



ELECTRICITY SAFETY ACT 1945

NATIONAL COMPETITION POLICY REVIEW

FINAL REPORT



OFFICE OF **FAIR TRADING**

NSW Consumer Protection Agency

Department of Commerce

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Glossary

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|-------------------------|---|
| COAG | Council of Australian Governments |
| Declared articles | Electrical articles that require approval as meeting legislated standards before they may be sold in Australia, as agreed by all jurisdictions |
| Electrical article | Any wire, cable, appliance, fitting, meter, insulator, apparatus or material intended, suggested or designed for use in, or for the purposes of, or for connection to, any electrical installation |
| Electrical installation | <p>Any appliances, wires, fittings or other apparatus placed in, on, under or over any land or premises (including land or premises owned, occupied or leased by the Crown) and used for or for purposes incidental to the conveyance, control and use of electricity supplied or intended to be supplied by an electricity supply authority, but does not include:</p> <ul style="list-style-type: none">(a) any electricity supply main or service line of an electricity supply authority,(b) any appliances, wires, fittings or other apparatus connected to and extending or situated beyond any electrical outlet socket:<ul style="list-style-type: none">(i) which is installed for the purpose of connecting portable electrical appliances, fittings or other apparatus, and(ii) at which fixed wiring terminates,(c) any appliances, wires, fittings or other apparatus which are:<ul style="list-style-type: none">(i) placed in, on or over any land or premises owned or occupied by an electricity supply authority, and(ii) used for the generation, transmission or distribution of electricity,(d) any electrical installation in or about a mine within the meaning of the <i>Coal Mines Regulation Act 1982</i> or within the meaning of the <i>Mines Inspection Act 1901</i>, or(e) any electrical installation operating at not more than 32 volts alternating current or 115 volts direct current. |
| ERAC | Electrical Regulatory Authorities Council |
| ISO | International Organization for Standardization |
| NCP | National Competition Policy |
| QAS | Quality Assurance Services Pty Ltd |
| Relevant authorities | Government agencies that are responsible for the approval of declared articles |
| Standards Australia | Standards Australia International Limited |
| The Act | The <i>Electricity Safety Act 1945</i> |

0. Executive summary and recommendations

The *Electricity Safety Act 1945* has been reviewed as required by the *Competition Principles Agreement*. A steering committee, chaired by the Office of Fair Trading, and consisting of representatives from the Cabinet Office and the Ministry of Energy and Utilities, was established to conduct the review in accordance with terms of reference approved by the Premier of New South Wales.

An issues paper, outlining the content, intent and administration of the legislation, as well as the objectives of the review, issues relating to electricity safety and possible options for future regulation, was published in October 2001 to stimulate public discussion of the review. The public consultation period closed on 29 November 2001, although submissions were accepted and considered until the finalisation of the final report. The report is based upon the Steering Committee's analysis of all the issues raised during the review, in both written and verbal submissions.

In accordance with the *Competition Principles Agreement*, the Steering Committee considered the available information to:

1. clarify the objectives of the *Electricity Safety Act 1945*;
2. assess whether intervention is required to meet the objectives;
3. identify and analyse the restrictions on competition resulting from intervention;
4. assess and rationalise the costs and benefits of the restrictions; and
5. consider the alternative means for achieving the same result.

The Steering Committee regarded the objectives of the *Electricity Safety Act* as being to encourage and promote safe practices in the generation, supply and use of electricity, and recommended:

- **That the *Electricity Safety Act 1945* be prefaced by a clear statement of the Act's objectives, including to "promote the efficient use of electricity".**

The evidence presented to the Steering Committee indicated that the *Electricity Safety Act* is successful in minimising serious injury and accidents to consumers caused by electrical articles and installations. Arguments for deregulating the requirements to meet Australian standards and certification of electrical articles were not convincing. The Steering Committee recommended:

- **That government intervention in the marketplace relating to consumer electrical articles and installations is warranted and should be retained.**

The review process identified a number of provisions in the *Electricity Safety Act* which restrict competition in the marketplace by:

1. regulating the sale and requiring labelling or marking of declared articles;
2. confining the authority to issue Certificates of Approval and Certificates of Suitability to the Commissioner of the Office of Fair Trading and whomever the Minister for Fair Trading approves;

3. requiring manufacturers and suppliers of electrical articles to comply with Australian and international standards or other requirements; and
4. restricting work on electrical installations to appropriately qualified persons.

The Steering Committee was cognisant of the broader issues affecting electricity safety, including matters considered by the Electrical Regulatory Authorities Council and national and international obligations under mutual recognition agreements.

In respect of the discussion on the merits of restrictions imposed by the legislation, the Steering Committee made the following recommendations:

- **Pending the expected national review of the declared article regime, no change to the declared article provisions of the *Electricity Safety Act* is considered desirable.**
- **The criteria for obtaining ministerial approval to issue certificates of approval and suitability under section 21A(1)(a)(iii), subject to appropriate safeguards, should be elaborated in legislation.**
- **The provisions that apply to the safety of second-hand consumer electrical articles are valid and should remain in place.**
- **The provisions of the *Electricity Safety Act* should not, at this stage, be extended to free-standing installations.**

As required, the Steering Committee considered the costs to government, industry and the public of the restrictions on competition imposed by the *Electricity Safety Act*, as well as the benefits. It was noted that the powers of authorised persons to ensure compliance with the Act are limited in a way that diminishes efficiency. The Steering Committee recommended that:

- **The *Electricity Safety Act* should permit the issue of penalty notices where minor breaches of the legislation have clearly been identified by an authorised person.**

The Steering Committee took into account the injury, mortality and accident data associated with the use of electricity for consumer installations and appliances, and the difficulty in estimating the value of lives saved, injuries prevented and property undamaged because of the restrictions of the Act. It was unanimously agreed that the provisions of the legislation are essential to safeguard consumers from the dangers of such installations and appliances and the following recommendation was made:

- **As, on the balance of evidence, the net benefits of restrictions to competition imposed by the *Electricity Safety Act* outweigh the costs, those restrictions should be retained.**

Alternative means of achieving the objectives of the *Electricity Safety Act* were considered as part of the review. There was support in varying degrees for all the suggested options for future regulation of electricity safety in New South Wales,

including retention of the current system, modification of the current system, centralisation of licensing and certification, and deregulation.

Resulting from the discussion on modification of the legislation, the Steering Committee recommended:

- **That the *Electricity Safety Act* be redrafted in plain English.**

Centralisation of the legislation under the administration of the Commonwealth Government was proposed in some submissions to the review. The Steering Committee recommended:

- **Centralisation of electricity safety legislation is not considered appropriate or necessary.**

Ultimately, the Steering Committee considered that, without government intervention, competition might control the quality of work to both the advantage and the disadvantage of consumers. High quality products that are certain to meet or exceed voluntary standards and work processes that are guaranteed to adhere to best practices may be successful marketing tools. Notwithstanding, the temptation of reduced prices may also be difficult to resist for some consumers, even though the result may be lower quality and potentially dangerous products and installations. It was considered unlikely that the safety objectives of the Act would continue to be met as successfully as they are at present. The final recommendation of the Steering Committee was that:

- **The benefits of the electricity safety legislation outweigh the costs, and the legislation should be retained.**

1. Introduction

1.1 The need for a review

A review of the *Electricity Safety Act 1945* has been undertaken in accordance with the National Competition Policy, which was endorsed by the Council of Australian Governments (COAG) in April 1995. One of the major components of the National Competition Policy (NCP) is the *Competition Principles Agreement*, which commits the New South Wales Government to reviewing all of its legislation that restricts competition. On 3 November 2000, COAG extended the timeframe for completion of legislation reviews from 31 December 2000 to 30 June 2002.

The *Competition Principles Agreement* establishes principles for pro-competitive reform of government business enterprises and removal of impediments to markets where they are not in the public interest. The Agreement requires that legislation should not restrict competition unless it can be demonstrated that the benefits to the community as a whole outweigh the costs and that the objectives of the legislation can only be achieved by restricting competition.

Examples of types of restrictions include:¹

- legislatively created monopolies to provide or operate infrastructure, marketing schemes (particularly in agriculture) or special government-backed initiatives;
- licensing schemes that restrict entry to particular businesses;
- regulations which restrict entry to particular professions;
- quota restrictions to preserve natural resources;
- regulations which specify strict technical standards for products or services; and
- administratively determined pricing arrangements for nominated goods and services.

More specifically, the Agreement states that any review of legislation should:

- a) clarify the objectives of the legislation;
- b) identify the nature of the restrictions on competition;
- c) analyse the likely effect of the restriction on competition and on the economy generally;
- d) assess and balance the costs and benefits of the restriction; and
- e) consider the alternative means for achieving the same result, including non-legislative approaches.

All NSW legislation has been examined to determine whether it establishes market entry barriers or requires conduct that has the potential to restrict competitive behaviour in the marketplace. The *Electricity Safety Act 1945* was identified as potentially restricting competition and was listed for review.

¹ Guidelines for NCP Legislation Reviews, Centre for International Economics, p.8.

1.2 Market failure and consumer protection

Legislative controls are usually imposed by government to address problems arising from the provision of goods and services in an unregulated environment. These problems are also known as “market failures.” An example of such a market failure is where there is an imbalance of information between traders and consumers, limiting the ability of the consumer to make informed choices when seeking a product or service. However, regulation may also restrict competition among traders. This may result in new problems or costs for business, consumers and government that are not justified relative to the problem that the intervention aimed to address. Alternatively, regulation may not be effective in addressing the identified problems.

1.3 The review process

It is the Government’s policy to ensure that the review process takes into account the full range of public costs and benefits of the legislation and that all views are thoroughly considered before any reforms are proposed.

In assessing the public benefits of legislation, the *Competition Principles Agreement*² calls for the following matters to be taken into account where relevant:

- government legislation and policies relating to ecological sustainable development;
- social welfare and equity considerations, including community service obligations;
- government legislation and policies relating to matters such as occupational health and safety, industrial relations and access and equity;
- economic and regional development, including employment and investment growth;
- the interests of consumers generally or a class of consumers;
- the competitiveness of Australian businesses; and
- the efficient allocation of resources.

The review of the *Electricity Safety Act* was conducted by a Steering Committee, chaired by the Office of Fair Trading, together with representatives from the Ministry of Energy and Utilities and the Cabinet Office. Given the consumer safety aspects and technical nature of the legislation, a reference group was established to provide the Steering Committee with advice from different fields of expertise. This consultative committee included consumer, industry, union and government representatives from:

- the Utility Consumers Advocacy Program;
- the Australian Consumers’ Association;
- the Electrical Trades Union – NSW Branch;
- the WorkCover Authority of New South Wales; and
- the Office of Fair Trading.

² *Competition Principles Agreement*, clause 1(3).

The purpose of the *Electricity Safety Act 1945* review was to consider:

- the objectives of government regulation of certain safety aspects of electricity distribution and usage, the manufacture, supply and sale of electrical articles and product information standards, and associated approval and certification;
- whether regulatory intervention is still justified;
- the impact of the current Act on competition within the industries; and
- whether the government objective could be met by any less restrictive mechanism.

Although the emphasis of the review was on anti-competitive provisions, the Steering Committee also considered the general effectiveness of the legislation and examined other issues of concern to consumers and industry.

The complete terms of reference for the review are detailed in Appendix 1.

An issues paper was produced to stimulate discussion within the community and to assist interested individuals and organisations wishing to lodge a submission to the review.

The issues paper:

- outlined the principles of the National Competition Policy and explained the reason for the review;
- described the review process;
- provided background information on the *Electricity Safety Act 1945*;
- examined the objectives of the *Electricity Safety Act 1945*;
- raised competition and other issues associated with the operation of the Act; and
- outlined options for managing the relevant electricity safety issues and considered some of the costs and benefits of each option.

The review was advertised on 27 October 2001. The issues paper was widely circulated to interested parties for response to the matters raised and any other relevant concerns. The public consultation period closed on 29 November 2001, although submissions received after this date were accepted.

The Steering Committee received submissions from the electrical article manufacturing and distributing companies, electrical trades associations representing employers and employees, government regulators, an electricity distributor and the public.

1.4 The final report

The Steering Committee has prepared this report for consideration by the Minister for Fair Trading and the New South Wales Government in accordance with the review requirements under the *Competition Principles Agreement*. It is based upon the Committee's analysis of all the issues raised during the review.

2. Regulation of Electricity Safety

The *Electricity Safety Act 1945* gives certain powers to the Energy Corporation of New South Wales, the legal entity of the Ministry of Energy and Utilities. It provides for the prohibition of the sale of certain electrical articles, the conformity of certain electrical items with safety standards, labelling of other electrical articles, accident reporting and investigation functions, and consumers responsibility for the safety of their electrical installations. A diagram depicting the environment in which the Act operates is on the following page.

2.1 Current provisions of the Act

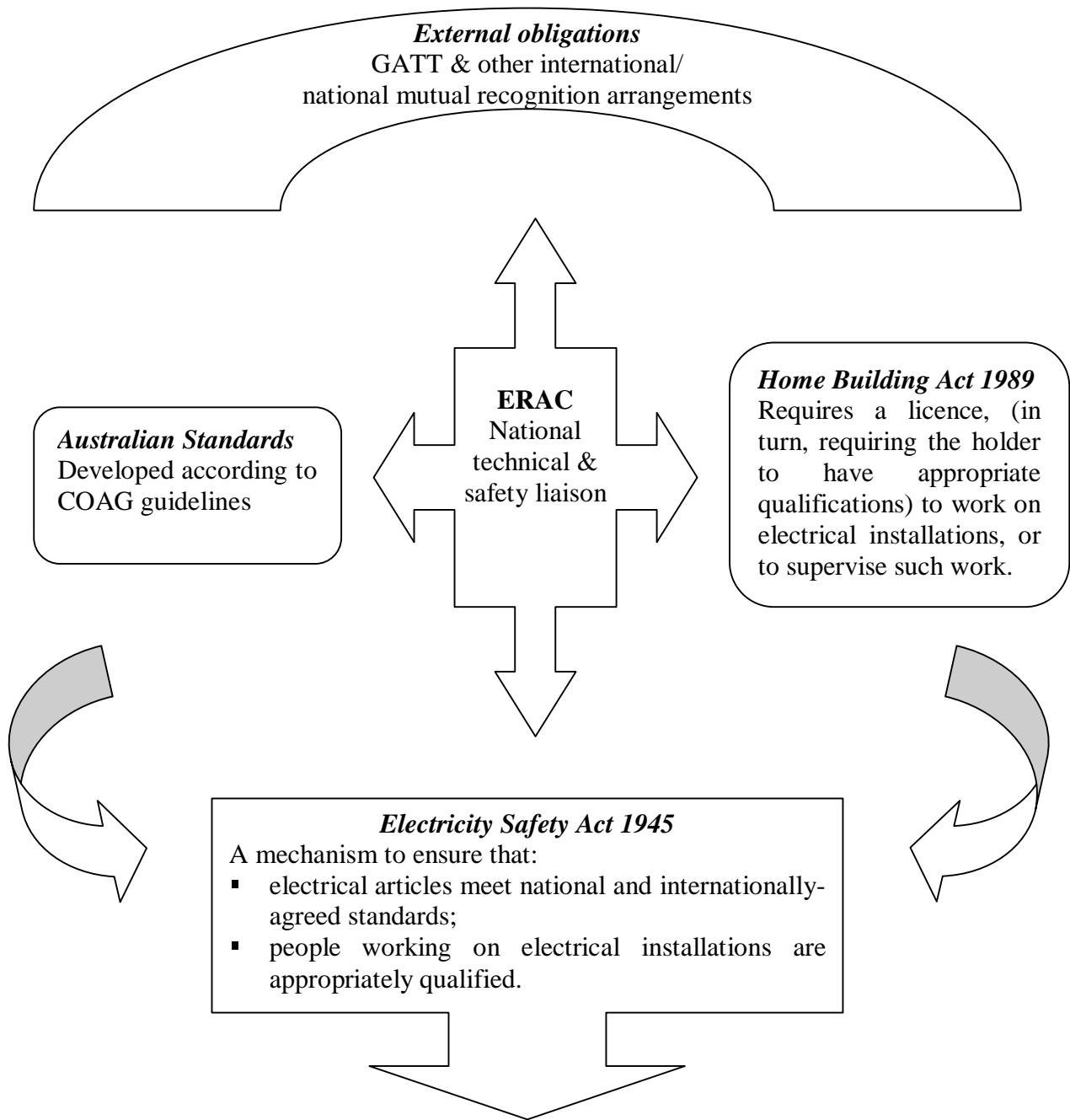
The provisions of the *Electricity Safety Act* that were identified as possibly restricting competition:

- make it an offence to sell (including attempt to sell, barter, supply or hire) prescribed electrical articles that do not conform to the Act;
- require that electrical articles be designed, manufactured, and, in certain cases, approved to meet minimum safety requirements so that they will not, in normal use, result in electric shock, injury or death to the user, or fire damage to the user's property; and
- authorise appointed investigators to enter property, inspect and test electrical apparatus and articles and ensure that persons doing electrical wiring work are not prohibited from doing that work.

The remaining provisions:

- empower the Energy Corporation of New South Wales to promote, regulate and encourage the safe use of electricity, both generally and with emphasis on primary and secondary industrial users;
- give the Energy Corporation the same powers as an electricity supply authority should the life or health of any person be at stake;
- establish the Electricity Development Fund in a NSW Treasury account, directed, controlled and managed by the Energy Corporation, for contributions from the Energy Corporation, electricity distributors constituted under the *Energy Services Corporations Act 1995* and any money provided by Parliament;
- authorise the Director of the Department of Energy (now the Director-General of the Ministry of Energy and Utilities) to direct the relocation of roadside electricity structures, if required;
- authorise appointed investigators to inspect, test and seize electrical articles and to acquire relevant information;
- require the notification of serious electrical accidents and enable the appointment of inspectors, with associated powers, to investigate such accidents, as well as allowing the publication of accident details;
- authorise the Minister for Fair Trading and the Minister for Energy to delegate their respective functions under the Act (other than the power of delegation);
- make consumers responsible, to the best of their ability and knowledge, for the safe use of electrical installations;
- enumerate the matters on which the Governor may make regulations; and
- include savings, transitional and other provisions consequent on the enactment of legislation resulting from the national energy market reforms.

Electricity safety in New South Wales



Consumer electrical articles safe for purchase and hire



Work on consumer electrical installations safely done by experts



Information asymmetry balanced in favour of consumer safety

2.2 Administration of the Act

The *Electricity Safety Act 1945* is jointly administered by the Minister for Fair Trading, who administers the Act so far as it relates to electrical articles and electrical installations, and the Minister for Energy, who administers the remainder.

Under this arrangement, the Office of Fair Trading regulates a compulsory pre-sale certification scheme for specific (declared) electrical articles and a voluntary certification scheme for all other electrical products. The Office investigates and maintains records of serious electrical accidents (that relate to electrical articles and electrical installations) and analyses them in order to improve the safety of electrical articles and installations. Its functions include:

- pre-market safety certification and regulation of safety requirements for electrical articles and accessories;
- inspecting safety standards and procedures for electrical work on all types of premises;
- collection and analysis of electrical accident data;
- accident prevention through safety promotions and education, improved safety standards and regulatory controls; and
- identification and correction of problems in the marketplace where unsafe electrical goods or practices are reported.

The Ministry of Energy and Utilities' responsibilities in respect of the *Electricity Safety Act 1945* comprise functions of the Energy Corporation of New South Wales and safety issues associated with electricity supply networks. Its functions include:

- promotion and regulation of standards relevant to the electricity supply industry;
- inspection of work done on electrical installations, cathodic protection systems and stray current sources;
- investigation of electrical accidents;
- dissemination of safety information and accident statistics and participation in safety promotion; and
- administration of nationally agreed energy labelling requirements (key elements of the National Greenhouse Strategy).

2.3 Equivalent authorities

The equivalent regulatory authorities in Australian jurisdictions are:

- for Queensland – the Electrical Safety Office, Department of Industrial Relations;
- for Victoria – the Office of the Chief Electrical Inspector;
- for South Australia – the Office of Energy Policy, Primary Industries and Resources (electrical articles) and the Office of the Technical Regulator (electrical installations);
- for Tasmania – Electricity Standards and Safety, Workplace Standards Tasmania, Department of Infrastructure, Energy and Resources;
- for Western Australia – the Office of Energy;
- for the Northern Territory – the Department of Industries and Business; and
- for the Australian Capital Territory – the Department of Urban Services.

In New Zealand, the Energy Safety Service is part of the Ministry of Consumer Affairs.

2.4 Effects of other legislation

Mutual recognition legislation requires that approvals in force in New South Wales are also recognised in other jurisdictions, and *vice versa*, although this requirement may be overridden if necessary. Under the *Trans-Tasman Mutual Recognition Arrangement*, regulatory standards adopted in New Zealand regarding goods and occupations are also uniformly recognised in Australian jurisdictions and vice versa.

The Act is also subject to the following international agreements:

- *General Agreement on Tariffs and Trade*;
- *Agreement on Mutual Recognition in relation to Conformity Assessment, Certificates and Markings* between Australia and the European Community (Australian Treaty Series 1999 No 2);
- *Agreement on Mutual Recognition in relation to Conformity Assessment, Certificates and Markings* between Australia and the Republic of Iceland, the Principality of Liechtenstein and the Kingdom of Norway [European Free Trade Association - European Economic Area] (Australian Treaty Series 2000 No 17);
- *Asia Pacific Economic Cooperation Mutual Recognition Arrangement on Conformity Assessment of Electrical and Electronic Equipment*; and
- *Australia-Singapore Mutual Recognition Agreement on Conformity Assessment*.

2.5 Uniformity

Due to regional variations and the reforms of national infrastructure that were based on the recommendations in the *Independent Committee of Inquiry into National Competition Policy* report by Professor Fred Hilmer, New South Wales' *Electricity Safety Act 1945* does not have a direct equivalent in other jurisdictions. Nevertheless, elements of the Act exist in every State and Territory of Australia.

The scheme for the approval and certification of electrical articles is uniform across all States, Territories and New Zealand. This has been achieved by the participation of all jurisdictions on the Electrical Regulatory Authorities Council (ERAC), a technical and safety liaison body which co-ordinates some of its activities with the Commonwealth Government. ERAC is also involved in the development of standards, the national co-ordination of recalling dangerous electrical products, safety promotion strategies, accident prevention programs and electrical appliance energy efficiency.

Standards Australia International Ltd, commonly known as Standards Australia, is a non-profit company with membership comprising representatives from a range of Australian businesses, industry, unions, academia and government. It is the peak non-government standards body in Australia.

In 1990, Standards Australia established Quality Assurance Services Pty Ltd (QAS) to provide conformity assessment and certification services to Australian and international standards, including the ISO 9000 quality system. QAS is presently the only non-governmental body recognised in all jurisdictions to provide these services in accordance with the *Electricity Safety Act*.

2.6 Recent developments

Review of electricity safety in Queensland

The Queensland Government commenced a major review of its electricity safety regime in 2000. As part of this process, the Department of Industrial Relations is reviewing the safety provisions of the Queensland *Electricity Act and Regulations 1994*, which includes provisions equivalent to the New South Wales *Electricity Safety Act*, as well as the licensing of electrical contractors and workers.

It should be noted that the Queensland review has been prompted by concerns about workplace safety issues and accident investigation practices.

The review was still in progress when this report was prepared.

Review of electricity safety in New Zealand

The New Zealand Government has been working to facilitate the implementation of the Trans Tasman Mutual Recognition Arrangement, including the formation of an Energy Safety Service at the Ministry of Consumer Affairs. The Energy Safety Service is responsible, amongst other things, for the safety of electrical articles, installations, supply and generating systems, and safeguarding the public and property from electricity hazards.

The New Zealand Energy Safety Service is reviewing its electrical appliance regime. Certain amendments to the New Zealand legislation have been effected in support of the Trans Tasman Mutual Recognition Agreement for electrical articles. It appears that consideration is being given to decreasing the number of items on the New Zealand Declared Articles List from twelve to four, compared to the 60 presently declared articles in New South Wales (and Australia). The New Zealand regime would also include a regime for items that are not declared articles in New Zealand but are declared in Australia, which would require suppliers to provide evidence of compliance with acceptable standards for those items imported into Australia.

Review of declared articles

The prospect of reducing the number of declared articles in Australia has been under consideration by ERAC for some time. Consideration is also being given to a total review of the declared article system by regulatory authority representatives, with the intention of re-evaluating the reasons for the inclusion of each article or removing it from the list. Each declared article would then be reassessed at regular intervals.

3 Competition issues

In accordance with the *Competition Principles Agreement*, the Steering Committee considered the available information to:

- a) clarify the objectives of the *Electricity Safety Act*;
- b) assess whether intervention is required to meet the objectives;
- c) identify and analyse the restrictions on competition resulting from intervention;
- d) assess and rationalise the costs and benefits of the restrictions; and
- e) consider the alternative means for achieving the same result.

The COAG agreed that government intervention in markets should generally be restricted to situations of market failure and that each regulatory regime should be targeted on the relevant market failure or failures.³

Thirty-three specific issues were raised in the issues paper to assist readers to focus on the competition issues in question. It is not proposed to deal with each issue separately, but rather to discuss the salient points arising from the research undertaken and the submissions received.

3.1. Clarification the Act's objectives

The sources consulted to identify the objectives of the *Electricity Safety Act 1945* included second reading speeches, the legislation and the evidence of those affected by the legislation, including research and the submissions to the review.

Most of the safety provisions were in the Act before it appeared in the current form. An examination of second reading speeches when major amendments were made to the Act, variously named the *Electricity Development Act 1945* and the *Electricity Act 1945*, confirms the intention to safeguard the health and property of people using consumer electrical articles and installations. There appears to have been no opposition to these consumer safety provisions.

The general statement at the beginning of the *Electricity Safety Act* reads: "An Act to provide for the development of electricity supply; to confer certain powers, authorities, duties and functions on the Energy Corporation of New South Wales; to provide for the regulation of the sale and hiring of electrical apparatus; to amend the *Local Government Act 1919* and certain other Acts in certain respects; and for purposes connected therewith."

The provisions of the Act encourage and promote safe practices in the generation, supply and use of electricity, and establish minimum safety requirements for the sale and hire of electrical equipment. Specifically, the Act seeks to achieve electricity safety through:

- promotion of standards for the plant used to generate and distribute electricity and guidance for electricity authorities engaged in this activity;

³ Council of Australian Governments, *Report of the Task Force on Other Issues in the Reform of Government Trading Enterprises*, released as part of the first COAG communique, 1991, p22

- inspection, testing and approval requirements for the legal sale and hire of electrical equipment; and
- general electricity safety requirements associated with the generation, transmission, distribution and use of electricity and electrical articles, including requirements for accident reporting and investigation.

The provisions of the *Electricity Safety Act* are precautionary measures: the Act is intended to protect people and property from an invisible and lethal energy source that drives many of things taken for granted in modern society. The legislation currently takes into account the risks to life and property from:

- unqualified persons carrying out electrical wiring work;
- electrical articles supplied from dubious or unknown sources; and
- the quality of any repair work carried out on electrical articles intended for resale or hire.

In its assessment of whether the objectives of the *Electricity Safety Act* are still appropriate, the Steering Committee considered statistics⁴ relating to fatal and non-fatal accidents and damage to property from the failure of electrical articles and residential wiring. An analysis of the data indicated that very few electrocutions can directly be attributed to the failure of electrical articles to meet the required standard, although the number of non-fatal accidents amongst the public has been increasing. The latter fact, however, may be due to improved reporting practices, rather than an actual increase in occurrences. Similarly, short-circuits and other electrical faults are known to be the cause of millions of dollars worth of damage to property, but it remains unclear from the available data as to whether the electrical faults are due to a failure to meet the required standard.

3.1.1 Discussion

The *Electricity Safety Act* is unambiguously preventative consumer safety legislation. The Act contains a preamble indicating that its objectives relate to the safety of people and property in relation to the installation, maintenance and use of electric lines, works, electrical installations and cathodic protection systems.⁵ However, the main thrust of the legislation is to ensure that consumers have access to relevant, accurate information with which to compare electrical goods and services, as well as a safer environment. A further objective of the legislation is the protection of consumers from sub-standard products and services by restricting the testing and certification of particular articles to suitably qualified and accredited authorities.

The Act establishes a mandatory benchmark for the safety of electrical installations and articles. This not only provides for the safety of consumers by minimising the likelihood of electric shock, burns and fire, it means that the safety of an appliance no longer has to be established by consumers independently when purchasing such an

⁴ See appendix 2 for an overview of the statistics used.

⁵ It should be noted that the first objective of the *Electricity Supply Act 1995* is to “establish a competitive retail market in electricity so as to promote efficient and environmentally responsible production and use of electricity and to deliver a safe and reliable supply of electricity” (s. 3(a)). Section 27 covers aspects of service equipment to deliver electricity safely and efficiently. Section 48 deals with trees obstructing power lines, while section 106 provides regulation-making powers for the development and implementation by network operators of safety plans for transmission or distribution systems and electrical installations.

item. This certainty reduces the information search costs to the consumer in that safety becomes a known factor, not one that needs to be assessed when deciding between the goods available.

None of submissions to the review questioned the necessity for safety standards in relation to the generation, distribution and supply of electricity, nor for work done on consumer installations and electrical articles for sale or hire.

One submission suggested that the objectives of the Act should be amended to include “to achieve efficient use of electricity” in addition to electricity safety. The Steering Committee considered that this was consistent with the Act by virtue of the regulation-making powers. The relevant sections include:

- 37(2)(c) prescribing standards for electrical articles;
- 37(2)(s) the testing and inspection of electrical articles;
- 37(2)(v) marking or labelling of electrical articles; and
- 37(2A) the application, adoption or incorporation of provisions from any statutory rule or other publication.

The *Electricity Safety (Equipment Efficiency) Regulation 1999* is administered by the Ministry of Energy and Utilities. It is noted that the energy efficiency labelling regulations contribute to the NSW Government’s obligations under the National Greenhouse Strategy.

3.1.2 Conclusion

The Steering Committee considers that the objectives of the *Electricity Safety Act 1945* are to encourage and promote safe practices in the generation, supply and use of electricity.

Recommendation: That the *Electricity Safety Act 1945* be prefaced by a clear statement of the Act’s objectives, including to “promote the efficient use of electricity”.

3.2 Assessment of the need for intervention

Statutory regulation is generally introduced to achieve a social or economic goal which would not be met if the market was left to its own devices. Legislation often addresses the failure of the market to achieve an efficient outcome.

If safety standards were not prescribed for electrical articles, for example, consumers might purchase products which they believe to be safe but are actually dangerous, thereby putting themselves and others at risk, as well as not getting what they think they are paying for (ie a safe product). Alternatively, consumers would need to establish the safety of a product by undertaking their own testing or rely on tests conducted by a third party. This, in turn, would add to the consumer information search costs and make transactions more risky. Third parties not involved in the transaction could also be placed at risk, such as the neighbour whose home is also burned down when a faulty appliance causes a fire.

However, government regulation imposes a direct burden, whether tangible or intangible, on certain parties. Financial costs are, in most cases, passed on to the consumers of the products or services provided by those parties affected by the legislation.

This review is intended to ascertain whether the benefits of the *Electricity Safety Act* justify the direct and indirect costs it imposes. To do this, the market failures which led to the Act's introduction must be identified.

The statistics, other research and submissions to the review assist in identifying the market failures that the *Electricity Safety Act* is intended to address. These include:

- non-fatal and fatal accidents to consumers and workers due to contact with electricity from installations and articles;
- damage to personal and public property from fires caused by consumer installations and articles; and
- losses sustained by families, industry, government and the environment subsequent to the above-mentioned events.

In other words, the market fails to provide the desirable outcome of safety for the users of consumer electrical installations (home wiring) and consumer electrical articles. The resulting accidents (see appendix 2 for an overview on accident statistics) have personal, social and economic implications.

The major causes of these market failures are considered to be:

- work done on consumer installations by people who lack adequate technical knowledge or experience; and
- the manufacture, distribution and supply of electrical articles that are not safe for use under normal circumstances.

3.2.1 Discussion

The Steering Committee noted the continuously increasing demand for electricity as the number of consumer installations grows, and the proliferation of electrical articles from domestic and international sources. It was recognised that electricity is a lethal resource and its use remains as potentially hazardous now as when the safety provisions of the Act were introduced.

Examination of accident statistics indicates that the legislation in New South Wales is successful in promoting consumer safety: while it is impossible to measure the number of people who have not been injured or electrocuted or the amount of property undamaged by unsafe installations or electrical articles, the Steering Committee concluded that the low number of accidents compared to the risks involved supported retention of the *Electricity Safety Act*.

At the same time, there are a number of factors that may have contributed to a perception that the legislation is less relevant than previously, including:

- the nationally-consistent licensing regime;
- the availability of Australian and international standards covering manufacturing, labelling and many other matters;
- the growing community awareness of consumer protection issues and safety-conscious purchasing decisions;

- the increasing incidence of private legal action; and
- a sector of the community inclining towards self-regulation.

The question of whether market failure warrants legislative intervention by government was addressed by all submissions. The majority of submissions explicitly supported or did not question the value of government regulation in the area of electricity safety. With the following exceptions, there was no suggestion that industry should be able to choose whether to follow published standards or be self-regulating, or that consumers would be able to make safe purchasing decisions (or litigate when something goes wrong) without the current form of government intervention.

Two submissions supported the deregulation of specific provisions. The first submission advocated the removal of provisions relating to standards, approvals and certification. The second concerned the application of the Act to second-hand goods, and is discussed in detail below in sub-section 3.3.3, under the heading “Compliance with standards”.

The first of these submissions argued that the Australian standards favour large businesses, as they can afford to be on committees that develop standards; that Australian standards are unable to keep up with technological changes, and are irrelevant. Further, it was claimed that the majority of the electrical article sales, service and maintenance industry ignores the costly minimum standard and statutory certification requirements (for imported articles) at no risk to employees or customers, as the manufacturer has already met international standards at the point of origin.

The Steering Committee acknowledged the possible advantages to larger businesses of being involved in the standard-setting-process. However, it was also noted that national standard-setting bodies are subject to the *COAG Principles and Guidelines for National Standard Setting and Regulatory Action*. This requires relevant national standards to be developed in accordance with principles and processes agreed by Heads of Government. The standard development process is therefore subject to scrutiny and is beyond the scope of this review. It should be noted that Standards Australia also provides a forum for public comment on draft standards.

The Steering Committee also noted that international standards are recognised in Australia, however, as is the practice in other countries, standards may be revised to make them appropriate to local conditions, notably those of the electricity supply (220-240 volts, 50 Hertz⁶), traditional wiring colour codes, number of wires, plug design and climatic conditions.

Most of the submissions indicated that the costs of meeting Australian standards and certification were justified in view of the certainty that the process provides to consumers. Certification also serves as a tool for government to ensure that industry is complying with the Act.

⁶ Electricity in North, Central and parts of South America, the Carribean and parts of the Pacific is generally supplied at 110-125V, 60Hz. Some countries use both 110 and 220V and either 50 or 60Hz.

3.2.2 Conclusion

It appears that the *Electricity Safety Act 1945* is successful in minimising serious injury and accidents to consumers caused by electrical articles and installations. The Steering Committee did not accept the arguments for deregulating the requirements to meet Australian standards and certification of electrical articles.

Recommendation: That government intervention in the marketplace relating to consumer electrical articles and installations is warranted and should be retained.

3.3 The nature of restrictions

Legislation can restrict competition and innovation in a number of ways.

The National Competition Council⁷ suggested that legislation may limit competition if it:

- governs the entry or exit of firms or individuals into or out of markets;
- controls prices or production levels;
- restricts the quality, level or location of goods and services available;
- restricts advertising and promotional activities;
- restricts price or type of input used in the production process;
- is likely to confer significant costs on business; or
- provides advantages to some firms over others.

The *Electricity Safety Act* imposes obligations on the Energy Corporation of New South Wales, each electricity distributor in the State, the NSW Treasury, persons or firms who approve, design, manufacture or sell (within the definition of “sell” in section 20⁸ of the Act) electrical articles, persons carrying out electrical wiring work, anyone who has or uses any sort of equipment related to the generation, transmission or distribution of electricity, and consumers of electricity using electrical installations.

The review process identified a number of provisions in the *Electricity Safety Act* that restrict competition in the marketplace by:

1. restricting the sale (s. 21A(1)(a)(i) and (ii)) and requiring labelling or marking of declared articles (s. 21A(1)(b));
2. confining the authority to issue Certificates of Approval and Certificates of Suitability to the Commissioner of the Office of Fair Trading and whomever the Minister for Fair Trading approves (s. 21A(1)(a)(iii));
3. requiring manufacturers and suppliers of electrical articles to comply with Australian and international standards or other requirements (s. 21A(1)(c)); and
4. restricting work on specific electrical installations to appropriately qualified persons (s. 25(4)).

⁷ National Competition Council Legislation Review Compendium, 3rd Edition, December 1999.

⁸ Under s. 20, “sell includes (a) auction or exchange, (b) offer, agree or attempt to sell, (c) advertise, expose, send, forward or deliver for sale, (d) cause or permit to be sold or offered for sale, (e) hire or cause to be hired, and (f) display for sale or hire.”

3.3.1 Declared articles

The Act makes it an offence to sell an electrical article that has been declared by the Governor (by order published in the Gazette) unless the article has been approved and certified by the Director or an equivalent authority in another Australian jurisdiction.⁹ Declared articles must be marked with the issued approval mark and comply with the prescribed standards. These are types of articles that are considered would be particularly hazardous if not made to the prescribed standard.

Some manufacturers and distributors also choose to have articles that are not declared certified under a voluntary scheme operated by the Office of Fair Trading.

The certificates of approval for declared articles issued by the Office of Fair Trading expire after five years. If that approval is not renewed and the article is not appropriately marked or does not otherwise meet the requirements of the Act, it is illegal for the article to be sold, hired, or represented as being for sale or hire – whether new or second-hand.

On application, a mark of approval may be issued by the relevant authority in any Australian jurisdiction to the distributor of a declared item, who must ensure that the mark appears on each of those articles available for sale or hire in New South Wales.

3.3.1.1 Discussion

Apart from the submission, discussed in Section 3.2 (Assessment of the need for regulation) above, which recommended deregulation of the (standards and) certification regime, the submissions that addressed this issue were strongly in favour of retaining the process of approval and certification of declared articles. Most cited the safety to consumers provided by the system or the marketing value of the marking and labelling requirements.

As noted in Chapter 2, the list of declared articles in Australia is to be reviewed by ERAC, with a view to reducing the number of articles from 60 to 51 or 52. The proposal in New Zealand is to reduce the number to four declared articles, with a folder system by which suppliers would have available information to verify that non-declared articles which are declared in Australia comply with standards. The submission that favoured deregulation also suggested the proposed New Zealand folder regime as an alternative to the current list of declared articles.

Recommendation: Pending the expected national review of the declared article regime, no change to the declared article provisions of the *Electricity Safety Act* is considered desirable.

⁹ Note that the same holds true for articles subject to the Trans-Tasman Mutual Recognition Arrangement and several other trade agreements with European and Asian countries.

3.3.2 Authority to issue certificates

The Act limits the authority to issue certificates of approval and certificates of suitability to the Commissioner of the Office of Fair Trading and whomever the Minister for Fair Trading approves (s. 21A(1)(a)(ii)).

At present, only one other organisation (Quality Assurance Services Pty Ltd) is approved under section 21A(1)(a)(iii) to issue these certificates. Neither the Act nor the Regulations specify procedures for approving an authority to issue certificates.

3.3.2.1 Discussion

It was suggested to the Steering Committee that the criteria for gaining ministerial approval to issue certificates of approval and suitability under section 21A(1)(a)(iii) be elaborated.

The only non-governmental certification scheme is operated by QAS, a commercial subsidiary of Standards Australia International Ltd. QAS has a market advantage by being the only private company permitted to be in competition with the Office of Fair Trading and the other government authorities approved under the legislation.

No adverse safety implications are known to have arisen from the testing and certification scheme operated by QAS. The Steering Committee considered that, with appropriate safeguards¹⁰ in place, there should be no impediment to broadening the testing and certification scheme market.

The Steering Committee also noted that, under clause 3 of the *Competition Principles Agreement*, the NSW Government is required to foster competitive neutrality between Government and private businesses where they compete¹¹. The objective of CPA clause 3 is the elimination of resource allocation distortions by removing any net competitive advantages of Government business activities that arise simply as a result of their public sector ownership where they actually or potentially compete with other private or public sector businesses. The operation of section 21A(1)(a)(iii) of the *Electricity Safety Act* avoids conflict with the competitive neutrality requirement.

Recommendation: The criteria for obtaining ministerial approval to issue certificates of approval and suitability under section 21A(1)(a)(iii), subject to appropriate safeguards, should be elaborated in legislation.

¹⁰ Safeguards could include approval by the Office of Fair Trading of proposed schemes, supervision by and regular reporting to the Office and appropriate third party accreditation within a specified period after commencement of operation.

¹¹ Competitive neutrality involves removing any unfair competitive advantage or disadvantage that Government businesses may experience, simply as a result of government ownership. Competitive neutrality allows privately owned businesses to compete with Government owned businesses on an equal footing. Exposing Government businesses to competition from the private sector encourages them to improve their business practices and value for money, minimising the need for the use of taxpayer's resources.

The objective of competitive neutrality policy is to ensure that no government business enjoys a net competitive advantage by virtue of its public sector ownership. (NCC)

3.3.3 Compliance with standards

The Act requires that certain electrical work meet standards which may be detailed in subordinate legislation.

Section 37 of the Act, amongst other things, empowers the Governor of New South Wales to prescribe standards and rules that regulate electrical work, for both electrical installations and electrical articles¹². These standards may cover matters including:

- electrical articles and the materials used for their manufacture;
- the voltages to be maintained at the terminals of consumers of electricity;
- the installation, alteration, repair or renewal of electric wires, cables, appliances, meters, fittings, insulators, or apparatus at any place or premises; and
- electrical installations and other equipment used for or in connection with the generation or supply of electricity (other than by Pacific Power) and for materials used in the manufacture of such equipment, and the adoption of engineering standards for such installations, equipment and materials.

In addition:

- the Energy Corporation has the power to regulate the adoption of standards of plant, equipment, frequency and voltage for the generation, transmission, distribution and supply of electricity (section 9(1)(a)); and
- the Commissioner of the Office of Fair Trading may specify the classes and types of electrical articles to which the Act applies (section 20(1)).

It is illegal to sell, hire, or represent as for sale or hire any declared electrical article that does not meet the current relevant Australian standard. An exception to this is second-hand television receivers, which have been exempted from those provisions of the Act, subject to certain conditions, which include that the model was first sold before 1 July 1998, has not been subject to recall, and that the receiver currently complies with the relevant minimum safety requirement.

3.3.3.1 Discussion

One submission suggested that the provisions relating to pawnbrokers, second-hand goods dealers and hire firms should be removed if there have not been any electrical appliance safety issues associated with these traders.

The Office of Fair Trading is aware of instances of accidents involving used electrical goods, and carries out checks of markets and stores. Discussions with charitable institutions and second-hand dealers take place to raise awareness of the legislation and the dangers of such articles.

The Steering Committee noted that there is a specific order covering second-hand televisions, and that the Office of Fair Trading may be proposing further orders to cover other second-hand appliances considered to warrant such attention.

While compliance remains a challenge, this does not undermine the need for relevant provisions. It was considered that the onus should remain on the supplier to ensure the safety of second-hand appliances.

¹²The complete regulation-making powers of the Governor are reproduced in Appendix 3.

Recommendation: The provisions that apply to the safety of second-hand consumer electrical articles are valid and should remain in place.

3.3.4 Qualifications

In New South Wales, electrical work within the meaning of the *Electricity Safety Act 1945*, ie the actual physical work of installing, repairing, altering, removing or adding to an electrical installation and the supervising of that work, may only be carried out by holders of an appropriate licence or registration certificate (if properly supervised) under the *Home Building Act 1989*.

Section 25 of the Act permits persons authorised by the Commissioner of the Office of Fair Trading to require that someone claiming to be an electrical contractor prove their claim. An authorised person may also require that others who appear to be carrying out electrical wiring work prove that they are not prohibited from doing that work – a provision intended to cover apprentices and others persons who are carrying out work under appropriate supervision.

Unless the appropriate qualification is held (or an appropriately qualified person is instructing and supervising), electrical wiring work may not be done. This restriction means that unqualified persons may not work on electrical installations, including home do-it-yourself jobs, which are connected to 240V supply. However, any person may do electrical work on self-standing 240V electrical installations powered by a generator, windmill or solar panels.

3.3.4.1 Discussion

Two submissions favoured the requirement of a licence to work on free-standing installations, such as generators, windmills and solar panels. It was claimed that life-threatening situations have occurred on construction sites and elsewhere when free-standing installations have been connected to the mains grid.

The Steering Committee noted that the *Wiring Rules*¹³ apply to free-standing installations (which may be used to operate consumer articles), whether connected to the mains grid or not. It was also noted that the connection of free-standing installations to the mains grid is regulated by the *Electricity Supply Act 1995* and regulations. It is the responsibility of the electricity distributor to ensure that such an installation is safe before connection to the grid.

Although it is recognised that free-standing installations may be used to generate electricity for domestic consumers, and have the potential to cause injuries and electrocutions by their use, the fact that no injuries or deaths are known to have occurred from incidents involving free-standing installations was also taken into consideration.

¹³ Electricity installation work must be done in accordance with the Australian/New Zealand Wiring Rules. The Wiring Rules cover matters including the notification, safety, compliance testing and maintenance of consumer installations.

The application of the *Electricity Safety Act* to these installations may impose a considerable burden on people living in rural, particularly remote areas of New South Wales, without providing any tangible benefit to them.

Recommendation: The provisions of the *Electricity Safety Act* should not, at this stage, be extended to free-standing installations.

3.4 Cost/benefit analysis

Costs imposed by legislation are usually passed down the line to the consumer in the form of higher prices or lower quality. The question that needs to be considered in this review is whether the costs borne by business and the community are justified given the benefits provided. Wherever possible, regulatory processes should be designed to minimise the costs of administration to government and of compliance by individuals and businesses.

3.4.1 Costs

The economic costs associated with electricity safety are taken to be the quantifiable or estimable costs normally associated with the buying, selling and use of the relevant goods and services¹⁴. In the case of electrical consumer goods and installations, these may include the costs of:

- the testing, approval, certification and labelling process; and
- recalls and/or rectification when an installation or product is found to be faulty.

In addition, the costs to government in administering the *Electricity Safety Act* and Regulations, including inspections, approval and certification procedures and associated services and support, must be taken into account.

Many, if not all, of these costs are ultimately borne by the consumers as costs to industry and government are passed on.

3.4.1.1 Electrical articles and installations

Costs to Government

The Office of Fair Trading typically carries out some 2,000 certification tasks, (new certificates of approval, modifications to these certificates, renewals of certificates, new certificates of suitability and variations to these certificates) per annum, or about 41% of the approvals and certifications in Australia. The issue of certificates of suitability accounts for 20% of this work. Revenue from these activities amounts to approximately \$700,000 per annum.

It costs approximately \$1,226,000 annually to operate the Electrical Safety Unit, which is also responsible for compliance work. A significant matter identified during the review which limits the powers of authorised persons to ensure compliance with

¹⁴ There are costs associated with the safety aspects of distributing and transmitting electricity, however, these responsibilities are only implied in the *Electricity Safety Act*, whereas they are explicitly stated in the *Electricity Supply Act 1995*. Consequently, these costs are not included for the purposes of this review.

the Act and causes unnecessary inefficiencies is the lack of penalty notices as a compliance tool.

There is a substantial administrative cost involved in attempting to apply any penalty under the *Electricity Safety Act*. The time and effort required to mount a successful prosecution may be at the cost of other equally necessary compliance work. Penalty notice schemes provide an additional compliance option which is effective, inexpensive and provides a rapid response to the illegal activity by unscrupulous traders.

The Steering Committee noted that penalty notice schemes operate under other consumer protection legislation, including:

- *Fair Trading Act;*
- *Pawnbrokers and Second-hand Dealers Act;*
- *Trade Measurement Administration Act;*
- *Employment Agents Act;*
- *Business Names Act;*
- *Motor Dealers Act;*
- *Home Building Act;*
- *Property, Stock and Business Agents Act;*
- *Landlord and Tenant (Rental Bonds) Act; and*
- *Retirement Villages Act.*

Penalty notices enable inspectors to issue on-the-spot fines to those traders caught committing a minor offence under the legislation. If the Office takes prosecution action in such cases, it may be up to 5 months before the trader is convicted of the offence.

The power to issue on-the-spot fines to persons or corporations in specific, clearly identified cases would reinforce the serious nature of such offences under the Act, protect consumers, as well as allow compliance staff to broaden their activities in the marketplace. Compliance costs would be reduced both for the Government and traders by avoiding prosecution.

It was noted that penalty notices would not replace current options to issue formal cautions or prosecute when warranted.

Recommendation: The *Electricity Safety Act* should permit the issue of penalty notices where minor breaches of the legislation have clearly been identified by an authorised person.

The net annual cost to government of certification is approximately **\$72,000**, not including the costs of any prosecutions.

Costs to industry

1. Testing Costs

Testing of electrical products is required to show that they comply with the relevant Australian Standard. For the purposes of this review, costs include only testing work done for Australian certification. Test reports obtained for certification elsewhere, then later used for Australian certification are not included, as no additional costs are involved. Most European test reports would fall into this category.

Based on Office of Fair Trading records, 22% of applications required full test reports and 19% require partial test reports. (The other applications either have certificates which were previously obtained for certification in another country or did not require test reports because the change to the product was not technical.) The estimated average costs of these are \$3600 and \$1200 respectively.

Based on an estimate of 820 applications, the annual costs of testing for certification purposes is **\$2,040,000**.

2. Cost of application fees for certification

Based on the receipts of the Office of Fair Trading, these costs are estimated to amount to approximately **\$700,000** per annum.

3. Authority to issue certificates

The potential costs associated with restricting who may issue certificates under the Act include:

- preventing firms from entering the certification market; and
- providing a financial advantage and associated reputation to those who may issue certificates.

This restriction makes it difficult for other businesses to develop and operate certification schemes that are valid in New South Wales. In NSW, the cost of this restriction is an unknown percentage of the market currently serviced by the Office of Fair Trading, and, to a very minor extent, QAS. It is acknowledged that mutual recognition provides the potential for an Australia-wide market.

For the purposes of this review, it is estimated that 50% of the approvals and certifications currently being issued by the Office of Fair Trading may be denied to the private sector. The cost to industry would, in this case, be **\$350,000**.

4. Recall Costs

Individual recall costs can vary from a few thousand dollars to several millions of dollars. These recall programs are estimated to cost from \$600,000 for sales of 10,000 units to \$22.4 million for sales of 50,000 units. The estimated average recall cost is \$300,000.

Office of Fair Trading records indicate that, in a typical year, 22 recalls of electrical articles are carried out.

An estimated total yearly cost of electrical product recalls in Australia is **\$6,600,000**.

5. *Qualifications*

The costs associated with meeting qualification requirements to work on electrical installations include:

- training in both theoretical and practical work; and
- licence fees.

However, these costs are indirect, being associated with the *Home Building Act 1987*, and are not included for the purposes of this review.

Costs to Consumers

Certification, testing and other forms of safety assessment add to the cost of placing electrical equipment in the marketplace. These costs are passed onto the consumer by increased wholesale and retail mark-ups. The total cost imposed on suppliers by the *Electricity Safety Act* has been determined above as \$9,340,000.

It is estimated that the mark-up charged to consumers is 50%, or **\$4,670,000**, per year.

Intangible costs

The restriction of the electrical articles that may be sold may also result in intangible costs; impedance of the creative expressions of the designers of electrical articles and curtailing the product ranges of manufacturers and distributors, as well as restricting the range of products available to the public.

Other costs

Other costs may include time and effort to gain an appropriate knowledge of Australian standards, design, manufacturing and distribution processes, and statutory requirements.

In the case of electrical installations, the costs of examining and testing of equipment that is used by, or intended to be used by an electricity supply authority or electricity supplier, include the time taken and loss of income whilst the apparatus is out of commission.

3.4.2 Benefits

The objectives of the legislation have evolved from creating the infrastructure required to distribute electricity throughout New South Wales to making it safe for consumers to use electricity. If consumer protection is the main objective of the Act, the statistics cited above indicate that the detrimental effects to consumers from the use of electricity are measurable.

The benefits of the legislation are identifiable, being the reassurance to consumers that electricity is delivered safely, that electrical articles are safe to use and that the person installing or maintaining their home wiring knows what to do. Reassurance, however, is difficult to quantify. Similarly, it is problematical to measure the reduction in information search costs, the number of people who were not killed or injured, the number of fires that did not start and the amount of property not damaged as a result of the operation of the *Electricity Safety Act*.

3.4.3 Discussion

In any one year, millions of dollars are lost in terms of life, property and productivity. Families suffer trauma and loss, and businesses face additional costs to recall faulty products or to rehabilitate or recruit staff.

The number of lives saved, the amount of property undamaged and the number of businesses able to continue operating due to the application of the *Electricity Safety Act 1945* to electrical articles and installations is incalculable.

The majority of the submissions to the review supported some form of regulatory intervention in the interests of uncompromised consumer safety and confidence. Some specifically stated that only qualified persons should be allowed to work on electrical installations, as the nature of the construction can hide problems and faults from inspectors.

The Steering Committee took into account the costs to government, industry and consumers, the injury, mortality and accident data associated with the use of electricity for consumer installations and appliances, and the difficulty in estimating the value of lives saved, injuries prevented and property undamaged because of the restrictions of the Act. It was unanimously agreed that the provisions of the *Electricity Safety Act* are essential to safeguard, as far as possible, consumers from the dangers of such installations and appliances.

Recommendation: As, on the balance of evidence, the net benefits of restrictions to competition imposed by the *Electricity Safety Act* outweigh the costs, those restrictions should be retained.

3.5 Alternative means of achieving objectives

The *Competition Principles Agreement* requires that this review consider alternative means for achieving the objectives of the *Electricity Safety Act*, including other legislation with equivalent or similar provisions and non-legislative approaches.

The issues paper discussed a number of options to achieve the objectives of the *Electricity Safety Act*, including retaining the Act, but with major modifications and transferring administration of the legislation to the Federal Government. The removal of government intervention was also canvassed.

3.5.1 Modification

The Steering Committee considered a number of suggestions for modification of the *Electricity Safety Act* during the review, some of which were outlined in the issues paper.

3.5.1.1 Discussion

Installations

- a. One submission suggested the introduction of permits for people to do their own domestic wiring. Applicants would be required to pass a knowledge test or short TAFE course and test. The permit would not allow the holder to work for profit or for others, unless in an advisory capacity. The work done could then be inspected by an independent body for compliance with safety standards.

Two main issues arose when the Steering Committee considered this suggestion: that of safety, including meeting the required standards, safe working practices, and the difficulty in inspecting wiring work behind walls and in other inaccessible locations to ensure the safety of the work; and the increased regulation the proposal would entail.

Costs for this proposal would include the preparation and provision of the TAFE course, fees for the course and permit and additional government administration of the permit system. This proposal is not recommended.

- b. Relevant information with simple diagrams and text should be provided with components sold to assist people to do their own domestic wiring.

The Steering Committee did not endorse the proposal to allow unqualified persons to do home wiring, but noted that the Wiring Rules are being supplemented with guides to assist qualified persons.

Costs for this proposal would include printing and repackaging of items for sale. It would not assist when purchasing second-hand items. A potential cost would be the safety of persons performing the work, others in and around the premises should the wiring fail, and the damage to property itself. This proposal is not recommended.

- c. The legislation and other rules should be revised to make them easier to understand.

It is standard practice to draft legislation in plain English. Other documents, such as standards and the Wiring Rules fall outside the ambit of this review. **This proposal is recommended.**

- d. Impose compulsory testing of residential electrical installations upon change of ownership (similar to pest inspection certificates) in addition to the testing of new installations.

The benefit of this proposal was recognised, although it does not seem appropriate to this Act. The Conveyancers Association, Insurance Council of Australia or the Bankers Association may be relevant in this instance.

Costs would include inspection fees. This proposal is not recommended.

Standards

- a. Recognise safety standards used in other countries to reduce re-testing costs, and increase the choice of standards followed.

The Steering Committee noted that international standards are already recognised in Australia, although they may require amendment to meet Australian conditions (eg climate and/or the electricity delivery system).

Costs for this proposal include the potential dangers of not meeting a standard appropriate to Australian conditions. This proposal is not recommended.

Regulatory regime

- a. Create an authority to which businesses can appeal when restricted by mandatory Australian Standards.

Businesses can already appeal to the relevant regulatory authority or Standards Australia. Another authority would increase bureaucracy unnecessarily.

Costs for this proposal would include the establishment of a new authority or division in an existing authority. This proposal is not recommended.

- b. Compensation and/or damages should be available when incorrect advice is received from a regulatory authority.

Such avenues already exist. No additional cost is associated with this proposal. This proposal is not recommended.

Recommendation: That the *Electricity Safety Act* be redrafted in plain English.

3.5.2 Centralised regulation

All jurisdictions follow a uniform scheme for the approval of declared articles, and all require other electrical articles to comply with agreed minimum safety requirements. Similarly, all jurisdictions require that electrical installation work be performed by suitably qualified persons, whilst vocational training and licensing systems are becoming increasingly uniform across the nation. In addition, the Consumer Affairs Division of the Commonwealth Treasury already co-ordinates national product recalls.

Given the national consistency of these associated matters, it has been proposed that the relevant elements and powers of the *Electricity Safety Act* (and its equivalent legislation in other States and Territories) be transferred to the Commonwealth Government. This would require a major and lengthy consultation process, however, if agreed, could mean:

- nationally consistent legislation;
- manufacturers and suppliers may need to apply for approval to only one licensing authority;
- one decision-making body could consider proposed changes to legislation, the list of declared articles or the application of Australian standards; and
- administrative processes and associated costs duplicated across the jurisdictions could be diminished.

Provisions of the Act that relate to functions of the Energy Corporation of New South Wales could be transferred to legislation administered by the Ministry of Energy and Utilities at the same time.

3.5.2.1 Discussion

Submissions in support of this option particularly favoured the reduction of duplicated functions across jurisdictions, as well as current inconsistencies across borders. One submission considered that centralisation of article approvals would benefit manufacturers by removing barriers in the Australia market.

The Steering Committee noted that the provisions applying to electrical articles are nationally consistent as they are generally agreed at the national level by the Electrical Regulatory Authorities Council, with each jurisdiction recommending decisions to the respective government ministers for approval and implementation. This system appears to be both workable and appropriate. Clarification of the method required to obtain ministerial approval for certification schemes should assist to reduce any delays.

The cost and relative inconvenience to industry of cross-border licensing is recognised, although mutual recognition of qualifications has already reduced the costs. It was noted that a national licensing scheme would be likely to result in the loss of income to governments, and may adversely affect smaller jurisdictions.

Recommendation: Centralisation of electricity safety legislation is not considered appropriate or necessary.

3.5.3 Deregulation

Under this option, the main control over the safety of electrical articles would be the marketplace and action taken under the common law. The Fair Trading Act could be amended to allow the banning of electrical products, but meeting industry standards would be voluntary.

Occupational health and safety legislation would still cover aspects of electricity safety in work places and the licensing and misconduct provisions of the *Home Building Act 1989* would continue to apply to electrical work. Electricity suppliers would remain bound by the safety standards of the *Electricity Supply Act 1995* with regard to customer installations.

3.5.3.1 Discussion

As discussed in detail above in sections 3.2 (Assessment of the need for intervention) and 3.3.3 (Compliance with standards), two submissions supported some form of deregulation: one favoured removal of the testing and certification provisions, the other questioned the need for second-hand goods to comply with Australian standards. Neither proposal was supported.

Without government intervention, competition might control the quality of work to the advantage and the disadvantage of consumers. High quality products that are certain to meet or exceed voluntary standards and work processes that are guaranteed to adhere to best practices may be successful marketing tools. Notwithstanding, the temptation of reduced prices may also be difficult to resist for some consumers, even though the result may be lower quality and potentially dangerous products and installations. It is unlikely that the safety objectives of the Act would continue to be met as successfully as they are at present.

Recommendation: The benefits of the electricity safety legislation outweigh the costs, and the legislation should be retained.

Appendix 1 Terms of Reference

TERMS OF REFERENCE

Review of the *Electricity Safety Act 1945*

1. The review of the *Electricity Safety Act 1945* shall be conducted in accordance with the principles for legislation reviews set out in the *Competition Principles Agreement*. The guiding principle of the review is that legislation should not restrict competition unless it can be demonstrated that:
 - (a) the benefits of the restriction to the community as a whole outweigh the costs; and
 - (b) the objectives of the legislation can only be achieved by restricting competition.
2. Without limiting the scope of the review, the review is to:
 - (a) clarify the objectives of legislation and their continuing appropriateness;
 - (b) identify the nature of the restrictive effects on competition;
 - (c) analyse the likely effect of any identified restriction on competition on the economy generally;
 - (d) assess and balance the costs and benefits of the restrictions identified; and
 - (e) consider alternative means for achieving the same result, including non-legislative approaches.
3. When considering the matters in (2), the review should also:
 - (a) identify any issues of market failure which need to be, or are being addressed by the legislation, and
 - (b) consider whether the effects of the legislation contravene the competitive conduct rules in Part IV of the Trade Practices Act 1974 (C'th) and the NSW Competition Code.
4. The review shall consider and take account of relevant regulatory schemes in other Australian jurisdictions and any recent reforms or reform proposals, including those relating to competition policy in those jurisdictions.
5. The review shall consult with and take submissions from consumers, relevant industry associations, manufacturers of electrical products, importers and other interested groups.

Appendix 2 Overview of statistics

A2.1 Accidents, compensation and lost productivity

Most of the accidents in New South Wales caused by contact with electricity occur to young or middle-aged males. These are generally working men, with (or with the potential to have) families and other responsibilities.

1998/99 workers' compensation data from the WorkCover Authority of New South Wales provide a partial picture of the costs to individuals, employers and the community from accidents due to electrical articles and installations. The costs include payment for initial treatment, rehabilitation, devices for walking or home alterations required in some cases, compensation payments for lost earnings, physical incapacities, lives, grief, and the cost of time and productivity lost to the workplace. All these costs are also applicable when such accidents are not work-related, but are not as easily measured.

In 1998/99, the non-fatal injuries to workers from electrical products and installations notified to the Office of Fair Trading constituted c. 0.17% of the total workplace injuries reported by WorkCover¹⁵. The imputed gross incurred cost for these injured workers was \$1,452,152. By extension, it is estimated that the annual incurred cost to the community for each injured person reported to the Office of Fair Trading is \$20,745. The annual costs to the community are estimated as follows:

| | Total non-fatal injuries ¹⁶ | Gross incurred cost ¹⁷ |
|---------|--|-----------------------------------|
| 1995/96 | 205 | \$4,252,725 |
| 1996/97 | 198 | \$4,107,510 |
| 1997/98 | 173 | \$3,588,885 |
| 1998/99 | 140 | \$2,904,300 |
| 99/2000 | 215 | \$4,460,175 |
| 2000/01 | 243 | \$5,041,035 |

Estimates of the cost of a death may be based on a person's age, including the value of lost production, health care, administrative costs associated with death, and in some cases, the value of the grief, pain and loss to those still living. Estimated values range from less than one million dollars to \$7.1 million¹⁸.

¹⁵ The injuries to electrical and electronic tradespersons notified to WorkCover include incidents unrelated to electrical articles and installations. Given the difficulty in extracting data purely relevant to matters relating to the Electricity Safety Act, figures based on average data have been used.

¹⁶ Total relevant non-fatal injuries as reported to the Office of Fair Trading.

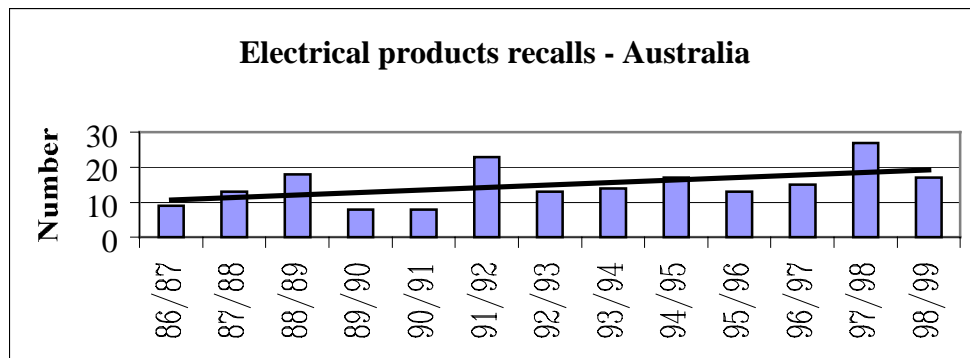
¹⁷ WorkCover defines gross incurred cost as the sum of payment plus an estimate of future liability if the claim is still open at the end of the current financial year.

¹⁸ To include economic and non-economic factors, the average value of a human life in Australia may be estimated at \$3.6 million, which corresponds to the lower estimated value of human life used by some British Government agencies (£1 million - £3 million), as well as various estimates of the average total economic loss to a family in the USA for persons aged between 30- 49 years (US\$1.6 million) and US court awards for wrongful death.

An average of 13 people per year died in New South Wales between 1995-2001 from accidents involving electrical consumer and network equipment. Of these, an average of 2.8 deaths per year was due to faulty articles or installations, the remainder of the related fatalities being due to failures under other legislation, including the *Electricity Supply Act 1995* and the *Occupational Health & Safety Act 1983*. The cost of lives lost per annum has been estimated at \$10,080,000.

A2.2 Product recalls

The number of electrical products recalled (see the graph¹⁹ below) has slowly been increasing in Australia. This could be due to a fall in manufacturing standards of local or imported products, but may also be accounted for simply by the proportionate increase in defects to the growing number of products available. It may also be due to a greater readiness for the suppliers to undertake voluntary recalls because of an increasing tendency for consumers to take legal action against the supplier when an injury occurs.



Recalling any product involves a number of costs to the manufacturer and/or supplier, including (depending on the product):

- advertising;
- transportation or postage;
- replacement or repair; and
- loss of good will.

Consumers may also incur costs associated with product recalls, including:

- transportation or postage;
- inconvenience; and in many cases
- purchase of a replacement article, rather than taking/sending the original back.

Types of electrical products subject to recall over recent months include computer notebooks, air conditioning units, night lights, modems, lamps, electric drills and liquid level controls.

Public safety warnings may also be published by the Minister in cases when the company that sold the product no longer exists and a recall is not possible. (The Fire Brigades also issues warnings about electrical appliance safety issues.)

¹⁹ Data supplied by the Commonwealth Department of the Treasury.

The costs to manufacturers, suppliers and consumers associated with the recall of electrical articles will vary according to the type of product, how many and where they were distributed. It can, however, be assumed that the cost of recalling even a relatively small number of a simple product will run to several thousand dollars.

A2.3 Property damage

In 1998/1999, some 1,355 (4.5%) of the 30,157 fires across the State detailed by the NSW Fire Brigades in its annual statistical report were known to have been ignited by short-circuits or other electrical faults. Short-circuits and other electrical faults are reported as being to blame for 9% of building and mobile property fires and 2% of other fires. The estimated value of damage to buildings caused by electrical failures was \$17,417,000, which equals approximately 11% of the value of property destroyed by fire in NSW in 1998/99.

Some of the sources of ignition of these fires included:

| Ignition type | No. of fires | \$'000 loss of buildings |
|---|--------------|--------------------------|
| Unspecified short-circuit arc | 727 | 5,359 |
| Short-circuit arc from defective or worn insulation | 272 | 3,074 |
| Arc from faulty contact, loose connection, broken conductor | 101 | 197 |
| Heat from improperly operating electrical equipment | 99 | 1,448 |
| Arc, spark from operating equipment or switch | 78 | 977 |
| Fluorescent light ballast | 21 | 3,211 |
| Total | 1,298 | 14,266 |

The types of electrical equipment that caused fires during 1998/99 include:

| Equipment | No. of fires | Equipment | No. of fires |
|---|--------------|-------------------------------------|--------------|
| Fixed wiring | 195 | Fans: portable, ceiling, exhaust | 41 |
| Air conditioning and refrigerators | 136 | Switches, receptacle or outlet | 31 |
| Dryers | 121 | Cords and plugs | 29 |
| Lighting fixtures, lamp holders, ballast, signs | 104 | Dishwashers | 28 |
| Portable room heaters | 104 | Lamps and light bulbs | 28 |
| Televisions | 65 | Hand tools | 18 |
| Electric blankets | 57 | Computer equipment | 14 |
| Washing machines | 56 | Telephones and transmitters | 11 |
| Water heaters | 51 | Radios | 10 |
| Meters or meter boxes | 42 | Stereos, tape recorders, cd players | 9 |
| Fans: portable, ceiling, exhaust | 41 | | |

The net cost of the NSW Fire Brigades' fire fighting activities in 1998/99 was c. \$278 million. Of this, 85% was spent on operational matters and prevention. Approximately 4.5% of fires were attributable to electrical articles, and the total firefighting cost attributable to the 1,355 fires caused by electrical products in NSW is estimated at \$10,648,000.