

energy

Bulletin

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Appliance Rectification Program

A recent change to the Gas Standards (Gas Supply and System Safety) Regulations 2000 has broadened the gas quality specification for natural gas, supplied to consumers to allow more gas producers access to the market.

All gas consumers should benefit from a more competitive market and a more secure gas supply as a result of this legislation.

In adopting a broader gas quality specification, it has been recognised that there is a potential risk that some pre-1980 domestic natural gas appliances may not perform as well as they should on the changed gas.

Pre-1980 domestic natural gas appliances that may be affected include:

- cookers, such as cook tops, ovens and freestanding cookers;
- space heaters, including flued, flueless and wall furnaces; and
- water heaters, both storage and instantaneous.

An Appliance Rectification Program has been established to identify all the pre-1980 gas appliances and to have them replaced or serviced to ensure all gas appliances perform adequately on the changed gas. The initial stage involves setting up a call centre and requesting consumers to contact the Appliance Rectification call centre on 1800 110 464 or visit www.gasapplianceprogram.com.au and complete the online form if they have any domestic natural gas appliances installed that date pre-1980.

Consumers will be informed about the program through a flyer contained in their gas bill and an advertising campaign scheduled for later in the year. The call centre contact details will go live in mid May 2010.

If the appliances are considered unsafe to be used on the broader gas specification, the appliance may be replaced with a **brand new natural gas appliance(s) at no cost.**

For safety reasons, EnergySafety proposes to prohibit the use, sale and installation of pre-1980 gas appliances that are not captured by the program, at a date to be determined by the Director of Energy Safety.

Further information is provided in the gas focus section or alternatively at www.energysafety.wa.gov.au



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New Electrical Licensing Board

The Minister for Commerce recently appointed a new Electrical Licensing Board, which commenced its term of office on 1 February 2010.

Members are appointed to the Board for a three year term, following nominations from industry and the community.

The new Board represents the interests of consumers of electrical services, either through the use of electrical contractors or through the direct employment of electricians. The Board members are selected to ensure the interests of traditional electrical industry stakeholders and the interests of consumers are reasonably balanced.

The new Board comprises:

- an independent Chairman with management and technical experience in the electrical industry (Mr Kevan McGill);
- a nominee from bodies representing the interests of electrical workers (Mr Jim Murie);
- a nominee from bodies representing the interests of electrical workers with restricted licences (Mr Gregory Grundy);
- a nominee from bodies representing the interests of electrical contractors (Mr Peter Beveridge);
- a nominee from bodies representing the interests of large businesses, who are consumers of electrical services (Mr Geoffrey Bryant);
- a nominee from bodies representing the interests of small businesses, who are consumers of electrical services (Mr Peter Mittonette);
- a residential consumer of electrical services (Ms Lynne McGuigan); and
- a representative of EnergySafety (Mr Don Saunders).

Engineering students working at EnergySafety

Tong Li, who is entering his fourth year studying Mechanical Engineering and Computer Science at the University of Western Australia, undertook a 12 week placement with EnergySafety, to gain work experience during the summer vacation, primarily working with the Gas Utilisation branch.

During his time with EnergySafety Tong has:

- Reviewed and contributed to the "Use of gas appliances in public venues" Guideline.
- Undertaken the initial stages of implementing an electronic submission system for Notices of Completion.
- Reviewed and added to reports detailing the effect of fires on LP Gas cylinders.
- Helped confirm amendments towards the review of AS 1375: SAA Industrial fuel fired appliances code.
- Prepared recommendations for variations/exemption applications for Type B gas appliances.
- Attended the initial investigations of a compressed natural gas bus fire.
- Attended several independent Type A and Type B gas appliance certifications onsite.

Tong was also able to gain an understanding of the regulatory work done by EnergySafety and how the standards and regulations play an integral part in industry, as well as expanding his knowledge of gas engineering. Overall, he enjoyed his time at EnergySafety and the experience that it afforded him.

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Vacation student Tong Li

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Luke Staal also commenced work experience at EnergySafety during the summer vacation period, during his final year of an Electrical Engineering degree at Curtin University of Technology.

During his placement, Luke developed a set of power line design calculation templates for determining design parameters such as:

- conductor tension change due to temperature;
- conductor vertical sag and horizontal swing;
- phase conductor separation;
- pole strength limits; and
- actual pole loading.

Luke's contribution has been invaluable and will greatly assist EnergySafety's engineering investigations and audits into the future.

National Licensing System update

The National Licensing System has a new, slightly changed name; it is now known as the National Occupational Licensing System (NOLS).

At its second meeting held on 18 March 2010, the Electrical Occupations Interim Advisory Committee (EOIAC) considered the first of six interrelated policy elements for the NOLS – licence categories, scopes of work and licence types.

Members considered the sub-categories of current restricted electrical licences and the challenges of developing a model for categorising these licences. The model needs to easily reflect newly identified risks that emerge in relation to electrical work for new equipment or technology.

Descriptions of the work regulated by licence categories (scopes of work) were also reviewed, to ensure inclusivity to enable discussion of eligibility requirements for different licence categories at the third EOIAC meeting in early June 2010.

Members also discussed a range of issues regarding licence types, including:

- the importance of maintaining the availability of both contractor and individual licences as these are important in managing the combination of safety and consumer risks in electrical work and electrical businesses; and
- the importance of having systems in place which provide the appropriate levels of supervision for apprentices.

Details of the proposed structure and scope of electrical occupations' licences will be made available after the EOIAC's third meeting. At that meeting, the committee will consider licence eligibility, and it is expected that this work will influence the recommendations regarding development of the licence structure and scope.

Builders' Registration Board

The Builders' Registration Board aims to ensure the highest possible standards in the building industry by providing a regulatory and dispute resolution service to the community.

The Board regulates the activity of builders and associated trades through the administration of the *Builders' Registration Act 1939* and the *Home Building Contracts Act 1991* and publishes a quarterly newsletter that provides information about its activities and the requirements of these laws.

To keep informed about important issues that may affect your work in the building industry you are invited to subscribe to the Board's e-Newsletter at www.building.wa.gov.au. Simply click on the 'Subscribe to e-Newsletter' link on the homepage Quick Links section and submit the form.

For more information you can also contact the Board's Senior Education Officer, Shaun Moriarty on (08) 9476 1250 or by email at SMoriarty@builders.wa.gov.au

electrical

focus

Ceiling insulation inspections

Electrical contractors will be aware that the Federal Government stopped its thermal insulation rebate program following unsafe ceiling installations and fraud concerns.

To ensure all houses are safe, following the installation of conductive insulation, the Federal Government has offered to pay home owners up to \$400 towards the cost of an electrical safety inspection. Many homes throughout Australia had conductive foil insulation installed which may be potentially unsafe. They may now have electrified roof spaces or are at risk of fire because existing ceiling space cabling is not rated for thermal insulation covering. The foil insulation may have become "live" through either contact with unenclosed and exposed cable joints, exposed cable joints at equipment or damage to cables, either before or during the installation of the insulation. Also foil and non foil insulation may have been installed over or too close to recessed luminaires thereby restricting the safe dissipation of heat from the luminaire. The 2007 edition of the Wiring Rules provides the minimum requirements for the types of loose fill insulation barriers and clearances required from recessed luminaires.

EnergySafety strongly recommends that foil insulation, where it is installed directly on ceiling joists, be removed. This is the only easy method to ensure that the house is safe and will remain safe. Homeowners should be warned not to touch the foil or enter the ceiling space until it is proved safe by a licensed electrical contractor.

Electrical contractors should turn off the installation main switch and tag it before entering the ceiling space and should instruct any employed electricians to do the same.

Electrical contractors requested to inspect a house following the installation of thermal insulation under the now defunct Federal Government insulation rebate scheme should advise the homeowner to call the Federal Government hotline on 131 792. They are entitled to obtain a thorough safety inspection and free upgrade of the insulation, if it is deemed necessary. Any remedial work to repair ceiling problems will also be reimbursed so long as it has been caused by faulty foil insulation. A reference number will be provided to the homeowner who can supply this to the electrical contractor. The electrical contractor will then be able to seek reimbursement (up to \$400) for these inspections from the Federal Government.

If the homeowner insists on retaining the conductive foil insulation (installed directly on top of ceiling joists) the insulation nevertheless must be removed to inspect all the cables, cable joints and terminations at equipment. If the foil insulation is to remain, RCDs must be installed to protect all the cables and equipment located in the ceiling space. Alternative power sources such as solar panels or generators must be isolated and tagged.

Double insulation must be maintained and there must be no exposed cable joints or terminations. All unenclosed joints must be insulated and fully enclosed. All terminations at equipment must ensure that double insulation is maintained into the termination enclosure of the fitting. The installation must be tested to ensure it meets all the tests in the 2007 Wiring Rules. The house is also to be checked to ensure that correct clearances are maintained around lighting fittings and appliances.

After completing the inspection, the contractor should submit an Electrical Safety Certificate to the homeowner summarising the work done and stating the installation has been checked and is safe.

Bunney prosecuted for falsifying an Electrical Licence and unlicensed electrical work

Simon Bunney was convicted and fined \$15,000 for several breaches of the Electricity (Licensing) Regulations 1991 including nine breaches of Regulation 19(1) for carrying out unlicensed electrical work at two mine sites in WA. Bunney was also convicted for one breach of Regulation 59(1)(c) for wrongfully representing himself as the person referred to in an electrical licence.

Bunney had supplied a recruitment agency with a false electrical licence number in order to gain employment as an electrician at both mine sites between October 2008 and February 2009. The electrical installing work undertaken by Bunney included the installation of submersible pumps, starter panels, 30kVA gensets at bores, connection of crib rooms and offices to stand-alone gensets, the installation of fibre optic cables and carrying out electrical repairs to lighting and equipment.

Considering the complex technical nature of this work, it was a great concern to EnergySafety that the electrical work was performed by a person without the training or skills to perform such work in a safe manner, this placed both Bunney and the public at serious risk.

This was Bunney's second conviction for breaches of Regulation 19(1), which the Magistrate took into account when setting the steep penalty, which recognised Bunney's complete disregard for the law and the serious issue of fraud.

There is imminent danger when unqualified and inexperienced workers are repetitively performing electrical work and are not adhering to standards or regulations. As a matter of public safety, EnergySafety encourages electricians to report instances of unlicensed work to EnergySafety on 9422 5261. Also, Bunney may still be seeking electrical work. If you are approached by him in response to an advertisement for an electrician please contact an Electrical Inspector at EnergySafety.

Before employing any person to carry out electrical work (or engaging a person from an employment agency) it is essential that you view the original electrical workers' licence and ensure it is current.

Reconnecting transportable structures to electricity supply

Transportable structures, such as relocatable homes, transportable huts and modified sea containers, being connected by hard wiring to electricity supply for the first time or being reconnected by hard wiring to electricity supply after relocation from another site, are treated as new electrical installations.

The electrical installation of those structures will therefore need to comply with the editions of AS/NZS 3001, Electrical installations – Transportable structures and vehicles including their site supplies and AS/NZS 3000, Wiring rules, current at the time of connection or reconnection.

Each instance of connection or reconnection will require the submission of a Preliminary Notice and Notice of Completion (to the relevant network operator) and the provision of an Electrical Safety Certificate (to the owner of the structure).

A network operator cannot supply electricity to an installation unless a Notice of Completion has been received. The Notice of Completion must cover the entire electrical installation.

In most cases two Notices of Completion will be submitted; one for the original wiring and the other for the interconnections (after transport), underground consumers mains, external hot water system and main earth electrode.

If the transportable has been relocated from another site and therefore no Notice of Completion is available, a Notice of Completion is still required to cover the entire installation. Where this occurs the Notice of Completion is to include the testing and checking of the existing electrical installation and this work is to be recorded in the comments section on the Notice.

Electrical contractors and in-house licence holders who connect pre-wired transportable structures to electricity supply are also reminded that in submitting a Notice of Completion to cover the connection (and providing an Electrical Safety Certificate where relevant), they must carry out the necessary mandatory checks and tests to satisfy themselves, their client and the relevant network operator, that the installation is electrically safe. This is particularly important where the transportable structure has been transported between sites or has been lying idle for some time.

Western Power fined \$50,000 for unsafe work practices

On 9 February 2010, Electricity Networks Corporation, trading as Western Power was convicted and fined \$50,000 for not maintaining their service apparatus in a safe and fit condition for supplying electricity at a residential property in Canning Vale. This is a breach of Section 25(1)(a) of the *Electricity Act 1945*. The property owner received an electric shock after coming into contact with the kitchen taps, which were live and dangerous. An investigation found that a Western Power contractor, Thiess Services Pty Ltd, had replaced the overhead distribution pole where the service mains cable for the property was connected. The active and neutral conductors of the single-phase 240 volt overhead service mains had been found transposed at the street mains. It was fortunate that the house holder received a non-fatal electric shock.

Notifiable work

Preliminary Notices and/or Notices of Completion are required to be submitted for all 'notifiable work'. Notifiable work is electrical installing work that does not include:

- maintenance work, with the exception if the work requires the disconnection and reconnection of supply of electricity to the installation concerned or the replacement of service apparatus;
- the alteration of a final sub-circuit; or
- the additions of a single final sub-circuit.

For further information, please refer to the inside cover of your book of Notices.

Western Power fined for unsafe work practices

Western Power pleaded guilty and was fined \$15,000 with costs of \$1,571 in the Perth Magistrates Court for a serious electrical safety breach.

In sentencing Western Power the Magistrate said that this is a very serious breach and the maximum penalty at the time of the offence (\$20,000) is totally inadequate and does not reflect the severity of the offence. The Magistrate also commented that he could understand why the maximum penalty has now been increased to \$250,000.

This breach came to EnergySafety's notice on 20 September 2007 when an explosion occurred in Western Power's 6.6kV high voltage equipment at Wembley Downs following the installation of new high voltage switchgear and underground cables. This explosion resulted in an employee of Western Power receiving life threatening burns to approximately 50% of his body. In addition a number of other people were exposed to the risk of injury and death.

The explosion occurred when a Western Power employee operated a high voltage switch at Wembley Downs. The operation of the switch energised the test equipment which short circuited and he received burns from the "arc flash".

EnergySafety's investigation found a number of serious safety breaches had occurred on this job.

This was an extremely serious accident that would not have happened had Western Power ensured that safe work procedures and a safe system of work were adopted and adhered to. One person was very seriously injured and could have lost his life. In addition, another worker was exposed to serious risk of electrocution and a number of members of the public, who courageously came forward to apply first aid to the injured man, were also exposed to a very serious hazard of electrocution and burns as the equipment had been automatically reenergised.

**Prosecutions for breaches of electricity legislation
1 November 2009 – 28 February 2010**

Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence	Date of Offence	Fine (\$)	Court Costs (\$)
Frank Italiano (Koondoola)	NLH	E(L)R Regulation 19(1)	Carried out electrical work whilst not authorised by licence or permit	Between 01/09/07 and 31/10/07	5,000.00 *	571.70 *
		E(L)R Regulation 33(1)	Carried on business as an electrical contractor whilst not authorised by a WA EC licence			
Mario Busacca (Coolbinia)	EW132641	E(L)R Regulation 49(1) (2 breaches)	Carried out substandard electrical work	Between 09/10/07 and 05/08/08	600.00	271.70 *
Scott Morgan (Newman)	EW121261	E(L)R Regulation 49(1) (2 breaches)	Carried out substandard electrical work	Between 03/12/07 and 17/12/07	6,000.00	571.70 *
		E(L)R Regulation 52(1)	Failed to submit a Notice of Completion to the Network Operator upon completion of the electrical installing work		5,000.00	
M & G Mahfouda T/A Solomons Electrics (Dianella)	EC004065	E(L)R Regulation 52(1) (15 breaches)	Failed to submit a Notice of Completion to the Network Operator upon completion of the electrical installing work	Between 09/11/07 and 18/12/07	5,000.00	571.70
Andrew McKenzie T/A Maktech Electrical Contracting (Karakin)	EC007838	E(L)R Regulation 52(3)	Submitted a Notice of Completion to the relevant Network Operator when the electrical installing work was not complete	18/01/08	3,000.00	571.70
Mario Busacca T/A Centurion Electrical Contracting (Coolbinia)	EC006641	E(L)R Regulation 52(3)	Submitted a Notice of Completion to the relevant Network Operator when the electrical installing work was not complete	Between 09/10/07 and 05/08/08	1,000.00	*
Jonathan Timothy Savage (Waikiki)	NLH	E(L)R Regulation 59(1) (c)	Wrongfully represented himself as being the person referred to in an electrical licence	09/10/08	500.00	671.70
Electricity Networks Corporation T/A Western Power (Perth)	EC004931	EA 25(1)(A)	Did not maintain their service apparatus in a safe and fit condition for supplying electricity	19/12/07	50,000.00	571.70

Legend T/A Trading As
 NLH No Licence Held
 E(L)R Electricity (Licensing) Regulations 1991
 * Global Fine or costs issued

gas focus

Appliance Rectification Program

EnergySafety has established the Appliance Rectification Program to locate and service or replace all pre-1980 gas appliances, due to the gas quality specification for natural gas being broadened in the Gas Standards (Gas Supply and System Safety) Regulations 2000. Additional gas from new gas producers is expected to come on stream in 2012.

The Gas Appliance Rectification Program will be conducted in two stages:

Stage 1

Involves requesting all owners/users of pre-1980 gas appliances to contact a project call centre and register their details.

The call centre will arrange for a licensed gas fitter to call and check the pre-1980 natural gas appliances and the consumer's gas installation, including determining if any Negas bayonet points exist. The information gathered by the gas fitter will be used to determine whether a gas appliance will be serviced or replaced and that a Negas bayonet point exists and will also need to be replaced.

Stage 2

Once Stage 1 has been completed and all the information has been compiled, Stage 2 will be implemented. This will occur several months after Stage 1.

Stage 2 involves a licensed gas fitter undertaking the necessary servicing and/or replacement of the pre-1980 gas appliances and Negas bayonet points.

As a gas fitter if you come across an appliance that dates pre-1980 please inform your customer of the Appliance Rectification Program and ask them to contact the call centre on 1800 110 464 or visit www.gasapplianceprogram.com.au

Generic compliance plate for mobile gas installations

EnergySafety will soon introduce a revised generic compliance plate for use on all mobile gas installations in Western Australia. The new compliance plate is identified by the code ESWA G056 0310 at the bottom right hand corner of the plate.

The revised compliance plate will replace the current red compliance plate [ESWA G056 0705] and is of the same colour and size.

The revised compliance plate now has provision for inscribing the variation/exemption number where this is applicable to a particular installation.

The current compliance plate will be phased out after 1 July 2010.

Private compliance plates previously approved by the Director can continue to be used on mobile installations that have been installed in accordance with AS 1425 or AS 4983. These existing plates are to have the variation/exemption number inscribed after the NOC number where this is applicable to the installation (For example, 1455982/GV/E:09/41). However under no circumstances is the standard design of the generic plate to be altered in any way. Any additional information, such as the installer's trading name, will only be permitted on an extension of the plate.

The instruction on the inside front cover of the Notice of Completion books will be amended to reflect the revised compliance plate.

ENERGYSAFETY WA	
Gas Standards Act 1972 Compliance Plate	
THE GAS INSTALLATION TO WHICH THIS NOTICE IS AFFIXED COMPLIES WITH THE REQUIREMENTS OF AUSTRALIAN (OR OTHER) STANDARD <input type="text"/>	
NOTICE OF COMPLETION NUMBER <input type="text"/>	GAS TYPE <input type="text"/>
INSTALLATION DATE <input type="text"/>	VARIATION/EXEMPTION NO. <input type="text"/>
INSTALLED BY REGISTERED GAS FITTER:	
NAME <input type="text"/>	GAS FITTER'S No. <input type="text"/>
WORKSHOP NUMBER	<input type="text"/>
VEHICLE / HULL IDENTIFICATION NUMBER, OR EQUIPMENT NUMBER	<input type="text"/>
CONTAINER SERIAL NUMBER	<input type="text"/>
CONTAINER TEST STATION STAMP DATE	<input type="text"/>
ESWA G056 0310	

Servicing Type A gas appliances

To carry out servicing of Type A gas appliances requires the gas fitter to hold a current Class G unrestricted permit or old certificate of competency endorsed for servicing.

Servicing, in relation to a consumer's gas installation, means:

- (a) **maintenance** involving the adjustment and cleaning of any appliance or apparatus in the installation in accordance with the recommendations of the manufacturer; or
- (b) **repair** involving the exchange of components but not requiring modification of the installation.

Therefore, in regulation maintenance and repair are considered servicing.

In 2010 the National Qualification Certificate III in gasfitting, along with some other EnergySafety requirements, became the requirement to obtain a Class G permit. The Certificate III in gasfitting includes a unit of competency – 'maintain Type A gas appliances'. This unit will not entitle a gas fitter to be endorsed to service Type A appliances.

Those who obtain a Class G permit, that is restricted to installation work only are not permitted to maintain Type A gas appliances even though they may have completed the 'maintain Type A gas appliances' competency unit.

Those gas fitters who wish to undertake Type A gas appliance service work can contact an EnergySafety recognised training provider or our Licensing Office. Information is also available on the EnergySafety Website www.energysafety.wa.gov.au.

Gas meter boxes versus the motor vehicle

Reports received by EnergySafety in the past month included two instances where the gas meter box had been struck by motor vehicles.

We are asking gas fitters to remain vigilant when at a customer's residence where a gas meter box may have been damaged and to report the matter to the gas network operator. Section 8 of the Notice of Completion is ideal for this reporting. Also advise the owner of your concern as well.

An incident in Albany occurred when the owner of a rental property was attempting to refix the gas meter box to the wall after it had been bumped by a vehicle. Normally this would not be a problem. The owner was using a cordless drill to drive home the fixing screws at this time. He did not smell an escape of LP Gas leaking from the fitting below ground that had been partially dislodged allowing an escape of gas.

There was a sudden flashover that engulfed the owner who sustained burns to his face and arms requiring treatment in hospital.

Renovations and extensions can leave the gas meter box exposed where originally the gas meter box may have been adequately protected by a garden bed. It is wise to advise the owner should the gas meter box become exposed in these circumstances.

Public events and displays

As a gas fitter do you install gas appliances to be used on a temporary basis such as country shows, public events and concerts?

EnergySafety has developed a guideline to assist event organisers to ensure that work being undertaken is done by licensed operatives and is compliant. Where there is a large gathering of patrons and visitors at these events there will always be a need to provide refreshments, i.e. hot dogs, pies, pasties, burgers, chips and the like.

Generally at these events, a large number of vendors are present to cater for these needs. They may have mobile food vans, usually self contained (covered under Australian Standards 5601 gas installations) or they may be set up under temporary marquees.

There are a number of hire companies across Western Australia that also hire out gas appliances for these events. The guideline will assist the event organisers, the gas fitter and the vendor in ensuring the gas installations are safe and compliant. A check list is provided in the guideline to assist in this process.

Under the regulations, it is a requirement for the gas fitter when installing a gas installation to complete a Notice of Completion. A copy must be provided to the person requesting the gas installation and one copy to the gas supplier.

Where the gas installation consists of the smaller nine kilogram gas cylinders a copy of the NOC is to be provided to EnergySafety as the gas supplier. Usually a couple of days pass before the gas supplier has an opportunity to arrange an inspection. By the time the gas inspector arrives to inspect the gas installation, the event has finished and there is no gas installation to inspect. Don't be tempted not to submit a NOC just because the installation is considered temporary.

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Items to be considered when installing a gas installation at an event are:

- LP Gas cylinders are on a firm level base and are secured;
- gas appliances are to be approved and in a serviceable condition;
- adequate ventilation to be provided; and
- if indoors, are the gas appliances installed under appropriate exhaust canopies.

EnergySafety will be distributing the guideline to event organisers, shire councils and hire companies. Should you undertake this work, please contact the Gas Inspection Branch at EnergySafety to obtain a copy of the guideline or alternately you may wish to download a copy from the website www.energysafety.wa.gov.au.

Generic barbecue conversion kits

EnergySafety received a complaint from a concerned gas fitter having been asked to convert an LP Gas barbecue to Natural Gas using a supposedly approved conversion kit the consumer had purchased from a retail store.

The kit contained a length of flexible hose connected to an appliance gas regulator, and a connection to suit a quick connect fitting (bayonet point) and a number of gas injectors. Supplied in the kit was a basic set of instructions that recommended the customer engage a licensed person. The store even supplied a length of thread sealing tape to assist the customer to do the connection.

The packaging mentions, "suitable for up to 4 burners to a maximum of 80mj/hr", but there is no information on what size injectors are to be used. This information may be found on the data plate of the original barbecue.

Should an incorrect injector be used there may be lighting back problems (where the burner lights back to the injector) resulting in poor combustion, inadequate heating up of the grill plate/s which may lead to customer complaints, or in the worst case, poor cross lighting leading to delayed ignition and explosions. These problems are highlighted to EnergySafety on a regular basis from poor conversion procedures.

The Victorian gas regulator EnergySafe (Vic) also has similar concerns and has approached the kit manufacturers to source approval from the Australian Gas Association with upgraded conversion kits. Until these kit manufacturers are prepared to source approved conversion procedures, EnergySafety cannot recommend the use of these generic barbecue conversion kits.

Modification of gas appliances

A serviceman from a prominent gas appliance manufacturer was called to a residence to undertake a warranty request on an underbench oven. Prior to dismantling the oven the serviceman discovered the oven had been hard wired. The oven was approved and provided with a three pin plug that should have been plugged into a general purpose outlet (GPO). Cutting off the three pin plug and having the gas appliance hard wired or cutting a hole in a side panel to effect an easier gas connection is a modification of an approved gas appliance. Doing this can void the manufacturer's warranty and is also a breach of the regulations.

A query was raised recently about converting gas appliances from one gas to another. Was this considered a modification?

To convert a gas appliance to another gas, say from Natural Gas to LP Gas, a gas fitter is permitted

to undertake this work. As a gas fitter you need to be mindful that only recognised conversion procedures and kits provided by the manufacturer are to be used. There are gas appliances in use that are not suitable for conversion and if a change of gas is contemplated by the consumer it is EnergySafety's recommendation that a new gas appliance suitable for the gas being connected is purchased.

Notification of new gas supplier to Western Australia

Elgas Limited is a major gas supplier in the Eastern States. Due to company acquisitions, Elgas has been brought under the umbrella of BOC Gases. Here in Western Australia, Elgas will be supplying bulk LP Gas to industrial and commercial gas installations and also marketing exchange cylinders.

BOC Gas will continue to market LP Gas to the exchange cylinder market. Contact details for the Notice of Completion are as follows:

Mailing address:

Elgas Limited
2 Uppsala Place
CANNING VALE WA 6155

Telephone: (08) 6465 8560

Fax: (08) 6254 2893

Cleaner fuel for the long haul – an introduction to EVOL LNG

A well publicised increasing dependence on imported fuels, combined with the impact on Australia's balance of payments and the increasingly volatile global oil price, has sparked a search for a diesel fuel alternative that is able to power a wide range of heavy vehicles and large industrial engines.

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Kleenheat Gas (a business unit of Wesfarmers Energy), is a pioneer in the field of alternative fuels, having produced and marketed Liquefied Petroleum Gas (LPG) for automotive, industrial and domestic applications for over 50 years.

More recently the company has also invested heavily in Liquefied Natural Gas (LNG), through the construction of the \$137 million project in Western Australia which includes the LNG plant and strategically located refuelling infrastructure.

Marketed under the 'EVOL LNG' brand, Kleenheat Gas currently supplies LNG and supporting refuelling facilities to approximately 200 trucks in Western Australia and Victoria with plans afoot to further expand into NSW, QLD and SA.

Major fleets already using LNG with great success in WA include Sands Fridge Lines, Mitchell Corporation, Cleanaway, SITA Environmental Solutions, WA Freight Lines and a growing internal fleet within Kleenheat Gas.

More than just a fuel producer, the EVOL LNG team works closely with original equipment manufacturers and specialist diesel-LNG engine companies to ensure the fuel delivers the best operational and environmental outcomes for its customers.

"To be successful in this emerging industry you need to make the fuel transition as easy as possible by engaging management and fleet drivers," Kleenheat Gas' LNG Manager, Brad Lawson said.

"We do a lot more than simply supplying the fuel – we supply the LNG refueller network, provide driver and workshop training with a strong focus on safety, site audits and facilitate the entire conversion process. Further, we have trucking experts embedded within our team," Mr Lawson said.

The EVOL LNG team has worked closely with Swan TAFE to develop and introduce the training course to allow the Class E gas fitting permits to be issued.

The official opening of Wesfarmers Energy's 175 tonne-per-day Kwinana plant (commissioned in September 2008) combined with the company's commitment to increasing national refuelling infrastructure will set the platform for the greater availability and use of LNG in the future. The 175 tonnes per day production capacity of this LNG plant is equivalent to approximately 250,000 litres of diesel per day.

What is LNG?

LNG is a clear, colourless, non-toxic liquid that is produced when natural gas is cooled to minus 161 degrees Celsius at atmospheric pressure.

Being 600 times the density of natural gas and three times the density of compressed natural gas (CNG), LNG is the most efficient method of transporting and storing gas.

LNG is vapourised or reconverted back to its natural gas state when required for use in applications such as industrial applications, power generation, heating and transport.

The Advantages of LNG

LNG fuel delivers the best outcomes for companies operating long haul fleets over medium to large distances.

LNG offers several environmental benefits over its oil-based counterparts; unlike diesel, the most traditional heavy transport fuel, natural gas burns more cleanly and with lower carbon emissions.

When used in modern truck engines, LNG emits significantly less particulate matter and nitrogen oxides when compared to diesel engines. Furthermore, internal testing by various manufacturers globally has proven that the current generation of gas-powered engines exceed the highest environmental requirements



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(EURO V and Japanese New Long Term 05) making LNG engines some of the cleanest internal combustion power plants available.

Australia has an abundant supply of natural gas reserves, providing us with natural advantages in terms of supply and pricing stability when compared to diesel.

Current LNG technology

With increased political and public pressure on the transport industry to reduce its carbon footprint, several manufacturers are in the process of introducing factory installed, high powered heavy duty LNG engines and fuel systems.

For example, Kenworth Australia, a division of PACCAR, has commenced production of LNG trucks with the road train

specification T908 available to order now, and the popular B-Double K108 model and T408SAR cab chassis are now available. Additional models are then expected to follow.

Derived from the Cummins ISX diesel engine, Canadian based LNG engine company, Westport Innovations offers the GX engine with high pressure direct injection providing comparable horsepower, torque and efficiency to the diesel engine, with ratings of up to 1850 lb-ft of torque and 580 peak horsepower.

Gasfitting work on Rottneest Island

EnergySafety is responsible for inspecting gasfitting work carried out on Rottneest Island.

However, as it is not widely known that EnergySafety ensures that gasfitting and consumer installations comply with relevant requirements, gas fitters tend to send their Notices of Completion to gas suppliers such as Kleenheat, or fail to submit the notices at all.

EnergySafety considers this as serious; gas fitters are required to submit a Notice of Completion upon completion of gasfitting work on Rottneest Island.

The Notice of Completion is to be forwarded to the Director of Energy Safety and the customer. Failing to do this is considered to be a deliberate attempt by the gas fitter to avoid having the gasfitting work inspected in compliance with the Regulations. It is the gas fitter's responsibility under Regulation 28 of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 to provide the Notice of Completion within 48 hours of the gasfitting work being completed. This also includes attaching an approved compliance label in an approved place inside the gas meter box or the regulator hood.

Inspection of Class G consumer gas installations by gas undertakers without inspection plans

A misinterpretation of the responsibilities of gas undertaker's, without inspection plans in regard to inspections of Class G consumer gas installations was recently found by EnergySafety.

The misinterpretation may have arisen where a new or existing alternative gas to a consumer gas installation was installed by one gas fitter or a number of gas fitters over several stages of a project. The first stage of the project may have involved the installation of

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pipework and the second stage may have involved the installation and connection of the appliance(s) in the consumer gas installation.

The gas undertaker was found to have inspected only the installation pipework when a Notice of Completion (NOC) was received from the gas fitter prior to gas being supplied in the first stage of the project. After the consumer appliance(s) was installed by the same or another gas fitter in the second stage of the project, a NOC was inaccurately marked 'Additional Work' by the gas fitter and submitted to the gas undertaker. EnergySafety considers this to be an erroneous interpretation by the gas fitter and gas undertaker in that the gas undertaker would not have inspected the whole installation prior to gas being supplied.

There are particular requirements for inspections by the gas undertaker of new Class G installations and those of alterations and additions (under the *Gas Standards Act 1972 (Act)* and the *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 (Regulations)* and these scenarios are outlined below.

Inspection of gas installations in new premises

Under section 13(1) of the Act, a gas undertaker without an inspection plan must inspect a new Class G installation before commencement of gas supply. With a new installation meaning, a direct connection of consumer gas to the gas distribution system.

This means that the new gas installation, including the pipework and new appliances (even if installed at a later date to that of the pipework) must be inspected with the gas appliances connected before commencement of the gas supply.

Inspection of new natural gas installations in existing premises with LP Gas installations

If a new natural gas installation is installed in an existing residence which has an existing LP Gas supply that is to be replaced, then the new installation, including the pipework and new or modified appliances must be inspected before commencement of the natural gas supply.

This means that new gas installations to existing premises, including the pipework and new or modified appliances must be inspected with the gas appliances connected before commencement of the natural gas supply.

Apart from the above scenarios, alterations and additions to an existing installation in a premise do not require inspection, as under the Act there is no current requirement for a gas undertaker without an inspection plan to inspect other than new consumer gas installations in new and existing premises.

Where and when a variation/exemption to AS 3814 may not be necessary?

EnergySafety has rationalised the issuing of some variation/exemptions for specific installations and particular clauses of the Australian Standard, AS 3814: Industrial and commercial gas-fired appliances.

Recent applications received for variation/exemptions to clauses 2.8.7.2, 2.14.1, 5.8.2.2 and 5.8.2.3, which relate to valves, have not been considered necessary for the specific installation, since the application proposed by the gas fitter [and endorsed by the Type B Gas Appliance Inspector] was considered acceptable based on the evidence provided.

For example, a recent application for variation/exemption to clause 2.8.7.2: Requirements for appliance isolating valves, provided evidence that the proposed isolating valve:

- Met the technical requirements prescribed in AS 4617 [even though the nominal diameter of the valve was greater than 150mm].
- Conformed to API Spec 6D: Specification for pipeline valves [with AS 2885.1 permitting use for appropriate applications].
- Had been used safely and satisfactorily as a standard for the particular industrial installations over the past 10 years.
- Had a declaration from the overseas equipment manufacturer of the valve supporting the fitness for purpose of the valves for the application.

On the basis of the evidence provided, the Director of Energy Safety [or delegate] had advised the Type B Gas Appliance Inspector that a variation/exemption would not be issued since the proposed isolating valve was considered acceptable.

When applying for variation/exemptions to a proposed installation and these involve clauses such as those outlined above, the applicant must initially provide information such as the following on the particular valve/component to the Type B Gas Appliance Inspector:

- A statement to the effect that for a valve greater than the nominal size that this is not certified, but meets the technical requirements prescribed in the relevant Australian Standard.
- Conformity to an internationally recognised standard and is preferably certified against that standard.

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- A declaration from the Australian or overseas equipment manufacturer of the valve/component supporting the fitness for purpose of the valve/components for the application.
- A statement to the effect that the valve/component has previously been used safely and satisfactorily as a standard for the particular industrial installation over many years.

With provision of information considered satisfactory by the Type B Gas Appliance Inspector; the inspector may on the basis of the evidence provided be able to recommend to the Director of Energy Safety [or delegate] that he/she accepts the proposed valve/component without issuing a variation/exemption.

The Director of Energy Safety [or delegate] on receipt of the inspector's recommendation may then advise acceptance in writing of the proposed valve/component without issuing a variation/exemption.

Note: Inspectors are reminded that they are not an 'authority' in regard to varying the requirements of a code/standard, as this can only be done by the Director of Energy Safety [or delegate] who on any matter subject to the discretion of the 'authority' can vary the requirements in sections 6 or 7 under regulations 32 and 33 of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999.

Restricted Class E permit proposal

EnergySafety after reviewing and considering the nine submissions received on the proposal for a Restricted Class E Gasfitting Permits consultation paper have concluded that the viability of issuing restricted Class E Gasfitting

Permits needs to be further examined for the servicing [repair and maintenance] of gas vehicles in Western Australia (WA).

The consultation paper (EnergySafety, November 2009) requested industry comment on whether restrictions should be imposed on applications for Class E permits rather than the current policy of on-the-job training and experience after completion of the institutional based training to obtain an unrestricted Class E Permit [installation and servicing]. Class E permits are issued by EnergySafety for mobile CNG, LNG and LP Gas installations in WA.

Issues raised in the submissions included the following:

- industry needs;
- permits for forklift technicians;
- flexible delivery methods for forklift industry;
- national licensing of gas fitters;
- additional cost of LP Gas installation competency unit;
- need for additional Class E permits in current WA situation; and
- installation by servicing personnel in some Australian states have not proved satisfactory.

These issues were provided with responses from EnergySafety that were sent to those who had made submissions, including the MTAWA, Challenger Institute of Technology, IAME, Mitchell Corp., Sprint Gas, Liberty Autogas, Holden, Komatsu, Canberra Institute of Technology and Evol LNG.

The decision reached by EnergySafety was based on the apparent need for separate service (repair and maintenance) permits; particularly for those Class E gas fitters working in the service side of the forklift, LNG transport and LP Gas vehicle (with factory fitted gas systems) industries, but not working in the installation side of these industries.

EnergySafety intends to liaise with existing current registered training organisations in WA to determine whether a training course incorporating National Competency units (and including therein the former WA Gas standards legislation and basic combustion, fluing and exhaust principles modules) is suitable for recognition. Once this course is developed and recognised by EnergySafety, an application may be made by a trainee who has satisfactorily completed the required institutional training and on-the-job work experience for a Class E Permit restricted to servicing (repair and maintenance).

Standards Australia and EnergySafety

Standards Australia has suffered from the fall out of the recent economic downturn, which has resulted in the loss of the Standards Funded Pathway for the development of new Australian Standards and/or major revisions of existing standards. This financial issue did not affect the newly created standards for Gas Distribution, nor did it affect the soon to be released revision of AS5601, Gas Installations.

However, new projects yet to commence are affected and therefore this funding issue has an immediate flow-on effect for Gas Appliance standards that are in urgent need of revision. Whilst there is some opportunity for the Standards Funded Pathway to return and that submissions by stakeholders are successful for the reduced amount of funding available, the commencement of the development of new standards will suffer major delays.

EnergySafety proposed to provide, along with other state regulators, funding so that the Gas Appliance standards development project can at least commence. The state

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regulators collectively have funded the initial start of the project whilst the revised Standards Australia business model is being implemented. EnergySafety on behalf of the States and Territories Gas Technical Regulators Committee (GTRC) have entered into a contract with Standards Australia for a duration of six months with an option to extend. This will allow the project to begin and not be unduly delayed. Since committee meetings are often held in Melbourne, the Victorian State Regulator will when ever possible assist in logistics as well.

Other factors which make it important that the Gas Appliance standards are revised in particular include the:

- introduction of new reference standards;
- revisions to the Gas quality standards;
- increased moves towards recognition of national and international gas appliance certification bodies; and
- the ever increasing diversity and capacity of residential and commercial gas appliances.

Standards Australia indicated that, as from June 2010, it will provide application forms and procedures for the Standards Funded Pathway and EnergySafety will apply for the allocation of funding to continue this important suite of standards through the Standards Funded Pathway.



Product Safety Recall

275 Litre Rheem Heavy Duty Commercial Indoor Gas Water Heater Models 621275N0 and 621275P0

Products manufactured from 1 July 2008 up to and including 20 November 2009

If your 275 Litre Rheem **Heavy Duty Commercial** Indoor Gas Water Heater model number 621275N0 or 621275P0 looks similar to the unit below and was manufactured from 1 July 2008 up to and including 20 November 2009, then this is likely to be an affected unit. Model numbers and dates of manufacture can be found on the product label located at the top of the heater jacket.

Defect Detail:
Under extended operating conditions the outer jacket temperature of the water heater can exceed safe temperatures. If this occurs, there could be a risk of contact burn for people that come into direct contact with the outer jacket of the water heater. There is also the potential for combustion of materials that are inappropriately stored against or near the water heater.

Consumer Action:
Immediately remove any combustible materials within the proximity of the water heater and take steps to ensure that no-one comes into contact with the water heater. Once this is done, please call toll free on **1800 063 018** between the hours of 8.00 am and 8.00 pm AEDST. Rheem will be arranging to undertake on site service modifications in order to eliminate the potential risk associated with the water heater. These modifications will be made free of charge.

Rheem Australia Pty Ltd, 1 Alan St Rydalmere NSW 2112
ABN: 21 098 823 511 **Email:** commercialgas@rheem.com.au

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



JW DUNN 01/10

FDA 007

**Prosecutions for breaches of gas legislation
1 January 2010 to 28 February 2010**

Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence	Fine (\$)	Court Costs (\$)
<i>Paul Dillon (Kinross)</i>	<i>NLH</i>	<i>GSA 13A(2), GSR 8</i>	<i>Carried out gasfitting work while not holding a certificate of competency, permit or authorisation allowing him to do so. Failed to advise the Director in writing of a change of address within 14 days of the change.</i>	<i>5,000</i>	<i>571.70</i>
<i>Jagdish Jeshani (Darch)</i>	<i>NLH</i>	<i>GSA 13A(2)</i>	<i>Carried out gasfitting work while not holding a certificate of competency, permit or authorisation allowing him to do so.</i>	<i>2,000</i>	<i>571.70</i>

Legend NLH No Licence Held
 GSA Gas Standards Act 1972
 GSR Gas Standards (Gasfitting & Consumer Gas Installations) Regulations 1999