

PEG

SUMMER 2017

APEGA's New Leaders

Registrar & CEO Jay Nagendran, P.Eng.
President Jane Tink, P.Eng.





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PEG

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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 at this time.

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

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The Association of Professional
Engineers and Geoscientists of Alberta

Beyond the Buzzwords and Jargon – Creating Clear Communication and Careful Listening

BY **JANE TINK**, P.ENG., FEC, FGC (HON.)
APEGA President

At our Annual General Meeting, I spoke about how much I have enjoyed the opportunity to meet our Members and Permit Holders and how I look forward to meeting many more of them over the coming year. I consider this interaction to be an integral part of improving our engagement with our membership and other stakeholders.

A large part of that engagement depends on how truly effective the communication is between our Association and its stakeholders. Engagement and communication are closely related, both relying heavily on the willingness, honesty, and clarity of everyone involved.

I have found that each party in a conversation usually believes they are speaking clearly. They're using their own typical language, complete with their own buzzwords, acronyms, and terminology. The other party is listening with their own filters and language. The question then becomes, "Is either side truly being heard?"

The Association's consultations with Members on our legislative review involved many different forms of communication, including in-person sessions, webinars, surveys, and written material. The reports that came out of these interactions and the feedback APEGA collected are covered in what are called [We're Listening reports](#), thus signifying that the Association has heard what Members have communicated. I encourage you to read the reports. We believe that we have been listening, but only you, our Members, can verify whether you were truly heard.

Engagement and communication, however, are not only important for the Association and the future of

self-regulation. They are equally important for Members and Permit Holders in their professional practices.

When I speak to new Professional Members at Member Induction Ceremonies, I reiterate the necessity, as Professional Engineers and Professional Geoscientists, to communicate honestly with all stakeholders in a manner that people understand. After all, this is our obligation to our clients, our employers, and all the stakeholders in our projects, including the public.

When we stamp our work, that stamp, that symbol, communicates to anyone who uses or reviews the work that it was performed by a licensed Professional Member and that it can be relied upon to be accurate — that it can be trusted!

We must always remember that it isn't only the

work we stamp and sign but all the work we perform that should achieve this high level of quality and care. Any work done by others that we accept and potentially incorporate into our work needs to be reviewed and checked like we had done it ourselves. We are taking professional responsibility and accepting liability. This should not be done lightly, because we must not violate the public trust we work so hard to earn and maintain.

Although most of us, if not all of us, would prefer to deal with the technical aspects of our work — the numbers, the calculations, the test results, the maps — we must, in fact, be able to explain both the benefits and the drawbacks of the work we do to all the stakeholders associated with the project. Some of these stakeholders may be technical experts like ourselves, but others may have little to no technical background.

ENGAGEMENT AND COMMUNICATION ARE NOT ONLY IMPORTANT FOR THE ASSOCIATION AND THE FUTURE OF SELF-REGULATION. THEY ARE EQUALLY IMPORTANT FOR MEMBERS AND PERMIT HOLDERS IN THEIR PROFESSIONAL PRACTICES.

We must be respectful of their perspectives, even when they differ from our own. We must take care in the words we use and the meanings we assign to the words others use. We need to communicate clearly to the technical and the non-technical players alike and address any issues that they may have, because they live with the consequences of the work we perform. Ultimately, we must be able to communicate in a way that allows all parties to be truly heard and understood. We may not be able to get everyone to agree to the entire solution, but they need to understand why we adopted the solution we did.

It continues to be my privilege to meet our Members and Permit Holders, as well as many external stakeholders. It has given me an opportunity to see whether we, as an Association, are communicating in a way that our Members actually hear and understand. It also allows me to find out about what issues our stakeholders are concerned about and why. Many of these issues are currently being addressed by Association staff. These include improvements to our application and registration processes, our complaint and investigative processes, and much more. (For more information, I encourage you to read the *2016 APEGA Annual Report: Strengthening Our Foundation*.)

Some of these concerns are being examined now by your Council and APEGA staff, such as reviewing qualifications-based selection for the acquisition of engineering and geoscience services; reviewing our proposed legislative changes and preparing documents related to the changes for submission to the government; and making more improvements to our systems to become an even stronger regulator of our professions.

Thanks for the input. I really do hear you!

Before we leave the subject of communication, I must take this opportunity to congratulate my predecessor, the now Past-President of APEGA, Dr. Steve E. Hrudey, P.Eng., FEC, FGC (Hon.), FCAE, FSRA. Dr. Hrudey has received international recognition for his writing, by receiving a Gold Hermes Creative Award, Publications — Column, for the President's Notebook published in the fall 2016 PEG, [We Must Honour the Privilege of Self-Regulation — or Risk Losing It.](#)

MEMBER-TO-MEMBER ENGAGEMENT: MY PERSONAL THOUGHTS

One concern raised by many Members-in-Training and senior Members is the impact that the economy has had on employment

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rates. This is of deep concern to your Council and APEGA staff. APEGA's Mission Statement is: "Regulate the practices of engineering and geoscience to serve the public interest in Alberta." That is the primary responsibility of the Association. However, we all recognize that something more needs to be done on the employment front.

Our professions are often silent and go unrecognized by others in society. These others are the people running businesses or involved in industries that our Members do not normally interact with in a professional capacity. Therefore, we may not even know about the challenges they face. They, in turn, may not even think of enlisting our services to find unique solutions to their problems but find ways to work around them. These solutions are not always safe or efficient.

Several presentations I've attended recently have inspired me and have a strong connection to this topic. I have heard speakers present on the need to expand our networks and to move outside our comfort areas (although, as professionals, we must always ensure our technical expertise fits any professional services we may offer). One of these presentations was from Chantal Lavoie, P.Eng., President of Dominion Diamond Ekati Corporation, about the technical advancements his staff have made in waste handling in the Northwest Territories. He spoke about the fuel savings and carbon reductions for each of the projects. For many businesses, improving their operating efficiencies to reduce carbon gases and future carbon levies is foremost on their minds for the continued success of their operations.

When I look around at the businesses that operate in my local area, I see many opportunities for technical improvements our Members could help them make. When you consider the impact that carbon taxes will have on many operations, it isn't difficult to imagine their need to become more energy efficient, reduce their operating costs, and minimize their carbon footprints.

Then I thought about so many of our Members having been laid off and remaining unemployed, even though they have the skills, talent, and knowledge in

many of these other areas. Many of them have worked so many years in the same industry that they may not even realize the skills they possess or where that expertise would be transferable.

I believe our APEGA Members can make significant contributions in new areas, for the betterment of people and businesses both here and abroad.

My hope is that we, as Members, can help other Members leverage their innovation and problem-solving abilities into industries and projects that perhaps aren't traditional or obvious fits. We have such a pool of expertise here in Alberta and so many areas of our economy that can benefit from our Members' talents. Let's put them together and see what happens.

With that in mind, some of us have decided to try to set up a pilot project to see if we can begin to connect our Members to representatives

from some of these industries that can benefit from the skills and expertise of APEGA Members. Please let me stress — this is a grassroots effort and not an official, APEGA-sanctioned activity. I welcome you to contact me directly for more information on this initiative. This is something that is being done by our Members for our Members for the betterment of the people of Alberta. It is a grassroots effort done on behalf of our membership by Members who are connected through APEGA. We know that if you succeed, the Association succeeds, and the businesses you help will also find success through innovative solutions provided by you. After all, we are the problem solvers — it is what we are trained to do!

Contact me at the email address below for questions or comments about anything you've read here or anything else you want to bring to my attention or have me consider. I look forward to hearing your ideas, your concerns, and your stories — and finding ways we can move forward as an Association and as professionals.

WE ARE TAKING PROFESSIONAL RESPONSIBILITY AND ACCEPTING LIABILITY. THIS SHOULD NOT BE DONE LIGHTLY, BECAUSE WE MUST NOT VIOLATE THE PUBLIC TRUST WE WORK SO HARD TO EARN AND MAINTAIN.

Questions or comments?

president@apega.ca

APEGA Annual Report | 2016



STRENGTHENING OUR FOUNDATION

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2017 Summit Award Recipients

The Summit Awards honour and recognize the contributions APEGA Members make to the engineering and geoscience professions and to society. Congratulations to all award recipients!



Centennial Leadership Award **Gary Faulkner, P.Eng., PhD, FEC, FGC (Hon.)**

In recognition of the highest distinction relating to engineering or geoscience as an executive or director of a continuing enterprise.



Environment and Sustainability Award **Quest Carbon Capture and Storage Project**

In recognition of excellence in the preservation of the environment and the practice of sustainable development.



Outstanding Mentor Award **Andrzej Slawinski, P.Geol., PhD**

In recognition of exceptional achievement as a mentor.



Community Service Award **Tracey Stock, P.Eng., PhD**

In recognition of an outstanding contribution made to society.



Early Accomplishment Award **Oliver R. Kohlhammer, P.Eng.**

In recognition of exceptional achievement in the early years of a professional career.



Excellence in Education Award **Janet A.W. Elliott, P.Eng., PhD**

In recognition of exemplary contributions to teaching and learning.



Frank Spragins Technical Award **Todd K. Simenson, P.Eng.**

In recognition of integrity and expertise, and for outstanding accomplishments in fields related to engineering or geoscience.



Research Excellence Award **Josephine Hill, P.Eng., PhD**

In recognition of innovative research in the professions that improves our economic and social well-being.



Honorary Membership Award **Pat Lobregt, FEC (Hon.), FGC (Hon.)**

In recognition of service to the engineering or geoscience professions resulting in the betterment of society.



Women in Engineering and Geoscience Champion Award **Jocelyn L. Grozic, P.Eng., PhD**

In recognition of achievement as a champion of women in engineering and geoscience.

APEGA 2017-2018 Executive Committee and Council

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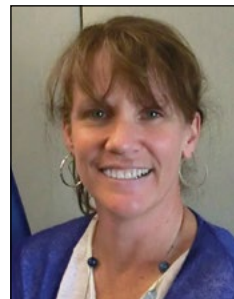
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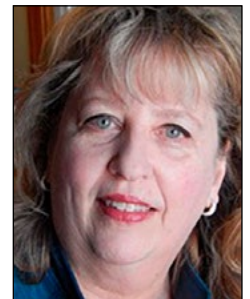
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Darren Hardy, P.Eng.



RaeAnne Leach,
P.Eng.



Emily Zhang, P.Eng.



Georgeann Wilkin,
RN, LL.B., MBS

MEET THE PRESIDENT



-photo by J.W. Tink

Why did you run for President of APEGA? Why is it important to you to serve the public, APEGA, and the APEGA professions in this role?

Jane Tink I have enjoyed and continue to enjoy my career as a Professional Engineer and a volunteer with APEGA. I strongly believe that we each should give back to our communities and society whenever and wherever we can for the betterment of both. I was honoured to be asked to run for President of APEGA and pleased to be in a position personally to allow my name to stand. It was a truly humbling experience to be given this opportunity by our membership.

What are your top priorities as President and why are they important?

JT To work with Council and APEGA staff to better engage with our Members and Permit Holders. To assist in moving APEGA towards being a more proactive regulator. To assist in moving our proposed legislative changes forward with the Government of Alberta.

On a more personal note, I am working on ideas that may ultimately help more of our Members become tomorrow's leaders and innovators. I think we have the skills, talent, and knowledge in the APEGA membership to do more for the betterment of people here and abroad.

“We have such a pool of expertise here and so many areas of our economy that can benefit. Let’s put them together and see what happens.”

Could you expand on that?

JT Right now, it’s a concept rather than a concrete plan. My hope is that APEGA can help Members leverage their innovation and problem-solving abilities into industries and projects that perhaps aren’t traditional or obvious fits. We have such a pool of expertise here and so many areas of our economy that can benefit. Let’s put them together and see what happens.

Your engineering practice experience is in oil and gas from consultancy through to international player. How will this range of experience inform your presidency?

JT I believe my experience allows me to see issues in different ways. I understand how we think in this province and country. Having worked with people from almost every continent, I also understand how other people view various situations, how they view us, and how they view our professional qualifications.

The reputations of our Members and Permit Holders, both domestically and internationally, are important to all of us and they need to be protected. When you take this need to protect our reputation and combine it with our overriding role of protecting the public, you can see why APEGA has undergone such an extensive review of our legislation. We are moving from being less of a reactive regulator to more of a proactive one, and that benefits everyone.

Similar question. You’re a rancher, a community volunteer, and a promoter of women in science. How will your experiences in these areas inform your work as President?

JT I believe that I bring a unique perspective to the table. I live in a smaller community, in a rural setting, but I have worked and lived for years in an urban setting. So I understand many of the challenges that impact rural Albertans and urban Albertans.

As a rancher, you protect the land, your livestock, and your water supplies. You understand what it is like to go without power in a storm; fixing your line impacts only 10 customers, whereas fixing a line in the city impacts thousands. You learn to appreciate the simpler things in life and celebrate what the big city might look at as minor successes.

My family have volunteered in various capacities from the earliest time I can remember to today. I was raised to believe that we each have the power to create change. It is our choice. We can sit on the sidelines and complain or get involved and make the world a better place.

I have worked over the years to encourage our youth, both male and female, to enter the engineering and geoscience professions. Our society needs these bright minds helping shape the world. We need to support our youth in reaching their maximum potential, regardless of gender and background.

I think that I will be able to make a positive contribution to the Association and our Members. I look forward to the next year and what we — Council and staff — can accomplish on behalf of our Members, our Permit Holders, and the public of Alberta.

“The reputations of our Members and Permit Holders, both domestically and internationally, are important to all of us and they need to be protected. When you take this need to protect our reputation and combine it with our overriding role of protecting the public, you can see why APEGA has undergone such an extensive review of our legislation.”



In your Annual General Meeting speech, you emphasized how much you enjoy meeting Members and Permit Holders. What are you hearing from them?

JT From our Members-in-Training: “How are you going to get our Members back to work?” “Where am I going to get a job or enough experience to become a Professional Member?” From Permit Holders: “How can we assist APEGA to communicate with our employees?” And, from the public, one of my favourites: “Wow! You’re a woman!”

I am always happy to explain to anyone who will listen that there are women engineers and geoscientists. I do believe we can get Members back to work and facilitate their transitions into new initiatives. Put a problem in front of our Members or Permit Holders and they will find a solution. They personify a can-do attitude!

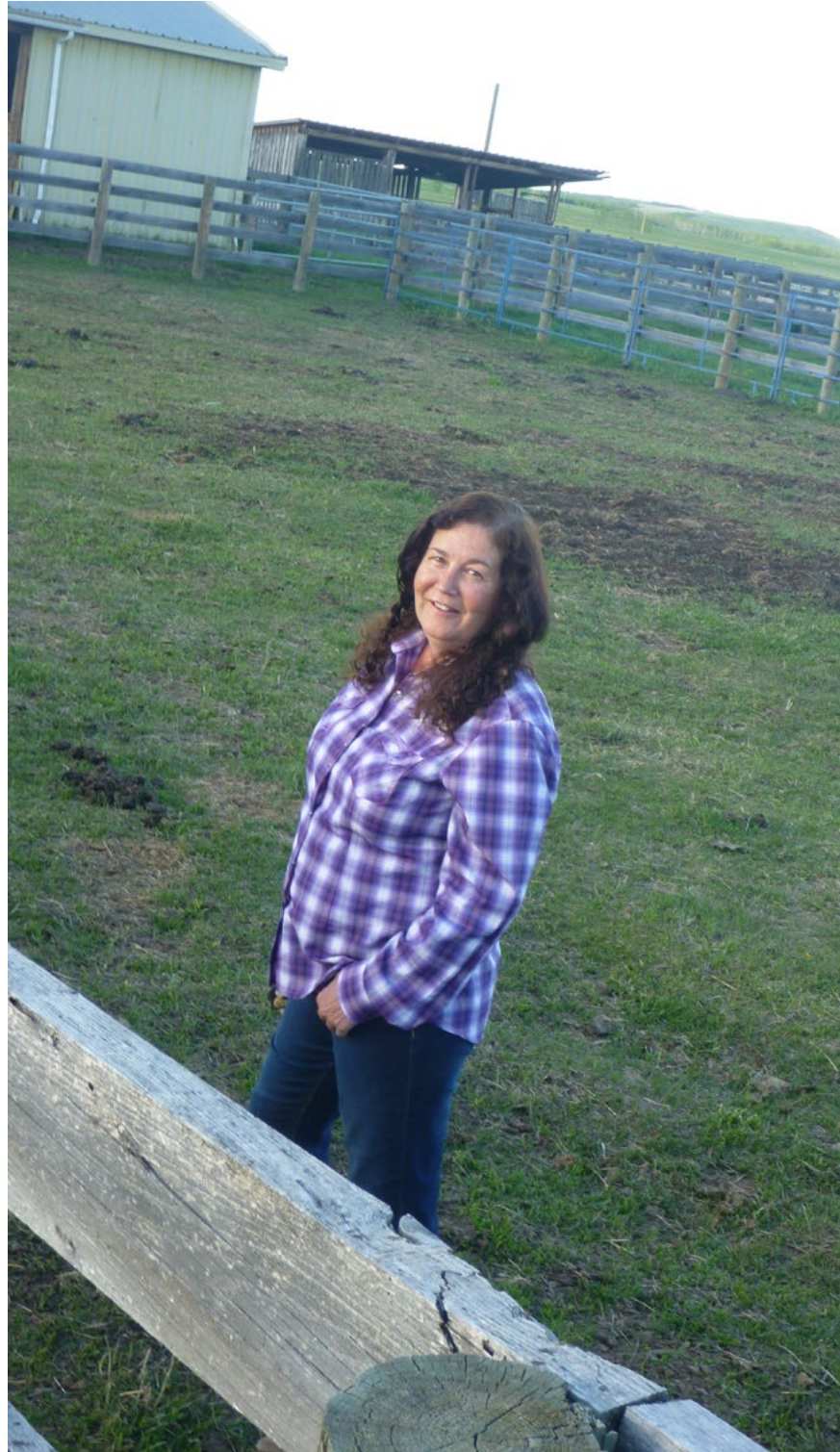
Your predecessor spoke and wrote about the amount of scrutiny self-regulating organizations are under across Canada. He also mentioned the public’s lowered confidence in experts, regulators, and their institutions. How should APEGA prepare for the risks these trends represent?

JT We aren’t the only ones speaking about the scrutiny self-regulating organizations are under across Canada. Each of our sister associations, as well as the other self-regulating professions within the province and elsewhere in Canada, recognize the need to ensure that their Members continue improving their skills through professional development. They, like us, are also striving to ensure that complaints against their Members are promptly and thoroughly investigated, that discipline action is taken when required, and that the process follows the course of natural justice. The public and the government need to be confident that the services we provide and roles we perform are the very best they can be.

During your time as President-Elect, APEGA developed a system of scaling Permit Holder dues according to the number of Members they employ. Because of the timing of the increase, you will undoubtedly be speaking about it often during your time as President. Could you explain the rationale for this new system?

JT After much deliberation, Council concluded that it was necessary to change the Permit Holder dues structure to reflect the

“I am a bit of a straight shooter. I try to treat each person the way that I would like to be treated, and when I am wrong, I admit it.”



-photo by J.W. Tink

number of Members each Permit Holder employs. The more Members employed by a Permit Holder, the higher the real and potential costs to APEGA, so we've come up with a more equitable approach to Permit Holder dues. It was also necessary to increase Member dues, which are still by far our largest source of income.

These increases help ensure that the Association has the resources to become a better

regulator. We can't afford not to improve, because the risks are too significant.

These resourcing decisions were not reached easily. Every attempt was made to minimize the impact to our Members and Permit Holders, particularly in light of the downturn in the Alberta economy. I can assure Members that we are still looking for ways to reduce costs and increase efficiencies.

“I have worked over the years to encourage our youth, both male and female, to enter the engineering and geoscience professions. Our society needs these bright minds helping shape the world. We need to support our youth in reaching their maximum potential, regardless of gender and background.”

Keeping Members engaged in their professional association and its business is often a challenge. Should APEGA do more to engage Members, and if so, what?

JT We need to keep Members engaged and to ensure they are meeting our Continuing Professional Development program requirements. We need to continue to provide opportunities for Members to engage with the Association, their peers, and members of the public. The Association has done a lot of work engaging Members during the legislative review, and we need to continue to improve this engagement. We need to share ideas and presentations in a manner that allows our Members, even those in remote places or time-constrained situations, to learn and become engaged.

The legislative review is nearing a new phase, with the final Member and stakeholder consultation now complete. What’s your perspective on the review and its potential impact on the public, Members and their professional practices, and APEGA?

JT Many of the proposed changes will, if accepted by the Government of Alberta, allow the Association to better and more effectively regulate our professions. These changes will be good for our Members, Permit Holders, the public, and the government. Improving efficiency, effectiveness, and engagement represents positive change. Our Members should be celebrating this.



Although the APEGA President is deeply involved in the governance of APEGA, you still carry just one vote at the Council table. What does being a good Council leader mean to you? How would you describe your leadership style?

JT I would describe my leadership style as participative or democratic. I hope my leadership style invites Council, staff, and our Members and Permit Holders to express their opinions candidly and honestly. I am a bit of a straight shooter. I try to treat each person the way that I would like to be treated, and when I am wrong, I admit it.

What are some final thoughts you would like to share?

JT This is your Association. Become involved, treat each other and the public with respect, continue to be diligent in the work you perform. And take pride in your work, too!

Meet the Registrar & Chief Executive Officer

In April this year, Jay Nagendran, P.Eng., QEP, BCEE, became APEGA's Registrar & CEO, bringing with him a strong resume in the government and regulatory worlds.

Mr. Nagendran's experience includes six years as an Assistant Deputy Minister with Alberta Environment, and Alberta Tourism, Parks and Recreation. Prior to that, he served as the director of the northern region with Alberta Environment, dealing with development of the oil sands and other industrial expansion.

He is a past member of Alberta's Natural Resources Conservation Board and a past President and CEO of the Alberta Environmental Monitoring, Evaluation and Reporting Agency.



Mr. Nagendran has served on the Board of Governors at the University of Alberta, and he's been the Manager of Environment and Engineering for the Alberta Special Waste Management Corporation. He's also worked for the Canadian International Development Agency in Indonesia and was a consultant to the World Bank and the Asian Development Bank on projects in India, the Philippines, and Thailand.

An APEGA Member for 40 years, Mr. Nagendran is the first person to lead APEGA in the newly created position of Registrar & Chief Executive Officer.

Following are the results of a question-and-answer session with Mr. Nagendran.

Much of your experience is in the regulatory and government worlds, but this is your first foray into self-regulation (beyond being, as a P.Eng., a Member of a self-regulated profession). How do your past leadership positions prepare you for your APEGA roles? How about your more technical past positions?

Self-regulation is a privilege allowing Members to regulate themselves and be regulated by their peers. Yet the rules of engagement have many similarities to direct, government-regulated activities. In both instances, regulations need to be firm, fair, consistent, and predictable. The rules of engagement must be transparent.

A regulator needs to be compassionate. The idea is not to see how to punish people or industry but rather to see how we can incentivize adherence to the *Engineering and Geoscience Professions Act and General Regulation*, including our *Code of Ethics*, and provide the tools Members and Permit Holders require — pertinent

and current professional development, for example, and current and pertinent professional standards, guidelines, and bulletins.

The APEGA position of Registrar & Chief Executive Officer is an extension of my career and the opportunities I've enjoyed. Leadership positions are a privilege and a platform to make life a little better for the people around you. This position provides me with a unique opportunity to enhance the image of our 97-year-old Association, while always remembering that its prime purpose is to protect the public and sustain the high quality of service our Members provide to all stakeholders.

The technical positions I have had along my career journey have been an opportunity to contribute to my profession. I have been very fortunate to work with some tremendously talented people, from whom I have learned much. Throughout this journey, it has been the people who have made this worthwhile.

This position provides me with a unique opportunity to enhance the image of our 97-year-old Association, while always remembering that its prime purpose is to protect the public and sustain the high quality of service our Members provide to all stakeholders.

Your last comment is telling, because you do come across as a people person – that is, someone who likes making connections and speaking with people. Is that a fair characterization? If so, how is it beneficial to APEGA? What are some other traits you possess that will be useful and beneficial?

If I do come across as a people person, I am very pleased. I do enjoy connecting with staff and working as a team. I truly believe that our success is based on a motivated workforce. If the organization is kind and compassionate, the productivity will be much higher than it is in a more rigid organization.

But my being a people person does not make this a free-for-all. Those who do not consider working for APEGA a privilege or those who are not

performing their duties should not be here. It is a disservice to our hard-working colleagues, and to our Members and other stakeholders, if there are some who are not contributing their fair share.

I never lose sight of the transient and finite journey of our mortal existence. I look at my job as a temporary privilege to make life a little bit better for those around me, and I hope that my actions show that.





My international assignments have enhanced my understanding of working with different cultures and being effective under different circumstances. I've learned to ramp up quickly, understand issues, and deliver results in an effective and timely manner.



Tell us about the international work you've done. How does that inform your APEGA roles?

My international assignments with the Canadian International Development Agency and the World Bank have enhanced my understanding of working with different cultures and being effective under different circumstances. I've learned to ramp up quickly, understand issues, and deliver results in an effective and timely manner.

These assignments have also made me proud to be a Canadian, because we are so widely respected. Canadians are considered peaceful citizens of the world.

Finally, working with talented people, as I mentioned before, is always educational.

What (or who) piqued your interest in this position and why did you apply?

Through my decades of APEGA membership, I have felt that the respect our professions garner with the public has a lot to do with APEGA's Professional Members. Each of us has a designation that is, in fact, our licence to practise with the confidence of the public as a foundation. Membership symbolizes the professional ethics that we pledge to uphold. At times during my career, it has provided me the courage to refuse to do things I judged to have contravened our professional obligation.

Seeing this opportunity present itself, I was excited about the possibility to lead within my own Association. What a highly coveted opportunity to have a positive impact this is.

What are your early impressions of APEGA, as a staff member and leader? What are its strong points? What areas need improvement?

My early impression of APEGA is that it has many talented and committed staff. It has gone through several recent leadership and structural transitions, and I have an opportunity to bring in some new and talented people.

I am also aware that lessons learned in other provinces tell us that APEGA needs to continually improve and be vigilant about being an outstanding regulator. It is very encouraging that our elected Council and staff are aligned in this goal. I am excited about working with our talented and committed staff.

In seeking a new staff person to lead the organization, Council combined the roles of Registrar and Chief Executive Officer into the single position: Registrar & Chief Executive Officer. What's the significance of that?

The Association had a separate CEO and Registrar before my appointment. Our legislation assigns many



My personal philosophy is that when one accepts a job, one accepts all the responsibilities that come with it — even if some aspects are not pleasant.



specific duties to the Registrar but contains just one mention of the CEO! This construct can at times place these two positions in conflict. I believe that Council was wise to combine these positions and make one person responsible for the entire mandate of the Association. In my view, this limits the potential for conflict and allows the Association to move forward with one voice in a unified direction.

How would you define your leadership style?

I define my leadership style as a servant leader who enables others to act. I also subscribe to being a situational leader — someone who is willing to take decisive and firm action when necessary. I do not enjoy or seek out confrontation, as I am sure applies to many people, but when others do not act ethically or when our Association’s reputation may be at risk, I am willing to tackle the matter head on. My personal philosophy is that when one accepts a job, one accepts all the responsibilities that come with it — even if some aspects are not pleasant.

However, I also want to be accessible to staff at all levels of the organization and work as colleagues with a common purpose.

You’ve come to this role at an interesting time. The organization embarked on ambitious goals, about five years ago, in terms of improving processes and becoming a better regulator. With the downturn in the economy, funding those improvements through dues increases became a major issue. Any thoughts

on how APEGA can meet economic and continuous improvement challenges, as we continue along this path?

Provincial economic conditions are outside our control, so we need to be nimble enough to adjust accordingly. We need to constantly prioritize our work and ensure that the areas of higher risk are resourced adequately and acted upon. I am also hopeful that our province is resilient and will find a path forward, through a severe recession.

We at APEGA have paid a price by having two successive, annual wage freezes, which in some cases has lowered staff morale. Many of our Professional Members have also suffered through this period. We should take the view that what cannot be helped must be endured. However, we need to keep our spirits high and continue to perform at a high level. In the big picture, we are very fortunate as Albertans and Canadians — we should not lose this perspective.

At the time of this interview, you’ve been in the position for a little over 60 days. Characterize those days. And what do you see your next 60 days being like?

The early days have been a big and busy learning curve. I joined at a busy time of our annual cycle, just before our Annual General Meeting and the annual change in our leadership at the elected Council level — with a new President and five new or re-elected Council members. It was also a time when I reorganized and had vacancies in three of four

executive positions. Filling two out of three critical positions in the first 60 days was very satisfying.

Also, having suggestion boxes in Calgary and Edmonton for staff to provide me honest feedback and input enabled me to get a handle on the general mood of staff quickly. It also allowed me to act right away on some critical issues.

I am hopeful that the next 60 days will allow us to fill the final executive position and provide further stability. I am hopeful that I will understand the different parts of our organization better and provide the guidance necessary to allow APEGA to become a better regulator and be on a continuous improvement path.

I want to serve our elected Council well and serve our Members well, too, as we work together to fulfill our mandate to protect the public in our diverse professional activities.

One of those improvement projects has been a complete review of APEGA's governing legislation, the *Engineering and Geoscience Professions Act*. As that process enters its later stages, what are your thoughts about it?

The *Engineering and Geoscience Professions Act* is the guiding legislation of our self-governing professions. No major update of this legislation has occurred for more than 30 years. To become a better regulator and to continue to protect the public, certain aspects of the *EGP Act* need to be updated and modernized, such as the of fines we can sanction and our discipline process.

Because our legislation is also one Act, two associations, there are additional challenges. ASET, the Association of Science and Engineering Technology Professionals of Alberta, is also included in our Act. In our view, the ongoing desire of ASET to expand scopes of practice in a manner that would infringe on our professions jeopardizes some aspects of public safety.

This represents a large challenge in modernizing the legislation expeditiously.

Tell us a bit about who you are, outside of the office. What are your interests and hobbies? Are there details about family you'd like to share?

I feel very fortunate and blessed to have grown up in Sri Lanka, studied in California and Alberta, and settled in Edmonton, our home for the past 42 years. I have been active in our community associations, environmental credentialing institutions, and academics.

I was an avid runner at one time, participating in track and field. I also played table tennis and once won the University of California Davis Table Tennis Championship. I took up tennis at a later stage of life and enjoyed it. And I ran two marathons later in life, in recreational mode, enjoying Edmonton's river valley during training.

My wife completed all her university education in Alberta. She and our two sons all have PhDs earned at the University of Alberta. In addition, my two sons are heart surgeons at the Edmonton Mazankowski Heart Institute, a unique blessing.

Interestingly, my younger son graduated in chemical engineering before turning to medicine. Also, my father, who came to Canada, passed six exams and obtained his P.Eng. at the age of 50. So I am proud to say that engineering crosses three generations in our family.

What else would like to tell Members and other PEG readers?

I have used the word privilege many times in this interview. I will use it again, now. I sincerely feel that my life and the exciting career I have enjoyed thus far, along with the extraordinary people I have met along the way, have been a true privilege.

Self-Nominating Process Begins Now

Serving on Council is one of the most important volunteer opportunities APEGA offers. If this challenging, rewarding, and fulfilling commitment is for you, now is the time to make your decision — the search for candidates to run in the [2018 APEGA Election](#) starts now.

Members seeking election must submit their nominations in time to be considered by APEGA’s Nominating Committee. Nominations close **Friday, September 29**, but you should get to work now. Strong preparation will give you the best chance of being endorsed by the Nominating Committee and elected by your peers.

Details here and over the next five pages provide the basics of what you’ll need to prepare a nomination and what a Council commitment requires. Full information appears online at [apega.ca](#) and in a special nomination area of the [Member Self-Service Centre](#), accessible through the website. The self-nominating period begins **Monday, July 10, 9 a.m.**

APEGA no longer accepts paper nominations. Instead, we accept them electronically through the Member Self-Service Centre.

You’ll need to prepare a variety of materials, some mandatory and some not.

The APEGA Nominating Committee is charged with ensuring recommended candidates represent a strong combination of attributes for good governance and succession. Through its own networks, the committee searches for potential candidates to endorse. It also draws upon self-nominated candidates. Before the election, the committee arrives at its list of candidates — Members the committee has decided are willing, suitable, and available for Council governance and succession.

Names of all qualified and properly nominated candidates will appear on the 2018 ballot, regardless of whether they receive the Nominating Committee’s endorsement.

Every year, at least four Professional Members are elected to Council. Members also choose a President-Elect and a Vice-President each year. With

Potential Candidates’ Key Dates & Times

<p>Self-Nominating Begins</p>  <p>MONDAY 10 July</p>	<p>Self-Nominating Closes</p>  <p>FRIDAY 29 September</p>  <p>4:30 PM</p>
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the President and the immediate Past-President, they will lead Council on the APEGA Executive Committee. Not including the Executive Committee, Council is made up of 12 Professional Members and up to three public members appointed by the Government of Alberta.

APEGA must receive nominations by **Friday, September 29, 2017**, at 4:30 p.m. That allows time for nominations to reach the Nominating Committee 180 days before the next APEGA Annual General Meeting, on **Friday, April 20, 2018**, as APEGA’s bylaws require.

Once the Member Self-Service Centre begins accepting nominations on July 10, each potential nominee will be able to go in and out of the site to develop his or her nomination in draft, before finalizing it and clicking submit. Once submit is clicked, the nomination is final and locked from changes.

The collection of signatures takes place digitally, which makes it easier for potential nominees in areas without a large pool of Members in their local network.

APEGA runs background checks on all potential nominees, a term you will need to accept during the electronic nomination process. Also, two or more Members of the Nominating Committee will, as a panel, interview each nominee to review the information provided. Interview results become part of the committee’s process in deciding who to endorse.

What Does it Take to Be a Good Councillor?

If you're elected, your first term on Council is, in most cases, three years long. It's a big commitment — one that goes far beyond attending four regular meetings a year.

Before you start, it's a good idea to be certain the job is for you. Following are two lists to help you decide.

CHARACTERISTICS OF A GREAT COUNCILLOR

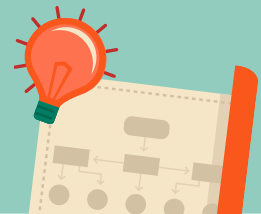
1. Experience in professional practice
2. Basic understanding of the principles behind professional regulation
3. Familiarity with board management and governance
4. Balanced perspective and problem-solving attitude
5. Particular knowledge of important issues or underrepresented groups
6. Strong champion of professionalism and of APEGA
7. Track record as a contributor
8. Willing to commit time to APEGA



TOP COUNCIL NEEDS

Council and APEGA's Nominating Committee have identified the top 15 needs for the 2018-2019 Council. You don't have to meet all 15 criteria — or any of them — to run in the election. This is simply meant as a guide to what the Nominating Committee is looking for when it arrives at its endorsements.

1. Governance experience
2. Business and organizational experience
3. APEGA/ASET experience
4. Risk management understanding
5. Regulatory experience
6. Strategic planning experience
7. Work experience (minimum 10 years)
8. Policy experience — public or not-for-profit organization
9. Financial literacy
10. CEO or other senior management experience
11. Professional discipline diversity — e.g., academic, industry, government
12. Variety of experience and background
13. Visionary qualities
14. Strong professional network
15. Functional experience



Creating a Great Self-Nomination

You're certain that you've got the time, dedication, and [personal attributes to be an effective participant in the governance of your professions](#).

You qualify as a candidate, and you think you have a reasonable chance of being endorsed by the Nominating Committee.

Sounds like you're ready to prepare your self-nomination.

On July 10, you can start the actual process of uploading your nomination materials to the Member Self-Service Centre of [apega.ca](#). But you can start preparing now.

Before your materials are accepted for publication and advancement to the Nominating Committee, APEGA will review them for professionalism and appropriateness.

And now — get busy!


WHEN NOMINATIONS OPEN

The nominations site in the Member Self-Service Centre opens on July 10 at 9 a.m. Follow the step-by-step process.


There's a save-draft function. If you've already begun preparing your materials, that's great.

Regardless, you'll need to:

- read the materials on the site
- fulfill all mandatory requirements
- consider non-mandatory requirements and fulfill those you decide are important
- work offline as necessary to get everything ready




SELF-NOMINATION MANDATORY REQUIREMENTS



- 1 | Reach out to 25 Professional Members in good standing to support your nomination. Let them know that they'll be contacted electronically to confirm their support.
- 2 | Find or have taken a print-quality photograph of yourself — a headshot.
- 3 | Write a personal statement that's 800 to 1,000 words long. Make sure it includes the information you think is important for voters to know about you.
- 4 | To help the Nominating Committee in its review, write an explanation of why you want to run for Council.
- 5 | Also for the Nominating Committee's review, rate yourself on the provided skills and attributes from 1 to 7 (1 being lowest, 7 being highest). The list of skills and attributes will be available when the nomination site goes live on July 10.

NON-MANDATORY REQUIREMENTS

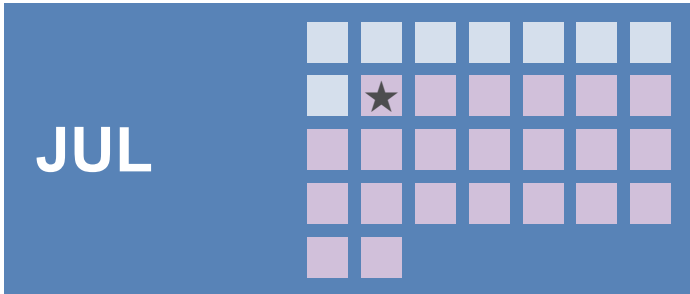


- 1 | Polish your curriculum vitae for posting.
- 2 | Gather any other supporting documents you would like to submit and have available for voters to review.
- 3 | Have a video shot of you promoting yourself as a candidate, which we will also post. We recommend that you keep it short and to-the-point — up to two minutes long.

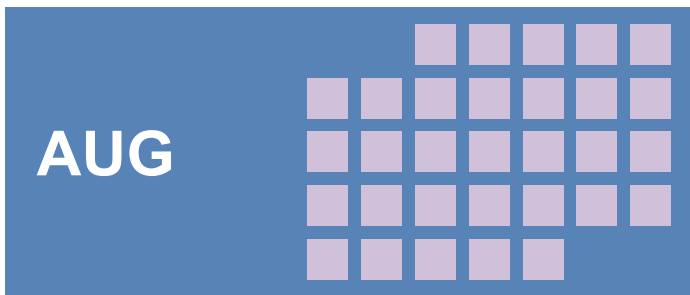
TIMELINE: Nominations and Election 2018

2017

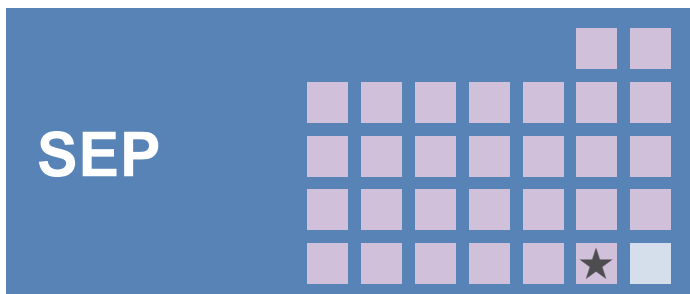
Key Dates



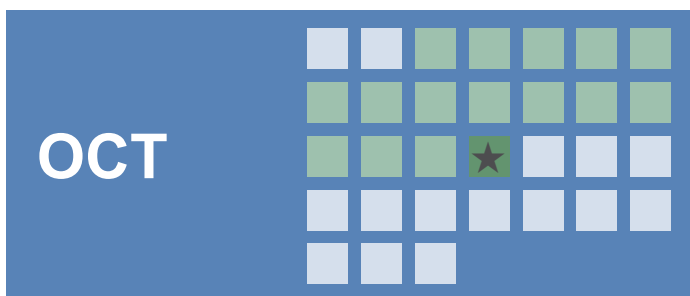
★ Nominations Open *July 10*



■ Nominations Accepted

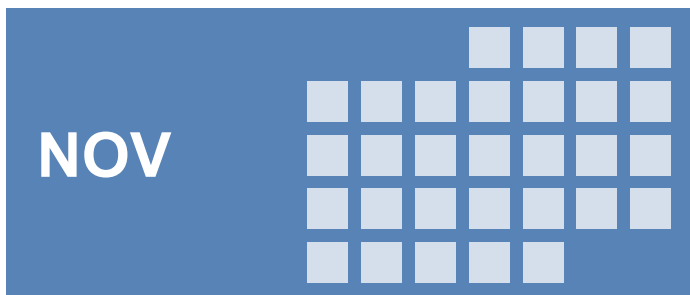


★ Nominations Close *September 29*

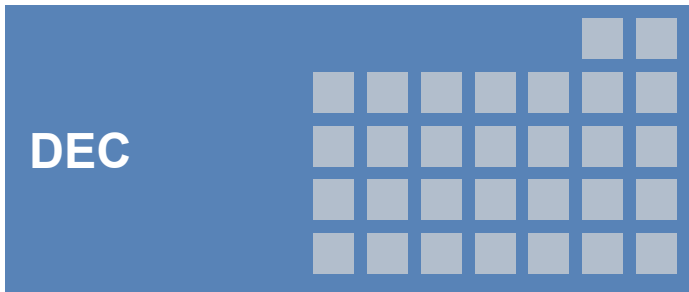


■ Interviews Take Place

★ Nominating Committee Meets *October 18*



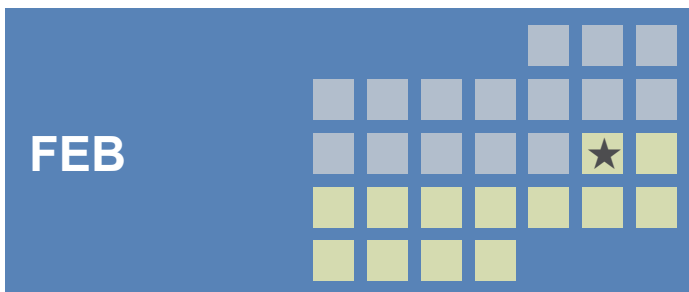
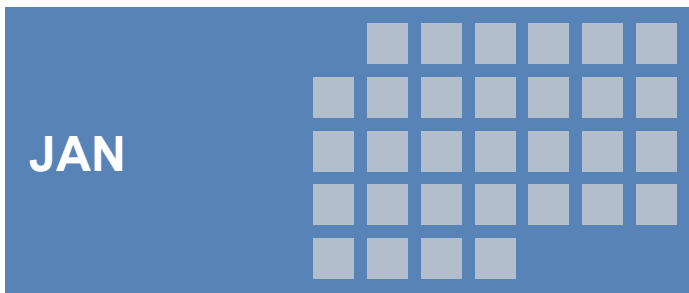
2017



Key Dates

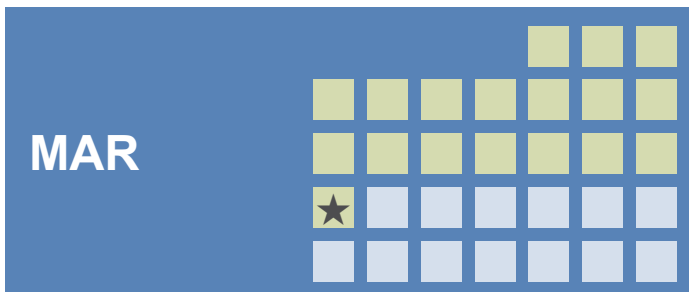
■ Candidate Information Available
e-PEGs, e-PEG Extras, social media, apega.ca

2018



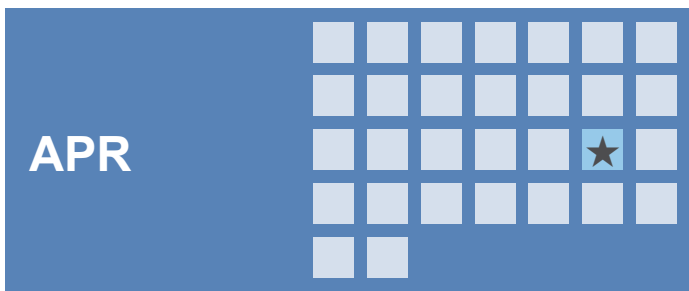
Candidate Information Published in *The PEG Mid-February*

★ Polls Open *February 16, 9 a.m.*



■ Polls Open for Voting & Candidate Information Available

★ Polls Close *March 18, 12 noon*



★ Annual General Meeting *April 20*



Duties and Responsibilities of a Council Member

Council Members have six core duties.

1. Duty of Care

- Act honestly
- Act in good faith
- Act in the best interests of APEGA
- Avoid conflict of interest

2. Duty of Knowledge

- Understand the legislation governing Professional Engineers and Geoscientists in Alberta and the responsibilities of self-governance
- Understand APEGA's mission and vision
- Understand APEGA's strategic and business plans
- Understand APEGA's governance model
- Be familiar with APEGA's governance manual

3. Duty of Diligence and Skill

- Be as informed about APEGA issues as is reasonably possible
- Identify external factors that may affect APEGA
- Prepare for, attend, and participate in all required meetings
- Use individual expertise in the best interests of APEGA

4. Duty to Manage

- Establish policies, provide guidance, and measure results
- Delegate implementation of activities to the Chief Executive Officer

5. Duty to Participate

- Participate in the development and renewal of APEGA's strategic plan
- Serve on selected APEGA task forces or committees
- Attend the Annual General Meeting and Summit Awards Gala
- Attend APEGA and Branch meetings as a representative of Council
- Mentor new Council Members and assist in their orientation
- Vote at meetings

6. Duty to Represent Council

- Provide a fair hearing to any APEGA Member regarding APEGA policies and administration
- Present Council decisions and actions in a positive and supportive manner
- Direct concerns to the Chief Executive Officer or the President if unable to provide an adequate explanation
- Attend selected other events, such as government functions, on behalf of Council

Characteristics of a Great Councillor

- ✓ Experience in professional practice
- ✓ Basic understanding of the principles behind professional regulation
- ✓ Familiarity with board and management governance
- ✓ Balanced perspective and problem-solving attitude
- ✓ Particular knowledge of important issues or under-represented groups
- ✓ Strong champion of professionalism and of APEGA
- ✓ Track record as a contributor
- ✓ Willing to commit time to APEGA

Characteristics of a Great President-Elect (1ST Vice-President)

- ✓ Recognized as a leader within the professions
- ✓ Track record of participating with APEGA or technical societies, or executive-level experience in professional practice
- ✓ Skilled leader — visionary, effective communicator, internal consensus builder, external diplomat
- ✓ Familiar with board and management governance, as well as forming and implementing policy and strategy
- ✓ Passionate champion of professionalism and of APEGA
- ✓ Energy and enthusiasm to do the work of Council
- ✓ Willing and able to commit significant time to APEGA (with the support of family and the backing of employer)

Activity	Councillor	Vice-President	President-Elect	President
Council meetings 4 all-day meetings ½ day preparation for each	6 days	6 days	6 days	6 days
Strategic retreat	2 days	2 days	2 days	2 days
Executive Committee meetings 4 all-day meetings 1 day preparation for each	—	8 days	8 days	8 days
Other committee meetings 1 day of preparation for each	8 days	8 days	8 days	24 days
Other meetings, briefings, and presentations	4 days	9 days	9 days	75 days
Total	20 days	33 days	33 days	115 days



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Movers & Shakers



SUMMIT NUMBER THREE
Dr. Gary Faulkner, P.Eng., FEC, FGC (Hon.), receives the pinnacle Summit Award, the Centennial Leadership Award, from outgoing President Dr. Steve E. Hrudehy, P.Eng., FEC, FGC (Hon.), FCAE, FSRA. He's one of six three-time Summit Award recipients.

FROM SUPER VOLUNTEERS TO POLYGLOT MOUNTAINEERS

APEGA Summit Awards Recognize Inspiring Professionals

Nine champions of Alberta leadership and excellence in Professional Engineering and Professional Geoscience were recognized by their professional peers at the [APEGA Summit Awards](#) in Calgary, April 27.

Recipients of the preeminent awards of the APEGA professions are serving Alberta and the world by:

- reducing environmental impacts and advancing sustainable development

- improving business effectiveness through new and emerging technologies
- volunteering their talents within and beyond our professions
- promoting outreach and diversity
- demonstrating outstanding innovation and leadership

Want to know more? Read on.

CENTENNIAL LEADERSHIP AWARD A Half Century of APEGA Service — and a Critical Link to Medicine

For nearly five decades, **Gary Faulkner, P.Eng., PhD, FEC, FGC (Hon.)**, has provided outstanding leadership as a tireless volunteer, an innovative researcher, and an inspiring teacher and mentor.

Dr. Faulkner served 27 years on APEGA's Board of Examiners (BOE), which reviews the qualifications of engineering and geoscience applicants seeking registration with APEGA. He joined the board in 1989 as an academic examiner in mechanical engineering. He became Chair in 1995, a role he held for 21 years. In 2007, he received APEGA's L.C. Charlesworth Professional Service Award in recognition of his long-term commitment.

As BOE Chair, Dr. Faulkner supported the growth of APEGA's membership while ensuring applicants met APEGA's high standards for professional licensure. Contributing thousands upon thousands of hours of service, Dr. Faulkner also helped develop and update board policies. Nationally, he ably represented APEGA by volunteering with Engineers Canada on the Canadian Engineering Qualifications Board and as Chair of a committee focused on international academic qualifications.

Since 2009, Dr. Faulkner has been Director of Rehabilitation Research & Technology Development at the Glenrose Rehabilitation Hospital in Edmonton, where he's developed pioneering treatments that use robotics, virtual reality, and other innovations. His work has led to faster recoveries and improved quality of life for hundreds of individuals. Numerous patients with severe facial disfigurement say his treatments have given them their lives back. He also supports the head-and-neck reconstruction unit at Misericordia Community Hospital.

Dr. Faulkner, a three-time Summit Award recipient, is also a professor emeritus in mechanical engineering with the University of Alberta Faculty of Engineering. At the U of A, he led development of the biomedical engineering program and chaired the Department of Mechanical Engineering for seven years, leading it through a major reorganization and overseeing a 40 per cent increase in undergraduate enrolment.

OUTSTANDING MENTOR An Innate Ability To Mentor

Many accomplished leaders volunteer in formal mentoring programs. For a select few, however, inspiring and guiding others is innate. In the latter category is **Andrzej Slawinski, P.Geol., PhD**, who selflessly shares knowledge and time to help others reach their personal summits.

The Chief Technical Officer at Waterline Resources Inc., the Calgary resident has more than five decades of experience in geology. Born in Poland, he completed his PhD in hydrogeology in 1977 at Warsaw's Polish Academy of Sciences.

In 1982, Dr. Slawinski and his family immigrated to Canada. He is fluent in three languages and has a working knowledge of four more — reflective of his work experience in Europe, Africa, southeast Asia, eastern Siberia, and South America. He is the author and co-author of numerous publications and hundreds of consulting reports.

Always available and generous with his time, Dr. Slawinski has mentored many young talents. Some have changed jobs or moved from other provinces to work with him. Waterline Resources Inc. was formed by three of his mentees, who convinced him to delay retirement to join the company. He acts as a technical advisor for senior and junior professionals alike, encouraging critical thinking and respectful practice.

Dr. Slawinski leads by example with an endearing, humble personality and a strong passion for adventure. An avid skier and mountaineer, he has attempted to climb the highest peak in North America twice — at the ages of 73 and 74. Although both times he has not made it to the 6,194-metre summit of Denali in Alaska, he has certainly engaged the hearts and minds of his colleagues, who tracked his progress from Calgary using a satellite messenger unit.

In the words of one mentee, Dr. Slawinski is “an inspiring combination of a brilliant mind and an accessible person.” He has a genuine concern for science and people, combined with an exceptional ability to engage and lead young professionals. His integrity, honesty, and fairness make him an outstanding mentor worthy of recognition — and a model of what it means to live by the *APEGA Code of Ethics*.

EXCELLENCE IN EDUCATION

Rock-Solid Teaching

In the words of one of her students, **Janet A.W. Elliott, P.Eng., PhD**, could “convince rocks to study thermodynamics.” Dr. Elliott, a professor of chemical and materials engineering with the University of Alberta Faculty of Engineering, puts her enthusiasm for education, genuine care for students, and creative mind to work by forging a path to excellence in undergraduate and graduate education.

Faced with increased class sizes and limited resources, Dr. Elliott — the Canada Research Chair in Thermodynamics at the U of A — has demonstrated exceptional dedication to her role, implementing new practices to optimize learning and the student experience. Students appreciate her ability to explain difficult concepts with clear examples, along with her selfless dedication to answering their questions, inside and beyond the classroom.

Her hard work is reflected in excellent and favourable scores and comments in student evaluations, and improvements among her students in their understand-

ing of complex subjects. Dr. Elliott continuously receives among the highest student rankings in her faculty.

She also enjoys mentoring new faculty members, sharing her methods for student engagement and success. She encourages new teachers and professors to take a student-centred, project-based approach to their roles.

Dr. Elliott believes in the value of interdisciplinary research, which is evident in a commitment to cross-faculty and cross-department training. She has supervised graduate students in chemical engineering, mechanical engineering, and medical science, as well as postdoctoral fellows from the fields of engineering, physics, mathematics, biology, and medicine.

Together with Locksley McGann, from the university’s Faculty of Medicine and Dentistry, she created a novel joint-degree program leading to a master’s or doctorate degree in engineering and medical science.

How’s that program working out? Its first graduate was invited to do a postdoctoral fellowship at none other than Harvard Medical School — without having applied.

WOMEN IN ENGINEERING AND GEOSCIENCE CHAMPION

Breaking Down the Barriers

An accomplished scholar, **Jocelyn L. Grozic, P.Eng., PhD**, is helping create a world that empowers women to pursue the careers they want to pursue and thrive in environments traditionally dominated by men.

In 2001, Dr. Grozic became the first female faculty member in the Department of Civil Engineering at the Schulich School of Engineering at the University of Calgary. It wasn’t long before she was advocating for change, becoming Co-Chair and later Chair of the Gender and Diversity in Engineering Committee (GDEC) for the school.

The GDEC strives to create an inclusive and supportive environment that recognizes and values gender and other diversity at Schulich. In her work with the committee, Dr. Grozic spearheaded the development of new recruitment and retention recommendations, which were approved for faculty and students by the Engineering Faculty Council. Dr. Grozic also served

as faculty advisor for the university’s Gender Equity Project from 2003 to 2006, an initiative designed to maximize the potential of female academics.

Dr. Grozic has educated hundreds of female students and strives to create a culture of learning that empowers women in academia and beyond. Half of her doctoral research students have been women, and she is currently mentoring female undergraduate students through the university’s Sophomore Leadership Program.

Dr. Grozic puts in countless volunteer hours for initiatives such as Women in Engineering Day. Continuously setting an example of courage, encouragement, and inclusion, others are inspired to follow her lead.

The APEGA Summit Awards apparently predicted this or something like it for Dr. Grozic. She was recognized in 2004 with the Early Accomplishment Award.

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RESEARCH EXCELLENCE**Fueling a More Sustainable Future**

Dr. Josephine Hill, P.Eng., PhD, is an accomplished scholar, educator, and leader in the field of catalysis and chemical engineering. Dr. Hill's research focuses on improving the efficiency of chemical and electrochemical processes to reduce their effect on the environment. Her leading-edge research on alternative energy and sustainable fuel generation is recognized internationally. She is also examining new ways to convert waste from heavy-oil upgrading and agriculture into value-added products.

With the University of Calgary Schulich School of Engineering since 2002, Dr. Hill established and leads the Laboratory for Environmental Catalytic Applications, at the Department of Chemical and Petroleum Engineering. Her 86 peer-reviewed publications have generated an impressive 2,200 citations, demonstrating the rigour and quality of her research.

A regular collaborator with researchers across Canada and around the world, Dr. Hill helped create a free knowledge base for solid-oxide fuel cell information through the Natural Sciences and Engineering Research Council of Canada. Her contributions were recognized in 2014 when she was among the first scholars invited to join the College of New Scholars, Artists and Scientists, launched by the Royal Society of Canada.

As a professor, Dr. Hill has mentored hundreds of undergraduate and graduate students. She was awarded a prestigious Killam Annual Professorship in 2017 for her continued excellence in research and teaching.

As a volunteer with groups such as Women in Science and Engineering, Operation Minerva, and Cybermentor, Dr. Hill encourages young women to pursue engineering and science careers — contributions that were acknowledged in 2012 when she received the APEGA Women in Engineering and Geoscience Champion Summit Award.

EARLY ACCOMPLISHMENT**Pushing The Limits Of Success —
On The Job, In The Community**

He's early into his career as a mechanical engineer, but **Oliver R. Kohlhammer, P.Eng.**, is already well recognized for redefining industry limits to achieve world-class results. Equally as impressive are the contributions he makes when he's not collecting a paycheck.

Mr. Kohlhammer's work on a steam-assisted gravity drainage (SAGD) development is one example of his professional success so far. Located 75 kilometres south of Cold Lake, the Lindbergh site came online in 2014 and produces 12,500 barrels of oil per day. The project has outperformed expectations and has the potential to produce even more oil — 40,000 to 50,000 barrels per day.

Mr. Kohlhammer co-managed the project for his employer, Scovan Engineering, on behalf of Pengrowth Energy Corporation. He oversaw development worth more than \$250 million in installed value, comprising well pads, a surface pipeline, and oil-processing components of a central processing facility.

The project team's use of advanced technology and design helped reduce the development's yearly operating costs by \$2.5 million, eliminating 90,000 tonnes per year of greenhouse gas emissions and recycling 97 per cent of the water used for oil production.

Throughout the course of the project, Mr. Kohlhammer demonstrated strong management and leadership skills, which are also apparent in his community involvement.

Mr. Kohlhammer shares his passion for engineering and Alberta's energy industry by speaking to young people — through groups like Canada Bridges, an international development organization — about what it's like to work as a Professional Engineer and how oil is extracted in Alberta.

His volunteer work also goes beyond engineering. He developed a simple maintenance course to teach youth how to maintain their own bicycles, and he has coached youth soccer. In 2013, he aided the Red Cross during the 2013 flood recovery efforts in High River and in First Nations communities around Calgary.

He and his wife, Jennifer Kohlhammer, are foster parents. Mr. Kohlhammer has also volunteered locally and abroad for HOPEthiopia, helping people in Ethiopia and Rwanda by supporting construction projects, coaching children's sports, and mentoring community members.

ENVIRONMENT AND SUSTAINABILITY AWARD

Capturing Carbon – the Integrated Way

The Quest Carbon Capture and Storage Project, designed and built by APEGA Permit Holder **Shell Canada Limited**, is the world's first integrated oil sands carbon capture and storage (CSS) project. Quest reduces carbon dioxide emissions from Shell's Scotford Upgrader by more than one million tonnes a year, which is equal to the annual emissions from about 250,000 cars. This is done by capturing and permanently storing the CO₂ deep underground.

The CO₂ emissions are produced when bitumen from Shell's oil sands mining operations near Fort McMurray is refined at the upgrader near Edmonton. Bitumen upgrading involves adding hydrogen to heavy oil and then reducing it to synthetic crude, and hydrogen production is one of the largest sources of CO₂ emissions from the upgrader.

Shell's patented capture technology uses an amine solvent to recover CO₂ from gases emitted by the upgrader's three hydrogen manufacturing units. Using heat, CO₂ is separated from the amine, compressed to liquid form, and moved through a 65-kilometre pipeline to Thorhild County. There, it is injected into three storage wells more than two kilometres underground.

Several parameters were considered in selecting the Quest storage site, including:

- presence of deep porous sandstone, located well below any fresh water or hydrocarbon sources
- multiple natural seals to ensure safe, permanent storage
- geological stability, with no faults or structural complexity, and no legacy wells within several kilometres

The project, estimated to cost \$1.35 billion over 10 years, is Shell's flagship project for its global CCS program. The federal and provincial governments also invested significantly in Quest, contributing \$120 million and \$745 million respectively.

Since it began operating in 2015, Quest has reduced emissions from the Scotford Upgrader by about 35 per cent. More than 1.5 million tonnes of CO₂ have been successfully injected underground. The technology has been shared with governments interested in undertaking similar projects in Mexico, Norway, the Netherlands, the United Kingdom, Taiwan, Korea, and China.

The Quest project team includes:

- **Tim Wiwchar, P.Eng.**, project lead
- **Anita Spence, P.Eng.**, project manager
- **Stephen Marsh, P.Eng.**, construction manager
- **Steve Peplinski, P.Eng.**, engineering manager
- **Dr. Simon O'Brien, P.Geoph.**, subsurface manager

FRANK SPRAGINS TECHNICAL

Keeping Communities on the Flow

Todd K. Simenson, P.Eng., has dedicated his career to providing real-world infrastructure solutions that positively affect the communities he serves. A testament to his technical expertise, projects he has worked on have garnered multiple awards from various industry organizations.

A vice-president and regional leader for **Stantec's** Alberta north and territories region, Mr. Simenson has enjoyed a fruitful 30-year career in Saskatchewan, the Yukon, and, since 1999, Alberta.

Most recently, he was part of the team that designed the South Red Deer Regional Wastewater System, recognized with the 2016 APEGA Project Achievement Summit Award. In spring 2016, he led Stantec's wastewater and stormwater recovery efforts after the Fort McMurray wildfire.

Other award-winning projects represented in Mr. Simenson's portfolio include the 88-kilometre Wandering River Regional Waterline, which was Alberta's first design-build regional waterline and the world's longest fusible PVC pipe installation. He also led the Regional Municipality of Wood Buffalo sanitary trunk project, which involved construction of two, 900-millimetre, directionally drilled sewer mains under the Athabasca River.

In 1993, Mr. Simenson was elected President of Engineers Yukon, becoming the youngest-ever elected leader of a Canadian engineering self-regulating organization. Throughout his career, he has mentored numerous Professional Engineers at Stantec and other organizations, providing technical and professional guidance. Many of his mentees have gone on to leadership roles.

Now a resident of Red Deer, Mr. Simenson supports numerous charities and frequently volunteers as a coach. His favourite role is Santa, which he performs at community events throughout central Alberta.

COMMUNITY SERVICE**Hitting 100,000 Hours**

Advocating for disadvantaged Calgarians and empowering local youth are just two ways that **Tracey Stock, P.Eng., PhD, JD**, has positively affected his community over the past four decades. The President of **Ares Engineering**, Dr. Stock — in addition to being a Professional Engineer and a lawyer — is a petroleum landman and a chartered manager. His work focuses on the upstream oil and gas industry, construction, health services, and education.

Dr. Stock has volunteered more than 100,000 hours of service to not-for-profit organizations, demonstrating his long-term commitment to the community and to helping others. This commitment began 45 years ago, when he served as a section leader with Scouts Canada for Cubs, Scouts, Venturers, and Rovers. Ensuing were several award-winning expeditions to remote regions of the Yukon and Nunavut. Today, he holds senior volunteer and executive roles with local and national councils and foundations.

For decades, Dr. Stock has been a program advisor with the Duke of Edinburgh's International Award in Alberta. This program gives youth an opportunity to grow through community service, physical fitness, outdoor adventure, and skill development.

He has volunteered with Calgary Legal Guidance for almost 30 years, providing free legal advice to those in need. Over the past 43 years, he has made more than 625 blood, plasma, and platelet donations to Canadian Blood Services. He volunteered for several decades in the Calgary Food Bank warehouse and as an instructor with St. John Ambulance.

And yes, there is more. Dr. Stock's service to his professional community spans nearly 30 years. It includes volunteering for APEGA statutory committees and for other professional associations. Dr. Stock also shares his expertise by teaching at the University of Calgary, Mount Royal University, and SAIT, as well as presenting for APEGA and other professional associations.

HONORARY MEMBERSHIP**A Leader Among Leaders**

Pat Lobregt, FEC (Hon.), FGC (Hon.), received a surprise 2017 Summit Award when she was presented with an Honorary Membership. Ms. Lobregt retired this year, having most recently served as APEGA's Director, Executive & Government Relations. Ms. Lobregt — who has also worked alongside two Alberta Premiers and an Edmonton Mayor, becomes one of about 20 current Honorary Members.



Interested in Nominating a Peer or Project for a Summit Award? apegasummit.ca/nominate

APEGA MEMBER BRYAN LEACH DIGS INTO MENTORING

Mentoring continues to gain traction in a variety of industries as a popular form of workplace training. Calgary's **Bryan Leach, P.Eng.**, has spent two years studying mentoring in the Canadian consulting engineering profession, sampling mentoring relationships in eight western Canadian companies.

Applying an intergenerational perspective, he interviewed 53 individuals, representing baby boomers, gen-Xers, and millennials. The individuals were drawn from a variety of mentoring relationships, ranging from structured programs managed by HR departments to informal, organically evolved relationships.



A passionate mentor himself, Mr. Leach decided to focus on the different expectations that the various generations have and are expected to meet in a career-boosting partnership. His findings are summarized in his new book *Mentoring — Generational Perspectives*.

Mr. Leach retired in 2009 after a 36-year career as a Professional Engineer in the consulting engineering business. He launched *Imparando Consulting Ltd.* in Calgary, which helps organizations with workplace training. To order *Mentoring — Generational Perspectives*, contact Bryan Leach at bryleach@telusplanet.net.

APEGA MEMBERS, PERMIT HOLDERS SUCCEED AT CEA AWARDS

Around 7,000 people who had fled war-ravaged Syria arrived in Alberta last year. Helping them start their new lives were generous people like **Steven Oosterhof, P.Eng.**, and his wife, Dianna Oosterhof, part of a team that sponsored a refugee family.

For this and many other good deeds, as well as exceptional professional contributions, Mr. Oosterhof of Edmonton received the Harold L. Morrison Rising Young Professional Award from the [Consulting Engineers of Alberta](#) (CEA), during the organization's Showcase Awards Gala 2017, February 24 in Edmonton.

As an associate structural engineer at **DIALOG** in Edmonton, Mr. Oosterhof has been involved with some of the city's highest-profile and most iconic projects of recent years, including the Edmonton Arena District, the Kelly Ramsey Tower, the Edmonton Clinic Health Academy, and an expansion of the TELUS World of Science.

Volunteering is a huge part of his life. With the Alberta Science Network, he visits elementary schools to share his excitement about science and engineering. He has also donated his time to the

Mustard Seed humanitarian group and the Mennonite Centre for Newcomers.

The gala attracted 530 attendees for dinner and presentations. Drawing from 56 project entries, a record number, judges chose 15 Awards of Excellence and 13 Awards of Merit.

The Lieutenant Governor's Award for Distinguished Achievement went to **Dimitri Papanicolas, P.Eng.**, for more than 30 years of service with **Thurber Engineering Ltd.** and many community contributions. Of note is his work with the Edmonton Strathcona Rotary Club, which he's been a member of since 1993 and serves now as President. Mr. Papanicolas, however, is humble about his contribution to Rotary: only in retirement from his day job, he says, has really been able to commit.

Permit Holder **Stantec** landed the most awards overall, six of them to add to the company trophy case. Three Awards of Excellence went to Stantec: two for Studio Bell, Home of the National Music Centre in Calgary, in Building Engineering — Institutional, and



THE NOT AS YOUNG AND THE YOUNG

Above The award itself in front of him on the podium, Dimitri Papanicolas, P.Eng., addresses the audience at the Consulting Engineers of Alberta Showcase Awards Gala 2017, where he received the Lieutenant Governor's Award for Distinguished Achievement. *Right* Steven Oosterhof, P.Eng., holds the Harold L. Morrison Award Rising Young Professional Award.

-photos courtesy Consulting Engineers of Alberta



Sustainable Design; and one for quick infrastructure assessment and recovery after the Fort McMurray wildfire, in Water Resources and Energy Production. The company received Awards of Merit for the ATCO Regional Industrial Water System, the Seebe Bridge Pipeline Crossing, and the Aquatera Bioreactor Landfill Gas-to-Energy.

A joint submission from Stantec and **MCW Hemisphere Ltd., DIALOG, and Amec Foster Wheeler Environment & Infrastructure** received the Award of Excellence in Building Engineering — Recreational, for Rogers Place.

And Stantec is listed as a subconsultant for **AECOM Canada's** Northeast Anthony Henday Drive design, build, finance, operate project, which received an

Award of Excellence, Transportation Infrastructure — Roads, Interchanges, Airports, Mass Transit and Ports.

Associated Engineering Alberta claimed Awards of Excellence Awards in three categories, including Community Development, for the Main Street Rehabilitation project in the Town of Rocky Mountain House. The company's efforts in emergency response and water system recovery during the Fort McMurray wildfire earned Associated its two Awards of Excellence, in the categories of Community Outreach and In-House Initiatives, and Project Management.

Other Permit Holders that received Awards of Excellence were **CIMA Canada Inc., Golder Associates Ltd., Klohn Crippen Berger Ltd., Morrison Hershfield Ltd., and Read Jones Christoffersen Ltd.**

ENGINEERS CANADA SCHOLARSHIP HELPS MEMBER ENCOURAGE FEMALE STUDENTS

Throughout her engineering career as she struggled to find a female engineering mentor, **Kathryn Korbaylo, P.Eng.**, has faced the challenges that come out of working in a male-dominated environment. By becoming a teacher, she hopes to inspire the next generation to engage in these subjects and ultimately increase the number of females in engineering fields.

Ms. Korbaylo, who holds a B.Eng. in biosystems engineering from the University of Manitoba, has decided to return to school to earn her bachelor of education degree so that she can engage, inspire, and mentor young people — especially females — to pursue careers in science and engineering. Now, Ms. Korbaylo has graduated with a bachelor of education degree from St. Mary's University in Calgary.

An [Engineers Canada](#) scholarship helped her reach that most recent goal. Engineers Canada partners each year with Manulife and TD Insurance Meloche Monnex to award cash prizes valued at a total of \$60,000 to six Canadian Professional Engineers returning to university.

Two types of scholarships are available: three Engineers Canada-Manulife Scholarships of \$12,500 each and three Engineers Canada-TD Insurance Meloche Monnex Scholarships of \$7,500 each.

"This year's scholarship recipients demonstrate how engineers improve the lives of Canadians in a diversity of ways," said Chris D. Roney, FEC, P.Eng. (ON), IntPE, outgoing President of Engineers Canada. "We are proud to support them as they build on their existing engineering expertise through dedicated research, policy development, and skills advancement in order to solve the problems facing our society and the world."



TO LEARN AND TO TEACH

Kathryn Korbaylo, P.Eng., recipient of an Engineers Canada scholarship, speaks May 25 during the 2017 Engineers Canada Spring Meetings and AGM in St. John's. She recently graduated with a bachelor of education degree from St. Mary's University.

-photo courtesy Engineers Canada

MORE ABOUT SUSTAINABLE COMMUNITIES

For APEGA Member **Greg Christenson, P.Eng.**, homebuilding crosses his family's generations. In the 1940s Mr. Christenson's grandfather built homes in the Camrose area. The building tradition carried on with his father, Lloyd Christenson, who helped build and relocate Founder's Hall at the University of Alberta's Augustana Campus in Camrose.

Today, Christenson Developments focuses on much more than the construction part of the equation. Influenced by his father's affinity for not-for-profits, the company engages in local partnerships to drive community development and engagement.

"We don't just turn over the keys and walk away," Mr. Christenson told the University of Alberta's engineering alumni magazine, *The Builder*. "We're partners. We stay in that micro-community, and the buildings are focal points and gathering places for the community."

This includes working on seniors' housing and becoming involved in wellness and community care models. And it now also includes the Christenson professorship, a part of the Nasser School of Building Science and Engineering in Edmonton.



TRANSFORMING THROUGH CONSTRUCTION
Greg Christenson, P.Eng., believes in creating environmentally friendly construction practices.

-photo courtesy Jason Franson, University of Alberta Faculty of Engineering

The professorship will support research into environmentally friendly construction practices.

"I want to see our industry move from doing transactional work to doing transformative work," Mr. Christenson said.

SOCIOLOGY MEETS ENGINEERING IN STUDY OF OFFENDER MONITORING

Almost three years ago, criminologist Erin Gibbs Van Brunschot, now head of the Department of Sociology at the University of Calgary, began studying the merit of GPS-monitored offender tracking. Do the monitors decrease the likelihood of reoffence? Are certain types of offenders better suited than others for monitoring?

But she needed help with the technological aspects of her research. That led her to geomatics pioneer **G rard Lachapelle, P.Eng., PhD**. She went to the right place: Dr. Lachapelle is a two-time APEGA Summit Award recipient. In 2000, he received the Frank Spragins Technical Award, and in 2007, the Research Excellence Award.

Dr. Lachapelle, a professor emeritus in the Geomatics Engineering Department at the Schulich School of Engineering, was brought on board to

assess conditions under which the tracking didn't perform well. He was also tasked with providing recommendations to improve performance.

"We knew the technology had limitations," Dr. Lachapelle told the university's online news service, *UToday*. "Offenders live indoors, for example, which can throw off GPS."

Dr. Lachapelle and his team worked indoors and outdoors, going through, as he called them, "catch-me-if-you-can scenarios." They discovered that adding self-contained sensors that do not rely on external electromagnetic signals can offer new metrics — ones that help portray what people are doing and not just their location. Incorporated into an ankle bracelet, the sensors show, for example, whether a person is standing, moving, lying down, or running.

STORY CONTINUES ON NEXT PAGE >>



-photo courtesy University of Calgary Schulich School of Engineering

GOOD ENGINEER, GOOD CRIMINOLOGIST

These two academics partnered up to learn more about monitoring and crime prevention. *Left* Dr. Gérard Lachapelle, P.Eng. *Right* Dr. Gibbs Van Brunshot.

Many factors cause people to reoffend. “You can’t simply put a monitor on and expect them to not reoffend,” says Dr. Gibbs Van Brunshot.

But Dr. Lachapelle notes that wearable sensors have merit beyond tracking offenders. How about in sports? Or for monitoring seniors with health issues? “Think about someone with Alzheimer’s who wanders, or the senior living alone worried about falling. A GPS unit augmented with sensors could pick up where they are and what they are doing.”



-photo courtesy Riley Brandt, University of Calgary

Here are a few other lasting consequences. Two academics gained a heightened appreciation of each other’s expertise — and the complexities of cases facing the police and justice communities.

“This was the first time I worked so closely with someone in the Faculty of Arts,” Dr. Lachapelle says. “Erin was a wonderful collaborator. We had some quite incredible experiences working with various law enforcement agencies.”

Adds Dr. Gibbs Van Brunshot: “I loved working with Gérard and his group. I think it opened up (all of) our eyes to different elements we weren’t used to seeing.”

PROGRAMS EARNS HIGH MARKS

Two University of Alberta programs related to the APEGA professions — petroleum engineering and geology — rank fifth in the world in their subject areas, says the Center for World University Rankings.

The centre’s *Rankings by Subject 2017* names the top 10 of 1,000 degree-granting institutions in each of the areas it looks at. U of A also landed a third in paleontology, a fifth in forestry, and a sixth in medical transplantation.

The University of Calgary landed two top-10 rankings in the centre’s list, sixth spot in petroleum engineering and ninth in education, scientific disciplines.

STOREY BY STORY — APEGA MEMBER SLOWS THE WRECKING BALL

Downtown Edmonton is rapidly changing, particularly since the closing of the City Centre Airport and its flight paths have allowed for more construction of tall buildings. A skyline of glass and steel is sprouting from places brick buildings have disappeared from.

Tegan Martin-Drysdale, P.Eng., is making sure some of the city's old landmarks stick around. She established RedBrick Real Estate in 2012, with the vision of refreshing the city from within by preserving historic buildings and their stories.

One of her rescues is the Alberta Block Building at 105 Street and Jasper Avenue in downtown Edmonton. Housing the CKUA radio station for nearly 60 years, the 100-year-old building was left to an unpromising fate when the station moved, sitting on the market for two years.

"I thought it was too big to be my first project," Ms. Martin-Drysdale told the University of Alberta's engineering alumni magazine, *The Builder*. "But I kept driving past it, thinking, I can't let this go. There is something drawing me to this."

The hard part was to make others see what she saw — that there was potential in that labyrinth of small rooms being opened into an airy, modern space.

But her vision goes beyond design. Her boutique infill company specializes in new and retrofitted residential and commercial buildings. By creating affordable spaces in older neighbourhoods, Ms. Martin-Drysdale hopes to contribute to sustainable communities and help prevent urban sprawl.

NEW LEADER AT GEOSCIENTISTS CANADA

Our own **George Eynon, P.Geo., FGC, FEC (Hon.)**, an APEGA Councillor, has shifted into the Past-President role with [Geoscientists Canada](#), the national body for nine geoscience self-regulating organizations in Canada. All told, APEGA and the eight other organizations regulate more than 9,500 Professional Geoscientists and more than 2,000 Geoscientists-in-Training.

Leading Geoscientists Canada now is President Jeff O'Keefe, P.Geo. (NL), the Director of Resource Management and Chief Conservation Officer with the Canada-Newfoundland and Labrador Offshore Petroleum Board, in St. John's.

REFLECTING ON ARCHITECTURE

Tegan Martin Drysdale, P.Eng., stands on one of Edmonton's rooftops, the Alberta Block Building, reflected in the largely glass-and-steel skyline that surrounds it.

-photo courtesy Demetri Gianitsios, University of Alberta Faculty of Engineering



WOMEN PLUS STEM PLUS SUCCESS

Lois Erichson, P.Eng., an operations leader for NOVA Chemicals near Red Deer, began her career in the early 1980s — when women were even less commonplace in careers related to science, technology, engineering, and math (STEM) than they are today. She’s learned a few things over those years, which she shared during a free, all-day workshop for women to connect and inspire, held at the University of Alberta in early May.

Don’t try to do absolutely everything and do outsource time-consuming tasks like yardwork, advised Ms. Erichson. She shared her experiences with about 45 women, most of them academic professionals from STEM careers in Western Canada who had gathered to discuss challenges and opportunities in their fields.

APEGA Members **Amy Kim, P.Eng., PhD**, and **Ania Ulrich, P.Eng., PhD**, both U of A professors, designed the free, all-day workshop for women to connect and inspire.

In addition to lectures, the Women in Science and Engineering Advancement Workshop featured breakout sessions for brainstorming and networking, as well as a speed mentoring session that connected senior facilitators with junior participants.

Topics included overcoming obstacles and building confidence, maintaining a work-life balance, and developing an inclusive work environment.

“Someone has to step up, organize, and host the entire event,” Dr. Ulrich says in an online news item posted by the U of A Faculty of Engineering. “There are so few female faculty and we burn out with all the service we do.”

At the conference, it was announced that Dr. Ulrich will become the new Associate Dean of Outreach for the faculty, a testimony to its growing inclusiveness.

COMBINED DEGREE PROGRAM PUTS STUDENTS IN THE BUSINESS FAST LANE

“Do I want a career in business? Or do I want to pursue engineering instead?” While both offer great opportunities, many ambitious high school graduates are forced to make that difficult choice.

But not anymore, at least if they’re planning to go to the University of Calgary. A new joint degree program offers a bachelor of science in engineering and a bachelor of commerce, in as little as five years of study.



COMBINING FOR SUCCESS

From left are Varun Bhatt, Scott McNichol, Aster Lau, Jerry Yang, Cyndora Chan, and Marion Brown, the first cohort of a new program at the University of Calgary that combines business and engineering education.

-photo by Riley Brandt, University of Calgary

“Before I came to the university, I was torn between pursuing engineering or business, and when I saw the opportunity to do both, I jumped at it,” Scott McNichol, one of the nine students who form the first cohort, told *UToday*, the university’s online news service.

The first of its kind in Western Canada, the program puts students on a demanding schedule, but promises to be an excellent choice for those seeking the best of both academic worlds.

Jim Dewald, Dean of the Haskayne School of Business, has engineering and business degrees. He said the new program will help future engineers better understand the business side of the projects they work on. The reverse is true, too. Those with a business bent will gain more knowledge about technical challenges.

“This kind of program is long overdue in a city like Calgary and I am confident these students will make a significant impact in our community,” says Mr. Dewald.

Adds **Schulich School of Engineering Dean Bill Rosehart, P.Eng., PhD**: “The ability to combine engineering and business opens new doors and broadens career horizons for our students.”

The University of Calgary officially launched the program in May. A \$5-million gift from Clayton and Linda Woitas and family will support program delivery and marketing, student recruitment, and scholarships. Clayton Woitas is a Calgary Business Hall of Fame laureate and is currently the chair of Encana’s board of directors. His wife and their sons, Josh and Carson, are University of Calgary alumni.

Help Unlock Someone's Full Potential!



Discover the rewards of mentoring. Support another Member's professional growth while earning CPD hours.

With APEGA's online matching software, you can connect with a mentee in a few clicks.

Become a **mentor** with APEGA's Mentoring Program and share your expertise.

Sign up at www.apega.ca/mentoring.



SPONSORSHIP DRIVE

The APEGA Calgary Branch seeks sponsorship support for our annual golf tournament.

Sponsorships will help lower participation costs, which in turn will increase Member attendance and provide valuable networking opportunities for more of our Members.

There are many categories available for sponsorship.

Please call the Calgary office at 403-262-7714 for complete sponsorship package details.

Sponsorship deadline is August 1, 2017.

APEGA CALGARY BRANCH ANNUAL GOLF TOURNAMENT

Players – Register Online Now

Pinebrook Golf Club
Monday, September 11, 2017

Registration &
Driving Range at 12:30 p.m.

Play at 2 p.m.

Dinner to follow

Call the Calgary APEGA Office at 403-262-7714 for more information.



SEALING HER FUTURE

APEGA's 98th President Jane Tink, P.Eng., FEC, FGC (Hon.), gets set to affix her stamp to official documents at the APEGA Annual General Meeting in Calgary, on April 28. Ms. Tink, an Okotoks rancher and oil and gas consultant, says a priority for her term is connecting Members and their skillsets with challenges faced by industries not usually linked to engineering and geoscience.



FAMILY TIES

APEGA Past-President Dr. Steve E. Hrudehy, P.Eng., FEC, FGC (Hon.), FCAE, FSRA, wearing his new vest, poses with his wife, Elizabeth Hrudehy, on stage at the Summit Awards on April 27. In honour of Dr. Hrudehy's Ukrainian heritage, the Past-President's vest is embroidered in colours representing the region of origin of Dr. Hrudehy's family. On the screen behind the Hrudeys is a likeness of a Ukrainian Orthodox Church that his late father, Steve Sr., built near Andrew, Alberta, in 1929-30. It was Steve Sr.'s first full construction project. The painting depicted here — which was included in an Art Gallery of Alberta exhibition of Ukrainian art — is by the late Alberta artist Isabel Levesque.

TRANSITIONS IN LEADERSHIP

Top Dr. Jim Gilliland, P.Eng., FEC, FGC (Hon.), left, a 2014 APEGA President, poses after his vesting with the Past-President during his term, Colin Yeo, P.Geo., FGC, FEC (Hon.). The vesting ceremony is a traditional rite of passage into the ranks of Past-Presidents.

Bottom Connie Parenteau, P.Eng., FEC, FGC (Hon.), 2014-2016 APEGA Past-President, honours newly minted Past-President Dr. Steve E. Hrudehy, P.Eng., FEC, FGC (Hon.), FCAE, FSRA, with a plaque commemorating his service to APEGA and the professions.



CENTENNIAL LEADERSHIP, SESQUICENTENNIAL LEADERSHIP, AND THE NUMBER THREE

Top You need three things to lead successfully, says Dr. Gary Faulkner, P.Eng., FEC, FGC (Hon.): a good boss, good people to work with, and a meaningful job. The 2017 recipient of APEGA's top honour, the Centennial Leadership Summit Award, added that an extra success boost came from his wife, Gail Hufty. "I can't count the number of times she's steered me away from disaster." One of APEGA's longest-serving and most dedicated volunteers, Dr. Faulkner retired as APEGA's Board of Examiners Chair in 2015. He is the Director, Rehabilitation Research & Technology Development, for the Glenrose Rehabilitation Hospital in Edmonton, where his innovations in robotics, virtual reality, and other areas are dramatically improving people's lives. He is one of only six three-time Summit Award recipients.

Bottom His Worship Naheed Nenshi, the Mayor of Calgary, speaks passionately about the 150th anniversary of Canada's Confederation. Mr. Nenshi is calling on Canadians to perform three acts of community service this and every year thereafter. "It could be a tiny thing, like mowing your neighbour's lawn. It could be a big thing, like joining one of APEGA's professional committees. Doesn't matter. The point is that every single one of us chooses to make community service part of our sesquicentennial celebration and part of our life." Sesquicentennial, he also noted, is a fun word and not nearly as tough to say as it looks. To prove his point, the mayor led the crowd in reciting it.





SURVIVING AND THRIVING AFTER A LAYOFF

APEGA Councillor Claudia Gomez-Villeneuve, P.Eng., presents a [professional development session](#) at APEGA Summit 2017 on strategies for surviving job loss, including steps forward for job seekers and team leaders.

POINTS OF THE MATTER

Right Calgary lawyer Evelyn Ackah, LL.B., presents at Summit 2017 on the legal issues surrounding opportunities in the United States for APEGA Members seeking work there.

Far Right APEGA Member Amin Sabzevari, P.Eng., CRM, presents on Alberta Boiler Safety Association's regulatory requirements.



PERMIT DUES INCREASES BEGIN JULY 1

APEGA has traditionally used a one-size-fits-all dues schedule for Permit Holders. That changes this summer with the launch of the first phase of a new permit dues schedule — one that better reflects the distribution of APEGA's costs.

Under the new schedule, Permit Holder dues increase with the size of the company, as measured by the number of APEGA Members employed as per APEGA's permit file.

Two launch dates are set for the new schedule. Effective July 1, 2017, Permit Holders employing six or more Members will pay dues using the new schedule. For those employing five or fewer Members, the effective date is a year later, July 1, 2018. This staggered approach is designed to give smaller companies more time to prepare.

The new rate structure is a more equitable reflection of the costs required to regulate Permit Holders. Member dues are still APEGA's main source of revenue.

The Permit Holder dues formula is \$500 times the square root of the number of registered APEGA Members employed. Types of Members used in the calculation are Professional Members, Licensees, Professional Licensees, restricted practitioners, Provisional Licensees, Members-in-Training, and exam candidates.

Under the formula, a Permit Holder with 15 Member employees would pay \$1,936.49 plus GST. A Permit Holder with 200 Member employees would pay \$7,071.07 plus GST. Previously, each Permit Holder paid \$500 plus GST in annual dues — regardless of the Member employee count.

A dues estimator appears in the upgraded Company Self-Service Centre of the APEGA website.

To keep dues increases as low as possible, APEGA has restructured operations, frozen staff salaries for the second consecutive year, and has put in place cost-cutting measures that include the elimination of the print version of *The PEG* magazine.

MORE INFO

[Member & Permit Holder Dues Increase Web Page](#)

BYLAW CHANGES APPROVED BY MEMBERS AT AGM

Changes in validation requirements for mail and electronic bylaw voting earned the approval of Members attending the APEGA Annual General Meeting on April 28 in Calgary. The successful amendment of Bylaw 37(3) means that voting by 400 eligible Professional Members now makes the results of a mail or electronic vote valid. Before, the requirement was 10 per cent of eligible Professional Members.

The amendment allows voting from a broad cross-section of eligible Professional Members and timely decisions on proposed bylaw changes. Until now, the usual mechanism for passing bylaw changes has been a legally constituted AGM. An AGM quorum is 60 eligible Professional Members, and bylaws typically passed or failed on a total vote count of 100 to 150.

A simple majority in favour continues to be the threshold for a bylaw change to pass, whether the vote is conducted by mail, electronically, or at an AGM or special meeting. At this year's AGM, 137 eligible Professional Members voted in favour of the changes to Bylaw 37(3) and 15 voted against. That's a passing vote of 90 per cent.

The amendment does not apply to the APEGA Election, which is covered elsewhere in the bylaws.

Members at the AGM also approved bylaw changes that add new eligibility requirements for nomination to Council and give clear guidance on removing someone from Council.

The changes were brought forward after Council discovered gaps in a review of its governance manual. The criteria belong in the bylaws rather than policy, Council decided, so Members can easily know and find the rules.

The nomination eligibility amendment passed by a 75 per cent majority, a vote of 117 to 39. The vote on criteria for removal from Council was 100 to 49 in favour, or 67 per cent.

MORE INFO

[Report to Members — Mail and Electronic Voting Requirements](#)

[Report to Members — Criteria for Eligibility for Nomination to Council, and Criteria for Removal of an Elected Member of Council](#)

APEGA Launches Improved System for Reporting and Examining Experience

Imagine an application system featuring a list of core competencies applicants use to measure and explain their work experience, regardless of discipline. Wouldn't that be fairer, more transparent, more efficient, and easier to understand than a less guided and structured reporting process for work experience?

Yes, it would be. And it will be — because that's exactly the era APEGA is now ushering in, through competency-based assessment (CBA).

Licensure can be complex, especially for applicants who gained their experience outside Canada. But CBA makes it easier for them to understand how their skills will be recognized and evaluated.

COMING SOON — ACADEMIC ASSESSMENT METHOD

APEGA is also developing an academic assessment method (AAM) to help us better evaluate the educational credentials of engineering applicants and reduce processing times.

With AAM, Canadian and internationally trained applicants will be assessed using a single academic standard.

Because all engineering applicants for Professional Member, Licensee, and Member-in-Training will meet a single standard, the academic assessment process will be more objective, more repeatable, and fairer.

Details are still being finalized, but there will likely be three different levels of assessment based on the core subjects completed by Canadian or international applicants. We hope to launch AAM before the end of this year.

Launching in July for APEGA engineering applicants seeking Professional Engineer or Licensee designations, the model already has a sound track record. CBA has been used successfully by the Association of Professional Engineers and Geoscientists of British Columbia for more than 10 years. It's also recommended by two major documents offering APEGA guidance on foreign qualifications — the Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications, and the Foreign Qualification Recognition Plan for Alberta.

APEGA began developing an Alberta CBA model in 2015, with support from an Innovation Fund grant from the Government of Alberta. It's a major piece of a four-year registration renewal project set for completion later this year. The registration renewal project is designed to improve tools and service, allowing us to process increasingly complex applications faster, more accurately, and more efficiently.

CBA is not used by individuals applying for the designations Professional Licensee (Engineering), abbreviated P.L. (Eng.) or P.L. (Geo.), or Professional Geoscientist, abbreviated P.Geo.

HOW DOES CBA WORK?

CBA asks applicants to explain how they meet specific competencies in 22 key areas, which are grouped into six categories:

- technical competence
- communication
- project and financial management
- team effectiveness
- professionalism
- social, economic, environmental and sustainability

Applicants are given a list of indicators for each competency. The indicators are examples of work situations an applicant can use to demonstrate competence. For each competency, applicants must provide at least one actual situation, plus several actions or details, making it specific to their experience. Finally, applicants must summarize the outcome of each situation, highlighting how their actions contributed to its overall success.

Here's an example.

In the technical competence category, applicants are asked to demonstrate their competence in the application of theory, to show how they've applied engineering knowledge to design solutions.

The indicators for this competency are:

- prepare technical specifications
- demonstrate use of theory and calculations to arrive at solutions
- demonstrate the development of a unique design solution which could not be accomplished with a standard design solution

An applicant with experience as a substation designer might submit the following situation as an example:

I was responsible for designing the ground grid for a 120kV substation. The design required additional research and design work because of high soil resistivity, limited real estate, and very high fault levels.

This situation would involve several actions, which the applicant might describe like this:

For the ground grid I reviewed a number of research publications. Instead of just adding extra conductors to a standard ground grid, I used variable spacing based on the research, considering the impact of soil resistivity. This allowed me to adjust the mesh density to obtain maximum performance by effective reduction of grid resistance.

To deal with the issue of potential high touch voltages, I specified different crushed rock fill to provide for higher surface resistivity. This included considering the impact of weather and moisture variations with the seasons.

The resulting outcome might be:

The final design met the Institute of Electrical and Electronics Engineers and hydro standards applicable to the substation installation and provided for the most cost-effective resolution of a challenging design-build.

THREE LEVELS OF ASSESSMENT

An applicant's proficiency in each of the 22 competencies will be rated three times.

First, applicants will **self-assess** their competencies. This allows them to think critically about their experience and become partners in the application process.

Each applicant must then send each competency to an appropriate validator — someone who can **validate** the assessment by applying direct knowledge of the technical details of the applicant's work experience

The application will be **assessed** by one or more Professional Engineer assessors. An assessor is on APEGA staff or is a volunteer with extensive experience in the applicant's discipline.

Next, the application will be presented to the APEGA Board of Examiners (BOE) for **evaluation and a decision**. Made up of volunteers (most of them Professional Members but also including public representatives), the board decides whether to register an applicant, or defer or refuse the application.

WHY CBA?

CBA is a more consistent way for the BOE to determine whether candidates meet Alberta qualification standards.

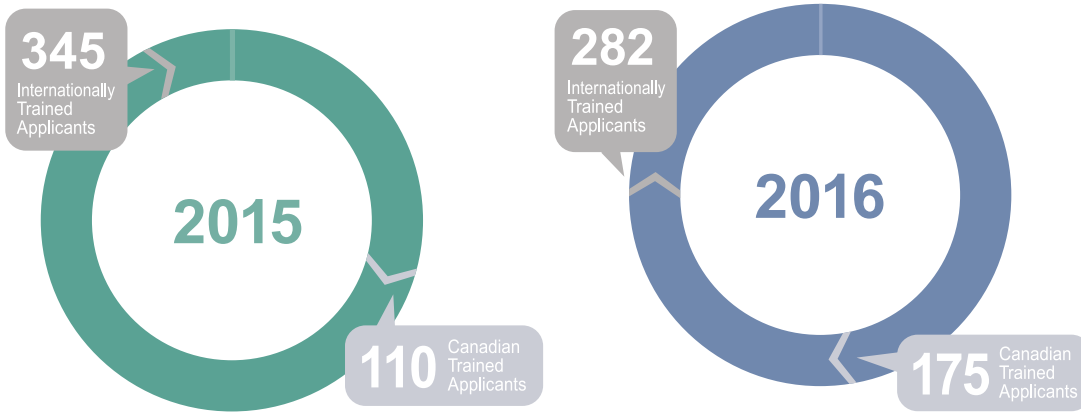
Here's how it worked before. We asked Professional Member and engineering Licensee applicants to describe at least 48 months of previous work tasks on a document called the Work Experience Record (WER). After the applicant's references verified their work experience, the Board of Examiners determined what level of expertise each task demonstrated.

Back-and-forth with staff often resulted, because applicants needed assistance to document their work experience in an way that the board would understand. This extended processing times.

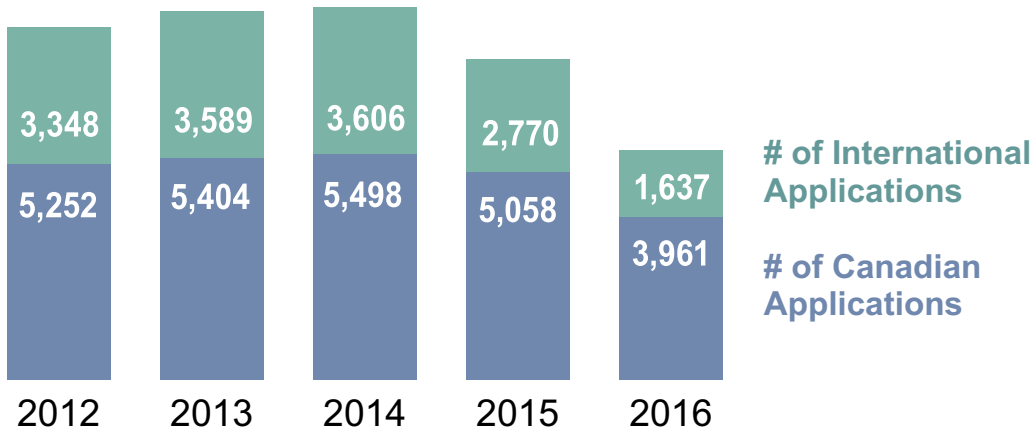
CBA will help us meet targets for foreign qualification recognition set last fall by the federal Forum of Labour Market Ministers. Federal, provincial and territorial ministers asked regulators like APEGA to achieve initial foreign qualifications decisions within

CONTINUED ON PAGE 50 >>

APPLICATION PROCESSING TIMES
average in days



VOLUME OF APPLICATIONS
Canadian trained vs internationally trained



In 2016, APEGA experienced an increase in the proportion of applications from graduates of Canadian engineering programs and a decrease in the proportion of applications from graduates of international engineering programs.

six months. The previous target was one year, which we were already well within.

With CBA in place, our goal is to reduce the average processing time for internationally trained applicants to 180 days by 2018. That number was 345 days in 2015, and 282 in 2016. The decrease last year was mainly due to two things: a reduction in the number of applications from internationally trained applicants and our use of World Education Services to verify degrees, which helped speed up processing.

For Canadian grads, our goal is to reduce average processing times to 90 days by 2018. In 2015, the average was 110 days, although that increased to 175 days in 2016. The increase was a blip caused by efforts by the BOE and staff to improve overall application processes, combined with a staff shortage and staff reassignments.

WHAT ABOUT OTHER ENGINEERING AND GEOSCIENCE APPLICANTS?

All other engineering applicants, and all geoscience applicants, will continue using the WER system for now.

Geoscientists Canada is developing improvements for assessing geoscience applicants. Like CBA, a system called admission support tools (AST) will enhance assessments through a competency profile for geoscience practice. The tool will describe core abilities and skills that a geoscientist needs for independent practice.

QUESTIONS?

registration@apega.ca

ASSESS YOUR WORK EXPERIENCE PRIOR TO APPLYING

Prospective applicants can assess their work experience prior to applying for an engineering licence with APEGA. By using our online Competency Self-Assessment Worksheet (CSAW), they can compare their scores to APEGA's licensing requirements.

This will help them determine whether they need to improve their skills before applying.

CSAW is an optional self-assessment tool and doesn't affect membership applications. It's not an official document and won't be reviewed by the APEGA Board of Examiners.

To complete the self-assessment, you must have already started the application process and received an APEGA ID number. You will see the CSAW option in your [Member Self-Service Centre](#) account.





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Engineering and Geoscience



www.apega.ca

Make an Impact

Build the Future by Volunteering

Volunteer Opportunities

- Committees
- Special Events
- Youth and University Outreach
- Mentoring

Current APEGA volunteer opportunities are posted on the volunteering section of the APEGA website

Volunteer Benefits

- Earn Continuing Professional Development Credit
- Expand Your Business Network
- Develop Skills, Knowledge, and Experience
- Give Back to Your Profession
- Have Fun

Note: Your acceptance in a particular volunteer position depends on spaces being available and the suitability of your qualifications.

Contact us:

Cam McCormick, Volunteer Manager
1-800-661-7020, Ext. 2517
volunteer@apega.ca



Share Your Knowledge and Experience

APEGA Members are needed for the following volunteer opportunities

Permit to Practice Seminar Presenters

Presenters are needed to deliver in-person Permit to Practice seminars, which inform Responsible Members of their duties and teach them to create Professional Practice Management Plans. Volunteers must present at least twice between September and June, typically in either Edmonton or Calgary. This position is eligible for an honorarium upon successful completion of agreed-upon presentations.

Candidates must:

- be licensed as a Professional Member of APEGA — P.Eng., P.Geo., P.Geol., P.Geoph., P.L.(Eng.), or P.L.(Geo.)
- have a minimum of 5 years of industry experience
- have proven public speaking abilities and be confident in handling regulatory questions
- be a current or past Responsible Member for an APEGA Permit Holder

Discipline Committee Members

Committee members are needed for the Discipline Committee, which hears and decides on complaints of unskilled practice and unprofessional conduct against APEGA Members and Permit Holders, brought before it by the Investigative Committee.

Candidates must:

- be licensed as a Professional Member of APEGA — P.Eng., P.Geo., P.Geol., P.Geoph., P.L.(Eng.), or P.L.(Geo.)
- have a minimum of 10 years of industry experience
- have experience interpreting legislation as it applies to municipal permits or appeals in other courts, or through involvement with APEGA and the *Engineering and Geoscience Professions Act*
- have experience reading and understanding legal decisions
- have experience participating in legal or quasi-legal proceedings, whether through APEGA, other regulators, or Alberta Courts

National Professional Practice Exam Question Author

APEGA Members are invited to volunteer to help produce new, high-quality examination questions to add to the National Professional Practice Exam (NPPE) item bank, for use in future administrations of the NPPE.

Candidates must:

- be willing and committed to writing exam questions regularly
- possess the strong English language skills necessary to write high-quality examination questions
- be a Professional Engineer or Professional Geoscientist licensed with APEGA or an equivalent Canadian self-regulating organization
- have 2-plus years of work experience
- have a working knowledge of professionalism, law, and ethics as outlined in the NPPE scope and syllabus

Environmental Professional Practice Standards Subcommittee

The Environmental Professional Practice Subcommittee ensures APEGA professional practice standards, guidelines, and bulletins for the professional practice of environmental engineering and geoscience are adequate to protect the public interest. The working group will review and revise environmental practice guidelines.

Candidates must:

- be licensed by APEGA as a P.Eng., P.Geo., P.Geol., or P.Geoph.

- have a background and current practice in an environmentally related aspect of engineering or geoscience

Professional Practice Examination Committee

The Professional Practice Examination Committee (PPEC) works on ensuring that new registrants know and understand the professional, ethical, regulatory, and legal responsibilities of practising Professional Engineers and Professional Geoscientists. The assessment used to determine if registrants know the subject matter should be valid, reliable, and fair.

The major objective of the PPEC is to ensure that the National Professional Practice Examination (NPPE) is a current, meaningful, and relevant examination in professional practice and is administered to new registrants in a manner satisfactory to the APEGA Board of Examiners.

Candidates must:

- be licensed as a Professional Member of APEGA — P.Eng., P.Geo., P.Geol., P.Geoph., P.L.(Eng.), or P.L.(Geo.)
- have significant experience as a Professional Member, ideally with more than 10 years of industry experience
- have a minimum of five years of Canadian professional membership, with APEGA or any other Canadian engineering or geoscience self-regulating organization
- be highly proficient in spoken and written English

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

Cam McCormick, Volunteer Manager
1-800-661-7020, Ext. 2517
volunteer@apega.ca

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

THE FUTURE – INSPIRED!



You are an Alberta Engineer or Geoscientist.

You are proud of your profession and the hard work it took to get where you are today.

You are grateful for the opportunities that your profession has given you.

You probably received financial assistance, mentorship, advice & encouragement that helped you along the way.

And now, you want to give back to the profession that has given you so much.

The APEGA Education Foundation is your way to give back. Every gift inspires the future!

Donate today at apegaeducationfoundation.ca



Going Up?

SEPTEMBER 13-17, 2017 | CALGARY, AB

Beakerhead

A SMASH UP OF ART, SCIENCE AND ENGINEERING. OPEN TO EVERYONE.

Photo credit: Neil Zeller Artwork: Chris Malloy



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Inquiring Minds — and the Stuff They Create

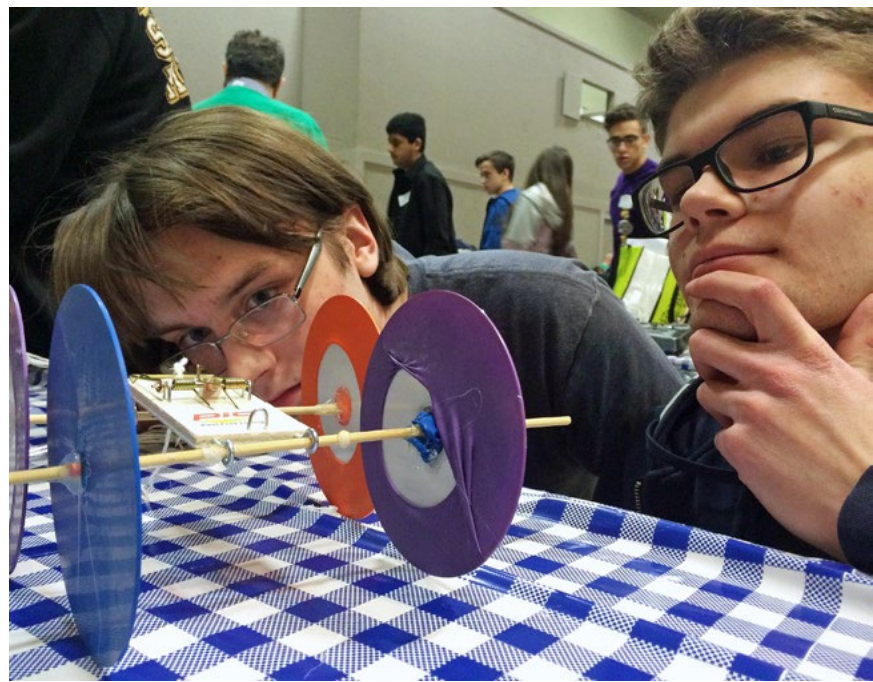
1,200 student inventors test their creativity and critical thinking skills at the annual APEGA Science Olympics — and, in the process, learn plenty about engineering and geoscience

Standing before their hand-crafted aluminum foil aqueduct, elementary students from Suzuki Charter School carefully analyzed their creation for potential design flaws.

“It *will* work,” one student confidently reassured her teammates.

And, to some extent, it did.

The students, taking part in the APEGA Science Olympics in Edmonton, were challenged to design a system that would transport water using gravity. Their tool kit included a few basic supplies: aluminum foil, wooden skewers, pipe cleaners, wax paper, and straws.



UP TO THE CHALLENGE

Top Waiting to compete, elementary students check out their images on the big screen at the APEGA Science Olympics in Edmonton. *Bottom* High school students in Edmonton ponder self-propelling possibilities for their vehicle, made of common household items like mousetraps, CDs, and balloons.



They were among 1,200 students from across the province who took part in the APEGA Science Olympics, this spring. Besides Edmonton, events were held in Calgary, Cold Lake, Lloydminster, Medicine Hat, Red Deer, and Peace River.

The APEGA Science Olympics takes learning beyond the classroom, testing the ingenuity and critical thinking skills of kindergarten-to-Grade-12 students. Working in small teams, students are encouraged to think beyond their everyday worlds to solve engineering and geoscience challenges.

In Lloydminster, for example, Grade 9 students were tasked with building electromagnets using a wooden dowel, an aluminum peg, two steel nails, insulated and uninsulated copper wire, and a D-cell battery.

Not only did they learn about series and parallel circuits, the 74 students learned that to succeed, they needed to cooperate and communicate. In fact, APEGA



THROUGH THE AGES

Top Calgary students in the division for Grades 1-3 make some high-pitch and low-pitch noise. *Bottom Left* Calgary students in the division for Grades 4-6 face their judge in the tower-and-bridges category. *Bottom Right* High school students in Red Deer, at the Central Alberta Branch APEGA Science Olympics, attempt to build a freestanding structure with provided supplies — strong enough to hold a marshmallow.

SCIENCE OLYMPICS

PIPE DREAMS

A young participant at the Edmonton Science Olympics gets creative with pipe cleaners. Division 1 students (Grades 1-3) built aqueducts to transport water and designed boats to float — with a payload of coins.



Science Olympics challenges are designed so teams that work together to solve problems — and those that come up with the most original and innovative ideas — receive extra points from the judges.

“Our goal is to show students that science and engineering have applications in everyday life, and that careers in science and engineering involve collaboration and team work,” explains Anna Salim, P.Eng., a volunteer with APEGA’s Vermilion River Branch, which organized the Lloydminster event.

Nearly all the students noted on feedback forms that they enjoyed working in teams. “It was satisfying to see that we drove that point home,” says Ms. Salim.

GOING FOR GOLD

Last year, APEGA introduced a new judging system that rewards students for ingenuity and teamwork. Instead of competing against other teams, students now strive to reach different achievement levels. This means multiple teams may receive gold, silver, or bronze recognition for the same challenge.

VOLUNTEER SHOUT OUT

The success of the APEGA Science Olympics depends on the generous support of hundreds of volunteers: Professional Engineers, Professional Geoscientists, Engineers-in-Training, Geoscientists-in-Training, university students, teachers, and parents.

Working with APEGA staff, they develop and test the challenges, judge them on event day, and act as role models for students.

More than 280 Science Olympics volunteers logged more than 2,700 hours of volunteer time planning and executing this year’s events.

Thank you, volunteers, for your commitment to inspiring the next generation of engineering and geoscience professionals.

CONTINUED ON PAGE 64 >>



TESTS AND TROPHIES

Top Edmonton junior high students test their wind-powered machine, using two supplied fans to move a brick as far as possible. Bottom Excitement is expressed in different ways, this pose from Division 1 silver winners in Calgary demonstrates.



Event organizers in each community had the flexibility to come up with their own challenges, though they were all based on the Alberta school curriculum and reinforced science concepts students are learning at school.

Some of the more complex challenges were work-at-home projects. Teams spent weeks — and even months — perfecting their creations before bringing them to the APEGA Science Olympics to be tested and judged. In Edmonton, elementary school students built Rube Goldberg

BOT POWER, BOAT POWER

Left Participants in the APEGA Science Olympics in Calgary try their hands at creations from FIRST Robotics. FIRST Robotics, an organization with similar goals to those of the APEGA Science Olympics, attended for demonstration purposes. *Bottom* A student at the APEGA Medicine Hat Science Olympics blows up a balloon to power his team's self-propelled boat, made from a chocolate milk carton and other materials.



machines, junior high students designed machines that could move bricks using wind power, and high school students constructed remote-controlled submarines to navigate, if all went well, an underwater obstacle course in a set time.

Mystery challenges were revealed at the events. In Lloydminster, these included the electromagnetism challenge and a marshmallow tower challenge. For the latter, teams were given 20 spaghetti noodles, one metre of string, a marshmallow, Scotch Tape, and just 10 minutes to build the tallest free-standing structure they could. They're only constraint: the marshmallow had to be on top.

"It was incredibly rewarding to see the students work on the challenges with such focus and determination," says Ms. Salim. "The most satisfying part was when a group of students spontaneously

came up to us to thank us at the end, and tell us how much fun they had."

Indeed, providing a fun and positive experience for the students is another goal of the APEGA Science Olympics.

That's exactly what happened at the inaugural Science Olympics in Peace River. The 51 students there in Grades 7 to 12 students participated in five challenges. In one of them, students became seismic sleuths, tasked with identifying an object without looking at it. In another, they had to complete a series of engineering- and geoscience-related tasks in 90 minutes, including making a grabbing tool, completing a cypher, and identifying mystery minerals.

"I love this. How about we do this event every month?" declared one student.

Event organizer Ibrahim Adewole, P.Eng., says feedback from students, parents, and teachers was supportive and encouraging. "They were all excited to see this event happen and they are looking forward to another one," he says.

The Peace Region Branch does hope to organize another Science Olympics for fall, but this time it will be in Grande Prairie.

EYES ON THE PRIZE

Students at the APEGA Science Olympics in Edmonton anxiously await competition results. Depending on their rating, teams posed with these gold, silver, or bronze LEGO trophies. Though they couldn't take the trophies home, they were given kits to build their own, smaller versions later.



And You Are?

Randi Buchner, E.I.T.

Civil Engineering Enthusiast — Outreach Ambassador — APEGA Science Olympics Volunteer



A buzz of excitement filled the air at Medicine Hat College as Grades 4 to 6 students gathered on a cold Saturday afternoon to compete in the APEGA Science Olympics. Soon, silence fell over the room, after the 27 students had been presented their first challenge — build self-propelled boats. Teams were quiet but busy as they devised their plans.

GIVING BACK

Outreach lead for APEGA's Medicine Hat Branch, Randi Buchner, E.I.T., hopes to inspire local students to explore career options in the engineering and geoscience professions. Role models piqued her own interest in civil engineering. Here, she and fellow volunteer Clayton Bos, P.Eng., explain a math quiz.

-photo courtesy Randi Buchner, E.I.T.

And that was music to the ears of APEGA volunteer Randi Buchner, E.I.T.

"They were all brain storming in their teams and were so focused on the task at hand. It was such a neat feeling to experience the sound of thinking," says Ms. Buchner, who works for the City of Medicine Hat and is the outreach lead for APEGA's Medicine Hat Branch.

While the students were creating, event volunteers soon had their own engineering challenge to overcome: the small pool they were using to test the boats sprung a leak.

"Luckily, with it being an APEGA event, there was a team of engineers at hand," laughs Ms. Buchner. "With a little duct tape and a glue gun, the pool was fixed in no time and the day was saved."

In previous years, the APEGA Science Olympics in Medicine Hat has been held in conjunction with other events. This was the first time the branch has held it as a stand-alone. Ms. Buchner, with 14 other volunteers, helped ensure success.

She describes the day in two words: incredibly inspiring.

One of her highlights was watching students learn, on the spot, as they attempted to meet their challenges. She uses the minefield egg toss as an example, which has students design a device to protect an egg from breaking.

"The students would toss their creation and chase after it, then anxiously open it to see if their egg was broken," remembers Ms. Buchner. Their excitement when the egg was still intact — and even when it was broken — was priceless.

"They got to experience hands-on trial-and-error, and there's no better way to do that than to get a bit messy," she says.

Working on the challenges, students would make comments like, "Next year we could try it this way," or, "I can't wait till next time!"

"It was so awesome to see their excitement to try — and to try things differently — to find a way that works," says Ms. Buchner.

Besides testing and developing critical thinking skills, a goal of the APEGA Science Olympics is to build awareness of engineering and geoscience as a career option. Most students know little about what APEGA professionals really do.

"Feedback from the teachers and parents was that many of the kids didn't know about engineering and geo-

science, but now they could see how practical and applicable it is to a lot of the things we do in everyday life."

SPARKING THE INTEREST

So, what does all this have to do with the bigger picture of who Ms. Buchner is, as an E.I.T. and as a person? Quite a bit, actually.

She knows firsthand how events like the APEGA Science Olympics can influence youth to explore engineering and geoscience careers. As a teen, she participated in science fairs, went to science camps, and took part in Operation Minerva, a one-day job shadowing event that gives Grades 8 and 9 girls a sneak peek into math and science careers.

"If I hadn't done those things, I don't think I would have been as interested in going into engineering. They definitely introduce you to it and they sparked my interest."

In high school, a counsellor suggested she consider engineering as a career path because of her strong math and science grades. She graduated from the University of Alberta Faculty of Engineering's civil engineering co-op program in 2015. Not long after that, she became an outreach volunteer with the Medicine Hat Branch and found herself spearheading the APEGA Science Olympics.

"Growing up, there were always people there to be a role model and mentor to me. It's good to get involved and do the same for others," says Ms. Buchner.

She's thrilled with the support the event received from teachers, parents, and students. "I'm really looking forward to planning for next year."

THE CHILDREN LEARN — AND SO DO VOLUNTEERS

Not unlike the students who take part, Ms. Buchner is building her skillset through the APEGA Science Olympics. Those organization and communications skills come in handy at her job with the city.

She's worked for the municipality for almost two years, an experience that's given her a great foundation early in her career.

Projects she's undertaken have included reviews of speed limits and signing in school zones, railway agreements, and construction at the airport. She's also worked on dam safety in the community.



Yes, Medicine Hat has a dam. “Not many people know that. It holds back a reservoir for irrigation,” she explains.

Ms. Buchner loves that her job offers such a diverse variety of projects.

“Every day is a little bit different, which is really great. It’s nice to try different things and figure out what you really like. That’s important when you’re first starting off, because you don’t know until you get to experience it,” says Ms. Buchner.

Volunteering with APEGA has also helped her connect with like-minded professionals and further build her skills. “You meet people on the same career path. And now they’ve become friends and mentors.”

CROSS THEM OFF THE BUCKET LIST

Travel is a passion for Randi Buchner, E.I.T. In the past year, she’s explored two extremes: Portugal’s temperate Mediterranean coast (top) and Iceland’s subarctic natural beauty.

-photos courtesy Randi Buchner, E.I.T.



GETTING TO KNOW YOU

Where was your last vacation? Over the last year, I went to Iceland and then to Portugal. When I graduated from university, I took a month and went to Europe. I really like to travel. It's one of my biggest goals in life — to see new places and try new things.

What do you do to relax? I like to watch different travel vlogs about different people and where they travel. And I read. I recently read the novel *A Dog's Purpose*, and I like murder mysteries.

What quality do you value most in a person?
Truthfulness.

What's the best advice you ever received? Something I've heard time and time again from professors at university, as well as my supervisors now, is that you are never done learning, which is incredibly true. We start learning at a young age. When we attend events like the APEGA Science Olympics, it sparks our interest to learn more. We continue learning in high school and university, and of course in our career. As an E.I.T., every single day I'm learning something new, and I know I have so much more yet to learn. It never stops, and that's exciting.

Favourite toy or game growing up? I used to have a lot of remote-control trucks and cars. Actually, I still have them.

Favourite movie? I don't have one movie that's a favourite. I like to watch a lot of documentaries. A really

good one I'm watching on Netflix is *DamNation*. It's about dams and river engineering in the States.

Favourite lunch spot? Inspire Café in Medicine Hat, for soup, sandwiches, and coffee.

Favourite quote? "Do more." It's more of a motto, really. No matter what you're doing, always do it to the best of your ability and try to do more.

What's the picture on your smartphone? It's a picture of my family dog, Tucker, who passed away last year.

What do you think you'll be doing in 10 years?
Hopefully, advancing my career and doing more travelling.

Who has been your biggest influence? My parents. They were very involved in the community while I was growing up and gave me the motivation to do what I'm doing. They've always been there for me.

How has your life so far been different from what you imagined? When I was very young, I wanted to be a vet. Even when I started university, I never thought I would be doing the things I'm doing now, with the variety of things I get to do. It's been a pleasant surprise.

If you could meet anyone, alive or dead, who would it be? Chris Hadfield. I've read a lot of his books and attended a few of his talks. I met him once at a book signing, but I'd like to sit down and have a conversation with him.

“I used to have a lot of remote-control trucks and cars. Actually, I still have them.”

MORE INFO

[APEGA Outreach](#)

[APEGA Branches](#)

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.



5% off current national rates



10% off current national rates



10% discount value with valid APEGA Member card



5% off regular rates (for BUSINESS only)

FINANCIAL



Financial Planning Services: 20% discount for APEGA Members

PERSONAL



10% off select regular priced items



15% off on resume services

ENTERTAINMENT



50% off first year Associate Membership

EDUCATION



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



Recommended Orders

Date: May 15, 2017

Case No.: 17-005-RDO

IN THE MATTER OF THE ENGINEERING, AND GEOSCIENCE PROFESSIONS ACT AND IN THE MATTER OF THE CONDUCT OF SUPREME STEEL LP

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of Supreme Steel LP (Supreme) with respect to a December 18, 2015 letter written to the Investigative Committee regarding the erection of steel girders for the 102nd Avenue bridge crossing over Groat Road in Edmonton, Alberta.

BACKGROUND

Supreme was engaged to supply, fabricate and erect the structural steel girders forming a part of the 102nd Avenue Bridge over Groat Road in Edmonton, Alberta. During the erection of steel girders on March 6, 2015, 3 of the 6 girders in place failed through lateral torsional buckling.

Two separate investigations determined that the failure was caused by incorrect lateral bracing. Supreme's authenticated erection drawings called for the permanent lateral bracing to be installed as the girders were erected. Permanent bracing was installed for the first 3 girders, however only temporary bracing was in place for the next 3 girders which subsequently failed.

The first 3 girders installed with permanent bracing did not fail, even under the additional lateral loading from the 3 failed girders.

Following this event, the APEGA Practice Review Board (PRB) initiated an inquiry into Supreme with respect to their practice of engineering. In the course of their inquiry, the PRB made the decision to forward their concerns to the Investigative Committee as a formal complaint.

A. COMPLAINT ALLEGATIONS

1. Supreme has engaged in unprofessional conduct that was detrimental to the best interests of the

public contrary to Section 44(1)(a) and (b) of the *Engineering and Geoscience Professions Act* ("the Act") and Rule of Conduct #1 of the *APEGA Code of Ethics* ("the Code"). Supreme and its Members did not hold paramount the best interests of the public.

2. Supreme has engaged in unskilled practice that displayed a lack of judgment in the work undertaken contrary to Section 44(1)(b) and (d) of the Act and Rule of Conduct #2 of the Code. Supreme displayed a lack of skill or judgment in the practice of the profession by engaging in a project that was outside their field of expertise.
3. Supreme has engaged in unskilled practice that displayed a lack of judgment in the work undertaken contrary to Section 44(1)(b) and (e) of the Act and Rule of Conduct #2 of the Code. Supreme displayed a lack of knowledge of or lack of skill or judgment in the carrying out or their supervisory duties while engaged in the project.
4. Supreme has engaged in unprofessional conduct that displayed a lack of judgment in the carrying out of a duty contrary to Section 44(1)(b) of the Act and Rule of Conduct #4 of the Code. Supreme displayed a lack of skill or judgment in complying with the requirements of a professional management plan as per the requirements outlined in Section 48(1)(d) of the regulations.
5. Supreme has engaged in unprofessional conduct that displayed a lack of judgment in the carrying out of a duty contrary to Section 44(1)(b) of the Act and Rule of Conduct #5 of the Code. The actions of Supreme did not uphold or enhance the reputation of the profession.

B. AGREED STATEMENT OF FACTS

As a result of the investigation, it is agreed by and between the Investigative Committee, Supreme and their Responsible Member, [Professional Member A], P.Eng., that:

- a. Supreme held a valid Permit to Practice at all relevant times.
- b. Supreme was engaged to fabricate and erect the 102nd Avenue bridge girders.

Case No. 17-005-RDO continued

- c. Supreme was the engineer of record responsible for girder erection drawings and girder erection scheming.
- d. Supreme was required to use the services of Professional Engineers throughout the process required to erect the bridge girders.
- e. Supreme, through the bridge girder erection process, did encounter change orders, modifications and/or alterations.
- f. Supreme had in place, at the relevant time, a Professional Practice Management Plan (PPMP) created in 2004 entitled, *SSL PPMP SP-02 Design and Drafting*, which had been created in response to the requirements made by APEGA at that time.
- g. Supreme failed to provide an appropriately labelled and updated PPMP manual to APEGA's Investigation Panel. The documents provided by Supreme did not meet APEGA's *Guideline for Professional Practice Management Plans, V1.4, February 2013*, specifically Section 2.4 which states, "Each permit holder should review its Plan at least annually to verify its suitability and effectiveness."
- h. Supreme, despite failing to provide an appropriate PPMP, had in place adequate policies and procedures intended to ensure the erection process of the girders was followed accurately and as required by design.
- i. Supreme issued 5 final erection drawings for the Project, one of which (Drawing *EP140312-R3*, revised March 13, 2015) included the details on the delivery, erection sequence, stability requirements and step-by-step installation procedures as well as crane locations for the 7 drop-in girders between the west and east abutment girders.
 - On the morning of March 14, 2015, Supreme's two engineers (Professional Member A, P.Eng., and Professional Member B, P.Eng.), and [Engineering and Construction Company Engineer C] involved with the Project were on site as the first of the drop-in girders was installed.
 - At 7:00 P.M., after the 3rd girder was installed, which included the permanent diaphragm framing, the engineers provided instructions to continue as per the plan and left the site.
 - On March 15, 2015, girders 4 through 6 were installed, but with only temporary bracing — the permanent bracing was not installed. The drop-in girder installation procedure was not followed in the same sequence as girders 1 through 3. Specifically, the permanent diaphragm frame installation was not completed.
 - At approximately 1:30 A.M. on March 16, lateral torsional buckling of girders 4 and 5 was noted and by 2:15 A.M. extensive buckling had occurred between girders 4, 5 and 6.
- j. An independent report ("the Report") was completed on June 22, 2015, regarding the causation of damages during erection. The Report was completed at the request of [Supreme's insurer], by [Engineering Company D]. The intent was to apply forensic engineering principles to address the most probable cause of the damages that occurred during the drop-in girder installation. The Report indicates that a procedural mistake was made by the experienced Supreme site foreman who did not fully understand the importance of the diaphragm frame installation. Specifically, it states:

"...the primary cause of the girder deflection and damages is as a result of the Supreme site foreman not following the unique stamped and sealed Supreme erection drawing procedures..."

Further:

"...the cause of damages to the drop-in girders would be as a result of faulty workmanship due to the Supreme erection procedures not being followed..."
- k. Supreme utilized Professional Members appropriately with respect to managing change orders, modifications and/or alterations related to the bridge girder erection.
- l. Supreme did not have constant, professional supervision at the site; however, they demonstrated there were adequate policies and procedures in place intended to ensure the girder erection process was followed accurately and as required by design. Having designed an appropriate erection scheme and passed it on to an experienced crew there would be no requirement for the engineer to be continuously on site to ensure his directions were being followed.

Case No. 17-005-RDO continued

C. CONDUCT

Supreme freely and voluntarily admits that its conduct described above in relation to its failure to have a Professional Practice Management Plan in place constitutes unprofessional conduct and that Complaint Allegation #4 set out above is admitted and proven.

With regards to the Complaint Allegations #1, #2, #3 & #5 set out above, the Investigation Panel determined there was insufficient evidence that Supreme contravened Sections 44(1) of the Act or Rules of Conduct #1, #2, #3 or #5 of the Code.

D. SECTION 44(1) OF THE ACT AND THE CODE OF ETHICS

Section 44(1) of the Act states:

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

- (a) is detrimental to the best interests of the public;*
- (b) contravenes a code of ethics of the profession as established under the regulations;*
- (c) harms or tends to harm the standing of the profession generally;*
- (d) displays a lack of knowledge of or lack of skill or judgment in the practice of the profession, or;*
- (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.

The Rules of Conduct of the APEGA Code of Ethics state:

- 1 Professional engineers, geologists and geophysicists shall, in their areas of practice, hold paramount the health, safety and welfare of the public and have regard for the environment.*
- 2 Professional engineers, geologists and geophysicists shall undertake only work that they are competent to perform by virtue of their training and experience.*
- 3 Professional engineers, geologists and geophysicists shall conduct themselves with integrity, honesty,*

fairness and objectivity in their professional activities.

- 4 Professional engineers, geologists and geophysicists shall comply with applicable statutes, regulations and bylaws in their professional practices.*
- 5 Professional engineers, geologists and geophysicists shall uphold and enhance the honour, dignity and reputation of their professions and thus the ability of the professions to serve the public interest.*

E. RECOMMENDED ORDERS

On the recommendations of the Investigative Committee, and by agreement with [Professional Member A], P.Eng., (Supreme Steel's Responsible Member) with those recommendations, following a discussion and review with the Discipline Committee Case Manager, the Discipline Committee hereby orders that:

1. Supreme Steel LP shall receive a Letter of Reprimand, a copy of which will be maintained permanently in their registration file and be considered at any future date should new cases of unprofessional conduct or unskilled practice be considered by APEGA.
2. Supreme Steel shall submit, to the satisfaction of the Practice Review Board of APEGA, a revised version of their Professional Practice Management Plan. The revised version shall be completed and submitted within 60 days of the Case Manager's approval of this Recommended Order. Should the Permit Holder not adequately complete the PPMP in the timeline provided, the Permit Holder's Permit to Practice shall be suspended until such time as the PPMP has been appropriately completed.
3. This matter and its outcome will be published by APEGA as deemed appropriate and such publication will name Supreme.

[PROFESSIONAL MEMBER A], P.ENG.

Responsible Member, on behalf of Supreme Steel

KEVIN WILLIS, P.ENG.

Panel Chair, APEGA Investigative Committee

APEGA Discipline Committee

Approved this 15th day of May 2017

By Case Manager John Nicoll, P.Eng.

Date: May 3, 2017

Case No.: 17-002-RDO

**IN THE MATTER OF THE ENGINEERING,
AND GEOSCIENCE PROFESSIONS ACT,
AND
IN THE MATTER OF THE CONDUCT OF
MR. ZAHER SHUKR, 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. Zaher Shukr, P.Eng. with respect to allegations of unprofessional conduct and/or unskilled practice pursuant to Section 44(1) of the *Engineering and Geoscience Professions Act* (“the Act”).

The investigation related to allegations that Mr. Zaher Shukr, P.Eng., sold electronic copies of copyrighted material, including 2003 National Professional Practice Exam (NPPE) questions and textbooks, through online advertisements.

A. COMPLAINTS

1. The APEGA Director of Examinations forwarded the following matters to APEGA’s Investigative Committee, alleging that Mr. Zaher Shukr, P.Eng., may have engaged in unprofessional conduct and/or unskilled practice, contrary to Section 44(1) of the Act, by advertising and selling copyrighted material on Kijiji including:
 - a) Electronic copy of APEGA National Professional Practice Examination (NPPE) 2003 Questions;
 - b) Electronic copy of the textbook *Practical Law of Architecture, Engineering and Geoscience Second Edition* (published by Pearson Canada);
 - c) Electronic copy of the textbook *Canadian Professional Engineering and Geoscience Practice and Ethics, Fifth Edition* (published by Nelson Education Ltd.).

B. AGREED STATEMENT OF FACTS

As a result of the investigation, it is agreed by and between the Investigative Committee and Mr. Zaher Shukr, P.Eng., that:

1. At all relevant times, Mr. Zaher Shukr, P.Eng., (“the Member”) was a Professional Member of APEGA, and was thus bound by the Act and the *APEGA Code of Ethics*.
2. On January 28, 2016, [Staff Member A], Director of Examinations at APEGA became aware of a Kijiji listing that advertised “sample questions” for the NPPE. He contacted the originator of the listing on behalf of APEGA and requested information.
3. The originator advised [Staff Member A] that he purchased the sample questions on Kijiji from the Member. The originator provided [Staff Member A] with the exam question PDFs, contact information for the Member, and a link to the Member’s Kijiji listing. [Staff Member A] conducted a search of APEGA’s database and determined the Member was an active Professional Member of APEGA.
4. On February 1, 2016, [Staff Member A] confirmed that one of the exam question PDFs sold by the Member was the actual NPPE administered in January 2003. [Staff Member A] further verified that the questions contained in the PDF were identical to the questions in the APEGA Legacy Item Bank, and the format of the scanned exam was identical to the printed 2003 exam.
5. On February 4, 2016, [Staff Member A] determined by reviewing APEGA records that he had previously spoken to the Member on September 24, 2015, regarding his Kijiji listing for “NPPE Prep Materials.” [Staff Member A]’s investigation at that time did not identify any copyrighted material.
6. On February 5, 2016, [Staff Member A], posing as a buyer, replied to the Member’s Kijiji listing. The Member responded with sample screenshots of the material for sale, including a screenshot of the previously administered January 2003 NPPE.
7. On February 8, 2016, [Staff Member A] replied to the Member and inquired if he was also selling scanned pages of the two textbooks (noted in Section A above) used by candidates to prepare for the exam. The Member confirmed that he was selling scans of all pages of both textbooks.
8. On February 9, 2016, posing as a buyer, [Staff Member A] purchased the material advertised by

Case No. 17-002-RDO continued

the Member through a \$100 PayPal transaction. [Staff Member A] received a Dropbox download link from the Member. The downloads included the following copyrighted material:

- a) Scan of APEGA National Professional Practice Examination (NPPE) 2003 Questions;
 - b) Scan of the textbook *Practical Law of Architecture, Engineering and Geoscience Second Edition* (published by Pearson Canada);
 - c) Scan of the textbook *Canadian Professional Engineering and Geoscience Practice and Ethics, Fifth Edition* (published by Nelson Education Ltd.).
9. On February 11, 2016, [Staff Member A] referred a complaint to the APEGA Director of Investigations, who notified the Member of the allegations. The Member apologized for his actions, pledged his cooperation with the investigation, and undertook to immediately remove his Kijiji listing.
 10. On April 21, 2016, [Staff Member A] received information that the Member sold the same copyrighted material to another individual. This individual subsequently confirmed that he purchased the copyrighted material from the Member in November 2015.
 11. The Member admits selling the copyrighted material to [Staff Member A] for \$100. Although the Member can't specifically recall selling the material to the other individual identified on April 21, 2016, he admits to selling the copyrighted material to approximately 10 people for a total of \$1,000.
 12. The Member obtained the electronic copy of the APEGA NPPE 2003 questions from another unidentified student during a 2009 course at the University of Calgary. The Member was not aware they were genuine, previously administered NPPE questions that were subject to APEGA copyright.
 13. The Member obtained electronic copies of the textbooks *Practical Law of Architecture, Engineering and Geoscience Second Edition* (published by Pearson Canada) and *Canadian Professional Engineering and Geoscience Practice and Ethics, Fifth Edition* (published by Nelson Education Ltd.) through a download link associated to an unidentified blog pertaining to the Ontario

NPPE. The Member was aware these textbooks were subject to copyright protection.

14. The Member reimbursed APEGA (\$100) for [Staff Member A]'s purchase of the copyrighted material, and confirmed the deletion of all NPPE related material from his computer.
15. The Member regrets his decision to sell the copyrighted material, and admits that his conduct was unprofessional.
16. In light of the Member's foregoing admissions respecting his conduct, the cooperation of the Member in this investigation, and the remorse expressed by the Member, it is the Panel's opinion that the matter would best be resolved through a Recommended Discipline Order rather than a formal hearing.

C. CONDUCT

Mr. Zaher Shukr, P.Eng., freely and voluntarily admits that his conduct, described above, constitutes unprofessional conduct.

D. SECTION 44(1) OF THE ACT AND THE CODE OF ETHICS**Section 44(1) of the Act states:**

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

- a) *is detrimental to the best interests of the public,*
- b) *contravenes a code of ethics of the profession as established under the regulations,*
- c) *harms or tends to harm the standing of the profession generally,*
- d) *displays a lack of knowledge of or lack of skill or judgement in the practice of the profession, or*
- e) *displays a lack of knowledge of or lack of skill or judgement 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. 17-002-RDO continued***The Rules of Conduct of the APEGA Code of Ethics state:**

- 1 Professional engineers, geologists and geophysicists shall, in their areas of practice, hold paramount the health, safety and welfare of the public and have regard for the environment.
- 2 Professional engineers, geologists and geophysicists shall undertake only work that they are competent to perform by virtue of their training and experience.
- 3 Professional engineers, geologists and geophysicists shall conduct themselves with integrity, honesty, fairness and objectivity in their professional activities.
- 4 Professional engineers, geologists and geophysicists shall comply with applicable statutes, regulations and bylaws in their professional practices.
- 5 Professional engineers, geologists and geophysicists shall uphold and enhance the honour, dignity and reputation of their professions and thus the ability of the professions to serve the public interest.

Mr. Zaher Shukr, P.Eng., has breached the Act, and therefore engaged in unprofessional conduct by:

1. Rule of Conduct # 3
Failing to conduct himself with integrity, honesty, fairness and objectivity by selling electronic copies of two copyrighted textbooks (*Practical Law of Architecture, Engineering and Geoscience Second Edition* and *Canadian Professional Engineering and Geoscience Practice and Ethics, Fifth Edition*) and electronic copies of the copyrighted APEGA National Professional Practice Examination (NPPE) 2003 Questions.
2. Rule of Conduct #4
Failing to comply with the provisions of the *Copyright Act* by selling electronic copies of two copyrighted textbooks (*Practical Law of Architecture, Engineering and Geoscience Second Edition* and *Canadian Professional Engineering and Geoscience Practice and Ethics, Fifth Edition*) and electronic copies of the copyrighted APEGA National Professional Practice Examination (NPPE) 2003 Questions.
3. Rule of Conduct #5
Failing to uphold or enhance the honour, dignity and

reputation of his profession by selling electronic copies of two copyrighted textbooks (*Practical Law of Architecture, Engineering and Geoscience Second Edition* and *Canadian Professional Engineering and Geoscience Practice and Ethics, Fifth Edition*) and an electronic copy of the copyrighted APEGA National Professional Practice Examination (NPPE) 2003 Questions.

E. RECOMMENDED ORDERS

On the recommendation of the Investigative Committee, and by agreement of Mr. Zaher Shukr, P.Eng., with that recommendation, and following a discussion and review with the Discipline Committee Case Manager, the Discipline Committee hereby orders pursuant to Section 63 of the Act, that:

1. Mr. Zaher Shukr, P.Eng., will receive a Letter of Reprimand, a copy of which will be maintained permanently in the Member's registration file and be considered at any future date by APEGA.
2. Mr. Zaher Shukr, P.Eng., will be assessed, and will pay, a fine of \$1,000, pursuant to Section 64(1)(b) of the Act, within three (3) months from the date this Order is approved by the Discipline Committee.
3. This matter and its outcome will be published by APEGA in any form or media deemed appropriate, but having regards to the established publication practices of APEGA in prior cases, and such publication will name Mr. Zaher Shukr, P.Eng.
4. Mr. Zaher Shukr, P.Eng., will achieve a passing grade on the National Professional Practice Exam (NPPE) within one (1) year from the date this Order is approved by the Discipline Committee.
5. Mr. Zaher Shukr, P.Eng., will deliver a Letter of Apology to the APEGA Director of Examinations, and provide the Discipline Committee with a copy of said letter and proof of delivery within three (3) months from the date this Order is approved by the Discipline Committee.

I, Mr. Zaher Shukr, P.Eng., acknowledge that before signing this Recommended Discipline Order, I consulted

Case No. 17-002-RDO continued

with legal counsel regarding my rights or that I am aware of my right to consult legal counsel and that I hereby expressly waive my right to do so. I confirm that I agree to the facts and admissions as set out above in this Recommended Discipline Order, and that I agree with the Orders that are jointly proposed.

IN WITNESS WHEREOF the undersigned agrees with the Agreed Statement of Facts and Acknowledgment

of Unprofessional Conduct in its entirety.

MR. ZAHER SHUKR, P.ENG.

KEVIN WILLIS, P.ENG.

Panel Chair, APEGA Investigative Committee

APEGA Discipline Committee

Approved this 3rd day of May 2017

By Case Manager Ken Liu, P.Eng.

Date: April 4, 2017

Case No.: 17-003-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 [Professional Member A], P.Eng., with respect to mismanagement of a project funded by [Company B]. In addition, there is an allegation of misappropriation of funds owed to [Company B] which were diverted to a company owned by [Professional Member A], [Company C].

A. COMPLAINTS

The Member has engaged in unprofessional conduct that contravened Section 44(1)(b) of the Act and Rules of Conduct #3 & #4 of the Code. The Member has engaged in unprofessional conduct by failing to maintain objectivity in the process of ensuring subcontractors were paid for work performed on behalf of [Company B], and the Member operated his company [Company C] without a Permit to Practice.

B. AGREED STATEMENT OF FACTS

1. [Professional Member A], P.Eng., (“the Member”) was a Professional Member of APEGA in good standing during the relevant time of the allegations, and was thus bound by the *APEGA Code of Ethics*.

2. The Member’s company [Company C] did not hold a valid Permit to Practice during the relevant time of the allegations. The permit application was withdrawn by the Member on March 6, 2014.
3. The Complainant, [Complainant D], is the Director of [Company B].
4. The Member operated [Company C], a firm active in providing drilling and completions services.
5. The complaint of unprofessional conduct against the Member arises from circumstances surrounding the failed business relationship of [Company B] and [Company C] between September 12, 2014, and February 2015.
6. In 2014 [Company B] sought to expand their business into drilling and completions, and accordingly they entered a business relationship with the Member. In August 2014, [Company B] created a new division called [Company B Drilling and Completions]. The Member was a director of [Company B Drilling and Completions] and his company [Company C] was a shareholder of [Company B Drilling and Completions] with a 25% stake in the company.
7. Pursuant to a letter of agreement dated September 12, 2014, the Member entered into a full-time contract position as the Drilling & Completions Manager for [Company B Drilling and Completions].
8. It was understood pursuant to a verbal agreement between the parties that [Company C’s] current clients would be billed going forward by [Company B Drilling and Completions].
9. The two clients related to the allegations are [Company E and Company F]. Both companies

Case No. 17-003-RDO continued

- were previous clients of [Company C]. [Company B Drilling and Completions] contractors were on-site performing work for both [Company E and Company F]. These contractors invoiced [Company B Drilling and Completions] and were eventually paid by [Company B Drilling and Completions].
10. The Member was terminated by [Company B Drilling and Completions] on December 9, 2014. At the time of his termination, he reverted to operating under [Company C]. At the time of his termination, the Member was engaged in a dispute with [Company B] over his wages. The amount of unpaid wages in dispute was \$42,782.40. The Member has since filed a claim against [Company B] with Alberta Employment Standards.
 11. In December 2014, [Company B] invoiced [Company E] (\$53,109.00) and [Company F] (\$4,393.20). When the invoices weren't paid, in January 2015 [Company B] followed-up with the clients who confirmed they paid [Company C] instead: [Company B] invoices were "voided" on instruction of the Member, and replaced with invoices from [Company C].
 12. Both [Company E and Company F] paid the [Company C] invoices on instruction of the Member.
 13. The Member instructed [Company E and Company F] to pay [Company C] rather than [Company B] as contractors raised concerns to the Member about non-payment by [Company B]. The Member contacted [Company B] by email on December 19, 2014 to inquire about payment status to the contractors; [Company B] did not respond.
 14. The Member did not provide [Company B] notice of his intent to invoice the clients directly.
 15. The Member did not seek advice from legal counsel, nor did he seek advice from another professional/mentor, before implementing this solution.
 16. In February 2015 [Company B] confirmed to the Member that [Company B] did indeed pay the [Company E and Company F] contractors. The Member advised [Company B] that he ([Company C]) invoiced [Company E and Company F] and received payment.
 17. The Member agrees that the money he collected from [Company E and Company F] rightfully belongs to [Company B]; he agreed to pay the

money back to [Company B] on February 13, 2015, however he missed the payment deadline, resulting in a civil claim by [Company B]. The civil claim has been settled.

18. The Member acknowledges that he should have been more objective under the circumstances, and sought outside assistance prior to redirecting payments from [Company B] to [Company C].
19. The Member acknowledges that he should have taken additional steps to notify [Company B] of his intentions.
20. The Member acknowledges that his company [Company C] was practising without a valid Permit to Practice from APEGA.
21. The Member expressed his desire to enter into a Recommended Order.
22. The Panel acknowledges that the Member cooperated fully with the APEGA investigation, and conducted himself professionally throughout the investigation process.

C. CONDUCT

The Member freely and voluntarily admits that he engaged in unprofessional conduct that contravened Section 44(1) (b) of the Act and Rule of Conduct #3 and #4.

D. SECTION 44(1) OF THE ACT AND THE CODE OF ETHICS

1. Section 44(1) of the Act states in part:

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...

b. contravenes a code of ethics of the profession as established under the regulations;

... 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.

2. Applicable Rules of the APEGA Code of Ethics state:

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

4 *Professional engineers, geologists and geophysicists shall comply with applicable statutes, regulations and bylaws in their professional practices.*

Case No. 17-003-RDO continued

E. RECOMMENDED ORDERS

The following Orders have been agreed to by the Investigative Committee, [Professional Member A], P.Eng., and the Discipline Committee Case Manager. The Discipline Committee hereby orders that:

1. [Professional Member A], P.Eng., shall receive a Letter of Reprimand, a copy of which will be maintained permanently in his registration file and be considered at any future date should new cases of unprofessional conduct or unskilled practice be considered by APEGA.
2. The circumstances of the case, excluding names, be published in *The PEG* magazine, in the e-PEG electronic newsletter, and on the APEGA website.
3. [Professional Member A], P.Eng., shall do one of the following with relation to [Company C] within 30 days of the Discipline Committee approving this Order:
 - a) Apply to APEGA for a Permit to Practice.
 - b) Confirm to APEGA in writing [Company C] is not practising and change the corporate name (remove “engineering” from the title).

- c) Confirm to APEGA in writing [Company C] is not practising and dissolve the corporation at Alberta Corporate Registry.

I, [Professional Member A], P.Eng., acknowledge that before signing this Recommended Order, I consulted with legal counsel regarding my rights or that I am aware of my right to consult legal counsel and that I hereby expressly waive my right to do so. I confirm that I agree to the facts and admissions as set out above in this Recommended Order, and that I agree with the Orders that are jointly proposed.

IN WITNESS WHEREOF the undersigned agrees with the Agreed Statement of Facts and Acknowledgment of Unprofessional Conduct in its entirety.

[PROFESSIONAL MEMBER A], P.ENG.

TRACEY STOCK, P.ENG.

Panel Chair, APEGA Investigative Committee

APEGA Discipline Committee

Approved this 4th day of April 2017

By Case Manager Tom Greenwood-Madsen, P.Eng.

Date: February 17, 2017 Case No.: 16-021-RDO

IN THE MATTER OF THE ENGINEERING, AND GEOSCIENCE PROFESSIONS ACT, AND IN THE MATTER OF THE CONDUCT OF HENK BRENKMAN, P.ENG., AND BRENKMAN & COMPANY LTD.

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has investigated the conduct of Mr. Henk Brenkman, P.Eng., (“the Member”) with respect to a letter of complaint received on April 27, 2015, regarding the design of a custom-built Hydro Vac Truck. The Complainant alleged the Member had engaged in work he was not competent to undertake and engaged in unprofessional conduct.

A. COMPLAINT

1. The Member has engaged in unprofessional conduct and unskilled practice, contravening Section 44(1) of the *Engineering and Geoscience Professions Act*.

B. AGREED STATEMENT OF FACTS

Upon conclusion of the investigation, it is agreed by and between the Investigative Committee and Mr. Henk Brenkman, P.Eng., that:

- a. Mr. Henk Brenkman, P.Eng., was a Professional Member of APEGA, and was thus bound by the *APEGA Code of Ethics* at all relevant times.
- b. Brenkman & Company Ltd. held a valid Permit to Practice at all relevant times.
- c. The Member holds a Bachelor of Engineering in Mechanical Engineering from the University of Pretoria (1994), a Bachelor of Engineering (H) in Mechanical Engineering from the University of Pretoria (1999), and an MBA in Business Administration from Brigham Young University (2003).
- d. The complaint was based on services provided

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by the Member to the Complainant regarding the mechanical design for a Hydro Vac Truck beginning in September 2014.

- e. A notice of investigation was provided to the Member on July 30, 2015, which included the allegations of unprofessional conduct and unskilled practice.
- f. Upon conclusion of the investigation the Investigative Committee determined there was insufficient evidence of unskilled practice.
- g. The investigation determined that poor communication and an overall lack of cooperation between the Member and the Complainant resulted in the termination of the contract and was detrimental to the relationship.
- h. Brenkman & Company did not have a Professional Practice Management Plan (PPMP) in place, as required for APEGA Permit Holders, at the time the Member's services were engaged.
- i. The Member has fully cooperated with the APEGA investigation and admitted that he did not have a valid PPMP in place as required at the time his services were engaged by the Complainant.

C. CONDUCT

The Member freely and voluntarily admits that he has engaged in unprofessional conduct that displayed a lack of judgment in the carrying out of a duty contrary to Section 44(1)(b) of the *Engineering and Geoscience Professions Act* and Rule of Conduct #4 of the Code. The Member displayed a lack of skill or judgment in complying with applicable regulations by not having in place a Professional Practice Management Plan as required by Section 48(1)(d) of the Regulations.

With regards to the other allegations submitted by the Complainant, the Investigative Committee determined there was insufficient evidence that the Member contravened any other sections of the Act or Rules of Conduct of the Code.

D. SECTION 44(1) OF THE ACT AND THE CODE OF ETHICS

Section 44(1) of the Act states:

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

- (a) is detrimental to the best interests of the public;*
- (b) contravenes a code of ethics of the profession as established under the regulations;*
- (c) harms or tends to harm the standing of the profession generally;*
- (d) displays a lack of knowledge of or lack of skill or judgment in the practice of the profession, or;*
- (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.

The Rules of Conduct of the APEGA Code of Ethics state:

- 1** *Professional engineers, geologists and geophysicists shall, in their areas of practice, hold paramount the health, safety and welfare of the public and have regard for the environment.*
- 2** *Professional engineers, geologists and geophysicists shall undertake only work that they are competent to perform by virtue of their training and experience.*
- 3** *Professional engineers, geologists and geophysicists shall conduct themselves with integrity, honesty, fairness and objectivity in their professional activities.*
- 4** *Professional engineers, geologists and geophysicists shall comply with applicable statutes, regulations and bylaws in their professional practices.*
- 5** *Professional engineers, geologists and geophysicists shall uphold and enhance the honour, dignity and reputation of their professions and thus the ability of the professions to serve the public interest.*

E. RECOMMENDED ORDERS

On the recommendations of the Investigative Committee, and by agreement of Mr. Henk Brenkman P.Eng., with that recommendation, following a discussion and review with the Discipline Committee Case Manager, the Discipline Committee hereby orders that:

1. The Member receives a letter of reprimand and a copy to be retained on his APEGA file.
2. The Member is to submit, to the Investigator of this case, a revised version of his Professional Practice Management Plan. As part of the PPMP, the Member is to include:

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- a. An appropriate section regarding policies and procedures in terms of implementing and tracking changes throughout the various stages of the design process.
 - b. An appropriate section for dealing with client disputes and conflicts that, using examples from this complaint, could address the disputes and conflicts encountered with the Complainant.
 - c. Be completed and submitted within 30 days of the Case Manager's approval of this Recommended Order.
 - d. Be deemed appropriate by the Investigative Panel.
 - e. If the PPMP is not submitted or deemed deficient, the Member and the Member's Permit to Practice will be suspended until such time it has been appropriately completed.
3. That the details of the case be published in *The PEG* magazine with names.

MR. HENK BRENKMAN, *P.ENG.*

GREG MEYERS, *P.ENG.*

Panel Chair, APEGA Investigative Committee

APEGA Discipline Committee

Approved this 17th day of February 2017

By Case Manager Robert Swift, P.Eng.

Date: February 1, 2017 Case No.: 16-016-RDO

**IN THE MATTER OF THE ENGINEERING,
AND GEOSCIENCE PROFESSIONS ACT,
AND
IN THE MATTER OF THE CONDUCT OF
MR. GREGORY J. SAUNDERS, 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. Gregory J. Saunders, P.Eng., ("the Member") with respect to a May 31, 2016 Letter of Complaint received from [Staff Member A], Registrar for APEGA, alleging that Mr. Saunders engaged in unprofessional conduct by virtue of disciplinary action taken against him by the Association of Professional Engineers of Ontario (PEO).

A. COMPLAINTS

1. The Member has engaged in unprofessional conduct that contravened Section 44(1)(b) of the Act and Rule of Conduct #1 of the Code. The Member failed to regard the welfare and safety of the public when he signed an engineering opinion confirming the structural integrity of a building in the jurisdiction of Ontario, without making reasonable provision to ensure the validity of the opinion.

B. AGREED STATEMENT OF FACTS

1. Background

Upon conclusion of the investigation, it is agreed by and between the Investigative Committee and Mr. Gregory J. Saunders, P.Eng., that:

- a) Mr. Gregory J. Saunders, P.Eng., was registered with APEGA as a Professional Member, and was thus bound by the *APEGA Code of Ethics*, at all relevant times. Mr. Saunders was also a Professional Member of the Association of Professional Engineers of Ontario (PEO) and the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) at all relevant times. He is currently practising in Manitoba and is a Professional Member of Engineers Geoscientists Manitoba (APEGM).
- b) Mr. Saunders came to the attention of APEGA on May 11, 2016, as a result of the Registrar receiving correspondence from [COO & Registrar B], COO & Deputy Registrar of the Professional Engineers & Geoscientists Newfoundland & Labrador (PEGNL). [COO & Registrar B] advised that during the course of his application to PEGNL, Mr. Saunders disclosed disciplinary action (including a seven-month suspension) which resulted from a PEO hearing into his conduct.
- c) Mr. Saunders became a Professional Member of APEGA on February 10, 2012, by way of transfer from PEO. Mr. Saunders earned a B.Sc. in Mining Engineering from Queen's University in 1984.

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- d) Mr. Saunders was employed by M.R. Wright and Associates Co. Ltd. (MRW) in Ontario during the relevant time. He was one of the individuals involved with evaluating the structural integrity of the rooftop parking structure of the Algo Centre Mall in Elliott Lake, Ontario, which subsequently partially collapsed on June 23, 2012.
- e) MRW was a company registered in Ontario, holding a valid Certificate of Authorization with PEO. MRW also held a valid APEGA Permit to Practice (P2P) during the relevant time, having received a P2P from APEGA on March 1, 2012. MRW has since resigned, and their P2P was cancelled by APEGA effective March 20, 2013, when the company was dissolved.

2. Facts Relating to the Allegations

- a) The PEO written *Decision & Reasons* in the matter regarding the conduct of Mr. Saunders was endorsed on May 18, 2016. The document is publicly available on the PEO website.

The document details the Agreed Statement of Facts signed by Mr. Saunders, and lists both the misconduct to which he admitted, and the sanctions imposed by PEO:

- The matter relates to the structural investigation of the Algo Centre Mall (“the Mall”) in Elliot Lake, Ontario, and the subsequent partial collapse of the rooftop parking structure of the Mall on June 23, 2012, which killed two people
- Mr. Saunders was the Contact Professional for MRW at the time of the Mall collapse
- Mr. Robert G. Wood, P.Eng. was the President of MRW
- Mr. Wood’s licence was suspended by PEO effective November 16, 2011
- On April 12, 2012, Mr. Wood attended at the Mall to conduct a “structural condition inspection” at the request of the Mall’s management
- On April 30, 2012, Mr. Saunders co-signed, with Mr. Wood, a letter to the Mall’s management stating in part, “We have no structural concerns over the additional loading of caulking or waterproofing.” The letter was not sealed, contrary to the requirements of the Act

- Mr. Saunders did not attend the mall on April 12, 2012, and had no involvement in the “on-site review”
- On May 3, 2012, Mr. Saunders co-signed, with Mr. Wood, a report entitled *Structural Condition Inspection* based on Mr. Wood’s April 12, 2012 on-site review. This report was not sealed, contrary to the requirements of the Act
- The May 3, 2012 report did not identify any structural concerns with the Mall, and stated that the beams inspected were “structurally sound” and that “no visual signs of distress were observed”
- Prior to co-signing the May 3 report, Mr. Saunders was advised by Mr. Wood that the report was requisitioned by Mall representatives for the purposes of financing and that Mr. Wood, during his on-site inspection, had been taken by a Mall employee to the worst areas of leakage in the Mall. Mr. Wood informed Mr. Saunders that he looked at the steel above the ceiling tiles in these areas and found no loss of section on any of the beams inspected. Mr. Wood reviewed with Mr. Saunders all of the pictures Mr. Wood took of the Mall structure during his on-site inspection. Based upon Mr. Wood’s representations, Mr. Saunders co-signed the May 3 report. Those representations by Mr. Wood turned out to be false
- The April 12, 2012 on-site review, the April 30 letter and the May 3 report were deficient because Mr. Wood:
 - i. Failed to consider previous reports that were available to him
 - ii. Failed to look at important parts of the Mall that he knew, or should have known, ought to be inspected
 - iii. Failed to adequately inspect or examine those parts of the Mall that he did look at
 - iv. Failed to notice, or failed to appreciate, the effects of continued leakage on the structural integrity of the Mall
 - v. Drew conclusions about the structural integrity of the Mall without an adequate basis for doing so
 - vi. Failed to notice or to identify the effects of corrosion on structural elements of the Mall
 - vii. Failed to identify deficiencies that compromised the structural integrity of the Mall

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viii. Implicitly affirmed the structural integrity of the Mall without having an adequate basis for doing so

- Although Mr. Saunders co-signed the April 30 letter and May 3 report, he had not visited the Mall, did not insist on seeing any drawings or field notes, nor did he examine MRW's own records to ascertain whether there had been any prior reports relating to the Mall. He did not inquire, and therefore did not know, that there was a long history of leakage at the Mall. He did not closely question Mr. Wood as to the limited scope of his inspection and whether it was sufficiently comprehensive in the circumstances. Mr. Saunders did not ask, and therefore did not know, that Mr. Wood had failed to take any measurements of the beams that were referred to in the May 3 report as being "structurally sound," nor had Mr. Wood inspected the condition of the welds at connections in areas experiencing leakage
- In all the circumstances, Mr. Saunders should have taken steps to double-check Mr. Wood's work. He should have been much more careful. Mr. Saunders did not conduct a proper or adequate review of the April 30 letter or the May 3 report or the work leading to them, and fell below the expected standard of practice in his supervision of Mr. Wood's work in connection with the April 30 letter and the May 3 report
- Mr. Saunders admits that the work carried out by him in connection with the April 30 letter and May 3 report was deficient and fell below the expected standard of practice for engineering work of this type
- On June 23, 2012, about two months after the April 12 inspection, a portion of the Mall's rooftop parking structure collapsed causing two deaths, several non-fatal injuries, and substantial damage to a number of areas of the Mall. After the Mall collapse, Mr. Saunders cooperated with the Association and the Ontario Provincial Police in their investigations
- The cause of the collapse was failure of a heavily corroded steel connection located below the parking deck. The expert report commissioned by the Ontario Provincial Police following the collapse concluded that the general condition of the structure of the Mall was poor. The experts found that the welds and other components of the connections in more than 40% of the locations they inspected had severe to very severe corrosion. The expert report concluded that corrosion was a widespread issue that affected significantly more than the connection that ultimately failed
- Mr. Saunders agreed that he was guilty of professional misconduct as follows:
 - i. On or about April 30, 2012, and May 3, 2012, signing a final engineering opinion without applying a seal contrary to Section 53 of Regulation 941 of the Act, amounting to professional misconduct pursuant to Section 72(2)(g) of Regulation 941 of the Act.
 - ii. On or about April 30, 2012, and May 3, 2012, signing an engineering opinion confirming the structural integrity of a building without making reasonable provision to ensure the validity of the opinion, amounting to professional misconduct pursuant to Sections 72(2)(a) and (d) of Regulation 941 of the Act.
 - iii. By reason of the foregoing, he engaged in conduct or performed an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as unprofessional, amounting to professional misconduct under Section 72(2)(j) of the Act.
- Mr. Saunders received the following penalties pursuant to a joint sentencing proposal:
 - i. Pursuant to section 28(4)(f) of the Act, the Member shall be reprimanded, and the fact of the reprimand shall be recorded of the Register for a period of one (1) year;
 - ii. Pursuant to section 28(4)(b) of the Act, the Member's licence shall be suspended for a period of seven (7) months, commencing 14 days after the day the penalty decision is pronounced by the Discipline Committee;
 - iii. Pursuant to section 28(4)(h) of the Act, the Member shall pay a fine in the amount of \$2,000 (two thousand dollars) within 30 days of the date the penalty decision is pronounced by the Discipline Committee;

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- iv. The findings and order of the Discipline Committee shall be published in the full under sections 28(4)(i) and 28(5) of the Act, with reference to the Member’s name; and
- v. There shall be no order as to costs.

b) Reference was made on several occasions in the PEO *Decision & Reasons* to findings of the Elliot Lake Commission of Inquiry, led by The Honourable Paul R. Bélanger. The Inquiry was established by the Government of Ontario to inquire into and report on events surrounding the mall collapse. The results of the inquiry were released in a report published on October 15, 2014.

Mr. Saunders’ testimony before the commission on June 6, 2013, may also be found on the Commission web site.

- c) Mr. Saunders cooperated with the APEGA Investigation Panel. He provided a written response for consideration by the Panel on June 12, 2016. His summary of involvement leading up to the Mall collapse directly parallels the facts set out in the PEO *Decision & Reasons*. He undertook to accept any decision APEGA makes with respect to his licence, and that a discipline hearing would not be required.
- d) The Investigation Panel notes that a suspension of Mr. Saunders’ licence would have been recommended to the Investigative Committee had the Member not already been suspended by PEO. The Panel is satisfied, by virtue of reviewing the PEO *Decision & Reasons*, that appropriate disciplinary action was taken against the Member in the jurisdiction where the misconduct occurred, and that there was no danger to the public in Alberta.

C. CONDUCT

- 1. The Member freely and voluntarily admits that he engaged in unprofessional conduct that contravened Section 44(1)(b) of the Act and Rule of Conduct #1.

D. SECTION 44(1) OF THE ACT AND THE CODE OF ETHICS

1. Section 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...

- b. contravenes a code of ethics of the profession as established under the regulations;*
- ...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.*

2. Applicable Rules of the APEGA Code of Ethics

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

E. RECOMMENDED ORDERS

The following Orders have been agreed to by the Investigative Committee, Mr. Gregory J. Saunders, P.Eng., and the Discipline Committee Case Manager. The Discipline Committee hereby orders that:

- 1. Mr. Gregory J. Saunders, P.Eng., shall receive a Letter of Reprimand which will remain on his file at APEGA indefinitely.
- 2. The circumstances of the case, including the Member’s name, be published in *The PEG* magazine, in the e-PEG electronic newsletter, and on the APEGA website.

I, Mr. Gregory J. Saunders, P.Eng., acknowledge that before signing this Recommended Order, I consulted with legal counsel regarding my rights or that I am aware of my right to consult legal counsel and that I hereby expressly waive my right to do so. I confirm that I agree to the facts and admissions as set out above in this Recommended Order, and that I am in agreement with the Orders that are jointly proposed.

IN WITNESS WHEREOF the undersigned agrees with the Agreed Statement of Facts and Acknowledgment of Unprofessional Conduct in its entirety.

MR. GREGORY J. SAUNDERS, P.ENG.

DOUG MACDONALD, P.ENG.

Panel Chair, APEGA Investigative Committee

APEGA Discipline Committee

Approved this 1st day of February 2017

By Case Manager Ken Liu, P.Eng.

Date: December 20, 2016 Case No.: 16-017-RDO

IN THE MATTER OF THE ENGINEERING, AND GEOSCIENCE PROFESSIONS ACT, AND IN THE MATTER OF THE CONDUCT OF MR. XINGJIAN (ALEX) LIU, E.I.T.

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of Mr. Xingjian (Alex) Liu, E.I.T., (“the Member”) with respect to an August 17, 2015 Letter of Complaint received from [Staff Member A], Director of Enforcement & Permits at APEGA, alleging that Mr. Liu provided false resumes to prospective employers.

A. COMPLAINTS

1. The Member has engaged in unprofessional conduct that contravened Section 44(1)(b) of the Act and Rule of Conduct #1 of the Code. The E.I.T., in knowingly providing resumes containing false employment experience to potential employers, failed to hold paramount the safety and welfare of the public.
2. The Member has engaged in unprofessional conduct that contravened Section 44(1)(b) of the Act and Rule of Conduct #3 of the Code. The E.I.T., in knowingly providing resumes containing false employment experience to potential employers, displayed a lack of integrity and honesty.
3. The Member has engaged in unprofessional conduct that contravened Section 44(1)(b) of the Act and Rule of Conduct #5 of the Code. The E.I.T., in knowingly providing resumes containing false employment experience to potential employers, failed to uphold the honour, dignity and reputation of the professions.

B. AGREED STATEMENT OF FACTS

1. Background

Upon conclusion of the investigation, it is agreed by and between the Investigative Committee and Mr. Xingjian (Alex) Liu, E.I.T., that:

- a) Mr. Xingjian (Alex) Liu was registered with APEGA as an E.I.T., and was thus bound by the *APEGA Code of Ethics* at all relevant times.
- b) Mr. Liu came to the attention of APEGA as a result of a complaint from an Alberta company alleging that his resume contained false employment experience.
- c) Mr. Liu applied for an E.I.T. position at the Alberta company in 2014 and submitted his resume in support of the application.
- d) On his resume, Mr. Liu declared previous employment experience with [Company B] as an E.I.T. in 2012/2013. HR at the Alberta company through verification determined that Mr. Liu’s employment experience at [Company B] was false.
- e) The Alberta company provided APEGA with a copy of Mr. Liu’s resume.
- f) APEGA Compliance reviewed the resume and confirmed with [Company B] that, although Mr. Liu applied for a position at [Company B], he was never hired. [Company B] provided APEGA with a copy of Mr. Liu’s resume used in the [Company B] application.
- g) Mr. Liu’s [Company B] resume outlined previous work experience as a Field Engineer, E.I.T., with [Company C] from May to August 2013. The resume further represented previous employment experience as an E.I.T. for [Company D] from May to August 2012.
- h) APEGA Compliance contacted both [Company C] and [Company D] and confirmed Mr. Liu never worked for these companies.
- i) In his statement to APEGA Investigations on November 4, 2015, Mr. Liu admitted to providing resumes containing false employment experience to eight additional companies: [Company List E].
- j) The resume submitted by Mr. Liu to each of these eight companies was identical — the Member fabricated previous employment with both [Company B] (May 2013 to August 2013) and [Company D] (May 2012 to August 2012).
- k) In total, by virtue of the initial complaint and the confession of Mr. Liu, resumes containing false employment experience were submitted to nine (9) companies.

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- l) Of the nine (9) companies, only one — [Company F] — hired the Member, relying, at least in part, on the false resume. The Member was employed as a Junior Field Engineer at [Company F] from November 2014 to March 2015.

2. Facts relating to the allegations

- a) The act of knowingly falsifying a resume is a serious breach of the *APEGA Code of Ethics*.
- b) The act of fabricating employment experience creates an unfair advantage over honest, legitimate candidates competing for the same positions.
- c) In the engineering professions, in which public safety is paramount, the ramifications of falsifying previous work experience poses a significant potential risk to public safety.
- d) Mr. Liu was very cooperative during the course of the investigation. He admitted to the allegations immediately, provided a confession, and voluntarily advised the Panel of additional companies to which he provided the false resume. He has indicated his desire to take responsibility for his actions by way of Recommended Order with appropriate sanctions to be determined by APEGA.

C. CONDUCT

The Member freely and voluntarily admits that he engaged in unprofessional conduct that contravened Section 44(1)(b) of the Act and Rules of Conduct #1, #3 and #5.

D. SECTION 44(1) OF THE ACT AND THE CODE OF ETHICS

1. Section 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...

- c. contravenes a code of ethics of the profession as established under the regulations;*
- ...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.

2. Applicable Rules of the APEGA Code of Ethics

- 1** *Professional engineers, geologists and geophysicists 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, geologists and geophysicists shall conduct themselves with integrity, honesty, fairness and objectivity in their professional activities.*
- 5** *Professional engineers, geologists and geophysicists shall uphold and enhance the honour, dignity and reputation of their professions and thus the ability of the professions to serve the public interest.*

E. RECOMMENDED ORDERS

The following Orders have been agreed to by the Investigative Committee, Mr. Xingjian (Alex) Liu, E.I.T., and the Discipline Committee Case Manager. The Discipline Committee hereby orders that:

- 1. The circumstances of the case, including names, be published in *The PEG* magazine, in the e-PEG electronic newsletter, and on the APEGA website.
- 2. A record of the full case document will remain on the Member's file at APEGA indefinitely.
- 3. Mr. Xingjian (Alex) Liu deliver letters of apology to each of the 9 companies identified as receiving a false resume, and provide the Discipline Committee with copies of the letters and proof of delivery to all 9 companies, within 30 days of being notified of the approval of this this Order by the Discipline Committee.
- 4. Mr. Xingjian (Alex) Liu achieve a passing grade on the National Professional Practice Exam (NPPE) within one (1) year from the date the Recommended Order is approved by the Discipline Committee.
- 5. Mr. Xingjian (Alex) Liu is prohibited from applying to be a Professional Member of APEGA before completing an additional 2 years of engineering work experience as an Engineer-in-Training (total of 6 years engineering work experience) under the direct supervision of a Professional Engineer, and not before complying with conditions (3) and (4) of this Order.

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6. Should the Member fail to comply with conditions (3) and (4) of this Order, he will be prohibited from applying to be a Professional Member of APEGA before completing an additional 1 year of engineering work experience as an Engineer-in-Training (total of 7 years engineering work experience) under the direct supervision of a Professional Engineer. If the non-compliance with conditions (3) and (4) of this Order continues through to expiry of the member's seventh year as an Engineer-in-Training, the member's APEGA membership will be cancelled.

I, Mr. Xingjian (Alex) Liu, acknowledge that before signing this Recommended Order, I consulted with legal counsel regarding my rights or that I am aware

of my right to consult legal counsel and that I hereby expressly waive my right to do so. I confirm that I agree to the facts and admissions as set out above in this Recommended Order, and that I am in agreement with the Orders that are jointly proposed.

IN WITNESS WHEREOF the undersigned agrees with the Agreed Statement of Facts and Acknowledgment of Unprofessional Conduct in its entirety.

MR. XINGJIAN (ALEX) LIU, E.I.T.

KAREN deMONTARNAL, P.ENG.

Panel Chair, APEGA Investigative Committee

APEGA Discipline Committee

Approved this 20th day of December 2016

By Case Manager Doug Cox, P.Eng.