

Guide

Electrical equipment and gas installations at markets, shows and sporting events

Disclaimer

This publication contains information regarding work health and safety. It includes some of your obligations under the *Work Health and Safety (National Uniform Legislation) Act* – the WHS Act – and the *Dangerous Goods Act* – DG Act - that NT WorkSafe administers. The information provided is a guide only and must be read in conjunction with the appropriate legislation to ensure you understand and comply with your legal obligations.

Version: 2.3

Publish date: October 2016

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Introduction

This Guide provides information on how to manage electrical and gas risks at markets, shows and sporting events.

To comply with the *Work Health and Safety (National Uniform Legislation) Act* and Regulations and the *Dangerous Goods Act* and Regulations, stallholders must meet certain requirements in the Northern Territory.

Further information can be found in the following Australian Standards available from the SAI Global website www.saiglobal.com.

- AS 1596 - LP Gas - Storage and handling
- AS 5601 - Gas installations – Part 1 General installations
- AS 5601 - Gas installations – Part 2 LP Gas installations in caravans and boats for non-propulsive purposes
- AS 2658 - Liquefied Petroleum (LP) Gas - Portable and mobile appliances
- AS 3760 - Testing of Electrical Equipment.

A checklist on Appendix A may assist stall holders in achieving compliance.

Who has duties under the law?

Everyone in the workplace has a work health and safety duty. The main duties for stall holders are set out in Table 1.

Table 1 Duty holders and their obligations

Who	Duties
<p>A person conducting a business or undertaking</p>	<p>A person conducting a business or undertaking (PCBU) must ensure, so far as is reasonably practicable, that workers and other people are not exposed to health and safety risks arising from the business or undertaking.</p> <p>A 'PCBU' is a term that includes all types of working arrangements such as organisations, partnerships, sole traders or small business owners. For example a builder, a manufacturing business, a fast food franchisee and a self-employed person operating their own business are all persons conducting a business or undertaking.</p> <p>A PCBU who has management or control of a workplace must ensure, so far as is reasonably practicable, the workplace, the means of entering and exiting the workplace and anything arising from the workplace is without risks to health and safety.</p>
<p>Workers and others</p>	<p>Workers and other people at the workplace must take reasonable care for their own health and safety, co-operate with reasonable policies, procedures and instructions and not adversely affect other people's health and safety.</p>

Electrical safety

There are many safety risks associated with electrical equipment at markets, shows and sporting events particularly if they are of a temporary nature. Therefore, particular care should be taken by the event organiser to ensure that adequate controls are in place to protect members of the public from the safety risks pertaining to such equipment.

Some hazards may include:

- Electrical shock resulting in electrocution;
- Excessive temperatures from overloading of circuits – can result in a fire;
- Lack of insulation or damaged insulation resulting from poor maintenance;
- Temporary wiring not buried at appropriate depth or strung through trees;
- Proximity of equipment to electrical overhead lines;
- Ingress of liquids, dusts and vapours causing an equipment earthing and possible electrocution or shock;
- Modifications to electrical equipment conducted by unauthorised personnel; and
- Missing labels or warning signs

A risk assessment of hazards identified should be undertaken.

Risk controls to consider are:

- All electrical equipment supplied through a socket outlet and used in a hostile environment such as a market, must be protected by a Residual Current Device (RCD) otherwise known as a safety switch.
- Electrical equipment must be of an approved design that complies with Australian Standards. The use of homemade electrical equipment IS NOT acceptable.
- Extension cords run at floor level in public traffic areas or access ways or suspended on stands shall be arranged so they do not obstruct persons walking in the vicinity.
- Where run on the ground, extension cords must be located or provided with suitable protection so they are not subject to mechanical damage or damage by abnormal temperatures.
- Domestic or industrial style power boards may be used in stalls and concessions provided each one is supplied directly from a power point (an extension cord may be used if the supply lead is not long enough to reach). Power boards should not be daisy chained i.e. supplying one power board from another.
- Electrical appliances, power boards, safety switches (RCD's) and extension cords must be tested and tagged every 12 months by a competent person to a standard defined by AS/NZS 3760:2010 Testing of Electrical Equipment.
- On occasion an event manager may impose conditions on stall holders and others which are above the legal standard.

Fire protection

The provision of appropriate portable firefighting equipment is paramount. The incorrect type of fire extinguisher used on a certain type of fire could have fatal consequences (e.g. if a water type fire extinguisher is discharged onto live electrical equipment).

The Northern Territory Police, Fire and Emergency Services recommend stalls using gas-fired appliances should have the following equipment:

- 1 x 2A: 30B: (E)Dry Chemical Fire Extinguisher (1.5kg)
- 1 x Fire Blanket of 1.2 x 1.8m in size (for stalls with deep fryer facility)

These are to be mounted in an accessible position and clearly visible. They must be regularly tested on a 6 monthly basis and records maintained of these inspections. The yellow pages provide a list of organisations providing this service under the heading “Fire Protection Equipment and Consultants”.

Gas safety

LPG is a flammable gas stored in cylinders under pressure. Failure to apply strict precautions in the use of gas can result in major damage to property and injury to people. Because we use gas everyday there is a tendency to overlook how potentially dangerous it can be. The risks are greater when using gas in areas where there are large numbers of people such as markets, shows and sporting events.

All appliances, regulators, connectors and hoses must be of an approved design. Home-made equipment can be dangerous and is not acceptable.

Purchasing gas equipment for commercial use at markets and shows

Not all gas equipment can be used for commercial purposes. Leisure products such as camping gear and domestic BBQs are generally not designed for continuous commercial use and can be unsafe if used in this manner. However, this type of equipment may be used if approved by the manufacturer for commercial purposes.

When purchasing gas appliances for use at markets, shows and sporting events, you should firstly check with the supplier and request evidence that the equipment is Type A or commercially rated and then look for the Australian Gas Association marking that certifies this. The following labels show that the appliance has been approved by a certifying body.



Transporting of gas cylinders

Transporting in enclosed vehicles

The total quantity of LPG transported in a vehicle should not exceed 2 x 9 kg cylinders. All gas cylinders transported must be upright, secured, gas tight, leak checked and fitted with a screw plug

Transporting in open vehicles

In accordance with the Transport of Dangerous Goods by Road and Rail Regulations, no more than 250 litres of LPG can be transported in a non-commercial vehicle, e.g. 10 x 9 kg cylinders or 2 x 45 kg cylinders.

Setting up gas cylinders

Gas cylinders must be tested every 10 years at an approved test centre. Gas cylinders over 10 years that have not been tested or have not passed must not be used. The date your gas cylinder was last tested can be found stamped on the rim of the gas cylinder.

Leakage of gas cylinders is a risk as gas is heavier than air. Gas will accumulate at low levels within a structure or facility and is slow to disperse. If at any stage a potential leak is identified, it is important that the gas supply is isolated. This can be best achieved by closing the gas cylinder valve. Gas cylinders shall be stored with all valves closed when not in use.

The only permanent connection permitted to be undone by an un-licensed person is the connection to the gas cylinder and quick release connections.

When setting up gas cylinders the following must be adhered to:

- Gas cylinders must be located away from excessive heat.
- Gas cylinders must be restrained to prevent them from falling over. A vented crate should be used to secure the gas cylinder and placed on a level surface.
- All connections must be wrench tight. Finger tight is not enough.
- Before operating appliances, all connections must be checked for tightness and leaks. The use of soapy water is the easiest method to check for leaks.
- The gas setup must be installed and commissioned by a licensed gasfitter. A licenced gas fitter may issue you with a certificate of compliance and attach the compliance plate to the gas setup.

Regulators

Regulators provide control over the delivery rate and pressure within a gas system. Regulators are an important safety feature of any gas installation. All gas setups at markets, shows and sporting events require a low pressure dual stage regulator.

The cylinder regulator must be low pressure (3 kPa maximum outlet pressure) with all appliances operating. A cylinder regulator should be rigidly fixed to an adequate support independent of the cylinder and mounted with the diaphragm vertical and the vent pointing vertically downwards. Regulators shall be connected to the gas cylinder in accordance AS 5601.

Gas hoses

Hose connections from the appliance to the gas cylinder should be at the back of the appliance to prevent the operator, staff or public tripping on or being caught up in the hose and also to provide a safe working environment.

A flexible hose, connected from the regulator to the gas appliance should be kept approximately 1.5 metres in length. The hose type should be to the relevant standard for the appliance and for the application it is being used in.

An approved flexible pigtail hose is to be used to connect the regulator to the gas cylinder. This hose also has an excess flow valve that slows the flow of gas should the hose be damaged.

Because of the temporary nature of market type stalls, flexible hoses are subject to greater damage from increased handling.

You should regularly inspect the condition of your hoses and engage a gas fitter to replace the hose if it is damaged or deteriorated in any way.

The below pictures are examples of gas setup that can be used by stall holders.



The below pictures of hoses, regulators and appliances are not suitable to be used by stall holders



Appliances

- Ring burners and portable wok burners are not accepted at events unless the burner is certified with an integral pan support.
- Appliances on benches need to be secured to prevent movement and should be on a non-combustible surface.

Below are some examples of camping or leisure products that are not suitable together with commercial alternatives.

Not acceptable



Acceptable



Consider the following	Yes	No	Comments/Action
General			
Do staff know what to do in an emergency?	<input type="checkbox"/>	<input type="checkbox"/>	
Has someone been trained in the use of a fire extinguisher?	<input type="checkbox"/>	<input type="checkbox"/>	
Has someone been trained to change the gas cylinders?	<input type="checkbox"/>	<input type="checkbox"/>	
Gas Cylinders			
Is the cylinder within the 10 year test period?	<input type="checkbox"/>	<input type="checkbox"/>	
Is a compliance plate fitted?	<input type="checkbox"/>	<input type="checkbox"/>	
Is the cylinder in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	
Have the connections been tested for leaks?	<input type="checkbox"/>	<input type="checkbox"/>	
Are cylinders secured or crated?	<input type="checkbox"/>	<input type="checkbox"/>	
Have you checked the cylinder isn't blocking an exit path?	<input type="checkbox"/>	<input type="checkbox"/>	
Have you checked the cylinder quantity is not exceeded?	<input type="checkbox"/>	<input type="checkbox"/>	
Have you checked the cylinder size is not exceeded?	<input type="checkbox"/>	<input type="checkbox"/>	
Are all portable gas appliances correctly secured and placed on even surfaces?	<input type="checkbox"/>	<input type="checkbox"/>	
Are cylinders to be used located away from flammable materials and ignition sources?	<input type="checkbox"/>	<input type="checkbox"/>	
Gas Regulators and hose connections			
Are dual stage regulators fitted rigidly?	<input type="checkbox"/>	<input type="checkbox"/>	
Are the regulators in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	
Is the regulator diaphragm mounted vertically?	<input type="checkbox"/>	<input type="checkbox"/>	
Are the hoses of approved material?	<input type="checkbox"/>	<input type="checkbox"/>	
Are the hoses and fittings in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	
Are they protected from accidental damage?	<input type="checkbox"/>	<input type="checkbox"/>	
Are the hoses less than 1.5m in length (no joiners)?	<input type="checkbox"/>	<input type="checkbox"/>	
Are quick release fittings fitted on appliances and hoses?	<input type="checkbox"/>	<input type="checkbox"/>	

Consider the following	Yes	No	Comments/Action
Gas Appliances			
Is the gas appliance being used approved for commercial use?	<input type="checkbox"/>	<input type="checkbox"/>	
Is the service history available?	<input type="checkbox"/>	<input type="checkbox"/>	
Are they in good working condition?	<input type="checkbox"/>	<input type="checkbox"/>	
Are safety devices not tampered with?	<input type="checkbox"/>	<input type="checkbox"/>	
Will the gas appliance be in a well-ventilated location?	<input type="checkbox"/>	<input type="checkbox"/>	
Do you have the required clearances from LP Gas cylinders?	<input type="checkbox"/>	<input type="checkbox"/>	
Are external appliances not in an internal location?	<input type="checkbox"/>	<input type="checkbox"/>	
Does appliance pressure not exceed 3kpa?	<input type="checkbox"/>	<input type="checkbox"/>	
Are appliance identification details recorded on the appropriate supply cylinders (e.g. number)?	<input type="checkbox"/>	<input type="checkbox"/>	
Are taps and knobs in good condition and marked?	<input type="checkbox"/>	<input type="checkbox"/>	
Fire Safety			
Do you have a 1.5kg (E) Dry chemical fire extinguisher?	<input type="checkbox"/>	<input type="checkbox"/>	
Has the extinguisher been tested and valid for use?	<input type="checkbox"/>	<input type="checkbox"/>	
Will the extinguisher be mounted and clearly visible?	<input type="checkbox"/>	<input type="checkbox"/>	
Do you have 1 x fire blanket clearly visible (where deep fryers are used)?	<input type="checkbox"/>	<input type="checkbox"/>	
Electrical safety			
Are electrical appliances inspected and passed for use? (tested and tagged)	<input type="checkbox"/>	<input type="checkbox"/>	
Are extension leads inspected and passed for use?	<input type="checkbox"/>	<input type="checkbox"/>	
Are extension leads from distribution box to the stalls heavy-duty 15 amp?	<input type="checkbox"/>	<input type="checkbox"/>	
Will you ensure that overhead leads are supported at a minimum of 3m intervals?	<input type="checkbox"/>	<input type="checkbox"/>	
Are portable power boards individually switched?	<input type="checkbox"/>	<input type="checkbox"/>	
Will you ensure that no extension leads are at floor level in access / egress / walkways?	<input type="checkbox"/>	<input type="checkbox"/>	
If using a van or caravan, have you ensured that you have double pole switching?	<input type="checkbox"/>	<input type="checkbox"/>	

NT WorkSafe

Work Health and Safety

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Workers Rehabilitation and Compensation

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