

ENGINEERING SKILLS: CALL FOR EVIDENCE REVIEW OF TIER 2

SUBMISSION TO THE MIGRATION ADVISORY COMMITTEE

25 SEPTEMBER 2015

BACKGROUND

The Institution of Professional Engineers New Zealand (IPENZ) is the lead national professional body representing the engineering profession in New Zealand. It has approximately 16,000 Members, including a cross-section from engineering students, to practising engineers, to senior Members in positions of responsibility in business. IPENZ is non-aligned and seeks to contribute to the community in matters of national interest giving a learned view on important issues, independent of any commercial interest.

The United Kingdom Branch of IPENZ provides services to IPENZ Members residing in, or visiting, the United Kingdom (UK). It provides a common point of contact for New Zealand engineers residing in the United Kingdom. The UK Branch arranges site visits and technical presentations, provides professional peer support and arranges for IPENZ competence assessments in the UK.

Currently the UK Branch has over 200 Members. However the number of New Zealand engineers in the UK is much greater than this. UK recruitment agency records show that a significantly greater number of UK-based New Zealand engineers are applying for job vacancies back in New Zealand. With email communications able to function independent of location, IPENZ is aware that not all its Members working in the UK choose to register with the UK Branch. Also, not all Kiwi engineers in the UK have obtained membership of IPENZ

SUMMARY

The UK has a considerable engineering skill shortage and the UK is competing globally for these skills. This shortage is likely to continue in the medium to long term. Solutions are important for growth of the economy generally, and for implementing, in particular, the UK Plan for Growth in the science and innovation economies.

Current international mobility agreements are mutually beneficial for the UK and New Zealand and play an important part in addressing engineering skill shortages in both countries.

While the UK has initiated and funded science, technology, engineering and mathematics (STEM) focused education policies, meeting the shortfall of engineers will not be satisfied by mobility agreements and education policies alone. Immigration policies need to be an integral part of the solution. These policies need to recognise the implications for the economy, the global competition, and the timeframes needed to address the shortage.

INTRODUCTION

The Advisory Committee's Call for Evidence indicates that there is concern with the rising number of migrants using the Tier 2 route which is the primary route for economic migration to the UK for engineers from outside the European Economic Area (EEA), which includes New Zealand.

This submission does not cover engineering skill shortages on a discipline basis as we expect the UK-based institutions, associations and allied industries will have sound evidence of specific occupational needs.

Rather, this submission covers the international context and the contribution New Zealand engineers can make to assist in overcoming shortages.

ENGINEERING SKILL SHORTAGES IN THE UK

Research shows there is a considerable shortage of engineers in the UK:

- The 2012 report of the Royal Academy of Engineering¹ concluded there is good econometric evidence that the demand for graduate engineers exceeded supply and the demand was pervasive across all sectors of the economy.
- The 2013 report by the Migration Advisory Committee² recommended that the majority of the job titles on the current shortage occupational list (as at 2013) be retained. The report acknowledged the increasing demand for specialist engineering skills continues to outstrip supply.
- The 2013 Perkins Review³ stated there is enough evidence to support a need to substantially increase the supply of engineers, at both professional and technician level. The Review also recognised that increasing the supply of engineering skills is a long-term problem and the ranks of the UK's professional engineers are reinforced by inward migration, including from outside the European Union.
- The 2015 report by Engineering UK⁴ stated that 31.7 per cent of engineering enterprises are more likely to have hard to fill vacancies for professional engineers than average (17.6 per cent). They also forecasted that by 2022 there will be 1.15 million new vacancies for professional engineers and 740,000 new vacancies for associate professionals and technical occupations. In 2012/13 Engineering UK reported there was an average current demand of 107,000 engineers per annum, compared to the graduation rate of 82,000 per annum.

There are similar issues in New Zealand, where Immigration NZ⁵ has a large number of engineering occupations on their Long Term Skill Shortage List.

The Manpower Group reported⁶ that, globally, of the jobs that employers have difficulty in filling, engineers are the third hardest to fill and technicians are the fourth hardest. In Europe engineering roles are second hardest to fill and this has been the

¹ Harrison Matthew, Royal Academy of Engineering, *Jobs and Growth: the importance of engineering skills to the UK economy*, September 2012.

² Migration Advisory Committee Report, *Skilled Shortage Sensible - Full review of the recommended shortage occupation lists for the UK and Scotland*, February 2013.

³ Perkins J, *Professor John Perkins' Review of Engineering Skills*, Department of Business Innovation and Skills, November 2013

⁴ Engineering UK, *the State of Engineering, 2015*.

⁵ Immigration NZ, *Long Term Skill Shortage List*, March 2015

⁶ Manpower Group, *Talent Survey Shortage*, 2015

case for the past four years – indicating the consistent nature of the shortage. Their report also said that engineers are also second hardest position to fill in the UK.

This shows the UK is competing globally for engineers.

GLOBAL MOBILITY OF ENGINEERS

IPENZ is a member of the International Engineering Alliance. We support and promote mechanisms that facilitate the international mobility of engineers. We are a signatory to three agreements covering mutual recognition in respect of tertiary-level qualifications in engineering:

- The Washington Accord (1989) is an agreement for recognition of professional engineers' qualifications⁷.
- The Sydney Accord (2001) is an agreement for recognition of engineering technologists' / incorporated engineers' qualifications⁸.
- The Dublin Accord (2002) is an agreement for recognition of engineering technician's qualifications⁹.

The United Kingdom, represented by the Engineering Council UK, is also a signatory of all three agreements.

IPENZ and the Engineering Council UK are also signatories to the International Professional Engineers Agreement which establishes international registers for professional engineers. Registrants may receive credit when seeking registration or licensure in the jurisdiction of another member country. Both organisations are also signatories to the International Engineering Technologist Agreement and the Agreement for International Engineering Technicians.

New Zealand engineers have taken advantage of the opportunity to practice internationally. Research¹⁰ shows that seven years after graduation 35 per cent of engineering graduates are overseas. While we do not have the data, we expect the majority of these graduates to be domiciled in the UK. The "overseas experience" phenomenon of New Zealand engineers is not new or exclusive to engineers – it is common for a number of professional occupations. Of all the non-EEA labour available New Zealanders fit in well in the UK due to the common language, culture, similar academic and professional training, and the similarities in engineering design and construction practice.

It is interesting to note that from 2001 to 2012 there was a net gain of engineers to New Zealand, and this comprised of non-NZ citizens¹¹. In other words, there were more non-New Zealand engineers arriving in New Zealand than were leaving. While the data for source country for engineer arrivals is not available, the UK¹² has been in the top five source countries for all immigrants to New Zealand from 2001 to 2015, and has been the number one country for nine of those 14 years. Therefore,

⁷ International Engineering Alliance (2015). *The Washington Accord*. Retrieved from <http://www.ieagreements.org/Washington-Accord/>

⁸ International Engineering Alliance (2015). *The Sydney Accord*. Retrieved from <http://www.ieagreements.org/sydney/>

⁹ International Engineering Alliance (2015). *The Dublin Accord*. Retrieved from <http://www.ieagreements.org/Dublin/>

¹⁰ Park, Z. *Beyond Tertiary Study: What Young Graduates Do When They Leave Study*, Ministry of Education NZ, June 2014

¹¹ Statistics New Zealand, International Travel and Migration Data

¹² <http://www.enz.org/migrants.html>

we expect that many, if not most, of the immigrant engineers to New Zealand were from the UK.

This demonstrates that international mobility agreements are mutually beneficial and play an important part in addressing engineering skill shortages in both countries.

UK IMMIGRATION POLICY

The mechanisms available to governments to address current and projected skill shortages are through education and migration policy.

We note that as part of its long term economic plan¹³ the UK Government intends to increase the number of science, technology, engineering and mathematics teachers in schools, and provide further support of vocational education and higher education. However, Engineering UK has provided evidence that the rate of change in the growth of supply of graduates is far too slow to meet the UK forecast engineering skills needs.

This gap highlights the role immigration policies must play in helping close the skill shortage gap, particularly with migrant engineers from outside the EEA.

We are also aware that in the Tier 2 System, where an overseas visa applicant is a national of a country outside the EEA, an employer needs to have a Sponsorship Licence.

Tier 2 migration policies for engineers need to recognise these issues.

Tier 2 restrictions for specific skills

We recommend selection criteria include points for particular professional occupations as follows:

- The scale of the impact of shortages on the national economy
- The expected timeframe of the shortage.
- The extent of the international competition.
- The extent of alignment of education, training, assessment of competency and practices (usually Commonwealth citizens)
- The extent of international mobility agreements (i.e. has the relevant industry itself made significant efforts to reduce mobility barriers).

Sunsetting

The length of time engineering occupations are classed as having shortages must reflect the time needed for education and immigration policies to have a substantive effect. All the evidence suggests engineering skill shortages are pervasive across all sectors of the economy, have been a persistent problem, and are long term in nature.

We recommend five yearly reviews at a minimum.

¹³ HM Treasury & Department for Business Innovation and Skills, *Our plan for growth: science and innovation*, December 2014.

Administrative Barriers

We recommend unnecessary administrative barriers be removed or reduced for some occupations above a certain points level. This would reduce compliance costs for applicants, for employers and the Government, where the applicant is in a highly sought after occupation, is highly educated, and has a low likelihood of being unemployed or an unsatisfactory citizen. This could include the complete removal of the employer sponsorship requirements, or a visa trial period for Commonwealth citizens of good standing.

CONCLUSION

We appreciate the opportunity to make this submission to the Migration Advisory Committee.

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