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**The Association of  
Consulting Engineers  
Australia**

ABN 25 064 052 615

## Submission to the House of Representatives Joint Standing Committee on Migration

### Inquiry into skills recognition, upgrading and licensing

**June 2005**

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*ACEA represents Australian consulting engineering firms which provide technology-based consulting services to government and private sector clients in Australia and 40 countries worldwide. Services are provided in building, infrastructure, oil and gas, transportation, mining, communications and information technology, agriculture, food processing and manufacturing.*

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## **INTRODUCTION AND EXECUTIVE SUMMARY**

### ***The Consulting Engineering Industry in Australia***

The Association of Consulting Engineers Australia (ACEA) represents the interests of nearly 250 engineering and technology businesses providing consulting services to government and private sector clients throughout Australia, both metropolitan and regional, and in more than 40 countries overseas.

The value of construction projects designed by ACEA member firms each year is estimated to be \$11 billion. The industry is a significant contributor to the Australian economy in terms of both revenue and employment and provides essential services to clients and the community.

ACEA firms offer a large range of design services for major projects in the fields of building, infrastructure, transport, communications and information technology, project management, environmental management, geotechnical and electrical services, mining, oil and gas.

ACEA firms employ more than 10,000 professionals in Australia alone, and many tens of thousands ancillary staff.

A profile of ACEA and the consulting engineering industry is attached. **(ATTACHMENT A)**

### ***The Joint Standing Committee on Migration Inquiry into skills recognition, upgrading and licensing***

Science, Engineering and Technology (SET) skills are critical to Australia's future and ability to perform successfully in a highly competitive global market. This has been recognised by the Australian Government and as a result the Department of Education, Science and Training is currently undertaking an audit into SET skills to examine trends in demand and supply (ACEA has provided a substantive submission to DEST).

ACEA is deeply concerned at the critical skills shortages amongst professional and paraprofessional staff in Australia available to ACEA firms and believes that this will substantially impact on the development of current and proposed infrastructure in Australia.

Against this background, ACEA welcomes the Joint Standing Committee's Inquiry into skills recognition, upgrading and licensing. ACEA believes that urgent action is needed to address the skills shortages in consulting engineering firms. The immigration system has a critical role to play in contributing to the solutions.

### **ACEA summary position**

ACEA believes that the position is as follows:

- Engineering design skills in consulting engineering firms are in short supply
- A significant number of specialist engineering skills are in critically short supply
- Project work and infrastructure development nationally will suffer from delays and cost blowouts; some projects will be unable to go ahead
- The shortages will extend over 3-5 years
- There may be shortages beyond 5 years.

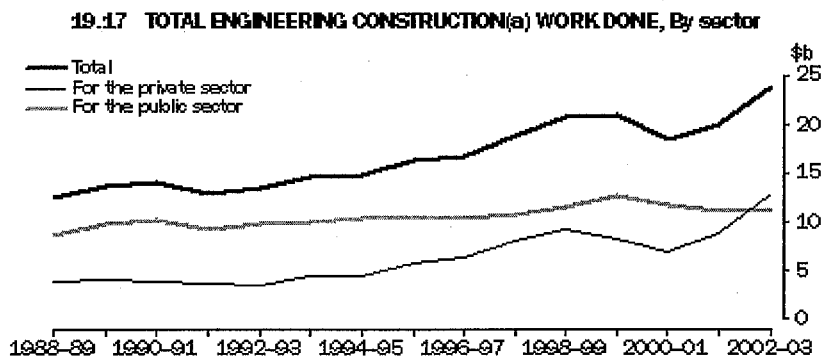
ACEA believes that a two part strategic approach is required to ensure that the demand for consulting engineers is met. That is looking at the short term action needed to assist recruitment and the assessment of longer term demand and supply to resolve ongoing shortages. The immigration system has a core role to play in realising this approach. ACEA has developed a number of recommendations, which it believes are necessary to address the ongoing demand for consulting engineers, these are set out in this submission.

## THE DEMAND FOR ENGINEERING SKILLS IN CONSULTING ENGINEERING FIRMS

### THE WORK DEMAND

Australia is experiencing an unprecedented demand for services brought about by Australia's economic boom of recent years<sup>1</sup>. This, and the increasing interest by governments in the development and upgrade of our infrastructure, has led to a dramatic increase in engineering construction project work.

The total value of engineering construction work done across the different sectors during the past 15 years, and the rising trend, is shown below (Graph 19.17 *ABS Year Book Australia*).



(a) Chain volume measures, reference year is 2001-02.

Source: *Engineering Construction Activity, Australia (8762.0)*.

This trend is set to continue. Economic statistics and forecasts from ABS, Treasury, Access Economics and our own economist are attached which demonstrate the likely continuation of high demand in the areas driving infrastructure development (**ATTACHMENT B**).

An illustrative list of just some of the infrastructure, resource and commercial projects in the pipeline for 2005 only, including 234 projects, is also attached (**ATTACHMENT C**). Daily, new and major projects are being announced. Government particularly is gearing up to deliver major public infrastructure packages, such as the Auslink transport proposals (Federal), and various major State government packages (e.g. recent statements of Qld and NSW Governments).

There is and will continue to be a very high demand for the services of consulting engineering firms.

<sup>1</sup> See the Hon Gary Hardgrave MP speech at ACEA Recruitment, Training and Retention for the Engineering Sector Conference March 2005

## THE SHORTAGE IN SUPPLY OF ENGINEERS

The engineering design work required to meet this huge demand can only be carried out by highly skilled staff at professional (and also para-professional and trade) levels, applying their high level skills in the design and development of projects. However experienced professional engineers working on the design of projects in consulting engineering firms are in short supply.

Technological specialisation and niche design demands are increasing, as projects become more complex, but also as areas of work which have been quiet over the last few years become more active e.g. expansion of the power industry needs many more highly skilled power engineers that the industry has trained to do the work over the last decade.

ACEA undertook a survey of all its member firms in March 2005, which identified a broad range of shortages in specialist areas.

A detailed breakdown of specialist areas in shortage as identified by our firms is attached (**ATTACHMENT D**).

### ***Home Grown Supply***

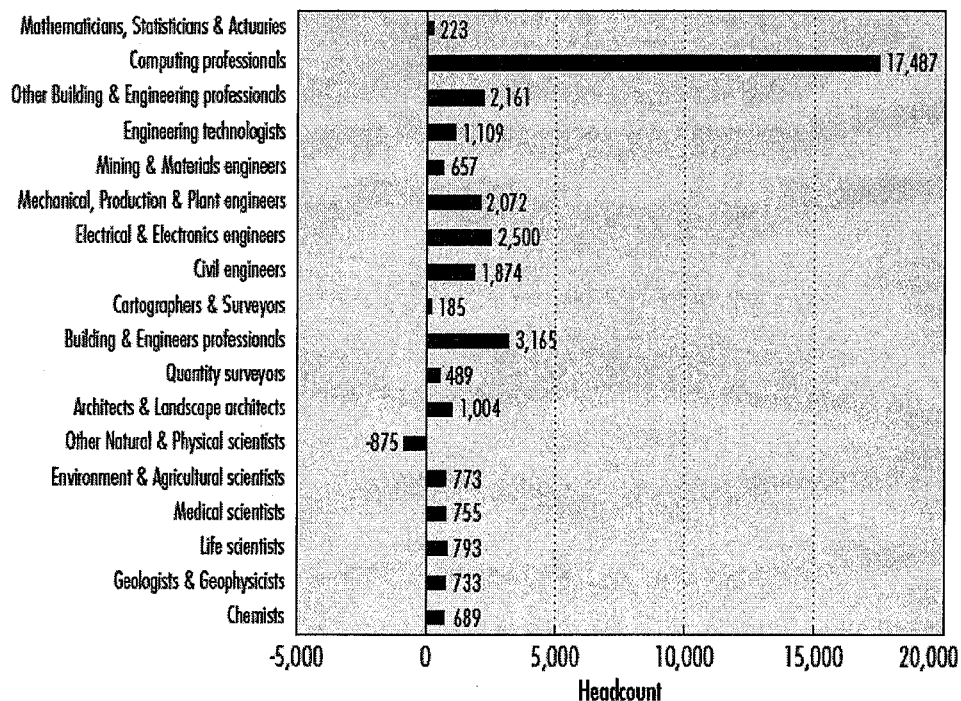
- The numbers of engineering graduates from Australian universities are not sufficient to meet the demand now, and the intakes are falling (**ATTACHMENT E**).
- The number of engineers acquiring specialist skills in many existing and emerging critical areas of engineering design in Australian universities are falling (small numbers and the high cost of training mean that specialist electives and postgraduate courses are closing). For example, the University of Canberra has closed its engineering faculty.
- There is significant and increasing competition for engineers with Australian employer organisations who value the skills of engineers for management and technical support services (as opposed to project design and development):
  - the public sector is recruiting engineers to develop the tenders and to manage the contracts for the growth in government infrastructure programs
  - contractors are recruiting engineers as project managers
  - management, accounting and law firms are acquiring engineers in large numbers to augment their advisory services with high level technical skills
  - banks are recruiting engineers to manage risk and oversee their projects

In 2004 only 1,263 Australian bachelor degree engineering graduates were employed as engineers and only 425 of these went into consulting engineering firms. A further 236 graduates were employed as para-professionals, but only 71 into consulting engineering. 631 engineering graduates went into an unrelated industry (**ATTACHMENT F**).

- Engineers are ageing; the ABS labour force survey (2003 annual average) showed that 27.8% of mining and materials engineers are between the ages of 45-47 and 14.2% are 55 and over. The same survey showed that the professions with an above average proportion (for a profession) working when 65 years or more included civil engineers and mechanical, production and plant engineers. The Department of Employment and Workplace Relations in their April 2004 report '*Australia's future professional skills need*' concluded that mining and material engineers were in the top four professions in Australia most at risk from ageing.

### International supply

The Department of Education, Science and Training report into Australian Science and Technology ('*At a Glance*') 2004 reported that in the five years to 2002-03, Australia experienced net gains of scientists and engineers through migration. The chart below shows the net gains in scientists and engineers through migration, by selected occupation, 1989-99 – 2002-03.



Source: DIMIA, unpublished data provided to Science and Innovation Analysis Section, DEST in June 2004.

Clearly the largest net gain was in the category of computing professionals (17,487 persons). Civil engineers, who have been assessed by the Department of Employment and Workplace Relations to be in shortage for eight of the last ten years, only numbered 1,874 persons during that period and only 657 mining and material engineers migrated to Australia.

## **IMPACTS OF THE SHORTAGE IN SUPPLY OF ENGINEERS**

In its survey of firms, ACEA also tested the impact that increased demand is having on the capacity of firms to respond to demand. The clear majority of firms stated that the shortage of professional engineers is a critical issue, reducing their ability to meet the needs of clients.

For clients, the primary impacts will be

- major projects not getting the level of skill and experience applied which they require
- time delays and unmet deadlines increasing
- cost blowouts and litigation further slowing projects.

Whilst this is a problem for clients attempting to manage projects, it also slows the streamlining of our national arteries that are vital for us to get our goods and services to local and international markets in as timely and efficient manner as possible. Speeding up investment in the infrastructure required to lift exports of minerals and manufacturers (notably roads, railways and harbours) is especially important for continuing economic development, given potential drops in agriculture revenue from drought.

For the firms themselves, the shortages are restricting their business growth. This is also detrimental to the contribution of such a vigorous and vital industry sector to Australia's economy through its taxation contribution.

**Skills shortages are having a direct effect on the sector's export performance (engineering service exports are amongst the highest categories of exports in the building and construction sector).**

### **SUMMARY POSITION**

**ACEA believes that the position is as follows:**

- **Engineering design skills in consulting engineering firms are in short supply**
- **A significant number of specialist engineering skills are in critically short supply**
- **Project work and infrastructure development nationally will suffer from delays and cost blowouts; some projects will be unable to go ahead**
- **The shortages will extend over 3-5 years**
- **There may be shortages beyond 5 years.**

## **WHAT ARE ACEA CONSULTING ENGINEERING FIRMS DOING TO ADDRESS THE SHORTAGES?**

ACEA consulting engineering firms are working hard, in an increasingly global market place, to recruit and retain skilled professional engineers.

### ***Domestic recruitment***

- Domestically, firms are paying graduate recruits and staff higher salaries than ever before (for example, the Graduate Careers Council of Australia, *Gradfiles December 2004* shows that engineering professionals have the highest starting salaries of all professionals). A survey-on-survey analysis of ACEA firms' total fixed remuneration (TFR) compared to other major industries (undertaken by CSi The Recruitment Specialists for 2005) shows that the TFR has increased by 5.1% compared to 2.7% in IT and 4.1% in Banking and Finance.
- Firms work with schools, for example through the Bridge Building Programme to encourage an interest in engineering. They carry out significant recruitment activity in universities and offer work placements during vacation periods. Firms also retain recruitment agencies to attract staff.
- To retain staff, firms are offering significant programs around performance bonuses, flexible working hours, staff incentive schemes and international rotation opportunities.
- Large and small firms are allocating up to 5 per cent of their total budgets on these activities, a significant increase on historical budget allocations in our organisations.

### ***International recruitment***

- Increasingly recruitment activity is moving offshore. Firms of all sizes are using international recruitment agencies, running graduate recruitment programs and participating in careers fairs and forums overseas. Many of the larger firms are recruiting up to 100 engineers per year from overseas, to make up for shortfalls in domestic recruitment. Many more are needed as described.
- Large firms are outsourcing work overseas, either through joint ventures, or establishment of overseas offices, to tap local design skills (India, the Philippines, and Bangladesh). Basic and routine work is done offshore, then transferred to Australia for final and more complex design onshore.

**Even with these measures, there are still not enough engineering skills available to properly do the work required.**



## **ACEA WORK PLAN RECOMMENDATIONS**

### **A Strategic Approach**

**ACEA believes that a two part strategic approach to alleviating consulting engineering skills shortages is required, which**

- 1. Takes urgent and immediate action to assist recruitment in the short term, mainly through sympathetic immigration arrangements to bring in skills from overseas, and**
- 2. Assesses the potential for longer term shortages with the objective of establishing the means of addressing them.**

ACEA asks the Joint Standing Committee to consider the following recommendations:

- 1. Develop a 12 month employer sponsored working visa to be granted within 10 days (subject to minimum checks only), with a facility to apply for a 457 long stay visa on satisfying the standard visa application requirements.**

Given the project based nature of consulting engineering and concerns over the shortfall in engineering intake numbers in Australia, immigration has become an essential method of recruitment. The current migration system gives the industry options to sponsor long stay temporary residence, but does not provide for the movement of skilled staff from overseas into Australia on a short-term project basis.

The development of a 12 month employer sponsored working visa would allow firms to bring skilled workforce into the country quickly to fill short term skill requirements, ensuring that project timetables do not suffer avoidable delays. This would work particularly well for Australian international firms wanting to bring skills into Australia from their overseas group sister companies on a short term basis.

Time is of the essence; therefore under the visa category proposed the applicant should only have to undertake minimum checks. For example, this could follow the special visa requirements for media and film staff.

If the firm and visa holder wish to extend the working visa an application could then be made following the standard sponsorship application procedure under the 457 long term visa rules.

**2. Expand the Department of Employment and Workplace Relations (DEWR) Skills Shortage List and the Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) Migration Occupations in Demand List (MODL) Lists**

The Department of Employment and Workplace Relations (DEWR) Skills Shortage List and the Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) Migration Occupations in Demand List (MODL) needs to be expanded to better reflect current skill shortages and to be more explicit about the detail of skills required.

'Civil engineering' is recognised on the skills lists, and consulting firms require civil engineers (amongst others). But this definition is a very limited instrument in describing the skills required by consulting firms. Many civil engineers do not have design expertise, and this is the critical skill which consulting engineering firms need. There could be many civil engineers listed as available for work, and there still be skills shortage in consulting engineering firms.

Technical suitability for vacancies is an important consideration in assessing the occupational supply of professional engineers. Vacancy data for such a broad category as 'civil engineers' gives no realistic information on the availability or otherwise of civil engineers with design skills suitable for work in project design firms. A greater differentiation of skill descriptions is required on the lists if accurate assessment of shortages is to be made.

In addition, disciplines of engineering and the skills required by consulting engineering firms other than civil engineering (design) are not identified on the lists. In the past, engineering activity tended to cluster in more narrowly focused and isolated disciplines. This is no longer the case, due to huge technological changes and the speed at which technologies change. The consulting engineering industry now is multidisciplinary and incorporates an array of engineering and technically based management consultancy services such as project management.

While in the long term there needs to be better analysis of supply and demand of both professional and trade engineering services, in order to address the shortage of skills today the lists operated by both DEWR and DIMIA need to incorporate the shortages that ACEA consulting engineering firms have identified.

A much more detailed lists needs to be incorporated in the DEWR and DIMIA Lists as below.

<b>PROFESSIONAL ENGINEERS</b>	<b>ENGINEERS IN SHORTAGE</b>
<b>FUNDAMENTAL DISCIPLINE</b>	<b>SPECIALISATION</b>
Civil	Structural Mining Geotechnical Materials Petroleum Traffic and Transport Water Construction project manager Engineering manager
Mechanical	Materials Mining Petroleum Hydraulic and Fire Water Construction project manager Engineering manager
Electrical	Materials Mining Petroleum Water Construction project manager Engineering manager
Chemical/Process	Materials Petroleum Water Construction project manager Engineering manager

<b>ENGINEERING TECHNICIANS</b>	<b>TECHNICIANS IN SHORTAGE</b>
<b>FUNDAMENTAL DISCIPLINE</b>	<b>SPECIALISATION</b>
Engineering Draftspersons	All areas
Construction Supervisory Staff	All areas

**OTHER DISCIPLINES:**

Environmental Scientists

The lists need also to be updated, at least annually. ACEA is happy to do annual surveys of firms in conjunction with DEWR and DIMIA to identify the relevant information. We are happy also to work in this with Engineers Australia and the Association of Professional Engineers Scientists and Managers of Australia (APESMA).

### **3. Streamline Entry Processes for Internationally Recruited Staff**

Once consulting engineering firms have received applications from prospective employees whom they believe are suitably qualified for the relevant engineering vacancy, the mechanisms for getting that individual into Australia needs to be routinely quick and efficient.

This should particularly be the case where the candidate's engineering discipline appears on the skills shortages lists.

Once the firm has demonstrated that they were unable to find a suitable candidate already in Australia through their normal recruitment processes and the applicant has verified his/her qualifications, in general there need be no further major delay checking qualifications or the numbers of such engineers already in Australia. Other checks on the individual, eg security and health checks need to be streamlined to support the streamlining of professional qualifications.

The target should be routinely to get *prospective employees* to work in Australia within a few weeks of application.

Some case studies where unnecessary delays materially affected an outcome for firms detrimentally are as follows:

#### **CASE STUDY 1**

In 2003 a young, highly qualified engineer from Scotland applied to DIMIA for Permanent Residency after travelling to Australia on a Short Term Visa.

The engineer, who was sponsored by one of Australia's most recognised engineering firms, was forced to wait for over 14 months for her application to be approved by the Department of Immigration. Her application was lodged in early February 2003, accompanied by all the requested documentation – including relevant police checks from Scotland Yard, and in late April 2004 the application was finally approved.

During this waiting period the engineer was married, and took on her husbands' surname. All appropriate documentation and transcripts relating her change of both circumstance and name were sent to the Department of Immigration, giving no cause for delay.

Throughout this process the engineering firm found communications with the Department of Immigration to be slow and uninformative. The Department did not acknowledge receipt of any documentation sent to them by the firm, and even after a personal visit to the officer in charge of their case the firm still found themselves frustrated by the Departments seeming inability to communicate effectively.

The engineering firm who sponsored the engineer, believes that there are blockages in the department which are responsible for the enormous and unnecessary delays associated with gaining permanent residency in Australia, the reasons for which are difficult to assess from outside. It may be that more resources are required in the relevant areas, and/or that codes of practice in relation to communications with applicants and sponsoring firms, and response rates for processing of applications, should be considered.

#### **CASE STUDY 2**

A senior engineer, sponsored by a major Australian engineering firm, was forced to wait in excess of 15 months before receiving Permanent Residency in Australia. The engineer, who is considered a world expert in his field, was highly sought after for his knowledge and expertise, and would have been a major asset to the Australian engineering industry.

The application process required both the engineer and his wife (from South Africa) to undergo thorough medical checks, and during these checks the engineer's wife made known that she suffered from what was considered a minor medical condition. Her condition was so mild it did not impact on her way of life in any way, she was not dependant on any medication and doctors did not believe that her condition would deteriorate. Despite these assurances the Department of Immigration, determined that it would be an unnecessary burden on the Australian health care system if she was granted Permanent Residency, and consequentially their application was denied.

After many discussions with the Department of Immigration, and the threat of legal action, the engineering firm was able to intervene. After a lengthy period from when their application was first submitted the engineer and his wife were granted permanent residency in Australia.

Unfortunately, after all the unnecessary and needless delays in getting the young couple approved for permanent residency, they were so disheartened with Australia's bureaucratic systems they decided to return permanently to South Africa.

The engineering firm believes that due to bureaucratic process and poor decision-making in the Department of Immigration they have lost an extremely valuable employee, but more importantly they are also disappointed that the Australian engineering industry has lost the opportunity to learn and gain expertise from an acknowledged world expert.

#### **4. Outpost a DIMIA Officer to ACEA**

This recommendation follows on from the previous to streamline entry process for international prospective employees.

The Minister for Multicultural and Indigenous Affairs announced on 14<sup>th</sup> April 2005 that the Government will outpost DIMIA officers to 10 key industry bodies to provide a direct point of contact and assist employers seeking skilled workers from overseas.

ACEA asks (and has submitted an expression of interest) that a DIMIA officer be made available to ACEA to streamline the entry process for ACEA firms. Such an officer would provide a direct point of contact for firms to assist them seeking and bringing in skilled workers from overseas, and a informed liaison mechanism with DIMIA and other interested parties.

ACEA believes that this could be the most effective delivery method for streamlining the entry process as the consulting engineering firm could liaise directly with the nominated DIMIA official in ACEA to fast-track the visa application.

#### **5. *Relieve the cost of large scale recruitment on firms***

With international sponsorship, firms have significant costs, both before the prospective employee arrives, and afterwards. The costs are particularly onerous where large numbers are sponsored.

- ***Relief on FBT Related to the Living Away From Home Allowance (LAFHA) through ATO***

Under the Living Away From Home Allowance (LAFHA) Scheme, international staff recruited to their first job can be paid that part of their salary that is above award rates as an allowance, which has the effect of reducing the amount of tax paid by the individual.

However firms are responsible for payment of FBT on the allowance (or that part above accommodation and living costs), particularly where single professionals (without families) are being sponsored.

ACEA believes that the Australian Tax Office might consider the waiving of FBT in these cases, particularly where large numbers of employees are sponsored (a cut-off point might be selected - over 20, or perhaps 5% of new employment numbers in any one year, is suggested for consideration), as a gesture of relief to the costs of firms.

- ***Relief on costs of health care benefits and more reciprocal health care agreements***

Employers who bring skilled workers to Australia on temporary business entry visas have a number of responsibilities one of which is to pay medical or hospital expenses by making suitable health insurance arrangements. Australia has reciprocal Medicare arrangement with a limited number of countries, for example the United Kingdom. This affords both the employer and employee reassurance that the costs of immediately necessarily healthcare will be met. However it is not the case with all countries, many of which have highly skilled engineers that Australian consulting engineers would wish to and do recruit, including Germany and European countries, and the United States of America.

Where reciprocal health care arrangements are not in place, employers must then interpret what is meant by 'suitable' health insurance arrangements, and given the uncertainty, and the disincentive of asking the employee to pay, in most cases firms take out insurance for basic cover on behalf of their sponsored employees. For employers looking to recruit large numbers from overseas this obligation can become very costly, running into thousands of dollars. Some consulting engineering firms may be recruiting more than 100 people from overseas annually. The cost of health cover adds to the firm's other outlay costs, which include employee relocation and visa application fees etc.

Even where firms take out insurance on behalf of their sponsored employees, some employees may wish to have private medical insurance on top of what is offered by their employer or offered through the reciprocal health care arrangements. They will have to budget for this extra cost. Such employees do not have access to Australian social welfare benefits either. In some circumstances this cost, on top of others, will be enough to deter the employee for choosing Australia as a place to work.

ACEA believes that reciprocal health care agreements could be signed with those countries where consulting engineering firms would look to recruit. A particular mechanism for this could be under the Free Trade Agreements that Australia has signed or is considering with a number of countries around the world.

**6. *Make approval of sponsorship for permanent residency concessional on guarantees of employment with the sponsoring firm for a minimum of 2 years***

ACEA recommends that the rules be amended so that when a consulting engineering firm sponsors an individual's permanent residency, that individual must remain an employee of the firm for a minimum of 2 years.

There is a major disincentive where firms might wish to sponsor prospective employees for permanent residency, in that once permanent residency is approved, the individual has no obligation to remain an employee of the firm that provided sponsorship, regardless of the investment of time and money by the firm.

The problem applies most acutely where prospective employees, for example from South Africa, will refuse an offer of employment from a consulting engineering firm unless the firm is prepared to offer sponsorship of permanent residency from the very beginning. If the firm chooses to sponsor the individual for permanent residency, the firm is taking a risk that the individual, once in the country, can decide not to work for the consulting engineering firm that provided the sponsorship.

The same issue arises where employees are recruited from overseas under a temporary visa (457), then the employee indicates that they would like to remain in Australia under permanent residency. Under the temporary visa, the

employee must stay with the sponsoring firm for up to 4 years as a condition of that temporary visa. If the individual has been a successful employee by applying their skills within the consulting engineering firm, and shortages still exist, it is reasonable that the firm might wish to encourage the individual to stay in Australia on a long term basis, by sponsoring for permanent residency. However, again, once permanent residency is approved, the individual has no obligation to remain an employee of the firm that invested in permanent sponsorship.

ACEA believes that these arrangements are inequitable for the consulting engineering firm, they do not reflect the resources which firms must expend to sponsor for permanent residency, and a two year commitment from the employee is reasonable in the circumstances.

Of course, all employees tied to employers in this way should be afforded the normal protections of Australian employment law for the duration of their contracted period.

#### ***7. Allow Firms Access to the Government Information Portal***

A number of ACEA firms have already developed or are developing ways in which to internationally advertise job opportunities.

DIMIA, DEST and DEWR could work together more effectively in order to develop ways to communicate areas of skills shortages to overseas job seekers and to provide simple straightforward immigration and employment advice and information as a coherent package. This should complement the proposed development of a national web portal on Australia's skills assessment and recognition process.

As part of the portal there should be processes in place for qualified job seekers to be quickly matched with potential employers. DIMIA, DEST and DEWR should work with industry so that employers can post applications and job seekers can come straight to potential employers for assessment. If approved, the portal can be then used to fast-track the visa applications through DIMIA.

#### **LONG TERM ACTION**

ACEA recognises that shortages in our industry are affected by cyclical influences. Given that, and what is known now of current and proposed demand, ACEA believes that the current cycle will mean shortages for some 3-5 years.

However ACEA is concerned that the fall in engineering graduate numbers, the changing age profile in firms and the dispersal of design engineers across a broader range of commercial organisations not actually delivering engineering design and development services, may constitute structural changes in the education and business environment rather than cyclical ones.



If this is the case, and if the current or even similar level of demand to the current continues, consulting engineering firms may have a problem which extends out beyond 5 years, and longer term assessment and development of strategies is required.

### **Long Term Shortages**

**8. Establish a strategic review process which assesses the potential for longer term shortages in consulting engineering, three, five and seven years out, with the objective of establishing the means of addressing them.**

The following is needed.

- To review the ongoing supply of consulting engineers and engineering technicians through the education system by mapping course intake and completions by region and discipline.
- To provide mechanisms for the sharing of data between the education institutions and industry thereby developing a joined up approach to education.
- To review the ongoing supply of consulting engineers and engineering technicians through immigration.
- To assess the demand for consulting engineering services, whether this has increased/decreased and what factors have influenced the demand.
- To quantify the success of the short term recommendations that have been implemented.
- To forecast future supply and demand needs for consulting engineers, through ongoing comprehensive and ongoing strategic skills mapping against demand
- To maintain and develop strategies to ensure that consulting engineering remains an attractive career for graduates and young people.
- To maintain and develop strategies to ensure that Australia remains an attractive destination for skilled job seekers and encourages the return of expatriates.

**9. Involve ACEA directly in all the above to represent the circumstances of our firms and industry.**

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