Electrical Focus 2

New Arrangements for Electrical Contractor Licensing

The Electrical Licensing Board has announced the introduction of the National Electrical Contractor Licence (NECL) system of training and other requirements for applicants for an electrical contractors licence. The new arrangements apply to all applicants for an electrical contractors licence as from 1 July 1995.

The NECL program was developed by the Electrical Regulatory Authorities Coordinating Committee (ERAAC) (previously known as Regulatory Authorities Licensing Committee) in conjunction with electrical contracting industry representatives, for use throughout all Australian States and Territories.

The program is based on nationally consistent standards and is designed for automatic recognition and acceptance throughout Australia. Therefore, a person who holds a National Electrical Contractor's Licence issued in one State may obtain a reciprocal licence in another State by simply making application and paying the prescribed fees.

Some Australian States have already incorporated the NECL program into their licensing requirements.

The basis of the NECL program is four training modules additional to an A-Grade Electrical Worker's Licence. The modules require applicants for an electrical contractor's licence to demonstrate competencies related to electrical safety and the business of electrical contracting. This system replaces the previous system whereby an applicant for an electrical contractor's licence had to satisfactorily complete an interview with an electrical inspector.

Training for the NECL is competency based and is available from training providers in WA.

Only two of the modules are mandatory for an applicant for a licence. They are:

- Establishing a Business
- Electrical Technical Requirements and General Legislation

The two remaining modules:

- Estimating, Tendering and Contracting
- Financing and Controlling

are recommended modules only and are available for applicants and electrical contractors seeking to improve their business skills.

Another requirement of the NECL system is that applicants must have a minimum of $1 million public liability insurance. In WA, this will be a recommendation only at this time. It is proposed to introduce this requirement by changes to the Electricity (Licensing) Regulations 1991 in the near future.

Where the applicant is for a nominee for an electrical contractor or an in-house electrical installer, the modules will need to be apportioned between the licence holder and the nominated electrical worker. Typically, the licence holder will require competencies associated with the ``Establishing a Business'' module and the nominated electrical worker will require competencies of the ``Electrical Technical Requirements and General Legislation'' module.

If you would like further information on this new licensing arrangement, please contact the Licensing Office on phone number (09) 422 5252.

Submitting Notices of Completion

Many electrical contractors are incorrectly submitting a Notice of Completion - Minor Work for work that should be notified on a Completion Notice.

The Electricity (Licensing) Regulations 1991 define ``minor electrical work'' as:

electrical installing work that does not require alterations to the service equipment, main switchboard, the consumer's mains, the main earthing conductors or does not involve the installation of private generating plant or additions and alterations to an existing installation operating at a pressure in excess of 650 volts;

The following work is deemed to not be ``minor work'':

- The connection of submains and final circuits to a main switchboard eg the wiring and connection of a new installation to a main switchboard that has been provided as a builder's supply.
- The connection of new loads that increase the installation's total maximum demand eg additions to shopping centres.

Supply authorities will not accept a Notice of Completion-Minor Work for the above type of work after 30 September 1995.

Ducting for Ceiling Exhaust Fans

Recent investigations into a number of fires in buildings have revealed that the fires were caused by overheating of ceiling exhaust fans.

In some cases, the overheating occurred because the ducting was too small for the size of exhaust fan.

The reasons are simple. Firstly, the smaller ducting restricts the airflow so the air movement figures quoted by manufacturers are no longer achieved and therefore the air changes per hour, as required by building codes, may also be incorrect.

Secondly, by restricting the air flow, back pressure is transferred to the blade and to the motor, resulting in lower fan speed and significant increase in the running temperature of the motor.

External cowlings fitted to the ducting may also affect the performance of the fan.

Continual running of the motor in these circumstances may lead to the lubricating oil in the bearings drying out and the windings deteriorating, leading to the motor failing.

Electrical contractors who provide or install fans should liaise with other trades to ensure they are aware of the correct duct dimensions required for each installation, as specified by the manufacturer, if not custom designed by a consultant.

Shrouds for Mains Connection Boxes

In December 1993, SECWA introduced a recommendation that all mains connection boxes fitted in coastal environments be fitted with a protective shroud (refer to Electrical Industry Bulletin No 23). This was necessary to reduce problems associated with pollution resulting in tracking across the terminals.

Experience with this application has proved to be successful.

However, in some areas of harsh environment, problems of tracking are still being experienced. Western Power has therefore resolved that, as from 1 November 1995, all mains connection boxes (Clipsal type or similar) are to be fitted with a shroud, or a sealed insulation piercing type mains connection box (RNJ Sicame or similar) is to be fitted. This will apply in all areas supplied by Western Power.

Note also that when installing cables less than 16mm sq into a mains connection box, the conductor strands should be twisted together.

Standards - Why? How?

Where to Now?

Technical standards form the basis for the regulation of the technical and safety aspects of the energy industry in Australia.

The standards ensure conformity so that performance and safety requirements are consistent throughout the nation.

The Office of Energy is therefore fully committed to the review and application of technical standards which are regarded as minimum industry benchmarks.

Many standards are developed in Australia through a cooperative process on the part of industry participants including the energy regulators in each State.

Standards Australia

Standards Australia is the principal coordinating agency and produces standards using the knowledge and experience of governments, research bodies, manufacturing industries and others.

To meet the Australian Government's commitment to the General Agreement on Trade and Tariffs (GATT) agreement on Technical Barriers to Trade (TBT code), Standards Australia has been progressively aligning Australian Standards with International (in particular IEC and ISO) Standards.

This will allow products manufactured in one country (or economic union) to a common standard to be accepted in another country without impediments such as retesting to local standards.

Readers will be aware of many new joint Australia/New Zealand standards that have been prepared in line with both ISO and IEC standards. One example is the AS/NZ - 4101-4110 Information Technology series which is identical with and produced from ISO/IEC documents.

Mutual Recognition Agreements

Much of the work of harmonising Technical Standards is being driven by mutual recognition agreements (MRAs) between nations and economic unions.

These agreements will greatly assist in formalising the removal of trade barriers to our trade with others.

Presently the Office of Energy is involved in planning MRAs with the European Union, New Zealand and Asia Pacific Economic Community, covering a variety of equipment approval issues, both gas and electrical.

AS 3000 - 1991 SAA Wiring Rules

Consistent with the above, Standards Australia has been preparing the way for the SAA Wiring Rules to be reconstructed in line with IEC Standards.

The new format is expected to make for a more user friendly document, simply setting out general principles and fundamentals. Particular applications could then be called up in associated smaller codes.

It is anticipated that the next edition of the wiring rules will not be issued before 1998. In the meantime you can direct your suggestions/ideas through Bob Briggs, Principal Engineer Electrical Installations and Appliances at this Office by telephoning (09) 422 5212.

Institute of Electrical Inspectors' National Annual Seminar

The Institute of Electrical Inspectors, WA Division is hosting this years National Annual Seminar ``Energy Industry Towards the 21st Century'' on Friday the 20 October 1995 at the Hyatt Regency Hotel Perth.

The seminar programme will provide for eight eminent speakers from relevant Government and private organisations. The Seminar will be in three parts:

Part 1 Energy Producers and Distributors and their Contribution to Improving Efficiency.

Part 2 The Regulator's Role and their Future.

Part 3 Industry Changes from a Consultant's and Contractor's Perspective.

Mr A Koenig and Mr K Hodgkin from the Office of Energy will be presenting papers at this Seminar.

Further information on this seminar may be obtained by contacting the Secretary, Institute of Electrical Inspectors PO Box 6050 EAST PERTH WA 6892 or telephoning Mr G Nichols (09) 420 2794 or John Watson / Mike Bunko (09) 422 5262.

Prosecutions

A number of recent breaches of the Regulations that have been heard in the Courts are brought to notice to show that the Courts do not treat breaches lightly.

Regulation NoDetails of BreachFine (including costs)

49(1) Licensed electrical worker carried out substandard electrical installing work (general installing work). $1 268

49(1) Licensed electrical worker carried out substandard electrical installing work (consumers mains not at correct depth, exposed live terminals on water

heater, exposed live terminals of GPO in kitchen and bathroom). $1 286

49(1) Licensed electrical contractor carried out electrical work that was substandard and potentially unsafe. $93749(1)

51(1) Licensed electrical contractor carried out substandard electrical installing work (general installing work). $1 402

52 53(2) Licensed electrical contractor employed an unlicensed person to perform electrical work and submitted a Notice of Completion not duly completed (signed by an unlicensed person). $4 070

54 Licensed electrical contractor submitted a Completion Notice Minor Work for work for which he was not responsible. $1 592

In another case, a cabinet maker was fined a total of $871 for carrying out electrical work without a licence. He admitted disconnecting a general purpose outlet in order to complete building alterations.

Note also that the requirement to display electrical contractor registration numbers (EC numbers) on any advertising (including on vans, etc) is being enforced after a lengthy introduction period. If you comply, you won't be in breach.
