

HARMONISATION OF ENERGY SUPPLY INDUSTRY TECHNICAL AND SAFETY REGULATION

Response to the Energy Technical and Safety
Leaders Group Discussion Paper

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1. Introduction

Engineers Australia is the peak body for engineering practitioners in Australia, representing all disciplines and branches of engineering. Membership is now approximately 86,000 Australia wide and Engineers Australia is the largest and most diverse professional engineering association in Australia. All Engineers Australia members are bound by a common commitment and code of ethics to promote engineering and to facilitate its practice for the common good.

Engineers Australia is organised into 8 Colleges which are responsible for the organisation's learned society functions. Each College is responsible for particular disciplines of engineering and the provision of professional development for members within those disciplines. Part of these responsibilities is to keep members informed on changes to legislation and technical standards and to represent the views of members in consultation arrangements relating to changes.

This Submission reflects the views of members of the Electrical College of Engineers Australia, which is responsible for all facets of electrical engineering, including electricity generation, transmission, distribution and utilisation. The Submission reflects the perspective of practicing engineers at all levels engaged in the electricity supply industry.

2. Overview Comments

Some Electricity Supply Industry (ESI) members have developed and enhanced their work practices over the years to substantially eliminate accidents to people, and damage to the network and property in general. If the future regime allows the lowest common denominator to be adopted in national standards on network safety standards and safety critical work practices, this may lead to poorer safety outcomes and reduced supply reliability. The aim should be to develop national technical standards that establish clear benchmarks for "good industry practice" in the ESI (i.e. not necessarily the very best, which may be unaffordable, but "good industry practice") which engineers and others can apply with confidence.

Such standardisation is positive for the ESI and should be strongly encouraged, regardless as to the detail of the future regulatory model (although it is expected that the safety case or 'Energy Network Safety System (ENSS)' approach will be in any model applied), since the standards will deliver important guidance to industry practitioners, and over time enhance consistency across the industry and country, regardless as to whether particular standards are mandated or not (see "Mandatory Standards").

The standards framework for the ESI should cover:

- network management principles (e.g. systems for asset inspection, refurbishment and replacement)
- technical standards for key design requirements (e.g. overhead lines, substations – a few of which already exist, such as the new AS 2067 covering substations)
- equipment manufacturing standards (many of these exist already)
- field work (such as HV live line practices, pole inspection work)
- operational work (such as HV switching practices, and rules for access to plant), and

- the objectives and content of a safety case (referred to as 'ENSS' in the paper), a standard which provides considerable flexibility to the network operator in terms of deciding on how safety outcomes are to be achieved (but may also obligate the network operator to use certain key safety "standards", in the interests of industry consistency and labour flexibility, as described further under "Mandatory Standards").

3. Regulatory Framework

Energy Network Safety System

Gas and electricity networks have very different safety issues for both the public and workers. Although having one amalgamated national standard for both sounds appealing, the preferred strategic direction is to develop and maintain separate standards, albeit that they could have common 'systems' or 'management' requirements.

Small and Isolated Networks

The discussion paper proposes two options for dealing with small and isolated networks. The first option contemplates that small and isolated network operators would comply fully with a very simple ENSS. Experience shows that there is no such thing as a 'simple ENSS'. The identification of risks and the analysis of how to deal with them are fundamental to the ENSS approach, and for really small network operators, this would be a huge regulatory hurdle, especially in some jurisdictions where there are truly "tiny" networks with very limited organisational capacity to deal with regulatory systems. Engineers Australia believes this option is not realistic.

The second option proposed is to exempt small and isolated network operators from ENSS requirements where the operators can demonstrate compliance with equivalent safety outcomes. Engineers Australia believes that this is a more realistic approach. In practice, a small network operator could be allowed to set out a program for managing the network in accordance with various standards and if the regulator is satisfied, an exemption for, say a 2 year period, could be given with scope for future extension.

Central ENSS Register

Engineers Australia supports the proposal for a central ENSS Register.

Mandatory Standards

The discussion paper covers the options for a limited number of mandatory standards to be directly referenced in legislation. One option is that there be no specification of mandatory standards other than the ENSS. Engineers Australia believes that this option would satisfy one objective only of the discussion paper, which is to reduce regulatory burden or barriers for network operators.

The second option is to select a number of safety critical work practices and technical standards to be mandated in legislation. Experience has shown that there are a number of work practices in the electricity supply industry where the correct conduct of the activity is critical for the safety of line-workers and others such as electrical fitters: for example, live overhead line work and rules for safe access to High Voltage equipment. There are also some standards that set out critical minimum safety standards (e.g. AS 2067 in respect of minimum safety requirements for substations).

If the objectives of greater labour mobility/flexibility and reduced regulatory compliance effort/cost are to be met, these types of work practices and critical safety requirements should be identified and national technical standards developed (by Standards Australia or an accredited Standards Development Organisation) to cover them where this is not already the case. These standards, which would not be many in number, can then be mandated within the new regulatory framework model either in the new ENSS standard (in other words, requiring 'safety cases' submitted for certification to contain provision specifying the use of these standards for the safety critical work practices), or by separately mandating these requirements in the legislation.

In summary, Engineers Australia considers that a select number of safety critical work practices and technical standards should be made mandatory, and that this is best effected by their specification as mandatory within the ENSS because it would facilitate easier management of changes from time to time. Engineers Australia notes that mandating standards is not seen as necessary to address "high risk public safety situations", as the ENSS approach should deal with these without additional requirements.

Criteria for referencing standards

In part, Engineers Australia's comment under this heading overlaps with comments made in respect to mandating standards. Certainly, principles are needed to determine which standards should be developed. As Engineers Australia's preference is to include mandated standards in the ENSS, no further comment about inclusion in the legislation is offered. Engineers Australia sees "deemed to satisfy" standards as primarily of value to small and isolated networks seeking exemption from the ENSS requirement.

Governance Arrangements

The discussion paper proposes that the enabling legislation sets out a governance structure with the appropriate separation of powers and oversight for the delivery of safe and efficient energy services and that the Ministerial Committee on Energy (MCE) represent State and Territory interests in respect of decisions about amendments to the framework. In principle, Engineers Australia agrees the proposal has merit as it allows a coordinated approach to the establishment and maintenance of a uniform regulatory environment for the electricity supply industry (ESI). However, the ESI is just one part of the wider electrical industry administered by electrical safety regulators (represented nationally by ERAC). Unless the remaining parts of the regulatory regimes are also brought under MCE oversight, undesirable fragmentation of electrical industry technical and safety regulation will result.

The discussion paper also proposes the establishment of a Committee, reporting to the MCE, to monitor the regulatory framework and to recommend future developments. Experience shows that tripartite bodies do not work well in the practical administration of regulatory regimes because sectional interests predominate and conflicts of interest occur. For example, several State Governments have abolished Electrical Licensing Boards, or declined to establish them for this reason.

Engineers Australia recommends that the initial regulatory framework be based on the development work of the MCE Energy Technical and Safety Leaders Group. However, ongoing maintenance and changes to the framework should become the responsibility of a new National Regulatory Committee supported by a standing stakeholder reference group. This approach provides the means for industry, the professions and government to deliver more effective and efficient outcomes.

Acceptance/Certification

Engineers Australia prefers the two stage option. Certification by the regulator only initially and later certification by an independent third party certifier allows confidence to be built before regulatory involvement is reduced.

Enforcement and compliance bodies

Engineers Australia supports the option of a ministerial agreement which provides for regulators to operate in a harmonised way by formalising the role of the Electrical Regulatory Authorities Council (ERAC) and the Gas Technical Regulators Committee (GTRC). A scheme under which local regulators are working, in a harmonised way, to a uniform set of requirements offers tangible benefits to industry and also facilitates arrangements for those parts of the regulatory regimes not addressed by the discussion paper to be brought under the oversight of the MCE.

Standards Development

Engineers Australia supports the use of national technical standards developed by Standards Australia (or an accredited Standards Development Organisation) by the ESI. Such full consensus standards have the support of all stakeholders and provide confidence to all practitioners in the industry.

National Energy Skills Passport

The recommended development of a National Energy Skills Passport is welcomed. Nationally consistent competency standards in electricity, electrotechnology and gas workers will aid mobility as well as safety.

Engineers Australia's system of competency assessment through the attainment of chartered status and/or registration on the national engineering registers provides a sound basis for underpinning the system with regard to engineering practitioners. The approach taken by Engineers Australia applies to engineering associates, engineering technologists and professional engineers, that is, engineering personnel at AQF6 and above.

Engineers Australia:

- sets qualification, experience and competency standards;
- assesses applicants in accordance with those standards;
- develops and disseminates appropriate standards of practice;
- requires practitioners to undertake ongoing continuing professional development and audits this;
- requires all members to abide by a code of ethics
- undertakes disciplinary action against engineers found guilty of breaches of the code of ethics.

Engineers Australia believes this co-regulatory approach could serve as a model for other workers in the industry particularly where strong and credible professional organisations exist.

Legislation

Engineers Australia favours the option of introducing legislation into a State Parliament supported by a nationally agreed implementation schedule. Experience has shown this to be more efficient and reliable for achieving (and maintaining) uniform legislation.

4. Next Steps

Engineers Australia supports the two stage implementation approach suggested in the discussion paper. Given their different stages of development, it makes sense to first develop the technical standards (including the ENSS standard) necessary for the electricity supply industry regulatory framework and to improve worker mobility.

When this has been completed the electricity and gas supply industries could be brought under separate but harmonized frameworks for energy technical and safety regulation (i.e. uniform legislation in all jurisdictions for electricity supply and also for gas supply, and minimal differences between the legislation covering electricity and legislation covering gas supply).

5. Concluding Remarks

The policy issues covered in this discussion paper are of high relevance to the practice environment of Engineers Australia members and the submission was developed from the perspective of the practising electrical engineer, electrical engineering technologist and electrical engineering associate working in various parts of the ESI, rather than from any corporate, union or government perspective.

Engineers Australia's Electrical College Board wishes to be kept advised and involved in further developments on this important policy project and it would be appreciated if this is done through the contact listed on the face page of this submission.