



**Annual Report by the  
Engineering Associates Registration Board  
For the Period from 1 April 2008 to 31 March 2009**

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## **Executive Summary and Commentary**

The Engineering Associates Registration Board is pleased to present the annual review for activities for the year to 31 March 2009.

### **Shortage of Engineering Technologists**

The shortage of experienced engineering technologists continues to impact negatively on industry and local government, although the level of demand in New Zealand has been reduced by the current economic situation.

There has been an increase in students undertaking engineering trade apprenticeships following a significant boost of funding support from government. However, there are still insufficient students completing the National Diploma in Engineering courses and associated practical and professional training, and the numbers of engineering technologists are growing too slowly.

During the year there have been attempts to rationalise the technical engineering diploma courses and increasing efforts by a consortium of polytechnics to promote the BEngTech 3 year degrees. It appears that over the next year or so there should be a marked improvement in the availability of appropriate technical engineering courses that have consistent curricula throughout NZ. Although these developments should attract more students, the shortage of engineering technologists is likely to remain a significant problem for industry over the next five to ten years.

### **Review of the Act**

The review of the Engineering Associates Act by the Department of Building and Housing (DBH) was deferred and no indication given when it will recommence. The Board considers that an updated Act is essential to the future success of registration for engineering technologists, as the current 1961 Act does not provide for many aspects now expected in the engineering and technology community.

### **Board Operations**

At 31 March 2009 there were 1733 registered REAs.

The Board achieved a surplus of \$12,737 for the financial year, increasing the Board's reserves to \$98,514. The annual audit by Audit NZ was completed during May 2009. The audit identified no matters of concern.

In September 2008, the appointments of existing board members were renewed unchanged for a further two-year term.

### **Development of a Strategic Plan**

In February 2009 the Board held a one-day planning exercise to begin developing a strategic plan to support the growth of the REA credential, the future for engineering technologists, and appropriate positioning of the Board. A draft outline for the proposed plan was produced and continuance of the strategic planning exercise was confirmed at the April 2009 Board Meeting. This project will be the subject of extensive consultation by the Board during the next year.

## **1. Legislative Context**

The Engineering Associates Registration Board (the Board) is appointed under the Engineering Associates Act 1961 (the Act) to fulfill the requirements of the Act and establish and maintain a register of those persons who apply and qualify to be registered as Engineering Associates. The Board's objectives are to encourage, support and promote excellence in engineering technology in New Zealand.

Registration as an Engineering Associate is a quality credential providing evidence that the registered individual has met specified academic and practical engineering competency standards plus supervisory experience as described in the Act.

Registered Engineering Associates (REAs) are generally senior engineering technologists employed in a wide range of disciplines such as engineering infrastructure design, implementation and maintenance or in engineering management roles within New Zealand and around the world.

The Act is administered by the Department of Building and Housing (the Department) reporting to the Minister for Building & Construction.

The Department's review of the EA Act 1961 was placed in abeyance during 2007/2008 with no further progress this current year. The Board believes that the Act needs revision, and that the review should include provisions to provide public assurance that individual REAs continue to meet the ongoing competency standards equivalent to those required for initial registration. The Board has a voluntary competency recognition system (REAcap) which offers recognition of on-going competency, although this is outside the scope of the current Act (details below).

### **ii. REA Credential and Registration Trends**

The Engineering Associates Registration Board operates under the Engineering Associates Act 1961 and its amendments (the Act). The purpose of the Act is to encourage, support and promote excellence in engineering technology in New Zealand.

The Act authorises the registration of persons with an academic-plus-practical-experience qualification, equivalent to New Zealand Certificate in Engineering (NZCE) who have also completed a significant period of "responsible experience" in the engineering workplace and who have indicated competence in their recognized discipline. The Registered Engineering Associate (REA) credential indicates that a person is a senior engineering technologist. Most REAs are employed in infrastructure design and implementation and engineering management roles in New Zealand. There are many REAs working in the international engineering market.

The total number of registered persons continue to reduce during the 2009 year. This trend is the result of:

- Changes to engineering training during the 1990's restructure of those government departments that traditionally employed technical engineering graduates resulting in a steady drop in numbers of persons entering this field. Although industry is now encouraging new entrants it is not keeping pace with the rate of retirement of older REAs. The current Act does not include mechanisms to facilitate the Board remaining in touch with new technical engineering graduates until they meet the "10 years experience" period for new REA applicants.
- Changes to engineering technologist education qualifications replacing the New Zealand Certificate of Engineering (NZCE) with a new National Diploma in Engineering (NDE). Additionally many tertiary

education providers introduced their own diplomas which has resulted in a number of different qualifications of varying levels of availability throughout NZ. This has created a confusing climate for students, employers and industry to select the most appropriate qualification and has resulted in further developments over the last year to rationalize the complicated situation. These developments continue and are being monitored by the Board.-

## Registration Statistics

Registration categories under the Act:

- R(a) Engineering technologists who have not completed a recognized technical engineering education qualification but have completed basic engineering training, and have at least 12 years of engineering experience, including 6 years in a responsible position, and were born before 1 January 1936.
- R(b) Engineering technologists who have completed NZ Certificate of Engineering or First Class Marine Engineer's Certificate (or an equivalent qualification), plus a basic engineering training and at least 6 years of engineering experience, including 1 year in a position of responsibility.
- R(c) Engineering technologists who have not completed a recognized technical engineering education qualification but have completed a basic engineering training, and have at least 12 years of engineering experience, including 6 years in a responsible position. The (c) applicants submit a 4,000 word written statement on an approved engineering topic, in lieu of the education qualification.

Summary of registrations during the year:-

Number registered at 31 March 2008	1778
Plus new applicants registered between 1 April 2008 & 31 March 2009	11
Less nett reduction from deceased, retired, resigned & restored	<u>56</u>
Number registered at 31 March 2009	<u>1733</u>

Categories:	R(a)	97
	R(b)	1534
	R(c)	<u>102</u>
<b>Total</b>		<b><u>1733</u></b>

## Engineering Technologist Education and Training Standards

Changes to engineering technologist education qualifications in the 1990s resulted in the NZCE being replaced by a variety of tertiary education provider diplomas in engineering. These qualifications do not include the practical experience required to meet the "equivalent to NZCE" criteria in the Act. As a step to correct this situation, during the year Infratrain NZ have introduced a post graduate qualification 'NDE (Civil) Applied' to provide a practical element to the NDE (Civil). A number of polytechs are having discussions with interested parties to also introduce a 3 year Tech Eng degree which is planned to have a consistent curriculum across all providers.

## Code of Ethics

The Code of Ethics for Registered Engineering Associates issued by the Board has remained unchanged for the period under review. The Code of Ethics is published on the Board's website and is in the information pack sent out to prospective applicants for registration.

## Current Competency Assurance – REAcap

The Registered Engineering Associates competency assessed practitioner scheme (REAcap) was implemented by the Board to provide assurance to the public and potential engineering employers that a currently registered REA remains competent in their chosen discipline. REAcap is, at present, voluntary with competency reassessment undertaken every four years. The competency principles embedded in the Act for initial registration are also the standards used for REAcap competency assessment including knowledge development, experience and responsibility performance. Continuing work in the engineering industry is also a requirement for REAcap recognition.

The Board believes that, in the current engineering market, the lack of ongoing competency assessment provisions within the Act disadvantages the REA credential compared with other recent occupational registration legislation.

REAcap was implemented during 2005, and at 31 March 2009 the total with REAcap validation was 123. The Board is concerned at the reduced frequency in applications and is investigating steps to stimulate interest. The website list of REAs is regularly updated to indicate successful REAcap validations.

### 3. Board Business

The Engineering Associates Registration Board continued normal operations during the year.

#### Members of the Board

Following a process in which the Associations and Institutes named in the Act nominate suitable individuals, the Minister appoints a Board with a range of relevant knowledge and experience. Board Members' terms of appointment are for a nominal 2 years and can be extended at the discretion of the Minister.

The Members of the Board at 31 March 2009 were:

Board Member	Position & Date Joined Board	Nominating Organisation
Mr I C Shearer FIPENZ	Chair – June 1999	Ministerial appointment
Mr T G Adson REA; MNZIRHACE	Member – August 2006	NZ Institute of Refrigeration, Heating & Air Conditioning Engineers Inc
Mr A D Blackler REA; MNZIHEEM	Member – August 2006	NZ Institute of Health Estate & Engineering Management Inc
Mr R W Grant CEngFIMarEST(UK)	Member – April 2003	NZ Institute of Marine & Power Engineers Inc
Ms F B L Johnstone	Deputy Chair – June 1999	Ministerial appointment
Mr H T Knight MNZElectIns	Member – August 2006	NZ Electrical Institute Inc
Ms W L Steadman GIPENZ	Member – August 2006	Ministerial appointment
Mr G D Wells REA; FDANZ	Member – August 2006	Design Association of NZ Inc
Mr M B Wheeler	Member – August 2006	NZ Electronics Institute Inc

A vacancy for the position nominated by the Institute of Measurement and Control Inc has not been filled. The terms for all Board Members were renewed in September 2008 for a further two years.

## **Committee Roles**

- **Finance (& Audit Committee if required)** – Chair & Registrar
- **Staff Committee** – Ms F B L Johnstone & Mr T G Adson

## **Board Remuneration (per day attendance)**

Until 30 April 2008: Chair \$515.00; Deputy Chair \$356.25; Member \$285.00.  
From 1 May 2008: Chair \$515.00; Deputy Chair \$375.00; Member \$300.00

## **Responsibilities and Operation of the Board**

The Members of the Board are accountable to the Minister for the performance of their duties including direction, oversight and implementation of the Act. The Board is responsible for the appointment of the Registrar.

The Chair, Registrar and Board continue to have effective working relationships with the Department of Building and Housing.

The Staff Committee is responsible for the annual review of the Registrar's conditions of employment.

The Act requires the establishment of an Investigation Committee (effectively a tribunal) if there are appeals against decisions of the Board. The Committee has not been required to date and there were no appeals against any decision of the Board during the year.

## **Technical Engineering Institutions Recognised in the Act**

Technical Engineering Associations currently recognised under the Act are:

- Design Association of New Zealand Inc
- New Zealand Electrical Institute Inc
- New Zealand Institute of Engineering Sciences Inc
- New Zealand Institute of Marine & Power Engineers Inc
- Institute of Measurement & Control Inc
- New Zealand Inst of Health Estate & Engineering Management Inc
- New Zealand Institute of Refrigeration, Heating & Air Conditioning Engineers Inc
- New Zealand Electronics Institute Inc
- Institute of Automotive Mechanical Engineers of New Zealand Inc
- New Zealand Institution of Gas Engineers Inc
- Society of Licensed Aircraft Engineers & Technologies Inc

The Board has an ongoing responsibility to keep the recognized associations informed of its activities and to encourage the advancement of technical engineering issues and standards.

## **Board Meetings**

The Board held four meetings during the year - April, June, September and November 2008. The Registrar attended all Board meetings.

In addition to the routine overview and approval of the registration of REAs, the Board has reviewed the future industry needs for engineering technologists, and continues to seek mechanisms to encourage more experienced engineering technologists to become REAs. This resulted in a workshop attended by all Board Members to investigate and begin developing a Strategic Plan for the Board and the REA credential (see below).

## **Accountability Agreement**

The Board, through the Department, is developing an Accountability Agreement between the Board and the Minister. This will document the Minister's expectations of the Board's performance. The first of these new agreements will cover the period from 1 July 2009 to 31 March 2010.

## **Promotional & Communication Activities**

In an effort to arrest the drop in REA registration numbers, the Board continues to distribute a brochure promoting the values of the REA credential, updates the website, and ensures the REA applicant's information packs encourage registration and the REAcap scheme. The Board publishes listings in public directories, and when appropriate, makes press releases.

Communication with REAs continues through the annual circular delivered with the annual fees renewal notice. This method, while cost effective, is limited to communication once per year. The use of email addresses of REAs for informal communications is increasing.

The Board has a policy of communicating the values of REAs and REAcap with employers that are advertising vacancies for technical engineers.

## **Website**

The Engineering Associates website, <http://www.engineering-associates.org.nz>, received a monthly average of over 10,000 'hits' which is a steady increase over previous years. During the year the site was extensively upgraded and modernized.

The 'List of REAs' is a feature of the website, providing web access to the list names of currently registered Engineering Associates. Details provided include surname and initials, regional location (with non residents listed as overseas), registered engineering discipline, certificate of registration number, the commencement year for continuous registration and the applicable REAcap validation. This web listing is updated following each Board meeting.

## **Strategic Planning Exercise**

In February 2009, the Board undertook a Strategic Planning exercise with a full day workshop attended by the whole Board to develop a Strategic Plan for the REA credential and the Board. The draft outline of the proposed plan was developed for consideration at the April 2009 Board Meeting. This project will be the subject of extensive consideration by the Board during next year.

## **Registrar**

The position of Registrar, held by Mr John V. Edgar REA, continued unchanged during the year. The EARB office remains staffed for 3 days per week.

## 4. Financial Aspects

### Auditors

The Board has contracted Audit New Zealand as its auditors.

### Financial Performance

Fees charged for registration during the period to 31 March 2009 remained as gazetted in the Engineering Associates Fees Amendment Regulations 2006.

The annual audit by Audit NZ was completed during May 2009. The audit identified no matters of concern.

Revenue decreased by 1.3% mainly due to fewer numbers of registered REAs, which was slightly compensated by the higher interest rates. Operating expenditure was consistent with the previous year, but the \$8,000 expenses associated with establishing the Strategic Planning exercise reduced the surplus for the year to \$12,737.

The total net assets, were \$98,514 at the end of the year.

### Summary of Financial Statements at year end.

Income:	Fees	\$91,454	
	Interest	<u>\$ 8,196</u>	\$99,650
Expenditure:	Operating expenses		<u>\$86,913</u>
	Income less expenses		<u>\$12,737</u>

### Statement of Financial Position

Fixed Assets	\$ 3,348	Current Liabilities	\$ 7,456
Current Assets	<u>\$95,166</u>	Accumulated Fund	<u>\$91,058</u>
Total Assets	<u>\$98,514</u>	Total Liabilities & Equity	<u>\$98,514</u>

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In conclusion, I would like to record my appreciation to the members of the Board for their energy, contributions and support throughout the year, and to the staff of the Department of Building and Housing for their advice and support.



I C Shearer  
Chair, Engineering Associates Registration Board.