



Professional Engineers
Ontario

ANNUAL REVIEW **2020/2021**



REIMAGINING PEO **TOGETHER**

Professional Engineers

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40 Sheppard Ave W

OUR MANDATE

Through the *Professional Engineers Act*, PEO governs licence and certificate holders and regulates the practice of professional engineering in Ontario to serve and protect the public interest.

OUR VISION

The trusted leader in professional self-regulation

OUR MISSION

Regulate and advance the practice of engineering to protect the public interest

PEO CORE VALUES

Accountability
Integrity
Professionalism
Respect
Teamwork

Governance

PEO Council provides overall direction for the regulator and profession. It is accountable to the public through the Ministry of the Attorney General to uphold PEO's duty to protect the public interest. Council comprises elected professional engineers and members appointed by the office of the Attorney General of Ontario. Not all of the appointed members are professional engineers. Together with Council, PEO operates with an appointed CEO/ registrar and approximately 110 employees.

PEO COUNCIL 2020–2021

Officers

President

Marisa Sterling, P.Eng., FEC

Past President

Nancy Hill, P.Eng., LLB, FEC, FCAE

President-elect

Christian Bellini, P.Eng., FEC

Vice president (elected)

Darla Campbell, P.Eng.

Vice president (appointed)

Arthur Sinclair, P.Eng.

Executive Members

Arjan Arenja, MBA, P.Eng.

Michael Chan, P.Eng., FEC

Lorne Cutler, MBA, P.Eng.

COUNCILLORS

Councillors-at-large

Sandra Ausma, PhD, P.Eng.

Michael Chan, P.Eng., FEC

Leila Notash, PhD, P.Eng., FEC

Northern Region councillors

Ramesh Subramanian, PhD, P.Eng., FEC

Luc Roberge, P.Eng., FEC

Eastern Region councillors

Randy Walker, P.Eng., FEC

Chantal Chiddle, P.Eng., FEC

East Central Region councillors

Arthur Sinclair, P.Eng.

Peter Cushman, P.Eng.

Western Region councillors

Wayne Kershaw, P.Eng., FEC

Peter Broad, P.Eng., FEC

West Central Region councillors

Warren Turnbull, P.Eng., FEC

Lisa MacCumber, P.Eng., FEC

Lieutenant governor-in-council appointees

Arjan Arenja, MBA, P.Eng.

Robert Brunet, P.Eng.

Todd Bruyere, P.Eng.

Lorne Cutler, MBA, P.Eng.

Andy Dryland, C.E.T.

Qadira C. Jackson Kouakou, BSW, LLB

Scott Schelske, P.Eng., FEC

Sherlock Sung

Engineers Canada Directors

Danny Chui, P.Eng., FEC

Christian Bellini, P.Eng., FEC

Nancy Hill, P.Eng., LLB, FEC, FCAE

Kelly Reid, P.Eng., IACCM CCMP

Changiz Sadr, P.Eng., FEC, CISSP (GDPR), TOGAF

(resigned March 26, 2021)

PEO EXECUTIVE STAFF

CEO/Registrar

Johnny Zuccon, P.Eng., FEC

Deputy registrar, licensing and registration

Linda Latham, P.Eng. (Acting)

Deputy registrar, regulatory compliance

Linda Latham, P.Eng.

Deputy registrar, tribunals and regulatory affairs

Johnny Zuccon, P.Eng., FEC

Director, communications

David Smith

Director, finance

Chetan Mehta, MS, MBA

Director, information technology

Michelle Wehrle

President
Association of Professional Engineers
Association and must be surrendered on revocation



Register

Under the authority of the *Professional Engineers Act*, PEO governs over 90,000 licence and certificate holders and regulates professional engineering in Ontario in order that the public interest may be served and protected. PEO is also mandated to carry out the following additional objects under the act:

1. Establish, maintain and develop standards of knowledge and skill;
2. Establish, maintain and develop standards of qualification and standards for the practice of professional engineering;
3. Establish, maintain and develop standards of professional ethics; and
4. Promote public awareness of the role of PEO.

Certificates of authorization

5820

As of December 31, 2020, PEO's register included:

Total P.Eng. licences **84,744**

74,444 male **10,330** female

Provisional licences **17**

14 male **3** female

Consulting engineer designations **935**

895 male **40** female

Engineering interns **13,318**

10,369 male **2949** female

Limited licences **363**

311 male **52** female

Temporary licences **62**

59 male **3** female

Building design specialists **184**

168 male **16** female

President's Message



Marisa Sterling, P.Eng., FEC
President and Chair, 2020-2021

THE COLLABORATIVE PATH OF REIMAGINING PEO TOGETHER

As an African proverb tells us, "If you want to go fast, travel alone; if you want to go far in life, travel together." Professional Engineers Ontario (PEO) has made significant accomplishments this past year, notwithstanding the global COVID-19 pandemic, because of the outstanding efforts of its Council, CEO/registrar, staff, committees, chapters and volunteers. Thank you all. When the uncertainties of the world's health, the health of our families and the stability of our employment were rising, PEO stepped up and did not waiver in its public protection focus. And the broader engineering community also found new ways of working, united in our goal to protect the public interest. I especially want to acknowledge our fellow engineering regulators across Canada: Engineers Canada and its Canadian Engineering Accreditation Board, Engineering Deans Ontario, the Engineering Student Societies' Council of Ontario, engineering employers, Consulting Engineers of Ontario and the Ontario Society of Professional Engineers. They have all made exceptional efforts this year, individually and collectively, to work to protect public wellbeing and live up to the obligations in our Code of Ethics. I have been inspired by the stories of engineers making a positive impact on the day-to-day lives of communities.

REGULATORY ACCOMPLISHMENTS

This past year, PEO processed and approved more than 3112 new licences, reviewed 58 complaints filed against licence and certificate of authorization holders, opened 485 enforcement files relating to unauthorized use of title and potential illegal practice and prosecuted eight matters involving licence and/or certificate holders for professional misconduct.

PEO amended regulations under the *Professional Engineers Act* to: recognize accredited engineering programs at institutions beyond universities as part of the qualifications for licensure, to clarify that the registrar shall issue a provisional licence to applicants that qualify and to permit engineering interns (EITs) to hold any executive position on chapter boards. In addition, the use of the National Professional Practice Exam replaced the prior Professional Practice Exam as a requirement for all types of licences, harmonizing similar requirements across Canada.

PEO also issued guidelines on Providing Reports on Mineral Projects; Environmental Site Assessment, Remediation and Management; Preparing As-Built and Record Documents; and Design Evaluations of Demountable Event Structures along with a COVID-19 Practitioner Advisory Notice on the obligations and responsibilities of professional engineers during the pandemic.

And, lastly, PEO joined the Notarius program to provide licence holders access to a digital seal service.

GOVERNANCE ACCOMPLISHMENTS

PEO Council amended its bylaw to legally permit digital, virtual meetings and regulatory proceedings. As a result, Council and its committees, along with PEO's discipline and quasi-judicial proceedings, have all occurred virtually for the past year to ensure business continuity amid pandemic restrictions. To help stay connected, Council met more frequently than planned because process matters. On top of the six formal Council meetings where decisions were made, the Executive Committee met 12 times and we also created monthly Strategic Conversation sessions to provide a forum to thoroughly discuss key issues.

Council elected me to be their chair and I am proud to report that this past year our agendas focused more on strategic issues, prioritizing regulatory and governance matters, affirming the work of staff and reducing operational requests.

FOUNDATIONAL CHANGES

In conversations I've had with engineers over the years, there is an urgent excitement to modernize PEO and usher in its 100th anniversary in 2022 with transformative change. To some, this change can't come fast enough, while to others, it is happening too quickly. Change, however, is our only constant; it's our new normal. And this past year, Council has made substantial, transformational decisions that are foundational to improving engineering regulation in Ontario. PEO's success decades from now as a relevant and agile regulator starts with the groundwork we have begun to lay.

1. Governance Renewal has been a top priority. It is a means to help Council take quicker action with sufficient information to manage risk as it works to become a more agile regulator. The first two phases of the Governance Roadmap were completed this past year: Phase 1 clarified Council's regulatory mandate and its outputs as a direction and control governing board; and Phase 2 created a committee structure for Council to help it make action policy decisions and focus on its regulatory, fiduciary, human resources and governance responsibilities. The final two phases will occur in the upcoming year and will look into Council's composition and the roles of chapters and external organizations. I encourage Council to consider how to attract and retain early and mid-career professionals and those with caregiving responsibilities in its future composition.
2. Continuing Professional Development (CPD) will be mandatory in Ontario likely before 2025. This follows the advice from an external regulatory review, public inquiries into deaths from the Downsview stage collapse and the Elliot Lake mall collapse and Council's response in 2019 to approve a mandatory CPD program. With this decision, PEO will be joining every other province and territory in Canada whose engineering regulator requires CPD, and will be ensuring that

Ontario engineers can continue to participate in national and international mobility agreements such as the Asia-Pacific Economic Cooperation. PEO's proactive stance focuses on preventing faulty engineering practice rather than relying solely on a system that punishes licence holders for practice failures that could have caused harm.

3. Inclusive Culture will help PEO govern more effectively as diversity drives innovation. I want to acknowledge the professional development that councillors have undertaken this year to ask great questions and support a respectful, inclusive and professional meeting culture. I also want to thank PEO CEO/Registrar Johnny Zuccon, P.Eng., FEC, for joining me on December 6 in a video marking the 31st anniversary of the Montreal Massacre. This past year, 32 per cent of councillors were women, and other identities such as Black and Indigenous cannot be reported as this data is currently not collected. In conversations with Ontario's Attorney General, I received a commitment for future public appointments to prioritize women to help PEO diversify its board. And last November, PEO appointed an exploratory working group to identify, study and address any issues of systemic racism and discrimination that fall within PEO's mandate. The Anti-Racism & Anti-Discrimination Exploratory Working Group will be making recommendations later this year. The work of PEO's 30 by 30 Task Force continues to be a priority regulatory initiative to remove barriers for women to apply for licence by 2030. And to recognize our bilingual province, my bimonthly President's Message in *Engineering Dimensions* was provided in French this past year, and you can read my annual report message in French on PEO's website. 📄 www.peo.on.ca/sites/default/files/2021-04/2020AnnualReport_PresMessage_French.pdf

WHAT'S NEXT—A FUTURE VISION INTO THE NEXT CENTURY OF ENGINEERING REGULATION

I look forward to supporting incoming president Christian Bellini, P.Eng, FEC, newly elected and returning councillors, the CEO/registrar, staff, committees, chapters, licence holders and volunteers. PEO's governance renewal is setting a solid base from which we can forge ahead with more agility but towards what needs more clarity.

In the abbreviated words of Seneca, "No wind blows in favour of a ship without direction." PEO's action plan, approved in 2019, will update many existing regulatory processes using right-touch regulation—regulating with just the sufficient amount of oversight to appropriately minimize public risk. Creating a new strategic plan will be critical in 2021 to support the swift completion of the action plan. As this work is rooted in the engineering practice and regulation of the 20th century, modernization will be important. Much has changed in the 2000s, particularly in the types of engineering practice and our understanding of how they impact society. For example, how using artificial intelligence in social media can hurt mental health, how applications of computer vision can bias people with darker skin and how software errors can cause plane crashes and communication network failures. These novel applications of technology can all be marvels of ingenuity as long as there is sufficient oversight in place that puts public protection first. And that is where a long-term vision by PEO can ensure that engineering regulation is not just keeping up with the public's concerns but leading the way.

OUR NORTH STAR

PEO's North Star—our mandate to protect the public interest—is resolute. What we hear in the media today are public concerns around how to stop climate change, to decide whether to trust smart cities or to know whether inequality in technology is causing societal harm. Addressing the engineering aspects of these public concerns and others needs to guide PEO's priorities. I encourage PEO to closely connect with and engage in citizen conversations in the coming year to better define who and what PEO regulates into the next decade and beyond.

ON A PERSONAL NOTE

I chose engineering because of my parents, who introduced me to the profession and the idea that one person could make a difference in the world. After the passing of my father, Gordon Sterling, P.Eng., PEO's 82nd president, I felt the ethical duties and public service obligations of an engineer more deeply. Although there is sadness in my story, I am grateful for this path that led to serving as the 101st president and chair of Council,

and the eighth woman in these roles in PEO's history. I wish to thank my mother and sisters for their support, and my employer, the University of Toronto and Faculty of Applied Science and Engineering, for their accommodations.

This past year has seen a personal investment of approximately 1200 volunteer hours in service to Ontarians, the Attorney General, PEO and engineers. Because of the values in professional development and professional duty held by University of Toronto Engineering Dean Chris Yip, PhD, P.Eng., I was able to take on the demands of the presidency while working fulltime. I hope that many youth, EITs and engineers will be inspired to follow in my footsteps and those of trailblazers before me. It is time for the engineering profession to reflect the population that we serve with more PEO leaders who identify as women, Black, Indigenous or queer. By acting urgently to identify and remove barriers, anyone who has felt marginalized in engineering can feel welcomed and we can become a more inclusive regulatory authority and profession.

It's been an honour to serve. Merci. Miigwech.

CEO/Registrar's Message



Johnny Zuccon, P.Eng., FEC
CEO/Registrar

As I reflect on the 2020–2021 Council term, I'm proud of the accomplishments Council and staff shared to advance the initiatives related to PEO's enterprise-wide transformation during unprecedented circumstances.

Since the outset of the COVID-19 pandemic, my primary concern has been the health and well-being of our staff. On March 17, 2020, in compliance with provincial lockdown measures, PEO closed its office indefinitely, and staff transitioned to working remotely. And while our office remained closed to visitors and the majority of our staff out of an abundance of caution, select employees were permitted to return at times under controlled conditions to complete essential work that required access to our facilities. On average, we have had five to seven employees in our office each day in staged times to eliminate contact. Thankfully, we have had no reported COVID cases amongst our staff to date.

NEW PROCESSES AND PROGRAMS

Although securing the necessary technologies to equip our staff to continue their work virtually proved to be a challenge, our persistence led to all staff being provided the necessary resources to ensure we met all of our regulatory obligations. In some cases, this required the development of workaround solutions for processes that had

previously required in-office attendance, most of which related to our licensing process and its ongoing evolution to a fully digitized process. While operating remotely, for example, we developed and implemented a system for e-filing of licensing applications and, by mid-June 2020, we were no longer adding to our existing paper-based inventory. And, despite the pandemic, applications filed increased 2 per cent year-over-year, with over 80 per cent in electronic form. Similarly, we transitioned to a digital process for receiving and approving new applications and managing renewals online via PEO's portal for certificate of authorization (C of A) applications and renewals. An e-filing system for new C of A applications was rolled out in mid-May 2020 and has since received close to 600 submissions. We also processed more than 7200 C of A renewal applications to date. Staff also completed a comprehensive status review of the existing paper-based inventory of P.Eng. licensing applications, determining that 87 per cent of the files are pending applicant action. A project was subsequently commissioned to convert these paper-based files to digital form.

The evolution of our licensing process continued with our transition to the National Professional Practice Exam (NPPE), which replaced the PEO-administered Professional Practice Exam. This provides PEO with an objective, psychometrically valid digital professional practice examination. I'm pleased to report that over 4200 applicants have written the NPPE since the roll out in June 2020 and the last sitting in January 2021, with a 97 per cent attendance rate. And, as of this writing, we're also on track to deliver technical exams online for more than 900 registrants in May 2021.

Staff also began work on a mandatory continuing professional development (CPD) program for licence holders. Moving forward with such a program aligns with our action plan and follows Council's approval of a motion in February 2021 that allows PEO to proceed as soon as any required legislative and operational tasks have been completed. Upon its completion, the legislative framework needed to implement a mandatory CPD program will be provided to Council for approval.

MAKING PROGRESS

Despite all the challenges presented by the pandemic, we remain vigilant on work related to PEO's multi-year, enterprise-wide transformation, the

strategy for which is built on three critical pillars: operational execution, organizational alignment and governance enhancement.

Our operational work largely stems from the changes outlined in the action plan to address the recommendations from PEO's 2019 external regulatory performance review. Key to this work was the development of an activity filter tool that assesses the activities and outputs of committees, subcommittees and working groups and determines if they relate to professional regulation, board governance or neither. A progress report on the evaluation phase of the activity filter was presented to Council at its November 2020 meeting. Specific recommendations and operational changes to address outputs for which the CEO/registrar has accountability will emerge over the course of 2021. Additional accountabilities will also emerge as a result of Council's work on governance enhancement.

Steps are also being taken to address our operational structure to ensure it has the appropriate capacity and agility to achieve our regulatory and governance objectives. This has included hiring a new human resources (HR) director to design and implement a robust structure that is not solely limited to providing HR support within the business but also aims to ensure compliance with HR procedures and processes. Further, the role of vice president, governance, was created and filled to assist Council with the implementation of its two-year governance roadmap, the outputs from which will cascade to the operational level and, ultimately, create a stronger and more consistent regulator with distinct clarity between operational and governance roles.

Although there is much work still to be done, I'm pleased with the progress we've made, especially considering the conditions in our province, and I look forward to building on our success in the coming term.

Licensing & Registration

PEO protects and serves the public interest by ensuring all licensed professional engineers are qualified—and by licensing those who qualify.

Individuals may not call themselves a professional engineer, an engineer, a P.Eng. or use any similar title that may lead to the belief that they are qualified to practise professional engineering unless they are licensed by PEO.

Companies and individuals may not offer or provide engineering services to the public unless they obtain a PEO certificate of authorization.

COVID-19 WORKAROUNDS

While PEO's office remained closed during the COVID-19 pandemic, staff developed solutions enabling the regulator to continue to carry out its mandate virtually. These solutions included:

- Updating the P.Eng. application form and modifying processes so applications could be submitted by email;
- New processes to permit the electronic distribution of P.Eng. seals in a digital format to new licence holders;
- Revising processes to allow licence applications to advance electronically through all licensing stages;
- For certificate of authorization applications and renewals, transitioning to a digital process for receiving and approving new applications and managing renewals online via PEO's portal;
- A paperless workflow for academic assessments requiring review by Academic Requirements Committee volunteers was developed to support the new, fully electronic licensing process implemented in 2020;
- Offering technical examinations in May 2021 using individual, online proctoring. This follows the cancellation of most technical examinations in 2020 due to the in-person nature of these exams along with local public health restrictions; and
- Developing a process to allow for Experience Requirements Committee interviews to be conducted via Zoom.



2020 LICENSING STATISTICS

Total P.Eng. applications

6806

male 81% / female 19%

Total applications for P.Eng. licence received from CEAB candidates

2733

male 77% / female 23%

Total applications for P.Eng. licence received from non-CEAB candidates

3356

male 83% / female 17%

Total number of P.Eng. applications processed and approved

3112

male 81% / female 19%

New P.Eng. licences approved for CEAB graduates

1544

male 78% / female 22%

New P.Eng. licences approved for non-CEAB graduates

893

male 81% / female 19%

P.Eng. licences approved for transfers

597

P.Eng. licences approved for reinstatements

78

New limited licences issued

12

New certificates of authorization issued

439

New consulting engineering designations issued

30

Tribunals & Regulatory Affairs

PEO protects and serves the public interest by conducting dispute resolution and hearings; preparing performance guidelines as benchmarks for quality of service in the engineering profession; and preparing performance standards in regulation.

The Discipline Committee (DIC) hears and determines allegations of professional misconduct or incompetence against licence holders.

The Registration Committee (REC) conducts formal hearings between the registrar and applicants for licensure.

A complainant may apply to the Complaints Review Councillor (CRC) for a review of the treatment of the complaint after a decision has been made by the Complaints Committee.

2020 DIC STATS

Matters referred to discipline.....	7
Pre-hearing conferences held.....	10
Matters pending (caseload).....	9
Written final decisions issued.....	8

2020 REC STATS

Requests for hearings.....	0
Pre-hearing conferences held.....	2
Matters pending (caseload).....	5
Hearings completed.....	0
Written final decisions issued.....	0

2020 CRC STATS

Applications for review.....	1
Notices to conduct a review.....	1
Dismissals without a review..... (dismissal report)	1
CRC review reports issued.....	8
Caseload.....	0
Examinations under section 26(1).....	0

The Fees Mediation Committee (FMC) deals with fee disputes between PEO licence and certificate of authorization holders and their clients. There were no mediations or arbitrations conducted or applications for mediations/arbitrations received in 2020.

MANDATORY CONTINUING PROFESSIONAL DEVELOPMENT

In February 2021, Council approved a motion allowing PEO to move forward with a mandatory continuing professional development (CPD) program for its licence holders as soon as any required legislative and operational tasks have been completed. See the News section for further information.

PRACTICE EVALUATION AND KNOWLEDGE (PEAK) PROGRAM

On June 30, 2020, PEO launched an updated online platform for the PEAK ethics module and introduced the “one new module per year” rule to ensure licence holders would have at least one module available each year. On August 31, 2020,

PEO launched the two-part 2020 ethics module with ethical and regulatory content.

 **Complete information on the PEAK program is available at www.peopeak.ca.**

PRACTICE GUIDELINES APPROVED

At its June 2020 meeting, Council approved the publication of two updated practice guidelines: *Providing Reports on Mineral Projects* and *Environmental Site Assessment, Remediation and Management*.

The first defines best practices for practitioners who provide reports on mineral projects in consideration of the *Professional Engineers Act*. The second highlights the professional and ethical

responsibilities of professional engineers providing environmental site assessments, site remediation and environmental risk assessment and management services. It aims to provide a benchmark to evaluate the level of professional practice and quality of work required of a professional engineer practising in the field.

At its April 2021 meeting, Council approved the guideline *Providing Engineering Services Under O. Reg. 1/17 and Part II.2 of the EPA*.

PEO also issued a COVID-19 practice advisory notice to advise licence holders of their obligations and responsibilities during the pandemic.



Regulatory Compliance

PEO protects and serves the public interest by disciplining professional engineers and certificate of authorization (C of A) holders found guilty of professional misconduct and taking enforcement action against unlicensed individuals who illegally describe themselves as engineers. Similarly, the regulator can prosecute companies or entities who illegally provide engineering services to the public.

During the pandemic, PEO maintained its complaints and enforcement processes, allowing the public to continue to submit complaints about licence holders and concerns about illegal practice to the regulator via email.

COMPLAINTS

To protect the public, PEO investigates complaints against licence holders for failure to meet their professional and ethical obligations as set out in the *Professional Engineers Act*. Its complaints process is intended to deal with the incompetence or professional misconduct of engineering practitioners related to the practice of professional engineering, to ensure the public interest is served and protected.

2020 COMPLAINTS COMMITTEE STATS

Complaints filed

60

Complaints disposed of by the committee

58

Referred to Discipline Committee

7

Not referred to Discipline Committee and no other action taken

36

Not referred to Discipline Committee and other action taken

15

ENFORCEMENT

Enforcement is action PEO takes against individuals or entities who practise engineering without a licence or lead others to believe they are qualified to do so, or who offer engineering services without holding a certificate of authorization (C of A). With few exceptions, only PEO licence holders can practise professional engineering, and only people or entities holding Cs of A issued by PEO can offer or provide professional engineering services to the public.

As a result of the COVID-19 pandemic a significant number of Ontario Court services were suspended or deferred, which affected PEO's ability to file charges or conduct prosecutions of provincial offences. There were no active matters scheduled for prosecution prior to the pandemic and no new charges were filed.

ENFORCEMENT ACTIVITY 2020

Files opened.....	485
File carryover from previous year.....	324
Files to carry over at December 31.....	426
Files closed.....	383

VIOLATION TYPE

Practice.....	4%
Title.....	88%
Both title & practice.....	7%

INQUIRY TYPE

Public.....	61%
PEO staff initiated.....	39%

News

THE COVID-19 PANDEMIC

In 2020, the COVID-19 virus quickly spread across the globe, impacting citizens and organizations with lockdowns and closures amid the pandemic. On March 17, 2020, in compliance with provincial lockdown measures, PEO closed its office and staff transitioned to working remotely. As many PEO regulatory processes were paper-based, staff implemented workaround solutions to ensure the regulator continued to fulfil its regulatory mandate. All PEO meetings and events were conducted virtually, including Council meetings and the Volunteer Leadership and Chapter Leaders conferences. PEO's 98th and 99th annual general meetings were held as virtual events on May 30, 2020 and May 15, 2021, respectively. As of May 2021, PEO staff continued to work remotely as a result of the pandemic.

PEO TRANSFORMATION

During the 2020–2021 term, work continued on PEO's multi-year, enterprise-wide transformation. PEO strives to achieve the change vision of becoming a professional, modern regulator that delivers on its statutory mandate and is supported by a governance culture that consistently makes decisions that serve and protect the public interest. The strategy for such work is built on three critical pillars: operational execution, organizational alignment and governance enhancement.

Operational Review

PEO is committed to becoming a more effective regulator. Work in this area stems from the operational changes outlined in the Action Plan approved by Council in September 2019 to address the recommendations from PEO's external regulatory performance review. The review identified gaps between PEO's current practices and those adopted as best practices by other "right touch" regulators. This voluntary initiative was undertaken as part of Council's commitment to ensure that PEO is effectively fulfilling its mandate as set out in the *Professional Engineers Act*.

Activity Filter

Key to this work was the development of an activity filter tool that assesses the activities and outputs of committees, subcommittees and work groups and determines if they relate to professional regulation, board governance or neither. The filter was approved by Council in the fall of 2019.

A progress report on the evaluation phase of PEO's Activity Filter was presented to Council at its November 2020 meeting. Each of the 90+ committee activities and outputs in the four categories (core regulatory, regulatory policy, governance and neither) was assessed to determine if its current assignment to a committee, task force, working group, etc., was necessary and fit for either a regulatory or governance purpose. The next phase is expected to determine the appropriate accountability for the outputs. Specific recommendations and operational changes to address outputs for which the CEO/registrars has accountability will emerge over the course of 2021. Other accountabilities will also emerge as a result of Council's work on governance.

National Professional Practice Examination

In support of the Action Plan objective to limit subjectivity in the licensing process within the constraints and capabilities of existing technology and regulations, Council adopted the National Professional Practice Examination (NPPE) as a replacement for the PEO-administered Professional Practice Exam at its March 2020 meeting. Joining this national program provides PEO with an objective, psychometrically valid and digital professional practice examination. The NPPE is a three-hour, closed-book, online exam on ethics, professional practice, engineering law and professional liability. The exam has 120 multiple-choice questions based on six subject areas. Ten questions are PEO-specific and deal with the *Professional Engineers Act*, Regulations 941 and 260/08, and Ontario focused practice issues. During the pandemic, the NPPE was offered as a remotely proctored examination.

Mandatory Continuing Professional Development

At its February 2021 meeting, Council approved a motion that allows PEO to move forward with the creation of a mandatory continuing professional development (CPD) program for practising licence holders as soon as any required legislative and operational tasks have been completed. This decision, which builds on the existing, voluntary CPD program, is consistent with PEO's continuous improvement and with the overriding need for public protection.

Council's decision rescinds a motion from its September 25, 2015 meeting, in which Council affirmed "its intent to ask the membership to ratify in a referendum any mandatory requirement to participate in a continuing professional development competency and quality assurance program." This preceded the introduction of PEO's Practice Evaluation and Knowledge (PEAK) program. PEAK is currently a voluntary CPD reporting and practice profile gathering initiative for licence holders that was designed to serve as a framework for mandatory CPD following a suitable trial phase.

Establishing a mandatory CPD program supports the Action Plan and repealing the referendum condition is consistent with Council's legal obligations under the *Professional Engineers Act*.

Mandatory CPD, once in place, will bring PEO in line with the best practices of other regulators of professions, including other engineering regulators, which have a mandate to protect the public. It also conforms with recent recommendations from several key government-related stakeholders, including the Elliot Lake Commission of Inquiry and reports from various coroner's inquests.

Work on the regulations needed to implement the program is underway.

Digitization Project

As part of PEO's evolution from processes that have been largely paper-based, the Information Discovery and Digitization Capability (IDDC) project was launched in 2021. The IDDC is a records conversion process that aims to transform paper applications into usable digital information accessible from PEO's licensing and licence holder system. This project is part of a larger digital transformation journey to enable greater automated processing, deeper business intelligence and overall greater efficiencies. Progress on this initiative, however, was limited due to pandemic-related restrictions to accessing the office.

Organizational Review

A strong, effective regulator requires a strong, professional staff, under the direction of a CEO/ registrar who is accountable to Council. PEO is therefore addressing its operational structure to ensure it has the appropriate capacity and agility to achieve its regulatory and governance objectives.

Organizational Structure

In 2021, PEO retained LM² Collective to assist the CEO/registrar with refining the organizational structure based on the final recommendations from the organization review by Western Management Consultants (WMC). The WMC review indicated a need to rebuild our staff organization to improve service delivery and eliminate organizational silos and other impediments to success.

As a precursor to this work, enhancements were made to the human resources department, enabling it to provide the organizational support necessary during the transition. The department now benefits from having a dedicated director and two additional HR business partners to support PEO's various departments.

PEO also appointed a new vice president, governance. This new role is consistent with the organizational restructuring initiative and complements Council's commitment to its multi-year Governance Roadmap. The incumbent now leads the governance change strategy and will restructure the Secretariat division so that it fully supports Council's ability to fulfill PEO's statutory mandate and thereby protect the public interest while also respecting the separate accountabilities of Council and the CEO/registrar.

LM² Collective has since began a four-phase project that is expected to conclude in June 2021. This project will build foundations for: functionality and flexibility; governance and accountability; engagement and change management; career development; and succession planning and performance management. Subsequent to this work, the necessary changes, including recruitment for additional senior level positions, will be implemented and completed, optimally by the end of 2021.

Governance Renewal

An effective regulator requires an effective, focused regulatory governance board. In March 2020, Council approved a two-year roadmap

with key steps and milestones to help develop and enhance Council's governance effectiveness—ensuring it is appropriately focused on high-level direction and control, based on a clear understanding of its mandate and key legal and fiduciary obligations.

Governance Roadmap

The Governance Roadmap will help Council clarify roles and responsibilities; improve policies; enhance the outcomes from committees and structures; and review effective board composition and competencies. It is being implemented over four phases:

- Phase 1: Enhancing Council effectiveness through regulatory and governance mandates and policy;
- Phase 2: Governance effectiveness of PEO committees' structure and mandates;
- Phase 3: Council selection and composition; and
- Phase 4: Reviewing and improving the governance effectiveness of PEO chapters and volunteers.

Governance Solutions Inc. was retained to guide and support Council's work on the roadmap. Council's Executive Committee was tasked with stewarding its implementation under the overall authority of Council.

Governance Tenets

In November 2020, Council approved the following governance tenets:

1. Council will be a governing-type board:
 - a. Council will primarily direct (set strategic vision and direction) and control (monitor and evaluate actual results to gain confidence PEO is moving in the direction set), delegating substantive operations to staff supported by committees as appropriate.
 - b. Submissions from members, councillors or others will first be referred to the responsible committee or staff for review and input before coming to Council with any recommendation for a decision (the originator will be consulted as needed by the committee or staff, and be advised of any disposition).
2. PEO will primarily be a regulator.
3. Council members will only serve on board (governance) committees.
4. Council will use core board (governance) committee, which means a form of committee structure that deals with the following: Finance & Audit; Human Resources; Governance, Legislation & Nominating.



News

5. PEO will use regulatory committees that add net value to its regulatory role. Committees with regulatory functions would be reviewed to assess the value they add to the regulatory process. These include committees currently prescribed by statute: in particular, the Academic Requirements Committee, Experience Requirements Committee, Complaints Committee, Discipline Committee and Registration Committee.
 6. Council will “right size”: An optimal range will be identified, likely smaller than the current size, based on mandate, and taking into account roles, needs, competencies and diversity considerations (including demographics) with and improve PEO’s role as a regulator charged with protecting the public interest.
 7. Council will approve strategic priorities that explicitly align with and improve PEO’s role as a regulator charged with protecting the public interest.
 8. PEO will adopt a risk model to measure and report on the protection of the public interest.
 9. Council’s and staff’s governance culture will be healthy, respectful, inclusive and professional.
 10. PEO will adopt a structured, mandatory governance orientation and education program for councillors, senior staff and committee members, as well as a separate program for all committee chairs.
- II. Formal annual evaluations of the effectiveness of Council, committees and chairs, and the CEO/ registrar will be conducted based on pre-agreed criteria PEO will take the necessary steps by May 2022 to implement these directions as part of its commitment to completing the Governance Roadmap approved by Council in March 2020.

Governance Committees

At its April 2021 meeting, Council formalized the establishment and initial mandates of four new governance committees to support its direction and control functions. The new committees of Council will be formed following PEO’s 2021 AGM. They are:

- Governance and Nominating Committee;
- Regulatory Policy and Legislation Committee;
- Human Resources and Compensation Committee; and
- Audit and Finance Committee.

As a result of the new committee structure:

- The existing Legislation Committee, Finance

Committee, Audit Committee and Human Resources Committee are stood down, and those committees will transfer their outputs to the appropriate governance committees;

- Responsibility for stewardship of the Governance Roadmap approved in March 2020 will be transferred from the Executive Committee to the new Governance and Nominating Committee;
- Responsibility for addressing the report of the Succession Planning Task Force also will be transferred from the Executive Committee to the Governance and Nominating Committee; and
- Responsibility for addressing the report of the Emerging Disciplines Task Force will be transferred from the Executive Committee to the new Regulatory Policy and Legislation Committee.

Councillors are to be assigned to the new committees at the 2021–22 Council’s first meeting following the AGM.

Additional Governance Directions

In March 2021, Council agreed to the following governance directions and committed to taking the necessary steps to achieve them:

1. PEO will use only the regulatory committees mandated by legislation, with mandates as per statute (notably Complaints, Discipline, Registration, ARC, ERC).
2. PEO will use four governance committees of Council: Finance & Audit; Human Resources & Compensation; Nominations & Governance; Regulatory Policy & Legislation.
3. Regulatory policy governance will be centralized by Council in the Regulatory Policy & Legislation Committee.
4. Effective 2021 AGM: new governance committees will replace current model; no new non-councillors will be appointed but existing non-councillors may be grandparented for a one-year transition at the request of the committee or its chair.
5. Effective Now: Council will not strike new committees nor approve changes in committee terms of reference, except to the extent that these coincide with the governance initiative itself.
6. First-year transition only: Councillors will be invited to specify preferences for serving on governance committees with rationale based on experience; appointments for 2021–22 will be proposed for Council’s approval using opera-

tional resources and random selection to break ties as needed.

7. Current committees will not take on any further regulatory or governance policy functions but may finalize current regulatory policy work under the oversight of the Regulatory Policy & Legislation Committee with a final transfer of responsibilities effective 2022 AGM.

Ultimately, these various principles will be incorporated in more formalized materials, including bylaw revisions and a new Council manual as needed, as well as in an enhanced Council onboarding and orientation program.

PEO ADOPTS DIGITAL SIGNATURE

In September 2020, Council approved technology allowing licence holders to apply a regulator-issued digital signature to engineering documents in conjunction with the image of their seal. PEO joined the Notarius program, which allows all licence holders to subscribe to the digital certification service. The service was rolled out in January 2021. A digital signature is encrypted metadata including a digital certificate issued by a third party, such as Notarius, appended to PDF/A documents to confirm the identity and professional status of the document issuer and secure or tamper proof the document. The certificate information verifying the issuer holds a valid PEO licence is available to the receiver when the document is opened with a PDF viewer. Use of the digital signature by PEO licence holders is voluntary. Notarius provides a similar service to all other Canadian engineering regulators.

ANTI-RACISM & ANTI-DISCRIMINATION EXPLORATORY WORKING GROUP

At its November 2020 meeting, Council approved the appointment of a four-member working group to develop recommendations to identify, study and address any issues of systemic racism and discrimination that fall within PEO’s mandate. The group will explore any potential vulnerabilities to systemic racism and discrimination within the engineering profession and within activities overseen by PEO and propose best practices for addressing any vulnerabilities. Council also instructed the CEO/registrar to recruit an equity, diversity and inclusion consultant to help guide and support the work.



Volunteers

In 2020, nearly 800 professional engineers, engineering interns and others volunteered their time to work on behalf of PEO. This includes those who served on Council, committees and their sub-committees, task forces, the Government Liaison Program, and PEO chapter leaders and volunteers, as well as those who represented PEO on external boards and advisory groups and volunteered for chapter-sponsored programs.

PEO gratefully recognizes and thanks all those who have served the profession in a wide variety of activities and events throughout the year.

👉 **For a full list of PEO volunteers, please visit:**
www.peo.on.ca/sites/default/files/2021-04/NVWProgram2021.pdf

COMMITTEES AND TASK FORCES

PEO Council mandates the creation of committees to help develop specific policies that guide the association. Some committees are ongoing and are written in the *Professional Engineers Act* because they reflect PEO's core purpose. Others may be temporarily arranged to deal with special projects or issues.

PEO committees can be legislated, regulated or appointed. Legislated and regulated committees are set out, along with their missions, in the *Professional Engineers Act*, R.S.O. 1990, Chapter P.28, or Regulation 941/90. Under the act, PEO Council is also permitted to appoint committees to address specific needs. These standing committees are mandated for an indefinite term, but their membership is appointed periodically by Council. Council also creates task forces to undertake specific tasks. Task forces exist only as long as necessary to finish their task.

👉 **Annual reports of PEO committees and task forces are posted on our website at**
www.peo.on.ca/about-peo/committees-and-task-forces

CHAPTERS

PEO's 36 chapters connect members-at-large with PEO Council and provide a local presence for engineering. During the COVID-19 pandemic, chapter volunteers organized virtual licence presentation ceremonies, hosted technical seminars and social events, provided virtual forums for members to exchange knowledge and ideas, and offered professional networking activities.

Members involved in chapter activities also continued a long-standing tradition of donating their time, energy and expertise to promoting awareness among grade school students of the engineering profession and the role of science, technology, engineering and math.

👉 **For more information on chapter activities, please visit individual chapter websites:**
www.peo.on.ca/about-peo/chapters-and-regional-offices/visit-chapter-websites

GOVERNMENT LIAISON PROGRAM

The main objective of PEO's Government Liaison Program (GLP) is to ensure that government, PEO licence holders and the public continue to recognize its regulatory mandate, in particular its contributions to maintaining the highest level of professionalism among engineers working in the public interest. Ultimately, the goal is to have government view PEO as a partner and understand and support PEO's policy direction.

👉 **For a full review of 2020 GLP activities, please see the 2020 GLP Year in Review.**

Abbreviated Financials

STATEMENT OF OPERATIONS AND CHANGES IN NET ASSETS, YEAR ENDED DECEMBER 31, 2020

	2020	2019
	\$	\$
Revenue		
P.Eng. revenue	19,192,091	16,617,881
Application, registration, examination and other fees	8,069,121	8,507,693
Building operations (Note 5)	2,433,586	2,063,933
Investment income	839,194	572,499
Advertising income	105,359	214,087
Chapter revenues (Note 3)	33,358	-
	<u>30,672,709</u>	<u>27,976,093</u>
Expenses		
Staff salaries and benefits/retiree and future benefits (Note 10)	11,541,133	11,948,676
Building operations (Note 5)	2,196,630	2,497,508
Amortization	1,152,613	1,182,780
Computers and telephone	1,137,393	1,001,350
Engineers Canada	1,024,502	1,009,422
Purchased services	958,697	1,295,698
Occupancy costs (Note 5)	846,019	845,733
Legal (corporate, prosecution and tribunal)	765,986	720,790
Transaction fees	700,010	650,829
Contract staff	502,825	551,099
Consultants	454,680	255,675
Chapters (Note 14)	327,940	942,292
Postage and courier	210,455	417,773
Insurance	143,100	128,505
Professional development	109,858	143,358
Volunteer expenses	109,056	614,032
Printing	64,677	97,200
Office supplies	57,673	129,224
Advertising	45,243	74,808
Recognition, grants and awards	31,772	152,623
Staff expenses	18,857	89,783
	<u>22,399,119</u>	<u>24,749,158</u>
Excess of revenue over expenses before the undernoted	8,273,590	3,226,935
Council discretionary reserve expenses (Note 9)	388,086	298,827
Excess of revenue over expenses	7,885,504	2,928,108
Remeasurement and other items (Note 7)	(3,307,400)	4,647,153
Net assets, beginning of year	24,727,697	17,152,436
Adjustment for change in accounting policy (Note 3)	(3,724,941)	-
Net assets, end of year	<u>25,580,860</u>	<u>24,727,697</u>

*The above information is an abbreviated version of PEO's 2020 financial statements. The full report appears in the May/June 2021 issue of *Engineering Dimensions* and on PEO's website.

STATEMENT OF FINANCIAL POSITION, AS AT DECEMBER 31, 2020

	2020	2019
	\$	\$
Assets		
Current assets		
Cash in interest bearing accounts	8,219,649	3,031,510
Accounts receivable	1,382,842	767,025
Prepaid expenses and deposits	475,843	363,272
Other assets	251,044	328,077
	<u>10,329,378</u>	<u>4,489,884</u>
Marketable securities, at fair value	15,069,278	11,303,103
Capital assets (Note 4)	31,340,072	33,301,183
	<u>56,738,728</u>	<u>49,094,170</u>
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities (Note 16)	2,513,546	2,024,830
Fees in advance and deposits	11,573,230	11,048,555
Current portion of long-term debt (Note 6)	1,088,796	1,088,796
	<u>15,175,572</u>	<u>14,162,181</u>
Long-term		
Long-term debt (Note 6)	2,540,496	3,629,292
Employee future benefits (Note 7)	13,441,800	6,575,000
	<u>31,157,868</u>	<u>24,366,473</u>
Net assets (Note 8)	25,580,860	24,727,697
Total liabilities and net assets	<u>56,738,728</u>	<u>49,094,170</u>
Contingencies (Note 17)		

STATEMENT OF CASH FLOWS, YEAR ENDED DECEMBER 31, 2020

	2020	2019
	\$	\$
Operating activities		
Excess of revenue over expenses	7,885,504	2,928,108
Add (deduct) items not affecting cash		
Amortization	2,269,255	2,243,632
Amortization—other assets	77,033	178,563
Employee future benefits expensed	713,400	1,017,653
Change in unrealized (gains) losses on marketable securities	507,308	(337,636)
Losses (gains) on disposal of marketable securities	46,294	25,596
	<u>11,498,794</u>	<u>6,055,916</u>
Change in non-cash working capital items (Note 11)	285,003	1,314,757
	<u>11,783,797</u>	<u>7,370,673</u>
Financing activities		
Payout of previous mortgage (Note 6)	—	(5,441,000)
Proceeds from refinancing of mortgage (Note 6)	—	5,443,952
Repayment of mortgage (Note 6)	(1,088,796)	(891,864)
Contributions to employee future benefit plans	(1,181,800)	(1,072,100)
	<u>(2,270,596)</u>	<u>(1,961,012)</u>
Investing activities		
Net change in marketable securities	(4,319,777)	(4,172,055)
Additions to capital assets	(308,144)	(929,202)
Additions to other assets	—	(50,332)
	<u>(4,627,921)</u>	<u>(5,151,589)</u>
Increase in cash	4,885,280	258,072
Cash beginning of year as previously reported	3,031,510	2,773,438
Adjustment for change in accounting policy (Note 3)	302,859	—
Cash, end of year	<u>8,219,649</u>	<u>3,031,510</u>

Honours

Due to the COVID-19 pandemic, PEO postponed all of its 2020 awards presentations, including the Order of Honour, the Ontario Professional Engineers Awards and the G. Gordon M. Sterling Engineering Intern, President's, S.E. Wolfe Thesis and V.G. Smith awards. PEO celebrated the 2020 awards winners at virtual presentations in 2021.

ORDER OF HONOUR

The Order of Honour recognizes those PEO volunteers, including both professional engineers and others, who have made valuable contributions to the engineering profession. The 2020 and 2021 inductees into PEO's Order of Honour will be recognized during an online presentation in June 2021. These recipients are:

Companions

2020 - Paul Ballantyne, P.Eng., FEC
2021 - R.D. (Bob) Dony, PhD, P.Eng., CEng, FIEE, FEC

Officers

2020 - Edward Kai-Jee Poon, MAsc, MSc,
P.Eng., PMP, FEC
2020 - L. Brian Ross, P.Eng., FEC
2020 - Stephen Hong Tsui, M.Eng., CEng,
P.Eng., FEC

2021 - Roydon Fraser, P.Eng., FEC
2021 - Sean P. McCann, MAsc, FEC, P.Eng.
2021 - Helen Wojcinski, P.Eng., FEC, FCAE,
MBA, CMC

Members

2020 - Karen Chan, P.Eng., FEC
2020 - Brett Chmiel, P.Eng., FEC
2020 - Waguih H. ElMaraghy, PhD, P.Eng., FEC,
FCAE, FCIRP, FASME, FSME, FCSME
2020 - John Hazel, P.Eng, MBA, FEC
2020 - David Kiguel, P.Eng., FEC
2020 - Jim McConnach, P.Eng., CEng, FEC,
FIET, SMIEEE
2020 - Scott Schelske, P.Eng., FEC
2020 - Barry Westhead, P.Eng., FEC

2021 - Annabelle Lee, P.Eng., FEC
2021 - Stacey McGuire, P.Eng.
2021 - Pasquale (Pat) Scanga, P.Eng., FEC

G. GORDON M. STERLING ENGINEERING INTERN AWARD

Recipients of the 2020 and 2021 G. Gordon M. Sterling Engineering Intern Award, which celebrates professional leadership achievements of engineering interns and funds leadership development training, are also to be recognized at the June 2021 virtual ceremony. The recipients are:

2020 - Nazanin Omrani-Moghaddam, EIT
2021 - Shengdi (Sharon) Chen, EIT

ONTARIO PROFESSIONAL ENGINEERS AWARDS

The presentation of the 2020 Ontario Professional Engineers Awards (OPEA) was broadcast virtually on April 22, 2021. Co-presented by PEO and the Ontario Society of Professional Engineers, the awards program salutes Ontario engineers who have made significant contributions to the profession and their community.

The following awardees and project for 2020 were honoured:

Engineering Medal – Engineering Excellence

Goldie Nejat, PhD, P.Eng.
Professor and Canada Research Chair in Robots for Society, University of Toronto

Mike Southwood, BSc, P.Eng.
Chief Electrical Engineer, Eastern Power Ltd.

Engineering Medal – Management

Laura Conquergood, BSc.Eng., P.Eng.
VP Operations, Baylis Medical

Howard Goodfellow, PhD, P.Eng., FCAE, FEC
President and CEO, Goodfellow Business Enterprises

Engineering Medal – Research and Development

Pascale Champagne, PhD, P.Eng., DWRE, FASCE,
FEWRI, FCAE
Professor & Canada Research Chair in Bioresources Engineering, Queen's University

Jing Jiang, BESC, MESC, PhD, P.Eng., FCAE, FEIC,
FIET, FISA, FIEEE, FANS

Professor and NSERC/UNENE Senior Industry Research Chair, University of Western Ontario

Engineering Medal – Entrepreneurship

Jeff Westeinde, BESC, P.Eng.
President, Zibi Canada

Engineering Medal – Young Engineer

Yin Yu Rachel Zhang, P.Eng., CCE
Clinical Engineer, Children's Hospital of Eastern Ontario

Award for Engineering Project or Achievement

National Arts Centre Rejuvenation
Fast + Epp

PRESIDENT'S AWARD

The President's Award recognizes non-engineers who have demonstrated extraordinary support or promoted public awareness of the engineering profession.

The 2020 recipient of the award was Dr. John Mighton, founder of JUMP Math.

There was no award recipient for 2021.

S.E. WOLFE THESIS AND V.G. SMITH AWARDS

The S.E. Wolfe Award is presented to a licence holder who prepared an engineering report as part of their licensing requirements and was awarded the highest mark of those who became registered during the previous year.

In 2020, Bhavin Shukla, P.Eng., received the award for his engineering report, *Smart Grid to Cognitive Grid*. He received a mark of 98 per cent.

In 2021, the award was presented to Frederik Niemeyer, P.Eng., who received a mark of 91 per cent for his engineering report, *Engineering Technical Report for the Design of the Damp Axial Scrape Tool (Hydraulic)*.

The V.G. Smith Award is presented to an engineer who achieved registration during the previous year by completing an examination program and possessed the highest standing of those who were licensed that year.

In 2020, Yuanpeng Li, P.Eng., received the award for successfully completing a program of seven technical exams, with an average mark of 95 per cent for his top three exams.

In 2021, the award was presented to Sandeep Kumar, P.Eng., who successfully completed 10 technical exams, with an average mark of 94 per cent for his top three exams.





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