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ENGINEERS CANADA
2013 MEMBERSHIP REPORT
DECEMBER 2014

P.ENG.*

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ENGINEERING REGULATORS

APEGBC:

Association of Professional Engineers and Geoscientists of British Columbia

APEGA

Association of Professional Engineers and Geoscientists of Alberta

APEGS

Association of Professional Engineers and Geoscientists of Saskatchewan

APEGM

Association of Professional Engineers and Geoscientists of the Province of Manitoba

PEO

Professional Engineers Ontario

OIQ

Ordre des ingénieurs du Québec

ENGINEERS NOVA SCOTIA

ENGINEERS AND GEOSCIENTISTS NEW BRUNSWICK

ENGINEERS PEI

PEGNL

Professional Engineers and Geoscientists of Newfoundland and Labrador

NAPEG

Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists

APEY

Association of Professional Engineers of Yukon

DESCRIPTION OF MEMBERSHIP CATEGORIES

Membership categories vary from one jurisdiction to another, as do the category descriptions. In order to describe membership composition at a national level, it is necessary to establish a common definition for each category.

ENGINEER MEMBERS:

Total engineering members - includes all categories of members **except** engineering students. Note that this category includes engineers-in-training (ingénieurs juniors/stagiaires in Québec) although they are not technically considered engineers yet. These are the numbers used in this report to track year-to-year growth in the last five years.

MEMBERS AND PARTICIPATING STUDENTS:

Some engineering regulators report students in this membership survey. In some cases, students are reported because they are members, in other cases they are reported because they are offered services by the engineering regulators to provide opportunities for them to network with members and familiarize themselves with the engineering profession. The total number of members and participating students will include all categories of members as well as engineering students in jurisdictions where students are reported.

ENGINEERS (P.ENG.'S)—INCLUSIVE:

Includes all categories of practising and non-practising members reported by the engineering regulators. These are:

- Engineers—exclusive
- Temporary Licence Holders
- Restricted Licence Holders
- Licence to Practise Holders
- Non-Practising or Retired P.Eng.'s
- Life Members

PRACTISING ENGINEERS (P.ENG.'S)—INCLUSIVE:

Includes all categories of practising (i.e. not retired) members reported by the engineering regulators. These are:

- Engineers—exclusive
- Temporary Licence Holders
- Restricted Licence Holders
- Licence to Practise Holders

PRACTISING ENGINEERS (P.ENG.'S)—EXCLUSIVE:

This category excludes engineers accounted for among other categories. Those excluded are:

- Temporary Licence Holders
- Restricted Licence Holders
- Licence to Practise Holders
- Retired P.Eng.'s
- Life Members

PRACTISING ENGINEER MEMBERS:

Includes all members who are practising engineer graduates (or equivalent), including engineers-in-training. Excludes non-practising or retired P.Eng.'s, life members, and engineering students.

ENGINEERS-IN-TRAINING:

These are engineering graduates (or equivalent) who are actively working toward earning a licence to practise engineering according to the rules of their respective jurisdiction. They are sometimes called junior engineers ("ingénieurs juniors" or "stagiaires" in Quebec).

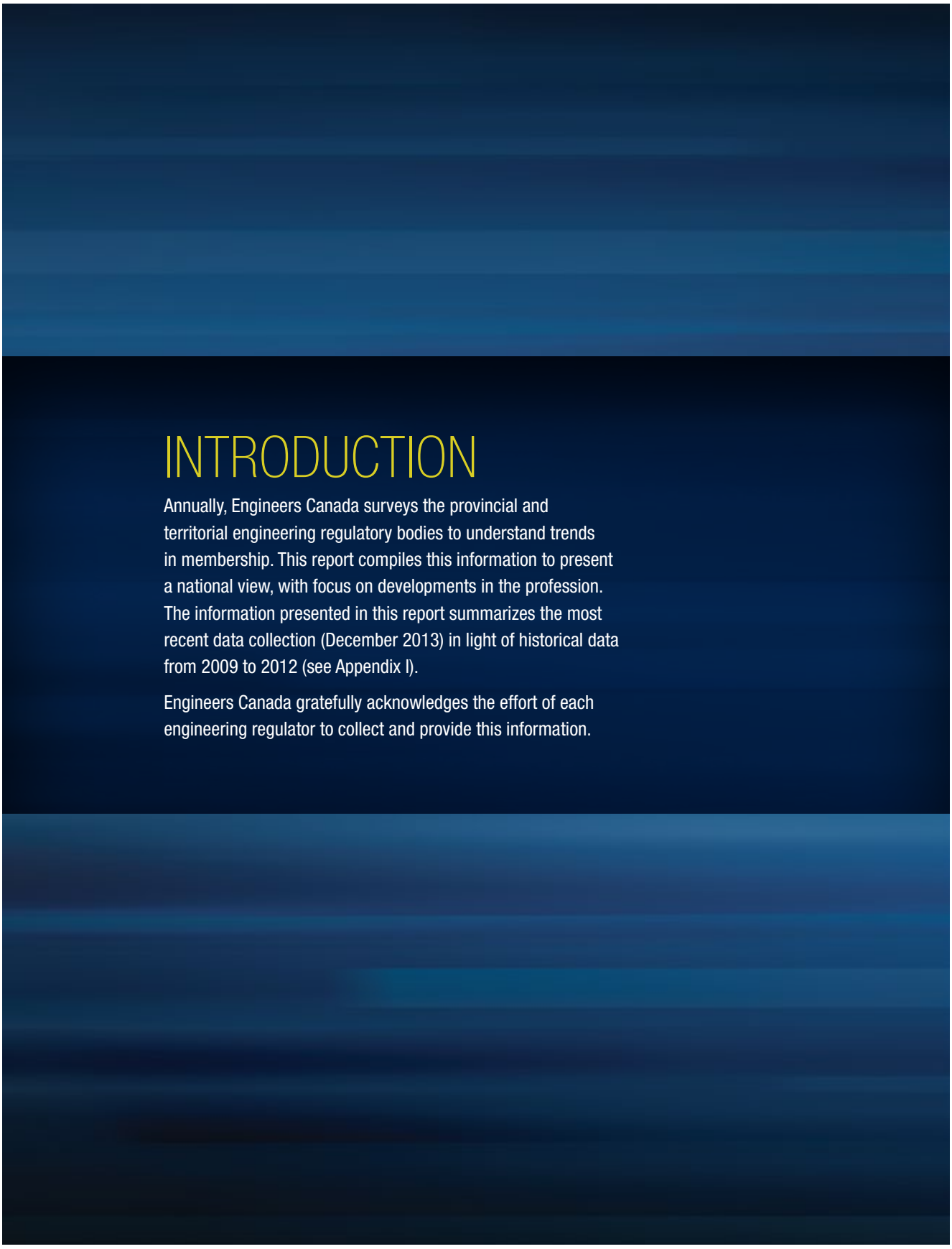
ENGINEERING STUDENTS:

Includes engineering students in jurisdictions where students are reported by the engineering regulator.

Table 1

Membership categories by groups as reported by engineering regulators.

	Practising P.Eng.'s	Temporary License Holders	Restricted License Holders	License to Practise Holders	P.Eng, Non-Practising or Retired	Life Members	Engineers-in-Training	Students
ENGINEERING REGULATOR MEMBERS	x	x	x	x	x	x	x	
ENGINEERING REGULATOR MEMBERS - INCLUSIVE	x	x	x	x	x	x	x	x
ENGINEERS – INCLUSIVE	x	x	x	x	x	x		
PRACTISING ENGINEERS – INCLUSIVE	x	x	x	x				
PRACTISING ENGINEERS – EXCLUSIVE	x							
PRACTISING ENGINEERING MEMBERS	x	x	x	x			x	



INTRODUCTION

Annually, Engineers Canada surveys the provincial and territorial engineering regulatory bodies to understand trends in membership. This report compiles this information to present a national view, with focus on developments in the profession. The information presented in this report summarizes the most recent data collection (December 2013) in light of historical data from 2009 to 2012 (see Appendix I).

Engineers Canada gratefully acknowledges the effort of each engineering regulator to collect and provide this information.

MEMBERSHIP COMPOSITION

TOTAL MEMBERSHIP

In 2013, total membership in constituent organizations across all membership categories increased from 280,505 in 2012 to 287,973 in 2013. This is an increase of 2.7%[1,2]. The total number of engineering members, excluding students, was 268,974. This is an increase of 8,649, or 3.3%.

When considering this growth from 2012 to 2013 with respect to gender (Table 2), we see that female participation is increasing over this time period more than male participation. Female membership, excluding students, increased 5.6% in 2013, whereas male membership, excluding students, increased 1.6%.

1. These numbers have not been corrected for members holding multiple licenses.
2. In this report, student numbers may vary greatly from actual numbers. Many engineering regulators do not report student numbers at all. Furthermore, APEGA reports engineering and geoscience student numbers (see Appendices I and II).
3. APEGA allows student respondents to choose to not specify gender. When considering student gender numbers, it is important to recall that there are 295 students who preferred not to indicate their gender.

Table 2

Engineering Membership by Gender Breakdown

	Engineering Membership[2,3]		Engineering Membership (excluding students)	
2012	246,472	34,033	230,251	30,074
2013	247,854	35,534	233,942	31,770
Percent Change	0.6%	**4.4%**	1.6%	**5.6%**

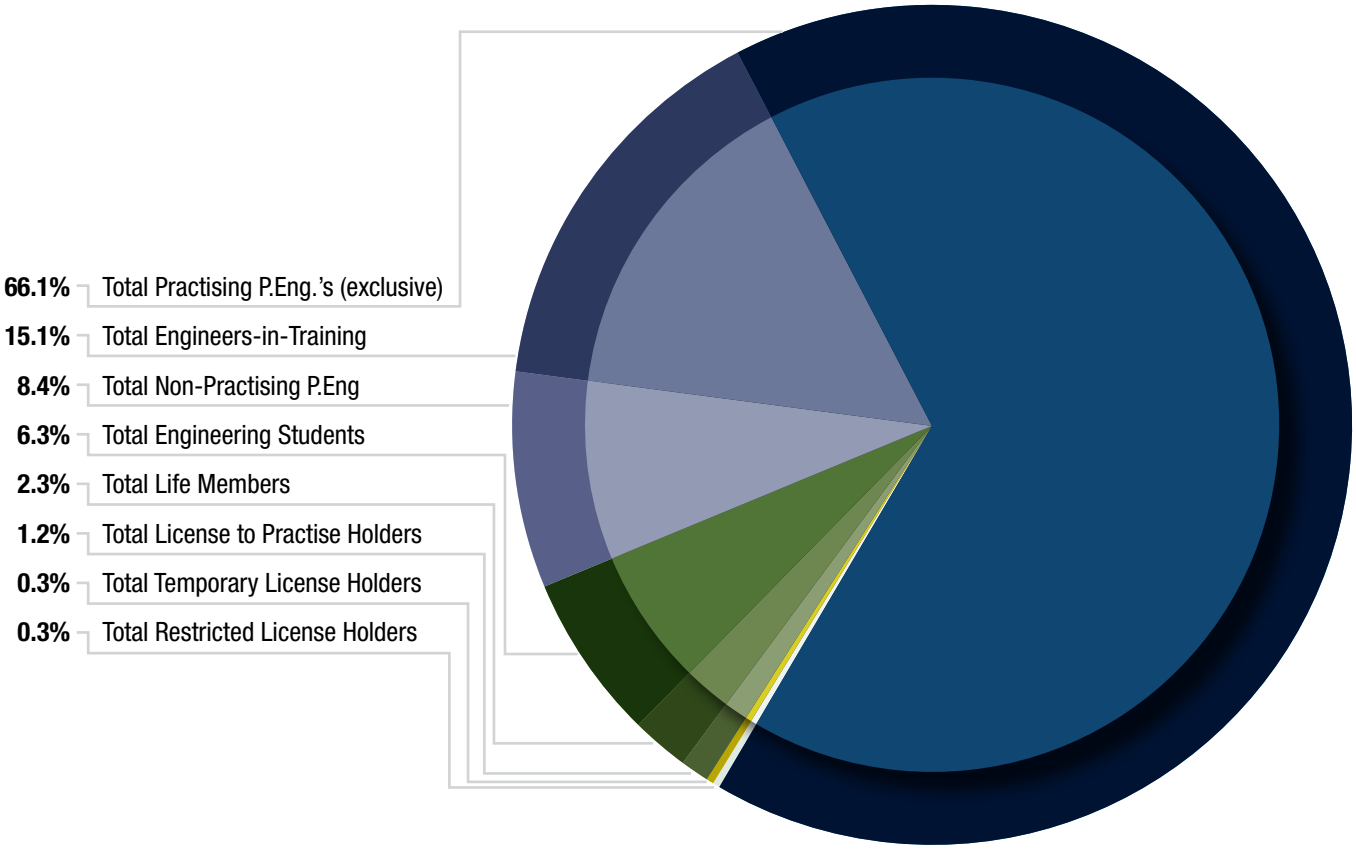
Engineering membership examined by gender breakdown shows that female participation is growing proportionally more than male participation annually.

SUB-CATEGORIES

In 2013, 66.1% of engineering regulator members were practising engineers - exclusive (Figure 1). This, combined with temporary licences, licences to practice and restricted licences, constitutes 67.9% of membership.Both these figures are slightly down from last year. Engineers-in-training (15.1%) and engineering students (6.3%) are 21.4% of engineering regulator's membership. Engineers-in-training have increased by 0.9% from last year, while students have decreased by 0.9%. Non-practicing (retired) and life members account for 10.7% of professional society membership.

66.1%
PRACTISING ENGINEERS - EXCLUSIVE

Figure 1 **Member categories as a percentage of total 2013 membership (across all constituencies).**



PRACTISING ENGINEERS

There were 189,522 practising engineers across all constituencies in 2013. This is a 1.2% growth from the previous year. The growth is much lower than in previous years. From 2009 to 2013, the number of engineers has increased approximately 4.2% annually.

PRACTISING ENGINEERING MEMBERS

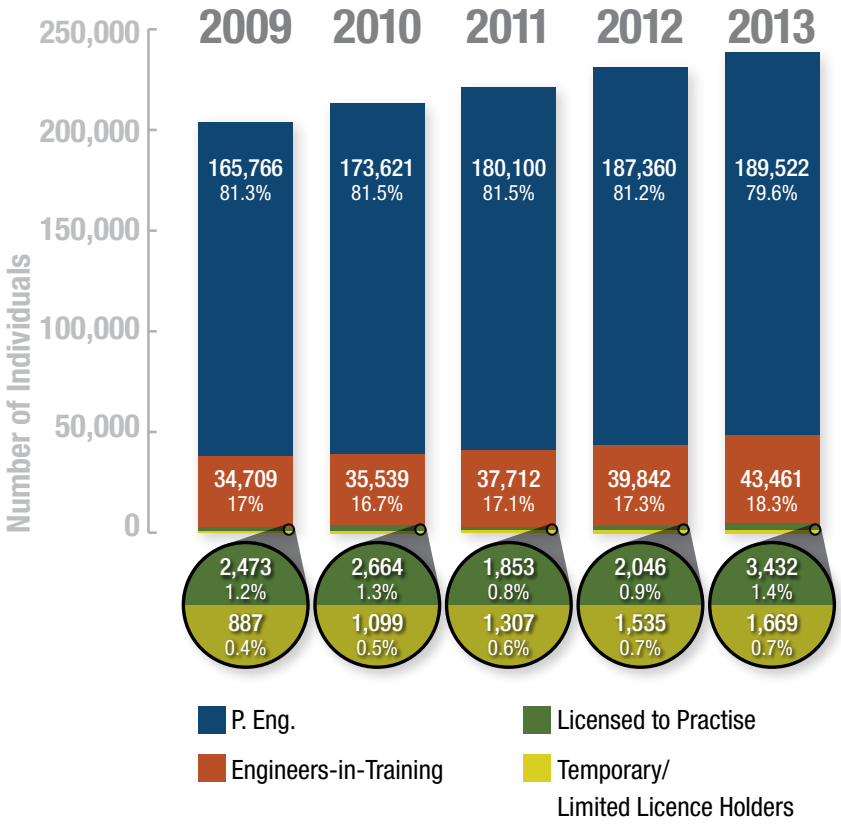
There were 238,084 practising engineering members in 2013. This was 7,301 more members (3.2%) than 2012 (Figure 2). OIQ and Engineers and Geoscientists New Brunswick reported lower numbers in this category in 2013. Figure 2 shows the trends in this category, practising engineering members, since 2009.

1.2%

PRACTISING ENGINEERS GROWTH FROM THE PREVIOUS YEAR

Figure 2

Individuals within each category of practicing engineering members reported from 2009-2013 (across all constituencies).



From 2012 to 2013, there was a 67.7% increase in Licensed to Practice engineer members. Moreover, the percentage of P.Eng.'s proportion of all practising engineering members has decreased to 79.6%. Although there are more P.Eng.'s in 2013, the rate of growth of practicing engineers has decreased, as stated previously. The number of temporary or limited licence holders has been increasing significantly over the first three years of this report (23.9% from 2009 to 2010; 18.9% from 2010 to 2011; 17.4% from 2011 to 2012). However, 2012 to 2013 shows more modest increases in temporary or limited licence holders, with 8.7% increase.

The number of engineers-in-training increased 9.1% from 2012 to 2013. This is the largest growth seen over the past four years. In December 2009, there were 34,709 engineers-in-training. From that time, 23,784 P.Eng.'s have entered the field.

GEOGRAPHIC DISTRIBUTION

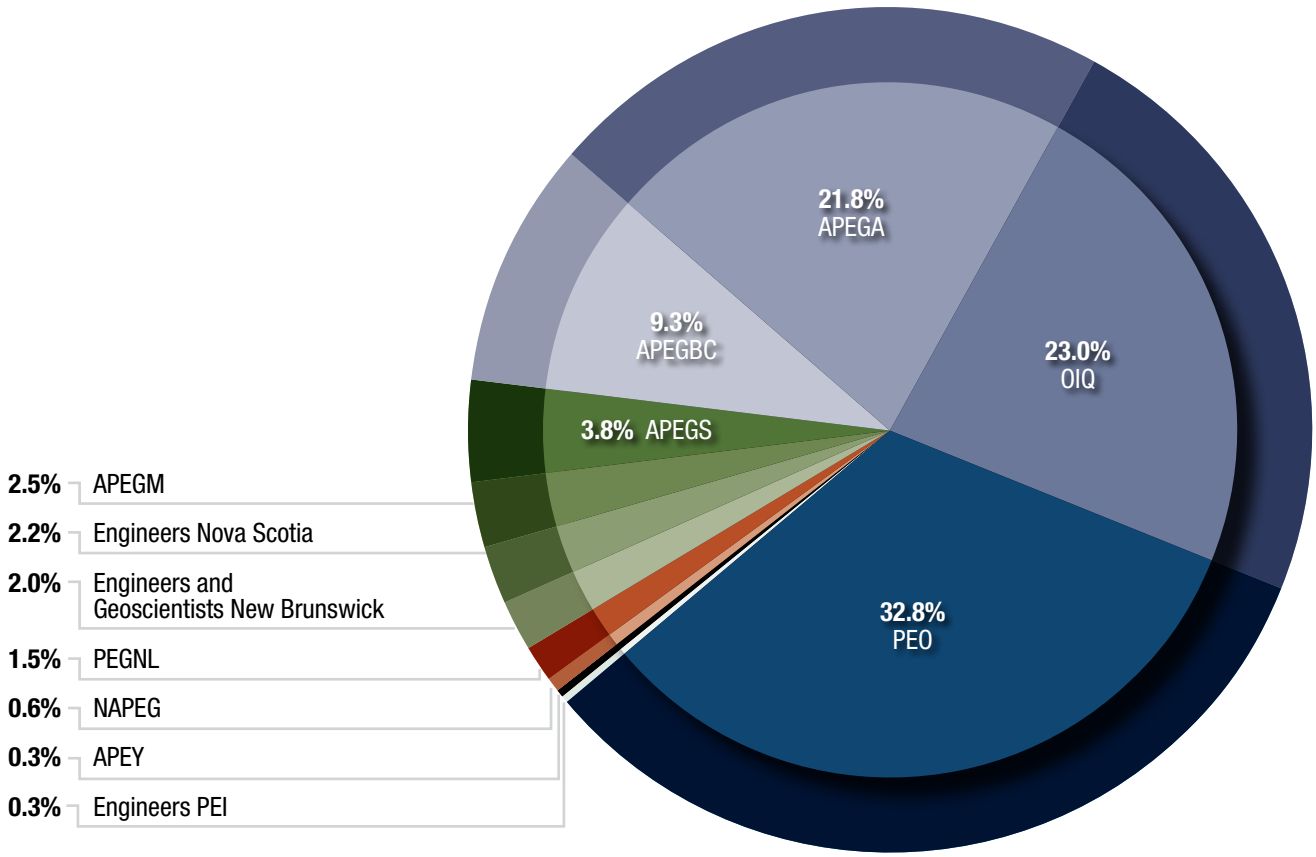
Much like 2012, OIQ, PEO and APEGA contribute the greatest number of all Canadian engineering members (77.6%), with PEO accounting for nearly one-third of all engineering members (Figure 3). APEGA's share of membership grew again this year, up 0.8% from last year. OIQ had a decline in its proportion of membership, from 24.1% of total membership in 2012, to 23.0% in 2013. This decline is also observed in the total number of engineering members of OIQ. In 2012 there were 62,685 total engineering members, while in 2013 this number decreased to 61,745.

77.6%

ENGINEERING REGULATOR MEMBERS ARE IN OIQ, PEO OR APEGA

Figure 3

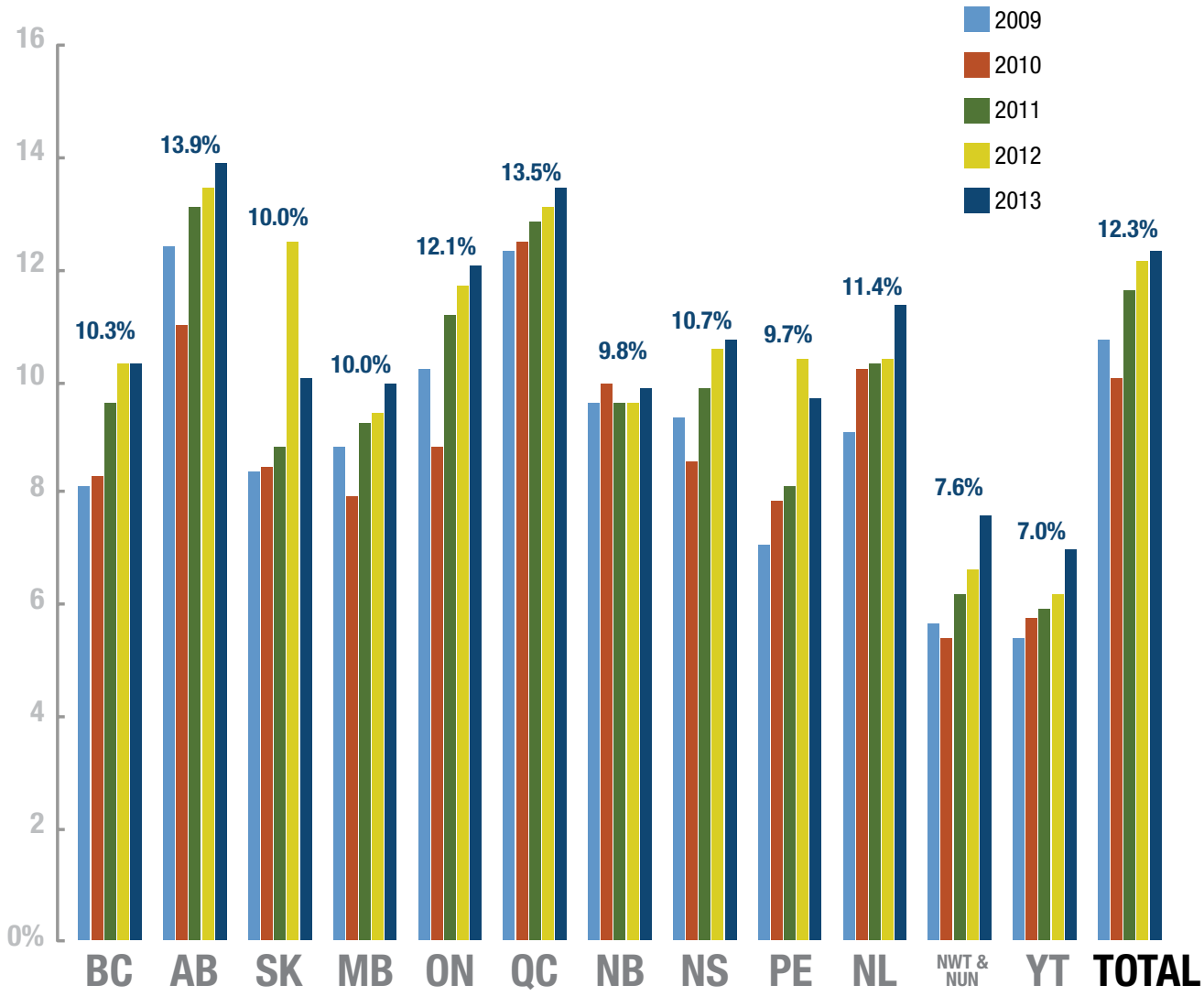
Proportion of total 2012 engineer membership (excluding students) contributed by each engineering regulator.



Since 2009, the percentage of women engineering members has overall increased in each engineering regulator. APEGA reports the highest percentage of female members (13.9%), whereas APEY has the lowest at 7.0% (Figure 4). It should be noted that these numbers include students, which may alter the results as many engineering regulators are unable to report student numbers. When considering all members of all engineering regulator, 12.3% of these are female.

12.3%
OF ALL MEMBERS ARE FEMALE

Figure 4 Female engineer membership (including students) of each engineering regulator.



TRENDS AND GROWTH

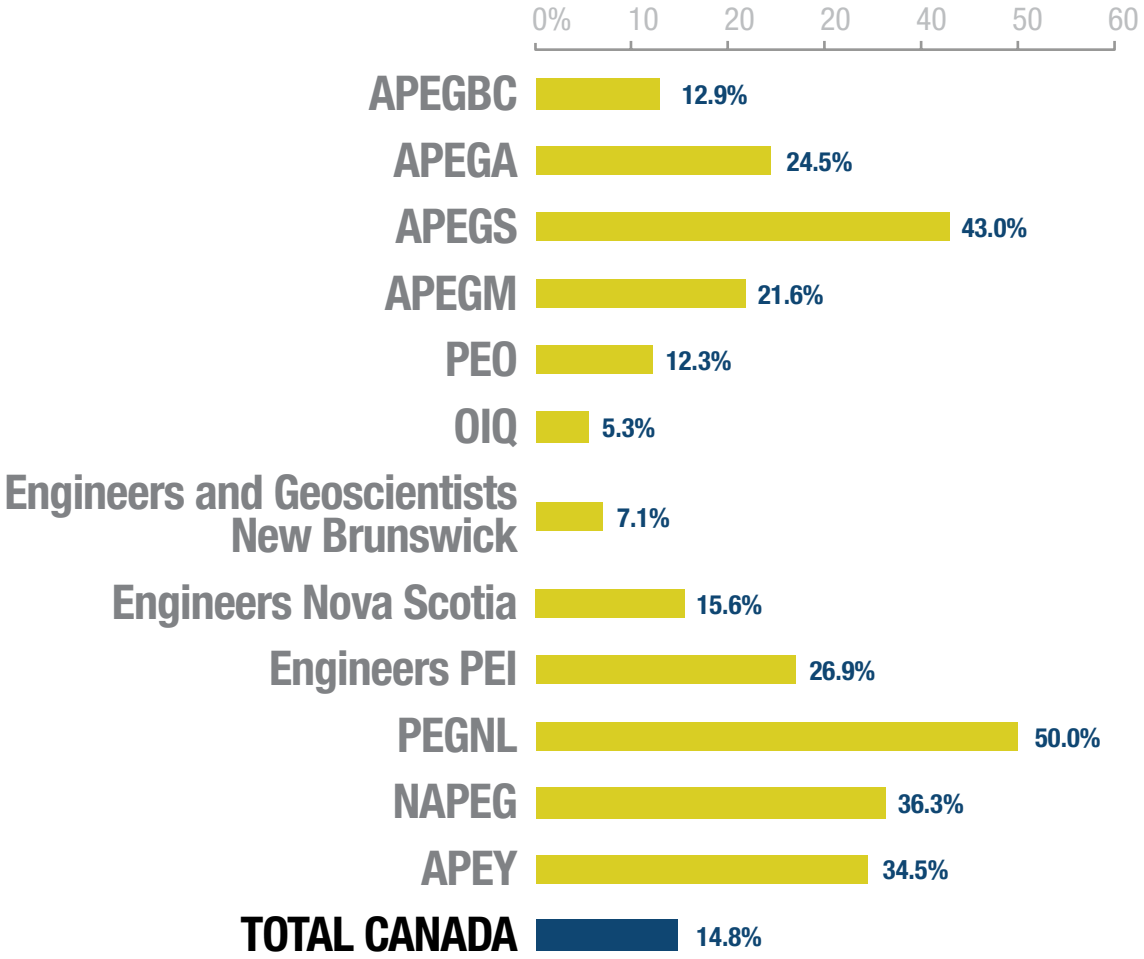
LONG-TERM MEMBERSHIP GROWTH

Figure 5 expresses the growth of engineering membership (excluding students) in each engineering regulator from 2009 to 2013. PEGNL saw the largest growth since 2009, with a 50% increase in engineering membership. Across the country, there was a 14.8% increase in Engineering Membership since 2009. OIQ had the lowest growth at 5.3% over this time. APEGA, APEGS, APEGM, Engineers Nova Scotia, Engineers PEI, NAPEG and APEY were all above the national average for this time frame. However, APEGBC, PEO, and Engineers and Geoscientists New Brunswick were each below.

14.8%

INCREASE IN ENGINEERING MEMBERSHIP SINCE 2009

Figure 5 **Percent growth of engineering regulators from 2009 to 2013.**



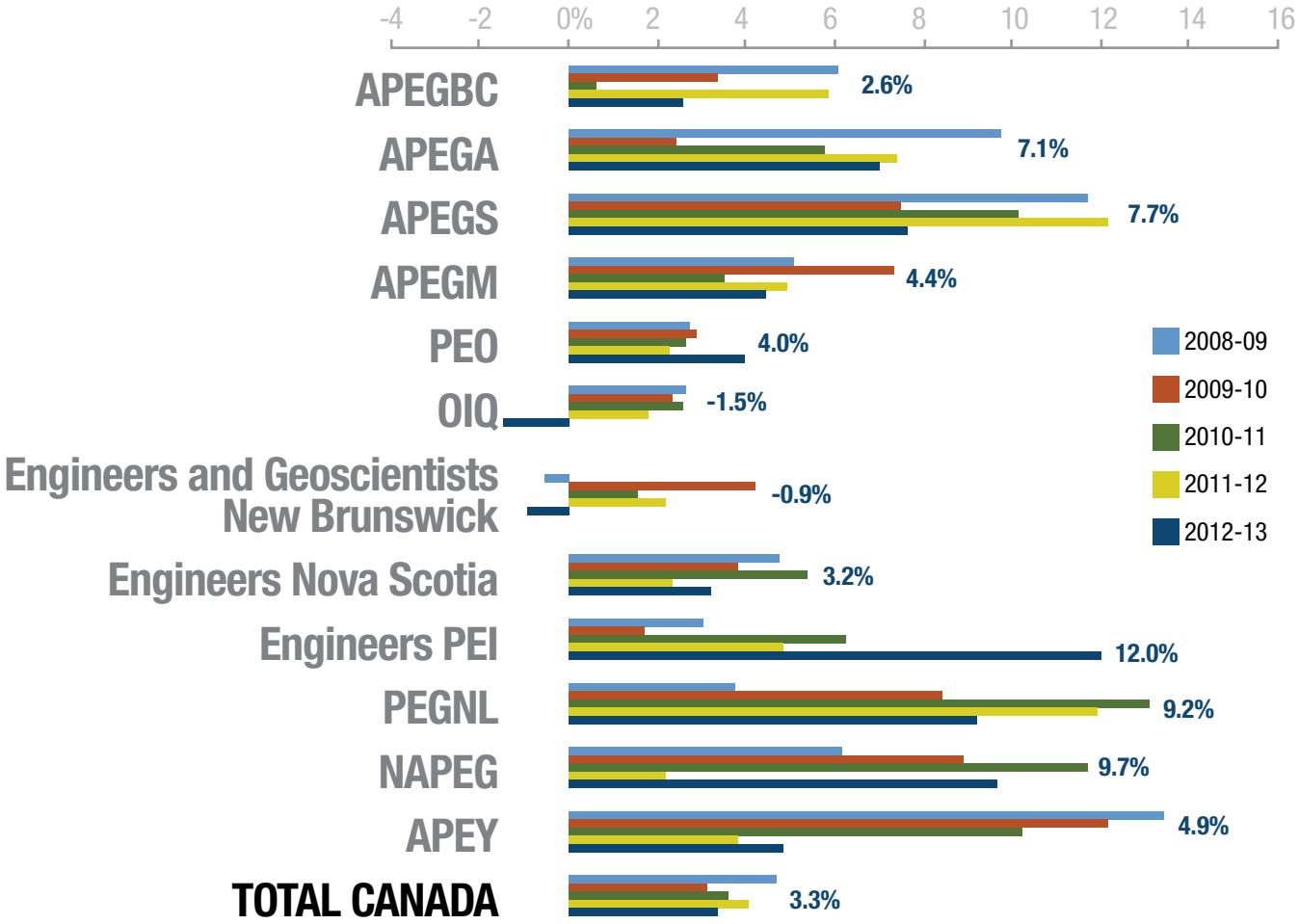
RECENT MEMBERSHIP GROWTH

Membership growth (excluding students) from 2012 to 2013 across Canada was 3.3%. Two engineering regulators, OIQ and Engineers and Geoscientists New Brunswick saw a decrease in membership (excluding students) from 2012 to 2013. APEGBC and Engineers Nova Scotia saw growth in membership from 2012-2013, but this growth was below the national average. Engineers PEI had the largest growth, with a 12% increase from 2012 to 2013. Noticeably, annual growth rates fluctuate greatly for many engineering regulators.

3.3%

MEMBERSHIP GROWTH ACROSS CANADA FROM 2012-2013

Figure 6 **Annual growth for all engineering regulators from previous year for all engineering members (excluding students) from 2008 to 2013. Percentages associated with each engineering regulator indicate the growth from 2012 to 2013 of that engineering regulator's membership (excluding students).**



WOMEN IN ENGINEERING

Some discussion of the state of women in engineering has been provided previously. In 2013, 13.3% of engineering members (excluding students) were female. This figure was 13.1% in 2012. The proportion of female engineering members (excluding students) has increased nearly 2% since 2009. In 2013, 9.4% of practicing engineers (inclusive), which is close, but slightly higher, than the 2012 figure, 9.2%. 19.2% of engineers-in-training are female in 2013. This is slightly lower than the 19.5% of female engineers-in-training reported in 2012. Furthermore, in 2013, 11.7% of engineers (exclusive) were women.

In figure 7, we consider the percentage of female engineers (exclusive) and engineers-in-training in each engineering regulator. Among the engineering regulators, PEGNL, NAPEG and APEY have the greatest female representation of engineers-in-training. However, PEGNL and APEY report below average proportion of female engineers. The percentage of female engineers was higher than the national average in Alberta, Quebec, New Brunswick, Prince Edward Island and the Northwest Territories and Nunavut. All engineering regulators reported greater percentage of female engineers in 2013 than in 2012. APEGBC, APEGS, Engineers and Geosciences New Brunswick and Engineers PEI decreased the percentage of female engineers-in-training since 2012.

Figure 7 **Percentage of female engineers (exclusive) of all engineers (exclusive) and percentage of female engineers-in-training of all engineers-in-training as reported by each engineering regulator.**

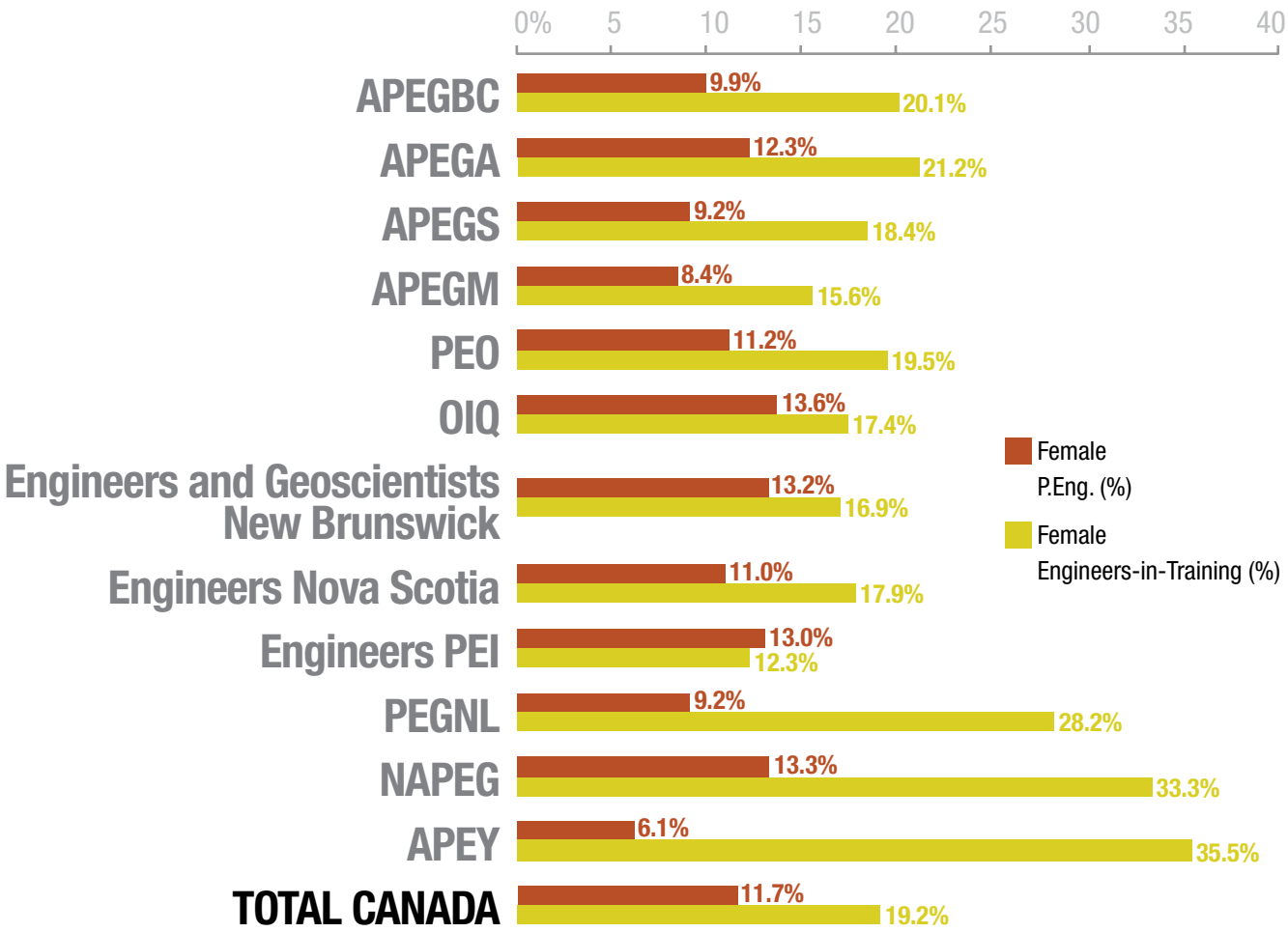
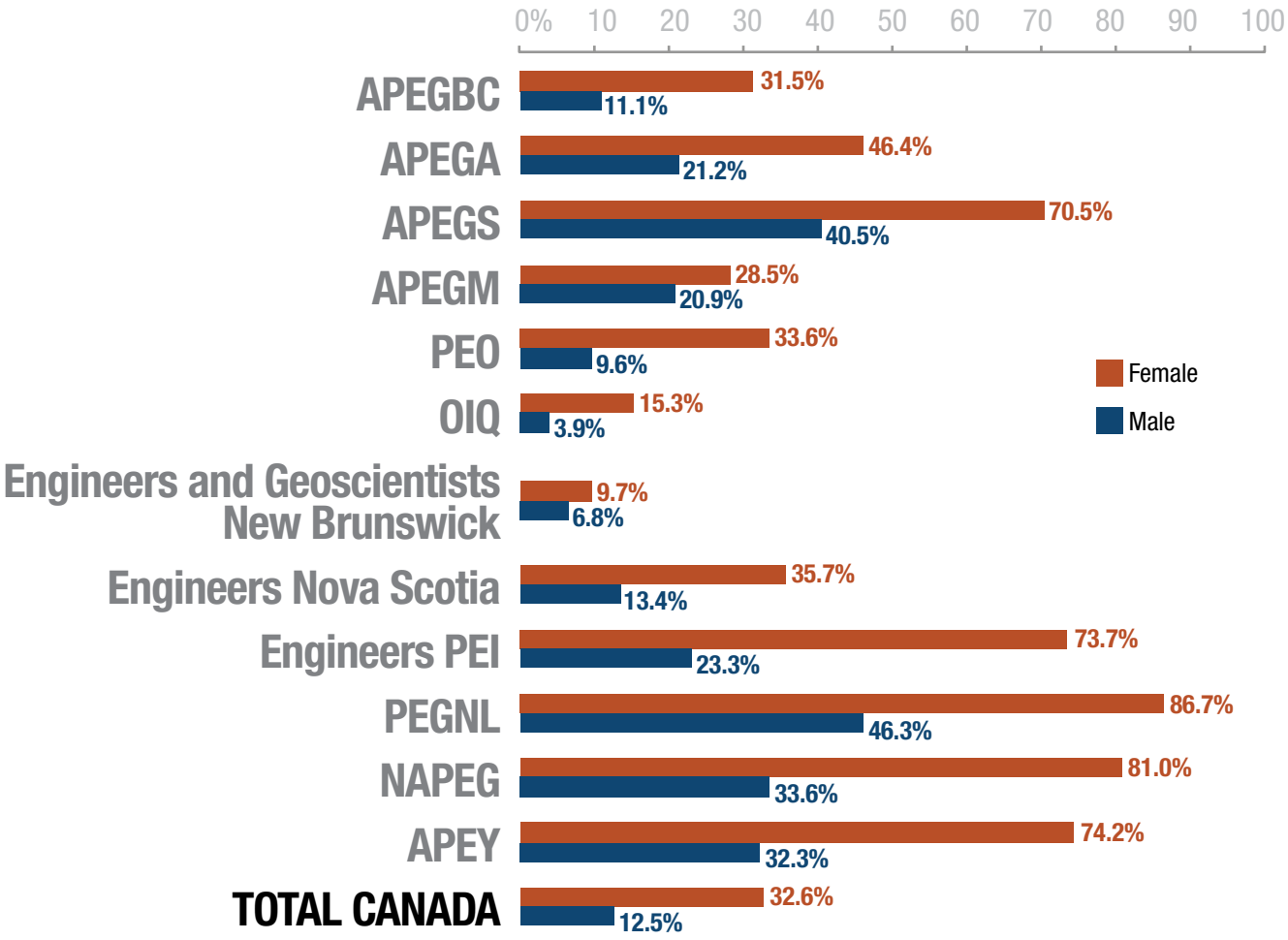


Figure 8 displays the long-term growth of all female engineering members (excluding students). Across Canada, there was an increase of 32.6% in female membership from 2009. APEGS, Engineers PEI, PEGNL, NAPEG and APEY have all grown female membership by at least 70% since 2009. When compared to male membership, female membership has grown more over this period. Although female participation is growing faster, male membership numerically is still greater than female.

Figure 8

Percentage of growth of female (red) and male (blue) membership (excluding students) since 2009. Note: Male membership still outnumbers female membership, but has grown more slowly in all engineering regulators when comparing 2013 to 2009.

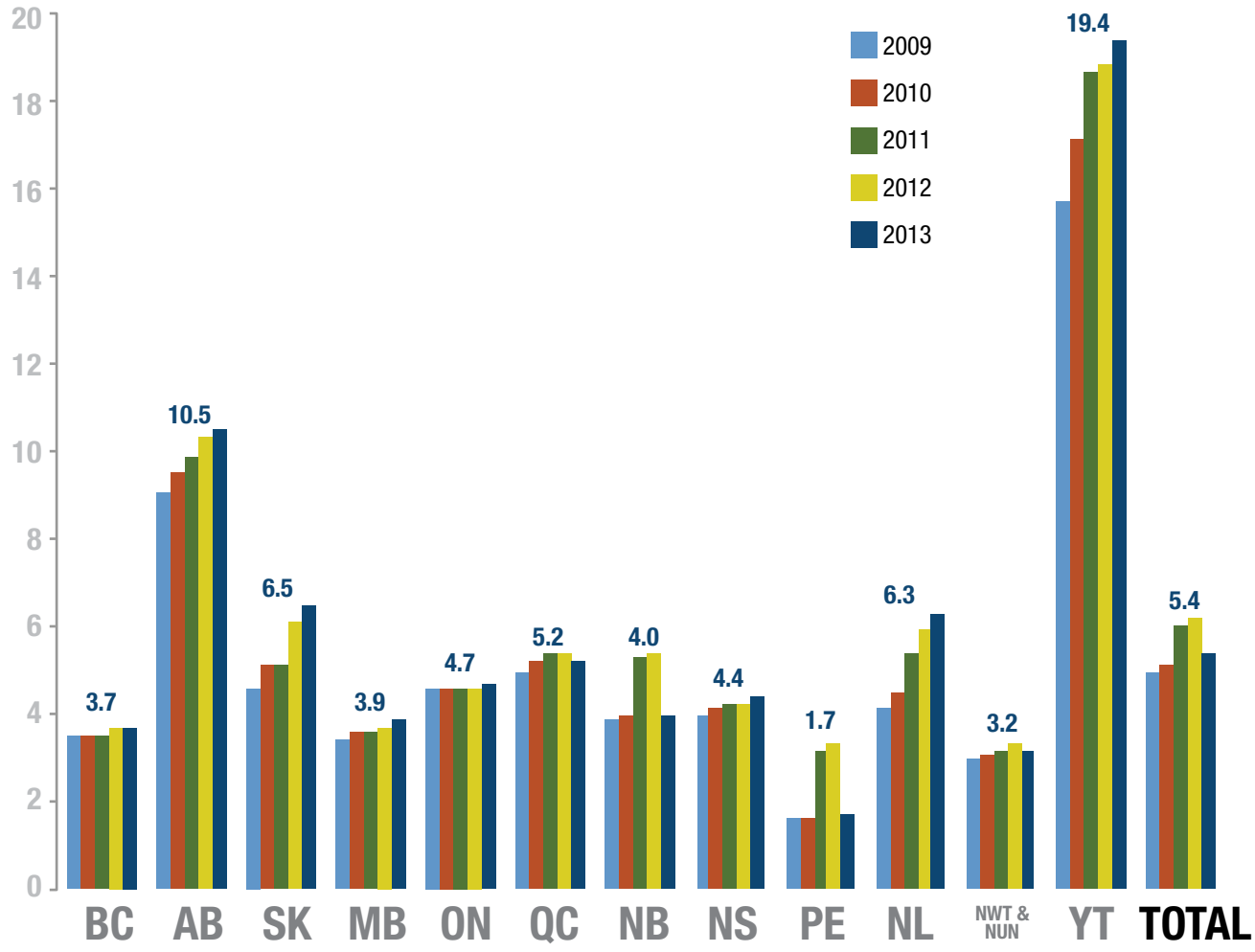


ENGINEERS-TO-POPULATION RATIO

The engineers-to-population ratio measures the number of practising engineers – exclusive for every 1,000 people[4] (Figure 9). Nationally, there are 5.3 practising engineers (exclusive) per 1,000 individuals.

4. Population information was produced by Statistics Canada in "Population by year, by province and territory (number)." Last modified 26 September 2014. (http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/demo02a-eng.htm).

Figure 9 **Number of practicing engineers (exclusive) per 1,000 individuals.**



Since 2012, Quebec, New Brunswick, Prince Edward Island, the Northwest Territories and Nunavut and the national ratio of engineers per 1,000 people have all decreased. APEY has, again, reported the greatest number of practising engineers (exclusive) per 1,000 people at 19.3. Alberta also has well above the national average of practising engineers (exclusive) per 1,000 individuals with 10.3 engineers per 1,000 people. Saskatchewan and Newfoundland and Labrador are also above the national proportion of practising engineers per 1,000 individuals.

ACADEMIC CREDENTIALS

Six engineering regulators reported, to some extent, the method by which their members have satisfied the academic requirements for licensure (Table 3). This totaled to 133,203 and was a large reduction from 2012. This is likely because PEO reported less information in 2013.

Table 3

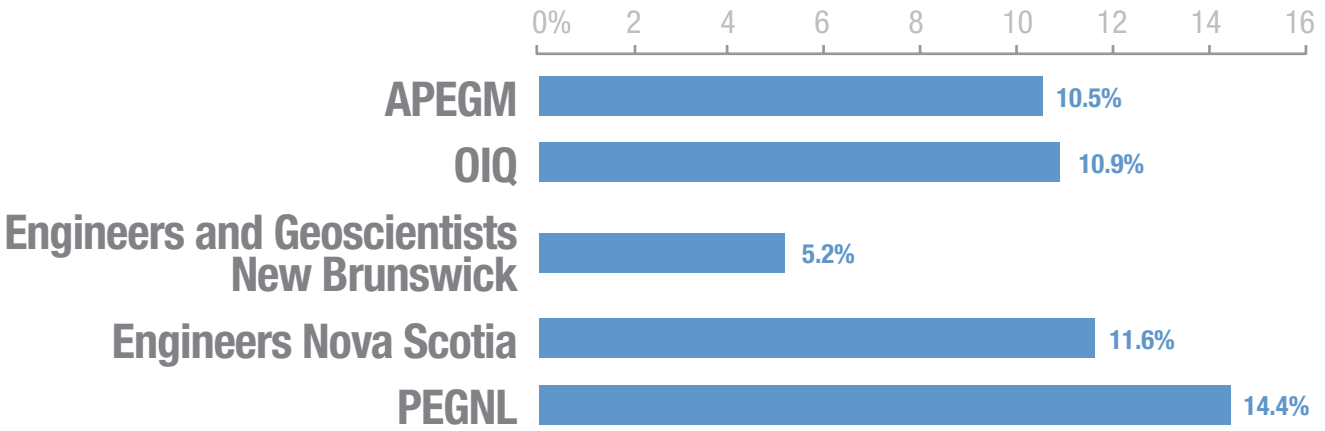
Methods by which members have satisfied the academic requirements for licensure. Note: '-' represents information that was not reported by engineering regulators.

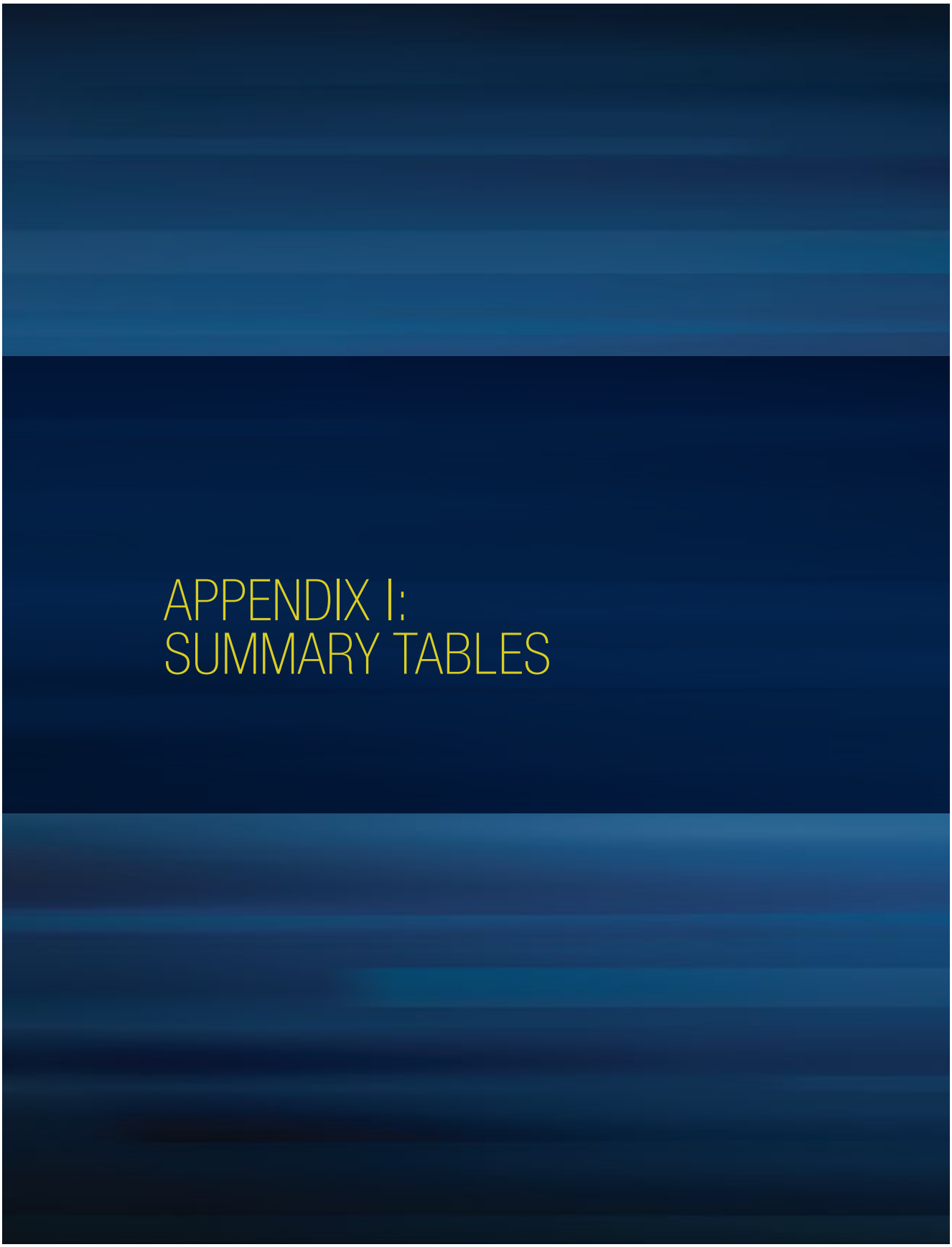
ENGINEERING REGULATOR	CEAB	IEG	EXAM	OTHER	TOTAL
APEGM	6,369	750	-	-	**7,119**
PEO	49,318	-	-	1,060	**50,378**
OIQ	54,003	6,715	941	86	**61,745**
Engineers and Geoscientists New Brunswick	3,820	209	-	-	**4,029**
Engineers Nova Scotia	4,735	680	46	378	**5,839**
PEGNL	3,503	590	-	-	**4,093**
TOTAL	**121,748**	**8,944**	**987**	**1,524**	**133,203**

The information provided is not believed to be an accurate picture of membership across Canada. With this being noted, we may be able to conclude that the majority of engineering members satisfied educational requirements from institutions accredited by the Canadian Engineering Accreditation Board. The proportion of internationally educated engineers ranges from 5.2% in New Brunswick to 14.4% in Newfoundland and Labrador (Figure 10).

Figure 10

Proportion of international engineering graduates identified from the reporting engineering regulators in 2013.





APPENDIX I: SUMMARY TABLES

Table 4

2013 Membership Compositions by Engineering Regulator[5]

Membership Category	APEGBC	APEGA	APEGS	APEGM	PEO	OIQ	Engineers and Geoscientists New Brunswick	Engineers Nova Scotia	Engineers PEI	PEGNL	NAPEG	APEY	TOTAL (REPORTED RESPONSES)
Practising P.Eng.'s (exclusive) (male)	15,332	37,072	6,513	4,477	56,720	36,835	2,601	3,685	221	3,025	222	663	167,366
Practising P.Eng.'s (exclusive) (female)	1,686	5,193	656	412	7,134	5,808	394	457	33	306	34	43	22,156
Total Practising P.Eng.'s (exclusive)[6]	**17,018**	**42,265**	**7,169**	**4,889**	**63,854**	**42,643**	**2,995**	**4,142**	**254**	**3,331**	**256**	**706**	**189,522**
Temporary License Holders (male)	420	136	77	21	132	34	0	0	0	0	0	0	820
Temporary License Holders (female)	30	11	1	2	10	2	0	0	0	0	0	0	56
Total Temporary License Holders	**450**	**147**	**78**	**23**	**142**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**876**
Restricted License Holders (male)	94	381	30	0	162	83	0	NR	NR	2	0	3	755
Restricted License Holders (female)	4	14	1	0	16	3	0	NR	NR	0	0	0	38
Total Restricted License Holders	**98**	**395**	**31**	**0**	**178**	**86**	**0**	**NR**	**NR**	**2**	**0**	**3**	**793**
License to Practise Holders (male)	7	1,087	0	0	0	0	849	0	250	0	1063	0	3,256
License to Practise Holders (female)	0	65	0	0	0	0	35	0	18	0	58	0	176
Total License to Practise Holders	**7**	**1,152**	**0**	**0**	**0**	**0**	**884**	**0**	**268**	**0**	**1121**	**0**	**3,432**
P.Eng, Non-Practising or Retired (male)	1,334	2,996	718	442	12,193	5,087	237	89	28	10	50	33	23,217
P.Eng, Non-Practising or Retired (female)	104	66	81	30	515	118	7	2	1	21	8	0	953
Total Non-Practising P.Eng	**1,438**	**3,062**	**799**	**472**	**12,708**	**5,205**	**244**	**91**	**29**	**31**	**58**	**33**	**24,170**
Life Members (male)	2,334	1,018	645	218	458	42	682	968	22	245	28	2	6,662
Life Members (female)	8	8	0	1	23	4	5	6	1	2	0	0	58
Total Life Members	**2,342**	**1,026**	**645**	**219**	**481**	**46**	**687**	**974**	**23**	**247**	**28**	**2**	**6,720**
Engineers-in-Training (male)	3,010	8,267	1,311	1015	8,796	11,343	378	519	93	346	28	20	35,126
Engineers-in-Training (female)	755	2,218	296	187	2,129	2,386	77	113	13	136	14	11	8,335
Total Engineers-in-Training	**3,765**	**10,485**	**1,607**	**1202**	**10,925**	**13,729**	**455**	**632**	**106**	**482**	**42**	**31**	**43,461**
Engineering Students (male)	NR[7]	5,536[8] (295[8,9])	0	252	7,728	NR	0	396	NR	NR	0	NR	13,912[8] (295[8,9])
Engineering Students (female)	NR	1,594[8]	0	80	1,988	NR	0	102	NR	NR	0	NR	3,764[8]
Total Engineering Students	**NR**	**7,425[8]**	**0**	**332**	**9,716**	**NR**	**0**	**498**	**NR**	**NR**	**0**	**NR**	**17,971[8]**

5. These figures include dual licensing. Engineers Canada estimates approximately 12% of practising P.Eng.'s are licensed to practice in more than one jurisdiction.
6. Excludes engineers also accounted for in other categories such as: License to Practise Holders, Temporary License Holders, Restricted License Holders, Non-Practising P.Eng.'s, and Life Members.
7. NR indicates information was not reported by or was not applicable to the engineering regulator. This information is assumed to be 0 for the purposes of this document.
8. APEGA reports students enrolled in both engineering and geosciences.
9. Individuals had the option to select 'Prefer not to respond' to inquiries regarding gender.

Table 5

2013 Membership Sub-Categories by Engineering Regulator

Membership Category	APEGBC	APEGA	APEGS	APEGM	PEO	OIQ	Engineers and Geoscientists New Brunswick	Engineers Nova Scotia	Engineers PEI	PEGNL	NAPEG	APEY	TOTAL
Total Practising P.Eng.'s (exclusive)[10]	17,018	42,265	7,169	4,889	63,854	42,643	2,995	4,142	254	3,331	256	706	189,522
Total Engineers (inclusive)[11]	21,353	48,047	8,722	5,603	77,363	48,016	4,810	5,207	574	3,611	1,463	744	225,513
Total Practising Engineer Members[12]	21,338	54,444	8,885	6,114	75,099	56,494	4,334	4,774	628	3,815	1,419	740	238,084
Total Female Members (with students)	2,587	9,169	1,035	712	11,815	8,321	518	680	66	465	114	54	35,534
Total Female Members (excluding students)	2,587	7,575	1,035	632	9,827	8,321	518	578	66	465	114	54	31,770
Total Engineer Member[13]	25,118	58,532	10,329	6,805	88,288	61,745	5,265	5,839	680	4,093	1,505	775	268,974
Total Members and Participating Students[14]	25,118	65,957	10,329	7,137	98,004	61,745	5,265	6,337	680	4,093	1,505	775	287,973

10. Excludes engineers also accounted for in other categories such as: License to Practise Holders, Restricted License Holders, Non-Practising P.Eng.'s, and Life Members
11. Includes practising P.Eng.'s and temporary, restricted and license to practice holders as well as retired P.Eng.'s, non-practising P.Eng.'s, and life members.
12. Includes all members who are practising engineers graduates (or equivalent). Excludes retired P.Eng.'s, non-practising P.Eng.'s, life members, and engineering students.
13. Includes all categories of members except engineering students.
14. Includes all categories of members including engineering students in jurisdictions where students are reported.

Table 6

2009-2013 Membership Composition

Membership Category	APEGBC	APEGA	APEGS	APEGM	PEO	OIQ	Engineers and Geoscientists New Brunswick	Engineers Nova Scotia	Engineers PEI	PEGNL	NAPEG	APEY	TOTAL
TOTAL ENGINEER MEMBERS													
2013	25,118	58,532	10,329	6,805	88,288	61,745	5,265	5,839	680	4,093	1,505	775	268,974
2012	24,489	54,676	9,592	6,517	84,926	62,685	5,315	5,659	607	3,748	1,372	739	260,325
2011	23,132	50,899	8,550	6,214	83,053	61,568	5,203	5,529	579	3,348	1,343	712	250,130
2010	22,990	48,118	7,763	6,005	80,899	60,005	5,123	5,245	545	2,960	1,202	646	241,501
2009	22,247	46,996	7,223	5,595	78,630	58,614	4,917	5,052	536	2,729	1,104	576	234,219
TOTAL ENGINEERS[15]													
2013	21,353	48,047	8,722	5,603	77,363	48,016	4,810	5,207	574	3,611	1,463	744	225,513
2012	21,004	45,411	8,027	5,357	76,417	48,477	4,821	5,048	520	3,350	1,335	716	220,483
2011	20,080	42,497	7,159	5,149	75,181	47,229	4,697	4,954	497	2,996	1,297	682	212,418
2010	19,756	40,243	6,529	4,970	74,411	45,916	4,551	4,735	470	2,601	1,161	619	205,962
2009	19,131	38,414	6,049	5,377	72,926	44,841	4,364	4,598	469	2,395	1,069	557	200,190
TOTAL FEMALE MEMBERS													
2013	2,587	9,169	1,035	712	11,815	8,321	518	680	66	465	114	54	35,536
2012	2,523	7,984	1,196	647	11,693	8,237	511	651	63	391	91	46	34,033
2011	2,227	7,229	755	602	10,574	7,935	501	570	47	346	83	42	30,911
2010	1,974	5,749	655	513	7,954	7,519	511	469	43	302	65	37	25,791
2009	1,967	6,265	607	554	8,842	7,216	472	501	38	249	63	31	26,805
TOTAL MEMBERS[16]													
2013	25,118	65,957	10,329	7,137	98,004	61,745	5,265	6,337	680	4,093	1,505	775	286,945
2012	24,489	59,424	9,592	6,839	99,531	62,685	5,315	6,164	607	3,748	1,372	739	280,505
2011	23,132	55,059	8,550	6,518	94,739	61,568	5,203	5,790	579	3,348	1,343	712	266,541
2010	23,915	52,201	7,763	6,484	90,317	60,005	5,123	5,506	545	2,960	1,202	646	256,667
2009	24,270	50,648	7,223	6,266	86,358	58,614	4,917	5,346	536	2,729	1,104	576	248,587

15. Includes practicing P.Eng.'s, and those licensed to practice, as well as Retired P.Eng.'s, non-practicing P.Eng.'s, and Life Members.

16. Includes all categories of members, including students.

Table 7

2009-2013 Engineers-to-Population Ratios

	BC	AB	SK	MB	ON	QC	NB	NS	PE	NL	NWT & NUN	YT	CANADA
2013													
Engineers[17]	17,018	42,265	7,169	4,889	63,854	42,643	2,995	4,142	254	3,331	256	706	189,522
Persons (thousands)[18]	4,631.3	4,121.7	1,125.4	1,282.0	13,678.7	8,214.7	753.9	942.7	146.3	527.0	80.2	36.5	35,540.4
P. Eng.'s/1000 People	3.7	10.3	6.4	3.8	4.7	5.2	4.0	4.4	1.7	6.3	3.2	19.3	5.3
2012													
Engineers	17,003	39,946	6,566	4,695	62,779	43,793	4,114	4,031	478	3,019	256	680	187,360
Persons (thousands)	4,622.6	3,873.7	1,080.0	1,267.0	13,505.9	8,054.8	756.0	948.7	146.1	512.7	77.0	36.1	34,880.6
P. Eng.'s/1000 People	3.7	10.3	6.1	3.7	4.6	5.4	5.4	4.2	3.3	5.9	3.3	18.8	5.4
2011													
Engineers	16,168	37,321	5,569	4,553	61,703	42,692	4,032	3,966	461	2,742	244	649	180,100
Persons (thousands)	4,573.3	3,779.4	1,057.9	1,250.6	13,373.0	7,979.7	755.5	945.4	145.9	510.6	77.0	34.7	34,482.8
P. Eng.'s/1000 People	3.5	9.9	5.3	3.6	4.6	5.4	5.3	4.2	3.2	5.4	3.2	18.7	5.2
2010													
Engineers	15,891	35,358	5,287	4,455	60,977	41,404	3,017	3,856	230	2,319	238	589	173,621
Persons (thousands)	4,531.0	3,720.9	1,045.6	1,235.4	13,210.7	7,907.4	751.8	942.5	142.3	509.7	77.0	34.5	34,108.8
P. Eng.'s/1000 People	3.5	9.5	5.1	3.6	4.6	5.2	4.0	4.1	1.6	4.5	3.1	17.1	5.1
2009													
Engineers	15,576	33,507	4,670	4,167	59,532	38,450	2,929	3,737	228	2,119	228	529	165,672
Persons (thousands)	4,455.2	3,687.7	1,031.1	1,222.0	13,069.2	7,828.9	749.5	938.2	141.0	508.9	75.6	33.7	33,739.9
P. Eng.'s/1000 People	3.5	9.1	4.5	3.4	4.6	4.9	3.9	4.0	1.6	4.2	3.0	15.7	4.9

17. Practicing P.Eng.'s only.

18. Source: Statistics Canada, Population by Year by Province and Territory, Population as of July 1, CANSIM Table 051-0001, last modified: 2012-09-27

Table 8

2009-2013 Academic Qualifications of Engineer Members[19]

Academic Qualification	APEGBC	APEGA	APEGS	APEGM	PEO	OIQ	Engineers & Geoscientists New Brunswick	Engineers Nova Scotia	Engineers PEI	PEGNL	NAPEG	APEY	TOTAL
2013													
CEAB Graduate	NR	NR	NR	6,369	49,318	54,003	3,820	4,735	NR	3,503	NR	NR	121,748
International Engineering Graduate	NR	NR	NR	750	NR	6,715	209	680	NR	590	NR	NR	8,944
Examination Program	NR	NR	NR	NR	NR	941	NR	46	NR	NR	NR	NR	987
Other	NR	NR	NR	NR	1,060	86	NR	378	NR	NR	NR	NR	1,524
Total	NR	NR	NR	7,119	50,378	61,745	4,029	5,839	NR	4,093	NR	NR	133,203
2012													
CEAB Graduate	-	-	-	6,152	49,947	55,230	3 482	4,562	-	3,250	-	-	122,623
International Engineering Graduate	-	-	-	679	20,090	6,444	272	686	-	498	-	-	28,669
Examination Program	-	-	-		4,752	983		41	-		-	-	5,776
Other	-	-	-		1,329	28			-		-	-	1,357
Total	-	-	-	6,831	76,118	62,685	3 754	5,289	-	3,748	-	-	158,425
2011													
CEAB Graduate	-	43,600	-	5,943	49,144	54,464	3 443	4,540	-	2,927	-		164,061
International Engineering Graduate	-	13,200	-	594	19,553	6,095	267	491	-	421	-		40,621
Examination Program	-		-		4,832	977		111	-		-	1	5,921
Other	-		-		1,368	32		387	-		-		1,787
Total	-	56,800	-	6,537	74,897	61,568	3 710	5,529	-	3,348	-	1	212,390
2010													
CEAB Graduate	-	40,600	-	5,790	48,499	53,182	3 436	4,259	-	2,641	-		158,407
International Engineering Graduate	-	12,300	-	528	19,132	5,720	333	564	-	319	-		38,896
Examination Program	-		-		4,912	986		32	-		-	1	5,931
Other	-		-		1,623	34		387	-		-		2,044
Total	-	52,900	-	6,318	74,166	59,922	3 769	5,242	-	2,960	-	1	205,278
2009													
CEAB Graduate	-	40,500	-	4,169	47,560	52,177		4,485	-	2,455	-	-	151,346
International Engineering Graduate	-	12,000	-	221	18,468	5,321	266	399	-	274	-	-	36,949
Examination Program	-		-	26	5,002	989		34	-		-	-	6,051
Other	-		-		1,704	127			-		-	-	1,831
Total	-	52,500	-	4,416	72,734	58,614	266	4,918	-	2,729	-	-	196,177

19. Dashes (-) indicate information not available from constituent members.

APPENDIX II: LIMITATIONS

RATIONALE FOR NOT REDUCING MEMBERSHIP DATA FOR DUAL LICENSING

A decision was made to discuss membership numbers that do not account for dual licensing. In the 2012 National Membership Survey, a reduction of 12% was applied to male practising P.Eng.'s (exclusive) as a reflection of information in the 2002 National Survey of Professional Engineers[20]. The 2002 National Survey of Professional Engineers states that "12% of members hold a membership from more than one provincial/territorial engineering association." This had increased from 1997, when "10% of professional engineers were registered in more than one association." As the 12% figure has not been adjusted for a decade and was deemed unreliable. Moreover, the 2002 document stated that many of the multi-licensed engineers were of retirement age at the time. This figure must be reassessed to understand the proportion of engineers holding more than one license.

STUDENT NUMBERS

Information regarding student numbers reported by APEGBC, APEGS, OIQ, Engineers and Geoscientists New Brunswick, Engineers PEI, PEGNL, NAPEG and APEY all resulted in 0 students being added to the total engineering students reported. In some instances, regulation prohibited reporting or the category did not exist in the engineering regulators' records and is therefore not applicable.

Furthermore, APEGA reports both engineering and geoscience students, likely making their estimation of 7,425 students over-reported. Additionally, APEGA allows for students to choose not to respond to questions of gender, creating 295 individuals not categorized as male or female. This should be taken into consideration when reviewing gender information that includes students.

20. EKOS Research Associates, Inc. (2003) "2002 National Survey of Professional Engineers." Final Report (P. 6).