ENGINEERS
AUSTRALIA

4 July 2005

Mr Rick Wells
Head
China FTA Taskforce
Department of Foreign Affairs and Trade
R. G. Casey Building, John McEwen Crescent
BARTON ACT 0221

Dear Mr Wells,

Engineers Australia is the peak body for engineering practitioners in Australia and represents all disciplines and branches of engineering, including information technology. Engineers Australia has over 75,000 members Australia wide and is the largest and most diverse engineering association in Australia. All members are bound by a common commitment to promote engineering and facilitate its practice for the common good.

Engineers Australia has invested a large amount of time and energy in developing and facilitating trade in engineering services at a multilateral level. We welcome the opportunity provided by DFAT to comment on the proposed Free Trade Agreement (FTA) with China. A number of the issues outlined below have been raised previously with the China FTA Study Taskforce. Nevertheless they remain important considerations for the negotiating team to consider anew.

Engineering Organisations in Asia

The Hong Kong Chapter of Engineers Australia http://www.ieausthk.org/ currently has 1738 members with around 40 of these working in China. Recently, during the World Engineering Conference in Shanghai, a reception was held by the Hong Kong Chapter with the aim of setting up a presence in Shanghai. Negotiations on this proposal are continuing.

The Chinese Academy of Engineering (www.cae.cn) is the designated authority for the regulation of engineering in China. There has been no exchange between the CAE and Engineers Australia or our Hong Kong Chapter in the last two to three years.

The Hong Kong Institution of Engineers HKIE (as distinct from our HK Chapter) has obtained recognition by the CAE of the Hong Kong Civil and Structural engineering disciplines but applicants for registration in China still need to undertake a short examination and interview. There has been no progress on other engineering disciplines. There may be an opportunity in the future to explore the possibility of expanding the mutual recognition of membership agreement between Engineers Australia and HKIE to seek recognition of Australian engineering qualifications in China by CAE.

Engineers Australia will continue to investigate the registration and licensing requirements operating for the engineering profession in China at the county, provincial and national levels, and will provide DFAT with further information as appropriate.

Mutual recognition of engineering qualifications at a multilateral level

In most countries, engineering is an "accredited" profession and as a result, engineers are required by law to be licensed before they provide professional services or use the title "professional engineer". Many other accredited professions such as accountancy and legal services are also subject to accreditation or licensing requirements. These licensing requirements can often operate as significant barriers to trade in professional services. This is because in addition to having professional qualifications, licensing requirements contain other conditions such as completing practical training, passing examinations and meeting language, good character and reputation, citizenship or residency conditions.

While several OECD countries including the United Kingdom, Denmark, Australia, Switzerland and Finland have no, or very limited legal restrictions on the provision of engineering services, the US, Canada, Japan and Singapore operate restrictive licensing procedures. The removal of these hurdles will depend on increasing the international recognition of qualifications and practice competency and the negotiation of professional accreditation and reciprocity agreements. These developments are an important means for professional service providers to gain international market access. This is why government support of the work already done by Engineers Australia to support international trade in engineering services is so important.

As a result of the work by Engineers Australia, accredited Australian qualifications and overseas engineering qualifications are recognised through formal agreements with engineering accreditation/registration/licensing bodies in other countries. These agreements include the APEC Engineer Register, the Washington Accord and the International Register of Professional Engineers. Details of these agreements are provided in Appendix A.

Engineers Australia believes that the APEC Engineer Register should be used as a best practice model to facilitate the movement of professional engineers between Australia and China, with the Register having the potential to increase trade in engineering services beyond the opportunities presented by the other multilateral agreements. Engineers Australia believes that the Australian government must seriously consider the inclusion of the APEC Engineer Register into the FTA as a suitable assessment framework for the movement of professional engineers between Australia and China.

China is currently not a member of the APEC Engineer Register, but is a member of the APEC Accountancy Register. Given China's involvement in the APEC Directory of Professional Services (Accountancy, Engineering and Architecture) through the Accountancy sector, there are opportunities to support China's involvement in the APEC Engineer Register.

The APEC Engineer Register was developed under the auspices of the APEC Human Resources Development Working Group. The register was an initiative of regulatory authorities, professional bodies and relevant ministries from APEC economies to remove barriers to professional mobility. The inclusion of national governments in some aspects of the APEC Engineer Register poses opportunities for other APEC initiatives supported at a national government level to strengthen the register.

These opportunities could include APEC initiatives such as the APEC Business Travel Card (BTC) which operates to cut though the red tape of business travel, and gives accredited business people pre-cleared entry to participating APEC economies (Australia and China are already participating). The use of APEC facilitated programs like the Business Travel Card have the ability to address issues limiting the trade of engineering services beyond problems associated with the mutual recognition of qualifications and registration.

Fast-tracked business travel and migration procedures between Australia and China will boost Australian involvement in the Chinese market and open the way for higher levels of cross-border trade in engineering services within the two countries. Further cooperation and coordination between Australia and China on the BTC would have positive flow on effects for migration by providing enhanced opportunities to increase marketing and awareness of the BTC and visa processes generally.

Another consideration is China's WTO GATS Services Offer for engineering which outlines that a foreign engineer must be a registered engineer in his/her own country in order to avoid limitations on market access/national treatment in China. The engineering profession in Australia is not regulated by the government (except in Queensland by the Board of Professional Engineers) and there would be value in DFAT working with China to recognise the APEC Engineer Register under the GATS arrangements as well as within the FTA.

Engineers Australia is currently in negotiations with the Queensland Board of Professional Engineers, for the National Professional Engineers Register (NPER – outlined fully in Appendix B) to be used as the assessment system for the registration of engineers. If this occurs as expected, engineers registered on NPER from other Australian States and Territories will be shown a high degree of reciprocity when seeking to practice engineering in Queensland. The Queensland Board is also a signatory to the APEC Engineer Register along with Engineers Australia. Delegates of the Queensland Board are members of the Australian APEC Engineer Monitoring Committee which governs the operation of the Australian APEC Engineer Register.

APEC Engineers from other countries are already eligible to be listed on NPER. If the Queensland Board adopts NPER as the assessment system for registration in Queensland, Engineers Australia anticipates that this will result in APEC Engineers from overseas countries being able to obtain registration in Queensland with few restrictions or delays. An outline of the domestic regulations and licensing procedures for engineering in Australia is attached as Appendix B.

Overall, given that a assessment process already exists for engineering registration/licensure internationally under the APEC Engineer Register, it would extremely disappointing if DFAT failed to look for commitments from China to support the APEC Engineer Register within the FTA negotiations.

Other issues for consideration

The following information was provided by the membership of Engineers Australia, after a call for comment was circulated regarding the possibility of an FTA between Australia and China. The majority of comments surrounded the export of engineering products to China.

The major issues currently facing Australian exporters of engineering products are:

1. The import duties and tariffs on imported manufactured goods is 47%. For some projects there is a government exemption issued to waive this duty, however it is a difficult process for any private sector enterprise to receive this exemption, but a simple process for a state owned enterprise (SOE).

2. The return of goods to Australia under warranty for repair is made extremely difficult because of the Chinese government documentation and authorisation requirements for approval and duty exemption on export, import and return. If a customer requires immediate support it means that the Chinese duties are often paid by the Australian company unnecessarily to effect repairs or supply replacement parts. This duty is virtually impossible to recover.

3. For any services provided within China, taxes are deducted from payments. This has two impacts on Australian businesses. Obviously cashflow is affected as the money is deducted up front rather than, quarterly or annually as it is in Australia. Secondly it has proven extremely difficult to get valid Chinese taxation receipts which are accepted by the Australian Tax Office for companies to claim a credit on their Australian tax returns.

4. All SOE and utilities are required by Chinese law to carry out 'public bidding' for any major capital purchases where goods are imported. These 'public bids' are flawed in several ways :

    - While public initially, all commercial terms, including price are still open for negotiation after the tender closes. This allows unfair practises to continue and makes the whole bidding process fraudulent.

    - A large number of the Chinese customers of Australian companies are required by either provincial or PRC law to utilise various state owned technical 'design institutes' and 'leasing bureaus' to evaluate and negotiate these capital purchases. These design institutes and leasing bureaus are normally associated with or part of an equipment manufacturing plant which subsequently copies the designs evaluated during the tender process.

    - The 'public bidding' process is not applied in the majority of cases to Chinese domestic bidders or domestic only purchases.

5. The protection of intellectual property rights is a major issue, as the illegal use of IP is encouraged and supported by SOEs. The PRC and provincial governments have indirectly encouraged IP infringement.

6. For mining equipment, there is a requirement in China that all imported equipment must have a Chinese Mining Approval (MA) and Explosion Proof (XP) certificate. The Chinese government does recognise the International Electrotechnical Commission (IEC) standards as applying, however they have applied localised rules via the MA and XP system that makes it impossible for imported equipment to comply without redesign. These rules offer no technical improvement (in fact may be retrogressive) but add considerable cost.

7. SOE and privately owned Chinese domestic manufacturers are provided with government support by way of import duty reductions, tax breaks, cheap loans from state owned banks etc. These advantages are significant, making it difficult for imports to compete locally.

In regard to the impact of an FTA on Australian manufacturers, all of the above issues listed can also be potentially utilised by Chinese enterprises to gain an unfair advantage in the Australian market.

In summary, many barriers for manufacturers exporting to China are not officially condoned by the PRC government or public policy, but these barriers are systematic, endemic, complex and endorsed politically at the county, provincial and national levels of government in China. An FTA with China should attempt to address some or all of the above issues, however even small gains would be welcomed by Australian engineering firms, particularly when compared to present trading arrangements.

Engineers Australia would welcome the opportunity to discuss these issues further. In particular, the use of the APEC Engineer Register as the potential assessment framework for the movement of engineers between Australia and China under the FTA

Kind regards

Kathryn Hurford
Associate Director, Public Policy

Appendix A

APEC Engineer Register

The APEC Human Resources Development Working Group Steering Committee for mutual recognition of professional engineers developed the initiative for the APEC Engineer Register over the period 1997 – 1998. The intent of the APEC Engineer Register is to recognise the equivalencies in the qualifications and experience of practising professional engineers in the participating economies and to facilitate trade in engineering services between those participating economies. It is anticipated that engineers entered on the APEC Engineer Register will be granted a high degree of mutual exemption from further assessment when practising in any of the participating economies: Australia, Canada, Hong Kong China, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Thailand and the United States.

An APEC Engineer is defined as a person who is recognised as a professional engineer within an APEC economy, and has satisfied an authorised body in that economy (for example Engineers Australia), operating in accordance with the criteria and procedures approved by the APEC Engineer Coordinating Committee, that they have:

- completed an accredited or recognised engineering program;
- been assessed within their own economy as eligible for independent practice;
- gained a minimum of seven years practical experience since graduation;
- spent at minimum of two years in responsible charge of significant engineering work; and
- maintained their continuing professional development at a satisfactory level.

All practitioners seeking registration, as APEC Engineers must also agree to be bound by the codes of professional conduct established and enforced by their home jurisdiction and by any other jurisdiction within which they are practising. Such codes normally include requirements that practitioners place the health, safety and welfare of the community above their responsibilities to clients and colleagues, practise only within their area of competence, and advise their clients when additional professional assistance becomes necessary in order to implement a program or project.

APEC Engineers must agree to be held individually accountable for their actions, both through requirements imposed by the licensing or registering body in the jurisdictions in which they work and through legal processes.

As required by the *APEC Engineer Framework*, the Council of Engineers Australia has convened an APEC Engineer Monitoring Committee, which includes representatives from leading stakeholders. The Committee is a sub-committee of the National Engineering Registration Board. The Committee monitors mechanisms for determining the eligibility of professional engineers practising in Australia to be placed on the APEC Engineer Register – Australia.

Washington Accord

The Washington Accord was signed in 1989. It is an agreement between the bodies responsible for accrediting professional engineering degree programs in each of the signatory countries. It recognises the substantial equivalence of programs accredited by those bodies, and recommends that graduates of accredited programs in any of the signatory countries be recognised by the other countries as having met the academic requirements for entry to the practice of engineering. The Washington Accord covers professional engineering undergraduate degrees. Engineering technology and postgraduate-level programs are not covered by the Accord. The signatory countries of the Washington Accord are: Australia, the United States, Canada, Hong Kong China, Ireland, New Zealand, South Africa, United Kingdom. Japan, Germany, Malaysia and Singapore are currently provisional members of the Accord.

The signatories have exchanged information on, and have examined, their respective processes, policies and procedures for granting accreditation to engineering academic programs, and have concluded that these are comparable. Through the Accord, the signatories recognise the substantial equivalence of such programs in satisfying the academic requirements for the practice of engineering at the professional level.

A *Provisional Signatory* has demonstrated that the accreditation system for which it has responsibility appears to be conceptually similar to those of the other signatories of the Washington Accord. By conferring provisional status, the signatories have indicated that they consider that the provisional signatory has the potential capability to reach full signatory status. Award of provisional status in no way implies any guarantee of the granting of full signatory status. Equivalence of the engineering programs concerned shall normally become effective from the date on which the new signatory was admitted to full signatory status.

International Register of Professional Engineers

The Register is governed by the Engineers' Mobility Forum, a grouping of international professional associations who enter into various types of mutual recognition agreements for membership. The following professional associations participate: Australia, Canada, Hong Kong China, Ireland, Japan, Korea, Malaysia, New Zealand, South Africa, United Kingdom and the United States.

Through this Agreement, the signatories aim to facilitate cross border practice by experienced engineers. The signatories have agreed to use their best endeavours to ensure that the bodies responsible for licensing engineers to practice in their own economies simplify as much as possible the requirements for those on the International Register. Some economies for example, the US and Canada have more complex licensing laws than others and all signatories have agreed to identify what local requirements will still remain to be met by engineers on the International Register who wish to practice in the signatory’s economy, and to work towards minimising such requirements. Engineers with an accredited degree and who have gained a minimum of seven years practical experience since graduating and have spent at least two years in responsible charge of significant engineering work will be eligible to be entered on the International Register.

Bilateral framework to facilitate mobility for mutual recognition of registered/licensed engineers between Australia and Japan

A Bilateral Framework to facilitate mobility for mutual recognition of registered/licensed engineers between Australia and Japan was signed on 1 October 2003. The Framework is based on the APEC Engineer Register and APEC Engineers registered in Australia are now in a position to take advantage of the framework agreement if they practice in disciplines for which both countries have similar definitions, such as Mechanical, Electrical and Chemical, as listed in the APEC Engineer Manual. The Framework's signatories include:

- The Ministry of Education, Culture, Sports, Science and Technology (MEXT), which has the power to grant use of the title *Professional Engineer* in Japan;

- The Institution of Professional Engineers, Japan (IPEJ), which is the designated examination and registration organisation in Japan and to register APEC Engineers in Japan.

- Engineers Australia which is authorised to maintain the National Professional Engineers Register in Australia and to register APEC Engineers in Australia.

- The National Engineering Registration Board in Australia, which is established to supervise the operation of National Engineering Registers.

The Bilateral Framework provides a high degree of confidence that an APEC Engineer registered in Japan would practise competently in Australia and vice versa. However, due to regulation difficulties in Japan, civil and building engineering work have been excluded from the Framework and the scope of mechanical and electrical engineering has been narrowed to exclude work related to civil and building infrastructure.

Domestic Regulation of Engineering in Australia

General issues

There is no one single regulatory regime in Australia governing the engineering profession and no national legislative restrictions on the use of the title "professional engineer". Engineers do not need to be a member of a professional association in Australia in order to offer engineering services to the public.

In all States and Territories of Australia the principal regulatory instruments governing the practice of engineering in Australia include:

- self-regulation by Engineers Australia, the principal professional body for engineers in Australia www.engineersaustralia.org.au;

- self and co-regulation by the National Professional Engineers Register operated by the National Engineering Registration Board www.nerb.org.au; and

- government regulation in the State of Queensland by the Board of Professional Engineers, under the *Professional Engineers Act 2002* http://www.bpeq.qld.gov.au.

Other than in Queensland, the engineering profession operates under a self regulatory system with two voluntary registration schemes – membership of Engineers Australia as a Chartered Professional Engineer (CPEng), or registration on the National Professional Engineers Register (NPER). Engineers can be registered on NPER without being members of Engineers Australia.

NPER provides a framework for recognition of competent professional engineering practitioners divided by areas of practice. It is a simple, consistent national database to which any person or organisation can refer. It identifies those persons whose academic qualifications, cumulative and current experience and competencies, and commitment to ethical conduct and continuing professional development are of the standard considered appropriate by the profession for independent professional practice. The same competency standards are used for both CPEng and NPER. However, the operation of NPER is at arms length from Engineers Australia and is supervised by an independent board.

The National Engineering Registration Board (the Board) was established jointly by Engineers Australia, the Association of Professional Engineers, Scientists and Managers, Australia (APESMA) and the Association of Consulting Engineers Australia (ACEA). The Board, representing State and Territory Governments, community organisations and professional associations, ensures that national registers are administered in the public interest. Engineers Australia administers NPER as the service provider to the Board.

There are no specific nationality, citizenship or residency requirements for registration by the Board. However, applicants must demonstrate awareness of national and local standards, rules and practices; and be assessed as meeting the National Competency Standards for Professional Engineers. An outline of these standards can be found at: http://www.ieaust.org.au/membership/general.html.

Queensland

The Board of Professional Engineers of Queensland administers the Queensland *Professional Engineers Act 2002*. The Act provides for the registration of professional engineers to practice in Queensland. It prohibits persons who are not registered from providing professional engineering services in Queensland. The only exception is for individuals who practice under the supervision of registered professional engineers. It also provides a process for persons who are aggrieved by the conduct of a registered professional engineer to lodge a complaint about their conduct.

Engineers Australia is currently in negotiations with the Queensland Board, for NPER to be used as the assessment system for the registration of engineers. If this occurs as expected, engineers registered on NPER from other Australian States and Territories will be shown a high degree of reciprocity when seeking to practice engineering in Queensland.

The Queensland Board is also a signatory to the APEC Engineer Register along with Engineers Australia. Delegates of the Queensland Board are members of the Australian APEC Engineer Monitoring Committee which governs the operation of the Australian APEC Engineer Register.

APEC Engineers from the overseas are eligible to be listed on NPER. If the Queensland Board adopts NPER as the assessment system for registration in Queensland, Engineers Australia anticipates that this will result in APEC Engineers from overseas countries being able to obtain registration in Queensland with few restrictions or delays.

Building and Construction Regulation

Most States and Territories in Australia have registration and/or licensing regimes for engineering practitioners in the building and construction industry, with differing education and experience requirements. NPER is used by many as the assessment framework for engineering qualifications in legislation governing the building and construction industry in Australia:

- ***Tasmania:*** designers and certifiers must be eligible to be registered on NPER;
- ***Victoria:*** engineers in the building and construction industry registered on NPER are able to be registered by the Building Practitioners Board without undergoing additional assessment;
- ***South Australia:*** geotechnical engineers must be registered on NPER;
- ***New South Wales:*** certifiers must be registered on NPER, it is expected that this will be expanded to include designers;
- ***Queensland:*** All practicing engineers must be registered by the Board of Engineers; and
- ***Northern Territory:*** Engineers must be registered with a government board under the *Building Practitioners Act* in order to work in the building and construction industry. The assessment system is linked to NPER in the NT Building Regulations.