

energy

Bulletin

ISSN 1323-8957

In this issue...

Energy Bulletin

- Introduction of natural gas in Esperance
- Western Power's increased network expenditure
- New protection for gas consumers
- The Gas Industry Ombudsman
- Proposed amendments to the Electricity (Licensing) Regulations 1991
- Energy Safety's Gas & Emergency Management Directorate
- New Chairman of the Electrical Licensing Board
- Energy Safety hosts 2004 gas inspectors' workshops and conference
- International fuel conference to be held in Perth

Electrical Focus

- Fault-loop impedance checks
- Carrying out assessments of existing installations
- Neutral voltage rise
- Carrying out electrical installing work for self
- Replaced electrical worker licences
- Disciplinary action taken by the Electrical Licensing Board
- Prosecutions for breaches of the Electricity (Licensing) Regulations 1991

Gas Focus

- Gas isolation of water heaters
- Gas bayonet fitting ventilation requirements
- Notice of Completion and Compliance Badge
- Disciplinary action taken by the Director of Energy Safety
- Prosecutions for breaches of the Gas Standards Act 1972 and Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999

Security of electricity infrastructure

Early in June 2004, Energy Minister Eric Ripper announced Western Power's four-year plan to spend more than \$8million to recruit more than 100 workers to improve response times and reliability of power supplies.

Western Power is embarking on this major recruitment drive at a time when there is a worldwide demand for experienced lines people. These additional operational staff will be used to restore power supplies in the event of faults, storms or fire damage.

Also, response times will be further enhanced with the introduction of new rapid response emergency vehicles that have been trialled during the past 12 months.

This investment is part of a major program of spending on the electricity network throughout the State to improve the safety, reliability and quality of power supplies (see article inside this Energy Bulletin).

Western Power's commitment will increase the number of workers and equipment available to repair and maintain assets comprising 80,000 km of lines and 800,000 poles, as well as to be better equipped to respond to emergencies.

In addition, following a massive increase in the State Budget, Western Power will spend \$1.8billion over the next four years to improve the performance of its electricity network.

Geoff Wood

GEOFF WOOD
A/DIRECTOR OF ENERGY SAFETY

Energy Safety has undergone a major restructure since becoming a Division of the Department of Consumer and Employment Protection.

This edition of the Energy Bulletin introduces the new Gas & Emergency Management Directorate, headed by Geoff Wood.

Esperance and the surrounding regions are set for an economic boom following the completion of an energy infrastructure upgrade worth more than \$100million.

Leading up to these events, Energy Safety's Chief Gas Inspector and Gas Regulatory Officer visited Esperance and gave presentations on gas regulatory matters to gas operatives and other business interests in the area.

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

Introduction of natural gas in Esperance

Esperance and the surrounding regions are set for an economic boom following the completion of an energy infrastructure upgrade worth more than \$100million, including construction of:

- a \$45million, 330km gas pipeline from Kambalda to Esperance;
 - a \$45million gas-fired power station in Esperance; and
 - the \$10million, Nine Mile Beach wind farm,
- and
- a new substation, underground cabling to the power station and upgrading of scores of transformers at a cost of \$6million.

For the first time, North-West shelf gas has been piped to the southern coast.

The pipeline and power station were built by Burns and Roe Worley (BRW) after the company was successful in a competitive tender process to replace Western Power's ageing diesel power station. BRW will supply electricity to Western Power at a lower generation cost and at higher environmental standards than existing diesel generators. Compared with Western Power's old diesel power station, greenhouse gas emissions are expected to be slashed by up to 30 per cent.

The power station will supply Western Power's 6,327 business and residential customers in and around Esperance, stretching west to Munglinup, east to beyond Condingup and north to Salmon Gums.

Both the power station and the gas pipeline have the capacity to meet expanding demand in the district. Installed capacity of the power station is now 33 megawatts and can rise to 44 megawatts as the region grows.

Installation and commissioning of the six gas-fired turbines and power station infrastructure required the

work to be carried out by gas fitters or, as in this case, under an Energy Safety gasfitting authorisation. Energy Safety issued an Authorisation for installation and commissioning

early in 2004. And an Energy Safety designated independent Type B Gas Inspector inspected and certified the gas installation for permanent connection to the gas supply system early in April 2004.

Leading up to these events, Energy Safety's Chief Gas Inspector Kevin Hooper and Gas Regulatory Officer David Hartley visited Esperance in early April. Kevin conducted a regional visit and David was invited by Solar Turbines to give two presentations on gas regulatory matters to operators and maintenance workers of the new gas-fired power station. Kevin and David also took the opportunity to hold an industry presentation on gas safety and licensing requirements to registered gas fitters and other stakeholders.

In addition to gas fitters, representatives from the Real Estate Industry, the Chamber of Commerce and Industry and the Esperance Shire, as well as a local hotelier, attended the presentation.

John Ovenden, General Manager of BRW Power Generation (Esperance) Pty Ltd, gave an overview of his company's plan to make natural gas available to local businesses and residences. The introduction of natural gas into Esperance is expected to present new business opportunities in the region.

John explained how the new pipeline was built and the engineering considerations that went into it. Spare capacity was



Esperance gas-fired power station

foremost on John's company's plans with a view to future expansion. Experience gained from other projects was incorporated into the design of the pipeline. As future demand increases, it will just be a matter of installing additional compressor capacity at Kambalda, as well as half way and two thirds the way along the pipe.

The first stage of the gas reticulation is taking part in the Esperance central business district (CBD) and surrounding suburbs. A spur pipe heading east into the light industrial area will eventually be extended to provide gas to the eastern subdivisions. Plans are in place for the reticulation of each new subdivision.

Once the network reaches a subdivision, natural gas will then be available to consumers.



John Ovenden explaining BRW plans for gas reticulation of Esperance

(Continued over page)

(Continued from previous page)

Energy Safety will continue to monitor progress of the rollout and audit those involved in the natural gas project. The reticulation process and procedures must comply with the *Gas Standards (Gas Supply and System Safety) Regulations 2000*. Installation work must be carried out in accordance with Australian Standard AS 5601/AG 601.

Existing consumer gas installations will need to comply with the *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999* before they can be converted to use natural gas.

Gas fitters attending the presentation showed keen interest in updating their gasfitting skills and knowledge. In particular, some of the gas fitters who only have LP Gas endorsed licenses want to obtain natural gas endorsement. Others expressed an interest in attending a course on converting gas appliances to use another form of gas.

On the matter of gas appliances, some are easily converted using manufacturers' conversion kits (usually newer appliances). Older appliances may need to have kits made up and approved before they can be converted. Others may need specialised skills to convert, thus requiring field combustion testing. Whichever method is employed, gas fitters are reminded that unless they hold the appropriate licence and have the competence to safely carry out the conversions, then they must not undertake conversion work.

Western Power's increased network expenditure

In May 2004, Energy Minister Eric Ripper announced details of the State Government's \$49million program to improve electricity reliability in country areas of the State's South-West power grid.

The new, four-year Rural Power Improvement Program will address the high number and duration of outages experienced by some country customers.

The Minister conceded that Western Australians deserve a safe and reliable power supply. Also, reliable power supplies are critical to the development of regional economies and to the quality of life of residents.

The program will target 'hot spots' in the South-West electricity grid, which stretch from Kalbarri in the north, east to Kalgoorlie and south to Albany. Spending would target maintenance, pole inspection and replacement, bushfire mitigation and capacity improvements.

This upgrade program is in response to Energy Safety's recommendations in late 2003, following many complaints from electricity consumers, particularly in the central Wheatbelt and Great Southern areas.

Western Power has already committed to the recommended improvements for the Bremer Bay township. This new program will complement that work.

The Director of Energy Safety is confident that country consumers will see progressive improvements as a result of this new program. He is encouraging country consumers to make their situation known to the now established Rural Power Improvement Program Committee so the committee, which will advise Western Power, can decide on overall priorities for the work to be done in the years ahead.

Energy Safety will continue to monitor the ongoing performance of Western Power's network.

New protection for gas consumers

In May 2004, Energy Minister Eric Ripper announced new consumer protection measures that form the centrepiece of major reforms to the Western Australian gas market.

The key to these changes is protecting the rights of residential and small business gas customers.

The reforms opened up the 490,000 strong residential and small business gas market to competition, officially ending the Alinta monopoly.

The Government has put in place:

- a gas industry ombudsman;
- a gas marketing code of conduct;
- regulations for standard form contracts; and
- tariff caps.

The Gas Industry Ombudsman will investigate customer complaints about gas companies, including gas supply and billing disputes. The Ombudsman has the power to make decisions that are binding on gas companies and will operate at no cost to residential and small business customers.

The Gas Marketing Code of Conduct specifies what gas companies can and cannot do when they market gas to residential and small business customers.

Regulations covering standard form contracts specify the conditions that gas companies must make available to their customers. Contracts must be written in clear and easy to read language, indicate how billing is determined, how disputes are to be resolved and how confidential information is to be handled.

Prices offered to residential and small business customers under a standard contract would not be able to exceed the price caps established by the State Government.

Changes to the WA gas market apply to all residential and small business customers consuming less than one Terajoule of gas per year, but not to bottled gas customers. Most residential and small business customers use about 20 Gigajoules per year.

The Gas Industry Ombudsman

A key element of the recently announced major reforms to the Western Australian gas market is the appointment of a Gas Industry Ombudsman.

Deirdre O'Donnell has been appointed as the Gas Industry Ombudsman.

Matters that the Gas Industry Ombudsman can investigate include:

- complaints concerning the provision or supply of (or failure to provide or supply) gas services by a gas company to a customer;
- billing disputes;
- the administration of credit and payment services for a particular customer;
- disconnection, restriction and refundable advance complaints; and
- complaints from owners and occupiers of land or other property about the way in which a gas company has exercised its statutory powers in relation to that land or other property or in relation to neighbouring land or other property.

Complaints may be made by consumers of gas and by persons directly affected by the provision or supply of (or failure to provide or supply) gas services. The GIO's functions do not extend to:

- the setting of prices or tariffs or determining price structures;
- commercial activities that are outside a gas company's licence to supply gas;
- the content of Government policies;
- complaints which are specifically under consideration by any court or tribunal, or which have been considered by any of those bodies previously;
- any matter specifically required by legislation;
- events beyond the reasonable

control of a gas company and their consequences, bearing in mind current law and reasonable and relevant industry practice; and

- actions taken by a gas company and their consequences, in complying with a direction, notice or other like instrument received by the company.

LP Gas provided in bottles and cylinders is not within the jurisdiction of the GIO.

Information about the Gas Industry Ombudsman is available at <http://www.ombudsman.wa.gov.au/gas> or by telephoning 1800 754 004 (freecall).

Proposed amendments to the Electricity (Licensing) Regulations 1991

Articles in earlier editions of the Energy Bulletin advised of the proposed changes to the *Electricity (Licensing) Regulations 1991*.

The second and final round of industry consultation has now been concluded.

Energy Safety is now preparing the final draft of the amendments, having taken into consideration the feedback from the industry forums and written comments received during the consultation stages.

During the recent consultation stages, a number of key issues were raised and discussed. The following significant alterations to the proposed draft amendment are now proposed:

- The proposal for reassessment of an electrical worker's competence prior to the date of the expiry of licence registration (currently a five-year licensing cycle) has been amended. Electrical workers will now only be required, at the discretion of the Electrical Licensing Board, to attend a one-day (nominal) electrical safety refresher course every five years, prior to licence renewal.

- The proposed Certificate of Compliance has been amended. The proposed form will be incorporated into the Notice of Completion sent to the relevant network operator. It is planned that the customer copy of the Notice will be the Certificate of Compliance. Where minor work (that in future will not require the submission of a Notice to a network operator) is completed and requires a Certificate of Compliance to be issued, then a dedicated certificate book will be used. The three-day requirement to provide a Certificate of Compliance to the appropriate person has been increased to 28 days.

Other changes to the proposed amendments include:

- Clarifying the required size of electrical contractor's licence number when displayed to "70% of the font size of the advertised business name or trading name".
- Clarifying that "a trade finish" is to be obtained by a person "so far as is reasonable or practicable".
- Clarifying that a person who designs an electrical installation is responsible for the safe and compliant design of the installation. The term "electrical equipment" was removed from the draft, since, by definition, "electrical installation" includes all wiring, enclosures, equipment, components etc.
- Amending the proposal for either the "principal contractor" or "subcontractor" to comply with a number of legislative requirements to the previously accepted position that the one identity, ie. the person who performs the electrical work, is responsible for compliance.

Additional information on the proposed changes is available on Energy Safety's website.

Energy Safety's Gas & Emergency Management Directorate

As previously advised, Energy Safety became a Division of the Department of Consumer and Employment Protection on 1 January 2004 (see Energy Bulletin No. 30, January 2004).

Energy Safety has been restructured into three Directorates:

1. Electricity Directorate
2. Gas & Emergency Management Directorate
3. Regulatory Services Directorate.

Geoff Wood heads the newly structured Gas & Emergency Management Directorate. He was previously Energy Safety's Principal Engineer Gas Supply. Geoff has considerable experience in the gas industry both in Australia and overseas.

Jillian Reynolds is now the Principal Engineer Gas Supply and Kim Wong moves to the position of Principal Engineer Gas Utilisation which replaces the Principal

Engineer Gas Installations & Appliances. All of these changes are in an acting capacity until permanent appointments are made later in the year.

The Gas Inspectors, still headed by the Chief Gas Inspector, Kevin Hooper, are also within this new Directorate.

Energy Safety also plays a pivotal role in the State emergency management structure through the Lifelines Services Group. In the event of a fuel shortage, Energy Safety has the responsibility for coordinating fuel supplies within Western Australia. Geoff will continue his involvement in emergency management. Other representatives on Lifelines are from those organisations responsible for providing services such as water, electricity, gas, telephones etc.

New Chairman of the Electrical Licensing Board



Peter Jensen, Chairman of the Electrical Licensing Board

Mr Peter Jensen has been appointed as the new chairman of the Electrical Licensing Board, following the resignation of the previous chairman.

Mr Jensen holds a Bachelor of Electrical Engineering from the University of Southern Queensland and is a Fellow of the Institution of Engineers Australia. He began his career with the Queensland Electricity Commission where he developed a background in high voltage transmission.

In 1990, Mr Jensen joined Hamersley Iron where, until recently, he managed its power generation and distribution facilities in the Pilbara Region of Western Australia.

Late in 2002, Mr Jensen transferred to the parent company Rio Tinto Ltd in Perth, where he remains involved in energy issues at a strategic level for Hamersley Iron and other Rio Tinto group companies.

Mr Jensen is well regarded as a senior professional engineer. His broad experience in the electricity industry and past management of Hamersley Iron's consumer electrical installation safety inspection regime gives him a good foundation for chairmanship of the Electrical Licensing Board.



The Gas & Emergency Management Directorate staff, pictured from left to right, are Kim Wong, Jillian Reynolds, Lee Whittington, Kevin Hooper, Dave Hartley, Carl Deimel, Barry Mounfield, Kim Martin, Mick Newbold and Tracy Western and, seated, Leonora Goudie and Geoff Wood. Absent are Ian Foster and Angela Bakota.

Energy Safety hosts 2004 gas inspectors' workshops and conference



Attendees at the one-day conference held at Technology Park, Bentley

In May 2004, Energy Safety's Gas & Emergency Directorate hosted two half-day workshops and a one-day conference for Gas Inspectors and others closely linked with inspection activities. Attendees included Type A and Type B Inspectors, representatives from gas suppliers and Energy Safety Inspectors and staff.

The workshops focused on Type A and Type B appliances and included discussion items on:

- legislation updates and clarification;
- gas supplier's responsibilities, concerns and issues;
- appliance certification requirements and issues;
- installation compliance issues; and
- inspection issues.

Discussions at the conference focussed on:

- gas supplier legislative requirements and inspection plans;
- proposed changes to legislation;
- full retail contestability;
- legal issues/investigations;

- regulations/compliance issues; and
- gas inspector training.

The workshops and conference provided an opportunity for all participants to contribute and debate many industry issues. Energy Safety is reviewing some of the matters that were raised and will provide clarification in future editions of the Energy Bulletin.

Evaluations of the workshops and conference showed that there is a particular need for Energy Safety to keep operatives, gas suppliers etc up-to-date with changes taking place within the industry. There is tacit support for similar forums to be held annually.

International fuel conference to be held in Perth

The "2004 International Hydrogen and Fuel Cell Futures – *the transition to sustainable transport energy Conference*" will be held at the Burswood International Resort, Perth, in September this year [2004].

Energy supply is a critical issue for all communities, industries and governments. This prestigious major conference – the first of its kind to be held in the southern hemisphere – will provide comprehensive coverage of the most likely future energy provision arrangements currently being identified across the globe.

The conference will address the latest technical and policy developments on fuel cell technology in their regions and share research results. Keynote speakers will discuss global concerns with regard to the world's diminishing energy reserves, current international fuel cell trial projects and future predictions for the role of hydrogen and fuel cell technology.

The program includes papers, panels, plenary sessions, poster papers and workshops, with a major focus on sustainable transport energy, including:

- strategic directions in transport energy policy;
- the transition to sustainable energy systems; and
- trials and demonstrations of hydrogen and fuel cell vehicles.

An accompanying exhibition will showcase the latest Australian and international technical developments and expertise in the field of fuel cells.

The conference will coincide with the launch of a two-year trial of three hydrogen fuel cell buses, as part of an international trial of more than 30 similar buses in 11 cities around the world (see article in Energy Bulletin No. 28, July 2003).

More information about the conference is available on the website <http://www.dpi.wa.gov.au/h2conference>.

Articles in this publication may be reproduced, provided they are reproduced in full and show acknowledgement to Energy Safety.

For further information related to Energy Safety's articles, please contact Harry Hills (telephone 08 9422 5208 or email hhills@docep.wa.gov.au).

Alternative formats of the Energy Bulletin may be available to meet the needs of people with disabilities.