installation Inspectors' Conference on 23 July 2013. The conference provided designated electrical inspectors and key operational staff involved in electrical inspection activities with updated information affecting their daily activities. Topics presented in this year's conference included amendments to Standards and Acts,

major incident awareness, industry trends and technical presentations.

One hundred and five inspectors and operational staff from BHP Billiton, Horizon Power, Indian Ocean Territories, Rio Tinto Iron Ore, Western Power, the Public Transport Authority, Chevron, the Department of Mines and Petroleum, Department of Commerce – WorkSafe and State Solicitor's Office were represented.

The Conference was well received and the feedback from attendees was very positive.



*Presentation by Senior Electrical Commissioning Engineer from Chevron, Anil Pandya*



*Assistant State Solicitor Lisa Eddy from the State Solicitor's Office*



A non-conforming 240v lead.

## Be on the lookout for non-conforming electrical appliances

Electrical contractors are reminded to be vigilant and look for approval markings when installing electrical appliances/equipment purchased from overseas suppliers. Often these products are purchased by consumers from websites such as e-Bay.

EnergySafety compliance inspections have found an influx of non-conforming electrical products entering the Western Australian market; products which are not approved and do not meet the relevant Australian/New Zealand standards (AS/NZS).

Recently, an electronics store was found to be selling imported non-conforming items including 240V leads with moulded plugs, 240V adaptors, strip lights, decorative table lamps, power boards and cord-line switches.

Inspection of the items confirmed they were likely to be unsafe or dangerous in use. An Infringement Notice and a Prohibition Notice were issued to the store to prohibit the sale, hiring, advertising for sale or use of these products.

Many imported appliances have been tested to the standards applicable in their country of origin. Often these standards are similar to those in Australia and when differences are identified between the Australian and international standards, importers must have the products tested to the AS/NZS standards.

Prescribed items require a Certificate of Approval issued before they can be sold in Australia. The testing of appliances for this certification is conducted by an Australian testing laboratory recognised by the National Association of Testing Authorities, the Joint Accreditation Scheme of Australia and New Zealand or by the IECEE (International Commission for Conformity Testing of Electrical Equipment) CB (Certification Body) Scheme.

In Western Australia, importers must contact a designated approval agency before engaging a laboratory for appliance testing to ensure the laboratory can carry out the tests required. A list of designated approval agencies can be found in EnergySafety's brochure "Electrical appliances

and equipment – Importing, selling or hiring" available on our website [www.energysafety.wa.gov.au](http://www.energysafety.wa.gov.au).

Importers selling or hiring electrical appliances or equipment which are not prescribed, do not require formal certification. However, they are responsible under common law for ensuring such items are electrically safe to be connected to the electricity supply. This assurance can be obtained by a report from an independent testing laboratory which confirms compliance with the relevant Australian/New Zealand standards for electrical safety. The report can be shown to a prospective buyer as evidence of compliance.

Electrical contractors must conduct visual checks before installing such products to ensure they comply with the relevant AS/NZS and report any non-complying electrical equipment or appliances to EnergySafety.

## Notifiable electrical work on marine vessels

EnergySafety continues to receive queries from electrical contractors about electrical installations on marine vessels operating in the coastal waters of Western Australia.

Boat owners and those working in the marine industry have an obligation to ensure the condition of recreational marine craft complies with Australian safety requirements. This safety obligation includes all electrical work (including maintenance and repairs) on the marine craft, which may only be performed by a licensed electrical contractor.

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Electrical contractors firstly must ensure that all electrical installing work complies with AS/NZS 3000:2007 "Wiring Rules", which also applies to electrical installations on imported boats. AS/NZS 3000:2007 offers the option of a Part 1: Design and Installation Solution, being Clause 1.9.4.1 for an installation. This solution may be applied to naval and commercial vessels if the electrical installing work is notifiable, the Notice is required to be submitted to the relevant network operator (Western Power or Horizon Power) supplying power to the site (eg marina, shipyard, dock, wharf) where the electrical work was carried out.

EnergySafety is the relevant network operator in instances when the correct network operator cannot be identified. If the vessel is at sea within coastal waters or incorporates a stand-alone power system with no on-board shore connection facilities, Notices shall be delivered to EnergySafety. Electrical work carried out beyond coastal waters is not subject to legislation administered by EnergySafety.

For low voltage installations, electrical contractors can seek additional guidance from AS/NZS 3004.2:2008 "Electrical installations – Marina and Recreational Boats Part 2: Recreational boats installations". Part 1 deals with electrical installations for marinas. Part 2 is more comprehensive, providing extensive guidance for the design, installation and authentication of on-board installations.

This standard is relevant for recreational boats that have:

- a length of up to 50m.
- been specifically designed for use on inland water or at sea.

- direct current systems which operate at a nominal voltage not exceeding 1,500 volts.
- single-phase alternating current systems that operate at levels not exceeding 1,000 volts.
- three-phase alternating current systems operating at levels not exceeding 1,000 volts.

It is not applicable for small boats equipped with a battery supplying power to circuits for starting engines, communication equipment and navigational lighting where the battery is recharged from an inboard or outboard engine-driven alternator.

If a person or agent is selling an imported recreational boat, they must ensure the electrical equipment on board (ie prescribed items such as circuit breakers, switches, refrigerators and microwave ovens operating at low voltage) complies with Western Australian legislation.

If you require further information about the standards applicable, please contact the Electricity Compliance Directorate on 9422 5261.

## **Q & A with Sarah Jayne Flatters – recipient of the 2013 EnergySafety Apprentice Award**

EnergySafety would like to congratulate the recipient of the 2013 EnergySafety Apprentice of the Year award, Sarah Jayne Flatters, pictured on the next page with Minister for Commerce, Hon. Michael Mischin. The award was presented at NECA WA's annual industry Excellence Awards night held on 20 September

2013. NECA's Excellence Awards honours those working in the electrical and communications industry who have demonstrated work practices of an excellent standard throughout the year.

**After winning this award, Sarah was interviewed for the Energy Bulletin. The interview is reproduced below.**

**Q: How did your nomination come about?**

I applied for the EnergySafety Award when I was nominated for the NECA Apprentice of the Year. I thought I was in for a shot because of the work we (the apprentices) had done on site to improve the safety culture. Also, I studied a Diploma in OHS and prior to undertaking my apprenticeship, I worked in the safety and workers compensation industry.

**Q: What influenced your decision to undertake an electrical apprenticeship?**

I decided to do an apprenticeship and get my Electrical Licence because of the varied opportunities this industry has to offer. Being an electrician means I have flexibility, financial security, opportunity to travel and can work in a whole range of environments. Oh, and I love it! I didn't expect to be so passionate about my job! I wouldn't do anything else.

**Q: Can you tell us what are some of the important electrical safety tips you have taken with you, from on and off-the-job training?**

Always test before you touch! They drum that one into you. Also, you need to ensure you are completely fit for work before coming to site.

**Q: What are your career plans for 2014?**

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Minister for Commerce, Hon. Michael Mischin with award recipient Sarah Jayne Flatters

I'm starting my first qualified electrical role in January for a large commercial service company. I chose them because I like fault finding, liaising with clients and doing something different every day. I also have just started a not-for-profit organisation called TradeUP Australia which will be launched in 2014. TradeUP is an initiative aiming to work with industry and the community to encourage women to see skilled trades as a viable career option.

**Q: What is the most valuable piece of advice you would give to apprentices who have just embarked on their apprentice journey?**

Do it because you want to do it!  
Three things:

- 1) work harder than they expect you to;
- 2) study more than required;
- 3) don't eat the sausage rolls at the site deli – pack a real lunch!



## Prosecutions for breaches of electricity legislation

Between 1 July and 30 September 2013

Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence	Date of Offence	Fine (\$)	Court Costs (\$)
Christopher McConnell (Pinjarra)	EW143157	Regulation 19(1) E(L)R 1991 (10 breaches)	Carried out electrical work while not authorised by licence or permit	Between 24/09/10 and 04/04/11	15,000.00	2,500.00
		Regulation 49(1) E(L)R 1991 (7 breaches)	Carried out unsafe and substandard electrical work			
Nathan Bailey (Darch)	EW144278	Regulation 49(1) E(L)R 1991	Carried out unsafe and substandard electrical work	06/05/11	2,000.00	771.15
Joshua Houlihan (Ashby)	EW143313	Regulation 49(1) E(L)R 1991	Carried out unsafe and substandard electrical work	10/05/11	2,000.00	656.15
Kevin Sherry (Popanyinning)	EW117588	Regulation 49(1) E(L)R 1991	Carried out unsafe and substandard electrical work	16/05/11	9,000.00	649.70
Kevin Raymond Sherry T/As Sherry Electrics (Popanyinning)	EC003044	Regulation 52(3)	Submitting a Notice of Completion when the electrical work was defective and therefore incomplete			
Ian Mazure (Busselton)	EW114722	Regulation 49(1) E(L)R 1991	Carried out unsafe and substandard electrical work	24/05/11	10,000.00	656.15
Mazure Pty Ltd T/As Mazure Electrical (Busselton)	EC004225	Regulation 52C(1)(b)(i) E(L)R 1991	Failing to check and test the electrical work after completion to ensure it was safe and complied with AS/NZS 3000:2007 "Wiring Rules"	24/11/11		

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<b>Name (and suburb of residence at time of offence)</b>	<b>Licence No.</b>	<b>Legislation and Breach</b>	<b>Offence</b>	<b>Date of Offence</b>	<b>Fine (\$)</b>	<b>Court Costs (\$)</b>
<i>Reno Morasutti (Exmouth)</i>	<i>EW130450</i>	<i>Regulation 49(1) E(L)R 1991</i>	<i>Carried out unsafe and substandard electrical work</i>	<i>20/09/11</i>	<i>2,000.00</i>	<i>656.15</i>
<i>Reno Morasutti T/As Cottesloe Electrical (Exmouth)</i>	<i>EC005247</i>	<i>Regulation 52C(1)(b)(i) E(L)R 1991</i>	<i>Failing to check and test the electrical work after completion to ensure it was safe and complied with AS/NZS 3000:2007 "Wiring Rules"</i>		<i>2,000.00</i>	
<i>CDI Electrics Pty Ltd T/As CDI Electrics (Carlisle)</i>	<i>EC009151</i>	<i>Regulation 51(1) E(L)R 1991</i>	<i>Failed to submit a Preliminary Notice to the Network Operator within the required time frame</i>	<i>Between 23/02/11 and 28/02/11</i>	<i>1,000.00</i>	<i>768.80</i>
<i>Ringo Lim T/ As Ringo Lim Electrical Services (Thornlie)</i>	<i>EC006756</i>	<i>Regulation 52C(1)(b)(i) E(L)R 1991</i>	<i>Failing to check and test the electrical work after completion to ensure it was safe and complied with AS/NZS 3000:2007 "Wiring Rules"</i>	<i>25/05/11</i>	<i>15,000.00</i>	<i>656.15</i>
<i>McGlasson Pty Ltd T/As McGlasson's Electrical Refrigeration (Mandurah)</i>	<i>EC007113</i>	<i>Regulation 52(3) E(L)R 1991</i>	<i>Submitting a Notice of Completion when the electrical work was defective and therefore incomplete</i>	<i>Between 14/03/11 and 21/03/11</i>	<i>20,000.00</i>	<i>998.80</i>
<i>Carl Robert James Meckelburg (Beaconsfield)</i>	<i>EC009331</i>	<i>Regulation 52(3) E(L)R 1991</i>	<i>Submitting a Notice of Completion when the electrical work was defective and therefore incomplete</i>	<i>17/02/11</i>	<i>3,000.00</i>	<i>430.00</i>

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<b>Name (and suburb of residence at time of offence)</b>	<b>Licence No.</b>	<b>Legislation and Breach</b>	<b>Offence</b>	<b>Date of Offence</b>	<b>Fine (\$)</b>	<b>Court Costs (\$)</b>
<i>MNB Electrical Contractors Pty Ltd (Darch)</i>	<i>EC009481</i>	<i>Regulation 52(3) E(L)R 1991</i>	<i>Submitting a Notice of Completion when the electrical work was defective and therefore incomplete</i>	<i>06/05/11</i>	<i>3,000.00</i>	<i>764.70</i>
<i>TJ &amp; PF Holding Pty Ltd T/ As Prompt Electrical Services (Padbury)</i>	<i>EC005972</i>	<i>Regulation 52(3) E(L)R 1991</i>	<i>Submitting a Notice of Completion when the electrical work was defective and therefore incomplete</i>	<i>28/04/11</i>	<i>20,000.00</i>	<i>653.15</i>
<i>Electricity Networks Corporation T/ As Western Power (Perth)</i>	<i>NLH</i>	<i>Regulation 242(1)(b) ER 1947</i>	<i>The connection of the supply of electricity caused the consumer's electrical installation to become unsafe</i>	<i>02/06/11</i>	<i>35,000.00</i>	<i>656.15</i>

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## focus

### AS/NZS 5601:2013 published

On 16 September 2013, Standards Australia published a new edition of AS/NZS 5601. The 2013 edition supersedes the 2010 edition and consists of two parts:

- AS/NZS 5601.1:2013  
Gas installations  
Part 1: General installations
- AS/NZS 5601.2:2013  
Gas installations  
Part 2: LP Gas installations in caravans and boats for non-propulsive purposes

The standard was adopted in Western Australia from 16 September 2013. The regulations provide for a six month period where the superseded edition (AS/NZS 5601:2010) is deemed to comply with the current edition (AS/NZS 5601:2013). Consumer gas installations completed in the periods shown must comply with the standard indicated:

- 18 July 2011 to 15 September 2013; AS/NZS 5601:2010;
- 16 September 2013 to 15 March 2014; AS/NZS 5601:2010 or AS/NZS 5601:2013;
- 16 March 2014 on; AS/NZS 5601:2013.

Although there is the six month period where both the 2010 and the 2013 editions of AS/NZS 5601 are acceptable we recommend that you adopt the 2013 edition as soon as possible. The standard can be purchased at <http://infostore.saiglobal.com/store/>

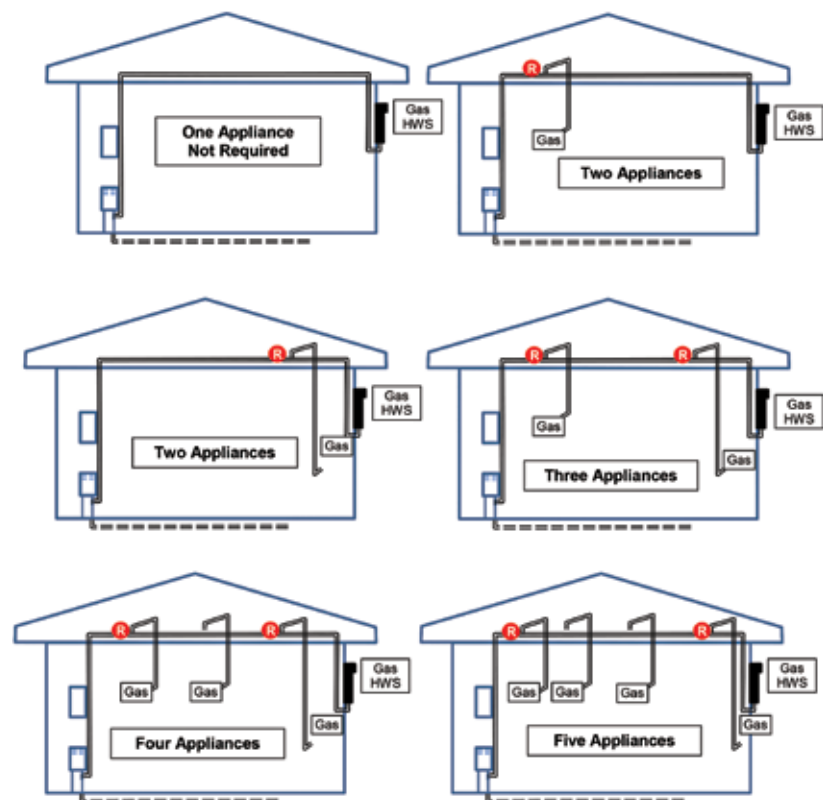
Many changes have been made in the 2013 edition; some of the more notable changes are:

- AS/NZS 5601.1:2013 and AS/NZS 5601.2:2013
  - Contents pages added at the start of each section.
  - An informative guide for commissioning gas appliances has been included.
  - An informative checklist for gas installations has been included.
- AS/NZS 5601.1:2013
  - References to 1st family gases (TLP) removed.

- Pressfit fittings now permitted for Copper and Stainless Steel.
- Location of reversion fittings in multilayer pipe installations changed (see drawings below).
- Where multilayer pipe is protected it must be identifiable as gas pipe.
- The requirements for where a discharge vent can be vented into an enclosure have been significantly changed.

#### Proprietary Piping: Reversion Fitting Requirements

Below are several examples, where the main run exceeds 10m in length, a reversion fitting may or may not be required to be installed in an accessible location.



Symbol: **R** = Reversion Fitting

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- The allowance for where ventilation for combustion air is required has been reduced from 3 MJ/h/m<sup>3</sup> to 0.4 MJ/h/m<sup>3</sup> for buildings constructed after September 2013.
- Combustion air vent sizes and locations for buildings constructed after September 2013 have been changed.
- A test of flue performance on commissioning of a flued appliance is now mandatory.
- When sizing pipework where the supply pressure permits an increase in capacity, then an increase in the system pressure drop is allowable.
- A spillage test for correct flue operation has been included.
- AS/NZS 5601.2:2013
  - Hose assemblies can only be used between the regulator and fixed piping and fixed piping and appliances, except to provide a flexible connection between fixed piping in caravans with a slide out section.
  - Hose assemblies cannot be connected to each other.
  - In an external cylinder/general storage locker, the partition no longer is required to seal against the lid.
  - Cylinder compartments can only contain cylinders and associated supply equipment.
  - Regulators to be located to permit drainage of any liquid back into the cylinder.
  - When testing gas installations the test pressure has been increased to 14 kPa for boats and caravans.

## PRODUCT SAFETY RECALL – Solar gas boosted (exterior mounted) water heaters



EnergySafety wishes to advise gas fitters of the safety recall issued by Dux.

### Identification

The recall relates to products sold as a Dux – SunPro MP15 or Ecosmart – Intelligent Hybrid solar gas boosted (exterior mounted) water heaters bearing model numbers DN15DS, DL15DS, DN15CS, 3D1NE, EN15DS, EL15DS.



### Defect

In a limited number of cases, leakage of gas has occurred during the start-up of the gas boost function. The gas valve may remain open, when ignition has not occurred.

### What to do

In the event that leakage is established, the customer should shut off the gas supply immediately and call Dux who will arrange for an urgent service call.

### For further information, contact

Dux Recall Hotline

Telephone: 1300 761 841

Email:

gasboostedsolar@gwagroup.com.au

Website: www.dux.com.au

## Interpretation of requirements

EnergySafety is frequently requested to provide guidance on the interpretation of the clauses in the regulations and standards where the intention of those clauses may be interpreted in various ways. The following guidance has been recently provided.

### Exposure of multilayer gas pipe to the sun

AS/NZS 5601.1:2013 in Table 4.1 requires that multilayer (PE/AL/PE, PE-X/AL/PE or PE-X/AL/PE-X) piping be protected against ultra-violet degradation. Ultra-violet light causes the chemical bonds in polyethylene polymer to break resulting in a loss of strength. The level of degradation caused by the ultra-violet light depends on the intensity of the light and the duration of the exposure.

EnergySafety requested information on the level of exposure to sunlight before protection is required from manufacturers and regulatory authorities in Australia. All replied that the pipe should be protected from exposure to direct sunlight at all times.

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However, responses to indirect sunlight (shaded areas) varied from no protection required to protection required in areas where plants will grow.

In light of the responses, the recommendation for where multilayer pipe is protected from exposure to sunlight is:

- Direct sunlight; not to be exposed at any time.
- Indirect sunlight; manufacturer's recommendation.

### **Isolation valve, means of disconnection**

AS/NZS 5601.1:2013 clause 5.2.8 requires a means of disconnection for appliances to be fitted immediately downstream of a manual shut off valve installed in consumer piping. This requirement applies to all isolation valves installed in consumer piping not just appliance isolation valves.

### **Identification of gas piping**

Clause 5.1.12.1 of AS/NZS 5601.1:2013 specifies that for non-single residence installations above ground consumer gas piping will be identified if:

- The operating pressure of the piping exceeds 7kPa; or
- the pipework is not readily identifiable as gas piping.

The identification shall comply with AS 1345 in all other aspects (AS 1345 identification of the contents of pipes, conduits and ducts).

AS 1345 requires that the piping is identified by a base colour which:

- Covers the entire gas pipework; or
- forms bands adjacent to all junctions, valves, service appliances, bulkheads, wall penetrations and the like, and at spacings not greater than 8m along the gas pipework; or

- forms bands at not more than 50m intervals on uninterrupted lengths of external gas pipework, visible along their length.

The base colour for fuel gases is Yellow-ochre also known as Straw, Sand, Sandstone, Raffia, or Biscuit.

Section 5 of AS/NZS 5601.1:2013 is for installations designed to operate at no more than 200kPa and therefore marking in compliance with clause 5.1.12.2 are mandatory for these installations.

Section 2 of AS/NZS 5601.1:2013 allows for performance based design and is not limited in application by operating pressure. Installations operating in excess of 200 kPa are required to comply with the requirements of section 2. Identification markings as detailed in clause 5.1.12.2 are acceptable as part of performance based design for these gas installations.

Other performance based designs may include other forms of identification as deemed acceptable on a case by case basis.

## **The Perth Royal Show 2013**

A number of divisions within the Department of Commerce have established a close working relationship with the Royal Agricultural Society (RAS) to provide services to ensure the Royal Show remains the showcase for the agricultural community of Western Australia.

Inspectors from WorkSafe inspect all the rides. Officers of the Consumer Protection Division inspect and sample the contents of the show bags. Inspectors from EnergySafety check the electrical products offered for sale and inspect the gas

appliances and gas installations around the showgrounds.

Prior to the show commencing, all stall holders having gas equipment are required to submit to the RAS a completed check sheet providing all information regarding their gas installations. These check sheets are provided in the booklet titled "Use of gas appliances in public venues". Passed to the RAS and in turn to the Gas Inspection Branch, these check sheets enable a timely assessment of the gas installations. Any non-complying gas installations or appliances identified by the gas inspectors are able to be rectified before the show commences. This prevents any hardship or loss of trade.

Gas fitters and plumbers Greg Carli and Ryan Dunne have for a number of years been contracted by the Royal Agricultural Society to install a number of new gas installations (LPG & NG) that will only be used during the show and then decommissioned. Although these installations are temporary they are still required to be compliant with the regulations.

The special gas equipment in this photograph are Paella cookers that have been certified and badged for installation by an independent Type A Gas Inspector.

EnergySafety Inspectors need to be vigilant as occasionally a caterer will not set up their gas equipment until the last day before the show.



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This year an interstate caterer inside one of the pavilions was disappointed to find that his unapproved high pressure propane equipment was prohibited from use.

Gas inspectors maintain an on-going presence during the show.



Unapproved high pressure propane appliance.

## The Notice of Intent


As a gas fitter you may recall recent articles on the Notice of Intent form. The Notice of Intent is aimed at providing relevant information to the gas network operator and/or gas supplier. If the form is completed and submitted it provides information on complex or large gas installations prior to commencement of a project.

### Who can submit a Notice of Intent?

Generally, notices are expected for large projects and can be submitted by project consultants, building contractors or gas fitters.

The information provided enables the design engineers of the network operator/gas supplier to plan for this project.

The following items are considered critical for this planning to proceed:



**Government of Western Australia**  
Department of Commerce  
Energy Safety

## NOTICE OF INTENT

This Notice should be duly completed and sent to the relevant gas supplier at the project planning/design phase and well before the work is commenced (six weeks minimum where possible), if any complex installation type listed applies. It is to be submitted on a voluntary basis until the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 mandate such a requirement.

**COMPLEX INSTALLATION TYPE** (Please mark appropriate boxes. Only if a box is marked, send completed Notice to gas supplier)

Multi-residential (16+)  
  Multi-storey (3+)  
  Consumer piping nom. size greater than 32mm  
  Class 1  
  Gas rate greater than 1,000MJ/h

**2 DETAILS OF INSTALLATION AND GAS SUPPLIER**

Owner/Occupier name				Euler's Name			
Phone/Fax				Phone/Fax			
Email				Email			
Lot No.	Unit No.	Street No.	Street name	Suburb/Town	Postcode		

Directions (please provide sufficient information)

Gas supplier (home)	Meter No. (if existing)	Proposed commencement date	Proposed completion date
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**3 FIXED INSTALLATION DETAILS** (Please mark appropriate boxes. For 'other', state gas type and operating pressure.)

Gas type:	<input type="checkbox"/> NG	<input type="checkbox"/> LP GAS	<input type="checkbox"/> OTHER:
Operating pressure (kPa):	<input type="checkbox"/> 1.25	<input type="checkbox"/> 2.75	<input type="checkbox"/> OTHER:

**4 GASFITTING WORK** (Please mark appropriate boxes.)

<input type="checkbox"/> NEW	<input type="checkbox"/> PIPE WORK	<input type="checkbox"/> INSTALLATION	<input type="checkbox"/> COMMENCED SUPPLY
<input type="checkbox"/> ADDITIONAL	<input type="checkbox"/> APPLIANCE	<input type="checkbox"/> COMMISSIONING	<input type="checkbox"/> REPAIR

**5 TYPE A (DOMESTIC/COMMERCIAL) APPLIANCES**

Description	No	Make/Model	MJ/h
WATER HEATER			
COOKING APPLIANCE			
SPACE HEATER			
BAYONNET			
SPRAYPOOL HEATER			
OTHER			

**6 TYPE B (INDUSTRIAL) APPLIANCES**

DESCRIPTION:

GAS RATE (MJ/h):

PRE ASSEMBLED  
 ASSEMBLED ON SITE  
 CONVERSION

TYPE B GAS INSPECTOR NO.: GI

7 MOBILE INSTALLATIONS (Please do not write in this area of the Notice of Intent)

COMPLETE AND SUBMIT THIS NOTICE ONLY IF A "COMPLEX INSTALLATION TYPE" IS APPLICABLE.

**8 GENERAL INFORMATION** (Please mark appropriate boxes. If 'yes' marked provide details.)

Any comments or details (include likely or used variation/exemption or dispensation)?  Yes  No

Does any part of the existing gas installation not comply with the regulations?  Yes  No

**9 CERTIFICATION OF GASFITTING WORK**  
(Please do not write in this area of the Notice of Intent)

'Complex installation type' - Meaning of terms are as follows:

- 'Multi-residential' - A development having 16 or more sole occupancy units.
- Multi-storey - Means three (3) or more storeys, excluding mezzanine or parking areas.
- 'Consumer piping nom. size greater than 32mm' - Piping of nominal diameter greater than 32mm.
- 'Class 1' - An industrial/commercial gas installation containing a Type B gas appliance.
- 'Gas rate greater than 1,000 MJ/h' - The total nominal gas consumption of all installed appliances exceeds 1,000 MJ/h.

**10 DECLARATION OF SUBMITTER OF NOTICE OF INTENT**

Name: \_\_\_\_\_

Business Name: \_\_\_\_\_

Business or residential address: \_\_\_\_\_

Phone/Facsimile Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

Registered Gas fitter's details (Complete if applicable)

No. : GF \_\_\_\_\_ Class/Reg \_\_\_\_\_

I declare that it is intended to carry out gasfitting work which is the subject of this notice in accordance with the Gas Standards Act 1972 and its regulations.

SUBMITTER'S SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

- What is the anticipated gas load?
- Can the existing infrastructure support this? Is gas available or is there a gas mains extension required?
- For bulk tank installations, will the bulk tank be sited in an acceptable location with adequate roads to support the replenishment of the bulk tank?
- For billing meters and regulators, is there any lead time for specialised equipment?

During construction of the project the Notice of Intent also provides for the ability of an inspector to check the progress of the works on site to enable commissioning of the gas installation and appliances without any unnecessary delay.

The Notice of Intent is available to download from EnergySafety's website [www.energysafety.wa.gov.au](http://www.energysafety.wa.gov.au)

## Gas suppliers – network operators

The deregulation of the energy market in Western Australia has been in place now for some time and we now have another gas supplier selling into the natural gas market, Kleenheat Gas.

To clear up any confusion that may be experienced by gas fitters in completing the Notice of Completion (NOC), you are required to nominate the gas supplier in Section 3. For natural gas, it is distributed through a network of gas mains, the network operator in this case is ATCO Gas Australia Pty Ltd (ATCO Gas).

ATCO Gas provides the infrastructure, the gas mains, service connection, the gas meter and transports the gas on behalf of the two natural gas suppliers, Alinta Energy and Kleenheat Gas. Both Alinta Energy and Kleenheat Gas then sell the gas to the consumer.

When filling out the NOC where natural gas is connected to the premise write “ATCO Gas” in Section 3.

To complicate matters further, Kleenheat Gas is a network operator and a gas supplier of LP Gas in Margaret River (Riverslea Estate and Rapids Landing), Albany (Oyster Harbour, Bayonet Point) and Leinster in the goldfields. When completing the NOC in these areas where the gas supply is from a distribution network “Kleenheat Gas” is written in Section 3.

ATCO Gas provides natural gas distribution networks in metropolitan Perth and surrounds, Kalgoorlie, Geraldton, Bunbury and Busselton. ATCO Gas also has an LP Gas distribution network in Albany that transports the gas on behalf of Alinta Energy.

As owner operators of distribution networks, both ATCO Gas and Kleenheat Gas are responsible for undertaking inspections and audits of gas installations connected to their networks.

One exception to all of the above is the natural gas distribution network operated by Esperance Gas in Esperance.

For areas outside of the reach of the gas distribution networks there are other major LP Gas suppliers providing LP Gas in exchange cylinders or bulk tanks. These are Origin Energy, Elgas, Kleenheat Gas and Supa Gas. These gas suppliers are also responsible for inspections and audits of gas installations.

All of the above supply LP Gas to domestic, commercial and industrial sites.

Larger industries, minesites, and power generation companies purchase their gas supplies direct from the major pipeline companies. (or have groups of LP Gas tanks or large LP Gas/LN Gas tanks)

Where the gas supplier (network operator) is not known and also in the case of mobile gas installations (caravans, mobile homes, boats and motor vehicles) write EnergySafety in Section 3.

## Summary of infringements for breaches of gas legislation

1 July to 30 September 2013

<b>Legislation and Breach</b>	<b>Offence</b>	<b>Number of Infringements</b>	<b>Fine (\$)</b>
GSA S13A(2)	<i>Engaging in an operation or carrying out work or process, of a kind prescribed to be nature of gasfitting work otherwise than in a prescribed capacity without a permit of certificate of competency</i>	1	1,000
GSR R18(2)	<i>Failing to ensure gas installation complies with prescribed requirements</i>	2	1,200
GSR R28(2)	<i>Failing to attach approved badge or label on completion of work</i>	2	800
GSR R28(3)	<i>Failing to give notice of completion of gasfitting work within required time</i>	4	1,600
	<b>Total:</b>	<b>9</b>	<b>4,600</b>

Legend GSA Gas Standards Act 1972

GSR Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999