



Government of **Western Australia**  
Department of **Commerce**

**EnergySafety**

## **ENERGYSAFETY DIVISION BUSINESS PLAN 2009/10**

December 2008

This Business Plan was approved under  
Part 2 of the *Energy Safety Act 2006* by the  
Hon Troy Buswell MLA  
MINISTER FOR COMMERCE  
on 20 December 2008



Government of **Western Australia**  
Department of **Commerce**

**EnergySafety**

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A brief outline of the 2007/08 year outcomes (the second complete year of the industry funding scheme), for information purposes only.

## FOREWORD

This document sets out the Business Plan 2009/10 for the Energy Safety Division (known as “EnergySafety” or EnergySafety WA<sup>1</sup>) of the Department of Commerce<sup>2</sup> (DoC).

EnergySafety is Western Australia's technical and safety regulator for the electricity industry and most of the gas industry. Its principal functions can be summarised as:

- administering electricity and gas technical and safety legislation and providing policy and legislative advice to the Minister and Government;
- setting and enforcing minimum safety standards for electricity and gas networks;
- enforcing natural gas and LP gas quality standards;
- for the purpose of ensuring satisfactory billing of consumers by gas suppliers, administering the regulatory scheme that determines the “higher heating value” of natural gas in distribution systems subject to the commingling (mixing) of gas from different sources;
- providing technical advice and support to the Economic Regulation Authority (ERA) and the Energy Ombudsman;
- at the request of the ERA or Energy Ombudsman, investigating the performance of electricity and gas network operators, particularly in respect of energy supply reliability and quality;
- setting and enforcing minimum safety standards for consumers' electrical and gas installations;
- setting and enforcing safety and energy efficiency standards for consumers' electrical and gas appliances;
- licensing electrical contractors, electrical workers and gas fitters and carrying out accident investigations;
- promoting electricity and gas safety in industry and the community; and
- promoting energy infrastructure security and resilience.

EnergySafety derives most of its statutory functions through the statutory functions of the Director of Energy Safety, an independent statutory office (established 1 January 1995) that is held by the head of EnergySafety. Since its inception in 1995 as part of the first major restructuring of the State's energy utilities, EnergySafety has had a busy corporate life and has seen its functions considerably expanded to include *inter alia* electricity and gas network regulation, energy efficiency regulation, natural gas higher heating value regulation and critical energy infrastructure protection.

As part of these changes, EnergySafety became fully industry funded from 2006-07 following the passing of legislation and the subsequent publishing in the *Government Gazette* of the *Energy Safety Levy Notice 2006* as approved by the Minister during June 2006. This mirrored what other major jurisdictions had also done and 2006/07 was the

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<sup>1</sup> There are other regulators such as in VIC that have very similar names

<sup>2</sup> Prior to 2009 known as the Department of Consumer and Employment Protection

first financial year under which EnergySafety was fully industry funded. The scheme is operating successfully and no changes are seen as necessary.

In summary, the industry funding scheme means that the cost of EnergySafety's activities is now fully met by those who benefit from them, through the combination of licensing revenue and industry levy revenue. The legislation provides for the levy to be subject to review by Parliament.

This Business Plan is a key part of the process for the yearly industry funding of EnergySafety as required by the legislation, since it sets out the following for EnergySafety, for 2009/10:

- A statement of intent;
- The business environment and challenges, including major projects;
- The financial plan;
- Details of the proposed 2009/10 energy industry levy; and
- A brief outline in Appendix A of the 2007/08 year outcomes (the second complete year of the industry funding scheme), for information purposes only.

Once the Business Plan has been approved by the Minister, it will (in accordance with the legislation) form the basis for the Minister's determination on the overall fixed amount to be levied on energy industry participants, and the manner in which it is to be allocated between participants, for the 2009/10 year.

Albert Koenig  
DIRECTOR OF ENERGY SAFETY and  
EXECUTIVE DIRECTOR, ENERGY SAFETY

December 2008

## STATEMENT OF INTENT

### **1.0 Introduction**

EnergySafety is the statutory technical and safety regulator for Western Australia's electrical industry and most of the gas industry. This Statement of Intent is part of the Business Plan 2009/10 required by the *Energy Safety Act 2006* setting out the requirements for the administration of the energy industry levy that, in combination with the revenue from electrical contractor, electrical worker and gas fitter licensing, provides EnergySafety with all its capital and operating expenditure for 2009/10.

### **1.1 Departmental Objectives**

The Department of Commerce (DoC), of which EnergySafety is a Division, has the following overall objectives:

#### **Vision Statement**

The Corporate Vision of DoC is for:

*"A fair, safe and prosperous community"*.

#### **Mission Statement**

DoC's Mission is:

*To create an employment and trading environment that provides for the growth, safety and protection of the community by:*

- *Enhancing capacity*
- *Enhancing an effective regulatory environment; and*
- *Enforcing the law.*

#### **Strategic Directions**

The five Directions featured in DoC's *Future Directions* document are:

1. Influencing and shaping our community's environment.
2. Enhancing the capability of the community.
3. Enhancing the regulatory environment.
4. Enforcing the law.
5. Strengthening DoC as an organisation.

EnergySafety, as part of DoC, both contributes to and embraces these strategic corporate directions for its own area of business.

Following commencement on 1 January 1995 as the Technical & Safety Division of the then Office of Energy and subsequent public sector restructuring in mid 2002,

EnergySafety became a Division of DoC<sup>3</sup>, which has three other key regulatory functions, each also represented by a separate Division that operates relatively independently: Labour Relations, Consumer Protection and WorkSafe. At the end of 2008, following the change in government, some of the industry development functions of the former Department of Industry & Resources were also transferred to the DoC.

## **2.0 EnergySafety's Objectives**

EnergySafety is the State's technical and safety regulator for all the electrical industry and most of the gas industry<sup>4</sup>, through the functions of the Director of Energy Safety.

The Director of Energy Safety ("Director") is a statutory office established under section 5 of the *Energy Coordination Act 1994*. The Director is an independent regulator subject only to direction by the responsible Minister, who in accordance with the Act is required to table in Parliament any direction given to the Director.

EnergySafety, through the role of the Director of Energy Safety, has a wide suite of statutory functions and compliance enforcement powers. In summary, on the basis of those functions, EnergySafety seeks to ensure:

- the safety of people (the public, energy workers and consumers) and property in respect of electricity and gas utility infrastructure;
- that residential and business consumers receive electricity and gas supplies that are metered accurately and meet minimum standards of quality so that appliances function safely;
- that consumers have safe electrical and gas installations at their premises;
- that electrical and gas appliances and equipment (including that for industrial purposes) purchased or hired are safe to use;
- that common household appliances and certain types of electrical equipment (including some that are for industrial purposes) perform and are labelled to satisfy prescribed energy efficiency standards;
- the safety of persons working on consumers' electrical and gas installations; and
- the safety of all persons using electricity and gas.

EnergySafety is also an active participant in the national framework for the promotion of energy industry infrastructure security and resilience, through the Energy Infrastructure Assurance Advisory Group (EIAAG) which is administered by the Commonwealth Attorney General's Department, although the emergency management functions it has administered since 1995 were transferred to the Office of Energy in January 2007 as part

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<sup>3</sup> When initially created in 2001, was titled "Department of Consumer & Employment Protection" (DOCEP).

<sup>4</sup> Safety regulation of the high pressure (>1.9MPa) gas transmission system and upstream gas production is the responsibility of the Resources Safety Division of the new Department of Mines & Petroleum.

of final changes under the “Machinery of Government Reforms” initiated by the then incoming government of 2001<sup>5</sup>.

EnergySafety also provides technical advice and support to the Economic Regulation Authority (ERA) and the Energy Ombudsman in relation to a variety of energy industry issues, and at the request of the ERA or Energy Ombudsman, investigates the performance of network operators, particularly in respect of energy supply reliability and quality and related complaints.

In addition to the above functions, EnergySafety performs a considerable amount of policy development work related to energy industry technical and safety issues, some of which takes place through national technical standards forums and regulatory coordination forums. EnergySafety also has the key function to provide advice to the responsible Minister generally, and this includes proposals for the improvement of energy industry legislation and statutory requirements in a technical and safety regulatory context.

One of the functions closely associated with the safety of consumers' installations and the safety of workers carrying out work on consumers' installations is the licensing of workers and contractors who meet defined competency requirements. EnergySafety carries out this licensing for electrical contractors, electrical workers and gas fitters.

In respect of electrical workers and contractors, the statutory Electrical Licensing Board (which includes industry members who are appointed by the Minister) oversees this function and also deals with minor disciplinary actions, whilst recommending to the Director which more serious cases warrant referral to the State Administrative Tribunal for possible licence cancellation or suspension. The internal Gas Licensing Committee, operating under a delegated authority of the Director, makes similar recommendations on gas disciplinary proceedings.

In broad terms, there is no specific intention during the period ahead to vary the manner in which EnergySafety has approached its work to date. Inevitably, the substantial amount of policy work and operational work to be done will require decisions to be made about priorities and the extent to which some activities, including compliance enforcement, are undertaken. These decisions will be greatly affected by the labour and financial resources available, although improved efficiencies are expected to be achieved in terms of enforcement, as a result of the proclamation on 30 November 2007 of the *Gas and Electricity Safety Legislation Amendment Act 2007*.

This Act amended the *Energy Coordination Act 1994*, the *Electricity Act 1945* and the *Gas Standards Act 1972* to provide *inter alia* significantly improved enforcement powers for EnergySafety, through the raising of penalties (generally to \$250,000 maximum) and substantially expanded order-making powers which are now much more suitable for dealing with electricity and gas network deficiencies. Additionally, earlier in 2007 the Minister approved the introduction of Infringement Notices and many offences of a non-serious nature can now be dealt with through this avenue, rather than prosecution, in the future.

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<sup>5</sup> During 2007-08 as part of transferring from the portfolio of the Minister for Energy to the portfolio of the Minister for Employment Protection, the emergency management functions of EnergySafety were transferred to the Office of Energy, the latter continuing to report to the Minister for Energy.



## **2.1 The road ahead for EnergySafety**

### General

EnergySafety's functions have undergone significant expansion since its creation on 1 January 1995 to include major additional responsibilities such as gas network regulation (2000) and electricity network regulation (2001), equipment energy efficiency regulation (2000 and later), critical energy infrastructure protection (2002) and gas heating value regulation in late 2007.

During the industry consultation of 2005/06 dealing with the then industry funding proposals, industry clearly indicated its support for EnergySafety's functions and work. Now that full industry funding is in place, the major challenge for EnergySafety in the period ahead is to deliver meaningful outcomes. This requires an appropriate balance between staff resource capacity and expertise and government, industry and community needs and expectations.

Currently there is certainly no shortage of issues for EnergySafety to address or respond to as a regulator, both in respect of major new policy initiatives, operational matters and corporate development issues, as the following sub-sections demonstrate.

### Significant policy projects

The following significant policy projects are presently at various stages of progress and expected to be completed during the next two years.

- The Commonwealth Government has instigated via COAG the following national, major regulatory reform projects in areas that are highly relevant to Energy-Safety. The final outcomes may have considerable impact on EnergySafety's role and functions, its structure and funding.

During 2008 EnergySafety has therefore had to make a significant commitment to involvement in the following projects, which is an extra workload that impacts considerably on staff resources, project priorities and costs. This will continue for several years and special funding has been provided under the Business Plan.

#### Occupational licensing

Electrical and other selected occupational licences have been chosen as a pilot group by COAG for the establishment of a national licensing system that allows a licence to be used in all jurisdictions. This requires one or more national databases and IT systems, plus at least a central administration to deal with licence applications and renewals standards and processes.

Decisions need to also be made about whether existing regulators' licensing offices (such as that of EnergySafety WA) will operate the national licensing system on a delegated basis, or whether the new system will be administered by separate, new offices reporting directly to the central administration (regulators strongly favour the first option as it involves much less change and thus less risk).

Decisions also need to be made about how local and central enforcement of regulatory requirements (standards of work by licence holders) would be shared and coordinated. The outcome of these matters will also affect decisions on how to share licence revenues, as some of the revenue supports enforcement activities.

This project has taken over the earlier harmonisation work by the COAG Working Group on restricted electrical licences, supported by ERAC (the Electrical Regulatory Authorities Council, of which EnergySafety is a member).

In summary, this reform project has the potential to greatly affect the current regulatory regime which operates on an integrated basis (i.e. licensing is an integral part of the overall regime).

#### Energy supply industry regulation

The technical and safety regulation of electricity and gas transmission / distribution is currently being reviewed by an energy industry Leaders Group appointed by the Ministerial Council on Energy. The objective is to enhance the harmonisation of such regulation and thereby reduce regulatory burden and improve labour mobility across jurisdictions.

The project is becoming more complex than originally thought as the reasons for industry complexity and barriers to labour mobility have been identified to be not just regulatory differences but differences between in-house developed work practices among the utilities. Technical standardisation is part of the solution but some industry members are not keen on this approach.

A plan of harmonisation enhancement proposals (including various options) has been prepared by the Leaders Group and is expected to be released late 2008 for industry comment, with a view to later finalising a Plan for Ministerial approval by mid 2009.

The reform project could potentially lead to an outcome ranging from modest reform that leads to a high level of consistency in both regulation and work practices, to drastic reform resulting a single national regulator for the electricity and gas supply industries, which has the potential to greatly fragment the present integrated approach to energy industry regulation. The latter outcome would greatly affect the role, structure and funding of EnergySafety.

#### National Construction Code

One of the committees reporting to COAG is considering a proposal from the building industry to create a National Construction Code. It is being suggested that aside from containing the kind of building standards documentation that is presently in the Building Code of Australia, it should also contain all electrical, plumbing and gas standards.

This is problematic since electrical and gas standards (as currently developed by the energy industry through the Standards Australia framework) have a much wider reach than just buildings – they cover all types of electrical and gas installations e.g. mine site and industrial installations. Moving along the reform path suggested would create very undesirable fragmentation of standards and potentially also regulation enforcement.

This project is still at an early stage and it is hoped that its scope will be substantially amended, although this remains to be seen.

- To further reduce the incidence of serious electrical accidents amongst electricians, a completely new Part IX to the *Electricity Regulations 1947* is proposed, so as to set out minimum standards for safe electrical work practices by electricians, particularly when proposing to work on or near live parts of a consumer's installation. This project has experienced various delays but is expected to be concluded by mid 2009. A Code of Practice on safe work practices by electricians was issued during 2008.

- To make major improvements to the energy efficiency of gas appliances and equipment, it is planned (as part of national changes) to regulate gas use efficiency through major changes to the *Gas Standards Act 1972* and related regulations. This work continues and is the subject of consultation at the national level however it now appears that the Commonwealth intends to legislate this area. This will require a number of changes to existing electrical industry legislation and a different approach to enforcement for both electrical and gas energy efficiency enforcement.
- There is a need to replace the simplistic and no longer deemed relevant provisions of section 54 of the *Energy Operators (Powers) Act 1979* (which deals with the control of vegetation near power lines) with a new regulatory regime under the *Electricity Act 1945*. What is needed is a more balanced approach to responsibilities for ensuring that vegetation is kept safely clear of overhead power lines by land occupiers and electricity network operators. This is important in terms of public safety and electricity supply reliability and quality.

Three years ago EnergySafety developed and widely issued a set of guidelines for network operators and land occupiers (including Local Government and other government entities) that outlined a responsibility framework for keeping vegetation clear of power lines, based on rules developed during the mid 1990s and used by Western Power since that time. These guidelines were very well received and have shown that the new regulatory scheme (which is intended to be based on the same principles), once drafted and enacted, should work satisfactorily. It had been proposed to obtain a fresh set of Government approvals for the drafting work to take place during 2008, but the election and change in government has delayed this work.

- A complete review of Australia's regulatory regime for the safety of electrical equipment and appliances is in progress. EnergySafety is currently participating with other regulators in this national review designed to ensure the regimes operated by each jurisdiction are as harmonised as possible and capable of dealing with the challenges offered through global manufacturing, as most electrical products are now imported. This project is proceeding well and a national regulatory impact statement is soon to be issued, outlining options and related costs/benefits. The outcomes of the review will be presented to a Ministerial Council for approval in principle, most likely in mid 2009/10, after which there will be a substantial implementation phase.
- To improve the safety of people using electricity and persons working in and around homes, especially in roof spaces, the Government has decided to mandate the retro-fitting of residual current devices (RCDs) or "safety switches" in all types of dwellings. Having drafted regulations, EnergySafety is therefore currently consulting with industry on the details of the scheme to make it compulsory for RCDs to be installed in a dwelling (house or unit), if not already installed, prior to the sale of the premises or in the case of leased premises, within 2 years. There will be significant implementation issues to manage during 2009/10.
- The Government has endorsed an EnergySafety proposal to implement a scheme under which home owners may engage an electrical contractor on a fee for service basis to provide an assessment report on the electrical installation of residential premises. The objective is to establish clear standards for such condition reports, which would have value to persons planning to sell, purchase or renovate property. This scheme will be very compatible with the plan to mandate the retrofitting of RCDs. A similar gas scheme may follow.

- During recent years there have been concerns about two aspects of overhead lines in the Western Power distribution system covering the SW of the State:
  - Pole top fires causing wildfires and power outages; and
  - High voltage conductor clashing causing wildfires and power outages.

EnergySafety continues to deal with Western Power on its mitigation strategies and to review them to ensure that all reasonable measures are employed to avoid such incidents in future, since their impact on the community can be severe. This is an area of activity that continues to demand significant attention.

As can be seen, there is a significant amount of major project policy work to be carried out, in addition to the more day-to-day policy work including advice to Ministers, participating on Standards Australia committees in relation to key technical standards, preparing and issuing guideline information to industry and the community, and general safety promotion.

Aside from the work required to complete the above projects, once finalised many also require ongoing additional administration and enforcement effort, since they expand the regulatory framework.

#### Significant operational work projects and issues

Further to the policy work described above, there is a large, continuing amount of operational work associated with administering the existing regulatory framework.

Some of the operational work is relatively routine, such as dealing with requests for advice, dealing with complaints, carrying out investigations and, as appropriate, making decisions on whether or not to prosecute a person or business, or whether to recommend disciplinary action. There is also a routine level of installation inspection work carried out by EnergySafety's Inspection Branches, for electricity and gas installations not connected to a network<sup>6</sup> (e.g. boats, caravans, pastoralist's facilities, mine sites etc).

During recent years the State's level of economic activity has continued to expand and this has naturally generated increased work for industry and thus also for EnergySafety, additional to that already experienced through the expansion of the regulatory framework.

EnergySafety is still finding it difficult to cope with demands on its Licensing Office as the very high level of industry activity presently in the State has resulted in a sustained influx of electrical and gas operatives seeking local work. During recent years the Licensing Office's staff resources were increased and this contributed to a substantial reduction in the average time required from application to issue of a licence. Nonetheless, considerable work pressure remains in this area and needs to be kept under review, although it may be expected that the downturn in industry demand at late 2008 will slow or perhaps even reduce the rate of demand.

The work of the Licensing Office will be assisted by the introduction during the first half of 2009/10 (previously expected to be early 2009, but now delayed by some months) of the new corporate computer based licensing system "CALs" which will replace the ELA and GLA computer systems developed in 1995. The new system will serve several DoC

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<sup>6</sup> Installations connected to a network or pipeline are required to be inspected by the network operator or pipeline licensee, who is required to report results to EnergySafety.

Divisions but will be customised for each, and deliberately designed in a modular fashion so that should future organisation changes occur, a Division's system can be relocated with the Division. It should be noted that EnergySafety is not being required to fund any of the CALS development work as the existing ELA and GLA systems were already due for replacement prior to the commencement of industry funding for EnergySafety.

Some operational work can become much more time consuming than expected.

For example, although it is expected that the issue will have been dealt with by early 2009, EnergySafety initially took action in May 2008 to improve the standards of gas installations in autogas (LPG) fuelled vehicles, by prohibiting (or limiting) the use of certain types of rubber hoses that were shown to have caused converter failures due to the leaching of plasticiser from the hoses, then the deposit of such plasticiser in the converters. This proved to be a difficult issue to manage due to the way technical standards are developed and implemented in this industry sector, however it was seen as important to address the clearly identified flaws in existing practices and the impacts these were having on some customers of the industry.

Some operational work can also be of a major project nature.

Western Power's management of its extensive wood pole "population" to ensure poles in service are structurally sound is a matter of ongoing concern. A major compliance audit was completed in late 2006. Western Power has since then been working closely with EnergySafety to clearly identify and address the key areas of concern, and this will lead to a number of areas of ongoing monitoring to ensure adequate compliance. This is also an area where better national technical standards are required to be developed.

Due to lack of staff resources in the electricity supply regulation area, EnergySafety has established a panel contract for technical personnel (engineer employees of Consulting Engineers) to be available for short term projects from mid 2008/09 onwards. This will allow some carefully targeted compliance audits to be conducted during the following 3 years, mainly on the network operators working in the Pilbara and remote locations. Special funding is provided for this work under the Business Plan.

During mid 2009 EnergySafety will be conducting a major "roadshow" of industry presentations in Perth and regional centres throughout WA, covering gas industry technical and safety regulation issues.

The formal approval during late 2007 of amendments to the *Gas Standards (Gas Supply and System Safety) Regulations 2000* that were developed in liaison with industry to deal with the issue of gases of different heating values commingling in gas distribution systems will also lead to an operational project to implement a suitable management regime, in liaison with gas suppliers. This work was delayed due to legal arguments by the operator of the DBNG pipeline but these should be addressed by early 2009 and the implementation work will continue into 2009/10.

In addition, it is important that EnergySafety conducts programmed (but random) compliance audits on a sample of industry operatives including –

- electrical contractors;
- gas fitter contractors including authorisation holders; and
- airconditioning and refrigeration contractors (working under restricted electrical licences).

Also, a sample of retail premises selling electrical and gas products needs to be audited to check compliance with –

- electrical safety approval requirements;
- gas safety approval requirements;
- energy efficiency labelling requirements; and
- minimum energy performance standards (MEPS).

The latter minimum energy performance requirements also place obligations on industry such as in regard to distribution transformers, motors and airconditioning plant, demanding a separate auditing approach on other parts of industry.

Additionally, the performance of the various utilities' Installation Inspectors must also be monitored. These Inspectors are authorised ("designated") by EnergySafety and perform the valuable function of checking the compliance of consumers' electrical and gas installations after work by industry operatives, reporting non-compliances to EnergySafety for possible follow-up action. They are obliged, in accordance with the terms of their designation, to comply with a Code of Conduct.

Random spot audits therefore need to be carried out from time to time to ensure that all are reporting defects as required by the statutory obligations that require the energy utilities to carry out such installation inspection work.

#### Safety Promotion

There is a need for EnergySafety and the energy suppliers to regularly promote:

- gas and electricity user safety;
- community safety awareness in respect of electricity and gas infrastructure; and
- how to work safely near electricity and gas facilities (aimed at all types of workers in various industries).

EnergySafety deals with the above through a combination of industry specific activities (e.g. through safety sessions during regional roadshows), through publications aimed at industry and also at the public, which are distributed and are also available via the EnergySafety website, and through television, radio and newspaper advertisements.

In terms of television, it is a very good medium for reaching the general community, however operational experience shows that a substantial effort is required if it is to have any worthwhile impact. Given that the cost of any substantial TV campaign is significant, EnergySafety has adopted a general strategy of running a major TV campaign approximately every 2 years. Special funding is provided for these campaigns, in the Business Plan.

#### Corporate projects and issues

EnergySafety, as a regulator, needs to have staff who understand the various business and technical areas of the electrical or gas industries and who can expertly evaluate and negotiate safety and performance issues with their industry counterparts.

This requires a competent grasp of industry-specialist technical practices (including safe field work practices), the energy legislation and OSH obligations, industrial relations implications and economic impacts. Some of the staff (particularly Engineers) also need to be strong in policy development work.

Staff of this kind have been difficult to recruit and retain, especially whilst WA's economy has been so strong.

To assist, the Minister approved in early 2007 a proposal for EnergySafety to offer improved employment packages to its technical staff (including Inspectors) so that these are considerably more competitive in the context of today's industry environment than was the case. This "Attraction and Retention Benefit" (ARB) supported a major new recruiting campaign by EnergySafety, for various types of vacant technical positions. This had modest results only as overseas recruiting was largely unsuccessful and some key positions remain vacant. The ARB has however been very helpful in staff retention.

Further recruiting is therefore required during 2008/09 and is expected to continue in 2009/10, especially as a number of the staff are approaching retirement age. Part-time work and part-time contract work options are also utilised to supplement EnergySafety's core of full time, permanent personnel.

The 2008 global financial problems have now started to impact the State's economy, especially in the resources sector, and the labour market is therefore expected to ease during 2009. However, the recruiting of specialist technical personnel is not anticipated to become any easier during this period, hence it is expected that the ARB arrangements will have to continue for the time being and the financial forecasts have been cast accordingly. This situation will be kept under regular review during the year and forecasts will be amended as appropriate.

The new corporate licensing information system CALS which is currently under construction by DoC's information systems staff is expected to commence operation in late 2008/09 and replace the ageing ELA and GLA applications. The new CALS can be expected to considerably improve the efficiency of licensing work during 2009/10.

EnergySafety's senior staff continue to have a major role in the development of DoC's new corporate "Compliance Management System (CMS)" which will support the enforcement activities of several of DoC's regulatory Divisions, including EnergySafety. CMS will be a major electronic information system that covers incident reporting, investigations, warnings, infringement notices, prosecutions, disciplinary actions, certain types of installation inspections, compliance audits, the issuing of remedial action orders, inspector field work scheduling and reporting, plus appliance approvals and the like. This development work is expected to be completed during 2009/10 and the new information system will provide many operational benefits and vastly improved data on safety incidents.

EnergySafety carried out a major project during 2007/08 to assist the Office of Energy in its efforts to assess what impediment there may be to changing the existing general purpose natural gas quality specification in WA, so that a wider range of gases could be seen as suitable for the local market. This involved working with the Australian Bureau of Statistics to determine a suitable size of sample domestic gas installations in the older suburbs of Perth, the objective being to inspect these installations and so record the number of pre 1972 and pre-1980 gas appliances still in service, as these have safety concerns in relation to suggested modifications to the gas specification. The inspection

work was carried out by contract with support for EnergySafety's own inspectors. The project was deemed a success in that valuable information was able to be provided to the Office of Energy in early 2008/09, and this will allow government to make further progress with this important policy issue. All EnergySafety costs incurred during this project were met directly from the CF through a special appropriation, and not from the industry funding that supports normal EnergySafety activities.



### **3.0 The nature and scope of EnergySafety's activities**

#### **3.1 Legislation administered**

As the State's technical and safety regulator for all electrical and most gas infrastructure, installations and activities, the Director of Energy Safety with support of the staff administers the following legislation:

- *Energy Safety Act 2006*
- *Energy Safety Levy Act 2006*
  
- *Energy Coordination Act 1994* (other than Parts 1A, 2A, 2B, 2C and 2D)
- *Energy Coordination (General) Regulations 1995*
  
- *Electricity Act 1945*
- *Electricity (Licensing) Regulations 1991*
- *Electricity Regulations 1947*
- *Electricity (Supply Standards and System Safety) Regulations 2001*
  
- *Gas Standards Act 1972*
- *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999*
- *Gas Standards (Gas Supply and System Safety) Regulations 2000*
- *Gas Standards (Infringement Notices) Regulations 2007*

EnergySafety also assists the Economic Regulation Authority (ERA) and the Energy Ombudsman's office in the enforcement of prescribed standards for electricity supply reliability and quality, in accordance with the provisions of the following legislation:

- *Electricity Industry (Licence Conditions) Regulations 2005*
- *Electricity Industry (Ombudsman Scheme) Regulations 2005*
- *Electricity Industry (Network Quality and Reliability of Supply) Code 2005*

#### **3.2 Specific Activities**

The legislation provides for EnergySafety to:

- Ensure the safety of consumers' electrical installations and appliances, by:
  - licensing electrical workers and electrical contractors (through the functions of the associated Electrical Licensing Board) and enforcing prescribed technical standards for electrical installing work;

- requiring electricity network operators to conduct consumer installation safety inspections in accordance with prescribed requirements and auditing this work to ensure compliance;
  - conducting safety inspections of consumers' electrical installations that are not connected to utility networks; and
  - auditing electrical appliances and equipment being offered for sale, to check compliance with prescribed safety and energy efficiency requirements (such as the star rating labelling scheme and MEPS).
- Ensure the safety of consumers' gas installations and appliances (including industrial gas appliances), by:
    - licensing gas fitters and enforcing prescribed technical standards for gasfitting work;
    - requiring gas network operators, gas pipeline licensees and LPG cylinder distributors to conduct consumer installation safety inspections in accordance with prescribed requirements and auditing this work to ensure compliance;
    - overseeing the work of external inspectors approving industrial gas appliances;
    - conducting safety inspections of consumers' gas installations that are not connected to utility networks or are not supplied with LPG directly from a gas distributor; and
    - auditing gas appliances and equipment being offered for sale, to check compliance with prescribed safety and efficiency requirements.
  - Ensure the safety and acceptable performance of electricity transmission and distribution infrastructure by:
    - auditing electricity network operators' design standards and constructed networks for compliance with prescribed safety requirements;
    - monitoring the safe work practices of network operators' employees and contractors, including attendance to incidents;
    - investigating unsatisfied consumers' complaints about unacceptable electricity supply reliability and quality, when referred by the ERA or Ombudsman; and
    - auditing network operators' compliance with their approved meter management plans, to ensure acceptable meter accuracy.
  - Ensure the safety and acceptable performance of gas distribution infrastructure by:
    - auditing gas network operators' design standards and constructed networks for compliance with prescribed safety requirements;
    - monitoring the safe work practices of network operators' employees and contractors, including attendance to incidents;
    - monitoring the quality of gas provided to consumers generally, for compliance with prescribed requirements;
    - investigating unsatisfied consumers' complaints about gas supply reliability and quality; and
    - auditing network operators' compliance with prescribed meter management requirements, to ensure acceptable meter accuracy.

- Appoint and oversee all inspectors in the State (including those of network operators).
- Ensure the safety of electrical and gas workers by enforcing prescribed safety requirements and providing guidance in respect of safe work practices.
- Issue exemptions or variations to certain regulatory requirements (electrical and gas).
- Investigate electrical and gas safety incidents (although incidents associated with electricity or gas utilities' supply systems, or their customers, are usually inspected first by the utilities' inspectors).
- Enforce statutory requirements through advice, warnings, prosecutions and, in the case of licence holders, also through disciplinary action.
- Respond to consumer concerns generally regarding electrical and gas technical and safety matters.

Furthermore *Energy Safety*:

- provides wide-ranging energy related policy advice and support to the Minister, Government and DoC's Director General;
- promotes electricity and gas safety to both the public and industry operatives; and
- participates in the in the national framework for the promotion of energy industry infrastructure security and resilience, through the *Energy Infrastructure Assurance Advisory Group* (EIAAG) which is administered by the Commonwealth Attorney General's Department.

#### 4.0 Performance Targets

The following performance indicators provide an overview of the type and volume of EnergySafety's regulatory work, as well as the influence of this work on safety outcomes.

MEASURES	07/08 Target*	07/08 Actual	08/09 and beyond Target*
<b>GAS</b>			
Gas related deaths	0	0	0
Gas related accidents <sup>7</sup> (including fatalities)	14	18	12
Gas installations inspected and found non-compliant (includes matters not directly affecting safety)	15%	12.1%	14%
No. of EnergySafety audits of gas distributors' Inspection Plans <sup>8</sup>	2	0	5
No. of Type B gas appliance variations assessed	45	37	40
Investigations under Acts and Regulations	200	320	200
Presentations to Industry or other Groups	10	5	12

MEASURES	07/08 Target*	07/08 Actual	08/09 and beyond Target*
<b>ELECTRICITY</b>			
Electricity related deaths	3	1	3
Electricity related accidents <sup>7</sup> (including fatalities)	25	21	25
Electrical installations inspected and found non-compliant (includes matters not directly affecting safety)	7.0%	5.45%	7.0%
No. of EnergySafety audits of electricity distributors' Inspection Plans <sup>8</sup>	2	0	2
Investigations under Acts and Regulations	650	574	650
Presentations to Industry or other Groups	10	16	10

\* Trend analysis is used to set the targets

<sup>7</sup> Accidents are defined as serious safety incidents where a person has received some type of medical treatment (other than just precautionary assessment tests) from a health professional, in a hospital or similar.

<sup>8</sup> Inspection Plans of energy distributors have a life cycle of several years and hence compliance audits are timed to fit with that cycle.

### **5.0 Type of information and advice to be provided to the Minister**

EnergySafety provides advice and support to the Minister for Commerce, since the Department (DoC) to which EnergySafety belongs is responsible to this Minister.

Interaction between the Minister's office and EnergySafety normally takes place via the Director of Energy Safety. However EnergySafety's Director Gas and Director Electricity are available to liaise directly if required.

The type of advice and information provided to the Minister by EnergySafety includes the following:

- Proposals for major policy projects such as new legislation, or amendments.
- Advice on the status and management of major policy projects, such as proposals for legislation.
- Advice on proposed regulatory actions that may have some significant impact on the public, or on a corporation.
- Advice on information releases that deal with subjects relevant to the Ministerial portfolio area.
- Advice on the status of major investigations or audits that have received media publicity.
- Advice for dealing with industry enquiries (verbal or written) to the Minister's office, if requested to do so by the Minister or his staff. This may involve correspondence and/or meetings.
- Advice on resource requirements and work programs.
- Advice on energy infrastructure protection and security issues.
- Advice on nationally significant energy issues (e.g. major regulatory reform projects, International Energy Agency matters, etc).

## **BUSINESS ENVIRONMENT AND CHALLENGES**

### **6.0 Introduction**

This part of the Business Plan provides an overview of the energy industry environment that exists within Western Australia today and highlights the issues that are impacting demand on EnergySafety's technical and safety regulatory functions and services.

### **6.1 WA's energy industry environment**

WA's energy industry is now truly restructured, following the disaggregation of Western Power into separate generation (Verve Energy), networks (Western Power), retail (Synergy) and integrated regional businesses (Horizon Power) on 1 April 2006.

The gas industry was substantially restructured in 2000 with the sale of AlintaGas and this commenced the progressive opening of the market to full retail competition. It is well known that the competitive gas supply market that has emerged from these changes is very favourably viewed by industry, especially in the resources sector. There is now pressure to introduce additional natural gas capacity to the State's industry, via expansion of the Dampier – Bunbury natural gas pipeline and through new sources of supply<sup>9</sup>. The unfortunate Varanus Island gas facility disruption in mid 2008 highlighted that diversity of supply is important.

The electricity supply industry has had a much slower reformation but it is clear that many positive changes should take place in the immediate years ahead. For example, the South West Interconnected System (SWIS) networks business of the previous Western Power (which is the entity that retains this name) can now use its revenue for reinvestment and maintenance as would any independent business, contrary to the situation when the networks business was part of a vertically integrated utility. This is a positive change, but of course it will take a number of years for the shortcomings of the last 10 years (evidenced by the Mt Barker, then Tenterden and more recently the Toodyay and Denmark fires resulting from clashing conductors, and the ongoing, widespread supply interruptions and safety problems from pole-top fires) to be dealt with by the new Western Power.

The same is expected of Horizon Power, also a successor to the old Western Power, generating and supplying electricity at many remote towns of the State including Esperance and parts of the Pilbara.

There are several other Pilbara and Goldfields based electricity network operators and other smaller entities. However, experience has shown that these networks are generally maintained in a manner consistent with the resources sector's standards that seek to minimise safety problems and 'downtime'.

Therefore, looking ahead to the next five years and the networks of the major players during this period, it is likely that existing shortcomings with Western Power's SWIS electricity supply network will require major attention, as will the networks of Horizon

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<sup>9</sup> EnergySafety has been asked to review the WA NG specification and as part of this carried out a survey of pre-1980 gas appliances in service, to ascertain what action may be needed to improve or replace these as a prerequisite to modifying the current gas specification. This work was being directly funded by the Government as described on p14.

Power. On the other hand, the younger nature and generally better state of the gas distribution networks operated by Alinta and others should mean they require comparatively less regulatory attention from a safety and performance perspective.

These matters are also the subject of attention from the ERA which through its gas and electricity network licensing regime monitors the safety and performance of network assets, in addition to approving network access rules and transport charges. The Energy Ombudsman deals with consumer complaints. As EnergySafety provides technical support to both these organisations, there will be continuing communication and cooperation between each of the two regulators and EnergySafety.

In the electrical contracting and gasfitting areas it is largely a case of continuing with current regulatory initiatives which appear to be working reasonably well:

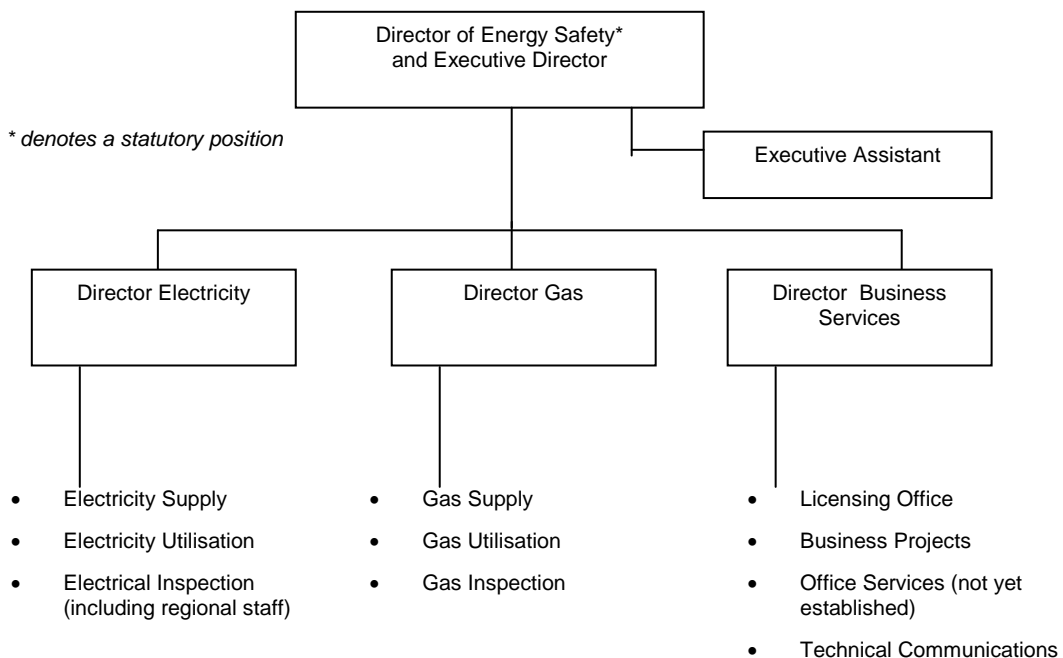
- For example, the incidence of serious electrical defects in work carried by electrical contractors has substantially declined, largely due to the success of the "Contractor Connect Scheme", it is believed. This scheme provides real incentives for major electrical contractors involved in residential electrical work to ensure their work is safe and compliant.
- In respect of gas, the "demerit points scheme" now in place is working to deal with those who are persistently delivering defective gasfitting work.

The implementation of new enforcement measures during 2007/08 (larger fines and the introduction of Infringement Notices) is also expected to show substantial improvement in electrical and gas industry compliance during the forecast period.

## 6.2 EnergySafety structure, resources and powers

### 6.2.1 Introduction

The Executive Director, Energy Safety Division (or "EnergySafety"), heads the Division and by design the incumbent also holds the statutory office of Director of Energy Safety.



The desire to become more efficient due to workload pressures and at the same time retain and develop critical technical expertise relevant to each industry sector caused a review in 2003 that resulted in the restructure of the Division into three Directorates as shown above, and described below.

This structure continues to function successfully. The Energy Safety Division is located at offices on the corner of Sevenoaks St and Grose Ave in the Perth suburb of Cannington.

### **6.2.2 Electricity Directorate**

This Directorate is headed by the Director Electricity and is responsible for –

- All electricity related technical and safety policy work including ministerial advice, new legislation, regulatory reform proposals, technical standards development, industry liaison and assessment of requests for variations to regulatory requirements; and
- All electricity related operational work.

The following two Branches:

- ❖ The Electricity Supply Branch, headed by a Principal Engineer; and
- ❖ The Electricity Utilisation Branch, also headed by a Principal Engineer;

each deal with policy work including ministerial advice, new legislation, regulatory reform proposals, technical standards development, industry liaison and requests for variations to regulatory requirements. They also provide specialist direction and assistance to the Electrical Inspection Branch, when the latter is carrying out complex investigations (such as those dealing with electricity industry work practices, or complaints about electricity supply standards) and corporate compliance audits of electricity utilities (e.g. Western Power) and licensed contractors, as well as enforcement activities.

The Directorate's Electrical Inspection Branch, headed by the Chief Electrical Inspector, is responsible for the following key activities:

- Conducting corporate compliance audits of electricity suppliers in relation to network safety and supply standards;
- Guiding and approving electricity supplier "Inspection Plans", which set out electricity consumer installation practices and commitments, and conducting audits to ensure compliance;
- Inspecting electricity consumers' installations in remote locations (not serviced by utilities);
- Conducting compliance audits of electrical equipment retailers, in relation to safety and energy efficiency (labelling and MEPS) requirements;
- Appointing all electrical inspectors in the State, maintaining codes of conduct, monitoring compliance;
- Carrying out investigations into serious accidents (injury and damage) and incidents (supply interruptions), and recommending safety promotion, warnings, prosecutions, disciplinary actions etc, as appropriate.
- Advising consumers and industry operatives in relation to energy safety and compliance matters;



- Technical and investigative support to the Electrical Licensing Board and the Licensing Office;
- Monitoring safe work practices used in industry;
- Participating in industry safety promotion campaigns (e.g. regional presentations); and
- Assisting the Director with appeals against external inspectors' rulings.

The Electrical Inspection Branch is based at the Cannington Office, but also has senior electrical inspectors based at Geraldton, Kalgoorlie and Bunbury. The NW and far north of the State are covered by a senior electrical inspector based in the Perth office, who conducts regular programmed inspections these areas. The branch operates on a 24/7 basis in response to the reporting of electrical incidents (fires, injury, major electricity supply interruptions etc).

### **6.2.3 Gas Directorate**

This Directorate is headed by the Director Gas and is responsible for –

- All gas related technical and safety policy work including ministerial advice, new legislation, regulatory reform proposals, technical standards development, industry liaison and assessment of requests for variations to regulatory requirements;
- All gas related operational work; and
- The development of strategies and plans, including liaison with a local industry reference group, in respect of electricity and gas infrastructure assurance, plus liaison with infrastructure security organisations at State and national level.

The following two Branches:

- ❖ The Gas Supply Branch, headed by a Principal Engineer; and
- ❖ The Gas Utilisation Branch, also headed by a Principal Engineer;

each deal with gas industry policy work and emergency management matters, including ministerial advice, new legislation, national policy issues, regulatory reform proposals, and requests for variations to regulatory requirements. They also provide specialist direction and assistance to the Gas Inspection Branch, when the latter is carrying out complex investigations and corporate compliance audits of gas utilities (e.g. Alinta<sup>10</sup>) and licensed gasfitting contractors, as well as enforcement activities;

The Directorate's Gas Inspection Branch, headed by the Chief Gas Inspector is responsible for the following key activities:

- Conducting corporate compliance audits of gas suppliers in relation to network safety and quality (composition) of NG and LPG supplied;
- Guiding and approving gas supplier "Inspection Plans," which set out gas consumer installation practices and commitments, and conducting audits to ensure compliance;

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<sup>10</sup> Alinta operates the Perth gas distribution system through the entity "Western Australian Gas Networks"

- Inspecting gas consumers' installations in remote locations (not serviced by utilities), with special focus on industrial installations such as mine sites with industrial gas appliances;
- Conducting compliance audits of gas appliance retailers, and gas appliance re-conditioners, in relation to safety requirements;
- Appointing all gas inspectors in the State, maintaining codes of conduct, monitoring compliance, especially in relation to the approval of industrial gas appliances;
- Carrying out investigations into serious accidents (injury and damage) and incidents (supply interruptions), and recommending safety promotion, warnings, prosecutions, disciplinary actions etc, as appropriate;
- Advising consumers and industry operatives in relation to energy safety and compliance matters;
- Technical and investigative support to the Gas Licensing Committee and the Licensing Office;
- Monitoring safe work practices used in industry;
- Participating in industry safety promotion campaigns (e.g. regional presentations); and
- Assisting the Director with appeals against external inspectors' rulings and requests for variations from prescribed requirements.

The Gas Inspection Branch is based at the Cannington Office. Support is provided from senior electrical inspectors at country locations, where practicable.

The branch operates on a 24/7 basis in response to the reporting of gas incidents (fires, injury, major gas supply interruptions, etc).

#### **6.2.4 Business Services Directorate**

This Directorate is headed by the Director Business Services and, in brief, is responsible for the operation of the Licensing Office, the development and maintenance of electrical and gas licensing policies, support to the statutory Electrical Licensing Board and the Gas Licensing Committee, especially for dealing with disciplinary proceedings against licence holders, the operation of EnergySafety's administrative and office systems, the provision of a wide range of business planning, business performance measurement, financial planning and management accounting functions, plus communication with industry.

The Directorate currently has three Branches, as follows:

- ❖ Licensing Office
- ❖ Business Projects
- ❖ Technical Communications

An Office Services Branch is yet to be established, to provide for the efficient future delivery of various corporate services and external contract services necessary for the functioning of EnergySafety.

These Branches deal with the following key activities, as relevant:

- the development and maintenance of licensing policies covering the licensing of electrical contractors, electricians, restricted electrical workers and the various types of gas fitters;
- administering the Licensing Office, which deals with all electrical and gas licensing enquiries, applications, renewals, and manages the licence holder databases and related applications;
- supporting the Electrical Licensing Board in the discharge of its statutory functions (including provision of Executive Officer);
- supporting the Gas Licensing Committee in its discharge of the statutory functions delegated by the Director (the Director Business Services is chair);
- managing formal disciplinary proceedings in respect of electrical operatives for the Electrical Licensing Board, and in respect of gas fitting operatives, for the Director of Energy Safety, the more serious proceedings being forwarded to the State Administrative Tribunal;
- administration of the Division's industry levy scheme including data collection and modelling, licence revenue forecasting, expenditure budget development;
- representing EnergySafety's needs in relation to various corporate and central agency activities, including internal audit, expenditure tracking and projection, performance indicator development and progress monitoring;
- overseeing the development of the annual Business Plan and maintenance of the Division's Operational Plan;
- overseeing and coordinating office services including records management, FOI, IT services, building services, fleet management; finance and administration services (as provided by Corporate Services Division);
- statistical analysis and reporting in respect of electricity and gas related incidents, and EnergySafety's key performance indicators; and
- industry technical (regulatory) communication, annual reporting and safety promotion generally.

### **6.2.5 EnergySafety's staff resources**

The Business Plan 2006-07 advised that the then Minister had approved a total of 10 extra permanent staff could be appointed progressively over 3 years to bring EnergySafety's establishment level to 56 FTEs.

The strategy adopted was that the additional staff would be appointed in line with financial capacity and the availability of suitable personnel.

Since then Government approval for an ARB (Attraction and Retention Benefit) in line with that initially submitted by EnergySafety during October 2006 allowed recruiting to fill vacant positions, although this met with only modest success.

Meanwhile some technical personnel have been engaged on a limited term basis to augment existing permanent staff resources.

The current status (at December 2008) of Energy Safety's staffing is that the establishment level of permanent, full time positions is 54.

It is expected that an FTE level of 56 will be reached during 2009/10.

### **6.2.6 EnergySafety's regulatory powers**

EnergySafety's regulatory powers originate from the regulatory functions of SECWA, the State's vertically integrated electricity and gas utility and regulator that ceased at the end of 1994. The regulatory functions at that time were tailored solely to suit safety regulation of consumers' installations and not electricity and gas networks.

This changed substantially in 2000 and early 2002 when new technical and safety regulations covering gas networks and electricity networks respectively came into effect.

Since then the recent passing and proclamation of the *Gas and Electricity Safety Legislation Amendment Act 2007* has addressed enforcement mechanism shortcomings. Additionally the ability since mid 2007 to issue Infringement Notices assists compliance enforcement.

In an environment where increasing competition inevitably puts cost pressures on all energy industry players, including network operators, it is important that the regulator can act to maintain a level playing field and also protect the community. The improved enforcement powers are significant in that context.

The next section describes in more detail some of the issues that are important for EnergySafety's business focus.

## 6.3 Industry and Community Electrical and Gas Safety

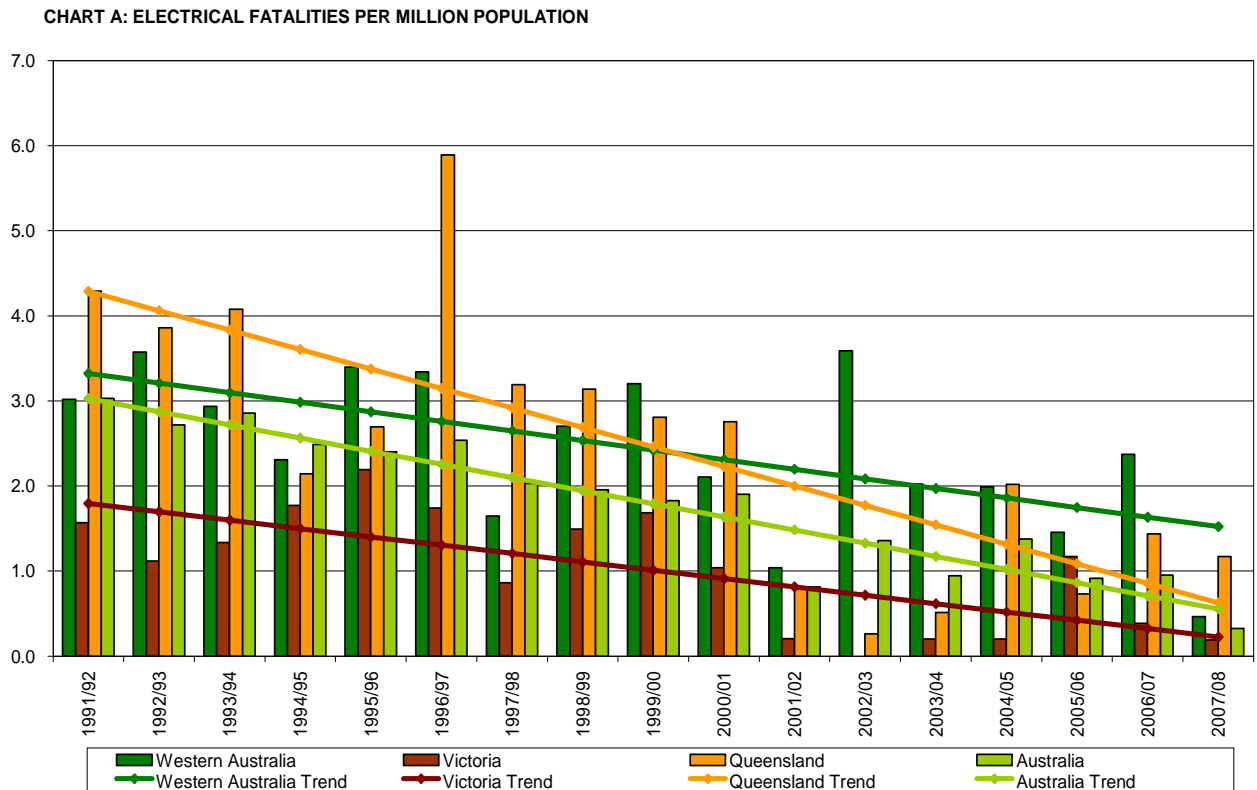
### 6.3.1 General

The following is a summary of electrical and gas safety outcomes in Western Australia. The data included in this report is based on Western Australian electrical and gas safety incidents reported by industry and the public, and recorded in EnergySafety's Electrical Inspection System and Gas Inspection System<sup>11</sup>.

The data for other States and Territories have been obtained from their respective regulatory authorities.

### 6.3.2 Electrical Safety

Traditionally Western Australia has been compared to Victoria and Queensland. As the following chart shows, the long term trend for electrical fatalities across Australia as a whole is a declining one. Western Australia has also had a decline in fatalities, but this decline has been slower than that of some of the other States.



Note: The number of fatalities for 2007/08 for Australia overall does not include South Australia and Australian Capital Territory as this information was not available at the time of documenting this report.

<sup>11</sup> These information systems are limited in terms of data quality and detail. They are expected to be replaced by new and improved systems during 2009-10.

Victoria has been known for its extensive TV advertising to promote electrical safety and this could be a reason for its low fatality rate, which is much lower than the national rate.

One of the drivers for declining fatality (electrocution) rates is the mandatory installation since 1992 of RCDs (residual current devices or “safety switches”) in new electrical installations, as well as additions/alterations. In some States (e.g. QLD) their retrofitting into older installations has been more effective, as it has been enforced as a condition of sale and leasing of residential premises (as is now proposed for WA).

### **Electrical Fatalities**

In 2007/08 there was one electrical fatality reported in Western Australia where electricity was found to be the cause. A ten year old girl climbed a steel pole to retrieve a football jumper and came in contact with “live” 230/400 volts conductor(s) and received a fatal electric shock.

CHART B: WA ELECTRICAL FATALITIES PER MILLION POPULATION - 1991/92 to 2007/08

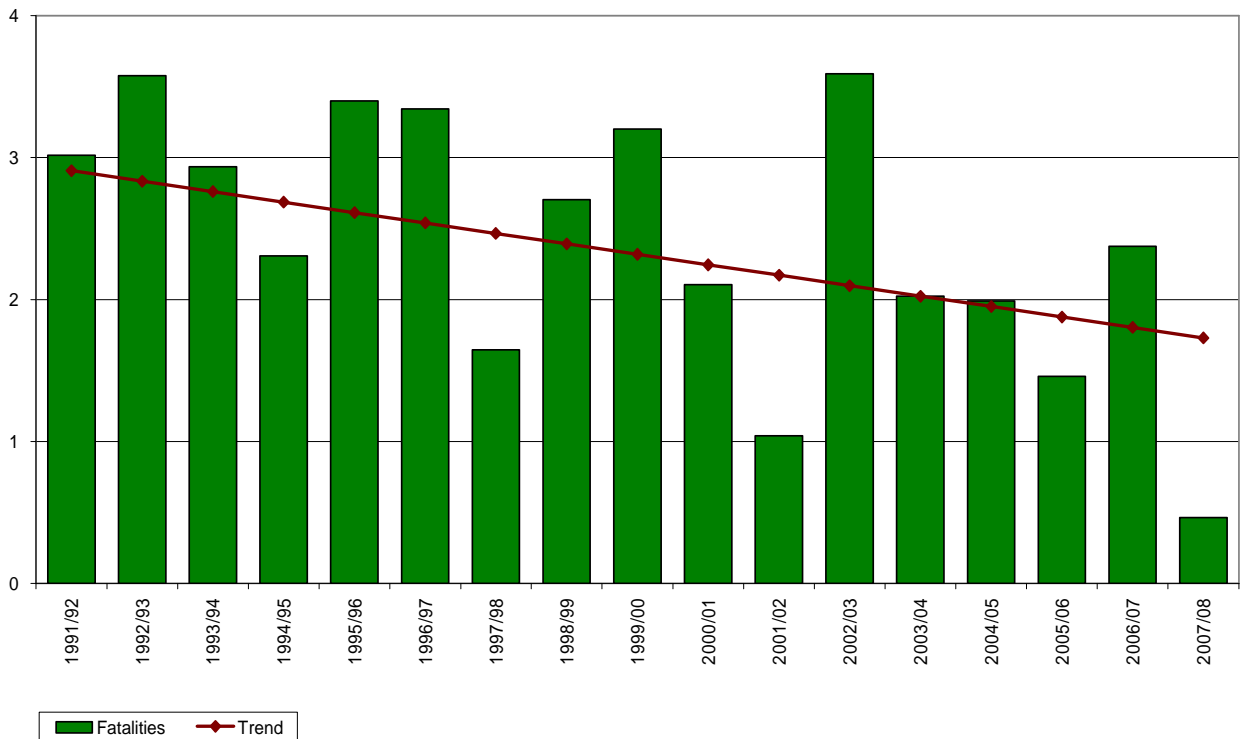


Chart B shows that the frequency of fatalities in Western Australia has decreased, with 2007/08 having the lowest rate of the last 17 years.

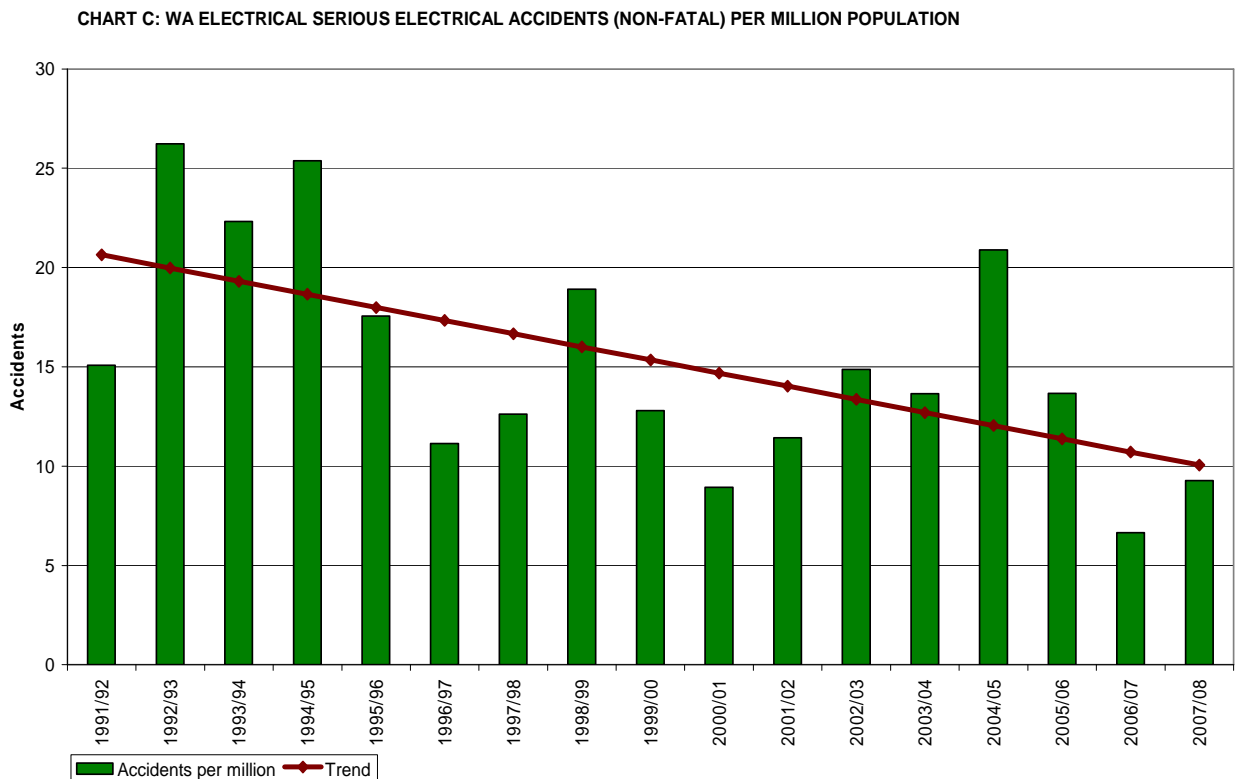
It should be noted that EnergySafety carried out a TV based electrical safety awareness campaign during 2007/08 and this may have contributed to reducing the number of fatalities. EnergySafety also conducted a safety awareness advertising campaign in 2005 and this is another year during the five from 2003/04 to 2007/08 when the rate of fatalities was noticeably less.

It can therefore be argued – taking into account WA experience and that in Victoria – that regular safety awareness campaigns do have a positive impact on community electrical safety.

### ***Serious Electrical Accidents – Non fatal***

There is a clear, decreasing trend in the number of serious electrical accidents per million population. Serious accidents are those requiring persons to be treated by health professionals, but do not include incidents resulting in persons receiving only pre-cautionary electrocardiograph (ECG) assessments (i.e. when treatment is not necessary).

In 2007/08 there were 20 non-fatal serious electrical accidents reported. It is interesting to note that 85 per cent of these occurred in workplaces, indicating that there is a need for more emphasis on workplace electrical safety.



Furthermore, of all the workplace electrical accidents reported for 2007/08 nearly 30 per cent involved electricians. A further 24 per cent of workplace incidents reported in the same year involved network operator employees such as line workers, cable jointers, technicians and others. Trends relating to incidents involving electricians only are further analysed in the section on electrical and gas worker safety.

Although there has been a slight increase in the rate of electrical accidents in 2007/08 compared to 2006/07, the last two years have recorded the lowest rates during the reported 17 year period.

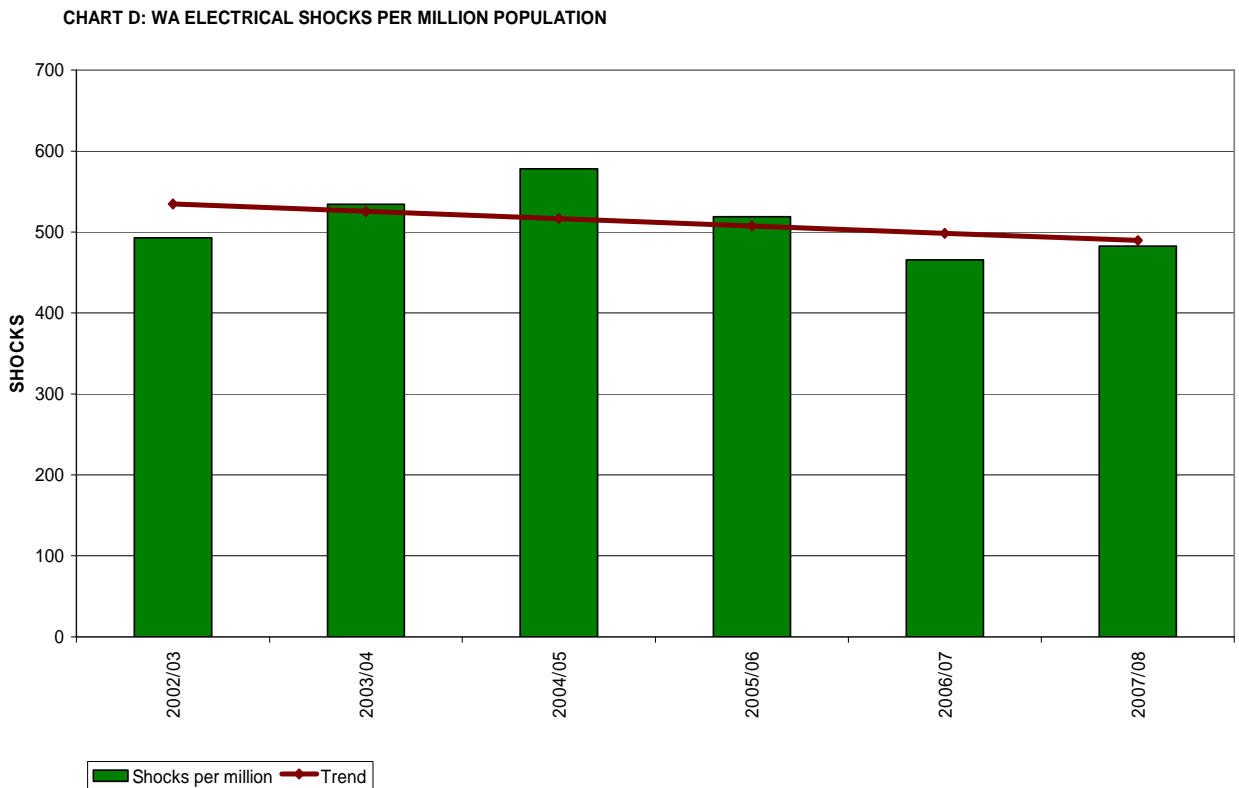
### **Electric Shocks**

The incidence of electric shocks is an indicator of community electrical safety.

In general terms, an electric shock not causing injury or harm may be experienced by a person due to an error by that person (e.g. touching something “live” while carrying out some work) or another person, or due to faulty equipment in the home or workplace, or due to a fault or deficiency with the electricity supply network.

The reporting of shock incidents is valuable as sometimes the difference between a shock and an electrocution can be very little – meaning that shock incident reporting can often identify a real safety hazard, so that it can be addressed.

Fortunately the reporting of shock incidents has improved during recent years and it is now possible to see a meaningful trend, which indicates that although it is moving in the right direction, considerable room exists for improvement.



The continuing positive impact of safety switches (expected to lift considerably once the mandatory retrofitting in homes is in effect) and other programs such as Western Power’s and Horizon Power’s commitment to replacing all of its aerial service cables can be expected to improve the declining shock rate trend.



### 6.3.3 Gas Safety

For 2007/08 one fatal incident that occurred while a gas worker was carrying out an operation on the Perth gas distribution system.

However, the State Coroner later concluded that the cause of death was not gas related and it has been excluded from statistics.

CHART E: WA GAS INCIDENTS RESULTING IN FATALITY PER MILLION POPULATION 2002/03 TO 2007/08

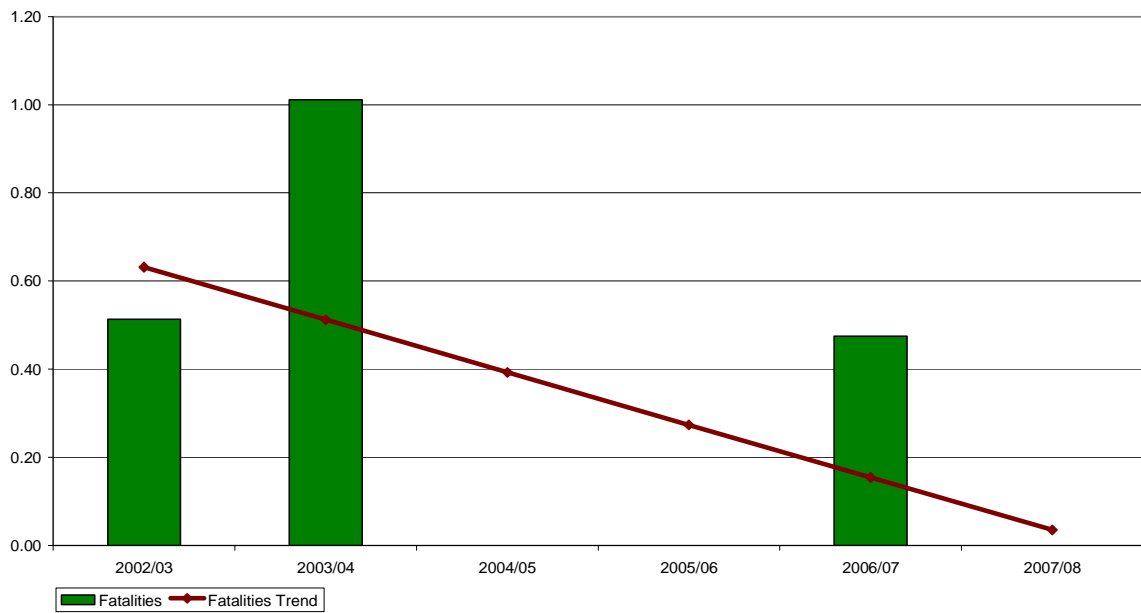
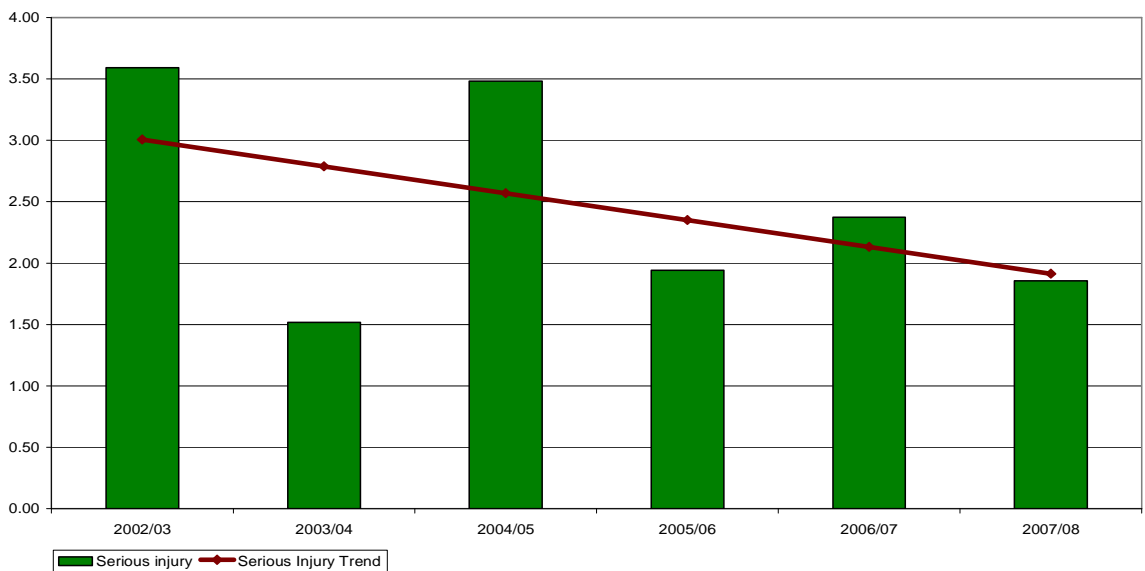
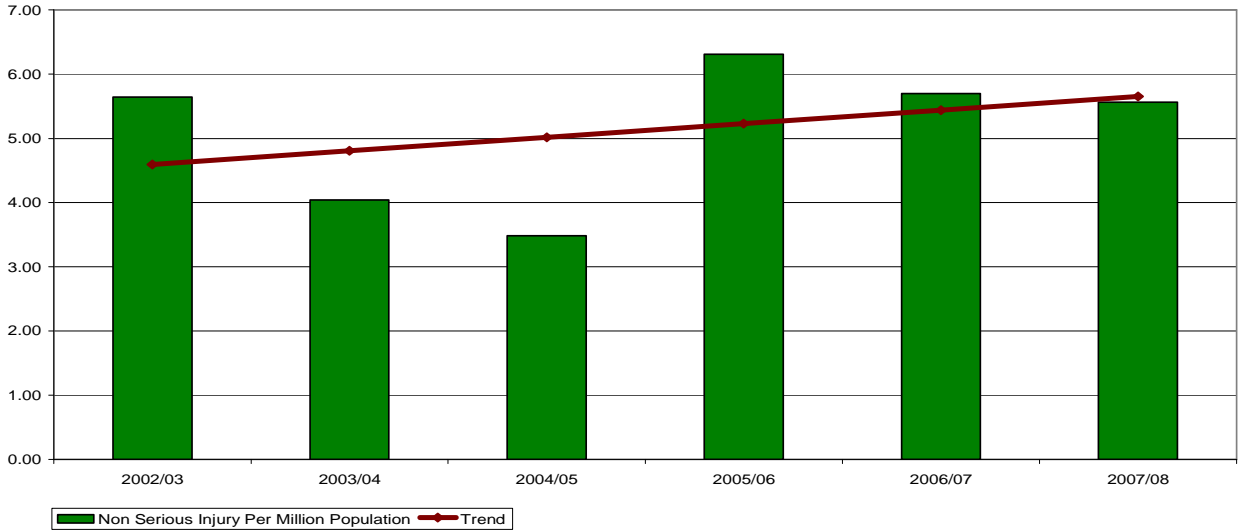


CHART F: WA GAS INCIDENTS RESULTING IN SERIOUS INJURY PER MILLION POPULATION 2002/03 TO 2007/08



The trends relating to incidents resulting in fatalities and serious injury are decreasing as illustrated in Chart E and Chart F respectively. The number of gas fatalities per million population has been less than one each year with the exception of 2003/04.

CHART G: WA GAS INCIDENTS RESULTING IN NON SERIOUS INJURY PER MILLION POPULATION - 2002/03 TO 2007/08

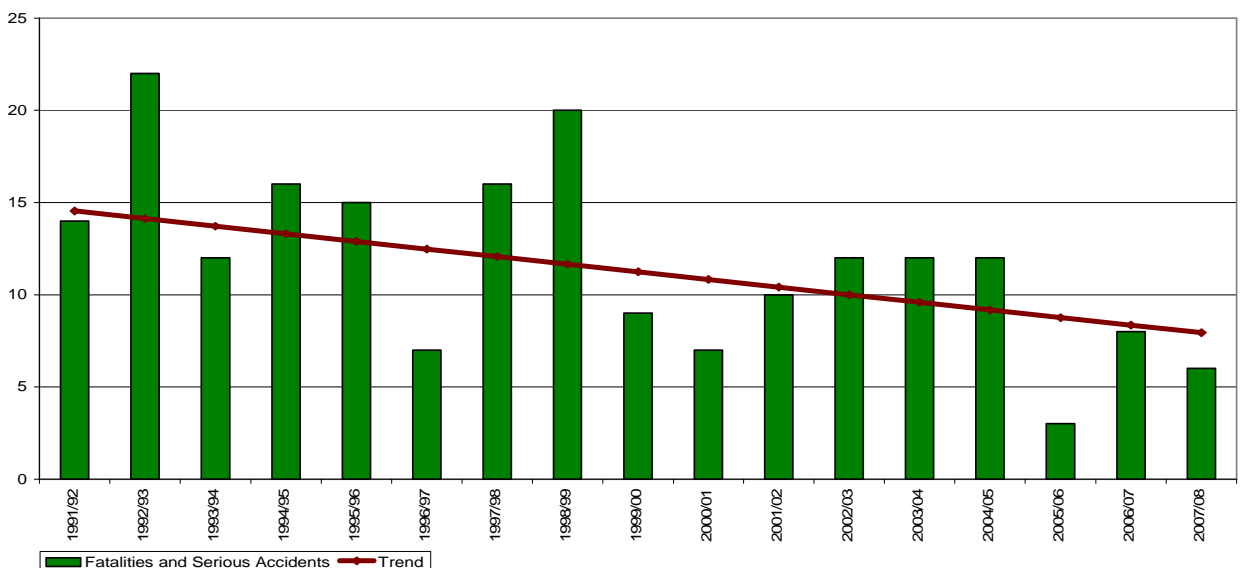


Incidents that do not result in a fatality or do not require the victim to be hospitalised are categorised as ‘non serious’. The trend of this type of gas incident indicates a slight increase, however this is attributed to greater awareness of mandatory reporting requirements during the more recent years and the trend should change in years ahead.

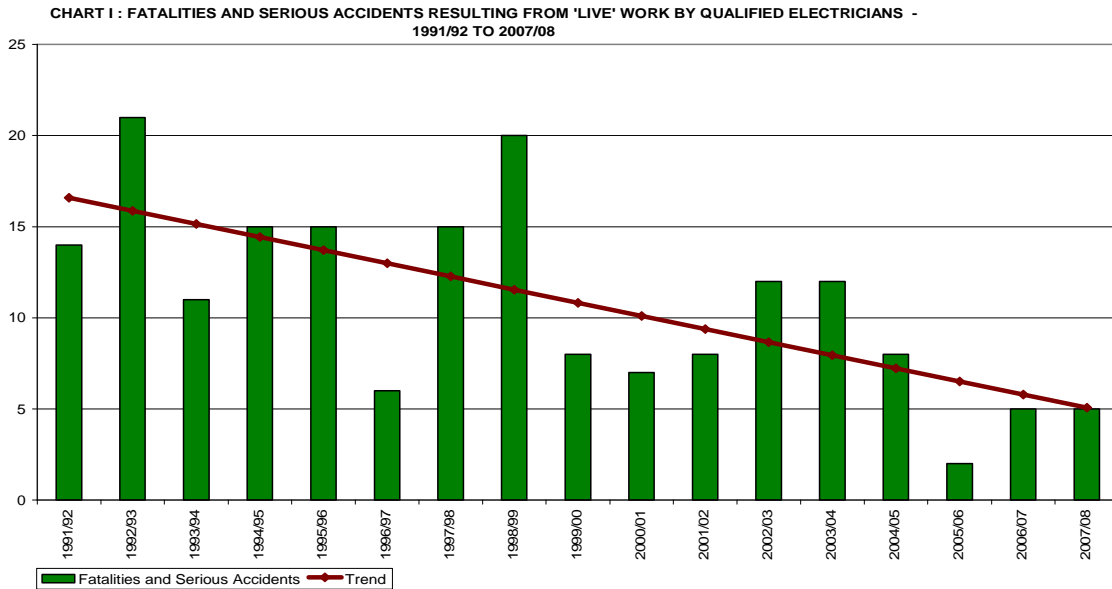
### 6.3.4 Electrical & Gas Worker Safety

Electrical workers are at greater risk of electrocution than members of the general public or workers in other occupations.

CHART H : FATALITIES AND SERIOUS ACCIDENTS INVOLVING QUALIFIED ELECTRICIANS IN WA - 1991/92 TO 2007/08

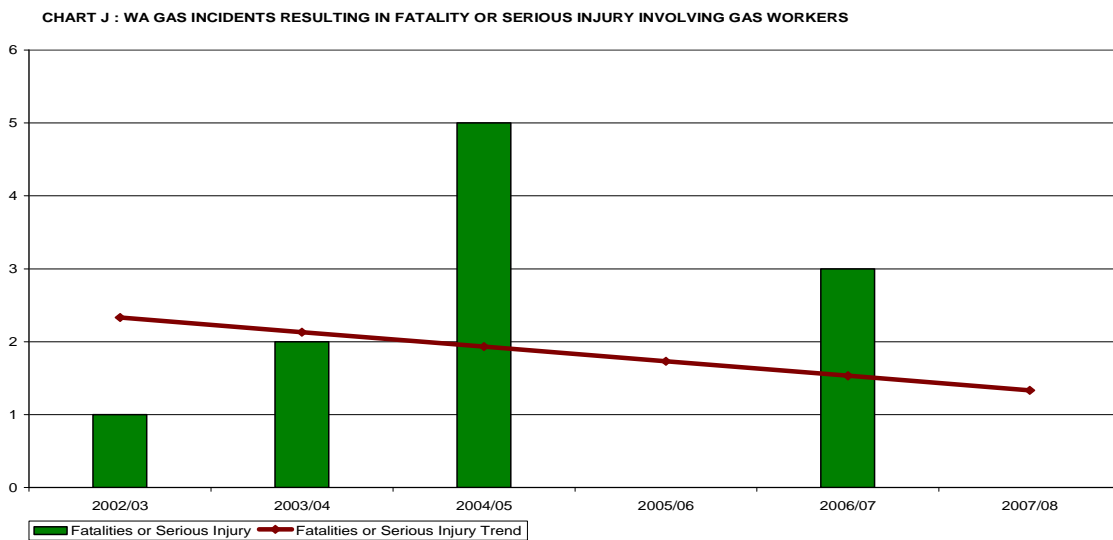


A comparison between charts H and I indicates that despite their skills which provide them with the knowledge of working with electricity, most of the incidents involving electricians result from performing tasks on 'live' equipment.



On a positive note, the trends in both cases are in the right direction suggesting that the main strategy utilised by EnergySafety, of warning workers of the dangers of performing 'live' work, is effective.

In relation to gas safety, there has not been a fatality involving a gas worker since 1984. The incidents in Chart J below reflect incidents resulting in serious injury.



The number of serious injuries involving gas workers is comparatively lower than electricians, indicating the different hazards and work practices associated with gas work.

*Note: The data included in Chart J reflects data available at EnergySafety. The data could not be verified for accuracy due to limitations of the data capture capabilities of the existing Gas Inspection System. This system and the electrical equivalent are due to be replaced during 20010/11.*

### **6.3.5 Concluding remarks**

The statistical trends in the areas of electricity and gas safety largely reflect positive outcomes. There are indications that TV advertising to promote electrical and gas safety has results in an increased awareness of community electrical and gas safety, and reduces safety incidents, especially electrical safety incidents.

## **6.4 Measures to improve safety outcomes**

### **6.4.1 General**

Although many safety incidents appear to take place due to human error on the part of the person affected, such as by –

- assuming something was 'dead' when in fact it was 'live', or
- making unintended contact with 'live' parts when using a tool and thus shorting out part of a switchboard, or
- failing to clear an area of gas before attempting to relight a gas appliance

rather than the failure of electrical or gas equipment or the incorrect installation of such equipment, the frequency of such incidents can also be reduced by improving technology, safety devices and compliance with prescribed installation and work practices standards.

The following Sub-Sections deal with some of these options, as well as education measures.

Aside from the use of specific requirements or controls on industry workers, other measures to improve safety outcomes (for both the worker and the end user of the work being carried out) include greater Inspector visibility.

A survey conducted by Donovan NFO in 2001 for WorkSafe WA supported the need to increase the visibility of Inspectors in the workplace in order to motivate businesses to actively manage occupational safety and health.

This observation equally applies to the energy safety regulation area. Such a proactive approach however places considerable extra and competing demands on the available Inspectors.

### **6.4.2 Consumer safety through installation compliance inspections**

EnergySafety oversees and manages an electrical and gas consumer installation safety inspection regime. This regime engages some 170 (estimated as 100 full-time equivalent) Inspectors across WA, employed by the various electricity and gas network operators, LPG suppliers or pipeline licensees, or operating on a fee-for-service basis for these entities. They inspect the work of licensed operatives at consumers' electrical and gas installations of all types (commercial, institutional, industrial and residential) either on an individual basis or, if the network operator (or LPG supplier) has an approved Inspection System Plan, on a sample basis.

This work continues as a key part of the enforcement regime. Comparisons with the installation inspection regimes of other jurisdictions has shown the WA framework

delivers very good results. These will be further improved through the new enforcement powers now available (especially the ability to now issue Infringement Notices).

#### **6.4.3 Retro-fitting of Safety Switches**

It is a well established fact that safety switches (more correctly called Residual Current Devices or RCDs) will save individuals from serious shock or electrocution in about 90% of cases in the home or small business. They also have extensive application in industrial plants and premises, albeit in different forms to suit the equipment and work environment.

One of the most common forms of serious electrical accident in residential premises is through persons entering the building's roof space to carry out some type of work (e.g. to repair something), then making contact with exposed live parts (due to damage or deterioration over many years of the wiring) while simultaneously contacting some earthed metalwork (e.g. plumbing pipe). If the wiring installation has "whole of house" RCD protection – either through a single or preferably two RCDs – then such contact will not result in a serious shock but only a tripped electricity supply to the premises.

Unfortunately, the promotional work carried out by EnergySafety during the 1990s did not result in significant retrofitting of RCDs by householders in pre-1991 homes (since then the fitting of RCDs has been mandatory).

The Government has therefore approved the retro-fitting of RCDs as a future mandatory requirement on the vendors of residential premises and the landlords of residential premises. Similar initiatives are being pursued or have already been undertaken by regulators in other jurisdictions. This is the most acceptable way of ensuring that the purchasers of a home can be confident the electrical installation is safe for their use, whilst making this a minor outlay only for the vendor and achieving a significant penetration of RCD protection over a 15 year period. EnergySafety is currently undertaking industry consultation on this initiative and it is anticipated that the regulations will come into operation during 2009/10.

#### **6.4.4 Residential installation safety assessments**

During 2008/09 EnergySafety intends to develop and implement in mid 2009 a scheme under which individuals may select and engage an electrical contractor to carry out and report on an assessment of the safety and functionality of a dwelling's electrical installation, based on a standard, structured plan that has been developed and approved by EnergySafety.

Energy Safe Victoria has already developed and implemented a similar scheme.

The need for this type of service, which is proposed to operate on a fee-for-service basis (with payment directly to the contractor), has become increasingly evident in WA as dwellings age and the persons either proposing to purchase them or renovate them, or simply properly maintain them, need better information on which to base their decisions.

Each electrical contractor undertaking such a service would be held accountable for the accuracy and quality of their reports to clients, by the Electrical Licensing Board.

Once the electrical installation assessments have been developed and implemented, following industry consultation, a similar scheme is expected to be developed for the gas industry.

#### **6.4.5 General electrical and gas safety promotion for the community**

Community safety is important and EnergySafety aims to be proactive in reminding the community of the hazards associated with unsafe electrical and gas installations and appliances through regular safety promotion activities.

Experience here and elsewhere shows campaigns should be aimed at both the public and energy workers in industry, to improve safety awareness in relation to the safe use of electricity and gas, electricity and gas infrastructure, and the hazards of working with energy. Campaigns need to be ongoing, as the message requires constant reinforcement to be effective.

Public safety and similar campaigns aimed at the general community are mainly reliant on the use of media advertising. Recent surveys have shown that TV advertising is very effective, whereas other forms of media are not. EnergySafety's 2008 campaign for example had good awareness recall by the public.

However, TV advertising is expensive and requires adequate funding to be available. For this reason, TV campaigns are being planned to run every 2 years approximately, and the next campaign is expected to run during late 2009/10.

#### **6.5 Energy efficiency regulation of appliances and equipment**

An increasing amount of electrical equipment used both in residential premises and industry is already subject to energy efficiency requirements such as labelling and minimum energy performance standards (MEPS).

During 2009/10 EnergySafety will continue to participate actively in the "E3 Committee", the Equipment Energy Efficiency Committee which operates under the Ministerial Council for Energy and is chaired by the Australian Greenhouse Office (which is also a member of ERAC).

This will ensure that EnergySafety remains up to date in its knowledge of the directions and latest steps of Australia's energy efficiency program, which is a key component of national efforts to minimise greenhouse gas emissions and related climate change. It is also expected that EnergySafety will become a participant in the national check testing program for products and equipment subject to energy efficiency regulation.

## FINANCIAL PLAN

### **7.0 Introduction**

The Financial Plan that follows on the next page sets out in detail the forecasts for the various components that make up EnergySafety's revenue budgets and expenditure budgets (both capital and operating) over the 2009/10 year and beyond.

Each of the components in the Table is explained in the text of section 7.1.

### **7.1 Financial Plan, notes and explanations**

EnergySafety's Financial Plan is designed to provide a detailed overview of –

- (1) estimated revenue from electrical and gas operative licence fees and other minor revenue generating activities;
- (2) planned operating and capital expenditure; and
- (3) the energy industry levy required to make up the shortfall between (1) and (2).

Estimates are provided for the next financial year 2009/10, as well as for the four forward years, although it needs to be recognised that projections for the out-years are less accurate and subject to review prior to each year.

The following points should be noted in relation to the attached Plan, in the sequence of items listed in the attached Plan:

#### **SPECIAL EXPENDITURE ITEMS**

- a) National regulatory reform projects:

These are described in detail on pages 8 - 9. The Commonwealth Government has instigated via COAG the following national, major regulatory reform projects in areas that are highly relevant to EnergySafety:

- Occupational licensing
- Energy supply industry regulation
- National Construction Code

The final outcomes may have considerable impact on EnergySafety's role and functions, its structure and funding.

During 2008 EnergySafety has therefore had to make a significant commitment to involvement in the following projects, which is an extra workload that impacts considerably on staff resources, project priorities and costs. This will continue for several years and hence special funding has been provided under the Business Plan [see item 1(a)].

*(notes continued after Table on next page)*

**FINANCIAL FORECASTS:**

	\$m					
	08/09	09/10	10/11	11/12	12/13	13/14
<b>OPERATING EXPENDITURE:</b>						
1) <u>Special Expenditure Items</u>						
a) National regulatory reform projects		0.150	0.175	0.200	0.200	0.200
b) Major safety campaign (TV etc)		0.500	0.000	0.500	0.000	0.500
c) Audits of remote electricity networks		0.400	0.400	0.400	0.000	0.000
<u>TOTAL SPECIAL ITEMS:</u>		1.050	0.575	1.100	0.200	0.700
2) <u>Recurrent Expenditure</u>						
a) Corporate services levy (to DoC)	0.759	0.790	0.790	0.790	0.790	0.790
b) Special EIS & GIS support	0.150	0.075	0.000	0.000	0.000	0.000
c) Legal services (mainly to SSO)	0.333	0.346	0.346	0.346	0.346	0.346
d) Labour costs (incl ARB)	5.883	5.720	5.720	5.720	5.720	5.720
e) Other recurrent expenditure	1.802	2.841	2.841	2.841	2.841	2.841
<u>TOTAL RECURRENT:</u>	8.927	9.772	9.697	9.697	9.697	9.697
<u>TOTAL OPERATING EXPENDITURE:</u>		10.822	10.272	10.797	9.897	10.397
<b>CAPITAL EXPENDITURE:</b>						
a) Desktop IT hardware/software renewal	0.094	0.135	0.090	0.120	0.120	0.120
b) IS Software replacements - see notes*	0.000	0.400	0.400	0.000	0.000	0.000
<u>TOTAL CAPITAL:</u>	0.094	0.535	0.490	0.120	0.120	0.120
<b>TOTAL EXPENDITURE:**</b>	9.444	11.357	10.762	10.917	10.017	10.517
<b>SOURCE OF FUNDS:</b>						
a) Estimated licensing revenue		2.828	3.671	4.268	4.380	3.720
b) Other minor income		0.093	0.093	0.093	0.093	0.093
c) Indian Ocean Territories service		0.056	0.058	0.060	0.062	0.065
d) Base energy industry levy		8.380	6.940	6.496	5.482	6.639
e) Adjustment to equalise levy		-2.228	-0.788	-0.344	0.670	-0.487
f) Net levy***	5.765	<b>6.152</b>	6.152	6.152	6.152	6.152
g) Carry forward to next year	3.175	0.947	0.160	-0.184	0.487	0.000
h) Funds from previous year		3.175	0.947	0.160	-0.184	0.487
<u>AVAIL FUNDS FOR EACH YEAR:</u>		11.357	10.762	10.917	10.017	10.517

\*\*\* total levy over the 5 forward years = 30.762 or 6.152 average p.a.  
after allowing for carry forward of 3.175 from 08/09

**Notes:**

- (1) \*This is EnergySafety's share of the increased cost of replacing the EIS and GIS software by the new CMS application (see further notes).
- (2) \*\*The amount shown for 2008/09 includes cost of special items not detailed above.
- (3) \*\*\*Proposed 2008-09 levy at \$6.152m is the 2008/09 levy plus 6.7% (CPI is 4.2%)
- (4) All forward estimates are in 2009/10 dollars



b) Major advertising campaigns for electricity and gas safety:

As part of its role, EnergySafety needs to promote electrical and gas safety, through programs that are varied from year to year. This is to promote public and consumer safety using TV, radio and print media as described on page 13 and it is proposed to have one major campaign every 2 years as shown. Industry presentations and safety material (e.g. safe work practices videos) are covered under Recurrent Expenditure. Special funding is therefore allowed for in the Business Plan [see item 1(b)].

c) Audits of remote electricity networks:

There is a need for electricity transmission and distribution safety compliance audits to be conducted, mainly on the network operators working in the Pilbara and remote locations (Western Power is already being audited in various areas). Technical labour resources are expected to be available through a newly established multi-year panel contract as described on page 12. Special funding is therefore provided for this work under the Business Plan [see item 1(c)].

*Employee entitlements:* in a change from the previous Financial Plan, this year no special fund is shown to cover liabilities associated with EnergySafety's labour force, such as for accumulated leave and certain (limited) superannuation<sup>12</sup> entitlements. The reason is that it has been found to be impractical to operate on this basis and instead payments against these kinds of entitlements are made from the annual labour costs budget.

### **RECURRENT EXPENDITURE**

- a) EnergySafety requires corporate services (covering finance, HR and IT/IS) to be provided by DoC and the amount shown is the estimated cost, which has been escalated in line with inflation.
- b) Extra expenditure may be required for maintaining the EIS and GIS applications until they are replaced as part of the new corporate Compliance Management System (CMS) application during 2010/11.
- c) Legal Services are normally provided by State Solicitor's Office and these are charged to EnergySafety at nominal cost.
- d) Labour costs include all expenditure associated with permanent, contract and temporary employees, known salary increases per the award and direct on-costs such as superannuation and FBT. Recruitment costs are now covered in (e).
- e) Other recurrent expenditure includes all rent and related outgoings associated with EnergySafety's Cannington offices and a minor Inspector's Store nearby for operational equipment, plus other costs such as energy and communications services charges, various consumables and services etc necessary for operating an office, travel, training, printing costs, vehicles etc. The total shown is a revised figure, following a detailed review of cost allocations between (d) and (e), including their quantum.

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<sup>12</sup> Employer superannuation contributions are made in an ongoing manner as part of labour costs.

## **CAPITAL EXPENDITURE**

- a) IT hardware and software replacement covers only the routine replacement of desktop PCs and local printers etc. All general DoC IT network infrastructure costs and software user licence costs are covered by the Corporate Services charge to EnergySafety.
- b) Information Systems (IS) replacement: EnergySafety's current corporate IS are –
- ❖ the Electrical Inspection System (EIS) which supports the operational work of the Electrical Inspection Branch and collects vital data;
  - ❖ the Gas Inspection System (GIS) which supports the operational work of the Gas Inspection Branch and collects vital data;
  - ❖ the Electrical Licensing Application (ELA) that handles all electrical worker / contractor licensing transactions and records; and
  - ❖ the Gas Licensing Application (GLA) that handles all gas fitter licensing transactions and records.

These systems are in the process of being replaced.

- In the case of the ELA and GLA systems this should be completed during early 2009/10, with the capital cost of the replacement CALS system being fully funded by CF appropriations as the systems were considered obsolescent prior to the inception of industry funding.
- In the case of the EIS and GIS systems the work should be completed by end of 2010/11 with the bulk of the capital cost of the corporate CMS (Compliance Management System) met by CF appropriations, as the various DoC systems that it will replace (EIS and GIS at EnergySafety, and other systems in other divisions) were considered obsolescent prior to the inception of industry funding. However, as is noted on page 39, a total of \$800,000 has been allowed in the EnergySafety capital expenditure budget at item (a), split equally between 2009/10 and 2010/11, to provide additional funding for the CMS project. This is the estimated amount required to cover EnergySafety's share of the increase in capital cost to develop the CMS. The reason for the cost increase and EnergySafety funding contribution is that the original estimates (and CF funds available for the project) did not allow for the sophisticated features now considered necessary for the compliance management system, which have added significantly to the design and build phases.

## **SOURCE OF FUNDS**

- a) Licensing revenue is that derived from electrical worker, electrical contractor, and gas fitter licence fees. The total revenue per year varies on a 5 year cyclical basis, as the electrical worker fees are for a 5 year term and renewals are not equally distributed over the 5 year period. Licence fees may only be set to reflect the cost of administering a licensing system and currently most fees are within 20-10% of full cost, with regular steps being taken to increase fees beyond CPI adjustments, so as to 'close the gap' and reflect full cost recovery. All fees are expected to be at full cost recovery within 5 years (Note: as fee increases are at each government's discretion, future increases have not been factored into the

- forward years, although the 2009/10 revenue estimate is based on proposed fee increases in line with the CPI).
- b) Other minor income: covers the sale of publications and the like to industry.
  - c) Indian Ocean Territories (IOT) services: DOCEP has a service agreement with the Commonwealth's Department of Transport and Regional Services (DOTARS) to provide regulatory services to the IOT as it does on the WA mainland, but at full cost to DOTARS. EnergySafety is providing electricity and gas regulatory services under this agreement and the expected income is as shown.
  - d) Base industry levy: this is the "unadjusted" energy industry levy that would be necessary to make up the difference between each year's total expenditure and the sum of the revenues of (a), (b) and (c) above. In other words, it is the raw amount of the levy needed to make EnergySafety fully industry funded.
  - e) Adjustment to equalise the levy: the figures at (d) show that over the 5 year period the combination of varying expenditure needs and varying licence revenue is such that it requires considerable variation in the levy itself. This is not desirable from a levy administration perspective, hence the Financial Plan at lines (f), (g) and (h) contains a mechanism that provides for an averaging of the levy over the 5 year forecast period, so as to reduce year-to-year fluctuations (this averaging is carried out on a yearly, rolling basis). The quantity shown at line (e) is the variation from the average levy, which is calculated at the foot of the page and for completeness shown at line (f).
  - f) This line shows the net actual (or equalised, or averaged) industry levy over the 5 year forecast period. It should be noted that this amount of levy is reasonable when compared with the amounts applied in other jurisdictions, for similar purposes (see section 8.0).
  - g) Carry forward to next year: the equalisation scheme referred to in (e) and (f) above necessarily provides excess income in some of the 5 years of the forecast period, and that needs to be allocated for "carry forward". Similarly, in some years the income from the equalised levy and other revenue may be insufficient to cover all expenditure and in this case a temporary credit facility (from the Department of Treasury & Finance) could be required, if actual figures follow estimates. During this forecast period this may be required in one of the forecast years, but as the amount is small and forecasts of other revenue tend to be conservative, it is unlikely that such a facility will be needed.
  - h) In keeping with (g), this line shows the amount carried forward from the previous year, to allow totals to be calculated. It had been forecast that \$2.217m would need to be carried forward into 2009/10 as part of the levy equalisation scheme, however the amount carried forward is expected to be \$3.175m, principally due to increased licensing revenues and reduced expenditure due to staff vacancies in the 2008/09 and the preceding year.

## **7.2 Industry levy quantum**

The Financial Plan shows the industry levy for 2009/10 is required to be \$6.152m, based on the equalisation scheme (as explained in section 7.1) that allows for fluctuations in revenue from licensing and in various types of expenditures.

The quantum of the levy proposed for 2009/10 is \$6.152m, which is 6.7% more than the 2008/09 levy of \$5.765m (i.e. more than just a 4.2% CPI based increase).

The reason for this is that a special, one time capital expenditure of \$800,000 in total has been allowed in the years 2009/10 and 2010/11 in equal amounts to meet the estimated amount required to cover EnergySafety's share of the increase in capital cost to develop the new computer-based Compliance Management System (CMS). This capital expenditure had not been anticipated during 2007 and is discussed further under "Capital Expenditure" on page 41.

The CMS capital funding contribution of \$800,000 has been spread over the 5 year period of forecasting and levy equalisation. The budget was too tight to allow the \$400,000 p.a. for 2 years to be accommodated without raising the levy by more than the CPI (significant planned programs would have to be abandoned).

The manner in which the levy of \$6.152m is to be applied across various industry participants is outlined in section 8.

## INDUSTRY LEVY STATEMENT

### **8.0 Introduction**

This Statement is produced in accordance with section 6 (1) of the *Energy Safety Act 2006* – “the Act”.

The Act makes provision for the collection of a levy from energy industry participants. A similar contribution scheme levied on the gas and electrical industries is to be found in other States, e.g. Victoria and Queensland.

The Levy is based on the concept that there should be a contribution from those parties who benefit from the existence, continuous development and enforcement of WA's electricity and gas technical and safety regulatory framework. It is assumed that entities that contribute a portion of the Levy will pass on this cost to its clients. The clients and beneficiaries of the regulatory framework are gas and electricity users generally as well as purchasers of commodities or goods produced using electricity or gas, irrespective of whether they are at home, at recreation or at work in commerce or industry. All these users benefit from safe energy supply systems, safe and efficient energy installations and appliances, safety promotion and related emergency management work.

For 2009/10 the proposed Industry Levy in accordance with the *Energy Safety Act 2006* section 6 (1) (c) and the related *Energy Safety Levy Act 2006* will be a total of \$6.152m. This legislation allows the responsible Minister to make a formal determination of the levy for the financial year, for notice of this amount to be published in the Gazette and for EnergySafety to issue notices of assessment accordingly. In accordance with the legislation, all revenue raised from the Levy will be used solely for energy safety related activities.

It should be noted that the proposed \$6.152m levy compares favourably with the levy raised in other States' jurisdictions, although it is difficult to make detailed comparisons as the various regulators' offices have some considerable variation in the scope of their work (e.g. in respect of their detailed functions such as critical infrastructure security, installation inspections, gas heating value regulation etc) and in their types of income (e.g. through electrical equipment approvals).

As required by the governing legislation, the next section of the Business Plan details the methodology for the calculation and allocation of the appropriate portions of the Levy to the individual industry participants.

### **8.1 Apportionment of levy between energy sectors**

The proposed 2009/10 Industry Levy of \$6.152m will be apportioned as 67% to the Electrical Industry and 33% to the Gas Industry in accordance with section 6 (2) of the Act.

The total Levy contribution received from participants in the Electrical Industry will therefore be \$4.122m.

The corresponding figure for the Gas Industry will be \$2.030m.

## **8.2 Model for allocation of levy within each energy sector**

To allocate the Levy within each industry sector, EnergySafety will continue to use the model devised for the allocation of the 2006/07 Levy. This model was devised after consultation with Industry and was agreed to be fair and equitable. The model is based on the following:

- a) Gas levy allocation across the gas sector to be based on the number of gas consumer sites supplied by each gas distribution system licence holder and LPG distributors supplying LPG in bulk and in portable 45kg cylinders in WA, subject to a minimum aggregate total of 500 sites<sup>13</sup>. The aggregate may be based on multiple networks.
- b) Electricity levy allocation across the electricity sector to be based on the aggregate number of consumer sites served by each network operator subject to a minimum aggregate total of 500 sites. The aggregate may be based on multiple networks.

In mid 2007 the Director of Energy Safety wrote to all participants in both energy sectors requiring them to confirm, in accordance with regulation 4(5) of the *Energy Safety Regulations 2006*, the number of LPG and consumer sites connected. Responses were received from all participants.

On the basis of the information received in these responses, EnergySafety calculated the proportion of all consumers supplied by each supplier within both industry sectors. This proportion was then used to calculate the annual levy contribution payable by each participant.

A similar survey will be carried out prior to 2009/10 to determine the levy contributions for each supplier in that fiscal year.

## **8.3 Administration of the levy scheme**

EnergySafety maintains a confidential database of industry site or operator specific information that provides an audit trail in support of the levy calculations for each participant.

Although the total levy amount falls due for payment at the beginning of each financial year, as in the initial year 2006-07, it is proposed to invoice industry participants at quarterly intervals.

The formal assessment for the year will be communicated to individual participants concurrently with an invoice for the first payment. In accordance with section 17(3)(b) of the Act, if an instalment is not paid at or before the time due for payment of that instalment then the whole of the annual levy unpaid becomes due and payable at that time. There will be no reductions in liability for departures from the industry during the year, or back accounts for arrivals into the industry during the year.

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<sup>13</sup> The addition of a minimum of 500 sites for gas suppliers is a variation (since 2007/08) on the original model, based on experience gained through 2006/07.

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## APPENDIX 'A'

<b>A brief outline of 2007/08 year outcomes for information purposes only</b>
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### Introduction

EnergySafety is Western Australia's technical and safety regulator for the electricity industry and most of the gas industry.

EnergySafety is a Division of the Department of Consumer and Employment Protection. Albert Koenig was (and currently is) the Executive Director of EnergySafety and has the statutory title Director of Energy Safety.

EnergySafety comprises three Directorates:

1. Gas Directorate, headed by Geoff Wood;
2. Electricity Directorate headed by Ken Bowron; and
3. Business Services Directorate, headed by Joe Bonfiglio.

The principal functions of EnergySafety can be summarised as:

- administering electricity and gas technical and safety legislation and providing policy and legislative advice to the Minister and Government;
- setting and enforcing minimum safety standards for electricity and gas networks;
- enforcing natural gas and LP gas quality standards;
- for the purpose of ensuring satisfactory billing of consumers by gas suppliers, administering the regulatory scheme that determines the "higher heating value" of natural gas in distribution systems subject to the commingling (mixing) of gas from different sources;
- providing technical advice and support to the Economic Regulation Authority (ERA) and the Energy Ombudsman;
- at the request of the ERA or Energy Ombudsman, investigating the performance of electricity and gas network operators, particularly in respect of energy supply reliability and quality;
- setting and enforcing minimum safety standards for consumers' electrical and gas installations;
- setting and enforcing safety and energy efficiency standards for consumers' electrical and gas appliances;
- licensing electrical contractors, electrical workers and gas fitters and carrying out accident investigations;
- promoting electricity and gas safety in industry and the community; and
- promoting energy infrastructure security and resilience.



EnergySafety derives most of its statutory functions through the statutory functions of the Director of Energy Safety, an independent statutory office (established 1 January 1995) that is held by the head of EnergySafety. Since its inception in 1995 as part of the first major restructuring of the State's energy utilities, EnergySafety has had a busy corporate life and has seen its functions considerably expanded to include *inter alia* electricity and gas network regulation, energy efficiency regulation, natural gas higher heating value regulation and critical energy infrastructure protection.

As part of these changes, EnergySafety became fully industry funded from 2006-07 following the passing of legislation and the subsequent publishing in the *Government Gazette* of the *Energy Safety Levy Notice 2006* as approved by the Minister during June 2006. This mirrored what other major jurisdictions had also done and 2006/07 was the first financial year under which EnergySafety was fully industry funded.

## **The following are highlights of the work during 2007/08**

### Operational work including compliance enforcement activities

#### **Western Power powerline clashing at Toodyay**

The reports on the investigations undertaken by EnergySafety and later also Western Power into clashing powerlines and a subsequent fire at Toodyay were released. For detailed information please see Issue 41, the August 2007 edition of the *Energy Bulletin*.

#### **Electrical Industry Seminars**

EnergySafety conducted a series of free seminars for electrical industry personnel, to explain the changes to the *Electricity (Licensing) Regulations 1991*, the new edition of the *AS/NZS 3000 Wiring Rules* and the new edition of the *WA Electrical Requirements*. The seminars were held in venues throughout the metropolitan region, as well as at Bunbury, Albany, Kalgoorlie, Geraldton, Karratha, Broome, Northam and Kununurra.

#### **Safety awareness campaign**

A major advertising campaign to alert consumers to the need for greater safety awareness when dealing with gas and electricity was launched in March 2008, and ran for six weeks. The campaign aimed to bring home the severe consequences that can occur if gas and electricity are not handled safely.

The themes of the electrical safety commercials were: *Test your safety switch; Don't do your own electrical work; and Make sure your appliances are safe to use.*

The television commercials were carefully chosen from campaigns that were broadcast in Victoria and Queensland, where they were proven to provide the impact needed in Western Australia. The use of these commercials also significantly contained costs.

The gas radio commercials covered care and maintenance of gas appliances; checking for gas lines; using a licensed gas fitter; appropriate use of portable outdoor gas heaters; and appropriate storage of LP gas cylinders.

### **Electrical Safety Certificates**

The implementation of the use of Electrical Safety Certificates took place from 1 July 2008, the date on which regulation changes came into effect. The changes associated with the use of these new certificates were explained to industry as part of the state-wide electrical roadshow.

### **New gasfitting compliance badge**

A new gasfitting compliance badge was introduced in late 2008.

### **Prohibition notice – autogas hoses**

The Director of Energy Safety issued a Prohibition Order (PO) in May 2008 but that was later modified to apply from 1 December 2008. The PO is designed to limit the amount of plasticiser in flexible hose that may be used as the fuel lines and thus part of a vehicle autogas installation, as plasticiser was found to cause gas converter failure in some vehicles. Energy Safety is working with industry to facilitate compliance with these requirements.

### **Increased demand for licensing services**

The Licensing Office at Energy Safety again experienced a high volume of electrical and gas licence applications. The increased workload was well managed by staff of the Licensing Office.

### **Electrical Licensing**

As at 30 June 2008, there were **29,477** electrical workers, **3,627** electrical contractors and **247** in-house licence holders registered.

The Electrical Licensing Board grants licences to eligible electrical operatives and conducts competency assessments of operatives when necessary. It also recommends disciplinary action when appropriate.

Members of the Electrical Licensing Board as at 30 June 2008 were:

- Mr K McGill – Chairman
- Mr J Murie – representing the interests of electrical workers
- Mr P Beveridge – representing the interests of electrical contractors
- Mr G Grundy – representing the interests of electrical workers with restricted licences
- Mr D Retallack – representing the interests of large businesses, who are consumers of electrical services
- Mr P Mittonette – representing the interests of small businesses, who are consumers of electrical services
- Ms A Ciffolilli – a residential consumer of electrical services
- Mr D Saunders – nominated by the Director of Energy Safety.

The Electrical Licensing Board met **20** times during the year.

## Gas Licensing

As at 30 June 2008, there were **6,003** persons registered for gasfitting work.

The Gas Licensing Committee operates under delegated authority of the Director of Energy Safety and considers applications for licences for gas operatives. Routine applications are dealt with by licensing staff under delegated authority, as in the case of electrical licences.

The Gas Licensing Committee met **7** times during the year.

## Prosecutions

The following tables provide summaries of prosecutions finalised during 2007-08. Prosecutions are the result of investigations by inspectors, then review and authorisation by senior management of Energy Safety. The investigations are often initiated by inspectors of the electricity and gas distributors, as part of their consumer electrical or gas installation inspection work.

### *Summary of prosecution actions for breaches of electricity related legislation*

<b>Legislation</b>	<b>Breach</b>	<b>Number of Offences</b>	<b>Fines (\$)</b>	<b>Court Costs (\$)</b>
Electricity (Licensing) Regulations 1991	Regulation 19(1)	10	8,100.00 *	3,570.90 *
Electricity (Licensing) Regulations 1991	Regulation 33(1)	6	6,450.00 *	2,010.60 *
Electricity (Licensing) Regulations 1991	Regulation 49(1)	45	42,100.00 *	11,644.65 *
Electricity (Licensing) Regulations 1991	Regulation 50(1)	3	2,950.00	1,094.15 *
Electricity (Licensing) Regulations 1991	Regulation 51(1)	3	1,700.00	1,329.55
Electricity (Licensing) Regulations 1991	Regulation 52(1)	4	6,150.00 *	1,707.60 *
Electricity (Licensing) Regulations 1991	Regulation 52(3)	5	8,350.00	2,619.80
Electricity (Licensing) Regulations 1991	Regulation 53(2)	1	600.00	775.70
Electricity (Licensing) Regulations 1991	Regulation 63(1)	3	1,450.00	809.55*
<b>Totals</b>		<b>80</b>	<b>77,850.00</b>	<b>25,562.50</b>

\* Global Penalty (more than one offence)

*Summary of prosecution actions for breaches of gas related legislation*

<b>Legislation</b>	<b>Breach</b>	<b>Number of Offences</b>	<b>Fines (\$)</b>	<b>Court Costs (\$)</b>
Gas Standards Act 1972	Section 13A(2)	4	1,750.00*	2,183.30*
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 18	6	6,550.00*	3,826.70*
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 20(1)(b)	3	2,200.00	1,707.60
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 21(a)	1	1,350.00	569.20
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 26(1)(a)	2	750.00*	569.20*
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 28(2)	19	7,050.00*	6,084.20*
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 28(3)	12	*	*
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 28(3a)(b)	16	800.00*	569.20*
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 28(3a)(c)	15	*	*
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 32	6	*	*
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 38(1)	1	*	*
<b>TOTALS</b>		<b>85</b>	<b>20,450.00</b>	<b>15,509.40</b>

\* Global Penalty (more than one offence)

<b>Summary of Infringement Notices issued for breaches of electricity related legislation</b>			
<b>Legislation</b>	<b>Section / Regulation</b>	<b>Number of Offences</b>	<b>Fines (\$)</b>
<i>Electricity Act 1945</i>	33B(2)	4	10,000.00
	33F	2	4,000.00
<i>Electricity (Licensing) Regulations 1991</i>	45(1)	30	29,500.00
	49(1)	1	500.00
	52(1)	3	3,000.00
<b>TOTAL</b>		40	47,000.00

**Summary of Infringement Notices issued for breaches of gas related legislation**

<b>Legislation</b>	<b>Breach</b>	<b>Number of Offences</b>	<b>Fines (\$)</b>
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	Regulation 18(2)(a)	19	7,600.00
	Regulation 20(1)(b)	2	800.00
	Regulation 20(4a)	1	400.00
	Regulation 26(1)(a)	5	2,000.00
	Regulation 28(2)	16	6,400.00
	Regulation 28(3)	13	5,200.00
	Regulation 30	2	800.00
	Regulation 34(1)	4	1,000.00
	<b>TOTAL</b>		62

## Major policy work

### **National regulatory reform projects**

During 2007/08 EnergySafety commenced work with electrical and gas safety regulators of other jurisdictions to make significant contributions to various national regulatory reform projects. Significant progress was made in reviewing the regimes for electrical appliance safety approvals, gas appliance safety approvals and restricted electrical licensing, to provide a more uniform regulatory framework across jurisdictions.

New areas projects were also commenced, covering energy supply technical and safety regulation harmonisation, a national occupational licensing system, and a proposed National Construction Code.

### **Code of practice for minimum requirements for safe electrical work**

A code of practice was developed and issued to reduce the incidence of serious electrical accidents and to set out the minimum requirements for safe electrical work practices by electricians, particularly when working on or near live parts of a consumer's installation. The code of practice was issued under section 33AA of the *Electricity Act 1945* in April 2008.

### **Standards development work**

During the year, EnergySafety played a significant role in the development of Australian Standards, covering subjects such as electrical installations (AS/NZS 3000 Wiring Rules), HV installations including electricity substations, marina electrical installations, gas installations, industrial gas appliances and gas distribution networks.

### **Committee participation**

Aside from major work on several key technical standards committees, EnergySafety continued to be involved in a number of national regulatory coordination and other technical standards bodies. The following is a summary list:

- National Regulatory Coordination Bodies
  - Electrical Regulatory Authorities Council (ERAC)
  - Gas Technical Regulators Committee (GTRC)
  - National Equipment Energy Efficiency Committee (Committee E3)
- National Standards Councils, Boards and Committees
  - Council of Standards Australia (representing the Government of WA)
  - Electrotechnology Standards Sector Board
  - AG6 Gas Installations
  - AG5 Industrial Gas Appliances
  - AG8 Gas Distribution
  - AG9 Natural Gas Vehicle Technical Standards
  - AG10 Specification for Natural Gas Quality

- AG11 Gas Component & Industrial Equipment Standards Committee
- CH-038 Liquefied Petroleum Gas
- EL1 Wiring Rules and 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.

### Safety statistics: Serious accidents and fatalities

The following were reported to Energy Safety during the year:

Electric shocks:	1005
Serious electricity related accidents	24
Fatalities (included in serious electrical accidents):	1

### **Serious electricity related accidents notified per million population\***

<b>Year</b>	<b>The number of electricity caused serious injuries per million population</b>	<b>Five Year Average</b>
1997-98	14	20
1998-99	22	19
1999-00	16	17
2000-01	11	15
2001-02	12	15
2002-03	18	16
2003-04	16	15
2004-05	23	16
2005-06	15	17
2006-07	9	16
2007-08	10	15

Note: In the above table, some of the numbers of serious electricity related accidents notified per million population differ from the figures given in previous reports on activities. These corrections resulted from a comprehensive review of statistics of serious electricity related accidents notified.

\* Electrical shock incidents resulting in the person requiring treatment at a medical facility.

The serious electricity related accidents included one fatality in which electricity was found to be the cause:

- A ten year old girl climbed a steel pole to retrieve a football jumper and came into contact with “live” 230/240 volt conductors and received a fatal electric shock.

### **Gas related incidents and fatalities**

The following were reported to EnergySafety during the year:

Incidents:	93
Serious gas related accidents (persons injured)	16
Fatalities	1

### **Serious gas related accidents notified per million population**

<b>Year</b>	<b>The number of gas caused injuries per million population</b>	<b>Five Year Average</b>
1997-98	5	7
1998-99	6	6
1999-00	4	6
2000-01	9	6
2001-02	13	7
2002-03	10	8
2003-04	9	9
2004-05	9	10
2005-06	8	10
2006-07	9	9
2007-08	7	8

### **Financial Outcome**

The surplus available for “carry forward” at the end of 2007/08 exceeded expectation.

It had been forecast that \$2.326m would need to be carried forward into 2008/09 as part of the levy equalisation scheme, however the amount carried forward was \$3.984m, principally due to increased licensing revenues and reduced expenditure due to staff vacancies in the 2007/08 year.