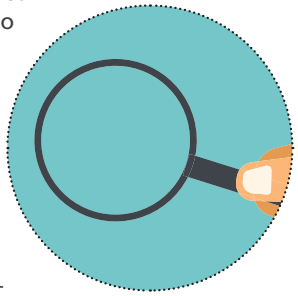
PEO's EXTERNAL REGULATORY REVIEW STILL IN PROGRESS

By Adam Sidsworth

Harry Cayton, international consultant to the United Kingdom–based Professional Standards Authority (PSA), and his team conducted a series of meetings with PEO staff, volunteers and external stakeholders in Toronto, Ontario, between January 31 and February 8 as part of their external regulatory performance review of the engineering association. Their final report and recommendations are to be submitted to PEO Council in June.

As reported in the January/February 2019 issue of *Engineering Dimensions* ("PEO undergoes external regulatory review," p. 8), Cayton and his team, including Ontario's own Deanna Williams, who has held senior positions with the Ministry of Health and Long-term Care, College of Denturists of Ontario and Ontario College of Pharmacists, reviewed the *Professional Engineers Act* (PEA) in December 2018 and, in a series of meetings in January and February, Cayton and his team met with Council members, committee volunteers, PEO staff and external stakeholders—notably the Ontario Society of Professional Engineers, Consulting Engineers of Ontario and Assistant Deputy Attorney General, Policy, Agency and Tribunal Relations Irwin Glasberg—to measure the performance of PEO against the PEA and the standards for regulators as developed by PSA. These standards were adapted by Cayton's team in their preliminary meetings with PEO in January to fit PEO's unique mandate and role as defined by the PEA. However, Bernard Ennis, P.Eng., PEO director of policy and professional affairs, is quick to note that the high standards for regulatory excellence established by PSA were in no way compromised, and Cayton's final report will reflect the same level of intense scrutiny that he and PSA apply to all regulatory reviews. During this same timeframe, Cayton and his team also observed a Council meeting and several non-regulatory and regulatory committees.

The external review is perhaps the highlight of the mandate of PEO President David Brown, P.Eng., BDS, C.E.T., whose presidency ends this May. Throughout Brown's tenure, he has remained committed to increasing PEO's transparency and efficiency, especially in light of a recently elected Progressive Conservative government that campaigned under a platform of less regulation and red tape. Additionally, other Ontario regulators—notably the Ontario College of Trades—are either being legislated out of existence or are having their regulatory performances scrutinized. Across Canada, PEO's sister engineering regulators are having their authority challenged by their respective provincial governments: Quebec's engineering regulator, l'Ordre des ingénieurs du Québec, was placed under a two-year government trusteeship that ended last month; and in British Columbia, Engineers and Geoscientists BC's authority will eventually be placed under the provincially appointed superintendent of professional governance, along with other BC natural resources regulators, as scheduled by the November 22, 2018, passing of the *Professional Governance Act* by the BC legislature (see "Professional reliance review targets BC natural resource regulators," *Engineering Dimensions*, September/October 2018, p. 10).



ENGINEERING SALARIES: IS PAY MIX SHIFTING?

By Liz Elliott

Globally, employees express an increased desire to work for companies that have a strong sense of purpose, invest in careers and development for their employees and provide flexible work arrangements, among other things. However, they also show us that compensation is still their top priority and, according to a recent employee engagement report by Mercer Sirota, employees are less and less satisfied with their compensation. Between 2016 and 2017 both satisfaction with fairness of pay and the connection between pay and performance decreased by about 10 per cent (Figure 1). It's no wonder employee retention and attraction are solidly surpassing economic concerns as top of mind for Canadian organizations when research continues to show that overall employee satisfaction with compensation is on the decline.

So, how are employers reacting to these challenges? The data presented in the 2018 Mercer OSPE National Engineering Compensation Survey—produced by Mercer and the Ontario Society of Professional Engineers (OSPE)—along with additional Canadian and global data collected by Mercer, can provide insight into the changes employers are making locally to compete in an incredibly tight talent market, particularly for the technically skilled and specialized engineering profession.

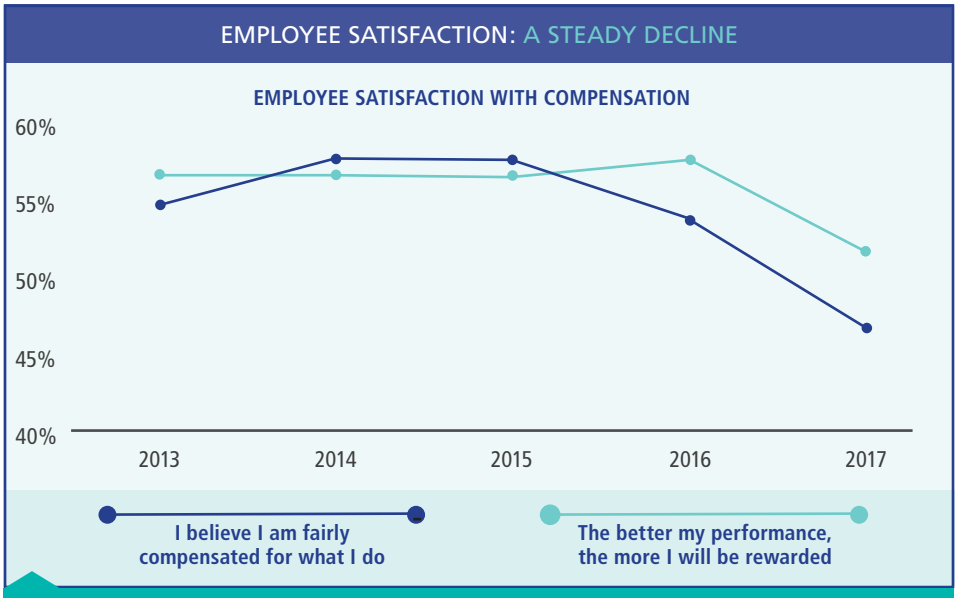


Figure 1: Year over year employee satisfaction with compensation

OVERALL, TOTAL COMPENSATION IS RISING

Though there's not much to talk about in terms of base pay increases, the narrative does get more interesting when we look at the total compensation package. The 2018 national engineering survey results show an increase for engineers in total compensation over the past several years in select industries. Engineers within mining and metals, energy and other non-manufacturing sectors are all receiving higher levels of pay than their counterparts outside of these industries. Take note, however, that higher pay is being delivered in the form of variable pay, either short- or long-term incentives, both of which are heavily reliant on performance.

WHAT TYPE OF PERFORMANCE?

When determining how to measure performance in order to distribute variable pay rewards (either in the form of short- or long-term incentives) companies typically consider a variety of factors. Participants in the 2018 national engineering survey indicated that although over 73 per cent use individual (employee) performance to determine awards in bonuses, 41 per cent also use some indicators of corporate performance of a parent company and 29 per cent use corporate performance of a subsidiary. Additional measures of performance indicated by participants include team or department, or division or site.

USE OF INCENTIVES INCREASES WITH EXPERIENCE

As an engineer moves from one level to the next, he or she is typically gaining responsibilities along with discretion and authority. With those changes, the ability to impact performance outcomes also changes; increased responsibility and use of discretion typically goes hand in hand with a more direct impact on the positive or negative performance outcomes of the individual, the team or department, the site or even the company. Accordingly, companies tend to use variable pay tied to performance more frequently at higher levels.

As we can see in the 2018 national engineering data, engineers are being offered some pay in the form of short-term incentives (i.e., a bonus or annual incentive) from the beginning of their career (Level A), although the usage is more significant starting at Level E where the award shows as around 5 per cent of base pay up to a little over 15 per cent in Level F as reported by national participants (Figure 2). Long-term incentives are used but not until the highest levels of engineer and incentive eligibility does not guarantee that the targeted value will be paid out and only a portion of those

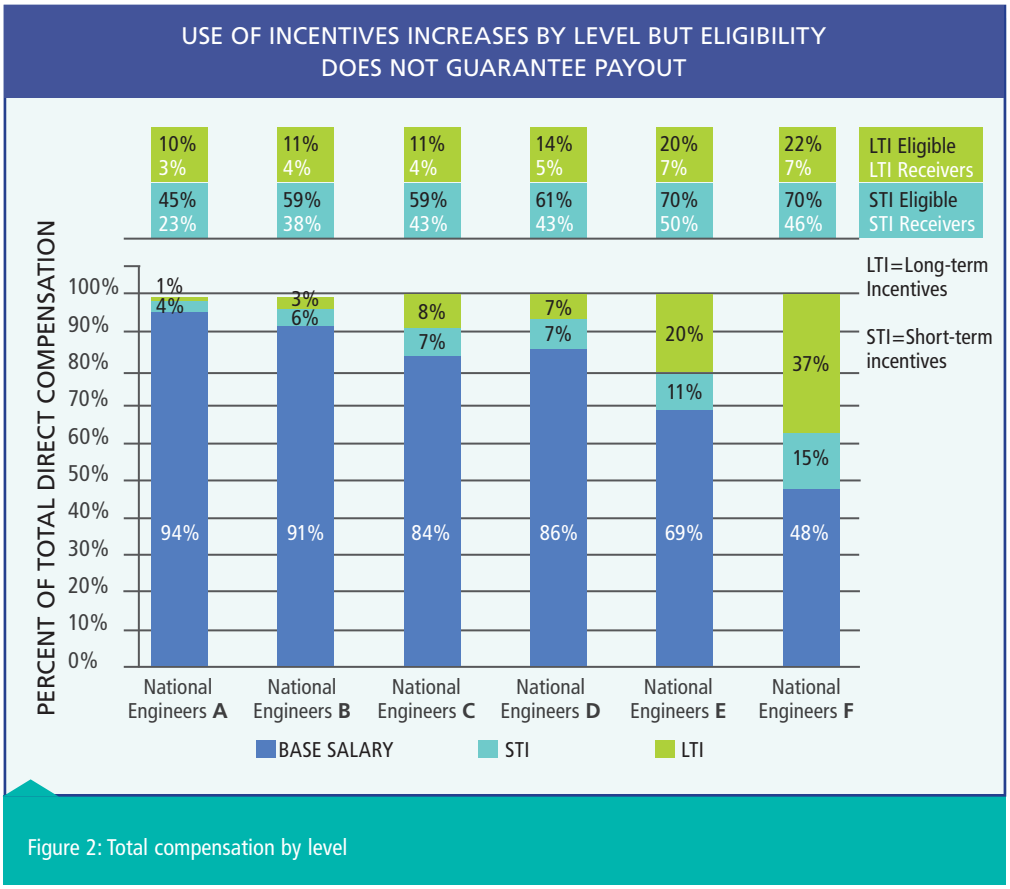


Figure 2: Total compensation by level

eligible for long-term incentives receive incentives in any given year.

In the 2018 national engineering survey we also see that the use of incentives varies among industries (Figure 4). Nationally, energy, mining and metals, and consumer goods and services are making the greatest use of incentives. Of particular interest is the fact that the two industries most emphasizing variable pay are also those with greater inherent variability in performance due to factors outside an employee's control, such as crude oil and metal prices. These industries also face the largest variation in head count through economic cycles emphasizing a correlation between risk and reward.

With Ontario's tight labour market and reports of national dipping employee satisfaction with compensation, it's more important than ever for employers in Ontario

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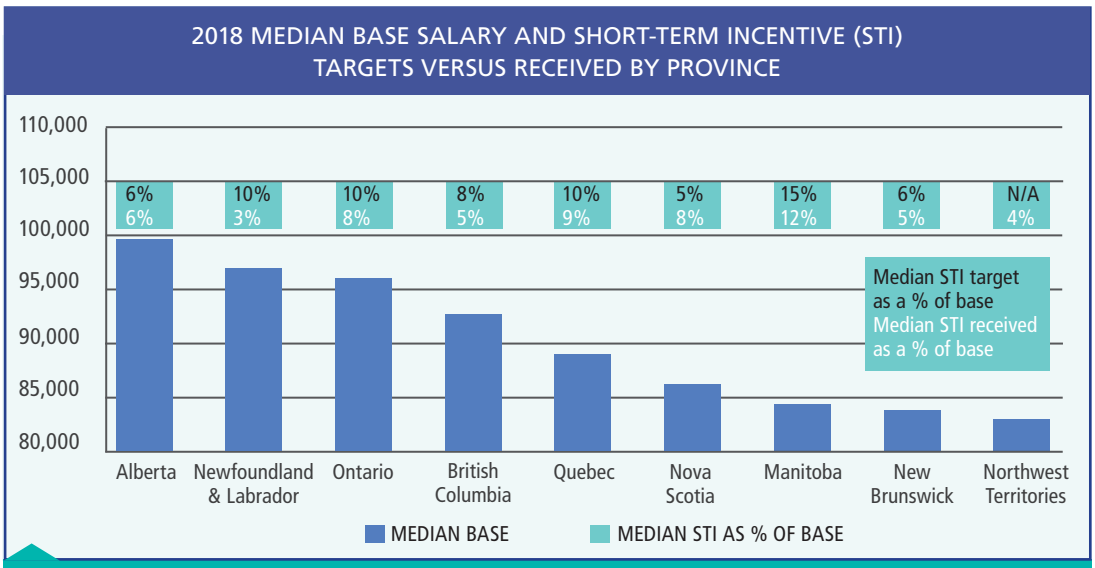

Figure 3: Pay mix varies by province

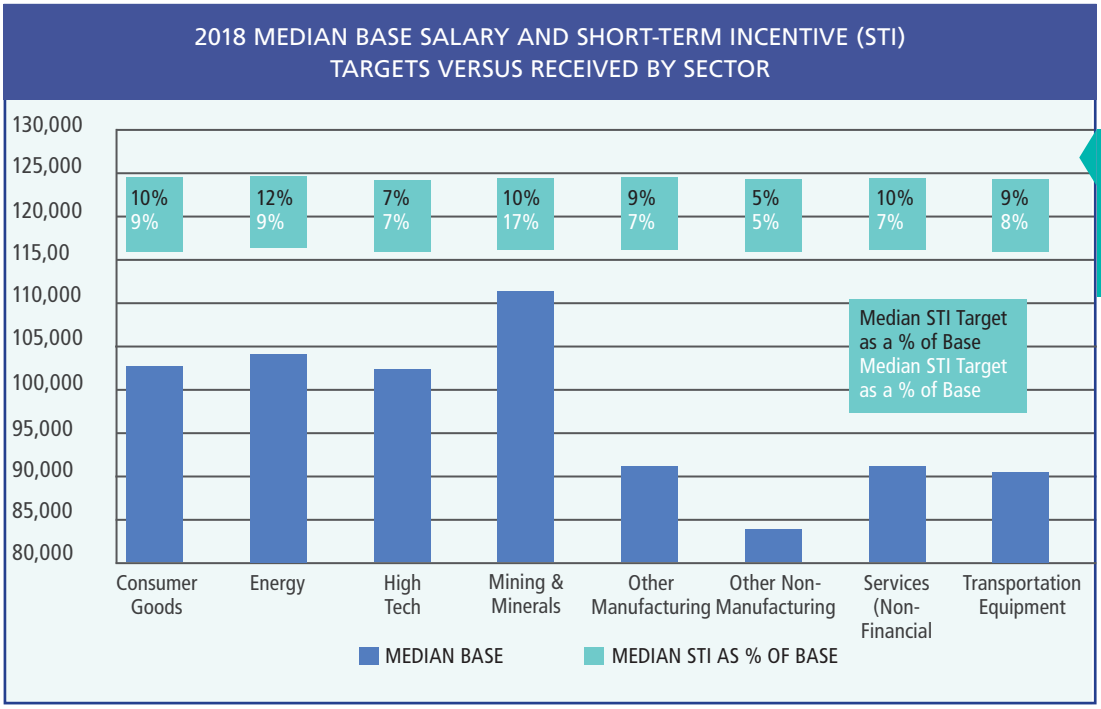

Figure 4: Bonus determination depends on performance in industry

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and nationwide to be thoughtful in how they establish their compensation packages to attract and retain the best and the brightest in the industry.

The Mercer-OSPE National Engineering Compensation Survey helps establish meaningful criteria for engineering pay levels for the benefit of both engineers and employers. Compensation and workforce metrics data for over 16,000 engineers nationally, across six engineering responsibility levels and 14 job types, were collected from 183 organizations in both the private and public sector. The survey results are available in PDF and in an online format through Mercer WIN. This information allows employers to assess their organization's competitive position and analyze market data. The design and implementation of the survey was overseen by an advisory committee comprised of representatives from industry, as well as the engineering and human resources communities. The committee ensures that the survey remains a current and reliable resource on compensation for engineers across Canada. Employers can order the 2018 Mercer OSPE National Engineering Compensation Survey by contacting Mercer at imercer.com/engineering, 800-333-3070, or info.services@mercer.com. OSPE members can access a complimentary copy of the member market compensation summary online at www.ospe.on.ca/engineering-compensation-survey.

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BITS & PIECES

With the launching of Alouette I in 1962, Canada became the third nation in space, behind the USSR and US. The Alouette satellites were renowned for their reliability and longevity in the hostile environment of space.

The meticulous design of the Alouette satellite antennae, known as STEM (storable tubular extendible module), set new global standards and was a progenitor of the Canadarm, a remote-controlled mechanical arm that serviced the NASA shuttle program for 30 years.

PEO ATTENDS PRE-INQUEST MEETING FOR RADIOHEAD CORONER'S INQUEST

By Adam Sidsworth

PEO attended a November 2018 pre-inquest meeting for an upcoming coroner's inquest into the June 16, 2012, temporary stage collapse at Downsview Park in Toronto, Ontario, a disaster that occurred just hours before rock band Radiohead was scheduled to perform. The collapse claimed the life of Radiohead drum technician Scott Johnson, 33, from England, and injured three others, leading to the laying of charges against an engineer and others by the Ontario Ministry of Labour.

PEO Director, Policy and Professional Affairs Bernard Ennis, P.Eng., represented PEO at the pre-inquest meeting. He notes that, if requested, PEO will most likely be given standing at the coroner's inquest, which he expects will explore the events leading up to the stage's collapse, including the inspection and oversight of the temporary stage construction, the roles of key players and the regulatory requirements for such structures. Ennis, who says that "staff will be subpoenaed to give expert opinion on PEO standards and guidelines," in addition to practice standards for engineers in such situations, adds that Council will have to approve PEO's standing.

Although the coroner's office would not confirm to *Engineering Dimensions* the beginning date of the coroner's inquest, some media outlets are reporting that the inquest is set to begin on March 25, 2019. Roger Skinner, regional supervising coroner for Central Region, originally announced the inquest on November 30, 2017. The inquest is considered mandatory, as Johnson's death occurred at a construction site.

As reported in the September/October 2017 issue of *Engineering Dimensions* ("Trial in fatal stage tower collapse could be in jeopardy," p. 7) as well as the March/April 2018 issue ("Inquest small comfort to P.Engs concerned about regulatory shortcomings," p. 9), the Radiohead stage collapse has been mired in controversy. The original trial was scheduled to end by January 2017; however, in June of that year, the presiding judge ordered a mistrial when he was appointed to the Ontario Superior Court and lost jurisdiction of the case. A new trial was scheduled to begin in September 2017 and continue into early 2018, but the new judge stayed the charges, citing the defendants' right to a timely trial.

Former engineer Domenic Cugliari, concert promoter Live Nation and contractor Optex Staging were charged with 13 offences under the *Occupational Health and Safety Act* by the Ministry of Labour in June 2013, after ministry engineers alleged several causes that led to the collapse of 27,000 kilograms of equipment. Notably:

- The weight of the stage's suspended roof grid system was miscalculated;
- Devices used to weigh components were insufficient;
- The construction did not adhere to the design;
- Sixteen ballasts were not installed correctly, including three not connected to any stage component;
- Locking pins were not installed in some upper sections of the scaffolding; and
- The pick-up trusses, which were intended to hold the stage roof structure and lighting in the air, failed.

Downsview Park in Toronto, Ontario, is where the stage collapse took place.

The lack of any findings from the court system clearly frustrated Radiohead and Johnson's family. During the first of Radiohead's back-to-back performances in Toronto in July 2018—their first appearance in Toronto since the stage collapse—lead singer Thom York addressed fans, stating: "Six years ago, we wanted to do a show in Toronto. The stage collapsed, killing one of our colleagues and friends. The people who should be held accountable are not being held accountable. The silence is…deafening." And Radiohead drummer Philip Selway spoke about his guilt, telling *CBC News*: "When the collapse happened, it happened at four in the afternoon. Our soundcheck was due to start at four, and I actually should have been where Scott was…That is an incredible weight, and personally, I can't let this lie. I want to see a proper conclusion, something that is respectful to Scott." Addressing the stayed charges, he added: "We're appalled that this has been allowed to conclude in this manner. I feel angry about it." Ironically, Johnson's father, Ken, is a scaffolder who audits the annual safety report for the United Kingdom's National Access and Scaffolding Confederation. "Some errors are fairly obvious because of the nature of my role," he told *CBC News*. "It just wasn't strong enough. There's no getting away from it. If it was strong enough, it would have stayed up."

PEO HONOURS 13 THROUGH 2019 ORDER OF HONOUR AWARDS

By Nicole Axworthy

This year, PEO will induct one Companion, six Officers and six Members into its Order of Honour. The Order is an honorary society that recognizes professional engineers and others who have rendered outstanding service to the engineering profession in Ontario, primarily through the association. The honorees will be recognized at a ceremony on Friday, May 3, held in conjunction with PEO's annual general meeting in Toronto, Ontario.

COMPANION

David Robinson, P.Eng., FEC, will be inducted as a Companion. A civil engineering graduate from Queen's University and career-long PEO volunteer, he was first recognized as a Member for his 30 years of service to the North Bay Chapter. In 1971, he spearheaded the chapter's first Professional Engineers Day conference, which has since become an annual tradition aimed at raising local awareness of PEO and professional engineers. Similarly, he has been involved in education outreach programs promoting science and engineering to schools, including career days, the North Bay Regional Science Fair and bridge-building contests. As chair, he contributed to the chapter's growth and served on its Government Liaison Program Committee. Today, he continues to assist the chapter, especially in times of need—filling in as a last-minute keynote speaker for the 2015 Student's Night and auditing the chapter's financial statements in 2016 and 2017. He also provides mentoring and guidance for the current chair and chapter executive. Robinson has also been a motivational force as a member of several PEO committees, including the Awards and Discipline committees.

OFFICERS

Peter John Broad, P.Eng., FEC, C.Eng., MIMMM, will be inducted as an Officer. A graduate of the University of Manchester's metallurgical engineering program, he has been an active volunteer with the association since 1995, serving at both chapter and provincial levels.

While working in the mining industry in northern Ontario, Broad began volunteering with the Porcupine/Kapuskasing Chapter, serving both on the executive and as chair from 2001 to 2003, ensuring that the concerns and interests of smaller northern chapters were adequately discussed at Chapter Leaders Conferences. In 2004, he moved to London and planned the annual general meeting "Partner Program" hosted by the London Chapter in 2005. At the provincial level, Broad chaired both the Enforcement Committee, and the Repeal of Industrial Exception Task Force, as well as serving a year on the Professional Standards Committee. A strong advocate for increasing the number of professional engineers in industry, he has participated or chaired subcommittees on Enhanced Enforcement for Industry, the Enforcement of Business Names, the Definition of Engineering, and spearheaded a proposal to replace the *Guideline for Pre-Start Health and Safety Reviews* with an enforceable performance standard.

John Douglas Glover, P.Eng., FEC, will be inducted as an Officer. A graduate of the University of Toronto's bachelor of applied science program, he has served as a PEO volunteer at both chapter and provincial levels for almost 30 years—including 26 years as a member of the East Toronto Chapter board, where he served as chair from 1992 to 1995 and from 2007 to 2010. After being inducted as a Member of the Order of Honour in 2002, Glover has been a constant fixture on the East Toronto Chapter executive, serving as vice chair, chair and past chair. During this time, he helped organize over 100 seminars, more than 30 technical or social tours, many chapter licence certificate ceremonies and several annual general meetings. At the provincial level, Glover has served in several capacities including as the East Central Region representative on the Chapter Boundary Task Force and moderating the PEO president's town hall meetings and several PEO Council election debates. For over a decade, he has been a member of the planning committee for the annual Engineering Innovations Forum.

Gordon Ip, P.Eng., FEC, will be inducted as an Officer. Since his induction as a Member of the Order of Honour in 2011, he has doubled down on his volunteer efforts. In 2012, Ip co-created and organized York Chapter's first Engineering Project of the Year award to celebrate excellence in engineering projects in the York Region business community. In 2016, as chapter chair, he created a Business Liaison Committee to continue to foster the engineering business relationships first established by the award; and he leveraged the committee to organize the chapter's Engineering Technology Symposium on Industry 4.0, increasing attendance to over 300 delegates. To address voter apathy in PEO Council elections, in 2017, 2018 and 2019, Ip organized an East Central Region All-Candidates meeting to engage members in association governance and improve voter turnout. Ip has also served on several PEO committees. Leveraging his experience in computer, software and communications infrastructure engineering, he has provided guidance to the Experience Requirements Committee to interview engineering candidates in these disciplines. He joined the Enforcement Committee in 2018 to help with enforcement activities, with a special interest in these emerging disciplines.

William Elliott (Bill) Jackson, P.Eng., FEC, will be inducted as an Officer. A graduate of the bachelor of engineering program at McMaster University and the master of engineering program at the University of Ottawa, he has served on a wide range of PEO committees, subcommittees and task forces since 1984. Jackson began volunteering on PEO's Professional Practice Committee in the mid-1980s, helping to develop standards of qualification and practice for the profession. He ultimately chaired two related subcommittees, where he helped develop two influential guidelines: *The Use of*

Computer Software Tools by Professional Engineers and the *Development of Computer Software Affecting Public Safety and Welfare and Professional Engineers Providing Communication Services*. Jackson has also been a long-time member (since 2000) of the Enforcement Committee, where he's shown outstanding leadership in expanding PEO's enforcement activities, including the development of the regulator's policy in this area. As an Experience Requirements Committee (ERC) member, he has tirelessly advocated for practitioners in emerging disciplines such as communications and software engineering, promoting licensure of qualified candidates practising in those fields. As a member of the joint ERC-Academics Requirements Committee (ARC) group formed in 2015, he helped develop the limited licence application process.

Roger Jones, P.Eng., LSMIEEE, FEC, will be inducted as an Officer. A graduate of Imperial College, London University, he began volunteering for PEO in 2010, with service on the Professional Standards Committee and Emerging Disciplines Task Force. Since then, Jones has shared his talents across a wide variety of regulatory activities. Both during and after his six years on Council as councillor-at-large, he served as a member and chair of the Finance Committee and also as a member of the Central Election and Search Committee, the OSPE-PEO Joint Relations Committee, the Council Composition Task Force, the Continuing Professional Competence Program Task Force and the Public Information Campaign Task Force. As Council liaison to the Emerging Disciplines Task Force, Jones brought a deep understanding of licensure for engineers in newer, high-tech fields thanks to his background in electronics and control systems engineering. He has been instrumental in contributing material for both the communications infrastructure and nano-engineering sub-groups and assisted in formulating Council motions and notes to ensure councillors understand the challenges around regulating emerging disciplines.

Don Lewis (Don) Marston, P.Eng., JD, FEC, will be inducted as an Officer. He graduated from Queen's University in both engineering and law. He has been a registered professional engineer for more than 50 years and a lawyer for more than 40 years. Early in his law career Marston was asked by the University of Toronto to teach an engineering law course, which he did for more than 20 years. In the course of his teaching, Marston wrote the textbook *Law for Professional Engineers, Canadian and Global Insights.* In the 1980s, PEO implemented its professional practice examination program. Marston was asked to set the program's law examination and arrange for its marking, and he continues to do so. In 1993, Marston was

asked to join a task force reviewing licensing requirements for government, industry and consulting engineers. This led to Marston reporting and making recommendations to PEO Council on proposed changes to the definition of professional engineering. He recently co-chaired a subcommittee reviewing whistleblower protection. This work culminated in PEO's *Guide to Enforcement Reporting*, published in 2018. He is also a former member of the Ethics Committee and a 12-year member of PEO's Enforcement Committee.

MEMBERS

Joseph Lawrence Adams, P.Eng., FEC, will be inducted as a Member. A mechanical engineer with degrees from Kettering University and Western University, he has served many roles on the London Chapter executive and contributed to committees for licence certificate presentations, education outreach and government liaison. Adams helped establish the chapter's Government Liaison Program (GLP) Committee in 2008, and, as committee chair, he was instrumental in building strong relationships with all six MPPs within the chapter's boundaries. Under his leadership, the committee staged several town hall meetings bringing together local politicians and engineers to discuss topics of relevance for the engineering profession. His commitment to service extends to the provincial level, where he has been an active member of the Enforcement Committee, which is charged with advising Council on issues related to enforcement of the *Professional Engineers Act*.

Narayana Pillai Asogan, P.Eng., FEC, will be inducted as a Member. A mechanical engineer educated at the University of Ceylon in Sri Lanka, he has been a strong presence at the Scarborough Chapter, serving many roles including secretary, chair and certificate coordinator. As chair of the chapter's Government Liaison Program Committee, he was involved in numerous government relations activities, including organizing all-candidates debates and participating in MPP events such as Take Your MPP to Work days to build strong relationships with government decision makers. During a provincial by-election in 2013, Asogan organized a last-minute, all-party candidate's debate that received much attention from the local press. During his tenure as chapter chair, Asogan led education outreach activities in local schools, including the popular mathletics and bridge-building competitions and introduced Mechatronics to help educate students about engineering careers. A strong believer in succession planning, Asogan left the chapter board in 2017 to provide opportunities for younger volunteers to lead; however, he continues to contribute as a member.

Rabiz N. Foda, P.Eng., FEC, ICD.D, will be inducted as a Member. An electrical engineer with a bachelor of technology honours degree from the Indian Institute of Technology, Bombay and a graduate diploma in management from the University of Bombay in India, he has been a diligent Experience Requirements Committee volunteer since 1998. His global engineering experience has been invaluable in assessing international engineering education and experience for foreign-trained applicants—a significant contribution to PEO's regulatory mandate. Thanks to his engagement with government and corporate bodies, Foda was also instrumental in the successful application by India for accreditation of many of its engineering degrees through the Washington Accord. A devout advocate for engineering graduates seeking licensure, he worked with the Toronto Regional Immigrant and Employment Council to create a mentoring program for new immigrants and has been an outstanding mentor to engineering graduates from different academic and cultural origins. Foda was also one of the few professional engineers appointed by an Order in Council by the lieutenant governor of Ontario to serve on the Ontario Ministry of Health and Long-term Care's Health Professions Appeal and Review Board.

Wayne Peter Kershaw, P.Eng., will be inducted as a Member. A mechanical engineer with a bachelor of engineering (aerospace) from Ryerson University, Kershaw began volunteering with the Hamilton-Burlington Chapter, serving in a variety of roles including chair, vice chair and Government Liaison Program Committee chair and actively encouraging volunteer participation at all levels, fostering a positive and supportive culture. He also made great efforts to encourage collaboration with neighbouring chapters, including the Niagara Chapter, which he later joined as an executive member. As a key participant on the Niagara executive, Kershaw organized numerous activities, including technical tours at Niagara College, member appreciation events, annual general meetings and educational outreach events. During a period of transitional leadership at the Niagara Chapter, he stepped in as vice chair, providing valuable advice and direction to keep the chapter moving ahead. Kershaw has also provided leadership to the profession as a councillor-at-large on PEO Council from 2011 to 2013. He has offered his expertise to several PEO committees and task forces, including the Enforcement Committee, Legislation Committee, Council Composition Task Force, Repeal of the Industrial Exception Task Force, and the Western Regional Congress Committee.

Sardar Asif Khan, P.Eng., MSc, MBA, FEC, PMP, will be inducted as a Member. An electrical engineer with a bachelor of science in engineering degree from the University of Engineering and Technology, Lahore, a master of science in engineering degree from Wayne State University and a master of business administration degree from Central Michigan University, Khan has accomplished much since he began volunteering in 2006. An expert in lean manufacturing concepts in his professional life, he was instrumental in initiating the Windsor-Essex Chapter's successful Learn to Leverage Lean Subcommittee, which provides free talks and tours to educate the public and engineering community about the benefits of lean. The group eventually worked with the University of Windsor engineering school to create a lean principles course for graduate students. He also developed the chapter's very successful annual "Innovation Station—Engineering Your Life" event that showcases engineering to the public and students through booth demonstrations and

school outreach by local engineers. The event won the top award at PEO's Chapter Leaders Conference in 2015 and 2016. Currently Windsor-Essex Chapter chair, Khan has also been active on the Chapter Leaders Conference and Planning Committee; as a mentor with the Licensure Assistance Program; and as a judge for the Windsor Regional Science, Technology and Engineering Fair.

Luc Roberge, P.Eng., FEC, will be inducted as a Member. A mechanical engineer with a bachelor of science from Queen's University, Roberge has been an active PEO volunteer serving on the executive committees of the Porcupine/Kapuskasing, North Bay and Algoma chapters since 2004. From 2012 to 2013, he served as vice chair and chair with the North Bay Chapter, where he was instrumental in reviewing and updating its communication strategy with members. He also chaired the Engineers Day and Bridge-building committees and served on the majority of the chapter's event committees. He rejuvenated the chapter's bridge-building event for local students and greatly increased student participation, notably from francophone schools. A strong volunteer leader, Roberge encourages others to take on chapter leadership roles and is always ready to guide and mentor chapter colleagues. Currently chair of the Porcupine/Kapuskasing Chapter, his passion and enthusiasm for the engineering profession and inspires and motivates others to participate and step into leadership roles.

PEO ANNOUNCES RECIPIENT OF 2019 G. GORDON M. STERLING ENGINEERING INTERN AWARD

Kaela Shea, EIT, has been named this year's recipient of the G. Gordon M. Sterling Engineering Intern Award. Currently a PhD candidate at the University of Toronto's Institute of Biomaterials and Biomedical Engineering, Shea is researching rehabilitation and assistive devices solutions to help overcome communication and physical challenges faced by children with disabilities. Her work includes the development of an innovative brain-computer interface that incorporates natural language processing, bringing the user context-relevant messages for face-to-face communication. As a student, she is known for her strong leadership and communication skills and high aptitude for assimilating knowledge across multiple disciplines—including engineering, kinesiology and neuroscience.

As an undergrad in the University of Guelph's engineering program, Shea volunteered as a peer helper, assisting fellow students in learning key course concepts and problem-solving strategies. She also co-founded the first Canadian chapter of Engineering World Health, an organization committed to inspiring the biomedical engineering community to improve healthcare delivery in the developing world. After the chapter was established, she worked to build its presence at the university, planning and leading activities for fellow students.

As a PEO volunteer, Shea is an engineer-in-residence at Toronto's Queen Victoria Public School, where she engages with students on engineering topics and the profession itself. Shea represents a new breed of socially conscious engineers. Although she possesses great technical ability, it's her potential to profoundly influence the profession that stands out for her instructors, mentors and peers.

2018 A RECORD YEAR FOR NEW ENGINEERING LICENCES

By Adam Sidsworth

The past year witnessed the highest number of new engineering licences issued in PEO history. Of the 2649 licences issued in 2018:

- 1719 were granted to graduates from Canadian Engineering Accreditation Board (CEAB)–approved post-secondary engineering programs; and
- 930 were granted to graduates of non-CEAB programs.

The total number represents a 19 per cent increase over 2017 and a 41 per cent increase over 2016 figures. Michael Price, P.Eng., PEO then-deputy registrar of licensing and registration, recognized the dedicated efforts of staff in overcoming previous resourcing issues due to staffing shortages and an upgrade of the association's database system while working with an increase in the number of licence applications.

Price told *Engineering Dimensions* that the 2018 numbers are a continuing trend of both an increasing number of issued licences and overall applications submitted. However, he also notes that, other than recording whether an applicant graduated from a CEAB-approved engineering program in Canada or a non-CEAB-approved program within or outside Canada, PEO does not track any specific applicant demographics. (In previous years, PEO received statistics from the Ontario Ministry of Citizenship and Immigration regarding international engineering graduates coming to Ontario from overseas, but those numbers haven't been reported since 2008.)

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NUMBER OF LICENCES ISSUED, 2008–2018

Licences Issued	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CEAB	1200	1234	1483	1165	1480	1315	1655	1619	1284	1496	1719
Non-CEAB	1174	1097	997	665	812	707	830	830	596	724	930
Total	**2374**	**2331**	**2480**	**1830**	**2292**	**2022**	**2485**	**2449**	**1880**	**2220**	**2648**

NEW APPLICATIONS, 2008–2018

New Applications	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CEAB	2238	2278	2361	2594	2596	3428	2708	2829	3120	3247	3279
Non-CEAB	2211	1835	1595	1734	1772	2810	1716	1814	2182	2098	2563
Total	4449	4113	3956	4328	4582	6238	4621	4916	5452	5345	5842

The number of applications received has witnessed, for the most part, typically a 5 per cent annual increase over the past decade, with one large spike in 2013, when the provincial government announced its intention to repeal the industrial exception, which would have required operators of professional engineering or production equipment and machinery to posses an engineering licence. Price also notes that the number of new applicants doesn't necessarily corelate with the number of new licences issued within the same calendar year, as some candidates, particularly non-CEAB candidates, have their academic credentials reviewed by PEO's Academic Requirement Committee, and, depending on the committee's decision, may have to complete a number of technical examinations before their licence can be granted. In addition, PEO must verify that all candidates have completed the 48 months of work experience, of which 12 months must be completed in Canada; and have successfully completed the Professional Practice Examination.

The record number of new licences for PEO comes as traditional engineering fields require more licensed engineers. Engineer Canada's *2015 Engineers Canada Labour Market Study* predicts that by 2025, there will be "a large and growing need to replace retiring engineers as they exit the workforce. This is particularly relevant for civil, mechanical, electrical and electronic engineers as well as computer engineers." It also comes at a time when engineering is expanding into new—and often unregulated—fields, forcing Canada's engineering regulators to adapt and perhaps expand the meaning of an engineering licence. As PEO President David Brown, P.Eng., BDS, C.E.T., noted in the January/February 2019 issue of *Engineering Dimensions* (p. 6), licensed engineers "are well educated and experienced, abide by a code of ethics responsible for safeguarding life, health and public welfare and are accountable to a regulator." However, Brown says that although the *Professional Engineers Act's* primary objectives—protecting the public interest through licensure and setting and enforcing standards of knowledge, practice and ethics—are broad enough to capture emerging disciplines such as computer, environmental and software engineering, we are not doing enough to stay ahead of the game. "If we're going to close our regulatory gaps—gaps that are widening every year—we need to change the way we look at licensure," he said.

PEAK TURNS TWO

By Marika Bigongiari

PEAK
REACHING NEW HEIGHTS

PEO's voluntary Practice Evaluation and Knowledge (PEAK) program was implemented in March 2017 and will embark on its third year on March 31. As the program moves forward, PEAK organizers are making plans to add enhancements and improve the user experience.

The PEAK program is voluntary, but completion statuses are made public on PEO's online directory—and they are reset every year on the anniversary of licence renewal. At that time, licence holders (professional engineers and limited licence holders) are reminded to participate in the program and are directed to the PEAK section of PEO's member portal (secure.peo.on.ca/ebusiness/home) to declare their practice status and watch the next available ethics module video.

PEAK's third year will see a new ethics module added to the video library. Modules are designed to cover the professional and ethical obligations of professional engineers, accompanied by real-life examples of scenarios an engineer may encounter in his or her professional life. "The plan is to develop more ethics modules to cover different refresher topics that would benefit licence holders," says Arden Heerah, P.Eng., PEO's PEAK program coordinator. As more ethics modules are added year to year, some key concepts from earlier modules may be repeated for emphasis.

Reflecting on the previous year, PEAK statistics for the period of March 31, 2018, to February 21, 2019, indicate:

- 21 per cent of licence renewals include practice declarations, of which 79 per cent are practising and 21 per cent are non-practising;
- 72 per cent of those who have completed practice declarations have watched the ethics module; and

- 86 per cent of those practising have completed the practice evaluation questionnaire.

PEO continues to update the program for a better user experience. Question-and-answer sessions are offered upon request—an employer, management or professional group need only request one, and arrangements for a presentation can be made. Several employers, PEO chapters and government groups have already made use of the Q & A offering, with representatives from human resources departments often sitting in to learn about PEAK so they can incorporate it into their professional development programs. Benefits to firms that employ engineers include recognition that their workforce is continuously modernizing its engineering skills and knowledge and keeping PEO updated on the details of their practice and continuing competence efforts. In addition, firms are using PEAK participation as a marketing tool to appeal to new clients, and engineers appreciate employers that provide PEAK-aligned professional development opportunities.

The PEAK program's ongoing goal is to serve and protect the public and, in the spirit of continuous improvement, it welcomes community feedback. Licence holders are welcome to provide feedback via email, phone or at Q & A sessions. All feedback is logged, and key points are incorporated into upgrade projects. The PEAK program team is also available to answer questions via email at peoPEAK@peo.on.ca and phone at 416-224-1100 or 800-339-3716.

PEO APPOINTS LONGTIME STAFFER JOHNNY ZUCCON AS REGISTRAR

By Marika Bigongiari

Johnny Zuccon, P.Eng., FEC, was named PEO's new registrar on February 5.

PEO has appointed longtime employee Johnny Zuccon, P.Eng., FEC, as registrar effective February 5. Zuccon has served as interim registrar since February 2018, leveraging his long tenure at PEO to help facilitate a seamless transition following the departure of Gerard McDonald, P.Eng., who moved on to become CEO of national engineering organization Engineers Canada (see *Engineering Dimensions*, January/February 2018, p. 20).

Zuccon, who has been with PEO since 1995, brings considerable executive experience to the role in addition to a wealth of PEO-specific knowledge. Previously serving as deputy registrar of tribunals and regulatory affairs, he has been a member of the senior management team for 15 years, also serving as deputy registrar, standards and regulations; director of professional affairs; and manager, external relations. He holds a master of applied science and a bachelor of applied science, both in mechanical engineering, from the University of Toronto and has been licensed to practise engineering since 1986.

As registrar, Zuccon will be responsible for PEO's administration of the *Professional Engineers Act*, under whose authority PEO licenses professional engineers and sets standards for and regulates engineering in Ontario so the public interest is served and protected. "As interim registrar, Johnny demonstrated sound leadership, communication, relationship management, accountability and decisiveness," said President David Brown, P.Eng., BDS, C.E.T., on Zuccon's appointment. "We trust the transition will be seamless. At the same time, we trust that Johnny will be able to champion change and renewal initiatives, addressing processes, systems and culture at all levels of the organization."

At the February 8 Council meeting, Zuccon thanked members of Council for his selection as registrar. "I'm honoured and excited for the challenges and opportunity that lie ahead as we move forward to usher in unprecedented change," Zuccon told Council members. "I am buoyed by your vote of confidence and your decision to promote from within the PEO ranks, as it sends a powerful message to all our staff, who give and continue to give to this organization. They are our primary resource, and I wish to formally extend my thanks and gratitude to all of them. I remain deeply indebted to many of you for my success at PEO."