

PEG

SPRING 2019



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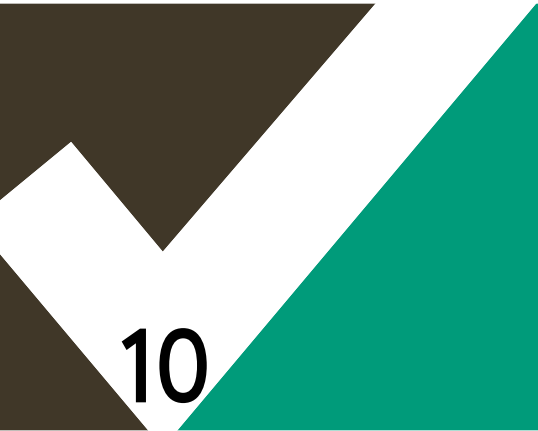
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PEG

VOLUME 3 | NUMBER 1 | SPRING 2019

ISSN 1923-0052

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The PEG (ISSN 1923-0052) is published quarterly—online—in the spring, summer, fall, and winter, by the Association of Professional Engineers and Geoscientists of Alberta.

The PEG's content relates primarily to APEGA, our statutory obligations, our services to Members and Permit Holders, and the professional development of Members. The magazine also celebrates Member and Permit Holder accomplishments in Professional Engineering, Professional Geoscience, and other areas.

The PEG is not a technical, peer-reviewed publication. Although we publish items about accomplishments in research, we **do not** publish actual academic or scientific papers and presentations, even in summary form.

The PEG does not accept advertising.

Opinions published in *The PEG* do not necessarily reflect the opinions or policy of APEGA or its Council.

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NOTICE



2019 Annual General Meeting

Friday, April 26, 2019 | 2 p.m.
TELUS Convention Centre | Calgary, Alberta
Luncheon 12:00 p.m. – 1:40 p.m.

Attendance Qualifies for CPD credit

apega.ca for more details.

In accordance with APEGA Bylaw 16(20) of the *Engineering and Geoscience Professions Act*, official notice of the 2019 APEGA Annual General Meeting is hereby given.



APEGA Council Election

Your Vote. Your Council. Your APEGA.

Have your say in how APEGA is governed.

The 2019 APEGA election runs from
Monday, February 11, 2019, at 9 a.m. to Thursday, March 14, 2019, at 4:30 p.m.

Visit apega.ca now to participate.



My Final Call to Action as APEGA's 99th President

BY **NIMA DORJEE**, P.ENG., FEC, FGC (HON.)
APEGA President

It's easy to be blasé about our professional roles. We act ethically, we perform our duties within our areas of training—and voila, the public is properly protected. Society, for the most part, moves forward. When we do this properly, there's no such thing as choosing to ignore codes, standards, and legislation. There are no shortcuts to success.

My bias is showing here, but by my reckoning, engineers and geoscientists play a disproportionate role in our march of progress. Bridges stay up, the bounty beneath our feet is discovered and put to good use, our shareholders smile. We hold our heads high, turn off our computers at the end of the day, and head home to be with our families and sleep the sleep of the just.

There's nothing wrong with all that. In fact, it encapsulates the beauty and power of self-regulation. Because we act professionally in our everyday lives, APEGA is well equipped to continue to serve the people of Alberta for another storied century. Member self-interest is channelled into the greater good. Kudos all round.

But is there more we should be doing? I think so. And that's the challenge I present to you, as my term as your President winds down. This is my last column in *The PEG*. Soon, I'll shift into Past-President mode, as the 2020 centennial of this wonderful organization draws near.

I have viewed my role as one of encouragement and leadership, rather than one of heavy-handed direction, especially when it comes to my relationship with members and permit holders. In every interaction we've had during my term, I have listened to you and also done my best to inspire you. I have shared information and ideas that dare us to stretch our imaginations beyond

what, on cursory examination, we think can achieve. I'm talking about the big picture and the moves we make now, as we bring an even better world into focus.

If you've been reading my words in this space, you'll recognize some common threads. In short, my column has been about our people: who we are, what we have, and how we can work together. I've written about how none of us succeed on our own, using as an example my own journey from refugee in India to professional engineer in Alberta. I've written about the need to develop our own engineering and geoscience communities, to develop new opportunities and connections, and to support each other. And I've implored you to think of Alberta's surplus of senior engineers and geoscientists, along with the regulatory excellence that buttresses them, as a provincial resource we should share with each other and the world.

Now, let's look at leveraging all this into the arena of universal responsibility. Let's start thinking of our duty to the public as something bigger than doing our jobs properly—and, dare I say it, bigger than our actual professions.

I am not suggesting that you aren't already giving back or serving the greater good in other ways. Some of you have earned enormous wealth, within and beyond engineering and geoscience, and I would never, ever minimize the impact that the labs, buildings, cultural enterprises, health facilities, schools, and other deserving projects you've supported have had. It's impossible to give you each individual recognition—I would miss many of you, which in itself reflects how prolific we are, when it comes to donating to good causes.

“ I HAVE LISTENED TO YOU AND ALSO DONE MY BEST TO INSPIRE YOU. I HAVE SHARED INFORMATION AND IDEAS THAT DARE US TO STRETCH OUR IMAGINATIONS BEYOND WHAT, ON CURSORY EXAMINATION, WE THINK CAN ACHIEVE. ”



Most of us won't have the opportunity to give millions of dollars to making the world a better place. We still have plenty to offer, though, no matter how much time or money we donate to worthy causes. Coaching your child's soccer team or serving meals for the local homeless shelter are profoundly important things, small as they may seem on the outside. And remember the APEGA Foundation, which tills the ground for future yields of engineers and geoscientists.

But what else? We have a responsibility to offer solutions, and we shouldn't limit ourselves to professional interpretations of those words. My call to action is not just about building, inventing, and mining things. It's about the impact and overall purpose of what we create, and it's about the bigger questions concerning the survivability of our planet, our institutions, and our infrastructure: better power storage, better information technology, affordable alternative energy, less societal disfunction. Add to the list as you see fit.

In our quest as professionals to find solutions, we're often called upon to use our skills in root-cause analysis. When you solve for the root cause, your success rate increases dramatically. This skill is needed everywhere, not just in the sciences. We need it in community development. We need it in education. We need it in business and various industries.

We are solution-seekers and solution-finders, and as such our value goes

beyond keeping the lights on and the oil coming out of the ground. Two major elections are coming up (not to mention the APEGA election, underway now). It may be too late to run provincially or nationally, but I implore you to participate. Ask the right questions. Support good candidates for good reasons. The public arena needs critical thinking, especially in a world that often looks at ignorance as a virtue and rails against expert opinion.

I do not believe one side or the other of the political spectrum has a monopoly on altruism. In our time, intolerance and selfishness are finding purchase on the left and the right. No matter what your own leanings are, you can be better than that. Alberta is often seen as some kind of redneck outpost, and current events, along with our reactions to them, are doing little to change that, especially after they've gone through the media filter and been reduced to Facebook memes.

I think we need to show the world that we can be pro-pipeline and pro-solar. We can simultaneously support the oilsands of Wood Buffalo and the windfarms of southern Alberta. We can seek solutions without destroying what we already have.

REAL-WORLD EXAMPLES

An honorary APEGA member many of you will have heard of is Calgary oil entrepreneur Jim Gray, OC, AOE. He's started something in his city that fits nicely into what I'm talking about, stemming from his Top 7 Over 70 Awards.

The Calgary and area awards program sprung from a pair of observations. All kinds of demographic groups, except seniors, are regularly awarded for their successes. At the same time, Mr. Gray noticed an explosion of new ventures among those who have reached or passed traditional retirement age. Wasn't

it time, he thought, to celebrate and encourage those late-career (or even post-career) successes and new directions? Top 7 Over 70, in partnership with the Calgary Seniors Resource Society, was born.

Mr. Gray did not stop there. The next step in this story is InterGen Canada, which unleashes what its website calls "an army of mentors and advisers" on companies that participate in its four-month accelerator program. Who are these mentors and advisers? Retired or soon-to-retire executives, of course.

InterGen also holds workshops, roundtables, and meetups—all geared towards connecting that senior and priceless resource I'm been talking about with younger entrepreneurs, their ideas, and their projects. I think we should all keep an eye on InterGen. And those of us in the senior category should look at InterGen as an example of what we can continue doing, when our more traditional careers are over.

Here's something else that ties into what I'm talking about. In 2008, Stanford Medicine in the U.S. founded the Center for Compassion and Altruism Research and Education. The centre, within the Department of Neurosurgery, addresses a need for research into what motivates us to do good things. It's also about cultivating good as a necessary part of societal and individual development.

That's amazing and encouraging: that being good is being promoted as a separate academic endeavour, worthy of being addressed as a medical matter. If medicine can promote altruism, why can't we? Why can't all professions?

So I'll end on that note. I hope that, during my presidency, I've managed to encourage you and inspire you. I know many of you have done exactly that for me. Thanks to all those who supported me, shared an idea with me, or shared a story with me. It's been a great ride.

Let's all start developing our next big idea. And let's all do our part to build a better world.

LINKS

[APEGA Foundation](#)

[InterGen Canada](#)

[Center for Compassion and Altruism Research and Education](#)

Questions or comments?

president@apega.ca

Demonstrate Professional Leadership: Vote in APEGA Election 2019

BY **JAY NAGENDRAN**, P.ENG., QEP, BCEE, FEC, FGC (HON.)
APEGA Registrar and Chief Executive Officer

Another year has zipped past in the life of APEGA, and the next cycle of governance is nearly upon us. We've been here many times before. In fact, the self-regulation of engineers and geoscientists has been proving itself in Alberta year after year, for almost a century, so thank you very much for your support during your chapter (and mine) in this storied history.

We have much to be proud of, and I am confident that there's at least another century ahead for APEGA. However, we cannot take the privilege of self-regulation for granted—we need to continuously earn the public trust.

The public and some governments have less faith in institutions like ours than they once had. Those with the authority to regulate, like us, are questioned often, so our processes need to be strong, our answers solid, and our decisions thorough and defensible, all in the public interest.

A century of service means a continued commitment to public safety. Being prepared and sustaining the public trust comes from strong and thoughtful leadership at the Council table.

That's why your vote matters and that's why I'm encouraging you to use it now, during APEGA Election 2019. Our collective wisdom—the wisdom that APEGA's staff and I rely upon for guidance and governance—are necessary to set us up for a second successful century of protecting the public interest, so let's do this properly.

Through surveys, we know why many of you have decided against voting in the past. A major reason is a lack of understanding of what exactly it is that Council does. Another reason is a lack of knowledge of who

the candidates are and what they represent. You don't know these people, so how can you reasonably choose between them?

The good news is that we've addressed each of these concerns. The election and the way we present it have improved, year upon year, based on the feedback you've provided. You can find out more about this in the election and candidate coverage in this *PEG*, which we've divided into three sections, starting on page 10: Why Vote? How do I Decide Who to Vote For? How do I Vote?

The first part explains what Council is and what it does for you, your professions, and, most importantly, the people of Alberta. Council develops and drives a strategic plan. It oversees the association's resources to make sure they are used responsibly. By directing me and receiving my reports, Council provides oversight of the operational side of the business.

Think of Council's role as deciding what the outcomes of our work should be. Council tells me what it wants APEGA to accomplish, then APEGA's staff and I figure out how to make it happen. Under the *Engineering and Geoscience Professions Act* (the *EGP Act*), Council is responsible to the government to enforce the Act. Hence, Council's role is a significant one.

To execute properly, Council counts on the yearly replenishment of fresh perspectives through the addition of bright and thoughtful people on Council. Selecting those people is where you come in. Your vote is important, so we want you to make informed decisions. That's why we post videos and other information about candidates online. Personal



Make yourself an APEGA election champion. Let your professional peers know what the candidates are saying. Direct them to information on the issues APEGA faces. If you're comfortable doing so, tell them who you're voting for and why.

statements appear on apega.ca and in this edition of *The PEG*. The statements this year are short and direct. They're less about what candidates have done and more about who they are now. We've had candidates answer identical questions, too, so you can find out even more about their approaches and positions.

We're offering two chances to meet the candidates in person. If you have the time in your schedule, considering attending one of our Coffee & Conversation events. Dates are February 20 in Edmonton and February 27 in Calgary, at our office in each city.

Of course, in this digital age there are other ways to connect, too. Look for your candidates on social media. Ask them questions. Post comments on their discussion strings.

We've improved the voting system itself, too. It's better and simpler, this year. You use your regular login procedures in our Member Self-Service Centre. No unfamiliar starting point or designs. If you do run into trouble, you can contact our 24-hour help line.

No matter what I write or say, some members won't vote. Empathy and lack of engagement exist in any society and any organization; APEGA is no different.

Perhaps you're thinking that my call to action makes a lot of sense. You agree that your Council makes important decisions. You agree that the people who serve in this way need to be bright, competent, and thoughtful. You see that APEGA is making it easy to get to know the candidates and cast your votes.

Still, what does one person's vote mean or change? How are you making a difference?

I understand the argument. It reflects one of the paradoxes of any democratic system. People, in our case members, have a collective role in deciding who governs them. Yet individually, a single person rarely makes a difference. Try naming an election decided by a single vote.

I have a response to that. Make yourself an APEGA election champion. Let your professional peers

know what the candidates are saying. Direct them to information on the issues APEGA faces. If you're comfortable doing so, tell them who you're voting for and why.

It's interesting how these columns turn out. At the outset, I was going to tie the election to the importance of leadership. I was going to talk about styles of leadership, individual leadership journeys (including my own), and how all of us, as professionals, are obligated to demonstrate leadership when the situation demands it. All of that was going to happen much earlier in this article than now.

Here we are at the end. I ask that you demonstrate your professional leadership now. Vote, be proud that you voted, and encourage others to vote. You have until Thursday, March 14, at 4:30 p.m.—but don't be afraid to act early!



LINKS

[Vote Now](#)

[Coffee & Conversation Event](#)

[APEGA Conference and AGM](#)

Questions or comments?

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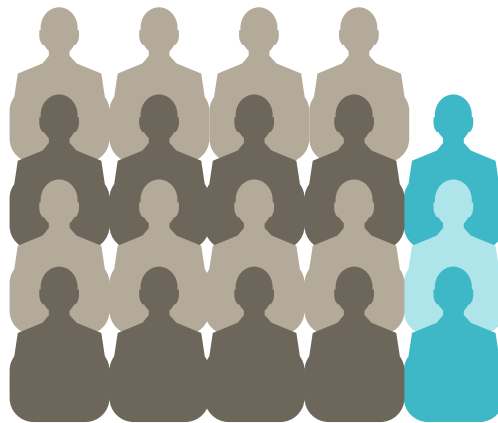
Why Vote?

Everything you do as a professional member is informed by a **COUNCIL** that oversees the APEGA professions. Council is a critical element in maintaining and enhancing self-regulation, and your vote demonstrates that you want the right people making decisions on your behalf.

APEGA ELECTION 2019 continues until March 14. Will you cast an informed vote? The content that follows should help get you there.



APEGA Council Election



APEGA's Council is made up of **16 professional members** and **3 public members**.



All professional members are elected by you!



All public members are appointed by the Government of Alberta.

Council's Role

"[To] manage and conduct the business and affairs of the Association." -Section 12(2), the Engineering and Geoscience Professions Act

To ensure responsible use of resources to effectively execute APEGA's strategic plan



To develop and drive APEGA's strategic direction

To provide ongoing oversight of APEGA's function and activities



To make decisions that affect the professions and the membership



To provide financial oversight

How do I Decide Who to Vote For?



You can learn more about candidates and decide which ones you would like to see on Council. ►

1. Candidate materials



Online now

Personal statements start on page 13

2. Follow APEGA and candidates on social media



3. Networking event

Coffee & Conversation

Edmonton: February 20

Calgary: February 27

CANDIDATES FOR PRESIDENT (2020-2021 Term) 3 running



You have up to 1 vote
Most votes: President-Elect
2nd-most votes: Vice-President



CANDIDATES FOR COUNCIL (Term Beginning 2019) 10 running



You have up to 4 votes
Elect 4



VOTE NOW

Polling began
February 11 and
continues until
March 14



Your Next APEGA President

The President of APEGA for the 2019-2020 term was elected last year, in APEGA Election 2018. Your incoming President officially advances from President-Elect to President at the APEGA Annual General Meeting, April 26, 2019, in Calgary.

You don't cast a vote for the 2019-2020 President. Instead, you vote for a President-Elect, who advances to the presidency next year. The information on this page is presented as background only.

George Eynon, P.Geo., FGC, FEC (Hon.)

Personal Statement

You only need to know a few things to understand me.

First, that I played rugby from an early age for 25 years. It is the consummate team sport, so I cannot help it—I am a team player! (Though I do enjoy cycling; it keeps me fit and gives me some time to think.)

Next, that my 45-year wide-ranging career affords me a unique, 360-degree, global perspective of our professions in operation.

That teaching is part of my make-up by training and predilection: as a high school teacher, TA at graduate school, consultant, oil and gas industry geologist, and regulator. Currently, I mentor several younger people, teach short courses for industry, classes, and workshops through the Haskayne School of Business and School of Public Policy, and speak at technical sessions and conferences. It's the age-old maxim of needing to "pass it forward."

As a life-long learner, I read a lot to keep up with all the things that interest me, and depend on good research and verified facts. I don't take anything on blind faith—show me your evidence! However, I don't always find the time to read everything I want to, as I'm a chronic serial volunteer (Scouting, PTAs, technical



societies, United Way, Drop-in Centre, and my professional association).

Lastly, while I've always been a stickler for proper use of language, I've also become a self-confessed governance and regulatory nerd as well—serving on my technical societies' boards, as an ERCB Board Member—and on APEGA Council.

George Eynon, P.Ge., FGC, FEC (Hon.)

Question Responses

What does self-regulation mean to you as a member of APEGA?

It means “professionalism by peer review”—the responsibility of regulating ourselves! It is the privilege of using our knowledge and skills in the best interests of society, given our training and licensure. Our registered peers maintain the status of our P.Eng. and P.Ge. designations, together with APEGA staff ensuring a high level of professional ethics, conduct, and standards of practice.

Why are you running for Council and why do you think it's important to serve in this way?

I ran for several reasons. First, a real pride in being a P.Ge. and the desire to give back to my profession in some way. Second, I have a deep personal interest in both proper regulation and good governance. Third, I bring considerable direct governance and regulatory training and experience to the table, having served with the ERCB and AER, and on numerous technical society and business-related boards.

What challenges do today's engineers and geoscientists face?

There are several. First, continuing economic distress in Alberta's economy that directly affects our members: thousands unemployed or under-employed, or unable to find work after graduating. Second, offshoring of engineering further contributes to unemployment here. Third, rapid advancement of technology requires continuous educational upgrading and retraining, which puts an additional financial burden on professionals. Finally, a complete lack of public knowledge of APEGA: about who we are, what we do, or why we do it!

What is the value of professional membership in APEGA?

The most important is that membership confers the legal right to practise as engineers and geoscientists, recognizing our training and skills. We regulate ourselves—ranking us with lawyers and doctors. There is also a degree pride in having the P.Eng. or P.Ge. title designation after our names. Society benefits, too: we practise our professions in the public interest under a *Code of Ethics* and against practice standards and guidelines.

Tim Joseph, P.Eng., PhD

Personal Statement

As a professional engineer, educator, and strategic leader in volunteer organizations for 20 years, most recently serving APEGA as a Councillor and the Vice-President, I continue to advocate for transparency, ethical honesty, empathy, knowledge enhancement, and courage to change. With two decades of governance, fiduciary, membership and outreach volunteer activity, I have heard the concerns of APEGA members.

Albertans are aware of APEGA—but largely unaware of what engineers and geoscientists actually do. I will move APEGA forward to better communicate to Albertans, especially in trusted assurance of those licensed under APEGA for services.

Our 2020 Centennial places APEGA under the spotlight. APEGA must clearly demonstrate the highest standards of its members to the public. Members need to find value in volunteering: branch activities, statutory boards, and running for APEGA Council. I will commit to moving APEGA to deliver on value-driven volunteering and participation.

APEGA members continue to find CPD challenging, especially formal activity. I will commit to moving APEGA forward in establishing CPD opportunities directly tied to members' discipline focuses.

In an era when the viability of self-regulation in Canada is questioned, a priority is moving the *EGP*



Act regulatory changes through approval to assure APEGA's continued relevance as a self-regulator. I will commit to moving APEGA towards being a stronger, transparent regulator.

I am seeking your support and faith to move APEGA forward. I value your trust, I will make the time and the commitment needed, and I look forward to the challenge and change.

Tim Joseph, P.Eng., PhD

Professional Highlights

- Recently appointed as Associate Dean (Student Conduct) for the Faculty of Engineering at the University of Alberta, meaning he is responsible for all discipline decisions for the more than 6,000 engineering students attending the university
- Awarded the Distinguished Service Medal from the Canadian Institute of Mining, Metallurgy and Petroleum in 2011 for his contributions to the global mining industry and to mining engineering education
- An expert in mine equipment, having a principal role in the innovative design of a number of major pieces of mining equipment and delivering industry PD training programs worldwide on mastering mining operations and decisions
- Experience on APEGA Council, 2017 and 2018, including current Vice-President and service as chair of the Policy & Standards Task Force

Question Responses

What does self-regulation mean to you as a member of APEGA?

Self-regulation is taking responsibility for your work and the work of others, drawing on training and experience as a licensed professional. It is about ensuring quality of work in the protection of all exposed to that work, and holding those accountable in delivering such work. It is as much an ethical and personal responsibility as it is an adherence to the *EGP Act* in our commitment to protect the public. APEGA may take the official compliance role as the self-regulator, but each of us is also responsible.

Why are you running for Council and why do you think it's important to serve in this way?

It is one thing to talk about taking a leading role, it is another to act on it. Having experienced APEGA as a volunteer, a Councillor, and the Vice-President, it is time for me to step up and lead. APEGA is a multi-faceted, complex, member-based organization; it requires strategic leadership with foresight. We must be mindful of the implications of the issues of the day and also of what the future will hold.

What challenges do today's engineers and geoscientists face?

Engineers and geoscientists, particularly in the Alberta resource sector, face challenging economic times. Opportunities are slim, but collaboration may be a vehicle to navigate depressed markets. Members have suggested that APEGA should host forums for discussions on innovative collaboration. Feedback provides valuable direction for APEGA in this area.

What is the value of professional membership in APEGA?

The value of professional membership in APEGA is hard to see for many members. If you are not involved as volunteers at branches, on statutory committees, in outreach, or as Councillors, APEGA is merely a collector of annual fees and your CPD reporting. Benefits like insurance and travel discounts do not cut it. APEGA needs to expand the variety of opportunities for direct involvement for the value proposition to be realized.

Shawn Morrison, P.Eng.

Personal Statement

Shawn was born and raised in Edmonton. After graduating from Bonnie Doon High School, he started working as a process operator at Celanese Canada and continued working there during university. He obtained a bachelor of science degree in mechanical engineering in 1980 from the University of Alberta.

After graduation he worked for Canadian General Electric, followed by Dillingham Construction and then Syncrude Canada Ltd. in various roles in Fort McMurray. There, he started volunteering with APEGA's Fort McMurray branch and for the community.

A more challenging career awaited in Calgary—and more APEGA opportunities. Serving on Council was a humbling experience Shawn enjoyed. Volunteering for APEGA committees and events identified the incredible depth and breadth of our professions. The volunteer bug had bitten, and Shawn was elected to a second APEGA Council term. Among his duties were serving on at least three committees a year. The most rewarding was the Finance Committee, which Shawn chaired for two years. Being fiscally responsible while providing regulatory activities and member services is a challenging task for APEGA staff.

Technical opportunities and challenges led Shawn to volunteer for the American Society of Mechanical Engineer (ASME), PVP Division, D&A Subcommittee.



Starting his own consulting firm during this time resulted in some amazing opportunities for work and technical knowledge growth. Travelling to world-class manufacturing locations and interacting with the companies that provided the very complex equipment for many mega projects was both rewarding and challenging.

Shawn Morrison, P.Eng.

Professional Highlights

- More than 38 years' experience in engineering and project management
- Director of Mechanical Engineering and CEO of M5 Engineering Inc. in Calgary
- Active APEGA volunteer, volunteering at Life Member Events, New Member Induction Ceremonies, and Iron Ring Ceremonies
- Experience on APEGA Council, 2000-2003 and 2008-2011, including service on Finance Committee and Governance Committee

Question Responses

What does self-regulation mean to you as a member of APEGA?

Self-regulation is a privilege. It means that our professions have the right for self-determination and governance. We can shape and control how the professions interact with and protect the public. This allows me to practise engineering in an environment that I choose.

Why are you running for Council and why do you think it's important to serve in this way?

The opportunity to lead our professions would be a challenging and humbling experience. APEGA members help design and create amazing technical advances. We help implement concepts to enrich the lives of others. Leading such an organization is a challenge that I would eagerly accept, and I would work hard to fulfill the role's requirements.

What challenges do today's engineers and geoscientists face?

The pace of change that technology brings is incredible. How we keep up with and lead those technological changes will be daunting. Ensuring our natural resources are developed responsibly and are sent out for fair market value is an immediate concern. Transitioning the future to other sources of energy, integration of artificial intelligence, robotics, advances in biomechanics are some of the other challenges that I see.

What is the value of professional membership in APEGA?

APEGA allows me to practise my profession in a self-governing environment. One can choose to practise engineering and geoscience in a job-type role or as an adventure outside the norm by providing a consulting service. The public recognizes that professional members are held to a high standard, and we are compensated appropriately for our efforts.

John Van der Put, P.Eng.

Personal Statement

Family

Drawn to the mountains of Alberta, John moved to Calgary in 1990, where he and his wife, Kathryn, raised their two daughters. He enjoys golfing and hiking in the mountains in the summer and cross-country skiing in the winter.

Professional

With 35 years of accomplishments in upstream oil and gas and pipeline development, John has been consistently recruited to be at the pointed end of the spear on high-risk, complex business challenges. Sometimes a constructive disrupter, he is known for both challenging and unifying teams that deliver above expectations. Committed to knowledge sharing, John is valued by his peers as a teacher and mentor—contributing to their professional development.

APEGA

The highlights of John's over 25 years as an APEGA volunteer were his two terms on Council, which allowed him to make a direct contribution to our association by addressing key issues affecting our professions—among them facilitating professional mobility, developing a continuing professional development system, improving the registration of geoscientists, and implementing an accord with technologists. John also served as chair of APEGA's Audit and Finance committees, helping ensure our association's financial integrity. John has also enjoyed mentoring and student outreach.



Volunteering

John devotes a significant amount of his time and energy to organizations that focus on human development and technological advancement. Aside from APEGA, examples of his volunteer work include the University of Athabasca Governing Council, the University of Calgary Centre for Innovative Technology Industry Advisory Board and, as an official, Calgary Track & Field.

John Van der Put, P.Eng.

Professional Highlights

- Energy industry executive with 35 years of experience, whose accomplishments span the Americas in upstream oil and gas and pipeline development
- Extensive knowledge of process engineering and project executive leadership
- Contributor for more than 20 years to boards focused on human development and technological advancement, including Athabasca University Governing Council and, most recently, the Engineering Research Advisory Board of the University of Calgary
- Experience on APEGA Council, 2007–2010 and 2012–2015, including service on the Discipline Committee; the Professional Development Committee; the Acts, Regulations & Bylaws Committee; the Audit Committee; and the Finance Committee; and in mentoring and student outreach

Question Responses

What does self-regulation mean to you as a member of APEGA?

Self-regulation is the privilege the province grants members of APEGA to determine what it takes to practice engineering and geoscience in Alberta, and ensure that our members are practicing competently, ethically, and professionally to protect the public. By being diligent in zealously upholding professional standards, our members will enjoy the privileges and benefits that derive from securing the public's trust. As well, the ability to manage our own professional association allows us to maximize the value our members can derive from membership.

Why are you running for Council and why do you think it's important to serve in this way?

I have worked as an APEGA volunteer ever since first becoming a member over 25 years ago because I believe in giving back to the profession that has given so much to me. Having served two terms on Council, I am running for President at this time because I can leverage my management skills and knowledge of our association to help make the renewal of our legislation a success and to improve the value of APEGA membership.

What challenges do today's engineers and geoscientists face?

APEGA's members today face very challenging times. The energy industry continues to be on the ropes, which impacts the province's economy more broadly and puts pressure on our members to reduce project costs—while never compromising on safety and continuing to strive to achieve more and more ambitious sustainable development objectives.

What is the value of professional membership in APEGA?

The principal benefit of APEGA membership is the opportunity to be a licensed practitioner of engineering or geoscience in Alberta and to enjoy the value that the public ascribes to your professional designation. Our association ensures that the standards of the engineering and geoscience professions are upheld and that its members have the tools to practice competently so that we can successfully contribute to societal well-being and ensure public safety.

Iyub Adam, P.Eng.

Personal Statement

Due to the struggle in oil and gas industries, thousands of our engineers have lost their jobs, and many graduate engineers and geoscientists have not been able to enter their chosen professions.

We should note the recent challenges to self-regulation elsewhere in Canada, including instructions to APEGA's counterparts to the west, EGBC, from the Government of B.C. Thus, self-regulated associations such as APEGA should maintain the confidence of the public and the government.

During these complicated times, APEGA must amplify membership services to help members. We must develop closer relationships with other organizations that serve members.

In today's world, engineering and design is often outsourced and only the final work is done in Alberta. So, one of the most important issues facing APEGA today is the challenge of regulating in a period of outsourcing and off-shoring. We need to ensure consistent regulation of technical work in engineering and geoscience, regardless of place

We have a duty to participate in the public debate on the issues that involve our professions, helping society make the right decisions.

APEGA must provide a forum for all members to be heard and engage in discussions with the



public to better serve our communities and our province.

I look for your support and look forward to engaging you in discussions on these and other subjects that concern you and our association.

Iyub Adam, P.Eng.

Professional Highlights

- More than 20 years of experience in engineering, design, and project management of power projects, including 10 years of leadership experience as engineering manager/team lead in ABB Inc.
- Obtained knowledge of the *EGP Act* and its administration through the lens of a permit holder at ABB, and knowledge of working within organizations through IEEE and others
- Robust awareness of case management, document management, and investigation practises within the power industry, considers themselves a strong and innovative team player

Question Responses

What does self-regulation mean to you as a member of APEGA?

Self-regulation means that the association should fulfill its obligation to meet the public safety and government interest. It's key to the success of APEGA. Also, APEGA should be transparent in all its activities and maintain public confidence.

Why are you running for Council and why do you think it's important to serve in this way?

In today's environment, engineering and design work is often completed overseas—outside of APEGA's regulatory authority—and only the final work takes place here. So, one of the most important issues facing APEGA is the challenge of regulating the professions in an era of outsourcing and off-shoring. We need to ensure consistent regulation of technical work in engineering and geosciences, regardless of where the work is done. I would work with the association to try to limit outsourcing and get more jobs for members.

What challenges do today's engineers and geoscientists face?

Engineers and geoscientists should meet their due diligence and overcome cost and time constraints. Without the influence of management and power, engineers and geoscientists should perform their work for the best interest of the public.

What is the value of professional membership in APEGA?

Engineers and geoscientists design a future world. They work on some of the most complex engineering and geoscience projects in Alberta. They provide technical solutions to some of the most challenging problems society faces. We have a duty to participate in the public debate on the issues that involve our professions, and to inform the public and elected officials of options so that they can make the right decisions to serve Alberta's interests.

Ali Chamanara, P.Eng., PhD

Personal Statement

As a Council member, I will bring to the table my substantial experience in strategic leadership, process and risk management, and operational excellence, gained while working in technical and leadership capacities for world-class enterprises including Shell, Rio Tinto, and CNRL.

Throughout my career, I have leveraged academic advancement with applied skills, remaining connected with academia by guest lecturing at the University of British Columbia and supporting research at the University of Alberta. I am committed to engaging prospective members from university through the member-in-training period.

Fourteen years ago, in a remote field in the Middle East, my job required me to communicate with an engineer from Denmark through an interpreter. I realized not speaking English was a critical gap in my career development. I left everything behind to come to Canada to learn English. My aspiration to grow led me to begin my doctorate at the University of Alberta while working at Rio Tinto, and then Shell. I recognize there are many members who share a similar journey, and I hope to contribute to the role that APEGA can play in helping newcomers close gaps in their competencies as they integrate into our professional and social communities.



My wife, Sarah, and I started our family in Fort McMurray before moving to Calgary. We welcomed our first son, William, last year, and we are expecting our second son in March. We are both committed to giving back and believe we each have a responsibility to build a better future.

Ali Chamanara, P.Eng., PhD

Professional Highlights

- Lead engineer in mine engineering at Canadian Natural Resources Limited, leading a large team based in Calgary and at Muskeg River and Jackpine mines
- Active supporter of advanced education, giving guest lectures at the University of British Columbia and supporting research at the University of Alberta with a specific focus on applied skills
- Advocate for diversity and inclusion as a building block of strategic strength in our professional and social communities

Question Responses

What does self-regulation mean to you as a member of APEGA?

Self-regulation means members of a profession taking on self-governing responsibilities delegated by government to protect the public's best interest. It is important to have an effective and well-governed self-regulating body, supported by a healthy and respectful relationship with government. APEGA has done well with its relationship in the past with government and its members, and as a member of Council, I will continue to promote and be an advocate for the organization.

Why are you running for Council and why do you think it's important to serve in this way?

Many bright professionals have played key roles in my career development by providing me with opportunities, mentorship, and coaching to get me where I am today. It is now my duty as a professional member to give back and to offer my unique, global skillset, vision, and voice on Council. It is important to serve on Council to play an active role in shaping the future of our association and to make a positive impact in our professional community.

What challenges do today's engineers and geoscientists face?

Our immediate challenge is to continue to manage the economic downturn that is impacting professionals, permit holders, APEGA, and governments. When companies cut costs, governments respond with their own measures. This results in economic uncertainty for families, governments, and businesses across Canada. APEGA and its members must continue to respond with innovative solutions, while maintaining high levels of due diligence, safety, and ethics.

What is the value of professional membership in APEGA?

APEGA professional membership represents a significant investment in our education and training. APEGA members dedicate their lives to making a difference by building strong and inclusive communities. APEGA is our professional home and we each belong to this family that supports our work, education, and professional development. Professional membership in APEGA brings public trust and confidence in our work as members serving the public's best interest.

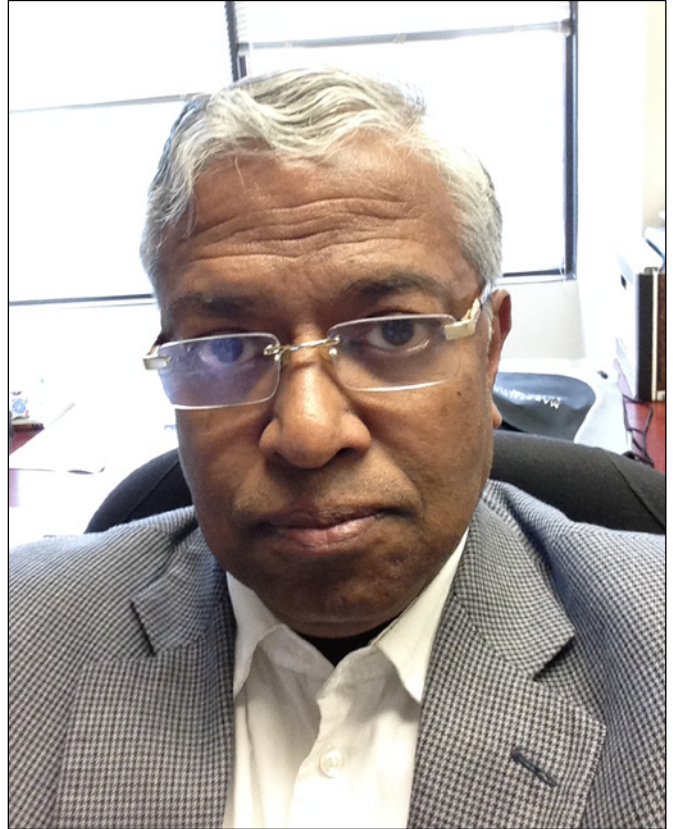
Swapan Das, P.Eng., PhD

Personal Statement

I have been a proud member of APEGA for over two decades and feel that this organization can do more to bring forward the work members are doing professionally to improve the quality of life and environment in Alberta and worldwide. We are 60,000 strong—a group of highly educated professionals with diverse educational and cultural backgrounds. It does not seem right that APEGA should be oblivious and succumb to external pressures on our livelihoods, most of which are political and created by vested interest groups.

APEGA members are working hard every moment to improve processes and technologies for a better world. With such a huge talent pool in APEGA, we need to use facts and figures to educate people, mostly the youngsters, about reality, so that they are aware and are not emotionally blackmailed. This is not about taking a side but about bringing out the truth.

Our CPD system needs to be made more effective and relevant. It should not be about just checking boxes. The current economic situation in Alberta has forced many of us into survival mode, working in gas stations or doing odd jobs. We deserve a reprieve and should not be led to arbitrary courses for fulfilling our CPD requirement.



APEGA needs to break the status quo. Lost membership may be a slippery slope for APEGA.

Part of the APEGA vision is to instill pride in Members. I will raise this in Council as a priority.

Swapn Das, P.Eng., PhD

Professional Highlights

- 34 years of experience in the oilpatch and has mentored and trained many junior engineers
- Vice-President, Reservoir Productivity Management, at Value Creation Inc., Calgary
- Has his PhD from the Department of Chemical and Petroleum Engineering at the University of Calgary (1995)

Question Responses

What does self-regulation mean to you as a member of APEGA?

Being professional members of APEGA we all work with proper due diligence, following standards of practice and applying technical skills gained through accredited educational institutions and personal work experience. Continued employment, growth, and customer satisfaction are indicators of our work as self-regulated professionals.

Why are you running for Council and why do you think it's important to serve in this way?

I believe APEGA can and needs to do more for members. I have talked to many members, and I hear complaints that APEGA is a money grab and not focused on member welfare. I will raise this issue as a member of the council. If needed, I will strive to be elected to the executive—a prerequisite is serving on Council for at least a year.

What challenges do today's engineers and geoscientists face?

The technical challenges are the same, and in general professional members are self-driven for improvement all the time. It's the social challenge on industry. Survival of Alberta's industry is the key challenge.

What is the value of professional membership in APEGA?

For members with private practice and others who need to stamp and certify their work and others' work, APEGA membership is of utmost importance. Many practising engineers, who usually work under APEGA members, do not get much value, other than nice-to-have or for a situation that may arise. In many cases it's not a requirement for the job. Having a P.Eng. on the business card should bring pride, which is fading away with all the lost engineering jobs in Alberta. In my personal discussion with many members the question that came out is, "Is it worth it?"

David Johnson, P.Ge., PhD

Personal Statement

I seek your support in running for Council. I am a geoscientist with more than 35 years of professional geoscience experience as an explorer, a research scientist, a consultant, and an entrepreneur. I have practised in the petroleum industry in Alberta, the Canadian frontiers, and petroleum provinces around the globe.

I am an analytically oriented, and a lateral to out-of-the-box thinker, who is inclined to take on difficult challenges. I see professional self-regulation as a trust granted by the people of Alberta. I believe in the kind of strong governance that recognizes that responsibility lies with individuals, and that policy provides a framework for channeling human endeavours to constructive ends.

I see legislation as structure in the fabric of society and recognize that a good cloth needs to be: flexible while providing structure; able to breathe while providing protection; protective while not chafing.



David Johnson, P.Geo., PhD

Professional Highlights

- Geoscientist with more than 30 years of global, Canadian frontier, and Western Canadian exploration and production experience in roles of progressive responsibility with super-majors, majors, and independents, including the leading of teams to significant discoveries in Canada and China
- Combines technical and operational leadership with a proven ability to deliver results, drawing on core strengths that include a passion for geoscience, exploration, project management, and risk assessment
- Currently is a senior adviser with Petrel Robertson Consulting Ltd., focusing on helium and natural gas in Alberta, and international opportunities

Question Responses

What does self-regulation mean to you as a member of APEGA?

The engagement of geoscience and engineering in private, community and commercial endeavors has the potential to create complexity that often requires the kind of good-judgement which falls beyond the scope imagined by any set of rules. Self-regulation and the ability to use good judgment are privileges granted to geoscientists and engineers by the people of Alberta through the auspices of APEGA.

Why are you running for Council and why do you think it's important to serve in this way?

I believe geoscientists need a voice on Council. As a regulatory body, APEGA has a pivotal role among government, industry, and professional practice. Council sets direction, develops policy, ensures resources, and provides oversight to APEGA. Geoscience representation on Council is low; currently Council has the minimum of two geoscientists, as mandated by the *EGP Act*, and one is stepping down this year.

What challenges do today's engineers and geoscientists face?

I believe the next three years will be a period of increasing change, as geoscientists and engineers adjust to the demands of industries reconfiguring to face the political and economic forces of Alberta's markets. Professionals can anticipate being caught between an economic rock and a regulatory hard-place as margins get thinner for majors, minors, and micros, and governments face increasing accountability. These pressures will be further compounded by attrition within a highly skilled workforce, which is confronting the demand for increased technical innovation, while coping with demographic shifts and economic downturns.

What is the value of professional membership in APEGA?

Professional geoscientists and engineers enjoy the value of government-sanctioned regulation by a forum of their peers. This value is expressed in the self-determination engineers and geoscientists have in developing policies and managing the organization which oversees the behavior of their professions.

Geoffrey Kneller, P.Eng.

Personal Statement

APEGA will soon be recognizing 100 years of service to Albertans and our professions. I want Alberta engineers and geoscientists leading the way for another 100 years of economic development in our province, and I'll work toward that by serving you on Council.

Albertans depend on access to safe, cost-effective engineering and geoscience services, and APEGA's Council must collaborate with our next provincial government to pass a new act with the regulatory tools we need to support public safety. Through regulatory experience as a volunteer chair of APEGA's Enforcement Review Committee, I've seen how important it is to work with the province to update our legislation, so that together we can discourage unlicensed, unregulated, and unsafe practice in Alberta.

I'm currently a professional engineer and a Responsible Member for R.J. Burnside & Associates Ltd., consulting on municipal infrastructure projects. I have the experience to contribute from professional practice across several Alberta industries: oil and gas, high tech, public service, and engineering consulting. Being an APEGA member has given me fantastic career opportunities, including providing Albertans with shelter while we recovered from the 2013 flood, developing affordable housing for the most vulnerable in our province, and leading major infrastructure projects to keep our communities



growing. I also offer 22 years of experience in leadership, planning, and public relations, developed as a Canadian Forces reservist.

Reach out on LinkedIn, Twitter, or email if you want to discuss how we, together, can make sure APEGA members lead Alberta's next century of economic development.

Geoffrey Kneller, P.Eng.

Professional Highlights

- Senior engineer specializing in municipal and land development projects, with more than 20 years of engineering experience in oil and gas, high-tech, and public-sector municipal engineering
- 22 years' experience as a Canadian Armed Forces Reserve Force Officer providing planning, leadership, training and public engagement for cadet programs in Southern Alberta Volunteer
- Chair of the APEGA Enforcement Review Committee, providing guidance to Council and administration on the enforcement of title and practice provisions of the *EGP Act*

Question Responses

What does self-regulation mean to you as a member of APEGA?

From my experience as an APEGA volunteer contributing to self-regulation, I've seen how easy it could be to lose this privilege. Our neighbours in British Columbia have been faced with self-regulation challenges this year, and it's taken an organized effort by their Council and membership to open a dialogue with their provincial government on new legislation. APEGA must continually demonstrate to Albertans that we stand up for public safety—otherwise, self-regulation could slip away.

Why are you running for Council and why do you think it's important to serve in this way?

I'm running because it's important for engineers and geoscientists to lead the way on Alberta's economic recovery, and I think serving on Council is the best way I can contribute to that goal. I've always believed it's important to serve and to contribute my experience: in professional practice, as a Responsible Member, as a reservist, and as a volunteer serving as the chair of APEGA's Enforcement Review Committee.

What challenges do today's engineers and geoscientists face?

We need to get more members of Alberta's talent pool of engineers and geoscientists back to work, so they can contribute to economic recovery. We all know friends and colleagues who have been out of work and recent grads who can't find a first job in this economy. APEGA can address that challenge by working to pass a new act with tools to enhance public safety and discourage unlicensed, unregulated competition in Alberta.

What is the value of professional membership in APEGA?

I've had a lot of opportunity to ponder that question while mentoring new members joining our professions. Ultimately, the value of becoming a professional member is a win-win: our members get access to opportunities to build exciting careers in engineering and geoscience; and Albertans benefit from the safe, cost-effective engineering services we need to develop the infrastructure our economy requires to keep moving ahead.

Jonathan Matthews, P.Eng.

Personal Statement

I feel a deep sense of responsibility to work collaboratively to seek out, develop, and deliver solutions that will enable a better balance between the effects of human activities, societal well-being, and the environment.

I firmly believe we need to adapt to use natural resources more wisely while deploying innovative technologies that mitigate societal impacts. We also need significant societal changes to deliver true sustainability. Within this context I firmly believe APEGA is especially well positioned to enhance and facilitate development and deployment of solutions that will reduce our impacts on the soil, water, and air, while still harnessing and distributing the affordable energy so critical to comfort and economic well-being.

Our APEGA mandate is to make ethical and skilled decisions that protect and serve the public. It seems self-evident that our 60,000-plus members have the potential to punch above our weight in shaping the future and brightening the prospects of future generations through courageous leadership in innovation. On this front I am highly motivated to work with all APEGA members to create a critical mass of professionals



so that we can advance in a more coordinated and distinctive manner.

Jonathan Matthews, P.Eng.

Professional Highlights

- Proven track record in conceptualizing, developing, and deploying technologies in the resource sector that enhance sustainability and respond effectively to stakeholder concerns
- Offers exceptional skill in ideation, collaboration and engaging communications to build trust
- Currently the Innovation & Collaboration Advisor/President at Magpie Consulting Inc. in Calgary

Question Responses

What does self-regulation mean to you as a member of APEGA?

Self-regulation provides the best environment to effectively regulate engineering and geoscience while maintaining flexibility to evolve and harness the full creative potential of Alberta's geoscience and engineering community. By self-regulating we can more effectively and efficiently adjust to meet societal and member needs, while never losing sight of our core mandate to safeguard those aspects of public safety and well-being served by our practitioners in Alberta.

Why are you running for Council and why do you think it's important to serve in this way?

APEGA has almost 100 years of history, and our members should be proud of this contribution. The diversity and complexity of the issues that will need to be addressed in the next century will be significant, so APEGA needs to keep evolving. I feel that there is still a lot of untapped potential that we need to unleash through enhanced member engagement, and I am motivated to roll up my sleeves to work with the APEGA leadership to see just how much more effective we can be in harnessing this potential.

What challenges do today's engineers and geoscientists face?

Feelings of uncertainty about the future are common to APEGA members. For example, tension between status quo hydrocarbon recovery and utilization is perceived to be at odds with public expectations of curtailment of GHG emissions without sacrificing socio-economic well-being. This is just one example of a sustainability conundrum that will require all the creativity and collaboration of our geoscientists and engineers in an objective, non-partisan environment.

What is the value of professional membership in APEGA?

One of the core value propositions of being an APEGA member is the opportunity to engage across the breadth and diversity of geoscience and engineering disciplines to deliver solutions that will deliver sustainability and prosperity, now and in the future.

Manon Plante, P.Eng.

Personal Statement

Good day, APEGA members.

My name is Manon Plante and I am seeking a second term as a councillor on APEGA Council. I thoroughly enjoyed the experience and learned a great deal—I wish to serve again as I know I have the skills, expertise, and energy to fulfill this role. The reasons have not changed from 2016:

- give back to my association by using my unique expertise (especially regarding government processes)
- support association key initiatives
- support and advocate for self-regulation
- assist the association in becoming a more robust and wiser regulator
- make the association more pertinent and closer to its members

I believe strong and sound self-regulation of our profession starts with a robust, visionary, and focused Council. It must demonstrate strong leadership to clearly understand and define our challenges, create realistic and attainable—yet forward-thinking—strategic goals, and align objectives with timelines and focused, measurable outcomes. I have contributed to Council in these areas and wish to continue doing so.



In conclusion, I want you to remember: our Council is key to the strong and sound self-regulation of our professions, so please select the council members that will uphold this crucial duty. Thank you for voting, and please encourage your fellow members do so, too!

Manon Plante, P.Eng.

Professional Highlights

- Bilingual executive level leader and manager (and former Canadian Forces military engineer) with more than 25 years of experience, demonstrating solid achievements in leadership, policy development, governance, and decision-making
- Assistant Deputy Minister in the Government of Alberta in the Freedom of Information and Protection of Privacy (FOIP) Transformation and Review Division
- Experience on APEGA Council, 2016–2018, including service on Audit Committee

Question Responses

What does self-regulation mean to you as a member of APEGA?

- the right voice (the membership) to regulate, advance, influence, and lead our professions today and into the future
- trust, collective competencies, and accountability to ensure we meet our duties—hold paramount the health, safety, and welfare of the public and have regard for the environment
- the heart of our association, helping ensure its stature and professional independence

Why are you running for Council and why do you think it's important to serve in this way?

- to serve the association through volunteering as a professional engineer
- to share my knowledge and expertise (knowledge of government processes), to continue to support key initiatives and plan for future ones
- to support and advocate for self-regulation
- to assist the association in becoming a more robust and wiser regulator
- to make the association closer to its members, helping ensure that it remains relevant and engaging

What challenges do today's engineers and geoscientists face?

- to remain relevant, sought-after, and trusted professionals in a rapidly changing world of technology, especially in the energy sector
- to continue to advocate for diversity to ensure our professions remain vibrant and enticing for generations to come
- to understand and then influence how the globalization of professional expertise and services is shaping our professions

What is the value of professional membership in APEGA?

Being recognized as professionals who

- adhere to a robust *Code of Ethics* through integrity, competence, dignity, and devotion to the professions
- are accountable for their practice to their colleagues and association (self-regulation and discipline)
- have acquired the right experience, training, and education to provide professional engineering and geoscience services to the public (registry and licensing)
- sustain a high level of expertise through continued professional development
- contribute to communities through education, outreach, and volunteering

Melanie Popp, P.Eng.

Personal Statement

Many of my values centre on the obligation and influence I have as an engineer in my community. My desire to run for APEGA Council comes from wanting to continue to elevate the status of our professions with stakeholders while growing practising excellence within the APEGA membership and permit holders.

As the people responsible for creating, deploying, and perfecting technology, engineers have the unique opportunity to direct these changes in a positive direction to address our world's greatest challenges. The work that we do must be done with integrity and service to the public at the forefront of our minds. This can only be achieved by regulating our practices in our province.

As a member of APEGA Council, I will continue to drive my passion projects forward, including:

- attracting, retaining, and engaging women in engineering and geoscience
- ensuring that foreign-educated engineering and geoscience professionals have a clear pathway for licensing and practising in Alberta
- evolving the definition of engineering to encompass new skillsets needed as part of the digital revolution

I will also be perfecting my communication, strategic planning, and facilitation skills, while



ensuring that value is created for all Council members in our limited times together. These skills will contribute to my ultimate career goal of continued work on boards.

I welcome the challenge that being a Councillor would bring and look forward to contributing to our professions and the public through APEGA.

Melanie Popp, P.Eng.

Professional Highlights

- Among awards she has won during her career is the Women in Energy Community Champion Award in 2017
- Currently the Director of Engineering at geoLOGIC Systems in Calgary, she prides herself for being able to engage individuals and teams with excitement while establishing value for all stakeholders
- Vice-chair of the programs committee for Women in APEGA, 2014-15

Question Responses

What does self-regulation mean to you as a member of APEGA?

Self-regulation speaks to the high level of professionalism throughout our membership. It acknowledges the contract we have made with the public to protect their interests over and above our individual and collective agendas. It is the role of APEGA to protect this right by ensuring exclusive rights to practice for qualified professionals and organizations. The public places their trust in us and negligence will not be tolerated.

Why are you running for Council and why do you think it's important to serve in this way?

I'm running for Council to influence APEGA to best support the needs of members in light of the economic crisis in Alberta. I have personally been affected by this. I believe that engineers and geoscientists can be incremental in driving the economy of this province, as they have in the past, but it requires agility and strategic thinking—tools I have developed through my experience.

What challenges do today's engineers and geoscientists face?

The pace of technical change has accelerated immensely in our lifetimes. I believe it is the role of engineers and geoscientists to navigate this technological change while examining the impact on society. Some work that our membership has taken on has been rendered irrelevant by technology, and our members have had to adopt new skills and workflows to shift into the digital age.

What is the value of professional membership in APEGA?

Professional membership ensures that the individuals practising are doing so with integrity. The use of continuous professional development drives us to constantly upgrade and refine our technical and non-technical skills. We are known for our character, ethics, and quality of work. Our titles mean that we will adhere to the highest technical, professional, and ethical standards, and we do work that makes a difference in society.

Jason Vanderzwaag, P.Eng.

Personal Statement

I have served on APEGA Council for the past two years, and I'm seeking your support for re-election. These two years have given me a deeper appreciation of the role of APEGA as a regulator, and our responsibility for upholding the standards for professionalism and ethics of our members. In observing threats to self-regulation in other parts of Canada, it is apparent that we must be proactive in being a more effective regulator.

I am a civil engineer with 16 years of experience. As the office manager for Associated Engineering in Fort McMurray, I lead a team of engineers and technologists to support our municipality and other regional clients in civil infrastructure and community development projects. This experience also includes recovery works of the water supply and distribution system following the 2016 wildfire, to support re-entry of the evacuated communities. I am very proud of our team being awarded two Awards of Excellence from CEA for our work.

I have an undergraduate and a master's degree, both from the University of British Columbia. Field research for my MASc included visiting rural communities in Nicaragua to assess the long-term efficacy of household drinking water treatment. I also have international development work, study, and volunteer experience from Chile, Costa Rica, Guatemala, Jamaica, and Bermuda.



I have been a resident of Fort McMurray since 2010. I look forward to continuing to be a voice for members—not just from this region, but from across all Alberta—on APEGA Council. Thanks for your support!

Jason Vanderzwaag, P.Eng.

Professional Highlights

- With engineering experience totaling 15 years, currently leads the Associated Engineering office in Fort McMurray, providing project management, technical leadership, and mentorship
- Experience includes Water System Recovery following the 2016 Fort McMurray Wildfire, Municipal and First Nation projects, and international community development projects
- APEGA experience includes current APEGA Councillor (2017–2019), with service on Governance Committee and as CEA Liaison, and other APEGA experience includes Fort McMurray Branch, mentor volunteer, and legislative review champion

Question Responses

What does self-regulation mean to you as a member of APEGA?

Self-regulation means that our professional members are responsible for providing statutory oversight over our peers. This includes the evaluation of applicants, and the investigation and discipline of members that contravene our *Code of Ethics* or do not meet professional standards. There are threats to self-regulation through government intervention and loss of public confidence in our professions. These threats are materializing in B.C. through “regulate the regulators” discussions, which risk political interference in an association’s ability to properly self-regulate. I believe that self-regulation is a privilege to be protected.

Why are you running for Council and why do you think it’s important to serve in this way?

Having served on Council for the past two years, I want to apply my experience, leadership, and problem-solving skills to the challenges facing APEGA into the future. I see opportunity to improve our relationships with organizations such as CEA and ASET, by recognizing the value of the work that their members contribute to our professional practice, and to the public good of Alberta as a whole.

What challenges do today’s engineers and geoscientists face?

While we are seeing signs of economic recovery in Alberta, many members are still struggling. Changes in our industry, including technology advancements, and the outsourcing and offshoring of work, create challenges for our members to remain competitive. I believe that through lifelong learning opportunities such as CPD and mentoring, we can ensure that our members remain at the forefront of their professions.

What is the value of professional membership in APEGA?

I believe that the value of membership in APEGA is the pride and prestige that comes with our titles, and the ability to sell one’s service as professionals. Our titles convey confidence to employers and procurers of services because of the high professional standard that our members must meet. This confidence is only maintained by upholding the association’s responsibilities and statutory obligations through self-regulation.

Lian Zhao, P.Eng., PhD

Personal Statement

During three decades of practice in energy and environmental consulting services, I have, with great commitment, built a sound multidisciplinary engineering-and-science knowledge base, supported by corporate governance and professional community services. I received an APEGA five-year volunteer award. I am a member of the Practice Standards Committee's Environmental Subcommittee, and chair of the Wetlands Subject-Matter Expert Panel and the Wetlands Science and Engineering Guideline Working Group.

Under struggling low oil prices, Alberta's economic conditions, and heavy environmental liability issues caused by aging O&G assets in Alberta, as a co-founder and principal of CEPro Energy Group I am providing corporate practice insights into integrated optimizations for the production recovery and liability management of mature oil and gas assets.

A passionate participant within the professional community, I specialize in technical promotional activities related to energy and resources sustainable development under a lifecycle of regulation and innovation. I am confident in communicating the common agreement among diverse and multicultural professional circumstances. My trustful, respectful, and inclusive professional manners in multicultural settings facilitate understanding and acceptance of diverse decision-making approaches. As an individual and a Responsible Member of consulting companies, I oversee the enterprise and key



stakeholders, as well as academic and industrial collaborative partners.

I prepare myself to embrace APEGA's 2020 strategic plan and the challenges APEGA faces. If successful, I will actively be engaged in public dialogue that affects the professions and make APEGA more visible within the main economic decision-making stream. Additionally, risk management and incurred rising membership dues will always remain in my focus.

Lian Zhao, P.Eng., PhD

Professional Highlights

- More than three decades of work experience in the upstream oil and gas and environmental consulting industries
- Principal at CEPro Energy & Environmental Services Inc. and President of CEPro Foundations Inc.
- Awarded a PhD in petrology at the Geology and Geophysics Institute in Chinese Academy of Sciences in 1995 and a PhD in Environmental Engineering at University of Guelph in 2007

Question Responses

What does self-regulation mean to you as a member of APEGA?

APEGA's members have privileges and responsibilities. Oversight of professionals is assured by self-regulation. APEGA's specialities of public safety, licensing, outreach, education, and member relations dominate the work of engineers and geoscientists, who are specialized and sophisticated, and best-managed by APEGA's comprehensive regulatory authority. APEGA also has the authority to prevent unqualified or unlicensed individuals from practising the professions. Self-regulation is efficient for business.

Why are you running for Council and why do you think it's important to serve in this way?

The most worthwhile commitment is to embrace service to the public and the practices of engineering and geoscience at the upper-most tier of APEGA governance and make more contributions to a Council facing the challenges of low oil prices and economic difficulties. My education, six years of volunteering, and executive management experience are great assets for the Council. It is essential for me to run and serve our professionals more. APEGA Council determines the strategic direction of the organization.

What challenges do today's engineers and geoscientists face?

The challenges are maintaining competency among the various roles, especially technical, engaging with low oil price economics worldwide, and navigating challenging conditions to strengthen both sides of a professional's creative critical thinking and integrated decision-making strategies. Also, reducing risk probability and creating effective ways to reduce costs also stick out. Promoting a higher engagement level among members is essential to secure and develop this self-regulated association.

What is the value of professional membership in APEGA?

As dedicated members in good standing, the membership with APEGA earn the confidence of the public and instill pride. APEGA promotes a business culture of belonging, inclusion, and diversity. Awareness of self-regulating professions and regulatory environments, and thorough knowledge of our governing legislation, make professional practice competitive. The recognized reputation and competency quality to protect the public's best interest and block non-qualified persons from practice are mandatory.

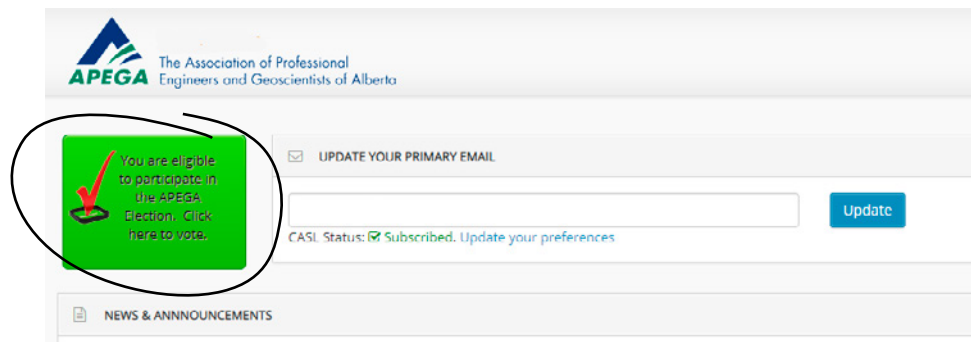
How do I Vote?



1 Visit the [election page](#) on the [APEGA website](#), to familiarize yourself with the candidates, their positions, and their qualifications.

2 Click on **Log In to Vote**. This will take you to the [Member Self-Service Centre](#).

3 Click on this **green box**:

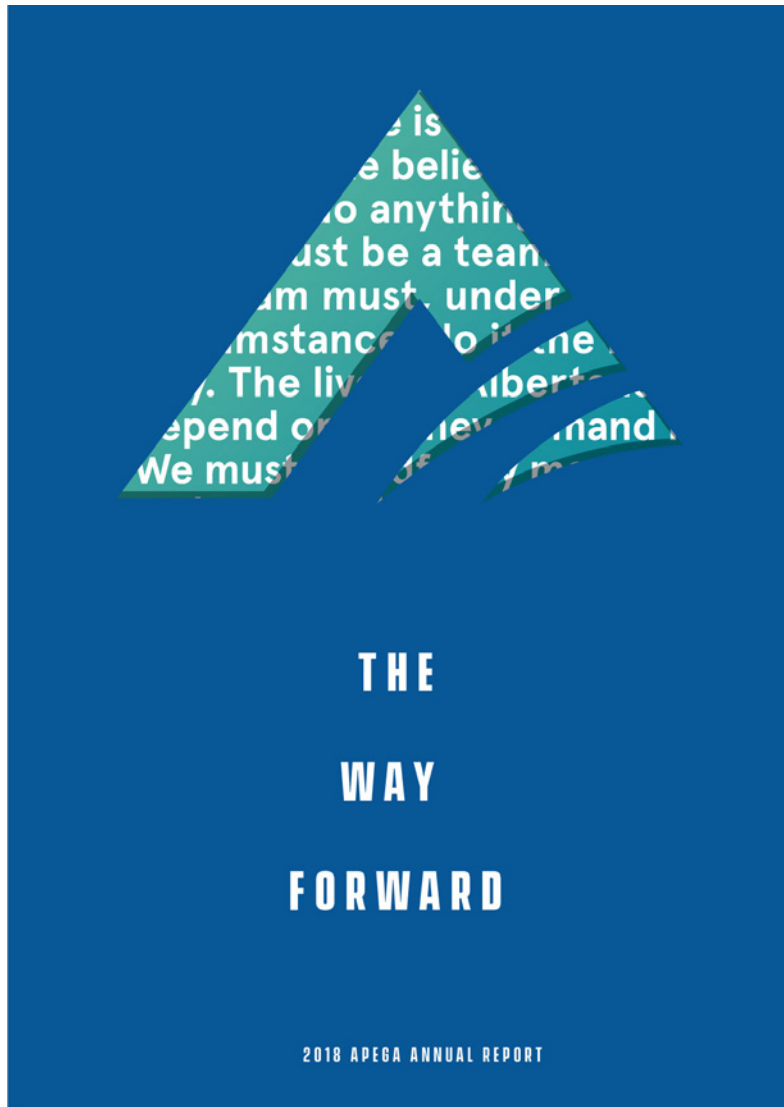


4 Follow prompts to cast your votes.



5 Give yourself a great big pat on the back. **You participated** in APEGA Election 2019!

COMING SOON



Your 2018 APEGA Annual Report

Watch for it in March 2019.
Attend the AGM on April 26 to pick up your copy.

ANNUAL GENERAL MEETING & CONFERENCE 2019

The APEGA 2019 Annual General Meeting and Conference takes place at Calgary's TELUS Convention Centre from April 25 to 26, 2019.

The Annual General Meeting and Conference brings members, permit holders, government representatives, and other professionals together for two days of professional development, collaboration, and celebration.

AGM LUNCHEON SPEAKER



LT.-GEN. PAUL WYNNYK, CMM, MSM, CD, P.ENG.

APRIL 26, 2019

A career soldier whose work has taken him around the world, Canada's Vice Chief of the Defence Staff Lt.-Gen. Paul Wynnyk, CMM, MSM, CD, P.Eng., is the speaker for this year's AGM luncheon. Serving in a wide range of command and staff assignments, including four years in Germany, Lt.-Gen. Wynnyk has had tours with the UN Advance Mission and the UN Transitional Authority in Cambodia, and an assignment as the Canadian Task Force Commander and Mission Chief of Operations of the UN Organization Stabilization Mission in the Democratic Republic of the Congo. In 2009, he was posted to

the Combined Security Transition Command—Afghanistan, as the Assistant Commanding General responsible for overseeing the development of the Afghan Ministry of Defense and the Afghan National Army. On July 16 last year, he was named to his current position.

Buy your tickets at apegaconference.ca.

ANNUAL GENERAL MEETING & CONFERENCE

PROFESSIONAL DEVELOPMENT SESSIONS

APRIL 25 AND 26, 2019
TELUS CONVENTION CENTRE, CALGARY

Thursday, April 25: 8:00 a.m.–4:15 p.m.

Earn up to 10 professional development

Friday, April 26: 8:30 a.m.–11:45 a.m.

hours under the CPD Program.

A huge selection of educational sessions, hand-picked to be engaging and relevant for engineers and geoscientists in Alberta. Earn up to 10 CPD hours while networking with your peers. For more information and to register, visit apegaconference.ca.

SUMMIT AWARDS

APRIL 25, 2019
TELUS CONVENTION CENTRE, CALGARY

Reception: 5:00 p.m.–6:00 p.m.

Dinner and Awards Presentation: 6:00 p.m.–9:00 p.m.

The annual Summit Awards is APEGA's pre-eminent event. The awards recognize excellence in professional engineering and geoscience and the valuable contributions APEGA members make to their communities. Buy your tickets at apegaconference.ca.

ANNUAL GENERAL MEETING AND LUNCHEON

APRIL 26, 2019
TELUS CONVENTION CENTRE, CALGARY

Registration: 11:00 a.m.

Luncheon: 12:00 p.m.–1:30 p.m.

Annual General Meeting: 2:00 p.m.–5:00 p.m.

Post-AGM Reception: 5:00 p.m.–6:00 p.m.

Open to all members and the public, the Annual General Meeting is your opportunity to discuss issues important to the professions, vote on matters brought before Council, and present motions for Council consideration.

www.apegaconference.ca

Reviewing the Work Products of Fellow Professionals: Communicate Clearly, Act Ethically, Set Aside Competitive Motivations

BY **MATTHEW OLIVER**, CD, P.ENG.

APEGA Deputy Registrar & Chief Regulatory Officer

Engineers and geoscientists are sometimes requested to conduct third-party reviews of work products created by other licensed professionals. This is becoming particularly commonplace in contracts with municipal and other government organizations, because they need to ensure they've performed full due diligence before letting a contract.

Third-party reviews alleged to have been carried out unprofessionally are also a trend in disciplinary complaints we're receiving. The onus to perform their duties professionally is, in all cases, on the individual licensed professional and the permit holder. They must ensure that all work is conducted in a manner that embodies integrity, honesty, fairness, and objectivity, thereby upholding the honour, dignity, and reputation of the professions.

Because of all this activity, APEGA decided a summary—the one you're reading now—would be helpful for members. If reviews like these are likely to come up in your job, saving this article for future reference is a good idea. It could save you some professional inconvenience or, worse, some real grief in the form of discipline findings against you.

There is nothing intrinsically unethical about performing a third-party review of the work of another licensed professional or permit holder. If it is done in a manner consistent with APEGA's [Code of Ethics](#), these reviews can add rigour to the final technical product—in essence providing a further check and balance in our service to the public interest. However, if done in a manner inconsistent with the *Code of Ethics*, third-party reviews can have far-reaching implications for the reviewer and the original creator of the professional work product.

Conflict of interest and bias can subvert a purely technical review of another's work, transforming it into something destructive. The third-party reviewer is usually a competitor in the practice area and may view critical comment as a great way to gain a business advantage. If the review is not done with full knowledge of all the background work—which is not always included in the final product—the reviewer may be providing an opinion on only part of the story.

A super-critical review provided to a client can undermine the originator, damaging his or her reputation. Even if the original creator of the work product achieves resolution through an APEGA investigation, the reputational damage may already have been done. Vindication months or years later is thin relief when a client has been lost for good.

The third-party reviewer may also be exposed to harm. If the review work does not consider all the original designer's preparatory work, the reviewer may face a ruling of unskilled practice. Unskilled practice can exist when a professional fails to consider all relevant details and produces a critical report that only reflects part of the narrative. Additionally, if the reviewer performs that role in a manner that violates the *APEGA Code of Ethics*, this may result in disciplinary action for unprofessional conduct.

How so? The *Code of Ethics* is legally binding on all APEGA licensed professionals and members-in-training. Rules of Conduct 1, 3, and 5 are relevant to this question:

1. Professional engineers and geoscientists shall, in their areas of practice, hold paramount the health, safety and welfare of the public and have regard for the environment.

3. *Professional engineers and geoscientists shall conduct themselves with integrity, honesty, fairness and objectivity in their professional activities.*

5. *Professional engineers and geoscientists shall uphold and enhance the honour, dignity and reputation of their professions and thus the ability of the professions to serve the public interest.*

Third-party reviewing can be seen as a means of fulfilling the overarching imperative to hold paramount the welfare of the public. The approach taken in a third-party review must still demonstrate fairness and objectivity, however, and be carried out in a way that enhances the honour and dignity of the professions.

There is often no single way that a particular design may be implemented, and licensed professionals are expected to be innovative in producing effective, safe, and economically viable designs. This means a given problem may be solved through a variety of approaches, and individual licensed professionals may disagree on the best one or how details are implemented.

In a single workplace, those disagreements are usually worked out through discussion and debate, options analysis, and cost-benefit analysis, leading to an optimal design. In third-party review, APEGA expects that a similar process is followed, meaning that the original creators and the third-party reviewers need to communicate with each other, particularly if the reviewer is planning on providing their client with critical comments concerning the final professional work product.

APEGA has produced a guideline to assist licensed professionals in understanding how third-party reviews should be conducted. [The Guideline for Ethical Practice](#) is available on the APEGA website in the Publications area. Section 4.5.3 of the guideline provides detail on how reviewing other professionals' work should be carried out. Reviews should:

- only be undertaken with the knowledge of the licensed professionals who originally prepared the work products
- only be undertaken after communication with the originators, to ensure the reviewer is apprised of all relevant information
- feature open communication between the reviewer and the originator, continuing through the review process. This allows the reviewer to be apprised of

underlying assumptions and gives the originator a chance to respond to comments and criticisms

- never call into question the competence or professionalism of another licensed professional, without the reviewer having first consulted the licensed professional to determine the facts of the case and the reasoning behind particular decisions

There are exceptions. A review undertaken in a legal process (for example, a rebuttal report prepared in a forensic context, especially when litigation is expected) may be cloaked with client-solicitor privilege. Licensed professionals involved in those reviews should seek the advice of legal counsel and APEGA if there are any concerns.

Other circumstances may exist involving proprietary or trade secrets in the work product. A client's interests may be damaged if this information becomes known, or if confidential processes are discussed in detail. This could be the case in a review of reservoir reporting, for example.

Even when a third-party reviewer is unable to contact the original author of the work, APEGA expects the reviewer to act in accordance with the *Code of Ethics*. The report resulting from a third-party review should never include:

- personal attacks on other professionals
- direct or indirect suggestions that the original authors were unprofessional
- direct or indirect suggestions that the original authors had limited competence

It is also expected that the original author be informed by the client or through other means that a third-party review is taking place.

If a third-party review uncovers work which may reflect negligent, unprofessional or unskilled practice, there is an onus on the reviewer to also make a complaint to APEGA. This is required of all licensed professionals by the first rule of the *Code of Ethics*, as our obligation to protect the public welfare is shared by all members of our professions. Third-party reviewers should be clear when contracted that they may be obliged to file a complaint with APEGA.

If you have any questions concerning this or any other professional practice matter, please contact us at professionalpractice@apega.ca.

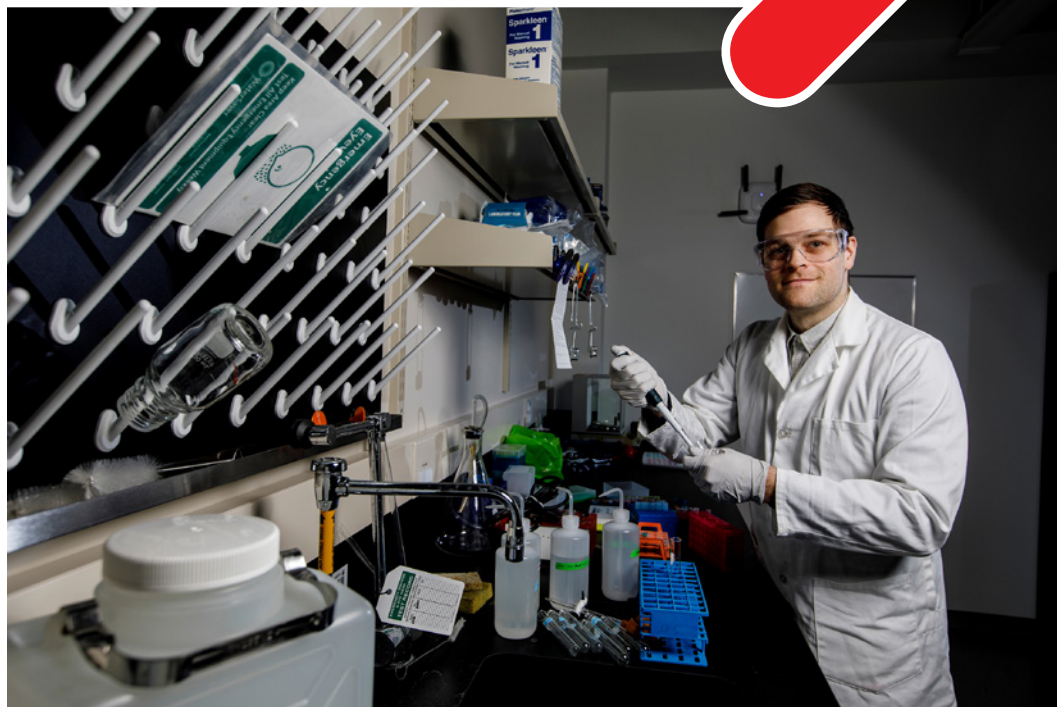
Movers & Shakers

CLEANING UP ON CLEAN-TECH CASH: ALBERTA RESEARCHERS SCORE BIG BUCKS

Clean-energy researchers in Alberta are starting 2019 off with a bang, after receiving \$20.5 million in funding to support technology development. Alberta Innovates, through its Climate Change Innovation and Technology Framework (CCITF), considered 160 applications in choosing 29 post-secondary and industry projects.

“Alberta researchers are Canada’s innovation leaders—from our artificial intelligence experts who have attracted world-leading software headquarters to our province, to the men and women who developed the steam-assisted gravity drainage technology that the rest of the world now relies on—we have so much to be proud of,” said the Hon. Deron Bilous, Alberta Minister of Economic Development and Trade. “Today’s investments will help turn homegrown ideas and technologies into jobs and businesses that will help grow and diversify our economy, and create a greener, more sustainable province for the next generation.”

CCITF is a partnership between Alberta Innovates, Emissions Reduction Alberta, and the



INNOVATION LEADING THE WAY

Dr. Dominic Sauvageau, P.Eng., is one of 11 APEGA members receiving provincial funding to advance clean energy in Alberta. He is using bacteria to turn methane waste into usable energy products.

-photo courtesy University of Alberta Faculty of Engineering

Government of Alberta. It encourages the development of innovative technologies, engages stakeholders, and ensures meaningful investments in research, innovation, and technology.

“(We) are pleased with the strength of the Clean Technology Development program funding competition and the calibre of the applications. We know that the work being undertaken all over Alberta will lead to innovation in clean energy, and demonstrate real and tangible ways to reduce greenhouse gases in our province,” said Brett Purdy, CCITF Executive Director.

Eleven of the newly funded projects are led by APEGA members: eight from the University of Alberta, two from the University of Calgary, and one from Imperial Oil.

Project Lead	Organization	Grant Amount	Project Objective
Dr. Nafiseh Dadgostar, P.Eng.	Imperial Oil, Heavy Oil In-Situ Research	\$2,000,000	To demonstrate enhanced late-life process as an alternative to steam-flood for recovering bitumen in cyclic steam stimulation operations
Dr. Yunwei (Ryan) Li, P.Eng.	University of Alberta	\$1,580,000	To use power electronics technologies to integrate remote gas field microgrids in Alberta
Dr. Ali Khajehoddin, P.Eng.	University of Alberta	\$600,000	To develop an intelligent green-building energy system based on renewable resources and energy-storage integration
Dr. Arman Hemmati, E.I.T.	University of Alberta	\$100,000	To finalize the development of a new pipeline technology that will transport bitumen and oil products across Canada at a lower cost and with a smaller environmental footprint
Dr. Yang Liu, P.Eng.	University of Alberta	\$99,500	To study options for effective cannabis waste treatment and energy recovery
Dr. Simon Park, P.Eng.	University of Calgary	\$99,400	To develop a partial upgrader that uses hydrodynamic vapour cavities and thermal-cracking stimulators to reduce greenhouse gas generation and energy consumption in partial upgrading processes
Dr. Dominic Sauvageau, P.Eng.	University of Alberta	\$99,400	To speed the industrialization of bacteria that can convert methane waste into isoprenoids, which can be used as bio-jet fuel and specialized fuel additives
Dr. Andre McDonald, P.Eng.	University of Alberta	\$96,000	To strengthen heat exchanger coatings with alumina and apply the novel coatings-based heat exchanger in the field
Dr. Elise Fear, P.Eng.	University of Calgary	\$50,000	To determine the specific sensing requirements, sensor designs, and algorithms for steam-quality monitoring with microwaves and develop a lab-based prototype system to verify the findings
Dr. Wei Victor Liu, P.Eng.	University of Alberta	\$37,560	To develop a better understanding of the thermal behaviour of borehole heat exchangers and design a more economically feasible geo-exchange system
Dr. Xihua Wang, P.Eng.	University of Alberta	\$25,000	To improve the efficiency of LED lights through secondary optics design

DEAN'S HOLIDAY RECEPTION A SALUTE TO SUCCESS

More than 200 business leaders, industry partners, donors, and alumni were on hand at the Dean's Holiday Reception at the Schulich School of Engineering in December last year, bidding farewell to 2018 and usher in the new year. **Dean Bill Rosehart, P.Eng., PhD**, hosted the annual holiday gathering in Calgary, merging a warm nod to the year's accomplishments with the eager anticipation of what's to come.

"Schulich is never at a standstill. The year ahead we will continue to drive efforts to promote student success, fostering diversity and high-impact research," said Dr. Rosehart. "We are currently working to develop a new graduate employment initiative to ensure our students have support transitioning to meaningful engineering work. We are focused on expanding our industry partnerships to enable our researchers to grow their high-impact research. And we will continue to promote new diversity initiatives, including new pathways into engineering for under-represented groups, to welcome everyone into our profession."

As always, the highlight of the night was the presentation of the school's top honours: the inaugural Schulich Leadership Excellence Award, the Canadian Engineering Leadership Award, and the Dean's Award for Corporate Leadership.

Elizabeth Cannon, P.Eng., PhD, is the first-ever recipient of the Schulich Leadership Excellence Award. The outgoing President and Vice-Chancellor of the University of Calgary played a huge role in bringing the University of Calgary to the world stage as one of Canada's most entrepreneurial and dynamic post-secondary institutions. "It has been an extraordinary journey. We've seen the university take major strides, and we've been able to do that because of the quality of our faculty, staff, and of course, our students, but we also do it because of the community," Dr. Cannon said.

The Canadian Engineering Leadership Award went to **Stephen Laut, P.Eng.**, Executive Vice-President of **Canadian Natural Resources** and a former Schulich graduate, for his extraordinary



-photo by Brandie Sunley

SCHULICH PLAYS SANTA

The Schulich School of Engineering capped 2018 with a holiday reception and a trio of awards. From left to right: Dr. Bill Rosehart, P.Eng., Dean of the Schulich School of Engineering; Stephen Laut, P.Eng., recipient of the Canadian Engineering Leadership Award, and Dr. Elizabeth Cannon, P.Eng., outgoing University of Calgary President and Vice-Chancellor, and inaugural recipient of the Schulich Leadership Excellence Award.

efforts in championing postsecondary education and research. Mr. Laut has supported many University of Calgary projects, including a state-of-the-art psychology clinic and a renovated and expanded engineering complex.

The third award, the Canadian Engineering Leader Award, went to Jason Balasch, the President of **Plains Midstream Canada**. The company has backed many education-based projects, including the creation of specialized workspaces where students can learn through hands-on work.

ENGINEER TURNS ADVERSITY INTO OPPORTUNITY

Edmonton's **Jessica Vandenberghe, P.Eng.**, knows what it feels like to be different. During almost 10 years working in the oil sands, she was often the only woman and the only Indigenous person in the office and field. Although she's faced discrimination throughout her career, simply for being who she is, Ms. Vandenberghe channels that adversity into a passion for supporting diversity in the workplace.

That endeavour that was recognized with the 2018 Indigenous Resources Leadership Award by the Alberta Chamber of Resources, presented during a gala evening in February at the Edmonton Convention Centre. (Keynote speaker was, by the way, the Hon. Stephen Harper, the former Prime Minister of Canada.)

"I feel incredibly honoured to receive this at this point. A lot of times awards are given towards the end of a person's career, so to be recognized for efforts that I've made today, mid-career, means a whole lot to me," she told *My Grande Prairie Now*.

Ms. Vandenberghe is used to hard work: she was high school valedictorian, holds two engineering degrees and patents, and has sat at national and provincial tables to influence standards, guidelines, regulations, and legislation in her profession. She is, as she sums it up, a "living example of the capability of Indigenous people."

She also has a special place in the hearts of her former colleagues at APEGA. Ms. Vandenberghe held several management positions with the organization, finishing her time with us as Director of Enforcement.

As the Indigenous Community Consultant and a project engineer at **Urban Systems Limited**, she promotes gender diversity and growing the number of Indigenous members in the engineering and geoscience professions. And the job's not over when she leaves the office: she spends much of her free time promoting education and understanding with Indigenous people, particularly youth.



DEDICATED TO DIVERSITY

Jessica Vandenberghe, P.Eng., is making a difference in the hearts and minds of those facing—and creating—adversity in the engineering profession.

-photo by Rhona Haas Photo & Video

"I hear the same stories, I hear the same themes, I hear the frustrations, and I know that I can play a role in moving forward some of these issues and concerns. Being an engineer has given me the ability to problem-solve and approach things differently and get things done, and so that drives me to keep at this, volunteer-wise."



FROM THE GROUND UP
Starting as a sewer replacement and ending as a revitalization of the downtown area, the Lacombe Main Street Program won the Envision Award—a first in the province.
—photo courtesy Stantec

PICTURE THIS: LACOMBE REVITALIZATION PROJECT FIRST IN ALBERTA TO RECEIVE ENVISION AWARD

A community in central Alberta has gained fame from across the border with the renewal of its downtown core. A collaborative project between the City of Lacombe and two APEGA permit holders, **Stantec** and **Pidherney's**, the Lacombe Main Street Program is a story of a sustainable, well-planned infrastructure upgrade

It started out as a project to replace the aging downtown sanitary sewer main. From there, it morphed into a successful, \$6.75-million downtown revitalization, catching the eye of the Institute for Sustainable Infrastructure (ISI) in Washington, D.C., and earning its Envision Silver Award. The Lacombe project is the first in Alberta, and only the fifth in Canada, to receive an Envision Award, meaning that it demonstrated an assortment of social, economic, and environmental benefits.

"The Lacombe Main Street Program is an excellent example of turning an urgent, negative situation—in this case, a degraded sanitary sewer system—into a sustainable, vibrant, community- and business-oriented project," said ISI President and CEO John Stanton.

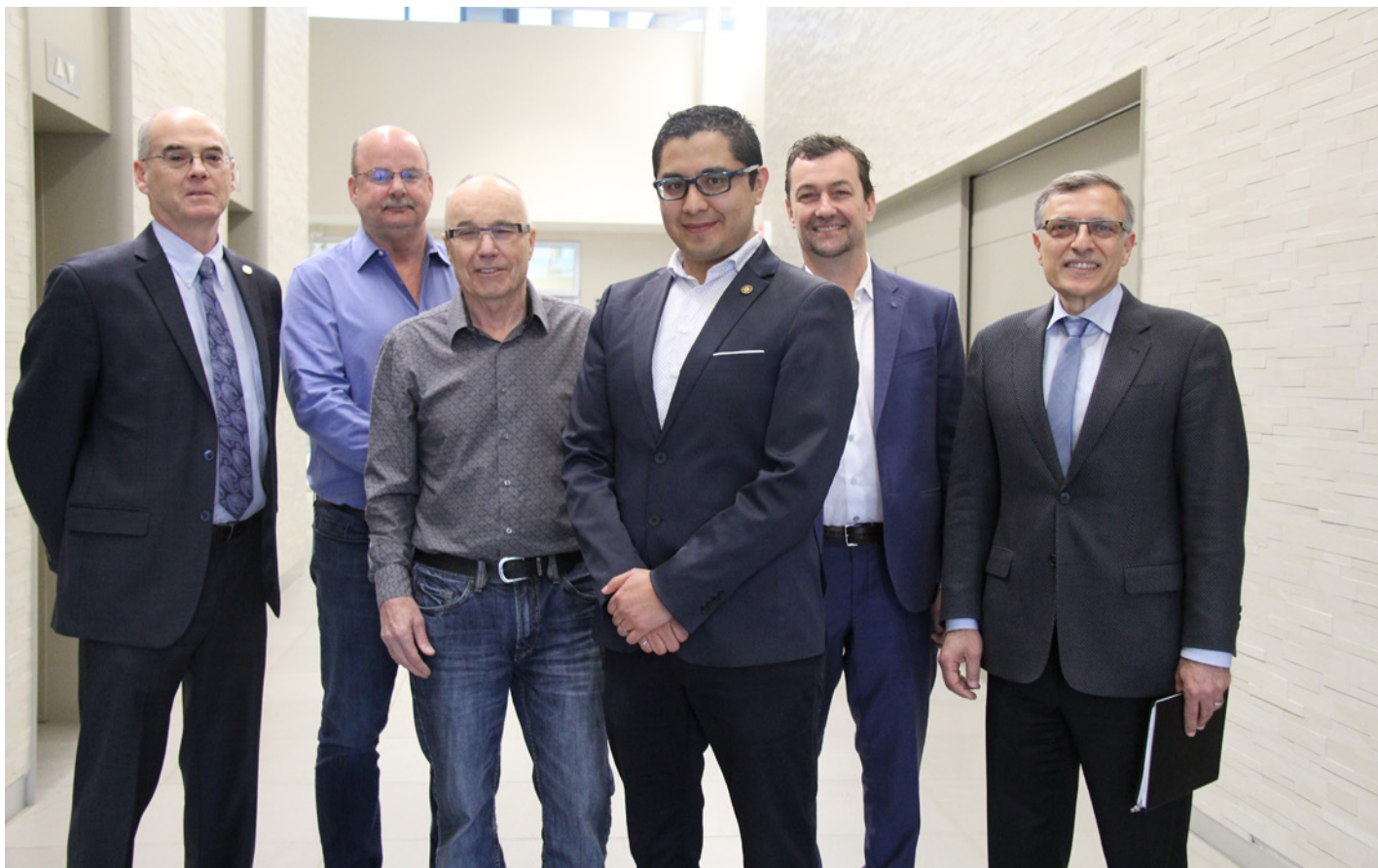
Unable to choose less-invasive repair options because the sewer system's condition was so poor, the City of Lacombe was faced with closing historic Main Street while crews tore through the asphalt and did their thing.

Taking a two-birds-one-stone approach, the project team tackled other infrastructure needs at the same time, limiting future disturbances.

"We were able to participate in presentations and stakeholder engagements that provided the most detailed and accurate information possible on schedules and methodology, well in advance of construction," says Pidherney's project manager **Dan Willis, P.Eng.** "In turn, the downtown community brought forth specific concerns and comments that allowed the project to reach a new level of service during completion."

If the revitalization was a test in teamwork, the teams involved proved their mettle. "In the engineering world, we often like to brag about nerdy things like technical specifications. But the really unique thing about this project that brought it home was the team and collaboration," **Ben Haeusler, P.Eng.**, a Stantec project manager, told the *Red Deer Advocate*.

Starting in 2015, the Lacombe Main Street Program was finished on schedule and under budget in 2018. In addition to the Envision Award, it received the 2018 Project of the Year Award from the American Public Works Association Alberta Chapter for its outstanding management, construction, and administration.



NEW FUNDING GIVES MASONRY AN UPGRADE

The Great Wall of China, St. Peter’s Basilica, the Taj Mahal—some of history’s most compelling architectural structures were made with masonry. Appealing to architects and builders because of its artistry, durability, and ability to weather the centuries, masonry has been used for thousands of years.

And now, thanks in large part to a \$3-million endowment funded by the Natural Sciences and Engineering Research Council and the Masonry Contractors Association of Alberta (MCAA), the University of Alberta’s Faculty of Engineering can help ensure the trade continues to have a future.

Under the endowment, engineering professor **Carlos Cruz-Noguez, P.Eng., PhD**, has been appointed as the Chair in Masonry Systems for the MCAA—Northern Region. He will orchestrate research programs to bring masonry up to speed with modern-day expectations.

“Our project will tackle issues of climate change, energy efficiency, and resource use,” Dr. Cruz-Noguez said in a story on the U of A website. “We have to

IF YOU BUILD IT...

As the Chair in Masonry Systems, Dr. Carlos Cruz-Noguez, P.Eng., centre, is developing ways to ensure the trade stands up to the years.

-photo courtesy University of Alberta Faculty of Engineering

develop safer, higher-performing masonry systems that are more energy efficient—using materials and processes that are centuries old and have a proven record—and engineer it into the next century.”

Dr. Cruz-Noguez will work with a team of academics to conduct his work, some of whom are researching energy and thermal efficiency, reliability and simulation, and composite walls. This research has piqued the interest of many of the graduate students needed to support the research, adding additional expertise to the team.

Dr. Cruz-Noguez won the Provost’s Award for Early Achievement of Excellence in Undergraduate Teaching in 2018 and is a strong proponent of including students in the masonry program’s strategic plan. “I incorporate masonry into the undergraduate curriculum where it’s appropriate, and we get them working with us through research programs,” he said. “They are an investment. They are the next generation.”

WHO ARE YOU CALLING ARTIFICIAL?

The **University of Alberta** is well on its way to building an artificial intelligence hub, after receiving \$2.5 million in support from the federal government. The AI-Hub will house high-performance computers that can process large quantities of data in hours—it usually takes days—and will be a collaboration space for academics and industry professionals. As well as supporting small- and medium-sized enterprises and providing artificial-intelligence training for companies in Western Canada, the project is slated to bring in \$15 million by way of increased productivity and business revenues.

“The AI-Hub will help Canada and Canadian businesses compete in the global innovation race to bring new technologies and products to market and bolster our economy,” said the Hon. Amarjeet Sohi, Minister of Natural Resources and MP for Edmonton Mill Woods. “The Government of Canada is proud to support the University of Alberta in its efforts to

help establish Alberta as a leader in the artificial intelligence sector.”

The funding extends to marketing initiatives designed to raise the visibility of Alberta’s AI sector. The AI and Interaction Digital Entertainment International Conference will be held at the university this year—taking place outside of the U.S. for the first time.

“We are grateful for the financial support from our government and industry partners that makes this possible. We expect hundreds of students, faculty and small- and medium-sized enterprises to benefit from this supercomputer facility,” says **Dr. Edmond Lou, P.Eng.**, associate professor in the Department of Electrical and Computer Engineering at the University of Alberta. “This project will lead to economic growth and raise the profile of Western Canada’s AI expertise and ecosystem nationally and internationally.”

HIRE THE RIGHT PERSON, RIGHT AWAY!

Showcase your job postings to skilled APEGA members who have the talents you are looking for.

We have **9,500+** registered candidates (and growing) waiting to hear from you!

Learn how to post your ad by visiting apega.ca/job-board and start hiring today!



NEW FELLOWSHIP PROGRAM HAS AN EYE ON CLEAN TECH

Alberta has a new pilot program focused on reducing greenhouse gas emissions and building the province's clean technology sector. The two-year GreenSTEM fellowship encourages entrepreneurship and provides support for expensive and challenging ideas presented by the successful applicants, who will be hosted by the University of Alberta, the University of Calgary, or the University of Lethbridge. The fellows will report on their project's progress to program leads and provide quarterly updates during cohort meetings.

GreenSTEM is made possible by the Climate Change Innovation and Technology Framework, which was created to support Alberta's Climate Leadership Plan through technology and innovation. Three APEGA members have been accepted in the first cohort of 12 GreenSTEM fellows.

Kurtis Broda, E.I.T., and **Christopher Robson, E.I.T.**, hold master's degrees in mechanical engineering from the University of Alberta. Through their company, Wyvern, they intend to develop hyperspectral imaging technology to use in cube satellites, which will enable daily monitoring of global greenhouse gas emissions.

Dr. Gem Shoute, E.I.T., has a PhD in electrical engineering from the University of Alberta. Through her company, Synthergy, she plans to improve the efficiency and sustainability of the nano-manufacturing technique used to make semiconductors and advanced coatings.

Under the program, innovators will have access to \$55,000 stipends each year, plus up to \$65,000 annually for technology and business development, entrepreneurship programming with a technology focus, mentorship, and networking.



GREEN FELLOWS

Alberta's first GreenSTEM fellows are coming up with ways to advance the clean technology sector. Above, top, Kurtis Broda, E.I.T.; above, Dr. Gem Shoute, E.I.T.; left, Christopher Robson, E.I.T.

-photos by Jane Humberstone, Director, Economic Development and Trade



LOOKING GOOD

Dr. Nir Katchinskiy, E.I.T., left, peeks through his laser equipment with his research supervisor, Dr. Abdul Elezzabi, P.Eng.

-photo courtesy University of Alberta



U OF A RESEARCHER SEES A FUTURE IN ULTRAFAST LASER SURGERY

Laser surgery is a common fix for nearsightedness, astigmatism, and other vision problems. But for the treatment of diseases like age-related macular degeneration and glaucoma—two of the leading causes of blindness—its use is far from routine. That's because current laser technologies can damage nerve cells and even cause additional vision loss.

Those high risks may be on their way out, thanks to work by Dr. Nir Katchinskiy, E.I.T., an electrical engineering researcher at the University of Alberta. He's looking at ways to harness the speed and accuracy

of lasers without causing damage to healthy tissue.

The process starts with an ultrafast laser that pulses at a quadrillionth of a second, called a femtosecond laser. Operating on a nano scale, it's precise enough to allow surgery on a single cell—or even part of a cell—without affecting surrounding cells.

Dr. Katchinskiy is developing a new platform that combines femtosecond lasers with two advanced imaging techniques, called optical coherence tomography and scanning laser ophthalmology. He's confident enough in his new approach to laser surgery that he's launched PulseMedica, a startup that will continue testing the technology and bring it to market.

CHARGE 'ER UP: ELECTRIC VEHICLE NETWORK IS COMING TO SOUTHERN ALBERTA

By the end of the year, southern Alberta will have 20 fast-charging stations for electric cars, thanks to the new Peaks to Prairie Network. The \$2-million project is a collaboration between the Government of Alberta (which invested \$1.2 million through the Climate Action Plan), the Federation of Canadian Municipalities, and other partners, in support of Albertans switching to electric cars and SUVs.

Running entirely on renewable energy, the charging stations will be produced by AddEnergie and installed and operated by ATCO Electric. Both are Canadian companies.

This just in: Suncor's retail brand, Petro-Canada, plans to install a cross-Canada network of 50 fast-charging stations for electric vehicles.



TANKS FOR THE MEMORIES

Charging options for drivers of electric cars are starting to pop up, helping make more and more gas tanks blasts from the past.

-photo copyright 2019 Services FLO Inc.

TO SPUR PERMANENT HOUSING, REGIONAL MUNI LOOKS AT SAYING NO TO NEW WORK CAMPS IN FORT MCMURRAY AREA

Twelve years ago, workers struggled to find housing in Fort McMurray, thanks to the frenzied pace of oilsands development. But in the aftermath of the devastating 2016 fire and several economic downturns, the city's population has dropped by 11 per cent. That's hindered the city's efforts to rebuild and pay down debt.

To help tackle the problem, the Regional Municipality of Wood Buffalo has voted to draft a bylaw that would place a moratorium on work camps in the area. This would force much of the area's shadow population—tens of thousands of workers staying at work camps and other types of temporary accommodation—to move into town and support the local economy.

If the bylaw passes, the municipality will stop all oil sands camp renewals within a 75-kilometre radius of the community by June. Right now, the area is home to as



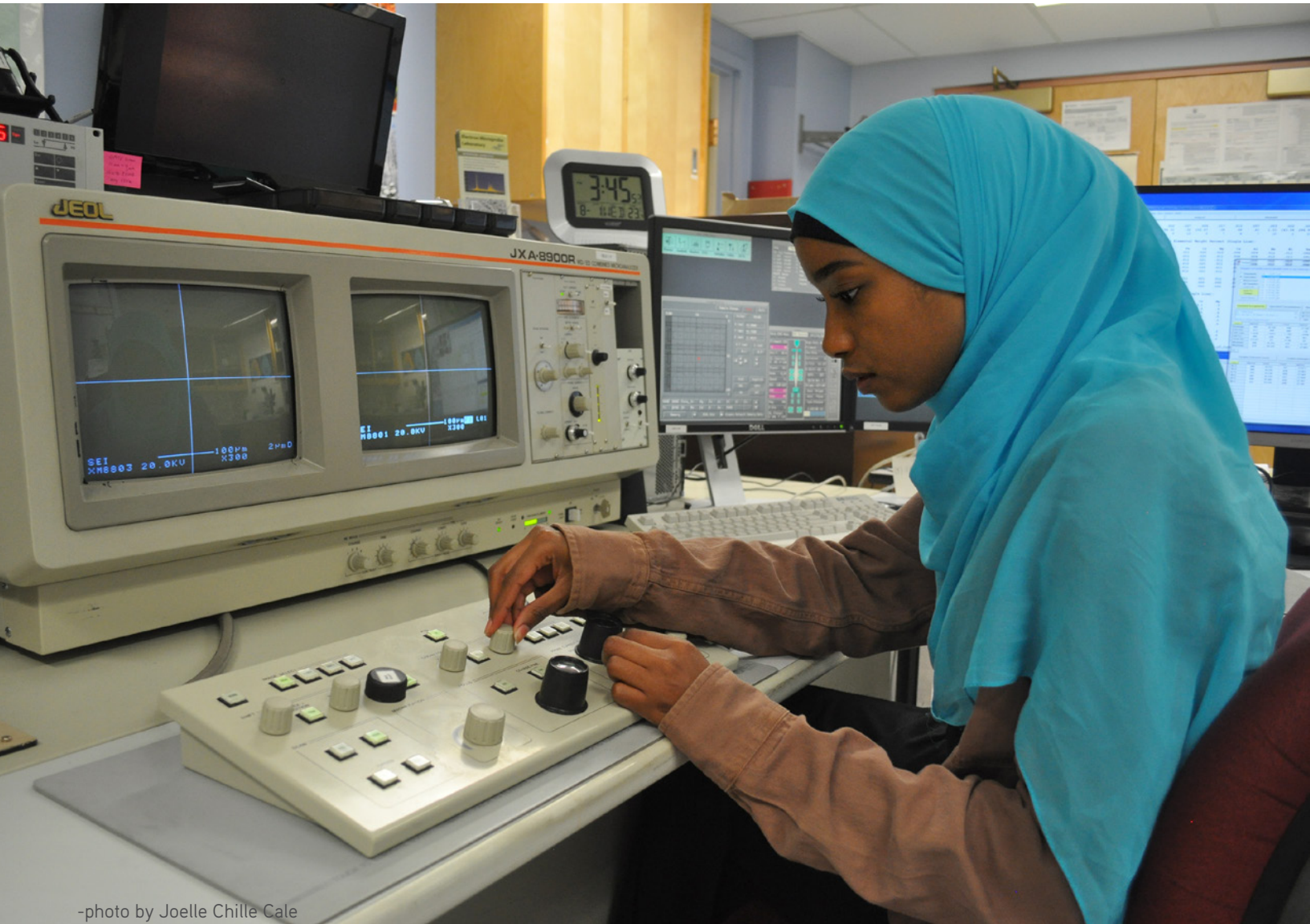
NEW AGAIN

Community leaders want to attract permanent residents to neighbourhoods like this one in Fort McMurray, which is still recovering from the 2016 wildfire. A proposed bylaw limiting camp construction is one possible way to help.

-photo by Paul Jen, Regional Municipality of Wood Buffalo

many as 61 camps, housing upwards of 27,000 people.

Exceptions will be made for maintenance camps, shutdowns, and sites inaccessible by road. Still, many in the oil sands industry think the ban could threaten its revival.



-photo by Joelle Chille Cale

HIGH SCHOOLER SHINES BY DISCOVERING DIAMOND REMOVAL METHOD

An Edmonton high school student has discovered what could be a better way to remove diamonds from kimberlite rock, suggesting a way to increase mining yields. Seventeen-year-old Hamdi Ali recently participated in a University of Alberta program offered through Women in Scholarship, Engineering, Science, and Technology (WISEST), an organization that focuses on creating pathways to science success for women and other underrepresented groups.

THE FUTURE OF GEOSCIENCE

High schooler Hamdi Ali performs her research at the University of Alberta, leading to presentations of what may be a better way to remove diamonds from kimberlite.

During her time at a U of A geology lab, Hamdi worked with a mentor on a research project that revealed that the standard industry technique of extracting diamonds from rock—mechanical vibrating plates—may actually destroy many of the diamonds. She came up with a safer strategy: using high-voltage pulses of electricity to break down kimberlite and reveal the diamonds within. Since completing her research, Ali has been asked to present to a number of companies in the industry.



HYATT HOTEL IN THE PIPELINE FOR OLD ENBRIDGE BUILDING

It's a familiar sight to Edmonton drivers and other downtown denizens: an office building with a peaked roof at the corner of 102nd Street and Jasper Avenue. The former Enbridge building, a city landmark since opening its doors in 1981, is on its way to becoming a business centre and a stopping-off point for visitors to the city.

Most recently, the tower housed about 2,000 Enbridge employees—many of them professionals licensed with APEGA. But in 2016, the permit-holding company relocated to the new Enbridge Centre, a shiny, 28-storey tower built where the Kelly Ramsey Building once stood.

The 38-year-old former Enbridge home is being transformed into a palace of beds and boardrooms. The business hotel, under the Hyatt brand, will include 300 guest rooms, a wellness spa, a fitness area, and much more. Owned by Lighthouse Hospitality Inc., it will offer short-term stays through Hyatt Place and long-term stays through Hyatt House.

Naturally, the building's exterior will also be redeveloped to suit its new purposes, but the iconic peaked roof will survive the \$65-to-\$70 million revamp. Owners say that the project should take about 18 months to complete.

STILL MAKING A POINT

The old Enbridge building in downtown Edmonton will be home to a new Hyatt-branded hotel, expected to be complete in about 18 months.

-artist's rendering courtesy Lighthouse Hospitality

HEALING IS COMPLETE OF A WHYTE AVENUE EYESORE

For 20 years in Edmonton, an empty lot at the southeast corner of 105 Street was an ugly gap in Whyte Avenue's otherwise inviting smile. Filled with weeds and mud puddles, and cordoned off by chain-link fencing, the site had been home to a gas station that closed way back in 1998.

Wherever underground gas tanks are used, so-called brownfields are the result, meaning environmental remediation was required before the lot was fit for reuse. Eventually, Calgary's Wexford Developments was cleared to begin work on a 132,000-square-foot, mixed-use building at the Edmonton site.

The Raymond Block opened this January after five years of construction. Named for the Raymond Hotel, which occupied the site in the early 1900s, it boasts 95 luxury apartments on its top four floors, and retail and office space on its lower two. In the lobby you'll find a 50-foot wall containing century-old bricks reclaimed from the historic and now demolished Kelly Ramsey building in downtown Edmonton. The Ramsey caught fire in 2009, and the lot where it stood is now home to Enbridge Centre.

According to the Government of Alberta's major projects inventory, the estimated cost of the Raymond Block was \$45 million.

POST-SECONDARY FOOTPRINT GETS BIGGER IN EDMONTON

Edmonton's Northern Alberta Institute of Technology (NAIT) opened in 1963 with nine buildings at its campus near Edmonton's city centre. It has since grown to include 29 buildings across four different campuses.

NAIT is about to grow again. The polytechnic institute is poised to double its footprint, after purchasing two new parcels of land from the City of Edmonton: 13.27 hectares in the developing community of Blatchford, northwest of the main campus, and 4.8 hectares

at the former site of a transit garage, north of the main campus.

The acquisitions will allow NAIT to continue to grow in the decades to come, eventually consolidating almost all of its programs at the main campus. Exceptions will be those that, by their very nature, require more space, like the crane and hoisting program in Spruce Grove.

Coming soon: a new student residence at Blatchford and a skills centre at the old transit property.



NAIT BUYS SOME ROOM TO GROW

Posed by the view of NAIT's Blatchford connection is the polytechnical school's President and CEO Dr. Glenn Feltham.

-photo courtesy NAIT

CALGARIANS NOT NECESSARILY SEEING THE BRIGHT SIDE OF THEIR ECONOMY

With the next election looming, Albertans are mulling over the state of the economy and wondering what the future will bring. A new study out of the School of Public Policy at the University of Calgary suggests that the city's residents may be leading the pack when it comes to economic pessimism.

With help from Forum Research, the study's authors surveyed the same 748 individuals about their views on the economy in 2017 and 2018. Two-thirds of respondents believed that the local and provincial economies had worsened over the previous year, and nearly half believed the Canadian economy had also declined. Younger Calgarians were more likely to feel that the economy had improved, while older folks were more prone to negativity.

The study's researchers note that the perceptions don't necessarily match the economic reality. Given the price of oil and gas, decline in GDP growth last year, and uncertainties about the future of the energy sector, no one would argue that the province has regained its past economic prosperity. But by many measures, Alberta's economy is still quite healthy.

The recession has been over since 2017 and the economy is growing, the experts on such things say. More people are employed now than before the crash, and workers enjoy average weekly earnings of \$1,155—more than their counterparts in any other province in Canada.

While it's true that Calgary's unemployment rate still hovers above seven per cent, not all demographics are equally affected. Those in their prime working years (25-54), for instance, now have employment rates very close to pre-recession levels.

YYC TRAVELLER FIGURES SOAR IN 2018

Calgary's economy may be staying close to the ground (at least in terms of public perception), but the airport authority is certainly flying high. In 2018, a record number of travellers—17.3 million—visited the Calgary International Airport. This marks a 6.6 per cent increase or an extra 1 million passengers in just 12 months, a surge that YYC hasn't experienced since 2014, when the provincial economy was soaring.

The airport authority attributes much of the growth to the addition of a \$2-billion international terminal in the fall of 2016, which has helped the airport become a hub for connecting flights. About 37 per cent of YYC passengers are connecting to another flight, a process that's made easier by new technologies, and improvements to customs and security procedures in the new terminal.



INTERNATIONALISM

A new international terminal is credited with making Calgary more of a hub than it used to be, driving usage upwards, says the Calgary Airport Authority.
-photo courtesy Calgary Airport Authority

The airport is expecting similar growth in 2019, when WestJet takes possession its first Boeing 787 Dreamliners. The 320-seat planes will allow the Calgary-based airline to begin competing more with Air Canada for international flights.

HEAVY SUPPORT PROVIDED TO LIGHT-RAIL TRANSIT

The province has officially greenlit Phase 1 of the most extensive single transit project in Alberta's history: Calgary's much-anticipated Green Line, connecting neighbourhoods in the north and south ends of the city. In a recent funding agreement between the Government of Alberta and the City of Calgary, the province committed its financial support to Phase 1, which comes with a \$3-billion price tag to connect 16th Avenue North to the Shepard area in the city's southeast.

The cost is being split between Alberta and the federal government, with much of the province's contribution coming from the carbon levy. The Green Line is expected to create 8,000 direct jobs and 12,000 support jobs in industries like engineering and administration over the next eight years, plus hundreds of maintenance jobs thereafter. The project is also expected to cut carbon emissions by 30,000 tonnes each year by the end of the first phase.

The province is simultaneously investing \$1 billion in Edmonton's \$2.6-billion Valley Line West LRT expansion, which will move about 40,000 Edmontonians between downtown and Lewis Estates in the west every day by the time it's completed in 2026. Also in Edmonton, the Government of Alberta has committed \$131 million towards the \$328-million expansion of the Metro Line, connecting NAIT with the new Blatchford community.



TRANSPOTTING IN ALBERTA

Top, a surface station on the City of Calgary's Green Line, and bottom, the Edmonton Brewery District stop.

-artist's renderings courtesy City of Calgary and City of Edmonton

Both Edmonton projects will connect large suburban communities with the city's core, allowing Edmonton's transit system to cover a larger area of the growing city. It is predicted that the number of people living in the Edmonton metro area will grow to 2.2 million people (from about 1.4 million today) by 2044.



GOING BANKRUPT NO LONGER AN EXCUSE TO ORPHAN YOUR WELL

Drive around rural Alberta and you'll see pump jacks scattered across the farmland that continually rolls into view. Some will bob up and down as you pass. Others, perhaps 90,000 province-wide, are sitting idle.

Most of these sites are no longer in operation but still under lease from energy companies. A growing number have been orphaned, which usually means they've been abandoned by companies that became insolvent and may not even exist anymore.

The Orphan Well Association (OWA)—an industry-funded not-for-profit that cleans up abandoned oil and gas wells—says there are currently 3,127 orphaned oil and gas wells in Alberta, needing to be plugged up for the health of the environment and landowners. This is a huge increase from the 200 reported in 2014, and

SOMETIMES THEY NOD, SOMETIMES THEY DON'T Orphan wells in Alberta number over 3,000, and the courts have ruled against insolvency being a justifiable abdication of cleanup responsibility.

not surprisingly, it represents billions of dollars in remediation costs.

In Alberta, the companies responsible for polluting land are obligated to take care of the cost of reclaiming it. In cases of insolvency, wells are sometimes abandoned, leaving the expensive cleanup to the OWA.

But a new Supreme Court ruling means that going under will no longer be an excuse for abandoning wells. Companies will now have pay for land reclamation before they pay back loans to their creditors.

The ruling overturns a lower court decision involving Redwater Energy. The Okotoks company that became insolvent in 2015. It tried to abandon old wells in favour of returning \$5 million to a creditor.

CANADIANS IN GROWING NUMBERS CLIMB ABOARD TRANSIT

In what many would view as wrong turn for urban transit, American cities are largely moving away from public options like buses and trains. The culprit is the rise of ride-sharing applications like Uber.

But Canadians appear to be bucking the trend: we're using public transit in higher numbers, it appears. The number of transit trips rose by 1.5 per cent in 2017—that's an additional 30 million rides and the first aggregate increase since 2014. So say statistics released by the Canadian Urban Transit Association.

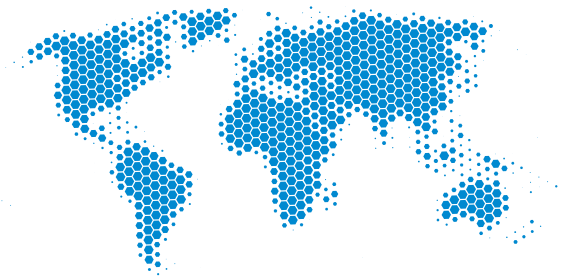
Reasons for the boost include service improvements (longer hours and better routes, for instance), growing student populations, increased tourism, higher gas prices, and higher employment.



TRANSIT TRENDS

Canadians are increasingly using public transit, because of improving service. Shown here is Calgary's Blue Line.

-photo courtesy City of Calgary



ERRATIC BEHAVIOUR OF MAGNETIC NORTH KNOCKS THE WORLD OFF COURSE

You use a compass to navigate backcountry hikes and Google Maps to find your way in the city. Regardless, all modern navigation systems are

based on the Earth's magnetic field—especially the location of magnetic north.

But magnetic north isn't fixed in place, as most of us know. Scientists and explorers figured that out in the 1800s and early 1900s, noting that the pole was shifting, roughly speaking, away from northeastern Canada towards Siberia.

However, geologists are stymied by the pole's erratic behaviour of late, especially its rapid movement (50 kilometres per year). Earlier this year, the World Magnetic Model—an international tool that describes the magnetic field and guides navigation, altitude, and other systems—had to be updated for the second time in five years. The last revision in 2015 was expected to last until 2020.

AN EXAMPLE OF FJORD-WARD THINKING (WITH APOLOGIES TO NORWAY: WE COULDN'T HELP OURSELVES)

Norway is working on a technically ambitious solution to making time through its rugged coastal landscape, a place where roadways bump up against majestic glaciers, fjords, and mountains. A third of Norway's 5.3 million citizens live on the west coast of the country, where 50 per cent of export goods originate.

About 1,000 fjords make travel and shipping in the area a beautiful but time-consuming endeavour. Using the existing E39 in all its glory—a 1,100-kilometre highway linking Kristiansand and Trondheim—requires seven ferry crossings and takes a vehicle 21 hours.

A \$49-billion solution will cut travel time by half and eliminate the need for ferries. It will feature three suspension bridges and five floating bridges (supported by pontoons). But there's more. The project could make Norway the first country to build a submerged floating tunnel. The structure will be built within a fjord at a depth of 1,400 metres—too deep to drill supports into the sea bed. So instead, the tunnel portion will dangle in the water, hung from island-like pontoons.

A NEW WAY TO ENJOY THE FJORDS

It's a different view for travellers in Norway, once the option of using a floating tunnel instead of a ferry becomes an option.

—artist's rendering courtesy Snøhetta

The tunnel will sit 30 metres (100 feet) under the surface of the water, with plenty of room for ships to safely travel above it and submarines below. The tunnel's depth will also protect it from big winds, waves, and currents.

The tunnel design will have to suit the area's unique environment. Currently, 50 engineers, geologists, and other experts from around the world are running simulations and taking detailed measurements of the area's geography and weather conditions. Although similar projects are underway in other countries—including China, South Korea, and Italy—Norway stands a good chance of being the first to get it done.

Still, there's no need to plan next summer's vacation around a drive through one of these engineering marvels: The Norwegian Public Roads Administration, the governmental body responsible for the project, aims to complete construction by 2050.



MARS DREAM CRASH LANDS

The headline-grabbing Mars One project appears to be sliding into obscurity, now that its commercial arm, Mars One Ventures AG, has gone bankrupt. The company was created to fund the ambitious initiative, which aimed to locate a permanent human settlement on the red planet—and, naturally, create a reality television show.

From the moment it was announced in 2012, Mars One has had more than its share of doubters, particularly from the space industry. Many did not think it would be possible to land a four-person crew on Mars for as little as \$6 billion, given the astronomical costs of space travel. But even if it were possible to adequately fund such an endeavour, experts argued that life on Mars would likely be impossible with current technologies.

In 2014, the Massachusetts Institute of Technology

released a report on the feasibility of the project that argued that settlers would die within the first 68 days. That's because growing crops within the habitat would produce unsafe levels of oxygen and lead to suffocation. And while Mars One aimed to melt Martian ice for drinking water, no current technologies exist to do that.

Other critics think the project's many logistical weaknesses, unrealistic financial requirements, and delayed deadlines are signs it was a scam all along.

One thing is certain: *Real Housewives of Mars* or *Survivor: The Mars Edition* will not be coming to your TV anytime soon.

Fortunately, you can still experience the planet via the Mars Curiosity Rover's sassy Twitter account. You can also check out a new, 360-degree video capturing a portion of its journey along the Vera Rubin Ridge at a Mars NASA site. *See our link box on next page.*

NOT YOUR GRANDMA'S MOON ROCK

Since Neil Armstrong and Buzz Aldrin first walked upon the moon in 1969, teams of astronauts and scientists have collected and analyzed rocks from its surface. Yet only now, researchers are learning that some of our moon rock may actually be Earth rock.

One sample, brought home during the Apollo 14 mission 48 years ago, may have actually originated on our own planet. The rock's age is estimated at 4 billion years, dating it from around the time life is believed to begun on Earth. Researchers arrived at their conclusion because the sample is a type of felsite, which is made up of feldspar, quartz, and small amounts of zircon, and is produced by plate tectonics: a very earthly phenomenon.

So, how did it get to the moon? One theory is that, not long after Earth formed, an asteroid or comet struck the planet and sent displaced rock hurtling through space. Some of it hit the moon. No matter how it got there, the sample appears to be the oldest rock geologists have ever identified.



EARTHLY EVIDENCE

Apparently, not only shadows from Earth have hit the moon, like this one captured during the 2019 eclipse. Researchers now say that a sample collected from the moon appears to be a 4-billion-year-old Earth rock.

LATITUDE LINKS

The following list of links related to the preceding Movers & Shakers and Watch sections.

Movers & Shakers

[Cleaning Up on Clean-Tech Cash](#)

[Dean's Holiday Reception Salutes Success](#)

[Engineer Turns Adversity into Opportunity](#)

[Lacombe Revitalization Receives Envision Award](#)

[New Funding Gives Masonry an Upgrade](#)

[Who Are You Calling Artificial?](#)

[New Fellowships Eye Clean Tech](#)

The Watch

ALBERTA

[U of A Researcher Sees Future in Ultrafast Laser Surgery](#)

[Electric Vehicle Charging Network is Heading to Southern Alberta](#)

[Fort McMurray Explores Camp Limitations to Spur Permanent Housing](#)

[High Schooler Shines by Discovering Diamond Removal Method](#)

[Iconic Former Enbridge Building to Become Downtown Hotel](#)

[Healing Complete for Whyte Avenue Eyesore: Raymond Block Opens](#)

[Post-Secondary Footprint Gets Bigger in Edmonton](#)

[Calgarians Not Necessarily Seeing Economic Bright Spots](#)

[YYC Traveller Figures Soar](#)

[Light-Rail Transit Garners Heavy Support](#)

[Supreme Court Says Insolvency Not a Valid Excuse to Orphan Wells](#)

CANADA

[Growing Number of Canadians Embrace Public Transit](#)

WORLD

[Magnetic North Moving Faster Than Usual](#)

[Norway Speeds Up Coastal Travel With Submergent Infrastructure](#)

[Mars One Appears to be Done](#)

[A Moon Rock Sample is Actually Earth Rock](#)

Advancing Our Professions— Impacting Our Communities

[VOLUNTEER WITH APEGA](#)

Committees & Boards

Members with five, 10, or more years of industry experience are encouraged to apply for committees and boards. Our volunteer team will work with you to find the best fit for your skill set and interests. [Apply Now and be Matched to a Committee or Board](#)



Lethbridge Branch Member-at-Large

Branches represent the association in their geographic areas. They advance the *APEGA Strategic Plan* by assisting Council and staff, primarily in communications, outreach, and professional development. Get involved and help your branch by supporting activities and having the opportunity to create new ones. Deadline to apply is March 4. [Learn More and Apply](#)

Graduating Student's Workshop

Graduating Student's Workshops are held in conjunction with Ring Ceremonies: The Ritual of the Calling of an Engineer. In this workshop, you'll help graduating students evaluate case studies on registration, compliance, ethics, and investigative issues, highlighting the importance of ethical considerations in practice. Volunteers are needed in Calgary and Edmonton. [Learn More and Apply](#)

"I enjoy volunteering in outreach and would say that Elementary Science Nights are memorable experiences. It's seeing the expressions on kids' faces when they realize that the salt on their fries and the lead in their pencils are rocks—those things are what make it all worthwhile!" – Mahendra Samaroo, P.Eng., P.Geol., APEGA Volunteer



Conference Room Host for PD Sessions

Every year, APEGA holds a conference that brings together delegates from across Alberta and beyond, providing a stimulating program that speaks to the future of engineering and geoscience. As a dynamic volunteer, you get to introduce the presenters of a PD session at the conference, as well as help with housekeeping tasks like attendee registration. Deadline to apply is March 25. If you are interested in volunteering and would like more information, email our Volunteer Management Coordinator at volunteer@apega.ca. Subject line: Conference Room Host.

Science Olympics

Share your passion for engineering and geoscience with students at one of our APEGA Science Olympics events! These are great opportunities to foster enthusiasm for engineering and geoscience, to promote your profession in the community and to log professional development hours with APEGA. Volunteers are needed as [judges](#), [event assistants](#), and [challenge managers](#) in Edmonton, Calgary, Lloydminster and Red Deer.

Mentoring

Have an impact on the next generation of engineers and geoscientists by volunteering in the APEGA Mentoring Program. Each mentoring partnership lasts a full year. Meetings can be done in person or online. Time commitment is flexible. We encourage you to embark on this leadership role, contributing to a lifetime of good practice of your mentee. [Learn More and Apply](#)



For further information on any of the opportunities listed here—or other APEGA-related volunteer opportunities—please contact:

APEGA Volunteer Management
1-800-661-7020
volunteer@apega.ca

You can also check out the [volunteer section of the APEGA website](#).



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CALGARY BRANCH CALENDAR

LUNCHEONS

THURSDAY, FEBRUARY 28

Electricity and Regulatory Challenges

Gary Hart, P.Eng., AltaLink

THURSDAY, MARCH 28

Robotics

Dr. Alejandro Ramirez-Serrano, P.Eng., University of Calgary

WEDNESDAY, APRIL 17

Near Surface Geophysics in search of Failing Dams, Dead Sea Scrolls, and the Hidden Stashes of Pablo Escobar

Paul Bauman, P.Eng., P.Geoph., WorleyParsons

THURSDAY, MAY 16

Topic TBA

Miranda Keating Erickson, Alberta Electric System Operator

Luncheons held at: Fairmont Palliser Hotel, 133 Ninth Ave. SW

Schedule: 11:15 a.m. Registration 11:45 a.m. Lunch

Cost: Members—\$50

Non-members—\$60

Students—\$25

To register: apega.ca/events

SPONSORS



TD Insurance



EDMONTON BRANCH CALENDAR

LUNCHEONS

WEDNESDAY, MARCH 13

TEC EDMONTON—A PART OF ALBERTA INNOVATION

Location: APEGA Edmonton Office

WEDNESDAY, APRIL 10

Refining Bitumen in Alberta

Location: Chateau Lacombe

WEDNESDAY, MAY 15

Canada's Oil Sands Innovation Alliance and Oilsands Innovation

Location: APEGA Edmonton Office

Luncheons held at: APEGA Edmonton Office, Lindberg Conference Centre, 10060 Jasper Ave. NW

or

Chateau Lacombe, 10111 Bellamy Hill NW

Schedule: 11:30 a.m. Registration 12 p.m. Lunch

Cost: Members—\$35

Non-Members—\$40

Students—\$20

Webinar—\$10

To register: apega.ca/events

SPONSORS

Platinum



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Gold



Silver



Recommended Orders

Date: October 16, 2018

Case No.: 18-009-RDO

IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT, AND IN THE MATTER OF THE CONDUCT OF [PROFESSIONAL MEMBER A], P.ENG.

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of a permit-holding company (the “Company”) and a responsible member [Professional Member A], P.Eng., (the “Member”). The investigation has been conducted with respect to a complaint initiated by an architect (the “Complainant”), who submitted a letter of complaint dated June 20, 2016.

A. BACKGROUND

The Complainant was hired to complete a project in [an Alberta city]. The Complainant subcontracted out the lighting designed for both the interior and exterior of the building to the Company. At about 75 per cent completion of the project, the Complainant learned that there might be a problem with the level of lighting. The Complainant notified the Company and informed them that there might be some potential problems with the lighting and that they should pay close attention to the last portion of the project so they could monitor the lighting levels. The Complainant was assured by the Company that the lighting levels for the project would be sufficient.

At 98 per cent completion, the Complainant claimed that the interior lighting was not meeting the owner’s requirements. A dispute between the owner of the project (the “Owner”), the Complainant, and the Company ensued.

The Owner was able to retain a third-party engineer to assess the lighting levels. The report revealed that the illuminance levels for the main areas did not meet recommendations of the *Illuminating Engineering Society*

Lighting Handbook 10th Edition and Occupational Health and Safety Regulations of Canada.

The Member is the responsible member for the Company. At the project’s 75 per cent completion stage, the Company’s project manager noted that the colours painted in the space were not as originally specified. Dark, light-absorbing colours were used and the Company had not been notified of these colour changes made by the Owner. The project manager explained to the Owner that dark colours will negate the effect of indirect lighting.

Despite the Member providing alternative cost-effective solutions to the Owner, the Owner would not accept any additional costs. The Company did replace some of the lighting and did relocate some fixtures at their cost. The Member indicated that the project proceeded to completion and all requirements were met and occupancy provided.

B. THE COMPLAINT

The Investigative Committee appointed an Investigative Panel to conduct an investigation into whether the Member engaged in unprofessional conduct, unskilled practice, or both with respect to the allegations outlined in the complaint.

C. AGREED STATEMENT OF FACTS

1. The Member is the principal owner of the Company and has been a member in good standing with APEGA since 2005.
2. The Member was retained by the Complainant to provide the lighting design for the interior and exterior of the project and contract administration.

Case No. 18-009-RDO *continued*

3. The project commenced in 2012 with the Company providing their scope of work which included:
 - a. Electrical design for the 12,000-sq.-ft. office/retail building
 - b. Lighting layout and control design
 - c. Lighting design review
4. The Member declared a conflict of interest with the project and was not directly involved as his father was the owner of the electrical company that was awarded the electrical services contract through a tender process.
5. The project manager of the project (who is a senior partner at the Company) was the lead designer and primary contact person for the project. The Member was, at all relevant times, the Responsible Member for the Company.

D. PANEL FINDINGS

6. There was no evidence of the Complainant defining any requirements with respect to lighting guidelines, lighting recommendations, lighting industry standards, or any other lighting design guide.
7. With respect to the general lighting levels on this project, both inside and in the parking lot, there is insufficient evidence to support an allegation of unskilled practice, or unprofessional conduct.
8. The Member issued engineering schedules for this project verifying compliance with the *Alberta Building Code* (the ABC), without sealed lighting designs or field verification or both of light levels. It is agreed that the light levels on the main stairs did not meet the minimum levels as required by the ABC.
9. With respect to light levels mandated by the ABC, the Panel found sufficient evidence to support an allegation of unskilled practice, unprofessional conduct, or both regarding the light levels installed on the main stairs. Specifically, the Member failed to meet the *Alberta Building Code 2006*, Part B, Section 3.2.7.1:

3.2.7.1. Minimum Lighting Requirements

1) An exit, a public corridor, or a corridor providing access to exit for the public or serving patients' sleeping rooms or classrooms shall be equipped to provide illumination to an average level not less than 50 lx at floor or tread level and at angles and intersections at changes of level where there are stairs or ramps.

E. CONDUCT

10. The Member freely and voluntarily admits that the light levels installed on the main stairs failed to meet the *Alberta Building Code 2006*, Part B, Section 3.2.7.1.
11. The Member acknowledges that the conduct, described above, constitutes unprofessional conduct as defined in Section 44(1)(b) of the *Engineering and Geoscience Professions Act*.
12. The Member also acknowledges that the conduct described above contravenes Rule of Conduct #4 of the *Code of Ethics*:
 - 4.** *Professional engineers and geoscientists shall comply with applicable statutes, regulations and bylaws in their professional practices.*

F. RECOMMENDED ORDERS

13. On the recommendation of the Investigative Committee, and by agreement of the Member and following a discussion and review with the Discipline Committee's Case Manager, the Discipline Committee hereby orders that:
 1. The Member shall receive a letter of reprimand to be retained on his APEGA file.
 2. The Member shall pay a fine in the amount of \$1,000 to APEGA within 60 days after the Discipline Committee's Case Manager approves the Recommended Order.
 3. If the Member fails to submit the above-mentioned requirements within the designated timelines, his registration will be suspended until such time as he does.
 4. If the Member fails to meet the above requirements after a one-year period from

Case No. 18-009-RDO continued

the date the Discipline Committee's Case Manager approves the Recommended Order, the Member's registration with APEGA shall be cancelled.

5. This matter and its outcome will be published by APEGA in any form or media as deemed appropriate and such publication will not name the Company or the Member.

Signed,

[PROFESSIONAL MEMBER A], P.ENG.

GEORGE CARAGANIS, P.ENG.

Panel Chair, APEGA Investigative Committee

DIANA PURDY, P.GEOL.

Case Manager, APEGA Discipline Committee

Date: October 16, 2018

Date: September 24, 2018

Case No.: 18-006-RDO

**IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT,
AND
IN THE MATTER OF THE CONDUCT OF MR. TERRANCE WALKER SMITH, P.ENG.**

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has investigated the conduct of Mr. Terrance Walker Smith, P.Eng., (the "Member") with respect to a complaint initiated by [the Complainant], dated February 7, 2017.

A. BACKGROUND

The investigation related to allegations that the Member improperly permitted documents to be authenticated or initialed or both by employees at his company, TWS Engineering Ltd. (TWS).

B. THE COMPLAINT

The Investigative Committee conducted an investigation into whether the Member improperly allowed employees under his supervision to apply his electronic stamp and signature (Allegation #1); failed to maintain control of his stamp (Allegation #2); and improperly allowed employees under his supervision to apply his initials onto building schedules (Allegation #3).

C. AGREED STATEMENT OF FACTS

1. Certain employees at TWS had access to the Member's electronic stamp and signature through the TWS AutoCAD system.
2. The Complainant estimated that he applied the Member's electronic stamp and signature to professional documents approximately 30 times. The Complainant observed other employees apply the Member's electronic stamp and signature to documents.
3. The Member requested that certain employees cross out portions of building schedules that did not apply to a given project and apply the Member's initials, after which the Member would review the schedules. However, the Complainant stated that on many occasions the Member did not request to review the documents prior to them being sent to clients.
4. The Complainant notified the Member about his concern with the process of authentication and provided him with a copy of the *APEGA Practice Standard for Authenticating Professional Documents* (the Practice Standard).

(i) Allegation #1: Whether the Member improperly allowed his employees to apply his electronic stamp and signature.

5. The Member granted employees access to his electronic stamp and signature. These employees consisted of professional members, E.I.T.s, C.E.T.s, technicians, technologists, and administrators.
6. The Member incorrectly interpreted the *Engineering and Geoscience Professions Act* (the Act) the Practice Standard, the *General Regulation*, and the *APEGA Guideline for Ethical Practice* (the Guideline). The Member wrongly understood that the parties making use of the stamp were under his "direct supervision and control."
 - a. As per Section 78(1) of the Act, "A professional member, licensee or restricted practitioner shall, in accordance with the regulations, (a) sign documents or records, and (b) stamp or seal documents or records."
 - b. As per Section 54(3) of the *General Regulation*, "When a stamp or seal is applied, the professional member or licensee to whom it was issued shall ensure that the stamp or seal is accompanied with that person's signature and the date on which the stamp or seal is applied." As per the Practice Standard, "A professional member shall personally sign the documents to which his or her stamp has been applied."
 - c. As per Section 4.2.4 of the Guideline, "Professionals shall only stamp and sign reports, plans or documents that they have prepared or that have been prepared under their direct supervision and control. In the case of work prepared by others, they shall only stamp and sign after having thoroughly reviewed the work and accepted responsibility for it." Additionally, Section 4.2.4 of the Guideline states, "If other members of the engineering or geoscience team prepared the documents, the responsible professional shall have exercised sufficient supervision and control, or have thoroughly reviewed the document, so that he or she can sign based on personal knowledge."
 - d. As per the Practice Standard, "A professional member shall personally sign the documents

to which his or her stamp has been applied." Additionally, as per the Guideline, "Professionals shall only stamp and sign reports, plans or documents that they have prepared or that have been prepared under their direct supervision and control. In the case of work prepared by others, they shall only stamp and sign after having thoroughly reviewed the work and accepted responsibility for it."

(ii) Allegation #2: Whether the Member failed to maintain control of his stamp.

7. There were limited controls in place at TWS between 2006 and February 2017 to prevent the misuse of the Member's electronic stamp and signature. Upon review, the Member understands that greater control of both digital and wet-stamps is required by the Member.
8. The Member incorrectly interpreted the *General Regulation*, the Practice Standard and the Guideline:
 - a. As per Section 54(1) of the *General Regulation*, "A stamp or seal issued to a professional member or licensee must at all times remain under that person's direct control and must be applied by the professional member or licensee, or by a person acting under the professional member's or licensee's immediate and direct control, to all final plans, specifications, reports or documents of a professional nature (a) that were prepared by the professional member or licensee or under the professional member's or licensee's supervision and control, or (b) that were prepared by another person in circumstances where the professional member or licensee has thoroughly reviewed them and accepted professional responsibility for them."
 - b. As per Section 54(2) of the *General Regulation*, "No person shall permit a stamp or seal to be physically located in a manner that would allow its use by a person other than the professional member or licensee to whom it was issued."
 - c. As per the Practice Standard, "A professional member is responsible for maintaining custody and control of his or her stamp at all times."
 - d. As per Section 4.2.4 of the Guideline, "As a matter of practice, professionals shall keep their stamps and seals under control."

Case No. 18-006-RDO continued

(iii) Allegation #3: Whether the Member improperly allowed his staff to apply his initials onto Alberta Building Code (ABC) schedules.

9. The Member stated that certain TWS employees were expected to strike out irrelevant portions of ABC schedules and to handwrite the Member's initials in those areas. This is a form of applying the Member's signature, and the Member is not permitted to allow others to apply his signature to professional documents.
10. There is no evidence that the actions of the Member resulted in the approval of professional documents that impacted public safety.
11. The Member attended the APEGA Permit to Practice Seminar in June 2017 in order to remain current on legal responsibilities and expectations as the Responsible Member for TWS.

D. CONDUCT

12. The Member freely and voluntarily admits that he breached the Act, the Practice Standard, the *General Regulation*, and the Guideline by improperly allowing employees to apply his electronic stamp and signature to professional documents on his behalf.
13. The Member acknowledges that he breached the *General Regulation*, the Practice Standard, and the Guideline by failing to maintain control of his stamp.
14. The Member acknowledges that he breached the *General Regulation*, the Practice Standard, and the Guideline by improperly allowing his employees to handwrite his initials onto ABC schedules.
15. The Member also acknowledges that the conduct described above constitutes unskilled practice and unprofessional conduct as defined in Section 44(1) of the Act.
16. The Member further acknowledges that the conduct described above breaches Rule of Conduct #4 of the *Code of Ethics*:

"4. Professional engineers and geoscientists shall comply with applicable statutes, regulations and bylaws in their professional practices."

E. RECOMMENDED ORDERS

17. On the recommendation of the Investigative Committee, and by agreement of the Member with that recommendation, following a discussion and review with the Discipline Committee Case Manager, the Discipline Committee hereby orders that:
 - a. The Member will receive a letter of reprimand to be maintained permanently on the Member's APEGA file.
 - b. The Member will pay a fine of \$7,000 within 60 days from the date this Order is approved by the Discipline Committee Case Manager. If the fine is not paid within 60 days from the date this Order is approved, the Member shall be suspended from the practice of engineering until the fine is paid.
 - c. The Member shall successfully complete the National Professional Practice Examination within one year from the date that this Order is approved by the Discipline Committee Case Manager. If there are extenuating circumstances, the Member may apply to the Director of Enforcement for an extension prior to the deadline. Any extension will be granted within the sole discretion of the Director of Enforcement. If the examination is not successfully completed by the above-noted date, the Member shall be suspended from the practice of engineering until the successful examination is complete.
 - d. This matter and its outcome will be published by APEGA as deemed appropriate and such publication will name the Member.

Signed,

TERRANCE WALKER SMITH, P.ENG.

JOHN DIIWU, P.ENG.

APEGA Investigative Committee

KEN LIU, P.ENG.

Case Manager, APEGA Discipline Committee

Date: September 24, 2018

Date: September 7, 2018

Case No.: 18-007-RDO

IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT AND IN THE MATTER OF THE CONDUCT OF MR. JAN KORZENIOWSKI, P.ENG.

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of Mr. Jan Korzeniowski, P.Eng., (the "Member") with respect to a complaint initiated by [the Complainant].

A. THE COMPLAINT

The Investigative Committee appointed an Investigation Panel to conduct an investigation into whether the Member engaged in unprofessional conduct and/or unskilled practice with respect to the allegations outlined in the complaint dated February 9, 2015. A Notice of Investigation was sent to the Member on July 15, 2015, requesting the Member to respond to the Complainant's allegations.

B. BACKGROUND

The Complainant is the owner and developer of [an Alberta golf course]. To ensure his golf course and banquet facilities would be Alberta Environment-compliant, he required the services of an engineer to design a water supply and wastewater sewage system (the System).

The Complainant, through [Company A], retained the Member (JK Engineering Ltd.) in 2000 on an "as-required" basis.

C. AGREED STATEMENT OF FACTS

1. The Member attained his master's degree in civil engineering from the Technical University of Warsaw, Poland, in 1966.
2. The Member has been practising as an engineer in Canada for approximately 45 years and has been a member in good standing of APEGA since 1976, with no prior findings of unprofessional conduct or unskilled practice since he has been a member.
3. His background and experience have been primarily in the water engineering field, generally related to water supply and wastewater systems and hydrogeology, taking on a variety of different projects through his company, JK Engineering Ltd.
4. The Member was retained on a verbal contract with the Complainant with the specific scope to complete a water and wastewater treatment facility at [the golf course] that would be in compliance with appropriate regulatory bodies and jurisdictions.
5. The Member and the Complainant did not execute a formal, written contract to confirm the scope of work. Rather, the agreement was for the Member to provide engineering services on an as-required basis.
6. The Member provided design drawings for the System that were to be submitted for Alberta Environment approvals and then utilized by the Complainant's staff and contractors to construct.
7. The Member supplied equipment for the System, with some components being sourced out of Poland. Among components sourced out of Poland were fiberglass, potable water storage tanks.
8. Alberta Environment and Parks (AEP) *Standards and Guidelines for Construction and Design of Water Works Facilities* is a document that sets the standard for tanks that come into contact with water. In the treatment process, anything that contacts the water must comply with NSF61. In this case, the tank was not NSF61-certified and therefore is not in compliance with NSF61. The standard reads:

The AEP Standards and Guidelines for Construction and

Case No. 18-007-RDO *continued***Design of Water Works Facilities
2006 & 2012****1.7 Potable Water Treatment Chemical standards****1.7.2 Direct and Indirect Additives**

The American National Standards Institute and National Sanitation Foundation Standards (ANSI/NSF) 60 and 61 shall be used to control potential adverse human health effects from products in contact with or added to water directly for treatment or indirectly during treatment, storage or transmission as follows:

1. 7.2.1 Indirect Additives

All substances, materials or compounds (e.g. pipes, coatings, filter media, solders, valves, gaskets, lubricants, resins, process equipment, etc.) that may come in contact with water in the waterworks being treated to be potable and water that is potable shall conform to ANSI/NSF Standard 61 for health effects and the product certified for potable use by an agency accredited by the Standards Council of Canada, e.g. NSF, CSA, UL, etc.

The following exceptions apply:

- *Any materials listed in the current NSF Standard 61 “Annex C”.*
- *Existing waterworks (unless otherwise notified by the Regional Director).*
- *Portland cement based concrete. However, the Portland cement, any admixtures used in the concrete and concrete coatings shall be certified.*
- *If NSF certification does not exist for any substance, material or compound, the Regional Director, at his discretion, may approve formal food grade certification by a recognized agency (Health Canada, FDA, etc.).*

9. The Member interpreted this requirement that such control can be ensured by using other recognized certification and assumed that the Polish/EU certification is acceptable as an equivalent to NSF, CSA, or UL.

10. The Member provided the Polish Hygienic Certificate and the Polish National Declaration of Compliance regarding the acceptability of the fiberglass tanks for potable water storage that were made in Poland.
11. The storage tanks are made of a material that will come into contact with potable water, as it is the potable water storage tank, and therefore should have conformed to ANSI/NSF 61.
12. The Member fully cooperated with the investigation and indicated he will be contacting the AEP Regional Director regarding the process required to certify the tank material.

D. CONDUCT

13. The Member freely and voluntarily admits that:
 - a. The tanks, as supplied, were not certified as per ANSI/NSF61 as set out above in paragraph 8 and thereby demonstrated a lack of judgment in carrying out a duty or obligation undertaken in the practice of engineering.
 - b. Since the potable water storage tanks were not certified as per ANSI/NSF 61, their use resulted in a potential public health risk, and the Panel found sufficient evidence to support a finding of unprofessional conduct under Section 44(1)(e) of the *Engineering and Geoscience Professions Act* (the Act).
14. The Member acknowledges that the conduct is a breach of Section 44(1)(e) of the Act and therefore constitutes unprofessional conduct as defined in the Act:

44(1) Any conduct of a professional member, licensee, permit holder, certificate holder or member-in-training that in the opinion of the Discipline Committee or the Appeal Board:

... (e) displays a lack of knowledge of or lack of skill or judgment in the carrying out of any duty or obligation undertaken in the practice of the profession,

whether or not that conduct is disgraceful or dishonourable, constitutes either unskilled practice of the profession or unprofessional conduct, whichever the Discipline Committee or the Appeal Board finds.

Case No. 18-007-RDO continued

E. RECOMMENDED ORDERS

15. On the recommendation of the Investigative Committee, and by agreement of the Member and following a discussion and review with the Discipline Committee's Case Manager, the Discipline Committee hereby orders that:
 1. The Member shall receive a letter of reprimand and a copy to be retained on his APEGA file.
 2. The Member shall pay a fine in the amount of \$2,000 to APEGA, the amount to be paid within 60 days after the Discipline Committee's Case Manager approves the Recommended Order.
 3. Should the Member fail to submit the above-mentioned requirements within the designated timelines, his registration will be suspended until such time as he does.
 4. Should the Member fail to meet the above requirements after a one-year period, from the date this document was signed and approved by the Case Manager, the Member's registration with APEGA shall be cancelled.
 5. This matter and its outcome will be published by APEGA in any form or media as deemed appropriate and such publication will name JK Engineering Ltd. and the Member, Jan Korzeniowski, P.Eng.

Signed,

JAN KORZENIOWSKI, *P.ENG.*

JIAN YAO, *P.ENG.*

Panel Chair, APEGA Investigative Committee

JOHN VAN DER PUT, *P.ENG.*

Case Manager, APEGA Discipline Committee

Date: September 7, 2018

MEMBER BENEFITS

Eligible APEGA members can take advantage of the following discounts. Complete details of these group benefits can be found at apega.ca under [Member Benefits](#) and Member Insurance. Due to seasonal or other limited-time promotions, the member discount may not be the lowest price—you are advised to compare. APEGA does not hold any member insurance profile or policy information.

To inquire about these benefits, check your eligibility, or provide service feedback, please email memberbenefits@apega.ca.

TRAVEL



Hotel and car rental travel search engines
Below-market travel discounts



10% off current Alberta rates



10% off current national rates



10% discount value with valid APEGA Member card



Fuel discounts through Esso service stations

FINANCIAL



Financial Planning Services: 20% discount for APEGA members

PERSONAL



10% off select regular priced items



15% off on resume services



Market-leading, bring-your-own-device rate plans



10% off admission, IMAX, and annual membership

INSURANCE DISCOUNTS



Professional Liability Insurance

Pro-Form Sinclair Professional, A division of



Secondary Professional Liability Insurance



Manulife Authorized Advisor

