



ASSOCIATION OF CONSULTING
ENGINEERS AUSTRALIA

CONSULTING ENGINEERING

MARCH 2009

Industry Overview

ACEA SUBMISSION

Enquiries | Name *Nicola Grayson, National Policy Manager*

The Association of Consulting Engineers Australia (ACEA) is an industry body representing the business interests of firms providing engineering, technology and management consultancy services.

L6/50 Clarence Street
Sydney NSW 2000

P . 02 9922 4711

F . 02 9957 2484

E . acea@acea.com.au

W . www.acea.com.au

CONTENTS

CONTENTS	2
ABOUT THE ACEA	2
INDUSTRY PROFILE	4
SIZE OF THE INDUSTRY	4
INTERNATIONAL TRADE.....	5
THE CURRENT MARKET OUTLOOK	7

ABOUT THE ACEA

The Association of Consulting Engineers Australia (ACEA) is a business organisation that represents and provides assistance to Australian consulting engineering firms, representing firms of all sizes nationwide; small, medium, and large firms, as well as sole practitioners.

ACEA firms provide leading edge engineering and technology-based consulting services for the built and natural environment. They provide services in the fields of building services including hydraulics, fire, lifts/escalators, ventilation/air conditioning, lighting, water and power, as well as civil, structural, transport, communications and information technology, project management, environmental management, water engineering, geotechnical, chemical, electrical, energy, acoustical and mining.

There are over 260 firms, from large multidisciplinary businesses to small niche practices, across a range of engineering fields represented by ACEA with a total of some 45,000 employees across 93 different professional disciplines.

ACEA is also a voice to government and industry at all levels on the issues that affect the industry and business environments for member firms. Working through its national office and representatives in each State/Territory, the ACEA coordinates a common industry approach to Government policymakers and client bodies on issues such as business development opportunities, procurement, liability, standards and workplace relations. The ACEA also actively promotes members' consulting services to leaders within government and the private sector. It maintains close alliances within these sectors and with other business organisations.

As a natural extension to these duties the ACEA promotes Australian consulting engineering industries overseas and is recognised internationally as a representative organisation for such firms in Australia. The ACEA is dynamic and flexible and can react quickly to change in the market. It provides a forum for some of the best and most innovative technology and engineering firms to develop ideas and policies that shape and expand the market and contribute to Australia's growth.

The ACEA member firms design many major facilities and infrastructure including the Alice Springs to Darwin Railway, Melbourne's Federation Square and Sidney Myer Music Bowl Redevelopment, World Square in Sydney, Brisbane's Inner City Bypass, Western Australian Maritime Museum, Future Port Expansion Seawall in Queensland and the Eastlink Patronage Forecasts in Victoria.

Major international projects designed by ACEA firms include the Datong Cleaner Environment Project and the Shenzhen Aquatic Centre in China and Khalifa Stadium in Qatar.

Over the past five years the industries that drive consulting engineering revenues have grown strongly: industrial and commercial building by 15 per cent a year, engineering construction by 21 per cent a year, and investment in mining by an extraordinary 25 per cent a year.

As a result, fees earned by consulting engineers have increased from \$8.9 billion in 2001/02 to an estimated \$18 billion in 2006/07: an average annual rate of growth of 15 per cent a year. Part of the increase has been caused by rising costs in client industries: building and construction costs, for example, have increased by about 6 per cent a year over this period. But this still puts real growth at around 9 per cent a year, which is nearly three times the rate of growth in the Australian economy.

The picture that emerges today is of an industry of some 16,600 firms, employing about 124,000 people and earning pre-tax profits of around \$2.4 billion. Most of these firms, more than 96 per cent of them, are small, employing fewer than 20 people. Only about 660 firms employ more than 20. Thanks to strong growth in the market and to considerable merger and acquisition activity, the number of large firms, those employing 100 or more, has nearly doubled over the past five years, to about 80. The biggest eight of these make it into the list of the largest 1,000 enterprises in Australia. Six consulting engineers are now listed on the Stock Exchange.

BRW Magazine placed 5 ACEA member firms in the Top 500 Australian Private Companies Index¹, they included:

- Sinclair Knight Merz (NSW): ranked 31, revenue \$950.0mill, employees 6,500.
- GHD (NSW): ranked 43, revenue \$850.0mill, employees 6,000.
- Connell Wagner (Vic): ranked 69, revenue \$587.0mill, employees 3,750.
- SMEC Holdings (NSW): ranked 246, revenue \$205.0mill, employees 2,950.
- Arup (NSW): ranked 268, revenue \$190.0mill, employees 1,108.

¹ BRW Magazine, Volume 30 Number 34, August 28-October 1 2008.

INDUSTRY PROFILE

SIZE OF THE INDUSTRY

The Australian Bureau of Statistics (ABS) has conducted several detailed studies of the industry, notably in 1992/93, 1995/96 and 2001/02.² These studies reveal much about the size, structure and performance of the industry in those years, and provide some benchmark relationships that can be used to track subsequent developments and to forecast future activity.

The ABS defines *consultant engineering services* as including firms providing the usual range of services for the building and construction industry; civil, structural, mechanical and electrical engineering, as well as chemical, mining and industrial and process consulting engineering services.

Other services included are: building consultancy and inspection, boat designing and marine engineering, materials handling, sanitary engineering, hydraulic engineering, traffic engineering and construction project management services on a fee or contract basis. Firms mainly engaged in providing quantity surveying services are also included in this industry class.

Table 1.1 Statistical Summary				
		2001/02	<i>Estimate</i> 2006/07	<i>% increase</i> '01/02-'06/07
Number of firms, at year end	no.	10,984	16,600	51
Employment, at year end	no.	78,633	124,000	58
Income earned	\$ m	9,342	18,500	98
of which:				
engineering consulting	\$ m	8,931	18,000	102
other income	\$ m	411	500	22
Operating profit before tax	\$ m	1,152	2,350	104
Pre-tax operating profit margin	%	12.3	12.7	
				<i>% increase</i>
<i>Memorandum items:</i>		2001/02	2006/07	'01/02-'06/07
Gross domestic product (GDP)	\$ m	735,700	1,046,900	42
Private sector spending on:				
New plant & equipment	\$ m	52,316	78,100	49
Engineering construction	\$ m	8,899	33,991	282
Non-residential building	\$ m	9,500	21,057	122
New housing	\$ m	21,827	34,343	57
Public sector spending on fixed assets	\$ m	27,679	43,100	56
Consulting engineering income % GDP	%	1.27	1.77	

² *Selected Technical Services Australia, 1992-93, ABS Cat. No. 8676.0, Consultant Engineering Services Australia, 1995-96 and 2001-02, ABS Cat. No. 8693.0.*

INTERNATIONAL TRADE

The ABS surveys had nothing to say about the overseas operations or export earnings of consulting engineers. Yet it is well known that many of the larger firms operate overseas offices, and that some have won significant work on overseas projects from their Australian offices.

Table 1.9 shows the extent to which consulting engineering services have been exported over the past six years, in the context of all construction and construction-related exports, and all exports of services.

As the table shows:

- Exports of engineering services have averaged \$709 million a year over the past six years.
- Despite strong local demand, exports of engineering services increased by 21 per cent in 2006/07 and, over the past two years, nearly doubled.
- Over the six years to 2006/07, engineering services accounted for two-thirds of all construction and related services exports.
- Over the same period, consulting engineering exports accounted for 1.8 per cent of Australia's total service exports.

Table 1.9 Exports of Construction and Related services						
Exports	<i>\$ million</i>					
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Construction	118	105	104	106	134	132
Construction-related services:						
Architectural	29	32	40	43	74	82
Engineering	481	646	604	551	893	1,079
Surveying	5	9	21	16	13	36
Other	276	151	149	209	169	155
Total related services	791	838	814	819	1,149	1,352
Total construction & related services	909	943	918	925	1,283	1,484
All services	35,162	35,987	37,746	39,695	41,849	46,245
Construction & related services % all services	2.6	2.6	2.4	2.3	3.1	3.2
Engineering %:						
Construction & related services	53	69	66	60	70	73
All services	1.4	1.8	1.6	1.4	2.1	2.3

Source: ABS 5368.0.55.003

As Table 1.10 shows, the industry has also been subject to competition from abroad. Over the past six years, imports of consulting engineering services have averaged \$297 million a year.

As the net exports section of the table shows, exports have nevertheless exceeded imports in every year. Over the six years, net exports have averaged \$412 million a year and accounted for 70 per cent of all construction and construction-related net exports, and for 26 per cent of all net exports of services.

Table 1.10 Imports and Net Exports of Construction and Related services

	<i>\$ million</i>					
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Imports						
Construction	0	0	0	0	0	0
Construction-related services:						
Architectural	0	4	6	4	9	10
Engineering	333	257	260	339	300	292
Surveying	10	6	33	12	np	np
Other	141	149	177	175	189	245
Total related services	484	416	476	530	498	547
All services	33,135	33,463	35,696	39,315	41,078	44,367
Net Exports						
Construction	118	105	104	106	134	132
Construction-related services:						
Engineering	148	389	344	212	593	787
Other	159	33	-6	77	58	18
Total related services	307	422	338	289	651	805
Total construction & related services	425	527	442	395	785	937
All services	2,027	2,524	2,050	380	771	1,878
Engineering %:						
Construction & related services	35	74	78	54	76	84
All services	7	15	17	56	77	42

Source: ABS 5368.0.55.003

More dramatically, over the past three years net exports of consulting engineering services accounted for three-quarters of all construction and related services exports, and for more than half of all Australian net exports of services. The high share of total net services exports was achieved mainly because big increases in imports lifted our freight bill (the biggest net import of services) and thus reduced total net exports in those years.

The exports measured here include only the supply of services from the territory of one country into the territory of another. They do not include the supply of services abroad from wholly- or partly-owned subsidiary or associated companies, or from Australian consultants working abroad on overseas projects.

Although aggregate statistics on these overseas earnings are not available, they are known to be substantial.

Past surveys of members by the ACEA have found that:

- About one quarter of members perform some overseas work.
- The larger the firm the more likely it was to undertake overseas work.
- Exports generated 13% of the fees earned from Australian activities by the 17 large firms surveyed in 2006/07. Total fees earned overseas, including fees from their overseas offices, were 22% of fees.

THE CURRENT MARKET OUTLOOK

The party is over: the **economic outlook** for the world and for Australia has deteriorated markedly over the past quarter. Despite lower interest rates and a spate of measures to support financial institutions, world credit markets remain clogged.

GDP has been falling in most advanced economies, with the motor vehicle and housing industries widely in crisis, consumer and business confidence low, share and commodity prices down heavily, and unemployment rising. Not to mention there is a growing realisation that China and India are also suffering in the world slowdown by much more than was generally expected.

In forecasts revised on January 28, the IMF is now predicting that world growth will slow to 0.5 per cent in 2009, with GDP in the advanced economies falling by 2 per cent and in the developing world growing by only 3.3 per cent.

Most economists now expect very little, if any, growth in the Australian economy in 2008/09. But swift policy responses, both monetary and fiscal, may yet keep growth positive.

The major drivers of **consulting engineering activity** remained strong in the September quarter of 2008. New housing activity and spending on plant and equipment stayed steady and engineering construction increased by 11 per cent; but work done on non-residential building fell by 2 per cent. Total spending increased by 3 per cent and was 13 per cent higher than a year earlier.

For all of these markets except engineering construction, the September quarter is likely to have been the peak in activity. The consulting engineering market has already weakened and the slide is expected to continue in the year ahead.

Changes in the number of **fully-employed people** show that, except in WA, employment began to fall in the December quarter. The number of fully-employed is likely to ease further through the first half of 2009.

