

energy

Bulletin

ISSN 1323-8957

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Electrical Safety Awards 2002

Readers may recall from the last Energy Bulletin (No. 24 - July 2002) that this year, Energy Safety conducted the "Energy Safety WA and Electrical Contractors Association of WA Electrical Safety Awards". This was under an arrangement with the Electrical Contractors Association.

Energy Safety was also able to secure a co-sponsorship arrangement with major electrical corporation Siemens.

Nominations for the safety awards were sought by way of advertisements in industry journals, letters to electrical inspectors and electricity supply authorities, invitations to Master Builders Association and Housing Industry Association members and an article in the Energy Bulletin.

The response was excellent - 34 nominations were received, covering 26 electrical contracting businesses - 13 in each category.

A panel chaired by Kevan McGill, Deputy Director Energy Safety and comprising senior representatives of Energy Safety, the Electrical Licensing Board, WorkSafe, the Association of Consulting Engineers Australia and the Electrical Contractors Association, selected six finalists for the awards.

The two winners were announced at the Electrical Contractors Association's "Awards of Excellence" presentation night held on 14th September 2002 at the Hyatt Regency Hotel, Perth.


It was with pleasure that I congratulated the winners of this year's Electrical Safety Awards:

- Category 1 (Less than 10 employees)
- Always Electrical, represented by Arie Hordyk
- Category 2 (Ten or more employees)
- Downer RML Pty Ltd, represented by Bob Hatherley

Each winner received an award certificate and a voucher to purchase Bosch electrical tools to the value of \$1,500.00, sponsored by Siemens.

When congratulating the winners and acknowledging the good work of all electrical contractors nominated, I encouraged all electrical contractors to look seriously at the safety management plans that they either have in place - or should have in place. It is imperative that electrical contractors and their staff can be confident about their own electrical safety and the electrical safety of their clients.

To conclude, the level of interest in this year's new-look awards was very pleasing and I look forward to even more electrical contractors nominating for the awards next year.


ALBERT KOENIG
DIRECTOR OF ENERGY SAFETY

Energy Safety



Department of Consumer
and Employment Protection

Energy Safety
20 Southport Street
West Leederville
Western Australia 6007

Telephone: (08) 9422 5200
Fax: (08) 9422 5244
Email: energysafety@docep.wa.gov.au
Internet: www.energysafety.wa.gov.au

REPORT ON ACTIVITIES 2001/2002

This Report on Activities 2001/2002 outlines the principal work of the Technical & Safety Division of the Office of Energy, Western Australia, during its final year, before it transferred and became Energy Safety, a Directorate of the Department of Consumer and Employment Protection.

Overview of the Technical & Safety Division of the Office of Energy

The Office of Energy was a department built administratively around two statutory positions:

- The Coordinator of Energy, a position that deals with energy market policy and related reforms, and also has statutory responsibility for authorising the supply of electricity and gas; and
- The Director of Energy Safety, a position that has statutory responsibility for the technical and safety regulation of all electricity production, transmission, distribution and utilisation, as well as gas distribution and gas utilisation.

The current Director of Energy Safety is Albert Koenig and he has held this position since the inception of the Office of Energy on 1 January 1995. Until 30 June 2002 he was also head of the Office's Technical & Safety Division. The staff of this Division provided the administrative and technical support necessary for execution of the many statutory functions associated with technical and safety regulation of the State's electricity and gas industries.

The Director has independent powers through his statutory position, although the responsible Minister in regard to any matter pertaining to his functions may direct him. Such directions are required to be tabled in Parliament. No such direction was issued during the year.



The Director of Energy Safety,
Albert Koenig

In addition to its regulatory functions, the Division also:

- promoted the safe use of energy to the public and industry; and
- played an important part in the State's emergency management framework, by chairing the Lifeline Services Group and taking responsibility for the management of liquid fuel shortages, should they occur.

The Division was a significant part of the Office's resources during the year, constituting more than half the Office's establishment. On 30 June 2002 the Division and the Director ceased being part of the Office of Energy and transferred to another department, as described below.

Changes from the Machinery of Government (MOG) Review

During the year, the MOG Review's recommendation to transfer one part of the Technical & Safety Division to the Department of Consumer and Employment Protection (DOCEP) and the remaining part to the Department of Mineral and Petroleum Resources was reassessed and modified at the request of the Director. Ministers agreed that it would be better to transfer the entire Division to DOCEP as this would keep all related regulatory functions together and place them in a compatible "all-regulatory" departmental environment.

A considerable amount of effort was then made during the remaining part of the year to plan for the transfer of the Division to DOCEP. This took place on 30 June 2002. The Division is now referred to as "Energy Safety". For the time being, Director of Energy Safety Albert Koenig continues to be responsible to the Minister for Energy in respect of statutory functions performed.

It is anticipated that future legislation changes (as part of public sector wide MOG changes) will allow the legislative provisions dealing with the Director's functions to be separated and allocated to the portfolio of the Minister for Consumer and Employment Protection, to whom DOCEP reports.

Legislation Implemented

The Technical & Safety Division managed the following legislation projects during the year:

• *Electricity (Supply Standards and System Safety) Regulations 2001*

These regulations deal with technical and safety regulation of the electricity supply industry, covering system safety requirements as well as minimum standards for electricity supply quality, reliability and metering accuracy.

The regulations were in development for over 6 years, reflecting the difficulty faced by the Technical & Safety Division when seeking to introduce new regulatory regimes necessary for new industry structures. Extensive consultation took place during various phases of the 6-year period and culminated in gazettal of the regulations in late 2001.

• *Electricity (Licensing) Amendment Regulations 2001*

These regulations increased electrical industry operative licensing fees, as part of a plan to achieve full cost recovery.

• *Gas Standards (Gasfitting and Consumer Gas Installations) Amendment Regulations 2001*

These regulations increased gas industry operative licensing fees, as part of a plan to achieve full cost recovery.

• Amendments to s.18 of the *Electricity Act 1945* (as provided by the *Electricity Amendment Act 1996*) were proclaimed and came into force on 8 March 2002.

The amendment of s.18 relied on the coming into force of the *Electricity (Supply Standards and System Safety) Regulations 2001* and dealt with technical requirements for overhead power lines.

• *Electricity (Energy Efficiency and Labelling) Notice 2001.*

This notice made new types of electrical appliances (3-phase motors to 185 kW and air conditioners to 65 kW) subject to MEPS (Minimum Energy Performance Standards) as prescribed by the *Electricity Regulations 1947*.

Other Policy Work

Code of Practice for Inspectors (Electricity)

The Code of Practice for Inspectors (Electricity) in Western Australia was produced by the Technical & Safety Division. The code assists people designated or intending to be designated as an Inspector (Electricity) by clarifying their roles and obligations. The code also provides an understanding of the inspection regime.

National Regulatory Coordination and Standards Development

The Technical & Safety Division is represented on the following national regulatory coordination bodies and technical committees in standards development work:

National Regulatory Coordination Bodies:

- Electrical Regulatory Authorities Council (ERAC)
- Gas Technical Regulators' Committee (GTRC)
- National Uniform Electrical Licensing Advisory Council (NUELAC)
- National Appliance and Equipment Energy Efficiency Committee (NAEEEC)
- National Oil Supply Emergency Committee (NOSEC)

National Standards Councils, Boards and Committees:

- Council of Standards Australia (representing the Government of WA)
- Standards Accreditation Board
- Electrotechnology Sector Standards Policy Board
- Gas Technical Standards Council
- AG5 Industrial Gas Appliances
- AG6 Gas Installations
- AG9 Natural Gas Vehicle Technical Standards
- AG10 Specification For Natural Gas Quality
- CH-038 Liquefied Petroleum Gas
- EL1 Wiring Rules & related sub-committees
- EL2 Electrical Appliance Safety
- EL4 Electrical Accessory Safety
- EL11 Electricity Metering
- EL42 Renewable Energy Power Supply Systems
- EL43 High Voltage Electrical Installations
- ME46 Gas Fuel Systems for Vehicle Engines

During the year it became evident that Standards Australia has been unable to introduce all of the necessary companion documents for newly introduced standards that are referenced in legislation. Additionally, some new and unreasonable requirements in the documents cannot be justified on the grounds of safety. This has caused a negative reaction from industry. The Director of Energy Safety is presently addressing these matters with Standards Australia.

Legislation Development Projects in Progress

The Technical & Safety Division progressed the following projects during the year:

• Gas Distribution Legislation Amendment Bill:

This Bill has been drafted and awaits Government approval for introduction into Parliament. The Bill proposes to improve order-making powers for gas inspectors under the *Energy Coordination Act 1994*, and amend the *Gas Standards Act 1972* to clearly define the installation inspection regime and provide improved powers for the enforcement of gas regulations and statutory requirements. It is hoped the Bill will be passed during the 2002-03 year.

• Acts Amendments (*Power Lines and Vegetation*) Bill and related regulations:

This drafting work deals with amendments to the *Energy Corporations (Powers) Act 1979* and the *Electricity Act 1945*, to define in the latter a regulatory regime for tree control clearances and obligations of land occupiers, electricity network operators and other. This regime is expected to recognise and formalise the practices that have been developed during recent years, following extensive community consultation, especially in the metropolitan hills areas. It is hoped the Bill and regulations can be finalised during the 2002-03 year.

• Review of the *Electricity (Licensing) Regulations 1991*:

This work has already seen extensive industry consultation and is progressing to a second stage of consultation, as drafting of proposed amendments has been completed. The amendments will be finalised during the 2002-03 year.

• Review of Boards and Committees: As part of the second stage of the Machinery of Government Review, the functions and powers of the Electrical Licensing Board are being reviewed. This review is complicated by the concurrent proposals for a WA Civil & Administrative Review Tribunal (WACART) as these suggest that all disciplinary powers in respect of licence holders - for both electrical and gas industry operatives - should be transferred to the WACART (now known as SAT, the State Administrative Tribunal), aside from the latter acting as the central appeals body. This policy issue will be finalised during the 02/03 year.

• Review of Part IX of the *Electricity Regulations 1947*:

This Part deals with the "General safety requirements for electrical work". Due to a number of serious electrical accidents involving work on energised low voltage electrical equipment, the Minister for Energy requested that the Director conduct a review of the safe work practices of the electrical contracting industry. This review is currently in progress and is expected to be completed by the end of 2002. It has become evident that the entire content of Part IX of the regulations requires updating as part of improving safety in that industry.

• Review of Legislation Generally: It will be necessary during the 2002-03 year to review and align the Acts and Regulations containing electricity and gas technical and safety regulation provisions, with approved proposals for the reform of electricity and gas markets. The Director of Energy Safety provided advice to the Electricity (Market) Reform Task Force in that regard during the year.

Trans-Tasman Mutual Recognition of Gas Appliances

The stalemate on this policy issue continues. There has been very little progress between Australia and New Zealand under the Trans Tasman Mutual Recognition Agreement (TTMRA), with respect to gas appliances. Until the proposal for mutual recognition based on appliances meeting acceptable standards and certification processes is legislated in New Zealand, progress will be unlikely. A further rollover of the temporary exemption will be necessary early in 2003.

Electrical Inspections

Electrical Inspections and Investigations Summary

Inspections of installations not supplied from utility supply systems	888
Investigations into breaches of the Electricity Act & Regulations resulted in -	195
Prosecutions	60
Warnings	58
Investigations into various types of reported electrical safety incidents including fatalities	230
Audits of electrical appliance retailers, in respect of compliance with statutory safety and energy efficiency labelling requirements	19
Surveys/audits of electrical contractor/air conditioning installers' work systems and practices	90

Electrical Installation Inspections by Supply Authorities

All electricity supply authorities inspect consumer installations supplied by their networks or supply systems, under statutory obligations that require them to develop and then comply with Inspection Plans and Policy Statements after they are approved by the Director of Energy Safety. The supply authorities may carry out sample inspections in accordance with their approved Plan, rather than inspect all installations. The supply authorities' inspectors carry out many safety inspections across the State via this process. The inspectors are employed by the supply authorities but designated (given their powers) by the Director. They are required to work in accordance with not only the Inspections Plans but also a Code of Practice issued by the Director.

During the year, new Plans were approved and compliance audits were conducted by Technical & Safety Division at Western Power Corporation (metro operations), Robe River Iron Associates (which services Wickham and Pannawonnica), BHP Iron Ore (which services Newman), WMC Resources (which services Leinster), Hamersley Iron (which services Dampier, Tom Price and Paraburdoo) and Rottneest Island. This resulted in corrective action requests being issued to some authorities to improve compliance.

Electricity-related Accidents

The following electrical accidents were reported to Technical & Safety Division:

Electric shocks	597
Accidents (incidents where injury has been sustained requiring hospital treatment) including 2 electrocutions	21

The two electrocutions (ie. fatal shocks) took place as follows:

- Whilst attempting to install a telephone cable in the roof space of an old residence, a man inadvertently contacted an exposed part of a (live) conductor of a single insulated, open-wiring system.

- A man contacted live terminals within a distribution board at a mine site.

Electricity Supply Investigations

During the year, Technical & Safety Division carried out many investigations into electricity supply related safety incidents, tree cutting complaints and supply quality/reliability concerns. Advice was also provided to the Minister in response to a number of specific requests.

Western Power was prosecuted for failing to report an incident under regulation 63 of the *Electricity (Licensing) Regulations 1991*. The incident involved the collision of a barge-mounted derrick with a high voltage overhead power line in 1999. The prosecution was dismissed on a legal technicality and an appeal has been lodged in order to clarify the reporting obligations under the regulations.

There was a coronial inquest into the death of a Western Power Employee (Engineer Mr Daren Tan), who died following a severe high voltage electric shock at a Coolgardie Substation in January 2000. Officers of the Technical & Safety Division (including the Director) attended the inquest and gave testimony. [see Electrical Focus No. 25 in this issue of the Energy Bulletin for the Findings of the Coroner].

Gas Inspections

Gas Inspections and Investigations Summary

Mine Sites	28
Authorisation Holders	19
Gas Suppliers	72
Inspections Carried Out During Regional Visits	332

Caravans/Campervans	44
Autogas Installations	72
Mobile Food Vending Vans	59
Marine	46
Appliance Retail Outlets	118
Hire/camping Company Audits	55
Second-hand Outlets	127
Number of Notices of Defect issued on new gas installations inspected by the Gas Inspection Branch	37
Number of Inspector's Orders written where gas installations were inspected by Gas Inspection Branch and required maintenance or repair	133
A total of 209 investigations into various incidents (including fires) resulted in 5 prosecutions and 9 warnings	

Gas Installation Inspections by Gas Suppliers

All Natural Gas and LP Gas suppliers inspect consumer installations supplied by their networks or supply systems, under statutory obligations that require them to develop and then comply with Inspection Plans and Policy Statements after they are approved by the Director of Energy Safety. Gas suppliers may carry out sample inspections in accordance with their approved Plan, rather than inspect all installations. Gas suppliers' inspectors carry out many safety inspections across the State via this process. The inspectors are employed by the gas suppliers but designated (given their powers) by the Director. They are required to work in accordance with not only the Inspections Plans but also a Code of Practice issued by the Director.

During the year, the Director approved new plans for AlintaGas and Wesfarmers Kleenheat Gas. Compliance audits were conducted by Technical & Safety Division at a number of suppliers at various locations. This resulted in corrective action requests being issued to improve compliance.

Gas Incident Reports

Number of reported gas safety incidents with completed reports	114
Number of gas accident reports (where injury has been sustained requiring hospital treatment)	15
Gas related fatalities **	1

** This incident related to the inappropriate use of an LP Gas cylinder that exploded when filled with compressed air and used for a heating process with a gas cutting-torch.

Gas Appliance Approvals

Type A gas appliances are domestic or commercial appliances such as room heaters, cooking appliances and hot water systems. Type B appliances are any gas appliances larger than 10 Mj/hr and are mainly industrial appliances such as boilers, furnaces, kilns and power generating gas equipment.

During the year, inspectors from the Technical & Safety Division inspected and approved 112 Type A gas appliances from 59 submissions. Some local manufacturers seek this approval for small numbers of gas appliances to test the market acceptance of these appliances, prior to large-scale production and obtaining full Australian Gas Association approval.

Type B industrial gas appliance approvals by all inspectors totalled 366, a high number that reflects the importance and benefits of the availability of "independent Type B gas appliance inspectors". These inspectors were established by the Technical & Safety Division some 6 years ago. They are privately employed inspectors, designated by the Director, who work to regulated standards. They offer their services on a fee-for-service basis to all areas of industry.

Mine Site Gas Inspections

Compliance inspections conducted by Technical & Safety Division inspectors has highlighted quite a number of non-compliances with the regulations at mine sites throughout Western Australia. Some of the breaches identified were of a safety concern. In one instance, a Type B gas appliance had to be prohibited from use until such time as the inspector was able to be satisfied that the gas appliance was again safe for operation.

The Technical & Safety Division will continue with this safety inspection program throughout 2002/03 to seek to ensure that these installations are safe to operate. Efforts will be made at the same time to educate industry on the obligation to comply with all the relevant requirements of the regulations.

Gas Sampling

Sampling of Natural Gas was witnessed and sampling of LP Gas (liquefied petroleum gas) was carried out throughout the State. Gas

samples were tested for compliance with the quality standards contained in the Regulations. There were 53 Natural Gas and 59 LP Gas samples tested for heating value, quality and odorant levels, as well as for compliance with legislative requirements.

Licensing of Industry Operatives

Gas Licensing

At 30 June 2002, there were 6,398 persons registered for gasfitting work.

The Gas Licensing Committee, operating under the delegated authority of the Director of Energy Safety, interviewed 19 gas fitters. This resulted in 4 formal inquiries which were conducted by the Deputy Director Energy Safety, also under the delegated authority of the Director. The outcomes of the interviews/inquiries were:

Permits Cancelled	1
Permits Suspended	1
Certificates of Competency Suspended	1
Authorisations Cancelled	1
Gas Fitters Required to Undertake Further Training	9
Gas Fitters Censured for Their Actions	3

Licensing of Electrical Operatives

At 30 June 2002, there were 22,270 electrical workers, 3,029 electrical contractors and 227 in-house licence holders registered. The licensing of electrical operatives is carried out by the Electrical Licensing Board, although most licence issuing functions have been delegated to staff of the Technical & Safety Division. The Board's principal focus and effort (in terms of time spent by Board members) is on licence holder discipline.

Members of the Electrical Licensing Board as at 30 June 2002 were:

- Mr R G Pritchard - Chairman, self employed Consulting Engineer
- Mr R Butterworth - nominated by the Department of Training
- Mr K Roshier - nominated by the Director of Energy Safety
- Mr J Sweeting - nominated by the Electrical Contractors Association WA
- Mr R Graham - appointed as a

person with knowledge of restricted electrical work

- Mr G Wrigley - nominated by the Chamber of Minerals & Energy and the Chamber of Commerce & Industry of WA (Inc)
- Mr J Murie - nominated by the Communications, Electrical, Plumbing Union.



Members of the Electrical Licensing Board are, from left to right, Rod Butterworth, John Sweeting, Jim Murie, Bob Pritchard, (Chairman, seated), Geoff Wrigley, Ross Graham, Peter Tuck (Executive Officer Electrical Licensing Board) and Kevin Roshier (inset)

The Electrical Licensing Board met 25 times during the year. The Board also conducted 74 investigations including 7 formal disciplinary proceedings and 8 summary proceedings. The outcomes were:

Electrical Contractor Licences Cancelled	4
Electrical Worker Licences Cancelled	4
Electrical Contractor Licences Suspended	2
Electrical Worker Licences Suspended	8
Operatives Required to Undertake a Competency Assessment	36
Operatives Censured	9
Operatives Required to Undertake Further Training	6

Energy Safety Promotion

Technical Seminars

Electrical and gas seminars were held by the Technical & Safety Division at a wide range of metropolitan and country venues. The seminars covered electrical worker and gas fitter licensing issues, case studies of defective work and electrical or gas accidents, supervision requirements, changes to legislation and specific technical issues.



Electrical industry operatives attending a seminar at the Ascot Racecourse

State Emergency Management

Under the State emergency management framework, the Technical & Safety Division has responsibility for managing liquid fuel emergencies. This requires the Division to develop and maintain a formal plan for ensuring industry cooperation, in the event that liquid fuel rationing may be required. No such emergencies occurred during the year.

The Division maintained its involvement in the emergency management framework during the year through:

- Participation of the Director as a member of the State Emergency Management Committee, a policy setting body which is chaired by the Police Commissioner in his role as the State Emergency Coordinator;
- The Director chairing of the Lifeline Services Group, which operates to maintain a high level of cooperation between utilities and between utilities and emergency services organisations; and
- Senior staff participation in the Lifelines Operational Group, which maintains a valuable communication network between senior operational personnel of the Lifelines. This network is vital during emergencies.

Discussions were held and agreement was reached with Epic Energy, to improve communication protocols during times of prospective plant or other problems that might affect gas supplies off the DBNG pipeline.

There were 10 seminars attended by approximately 1,200 electrical industry personnel and 17 seminars attended by 1,100 gas industry personnel.

Energy Bulletins

This publication is the major electrical and gas industry communication vehicle of the Technical & Safety Division. Three Energy Bulletins were produced and widely issued through direct mail and industry outlets. Energy Bulletins cover technical and safety regulatory issues, technical standards and energy industry news.

Electrician's Newsletter

The Electrician's Newsletter was again published by the Technical & Safety Division during the year. The Newsletter is emailed to electricians who register their email details with the Division.

Sponsorship

During the year, the Technical & Safety Division sponsored:

- Two Electrical Safety Awards as part of the Electrical Contractors Association Annual Excellence Awards; and
- One Award to the plumbing trade apprentice with the best gasfitting results, as part of the Master Plumbers & Gas Fitters Association Annual Awards.

Advertising Campaigns for Public Safety Awareness

There was no advertising of this kind during the year by the Technical & Safety Division due to lack of funds, notwithstanding that requests had been made during the budget cycle.

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For enquiries on articles in the Energy Bulletin, please contact Harry Hills – Energy Safety

20 Southport Street West Leederville WA 6007

Telephone: (08) 9422 5208 • Fax: (08) 9422 5244

Email: energysafety@docep.wa.gov.au

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