ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS

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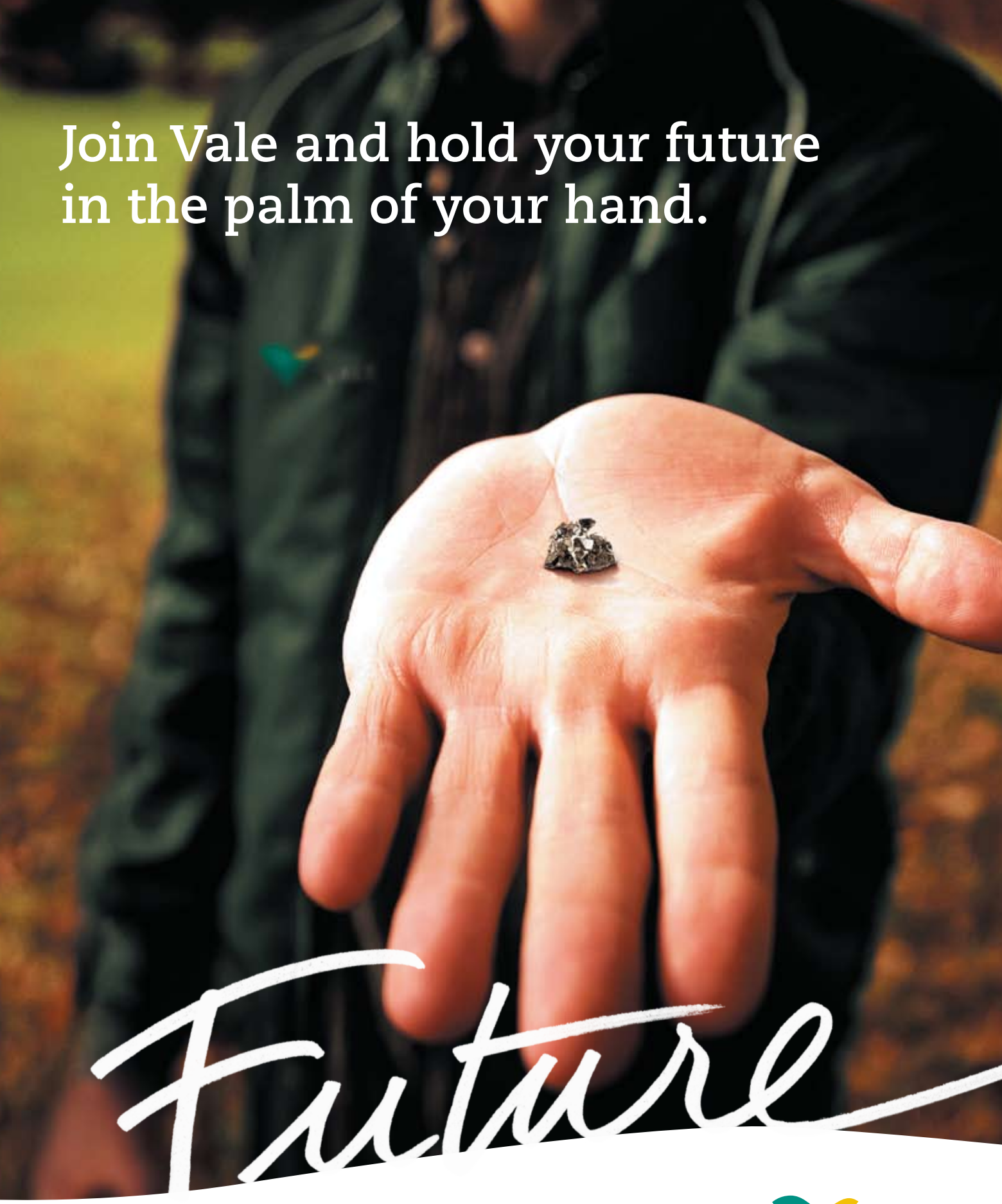
THE Voice

OF ONTARIO'S ENGINEERING PROFESSION

Special Advocacy Issue

No longer the silent profession.



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VALE

THE Voice

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OSPE

OSPE Messages from the President and Chair, and the Acting CEO

I am very proud of OSPE and what we have accomplished. I was involved in its inception and over the past 11 years, OSPE has laid the foundation for the advocacy of our profession. We have established excellent relations with the government in terms of keeping them informed on engineering issues, providing feedback on public policies including environment, energy and infrastructure. We have just begun. We still have a lot of work ahead of us advocating for our members with the business community and the public.

Our members have told us they want recognition for the value, they as engineers, provide to the economy. Engineers although everywhere, are not big on promoting themselves and consequently, have been taken for granted. They want the government, the business community and the public to realize that everything they touch, on an everyday basis, has its roots in engineering. Engineering has been 'The Silent Profession', and as an advocacy organization, it is our job to change that. If we want to be respected and valued as a profession, advocacy is a critical activity.

Public policy is dependent on us. Where would policy makers be without engineers? As a profession, we provide solutions to problems. Policy makers need our insight and technological understanding to help them in making valuable, sustainable and cost efficient decisions. The political players have great ideas, but they do not always consider the technical impact of those ideas on society. Engineers play a critical and educational role in public policy strategy, development and implementation.

As a profession, we have been silent for many years. We are fortunate in Ontario to have an advocacy body and this body is OSPE. We are that voice and we want to be heard. In the engineering profession and with the policy makers, we have established ourselves as the leader. We are the way of the future.

Alourdes Sully, ing., M.Eng. Mgmt., PEng.
President and Chair

Much has changed since OSPE was first created eleven years ago. Initially only two staff at OSPE were dedicated to advocacy and communications. From it modest beginnings OSPE has evolved into a diverse team with a broad range of skill sets. OSPE's extensive network of volunteers and staff are dedicated to the advancement of the profession and the economic interests of our members. To be succinct, we accomplish this by: advocating with governments; offering professional development; career advancement and affinity programs.

However, to be effective in our efforts we: conduct research to gather intelligence; monitor and report on important trends; canvass member needs to develop cost-saving member affinity programs; and communicate with governments, academic institutions, educators, the public, industry, related stakeholder organizations and professional engineers.

Having ones voice heard is at the heart of effective advocacy. In this issue we have asked professionals in related fields to provide some of their insights on the subject. As you leaf through the pages that follow you will be exposed to a range of opinions on advocacy. We hope the content will help to establish an ongoing dialogue that will lead to best practices in our role.

My term as OSPE's Acting CEO has been exciting and challenging. Working with so many dedicated people has been a rewarding experience. I look forward to a bright future for OPSE and professional engineering as we begin a new year together.

Daniel J. Young, MEng., PEng.
Acting Chief Executive Officer

OSPE's advocacy and public policy update

With respect to OSPE's advocacy activities, our Political Action Network representatives have had an opportunity to meet with members from all three parties, including both newly-elected MPPs and Ministers, since the October 6th election.

OSPE's "Graduating to Engineering Employment" Policy Series event in November featured speakers and panelists from the engineering field including the President of York University, Dr. Mamdouh Shoukri, as well as the University of Ontario Institute of Technology Provost, Dr. Richard Marceau. The event, held at the Toronto Board of Trade, was attended by students, employers, professors and engineers.

OSPE has a full slate of task forces and committees active on a range of public policy matters. An Environment Committee was recently set up to coordinate OSPE's environmental policy activities. In the coming months, OSPE plans to have its Research & Innovation, and Infrastructure Task Forces, and its Women in Engineering Advisory Committee (WEAC), host policy events.

On regulatory matters, OSPE provided input into the PEO consultations on complaints and discipline, and on the creation of a standard for use of the professional engineer's seal.

OSPE delivers three bridging programs for Internationally Trained Engineers funded by the Ministry of Citizenship and Immigration. One program assists immigrants in becoming job ready in the green economy and another prepares them for the PPE (as administered by PEO). A new program started on November 1st, 2011 and will develop resources for engineering companies to increase their hiring, retention and workplace integration of Internationally Trained Engineers.

Complied by: Kristian A. Kennedy, Lee Weissling, Maegan Baird

OSPE PEO Referendum

Effective organizations are those that lead as they listen

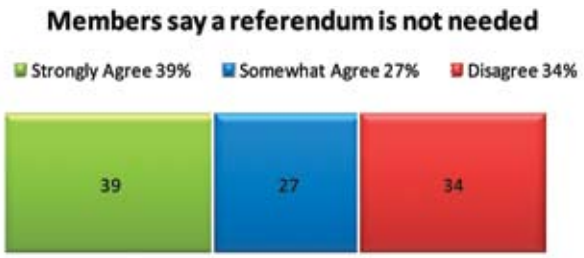
By John Laschinger, Sr. Research Director, Northstar Research Partners

That's why OSPE and other effective advocacy bodies use surveys, forums, focus groups and polling research to augment their qualitative insights.

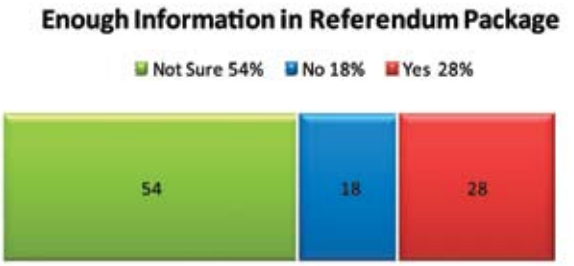
Since its formation in 2000, OSPE has conducted ten comprehensive studies as well as several forums and focus groups that included: OSPE members, PEO members (who were not OSPE members) and the general public. The 2011 Referendum initiated by PEO provided OSPE with another opportunity to gauge the opinions of professional engineers in Ontario.

The research took place in November of 2011 and consisted of both qualitative and quantitative components – a series of three focus groups and two waves of quantitative polling. The three focus groups included: PEO members who were not members of OSPE; PEO members who were also OSPE members; and a mix of the two. The findings of the qualitative research were used to design a quantitative questionnaire. The main objectives were to take the pulse of the members and to test the effectiveness of a variety of messages OSPE wished to deliver to members of the profession. In addition to the main objectives there were a number of sub-objectives most of which related to the future of the PEO/OSPE relationship post referendum.

The results of the quantitative research indicated that members were overwhelmingly opposed to the Referendum and that most felt they did not have sufficient information to make an informed decision.



A referendum is not needed: **66% Agree, 34% Disagree**



Both the qualitative and the quantitative research included open-ended questions. The nature of this form of research sometimes leads to unexpected revelations. The 2011 research did not disappoint OSPE's leadership in this regard. The results provided several nuggets of information useful in future communications with members of the profession and a better understanding of the perceptions held by engineers in Ontario.

What is apparent is that professional engineers want to be treated like other professionals (doctors, lawyers, architects…) and have the organizations that represent them act professionally. Members surveyed did not feel the process of the Referendum or the way in which it was conducted was consistent with their standard of professionalism.

Indeed, digging through the data led one to the conclusion that a significant number of engineers were unhappy with what they perceived to be a public squabble between PEO and OSPE.

Regardless of the result of the Referendum, members wanted OSPE and PEO to immediately work out a new relationship. **81% Agree, 19% Disagree**

It was apparent that members saw both organizations as being part of the future for the profession.

John Laschinger is one of Canada's most experienced campaign managers.

OSPE PEO Referendum

An outsider's perspective on inside maneuvers – Lesson's learned from PEO's Referendum

By Bret D. Snider

In late October of 2011, I was engaged by The Ontario Society of Professional Engineers (OSPE) to help the organization meet the communications challenges it faced in responding to a referendum called by their sister organization – The Professional Engineers Association of Ontario (PEO). The question put before 74,000 plus professional engineers was whether or not to terminate an eleven year old Agreement between the two different, but complementary, organizations that defined OSPE's advocacy role.

Prior to 2000 PEO had acted as both regulator and advocate. However, the government of Ontario determined that that placed PEO in a conflicting position. The regulator, responsible by statute for safeguarding the interests of the public, could not also be an effective advocate for the profession and its individual members.

A referendum is a significant event as it is a direct vote in which an entire electorate is asked to either accept or reject an important proposal. At the time many in the organization saw the referendum as a threat to OSPE's future efficacy.

Getting to the point of having PEO call the Referendum took a long time. Shortly after the creation of OSPE, PEO started to creep back into advocacy activities that conflicted with its regulatory mandate. Years of discussions to resolve the issues relating to overlap and duplication led nowhere. OSPE then initiated the dispute resolution clause in the Agreement. The process involved three steps: discussions at a Joint Relations Committee (JRC); in the event that failed, mediation by a mutually agreed upon third party would take place; if that too failed both parties would then be required to go to binding arbitration.

To circumvent the dispute resolution process, PEO's Council called the snap referendum. For a one month period both parties engaged in an expensive communications campaign to sway PEO members to vote their way – PEO wanted to terminate the Agreement to avoid mediation or arbitration while OSPE encouraged members to reject the proposal.

The sudden call of the referendum, the lack of notice to OSPE, and the limited one month time-frame could have led OSPE into taking a reactionary approach to the challenge. However, OSPE's leadership, staff and volunteers, took a measured approach. Its communications objective was to provide professional engineers with the requisite facts for them to make an informed choice. OSPE did not want to damage its relationship with PEO or professional engineers in Ontario.

Working through the referendum process with OSPE's staff and volunteer leadership was fascinating. It was obvious that the organization was facing a perceived challenge. However, the exercise forced staff and volunteers to question long-held assumptions.

When it was established in 2000, PEO's leadership decided to make OSPE membership optional. By contrast PEO's membership is mandatory. PEO members are required to pay annual fees to retain their licenses. The difference in the nature of the relationships between the two organizations and their respective members forced OSPE to develop a different culture. As a voluntary organization its leadership must not take its members for granted and it has to constantly prove its value.

The Referendum will likely be seen as a watershed for OSPE. Confidence and clarity of vision will continue to make it an effective advocacy body for the collective benefit of all professional engineers in Ontario.

Bret Snider is a strategic communications consultant.

Latest OSPE policy series breakfast explores gap in graduation-to-work transition

By Lee Weissling and Kristian A. Kennedy

Does attaining a university degree directly lead to employment in the engineering field? In its role as the advocacy voice of the engineering profession in Ontario, OSPE is well-placed to provide a forum through which policy solutions for the profession's unique characteristics can be addressed. Education policy is no exception. Over 75 people attended OSPE's Policy Series Breakfast on November 29, 2011, which served as a unique opportunity to explore questions related to education and engineering. Daniel Young, Acting CEO, welcomed the attendees on behalf of OSPE and its members.

The morning began with a keynote by York University President and Vice-Chancellor Dr. Mamdouh Shoukri, PEng. Fresh on the heels of his university's $25-million gift announcement to fund engineering, Dr. Shoukri chose the forum OSPE provided to emphasize that students should be 'global engineers'– professionals who are trained not only in engineering, but who also possess business acumen and a firm knowledge of public policy.

Following Mr. Shoukri's opening remarks, Valerie Davidson, PhD, PEng, from University of Guelph, moderated two panel discussions, one composed of academics, the other of employers. The academic panel explored questions related to today's university engineering education, the relationship between the academic study of engineering and the world of work, and the role of co-op placements and internships in students' educational experience.

The **academic panel** included:

- Doug Ferguson, LLB, Director, Community Legal Services and Lecturer, Faculty of Law, University of Western Ontario
- Gail Krantzberg, PhD, Director, ArcelorMittal Dofasco Centre for Engineering and Public Policy, McMaster University
- Janusz Kozinski, PhD. Dean of Science and Engineering, York University
- Doug W. Reeve, PhD, PEng, Professor, Department of Chemical Engineering and Applied Chemistry and Director, Institute for Leadership Education in Engineering, University of Toronto

The panel explored university engineering programs. It was generally agreed that academics are often too theoretical, with insufficient experience as practitioners. Mr. Ferguson commented similarly for law programs, although the Law Society of Upper Canada is addressing this issue. For engineering, students need, but most are not getting, more social sciences and business courses to help achieve

a well-rounded education. Building on this idea, Dr. Reeve made the ambitious proposition that "engineering education should be the liberal education of the 21st century". Dr. Krantzberg noted, even at a graduate school level, that students generally look for a formula to solve a problem when life is qualitative and most problems do not lend themselves to one particular solution. The panel agreed that, for example, a five year degree that combined engineering and a non-technical discipline is beneficial. As universities explore this option and if it increases the quality of new graduates, OSPE's role would be to advocate for an engineering curriculum that incorporates an interdisciplinary approach.

The panel all agreed that students significantly benefit from co-ops or internships. Students taking them can synthesize academic learning with practical skills. Dr. Kozinski suggested the key impediment to expanding internships is a lack of investment and this would be an area for more public/private partnerships.

Prefacing his remarks by acknowledging the vital role OSPE is playing in endorsing and advocating for his work with the Electric Power Engineering Education Consortium (EPEEC), the second keynote speaker, Richard Marceau, PhD, PEng, Provost and Vice-President Academic, University of Ontario Institute of Technology warned of an expected shortfall of at least 160 electric power engineering graduates per year in the coming decade. EPEEC, an innovative university/industry/labour partnership that came together to address the shortage of electric power engineers in Ontario, is lobbying to have Ontario's electric power labour needs addressed within the current education system.

This was followed by a panel of employer panelists that included:

- Katherine Morra, HR Delivery Partner Canada, CH2M Hill Canada
- Sturt Carter, Human Resources Manager, Conestoga-Rovers & Associates
- Adele Argirakis, Human Resources Director, Crossey Engineering Ltd.
- Jonathan Hack, Manager of Strategic Technology Engineering, University and Government Relations, Bombardier

The employer panel discussed whether an undergraduate degree is sufficient for entry level engineering positions in the profession. All were satisfied with the level of technical knowledge with graduates from a four year university engineering program. Mr. Hack made the case for five year degrees and all viewed favourably the skill-sets of graduates who spent an additional year to study business and/or social sciences. Especially desirable were graduates who have worked in their companies on co-op positions. Ms. Morra indicated her company hires many former co-op students.

Today's graduates often require additional training in the 'soft skill' area. Mr. Carter pointed out his company provides mentorship to new hires to fill soft skill gaps. All companies support continuing education and Ms. Argirakis noted her company regularly provides further education to its employees. The panel was unanimous in its support for mandatory continuing education to maintain professional engineer licensure.

OSPE would like to thank Bombardier Aerospace for its sponsorship and participation in the event.

Lee Weissling, PhD, is OSPE's Advocacy Development Officer.

Kristian A. Kennedy, MSc, is OSPE's Policy Analyst.

Ospe's Political Action Network (PAN) comes of age

By: Maegan Baird, Advocacy Coordinator

Prior to 2006, OSPE communicated with government officials selectively based on the relevance of the issue and the connections that key internal OSPE leaders had to policy-makers. To improve communications with members of the Provincial Legislature and the Federal House of Commons, OSPE introduced its Political Action Network (PAN). The principle objective was to create a wider network of contact points. Since its inception it has grown to ninety-four trained volunteers operating in eighty-two of Ontario's one hundred and seven Electoral Districts.

This fall the theme for OSPE's training session, delivered to new PAN members, was *"Strategies for Results"*. Participants were introduced to the PAN, given a detailed overview of government relations, and provided with important background information on key issues being worked on by OSPE.

OSPE's approach has been to develop relationships with all members of the Provincial Legislature and the Federal House of Commons (in Ontario) regardless of their political stripe. This means that the priorities and views of professional engineers and engineering will have a voice in committees and on the legislative floor.

Ontario's 2011 Provincial election resulted in the first minority government since 1985. In order to survive, the Government must now compromise with both opposition parties. OSPE's non-partisan political network will provide an opportunity in this highly charged political environment to make sure professional engineers have a voice on important issues that face law-makers.

At this point in time there are many legislative priorities in Ontario that will affect the profession in a variety of ways. Issues facing the government include: green policies in the energy sector; important and needed public infrastructure programs; climate change; and electrical power research and innovation.

By meeting with members of the Provincial and Federal government and members of the opposition parties to discuss important issues, OSPE is actively advocating on behalf of Ontario's professional engineers.

A top priority for OSPE is Ontario's Bill 15, "*The Ontario Society of Professional Engineers Act 2011*", which will clarify OSPE's advocacy role through legislative recognition as the advocacy body representing Ontario's professional engineers. The Bill passed first reading on November 30, 2011 and was introduced by MPP Monte Kwinter.

New member appreciation night

New members were introduced to OSPE on the evening of November 1, 2011 at the Novotel Hotel. Alourdes Sully, the President and Chair, along with many of the OSPE team were present to welcome them; to provide a brief overview of OSPE's activities; to outline the work OSPE does on their behalf; and to ensure they fully appreciate the value of their membership benefits.

Members had the opportunity to network, ask questions of the OSPE team, speak with other new members, and enjoy appetizers and refreshments. As the evening drew to a close, there were draws for gifts, which included a $100 Gift Card from our event sponsor, the Personal Insurance Company; a backpack full of OSPE goodies; and a grand prize of two tickets to the Ontario Professional Engineering Awards Gala – won by Alireza Yousefi, P.Eng.

The evening was a resounding success as people mingled and connected with like-minded engineering professionals.

Written by Mariana Kutin Morais

Winter driving tips

In winter, accidents occur more often, and they're usually more serious – what insurance folks call increased frequency and severity. But it doesn't have to be this way. Be prepared and reduce your risk with this checklist.

Get your car ready:

- Have an emergency car kit in the trunk – blanket, candles, flares and so on – just in case you become stranded.
- Make sure your car is tuned up.
- Put on snow tires. Today's all weather tires aren't necessarily right for Canada's challenging winters.
- Keep a bag of sand or salt in your trunk. It can help with traction and getting out of tight spots.

Be ready yourself:

- Be vigilant about driving, even when you're rested and in control.
- Take a *zero alcohol* approach when the weather is rough.
- Stormy night? Sleep over – your destination will still be there in the morning.
- Focus. Turn down the radio and turn off the cell phone. Keep your mind on the road.
- Consider taking a skid school course. It's added assurance and they're great fun.

Losing it?

If you can't stop and have almost lost control of your car, remember that typically, no one is fatally injured from hitting a snow bank. If you slide off the road and get stuck in the snow, don't gun your motor. Try and use higher gears to get out, they deliver less power to the drive wheels, meaning that your wheels spin less.

Chill

Slow down and follow the speed of the traffic in general and yes, that means you 4X4s and SUVs too. Drivers of these vehicles can be over-confident in poor driving conditions, leading to serious accidents and auto insurance claims.

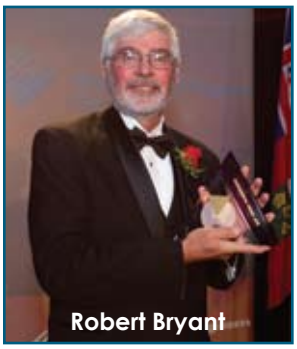
Brought to you by the Personal

The Ontario Professional Engineering Awards (OPEA) Gala


Mohamed Attalla


Michael Charles


Anna Dunets Wills


Robert Bryant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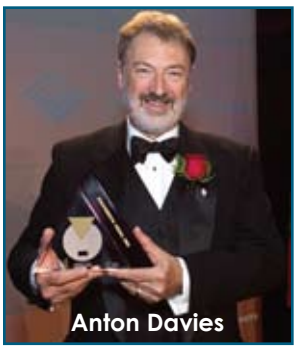
Anton Davies


Nils Voermann


Elizabeth A. Edwards


Milica Radisic


Stephan Matusch


Douglas Pervoic

The Ontario Professional Engineering Awards (OPEA) **Gala** took place on Saturday November 12th at the International Centre in Mississauga. Nearly 500 distinguished guests were on hand to celebrate engineering excellence.

The theme this year highlighted Ontario's Resources. Railways, parks, mining and forestry all play major engineering roles. The gala was delighted to learn that Parks Canada was celebrating its centenary anniversary.

Eleven outstanding award recipients were recognized in a wide variety of areas that included: entrepreneurship, management, and research and development.

The biggest honour of the evening went to Gold Medal winner Dr. Michael E. Charles. He is Professor Emeritus and Dean Emeritus from the University of Toronto, Faculty of Applied Science and Engineering.

Attendees also enjoyed a keynote address from Sam Marcuson, Vice President of Vale Canada Limited in the Base Metals Technology Department. Mr. Marcuson gave an insightful presentation on environmental sustainability and it's implications for the profession.

OSPE would once again like to congratulate all winners for their outstanding achievements, that greatly help to raise the profile of engineering in Ontario and beyond.

Written By Liz Greenland

The Ontario Professional Engineering Awards (OPEA) Gala




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OSPE Website

Opportunity is missed by most people

By Steven Kiss

OSPE has launched its new website platform with one great vision: To become the major online engineering hub for all engineers practicing in various engineering disciplines.

Since the launch of the new web platform OSPE has received over 65,000 unique visitors, almost 100,000 visits resulting in over 500,000 page views. On average, our visitors spend 4.5 minutes on site reading 5.2 pages.

OSPE's website presence is growing by the week. Over the past 6 months OSPE has had over 42,000 new unique visitors and over 23,000 regularly returning members and non-members. 96% of all the visitors came from Canada and the United States and 4% from 135 countries around the globe.

If we can achieve such great results within half a year, what is the limit for next year and for 2013? As Thomas Edison said, "Opportunity is missed by most people because it is dressed in overalls and looks like work." and in our vision, we see a great opportunity, but it needs a lot of work.

The key to our continued success is providing you as a member and even non-members of OSPE with regularly updated, valuable content, keeping our focus on OSPE's mandates and providing great opportunities and information

How to take advantage of our new web platform.

As our member, you can harmonize your Facebook and Twitter login information with your OSPE account. By doing so, any blogs posted on OSPE's website or discussions initiated in a forum, can be selected to be seen on your Facebook news feed, which allows your Facebook contacts to read and then click the link, which will bring them to OSPE's site and the original posting. By adding your Twitter account, you can monitor all your incoming tweets without having to open up another window.

As an OSPE member, you control all your personal and professional information on site. Do you want to change your user name and password? Just click Manage Profile (on the right) and then Edit Bio. From there you can change your address, your preferences, add a picture, set-up social media profiles such as Linked In and Facebook, and for the truly creative, build up to 10 profile pages – display your portfolio, list your professional achievements, talk about your future aspirations.... This provides great exposure for you to each OSPE member and allows for networking with them 24/7 on our site.

Similar to Facebook and other Social Media sites, members can create connections with other members, initiate Live Chat discussion, or send private messages. Our Blogs, Forums and Groups allow you to participate in discussions with your fellow engineers about the most pressing issues in your profession or to exchange ideas about social issues.

OSPE's Career Centre has gone through a major facelift. This fully customized online career centre allows our members to set up and receive automatic notifications once a job opening is posted in one's area of interest. A custom form provides an increased chance for job seekers to be found by the right employer or recruiting agency. In addition to the custom form, your custom résumé can also be uploaded for employers and recruiters to see.

In 2011 OSPE made a huge leap forward by bringing the 21st century technology to the service of its members. We have created the platform and the opportunity. Now it is up to you to use these services and maximize your potentials in the engineering profession.

Yes, it is dressed in overalls and it looks like work, but, we encourage you not to miss this opportunity. Log in to our site, update your profile, use all the features we offer and allow OSPE to help you succeed in your profession. Most importantly, don't forget to visit our site frequently, as we continue to add new features to serve you better.

For more information on how to set up your profiles properly visit www.ospe.on.ca/howto

Steven Kiss, MBA, Manager, Membership and Corporate Development

Have you visited our career centre?

By Victoria Houle

On OSPE's comprehensive Career Centre you will find: valuable labor market information; the job board; engineering career tips; resources and links to strategic career planning services; and information on networking events.

Employers: Source all positions cost-effectively, simply and timely

- Register and receive unlimited access to the résumé database for $40 for 1 year or $70 for 2 years. Choose from several Posting Packages.
- Upload your job posting(s) quickly and easily: copy and paste from Microsoft Word; embed a link or YouTube video.
- Take advantage of posting volunteer, student, intern, and co-op positions for free
- Tap into a wealth of "window-shopping" candidates – not really looking, but are open to new opportunities
- Take advantage of the Single Job Posting Package and have your posting appear in OSPE's *Career Advantage* newsletter

Register with the Career Centre today.

Visit www.ospe.on.ca/postajob for more information on Posting Packages.

Members: Looking for a change or open to new opportunities?

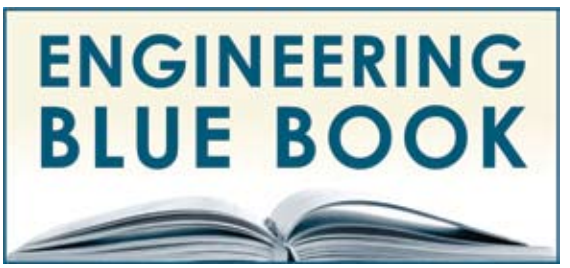
- Fill in the on-line résumé form and upload your résumé quickly and easily
- Customize access to your personal information
- Browse executive positions/ managerial/internships/student/co-op placements/volunteer opportunities
- Set up e-mail alerts to automatically receive matching postings
- Receive OSPE's *Career Advantage* newsletter

Visit: www.ospe.on.ca/careercentre for more information.

Online Engineering Directory is a great success

By Steven Kiss

In keeping with OSPE's vision to become the major North American online resource for engineer related information, in July 2011 OSPE launched its Engineering Blue Book – an online engineering directory.



The idea was simple: provide a *free basic listing* to all businesses, organizations, corporations, government bodies, recruiters... associated with the engineering profession, and then offer them the opportunity to enhance their listing at reasonable rates. Presently, with over 23,000 monthly visitors on OSPE's website, OSPE provides great exposure for this service.

To date, the Engineering Blue Book has almost 2000 listings, which for ease of use are organized by various engineering disciplines.

To further enhance the effectiveness of this OSPE service, we have partnered with Yourmembership.com to promote the directory and increase the number of participants. Our goal is to reach 4000 listings by the end of 2012.

We encourage all businesses to list themselves and refer their partners to this OSPE service benefit – a basic complimentary listing will increase your online exposure. For further information, contact Victoria Houle at vhoule@ospe.on.ca

Women in Engineering Advisory Committee's Fall Forum

by Liz Greenland

On October 19th, it was time again for the Women in Engineering Advisory Committee (WEAC) Fall Forum. These events occur bi-annually and topics typically focus on female engineers and the progress and impact they are having on the engineering profession. This year however, the subject matter switched gears slightly. The Forum was used as an educational tool with the topic being "Financial Planning From Your Perspective." With the economy dominating headlines worldwide for the past several months, this event featured advice for female engineers on how to stay in control of their bank account through working life, children and retirement. It's a fact that women live longer than men and women are far more likely to take on the responsibility of caring for aging parents. Guest Speaker, Macy Scharfstein from RBC Dominion Securities led an in-depth discussion on everything from advanced retirement planning for women's longer life expectancy to planning for workplace absences because of maternity or compassionate leave. A lively question and answer segment saw many attendees connecting with one another as they had similar comments about navigating the world of finance. WEAC will continue to host forums twice a year in the spring and fall. For more information regarding the next event, watch the OSPE website for more details.

Employers continue to remain cautious in 2011

By Jayna Koria and Annisa Au

With the current economic uncertainties, salary increases by employers of engineers in Ontario were below the Consumer Price Index (CPI) for the second year in a row.

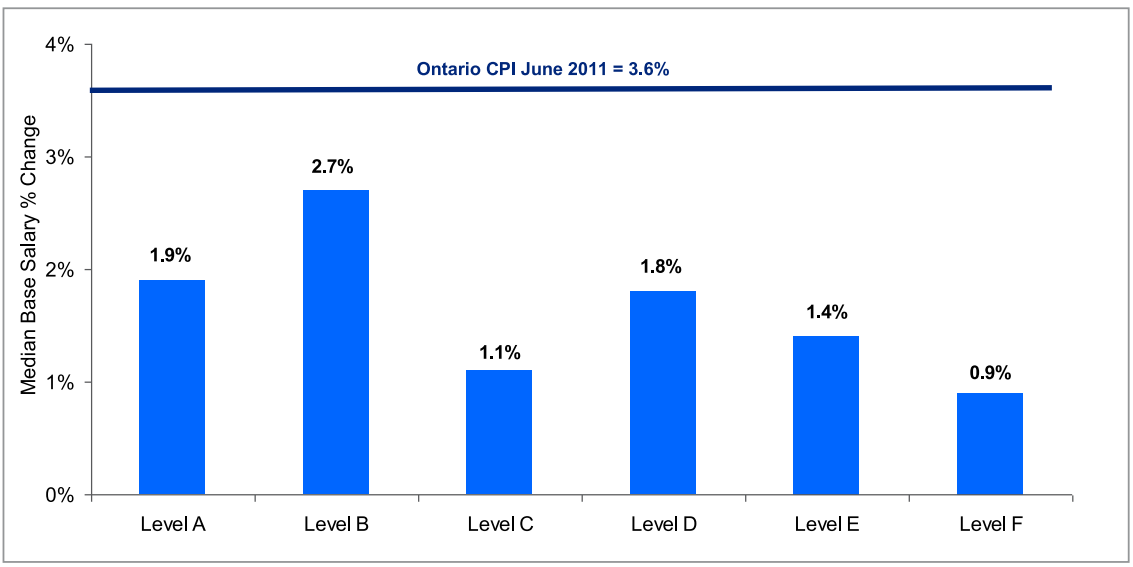
This observation is one of several findings in a recent survey conducted by Mercer (Canada) Limited for the Ontario Society of Professional Engineers (OSPE). Compensation data for more than 14,400 engineers across six engineering responsibility levels and 14 job types were collected from 140 organizations in both the private and public sector. The 2011 survey reflects data for engineers working in organizations of all sizes, across a broad array of industries located in 17 metropolitan areas in Ontario.

2011 Compensation at a Glance

- Pay increases continue to remain below Ontario's CPI
- Historical trend narrowing
- Industry choice matters

Pay increases continue to remain below CPI

Results of the 2011 OSPE employer compensation survey show that year-over-year median base pay increased for all engineering responsibility levels, with increases ranging from 0.9 to 2.7 %. However, growth for all levels was below Ontario's Consumer Price Index for the same period (June 2010 to June 2011). As seen in the graph below, base pay increases were highest for entry level engineers A and B (1.9% and 2.7%, respectively) and lowest for the more experienced Level F (0.9%) engineers. In contrast, the opposite was seen in 2010 where the highest median base pay increases were seen at the most senior engineering levels. These results may indicate that employers of engineers acknowledge the need to maintain competitive entry level rates if they want to keep engineers in Ontario rather than lose them to companies out West that may have bigger pockets to lure new talent.

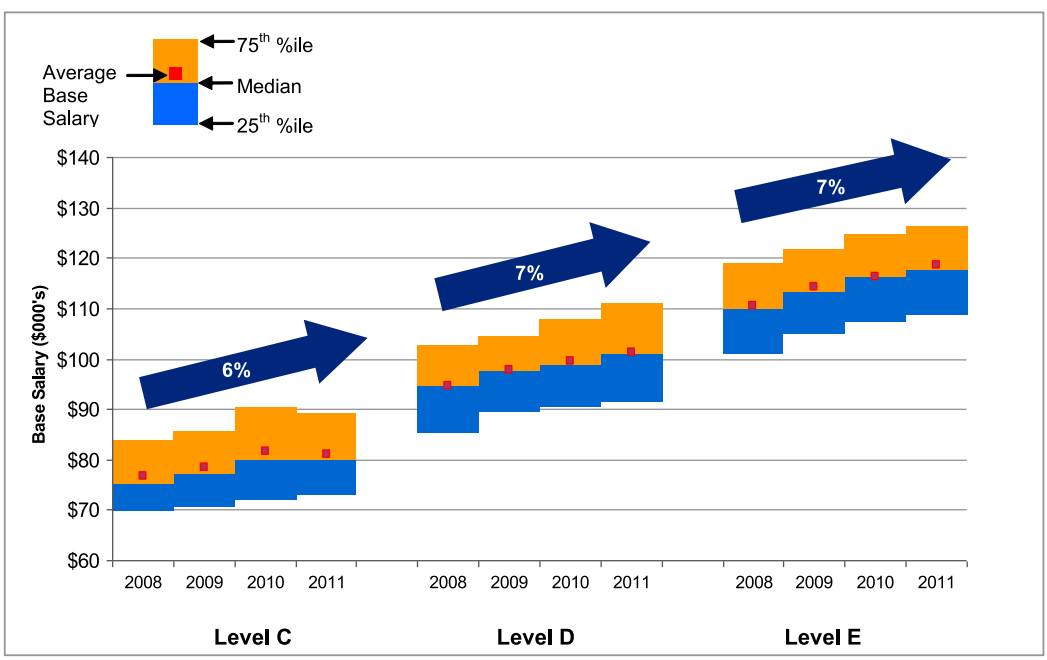


Engineering Level	% Change in Median Base Salary – Core Sample									
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All	2.4	2.0	3.6	-1.8	2.1	3.4	2.8	3.0	1.4	2.3
Level A	-3.8	0.0	-2.0	3.3	2.0	2.9	4.5	1.8	-0.6	1.9
Level B	-4.1	0.3	2.1	3.6	0.0	2.2	3.0	1.5	1.4	2.7
Level C	0.9	2.7	1.9	2.3	2.7	2.4	2.7	1.8	0.8	1.1
Level D	1.4	0.6	5.3	2.3	2.5	2.8	4.3	2.0	1.3	1.8
Level E	1.1	1.1	3.1	2.6	3.5	3.6	3.6	3.1	2.6	1.4
Level F	0.6	0.3	2.2	4.4	5.1	3.6	2.2	1.8	2.9	0.9
CPI Ontario	1.2	2.5	2.4	1.9	2.4	1.6	2.8	0.0	1.6	3.6

Note: 2004 figures represent the % increase in median salary for common core participants over 2003.
2005 figures represent the % increase in median salary over the 2004 total sample.
2006 - 2011 figures represent the % increase in median salary for common core participants over the prior year.
CPI figures represent the Consumer Price Index for Ontario as of June, 2011.

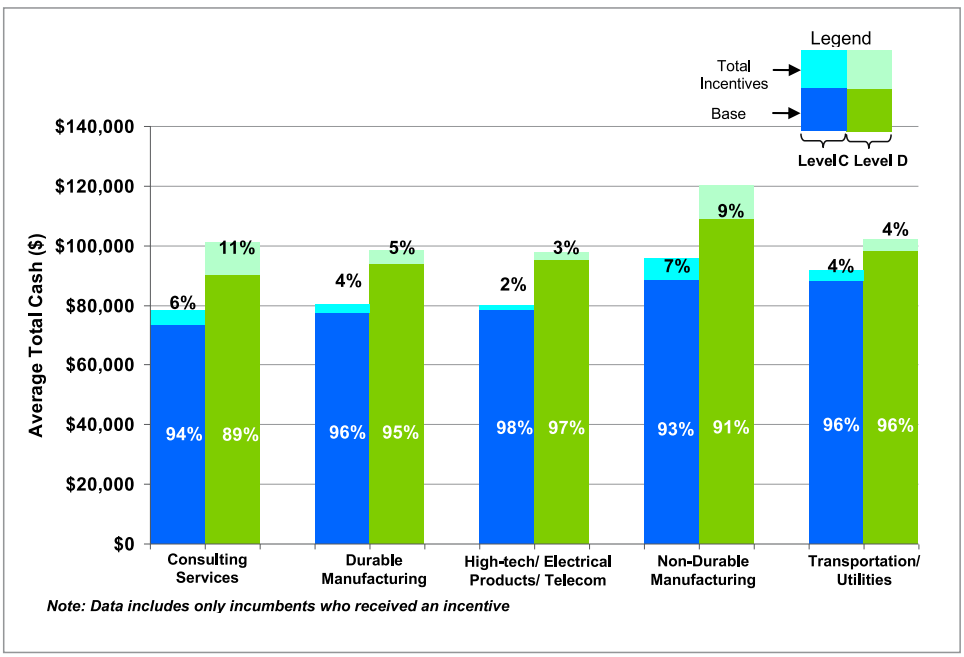
Historical trend narrowing

Over the last few years we have seen engineering salary increases at some historical lows and, as previously outlined, in any given year increases appear to be intentionally targeted to certain levels. However, if we take a look back at the overall trend for the working level engineers (Level C-E), it is interesting to note that fluctuations seem to smooth out over time and all levels see very similar increases when looked at over a four year period. When we look at the four year trend for salary increases, we would expect to see increases of roughly 10-12%, however, this trend has steadily been reducing; this year we are seeing a constant four year increase for Levels C-E of 6-7%. As uncertain economic conditions continue, it will not be surprising if we see smaller increases in the near future.



Industry choice matters

The difference in pay across primary industries can be significant. When looking at working level engineers (Levels C& D), of the five primary industries shown below, the Non-Durable Manufacturing industry (includes oil and gas companies), is the highest paying industry for Ontario engineers in 2011, consistent with previous survey findings. The difference in pay from one industry to another can be significant and is most noticeable between the Non-Durable Manufacturing industry and High-tech/Electrical Products/Telecom industry for Level D engineers where the disparity in average total cash is as much as 20%. However, not all industries show such a discrepancy. For example, there is very little differentiation between engineers in the Consulting, Durable Manufacturing and High-tech/Electrical Products/Telecom Industries whether looking at Level C or Level D engineers.



About the survey

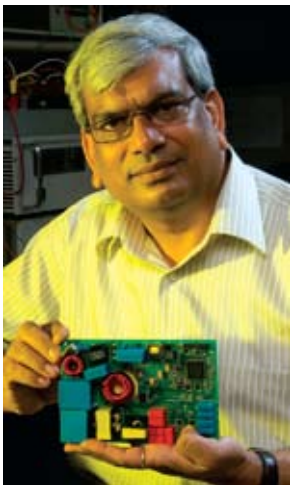
Now in its 58th year, the employer compensation survey of engineers in Ontario helps establish meaningful criteria for levels of engineering responsibility for the benefit of both engineers and employers of engineers and provides current data with respect to actual compensation levels for engineering work. The survey results are available in PDF format for both employers and OSPE members. In addition to the PDF, the survey results are presented in an online format through Mercer PayMonitor®, allowing employers to effectively assess their organization's competitive position and analyze market data.

As in previous years, the design and implementation of the survey was overseen by an OSPE advisory committee comprised of representatives from industry, as well as the engineering and human resources communities. The committee ensures that the survey remains a current and reliable resource on compensation for engineers. A list of committee members is provided in the published report.

Employers and OSPE members can order the 2011 OSPE Employer Compensation Survey by contacting Mercer at www.imercer.ca/ospe, 1-800-333-3070 or info.services@mercer.com. OSPE members can access a complimentary copy of the Member Market Compensation Summary online at www.ospe.on.ca.

Dr. Praveen Jain – a Canadian treasure and brilliant inventor

By Margaret Torrance



In 1982, 24 year old Praveen Jain with an honours BEng in hand, moved from India to Canada to work under Dr. Shashi B. Dewan, Professor of Power Electronics, at the University of Toronto. There he earned his MASc and PhD degrees in 1984 and 1987 respectively. What he has achieved in his specialty of ***power electronics*** over the past 30 years, is astounding. He contributed in the design of power systems for Canadarm while working for Canadian Astronautics. Next he developed innovative power conversion systems for telecommunications at Nortel. This was followed by corporate consulting work at Astec, Freescale, General Electric and Intel, before he settled down at Queen's University. This is barely a glimpse of the biography of Dr. Jain. What I hope to give you is insight into the man – a gentle, passionate, creative, modest, "problem finder and solver" and educator.

After a most engaging interview with Dr. Jain, it was difficult to decide on which of his many passions I would focus. I chose two: his commitment to teaching and his role as an entrepreneur.

With 40 patents to his credit, Dr. Jain could have opted for a successful life in the corporate world, but instead chose a career in academia. Here he has the opportunity to work with young, energetic minds, who know no boundaries, will try anything and work 24 hours a day with excitement. As Dr. Jain puts it, "You guide them, give them ideas, make them go in different directions and then help them develop inventions." With him, the students learn not only theory, but they also learn the practical aspects of applying and commercializing their work.

Commercialization can at times be challenging, as Dr. Jain acknowledges. While at Queen's, Dr. Jain has founded two successful start-up companies, CHiL Semiconductor in the area of digital power controller chips for computers, and SPARQ Systems in the area of photovoltaic microinverters. In CHiL's early days, Dr. Jain discovered it was "very, very hard to raise $2 million from Bay Street", but Venture Capitalists from Boston learned of his research and asked "how much he needed to obtain his objective.". He replied "$12 million" and got it. Recently CHiL Semiconductor was bought by International Rectifier – another US company – for $75 million.

The second company, SPARQ Systems – still in Canada – is recognized globally and has many large purchase orders for its product, but still faces difficulty in obtaining Canadian investment dollars to scale up the operation and manufacture its product. Current investment interest in SPARQ is coming from Taiwan, the US and Germany.

Dr. Jain, with the help of his research team, is an invention factory – he presently has 30 inventions in the works. He has a strong commitment to providing jobs for Canadians, and continues to seek Canadian investment in a challenging economic environment.

In 2010, Canada's top 100 corporate research spenders reduced R&D funding by $1billion from 2009 levels, while the federal and provincial governments and venture funds providers have fewer resources to devote to commercializing.

In this challenging environment, Dr. Jain is doing his very best, to conduct research with innovation potential to benefit Canada and Canadians.

Margaret Torrance is President of MVJ Group Inc. a boutique marketing and advertising company.

Canada's first female Chemical Engineer celebrated her 100th birthday

Laura Melba Greer, born November 22, 1911, graduated from University of Toronto in Chemical Engineering in 1934. Her classmates treated this feisty young woman very well, but it was her professors who had a problem and felt she did not belong.

Melba enjoyed a long and varied career. Upon graduation she joined Canadian Aircraft Instruments and Accessories Ltd., as their Chief Inspector. Upon leaving this position her Technical Director wrote, "During her stay the size and function of the inspection department has increased many folded and this department has developed under her leadership.". Her next position led Melba to the Toronto Filtration Plant, as their Control Chemist. Next as an Analytical Chemist, she developed recipes for Weston's Biscuits – Mother Jackson's Jiffy Pie Crust mix and a chocolate cake mix. And this was just the beginning.

Nothing could keep Melba down as she moved from project to project. At 80, she told City Hall that their intake pipes were too close to the sewer output – and she was right. At 95 after a bad fall, she demanded her doctor draw her a diagram of exactly where he was going to place the pins to fix her broken hip.

And at 100, Melba is still an amazing and feisty lady, as attested to by her loving family.

Dedication ceremony being held for an Engineering treasure

Jack Chisvin P. Eng and Gerhard Granek P. Eng, founders of ECE Group Ltd. commissioned Julius Damasday to create this sculpture, which was displayed on the premises from 1975 to 2010.

The artist was instructed to illustrate how ongoing societal progress is enabled by the creative interaction of nature, human activity and technology.

The sculpture was donated to Queen's University to be on permanent display as a reminder that

Engineering above all else is an art.

Come and join us for this special occasion.

The **dedication ceremony** for the ECE Group Sculpture will be held on **February 2nd, 2012 from 2 to 4 PM** in the **Atrium of Queen's University's Beamish Munro Hall**

Seating will be limited; if you can attend contact **Joanne Grills by January 24th at grillsj@queensu.ca**

Getting to know the volunteer OSPE Board of Directors

By Margaret Torrance

We all have wondered what drives someone to volunteer to be on a Board of Directors. The cynics in the crowd will say that board members do it to pump up their résumé or to see what they can get out it for themselves. And on some large boards, you will find the odd self-serving board member. OSPE's board is very fortunate because its members are all "passionate" about the engineering profession and they honestly do "want to give back". They believe they can make a difference.

Recently your Board members were asked to expand on these sentiments. Their comments and thoughts provide you with some insight into these special people. You should be very proud of your Board of Directors. They truly care about you and their chosen engineering profession, and are working hard to advocate and raise its professional profile.

Alourdes Sully, a Senior Network Specialist-Smart Grid at Hydro One and OSPE President & Chair, has been on the board since 2006. An engaged volunteer, whatever she sees, she questions and wonders if there is a better way – both technically and socially. When watching Alourdes speak about engineering, you can see the pride and excitement she has about her profession. You also notice her regret that the public does not comprehend the importance and value of the contribution engineers bestowed to our society. Alourdes is a proactive, passionate leader with a cause – to advocate for the engineers.

Nadine Miller, OSPE's Vice Chair, has been on the board since 2007, has sat on the executive since 2008 and has participated in numerous committees as a member and a Chair. Volunteering is second nature to Nadine, who has been doing it since childhood. Nadine simply cares so much, that she not only does what needs to be done, but goes beyond expectations. It is never a chore. Nadine is driven and her enthusiasm is contagious, as she infects others with her energy and commitment to engineering.

William (Bill) Goodings, after retiring twice from an exciting career as a consulting engineer, joined the OSPE Board in 2008 – currently Treasurer. An old hand at volunteering – served as President of The Consulting Engineers of Ontario – Bill had a special interest in OSPE, as his brother, Bob, was the first President and Chair. Bill joined the Task Forces that focused on advocacy for all engineers, not just consulting firms. His outstanding committee contribution led to his being asked to stand for the Board, where he continues to give his all.

Edward Poon, OSPE's Secretary for the second term, has a long history of volunteering. He sees a need and must try to fulfil it. Edward joined the OSPE Board in 2007 with the goal of enhancing the profile of engineers to the community. Engineers do a lot of great work to improve the quality of life, but their contributions are not generally recognized by the public. As a Board member, Edward has the opportunity to meet and work with politicians, fellow engineers and university students to raise public awareness to these contributions.

John Schindler, a Consulting Engineer and a longtime OSPE and PEO volunteer, believes that engineers are not rewarded proportionally to their contribution to society and that they fall behind other professions. Thus his major motivation is the desire to increase the prestige and public recognition of engineers and their impact on everybody's life. He feels very passionate about making all stakeholders aware, that most of the fruits of civilization are the products of engineering.

OSPE Board of Directors

Annette Bergeron, the Alma Mater Society General Manager at Queen's University, has been very proud of her engineering status and when OSPE was created, she followed its progress and never hesitated to run for the board when asked. She was elected President of OSPE in 2004/05 and then again in 2009/2010, and continues to serve her profession. Annette knows that engineers need a strong advocacy body and surrounded by other professionals, she will continue to do her part.

Gregory Cook, a Consulting Engineer, finds that volunteering allows him to learn how fellow engineers from many different disciplines and demographics, see their professional challenges. He finds it very satisfying that he can offer his viewpoint and competencies, to help make a difference when working towards a common goal.

Desmond Gomes, a project manager with Husky Injection Molding Systems, is no stranger to volunteering. He has spent over a decade working with his fellow engineers to promote the profession, and has always chosen experiences that had the most impact toward advocating for the professional engineer. Desmond plans for the long term and believes in providing creative solutions with high standards of excellence. A broad-based approach is important to him – all communities, not just the large metropolitan areas.

Jane Huang, an Engineering Project Manager in the automotive industry, brings her internationally-angled engineering education and strong multi-cultural engineering community background to her volunteering efforts. She has actively assisted and recruited engineering graduates and internationally-trained engineers, both at work and on the board of the U of T Engineering Alumni Association. Jane sees OSPE as the perfect arena for her to continue to focus on these objectives and create value for all engineers.

Rob Hughes, a senior project manager for Stantec, feels it is important to contribute to and promote the interests of individual engineers and the engineering profession in Ontario. He is motivated by the dedicated and passionate fellow engineers on the board at OSPE and feels that together with the staff, they are making a meaningful difference in the engineering community.

Mirka Januszkiewicz, the Director of Waste Management Services for the Regional Municipality of Durham, believes the public needs to be educated on what engineers do and how they impact everyone's lives both at home and at work. She sees the need to promote the profession and by volunteering at OSPE, feels she has the unique opportunity to shape the future and impact the direction the province and the country is taking, while also raising the profile of the engineering profession.

Matthew Xie, an Engineering Manager for Multimatic Anton Mfg., finds that volunteering at OSPE provides a healthy and constructive balance with his fast-paced professional life. When volunteering, he can fully contribute his knowledge and expertise, but without the pressures of everyday business. He values the diversified, yet united fellow OSPE board members. Working together to create a new shared vision, motivates him to devote even more of his personal energy to support OSPE.

OSPE helps to shape the new engineers at Ryerson University

OSPE Director and Secretary Edward Poon, P.Eng. helps to shape the civil engineering students at Ryerson University before they graduate. Currently a member of the Program Advisory Council of the Civil Engineering Department, Edward participated in reviewing and making enhancements to the university curriculum annually. He likes to ensure university engineering programs meet closely with the needs of the employers in the industry. When he sees a gap in skill sets, he moves forward to make suggestions to fulfill it. This is exactly what he has done for the past five years while volunteering at Ryerson University.

He started in 2006 by initiating a mentorship program to Ryerson's Capstone Design course. Fourth year students at Ryerson are required to complete a major design project called Capstone Design as part of the compulsory curriculum before graduation. Edward initiated this mentorship program by bringing in practising engineers from the industry to act as mentors to the students. In 2007-2008, he volunteered as a mentor to guide a group of five students on a tunnel project. For the past three years, he has continued to manage the program and has volunteered as a guest lecturer for the students. He has also given lectures on contract administration and project management skills. He said that his goal "is to bring real-world engineering into the classroom and allow students to connect with current engineering practices before they graduate." His effort earned him an appointment to the Advisory Council from the university in 2011.

This year, in view of certain events that have occurred, such as the earthquakes in New Zealand and Japan and building roof collapses in Alberta, Canada, and the marking of the 10th anniversary of the collapse of the World Trade Centres, Edward was determined to introduce the "Study of building failures and their causes" into the curriculum. He considers that "education and training are the only effective ways to minimize failures" and that "the study of building failures and forensic investigations needs to be part of the curriculum alongside the study of normal construction." No such course is currently offered in Canada. He approached Ryerson with his idea and was subsequently invited to deliver two guest lectures to their graduate students. In October, he presented a guest lecture and a workshop on this topic to a group of 20 MSc and PhD students and faculty professors The presentations were well received and appreciated.

In recognition of his voluntary efforts to the engineering communities over the past decade, Edward was awarded the Order of Honour from Professional Engineers Ontario (PEO) and Fellow of Engineers Canada in 2009 and the 10 years Volunteer Service Awards from the Government of Ontario in 2010.

Edward is truly a Canadian trained engineer. He obtained his Bachelor of Engineering degree from McMaster University and his Master of Applied Science degree from the University of Toronto. He has been a professional engineer for over 30 years and is currently working for the Toronto Transit Commission managing its twin tunnels design contracts for the Spadina Subway Extension project.

OSPE Director, Edward Poon (5th person from left in back row), delivered guest lectures to Ryerson's graduate students in the Civil Engineering Department this October.

PEO Council: the cost of good intentions

by Sara Bedal

In a perfect world, governing councils of self-regulatory professions would run like well-oiled machines. But occasionally they need some tweaking. The Council of Professional Engineers Ontario (PEO) is no exception.

Legislation dictates that the PEO Council be made up of 15 to 20 PEO members who are elected. The other Council members (eight to 12) are appointed by Ontario's Lieutenant Governor in Council. (Five to seven of these "LG" appointees must be PEO members, while three to five of them must be non-engineers.)

In August 2011, Alourdes Sully, OSPE's president and chair, alerted Chris Bentley, then-Ontario's Attorney General, that an imbalance can occur on the PEO Council when the minimum number of elected members is paired with the maximum number of LG appointments. Under this scenario, it's possible for appointed members to skew the votes of elected members. Sully urged Bentley to review the balance of LG appointments so that they are "in proportion to the number of elected Council members."

Patrick Quinn, PEO's (elected) vice president, highlighted this predicament in the September/October 2011 issue of *Engineering Dimensions*, PEO's magazine. "Recent voting records show that LGAs voting as a bloc have become of critical significance in the governance of our profession," he wrote. "Their recorded votes were greatly instrumental in the move away from member involvement in bylaw changes, in the move to deny members their traditional role in the election of our president and vice president, and in denying member participation in these decisions by the tradition of member referendum."

The PEO Council hasn't always included so many government appointees. When the engineering profession in Ontario became self-regulating in 1922 and PEO was created, its council included five appointed members. Years later, more appointed positions were added due to increased workload on Council members and the belief that the public should have a presence on Council.

It's not necessarily easy to land an LG appointment. The selection of skilled candidates can include personal or telephone interviews, detailed reference checks or stakeholder consultations. Most important, candidates must have high personal and professional integrity and be respected.

"I'd hope that they'd be active in their community, whatever their community is--whether it's a multicultural community or a civic community or a business community," says Doug Ferguson, a lawyer and the director of Community Legal Services in the University of Western Ontario's Faculty of Law. And, because appointments have the expectation of public service, appointees are not always paid or are remunerated at below-market rates. (Currently, PEO Council lay appointees are paid $133 per day.)

Ferguson—who was president of the Liberal Party of Canada from 2008 to 2009--doesn't deny that political patronage has played a role in government appointments in the past. But times have changed. "Provincial appointments have come a long way," he says. "If you're a government, you want [appointed] people [who] reflect your point of view, but I think they're much more inclined to put in non-political people and much better-qualified people."

What does surprise Ferguson is the proportion of elected members on the PEO Council to appointed members. In contrast, the board of directors of The Law Society of Upper Canada—which regulates Ontario lawyers--is governed by 40 elected lawyers, two elected paralegals and only eight lay "benchers," appointed by the provincial government.

Ultimately, what's at stake is whether engineering in Ontario can continue to be considered a self-governing profession, based on democratic principles. Good intentions may have led to the increased number of appointees on the PEO Council decades ago but now it's time to question that. "Find out what the logic was behind it," says Ferguson. "Maybe the logic no longer applies."

Sara Bedal is a writer and editor in the Toronto area.

Campaigns matter

by Jaime Watt and David Simmonds

Dalton McGuinty may claim he was given a "major minority", but the truth is his world has changed – he and his party can no longer afford to make enemies.

In this brave new political world, stakeholders don't have to let the government win. In fact, with the right strategy they can shape policy in ways they seldom have before.

Simply put, each party needs new friends before the next election if they want to form a government. And past allegiances aren't always going to be predictors of future behaviour.

It's time then, to look beyond conventional government relations.

Anyone looking to influence policy should consider running a public campaign: one that cements your desired narrative among voters and makes it difficult for the government to avoid meeting your expectations.

There's an important distinction to keep in mind, however: instead of simply pushing your message, you should be looking to activate support.

If you can show government that there is public support for your issue, it will make it considerably easier for them to support you. In doing so, you no longer look like an advocacy group with an agenda, but rather a benevolent force helping government achieve an important public policy goal.

At Navigator, we own the trademark: campaigns matter. And in the Ontario context, they've never mattered more.

For many of you, this is perhaps not the news you want to hear; the thought of ramping up your political involvement is a bleak prospect. As engineers, many of you probably view the road to solving Ontario's challenges clearly:

rational, informed policy making. The notion is, that if only we could get politics out of the business, we'd all be fine.

Well, it would be nice to win the lotto, too. Here's the cold, hard fact: politics ain't leaving any time soon.

Energy, health care, transportation, and education have never been more politicized. So it's time to get political too. Anyone looking to change policy needs to think differently in order to understand the strategic value of politics and communications in everything it does.

Last year, a major telecommunications company decided it wanted to change the way it billed customers for internet service. They called the change "usage-based" billing and hoped it would pass without a peep. Not quite. The federal government got 350,000 angry letters demanding that it step in. And guess what the government did? It sided with the angry mob, reminding us that seemingly small issues can explode, and when they do, governments default to the populist position.

The usage based billing case study tells us nearly everything we need to know about how to operate in this current opinion environment. New communications tools are moving advocates from an era of traditional persuasion campaigns to something we call the activation campaign.

For decades, we have focused on running persuasion campaigns where we write off the people at the low-end of the curve, take the people at the high-end for granted, and focus all of our time and attention on trying to move the middle. Social media has given groups like yours the ability to become particularly active on the campaign front. Activation campaigns – campaigns where we find people who will not just support our point of view, but will actually do something in support of it – change the way we engage with the public. Instead of focusing on those in the middle, we focus on those who are most supportive because we can actually motivate them to do something for us: to take action, to persuade others, to recruit to our cause.

The world has changed. Social networks have fundamentally altered the landscape. Now, we can be agnostic to geography. We can take people wherever we find them and combine them until we get a critical mass.

> *In too many cases, policy proposals fail because the political and communications realities of the day, did not get the strategic consideration required.*

It's a whole new way of looking at what we do – an entirely new way of allocating resources. It works brilliantly, and it's the way organizations will need to approach social media to communicate a message. There are more than 234,000 engineers in Canada. Engineers are an electoral force. Activation campaigns will strengthen your position.

In politics, strategists look for ways to move groups of voters to their desired position. You can offer governments and party activists exactly what they are looking for – a group of informed voters willing to show up on election day.

In too many cases, policy proposals fail because the political and communications realities of the day, did not get the strategic consideration required. Keystone XL, anyone?

In a world where one bad tweet can cause severe reputational damage, identifying supporters, organizing them around a digital community, and being fully prepared to use them in a fight to protect your reputation, is more important than ever.

The first minority government in Ontario since the mid-1980s presents a number of opportunities. Politicians will need to activate new groups of supporters. Your task is determining how to make this process work for you.

Jaime Watt is Executive Chairman and Senior Partner of Navigator Ltd. He is an adviser to Conservative governments across Canada. Jamie is a frequent commentator on CBC television, and appears regularly on CBC's The National.

David Simmonds is a consultant at Navigator Ltd. He advises clients in the non-profit and private sectors on strategic communications and public persuasion.

Advocacy's iron rule: "follow the votes"

By Patrick Gossage

It is interesting to look at the website for professional engineers, whether the PEO's or that of the professional association (OSPE) which runs this magazine. It is clear by the range of issues dealt with, that the profession is so embedded in so many facets of the economy, that in effect what affects prosperity in any sector affects engineers.

> *The golden rule of gaining stature with government is to play to their agenda – which at its basest is to get votes to stay in power.*

So quite naturally, for instance, the infrastructure deficit in our municipalities particularly, is good fodder for professional activism. Engineers are supporters of public transit – some of the major engineering works in Ontario for the next decade will involve transit in the GTA.

But for a profession to gain real leverage with governments, it has to go beyond promoting government investments that benefit it directly (my old boss Trudeau's rejoinder "Why should I sell your wheat?") and "Follow the Votes". The golden rule of gaining stature with government is to play to their agenda – which at its basest is to get votes to stay in power.

Luckily in your profession that is easier than you may think. Ask yourself where politicians of every stripe mined for votes in the last few years especially – among recent immigrants, of course. And the Conservatives did such a dandy job of paying attention to their needs that they nearly ran the Liberals out of town in Toronto, their former stronghold.

Then consider that at least on paper, your profession "seems to have" a pretty good track record of being open to smoothing the accreditation of foreign trained engineers – this plays well against the endless media moanings about the waste of human talent with doctors and engineers driving cabs. You are doing something about this situation.

But I deliberately said "seems to have". Since it only takes one foreign trained engineer who has been turned down for accreditation or cannot get a job after years of trying to go to The Star or CBC and – ouch! the profession gets a black eye.

It would seem we are dealing with about 10,000 or so engineers a year who land here and start trying to get a job and maybe get accredited. That's a lot of talent. And governments care a lot about this talent. They tend to be community leaders.

Now, not knowing the hoops these professionals have to pass through to become fully functional engineers here, I can only say, that what I read and see seems quite impressive and well organized.

> *And, as part of your advocacy program, your profession could make a greater effort to publicize and take pride in the numbers [of immigrant engineers] you welcome.*

The Ontario Government is fully engaged – this is good. It has, as you know, partnered with PEO, to create a career map for internationally trained engineers, which sets out every step of the registration process, including language requirements, industry trends, labour market conditions, the credential assessment process, licensing fees and other important information.

Better still, the PEO have a program offering free licensing-assessment for internationally trained engineers.

The program, introduced last year, waived the licensing fee and the fee for an intern training program if an internationally trained engineer registered within six months of arriving.

But fine and good as all this is, you will tend to be judged by how readily you accept these immigrants into your workplaces. This may be worth mounting a mini campaign to ensure engineering companies are fully aware of the good experiences many have had with this cadre of professionals.

And, as part of your advocacy program, your profession could make a greater effort to publicize and take pride in the numbers you welcome. It would also be advisable to support the efforts of governments to retain foreign professionals being trained here. Being on their page where votes are involved is advocacy at its best.

I am referring here to Immigration Minister Jason Kenney's marquee Canadian Experience Class – his department's fastest growing program. This allows foreign workers and non Canadians who have attended university here to jump the queue and apply for landed immigrant status without going back home. This is a big priority for the Harper government, getting the "best and brightest" of this group to stay and contribute to Canada.

There is surely an interface for the Society to identify and welcome the engineering component of this class.

The face of engineering in Ontario is changing indeed, and your faces look more like our amazingly diverse population than ever. This is good. It is good politics as well and if you think of what it means to "follow the votes" it is clear that the more openly and institutionally you welcome immigrants into your profession, the stronger your voice will be with governments.

Patrick Gossage is a veteran communications government relations professional, currently Chair of the Toronto company Media Profile. He was Press Secretary to Prime Minister Pierre Trudeau.

Public policy advocacy: takes a lot of work, thoroughness, strategy and time

By Sheldon Gordon

Increasingly, interest groups that engage in public policy advocacy in Ontario require the commitment of significant resources, grass roots member volunteerism, innovative tactics, long-range planning and staying power (sometimes measured in years rather than in months).

During the recent Ontario election campaign, the three major parties all offered policies aimed at homeowners. The NDP promised rebates up to $5,000 for those who retrofit for energy efficiency. The Liberals offered a home-renovation tax credit for seniors. The Conservatives promised a registry of properties formerly used as grow-ops.

These commitments didn't just emerge from party brain-storming. They arose from the sophisticated advocacy of the Ontario Real Estate Association (OREA). The group, which represents 52,000 Ontario realtors, began planning the campaign, called "Home Ownership Matters," six months ahead of the October 6th election.

"We launched our campaign in April," says Matthew Thornton, OREA's manager of Government Relations. "We knew that party platform development would start well before the election writ was issued. And we knew that once the election campaign began, we would be competing against the parties for public attention."

OREA wanted to raise awareness of the benefits of home ownership – not only during the election but well beyond. The group even hired Ipsos-Reid to poll provincial residents on their attitudes toward home ownership. (The poll showed that while most Ontarians, even renters, want to be homeowners, there is concern about affordability.)

OREA also organized a two-day "Campaign College" to educate volunteers from its local boards on how to influence their local MPPs by meeting with them, staging all-candidates meetings and submitting op-ed articles to the local newspapers. "The response we got was very positive," says Thornton. "and we'll certainly consider launching another campaign for the next election,"

Other interest groups might well replicate this approach as advocacy enters a new era. Traditional lobbying meant arranging the right meeting at Queen's Park to present an interest group's "ask." The challenge was to know whom to approach – and how and when.

If a policy initiative was percolating up the civil service but hadn't yet reached the minister's agenda, then an assistant deputy minister or a branch director might be the right target. If a policy had already been enunciated by the political echelon, then an approach to a Minister or MPPs might be needed to modify the policy before it emerged from the legislative pipeline.

John Duffy, owner of the government relations firm StrategyCorp., says that today, obtaining a meeting with a minister or senior official is not "one-tenth as important as having something to say to the Government at that meeting. It's important that you have something specific that you're seeking."

> *"Government now requires sophisticated solutions and thinking about actual implementation. They are so overwhelmed now that they need a lot more prepared on the outside – policy detail, finances, stakeholder management."*
>
> John Duffy

Too many groups take a proposal that is sketchy – often little more than a complaint or a description of a problem

– and invite the government to fix it. "It is more successful to take something to government that is 'policy ready'," says Alan Broadbent, chair of the Caledon Institute of Social Policy. "It takes a lot more work, and can often dilute the sharp interest the group might have, but we find a lot better uptake as a result."

Even a specific "ask" is not enough. "Once upon a time, you could go to the Government with your problem and they would figure out how to fix it and how to implement that fix," says Duffy. "Government now requires sophisticated solutions and thinking about actual implementation. They are so overwhelmed now that they need a lot more prepared on the outside – policy detail, finances, stakeholder management." He believes the engineering profession is well placed to offer such advice. But is it?

Dr. Gail Krantzberg, Director of the ArcelorMittal Dofasco Centre for Engineering and Public Policy at McMaster University, says engineers need to be more deeply involved in the public policy forum. "OSPE, to its credit, is doing that. Whether they are being heard or not is another question. Their profile could be higher, and their audience could be better targeted."

Krantzberg says the profession isn't reaching policy makers with its message. "It seems to be a discourse among the OSPE membership," she says. "I'm not sure they're actively encouraging Cabinet ministers, MPPs, deputy ministers or assistant deputy ministers to be part of their conversation. The politicians and officials should know there's an engaged institution that can bring engineers together and develop advice that's helpful to government. OSPE should be the go-to place for feedback on government programs."

Daniel Young, Acting CEO of OSPE explains, "Advocacy is the active support and representation of a cause. With so many areas of policy demanding engineering input today, whether it's the electricity grid or the infrastructure deficit, it is incumbent on the engineering profession to have a strong, independent advocative voice. Ensuring that the voice of engineers is heard in the corridors of influence is essential and OSPE has shown that it is well-positioned to lead the charge going forward."

Dr. Douglas Reeve, Professor of Chemical Engineering and Applied Chemistry at the University of Toronto, believes engineers are well-equipped with knowledge and expertise to influence public policy in Ontario, but "while they can speak to issues that are technical and narrow, when a broader context is required, the profession is quite limited." That is due partly to engineers' education, says Reeve.

"They are not renowned for their skills in those realms [public speaking and writing] that are part of public debate. Their capacity to deliver important messages could stand to be improved." (In the last provincial Legislature, he notes, only three MPPs were engineers.)

Both Krantzberg and Reed oversee public policy centres that provide future leaders of the profession with the broader skills to succeed in the policy arena. "I run a Master's program for engineers and scientists on how to get involved in public policy," says Krantzberg. "They understand the kinds of answers that policy makers are looking for – and that typical engineers don't give."

Reeve is co-leader of Engineering Leaders of Tomorrow, a leadership development program that spans the University of Toronto's Faculty of Applied Science and Engineering. As its mission statement says: "We believe that the 21st century engineer must be able to combine technical expertise with leadership skills to meet today's complex challenges."

However, both professors realize that public policy is not always the outcome of rationale argument. Reeve recalls chairing a high-level policy forum in June 2008 on Ontario's electricity needs. Officials from the provincial government and its energy agencies attended. When Reeve subsequently tried to carry the discussion further, "there was insufficient appetite for consultation or rationale Analysis."

The then-Energy Minister George Smitherman then "went off to Europe, saw the windmills, and Ontario's Green Energy Act was born," Reeve says. "We were short-circuited. There was very high-level manipulation of electricity policy without rational input." The policy that emerged, he says, was all about projecting a "green" image to win votes.

Of course, a profession such as engineering lacks

the numbers to bring electoral pressure to bear on a Government. But even an interest group lacking large numbers can still make headway, says Duffy, "if they can line up what their members are looking for with things that others are supporting and that the government might be prepared to support."

Such a strategy worked well for medical device manufacturers a few years ago when they lobbied Queen's Park for a change to occupational health and safety regulations. They wanted health care institutions to be required to purchase their new safety-engineered needles.

Chuck Rachlis, vice-president of Susan A. Murray Consulting Inc., leveraged the manufacturers' influence by persuading health care unions to be out front in the advocacy campaign. The unions not only had the force of numbers but their members – from nurses to laundry workers – would benefit from the protection against accidental needle sticks.

"The lesson is to find an attractive third-party advocate," says Rachlis. "And staying power is critical. It took us six years and three rounds of amendments to the regulations to achieve our objectives. We had to keep looking for fresh ways to make the issue interesting. We persuaded the Government that while there are lots of complicated things in health care to try to spin, here was one that everyone could understand and it was not very expensive."

In the arena of public policy, advocacy doesn't get any better than that.

Sheldon Gordon is an independent business journalist based in Toronto.

Regulating vs Advocacy

By Nate Hendley

Should associations that regulate professions also advocate on their behalf?

Arguments about advocacy largely hinge on how the word is defined. If advocacy is viewed as pushing one specific viewpoint for the self-interest of a given profession (as opposed to the public interest) then pundits agree that regulators should steer clear.

"Combining the role of regulator with that of advocate is problematic. It is difficult to avoid the perceived, if not real, conflict of interest between protecting the public and protecting the profession," says Laurie H. Pawlitza, Treasurer (the LSUC term for President) of the Toronto-based Law Society of Upper Canada, which licenses and regulates lawyers in Ontario.

"I don't think a regulator could be an advocate ... I see it as a bit of a conflict of interest. If you're a regulator and you're advocating for something then you're not being impartial. And for sound regulations to go forward they need to be based on impartial analysis," says Dr. Gail Krantzberg, a civil engineering professor and director of the Centre for Engineering and Public Policy at McMaster University in Hamilton, Ontario.

"I think the roles should be split," agrees Doug Reeve, professor of chemical engineering at the University of Toronto and director of the Toronto-based Institute for Leadership Education in Engineering (ILead).

Advocacy done for the sake of the public interest, however, is seen in a more benign light.

"Advocacy can take many different shapes and forms. My own view is that it may be acceptable for these regulatory bodies to advocate for the public interest. So if they're advocating for what's good for Canada, what's good for a province, what's good for the public, I think there can be a very important and constructive role for them to play. But if they are advocating purely for self-interest and for the self-interest of the members of the profession, there can be a potential conflict," says David Mitchell, president and CEO of Public Policy Forum.

Based in Ottawa, the Public Policy Forum describes itself as "an independent, not-for-profit organization dedicated to improving the quality of government in Canada through enhanced dialogue among the public, private and voluntary sectors."

Advocacy for educational purposes also gets a thumbs up.

"There is a need for knowledge dissemination – knowledge transfer of a specialized variety from many professional groups to the broader community. That's not advocacy in a narrow sense, that's in the broad public interest," says Mitchell.

Some pundits question whether educational initiatives should even be classified as advocacy.

"Advocacy is done by vested interest groups that want to advance their views on a position... educating is presenting a number of different viewpoints – working out different options and their implications for society," says Dr. Krantzberg.

The legal profession offers a good example of how to balance regulation and advocacy.

Both the Law Society of Upper Canada and the Canadian Bar Association (CBA) – which represents lawyers nationally – do advocacy work. Their duties are well-defined along sharply delineated lines.

"The Law Society regulates [and advocates for] lawyers and paralegals in the public interest. The Canadian Bar Association advocates on behalf of the profession, not the public. So the fundamental accountability of each organization is different," explains Pawlitza.

"The Law Society's mandate requires us to advance the cause of justice and the rule of law. We have a Human Rights Monitoring Group who regularly intervene, usually by letter writing, in situations where the rule of law and the rights and freedoms of members of the justice system are threatened ... this advocacy is quite distinct from the

work of the Canadian Bar Association and those other agencies that represent the interests of lawyers in Canada," continues Pawlitza.

This public-minded spirit is exemplified by a November 4, 2011 LSUC press release expressing "grave concerns about the harassment, arrest and imprisonment of human rights lawyers and activists in Iran."

By contrast, the Canadian Bar Association, headquartered in Ottawa, is dedicated to "promoting the interests of members of the [CBA]," according to the group's website. Under the title "CBA Advocacy", the website lists independence of the legal profession, solicitor-client privilege, access to justice and fairness in the legal system as "recurring themes" of interest to the group. The CBA's advocacy takes the form of submissions to government, court interventions and policy resolutions.

Organizations representing the medical profession take a similar tack.

The Toronto-based College of Physicians and Surgeons of Ontario (CPSO) regulates 35,000 doctors in the province. The College also advocates "on regulatory-related issues impacting the practise of medicine in Ontario," says Kathryn Clarke, senior communications coordinator at the CPSO.

"The CPSO has often submitted its position on draft legislation that will directly affect the CPSO or the medical profession. The CPSO will also periodically engage in public policy initiatives," continues Clarke.

In September 2009, for example, the College submitted a position paper on Bill 179, which concerned the regulation of health care in Ontario. More recently, the CPSO held a forum to discuss "issues related to opioid prescribing, dispensing and misuse," says Clarke.

The Canadian Medical Association (CMA), meanwhile, is headquartered in Ottawa and primarily exists to "advocate on behalf of Canadian physicians and the public about topical health care issues," as the group's website puts it.

In terms of advocacy work, the CMA offers a "MD-MP Contact Program" which links physicians with their local Member of Parliament and an online "eLobby" Tool designed to make it easier for doctors to contact politicians. The CMA also organizes a lobby day on Parliament Hill and trains doctors to be advocates for their profession.

The CMA makes frequent submissions to government on issues impacting their membership. Within a three-day period in October 2011 alone, the CMA made presentations on accountability in health care, health and the economy, and chronic diseases related to aging, to Senate and House of Commons standing committees.

Evidently, the Medical Association does a good job of rallying support for their cause; the CMA is "consistently ranked one of Canada's most influential advocacy organizations," boasts the Association's website.

The Ontario Association of Architects (OAA) is another regulatory body that does a dash of advocacy.

The Toronto-based group's mission is to "represent, regulate, support and promote the profession of architecture in the interest of all Ontarians and to lead the design and delivery of [buildings] in the province of Ontario," states the OAA website.

According to the OAA communications office, the Association wants to raise greater awareness of the architectural profession. Advocacy work includes a People's Choice awards program which encourages public-input on architectural projects, a website called Discover an Architect and community events such as Architecture Week.

Architecture Canada/the Royal Architectural Institute of Canada, which is headquartered in Ottawa, represents architects across the country.

"One of the most important roles the RAIC performs on behalf of its members is to act as the unified voice for the profession on a national level," states the RAIC website.

"RAIC is active in lobbying the federal government on numerous issues such as a fair and transparent system for selecting and contracting architects; the protection of intellectual property rights for architects; and efforts to require that all those with training in architecture within the public service be licensed or registered," continues the site.

In summary, associations representing law, medicine and architecture all engage in advocacy work. There is a very distinct separation of duties, however. Provincial

bodies such as the LSUC, CPSO and OAA regulate their members and advocate in the public interest. The CBA, CMA and Architecture Canada, by contrast, are national organizations that primarily use advocacy to advance the specific interests of their members.

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Sustainable innovative leadership

By S.W. Marcuson

In view of the rapid growth in natural resource consumption, a protracted recession, increasing atmospheric CO_2 levels and a concern that Canada is losing its global competitiveness, we are constantly asked to be "innovative" at finding "sustainable" solutions to conflicted challenges. As the Society honors engineers for outstanding achievements, let's examine "sustainable" and "innovative" in some depth.

Sustainable

The concept of Sustainable Development arose from the 1970's environmental movement. Then in 1987, the UN's Brundtland commission defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" [1]. Sustainability identifies three aspects of development, the environment, the economic and the social.

To engineers dealing with Indigenous peoples, social sustainability may be the most difficult concept to fathom. Sustainability recognizes that in a green-field mining endeavor, a large proportion of the benefits accrue globally (at a distance) while environmental effects are felt locally (in your backyard). Indigenous people are directly connected to the local environment, but remote from the global economy. Social sustainability may be defined as processes, systems, structures and relationships that actively support the capacity of current and future generations to create healthy and livable communities providing for diversity, equity, inter-connectedness, quality of life, democracy and governance [2].

Economic, environment and social issues are invariably confounded. Resolution requires engineer-leaders who have a world view – engineers with the capacity to deal beyond the technical. We need sustainable, innovative leaders.

Innovative

Experts in innovation tell us that it applies to all forms of human endeavor. Innovation is "directed use of creativity," the engine of "creative destruction," the process by which new practices, procedures, industries destroy old. Innovative thinking combines knowledge and ideas. Innovation is not a management process; it is iterative, not linear.

Then, we conclude that an innovative leader will: be competent, curious, ask questions, find better solutions, get others on board and lead the discovery and implementation process.

Possibly, the engineering curriculum and educational model require updating to attract and educate the young people who will create a sustainable 21st century world. Ponder which of the following choices will create innovative leaders: large classes versus small, scientific principles versus engineering practice, business management versus social sciences. What is the role of literature and other humanities? Is rhetoric important, for example, careful reading, clear thinking, and forceful, persuasive public speaking? What is the right level of math education? Since teamwork is mandatory, is there a role for organized sports?

Leadership

In 2007, the Intergovernmental Panel on Climate Change concluded that global warming is "unequivocal" and human activity is the main driver, "very likely" (>90%) causing most of the rise in temperatures since 1950 [3]. But since then we have only taken baby steps to reduce emissions. In 2010, CO2 emissions rose by 6% compared to 2009. Likely, Canada will meet only 46% of its 2020 CO2 emission reduction commitment. There has been a dearth of leadership. Fears constrict our capability to act – jobs will be lost; others will get ahead; growth will be impeded.

In October 1970, at a time of rancorous environmental debate, Paul E. Queneau, retired VP of technology at Inco, published this clarion call for leadership [4]:

> "Current events underline Rachel Carson's compassionate words of warning regarding the suicidal potential in short-sighted domination of nature: "a grim specter has crept upon us almost unnoticed." … In light of today's knowledge there is no need—nor can we afford—to inflict injuries on Mother Earth which will leave scars cursing all our tomorrows… Engineers—including those in the mineral industries—can serve their fellow men, by sincere and rational interpretation of science so that natural resources will be utilized efficiently and without destruction of the public domain."

Today, we are engaged in a "rational interpretation" of natural and human needs associated with resource exploitation and distribution of wealth and authority. We must create new engineering leaders, leaders capable of innovating sustainable solutions. These adventurers will refine the mission, intensifying efforts that protect the environment and promote the common good, while shedding practices that do not. They will create enterprises of which they can be proud, pay back to Mother Earth what is owed and give future generations a world that is environmentally, socially and economically sound and sustainable.

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Sam Marcuson, Vice President, Vale Canada Limited, Base Metal Technology Department

First Annual Engineering Day – March 16, 2012

By: Liz Greenland, Projects Coordinator

Do you have plans yet for March 16th? If your answer is no, then save the date and plan to spend time with OSPE at the first annual Engineering Day.

Celebrate engineering excellence

This year, OSPE is launching an event that will truly celebrate engineering excellence. The theme will focus on Energy and Innovations of the Future. A wide variety of topics will be discussed as we look to new technologies that will lead us into tomorrow, the next decade and beyond. How big a role will renewable energy play? Will there always be enough supply to reach demand? These questions and dozens more will be answered during this interactive event. The program for the day will feature panel discussions, keynote speakers and break out sessions. It will be an event for anyone interested in learning more about engineering and will appeal to those with either a novice understanding or those with a more distinguished background in engineering principles.

March Break – something for the kids

If you have already checked the calendar, you might notice that March 16th falls over the March Break. This is no coincidence, because Engineering Day will also have a 'kids' program. There will be hands-on workshops and exciting activities geared towards students from grades 6 - 8. This will be a wonderful opportunity for engineers of the future to dig into a project that is both fun and educational – always a winning combination for the younger set.

Trade Show & Exhibitor Fair

Also on tap for the day will be a trade show and exhibitor fair. Guests will be able to learn first hand what technologies and new initiatives exist in the growing world of energy. Another highlight of the event will be featured student science projects. Top science performers will be invited to participate and explain their own creation for a panel of esteemed judges.

National Engineering Month

Engineering Day will coincide with National Engineering Month (NEM). For the past 20 years, March has been designated NEM which showcases the profession and numerous accomplishments of engineers. More than 500 events will be hosted by each province and territory. Bridge building competitions and water pump workshops have been popular in the past. Volunteers generously donate their time to ensure the younger generation understands the engineering basics behind all the daily tasks most people take for granted.

So whether you are young or young at heart ... make sure that Engineering Day is on your radar for 2012.

Downtown Toronto will play host and all the exciting details will be arriving in January at www.engineeringday.ca

OSPE Future Events Calendar & Training Courses

Automotive Centre of Excellence at UOIT Facility Tour: January 13, 2012

OSPE is delighted to host a tour of The Automotive Centre of Excellence (ACE) facility at UOIT campus in Oshawa, the first research, development and innovation centre of its kind in Canada. With a total cost of $100 million, ACE is home to one of the largest and most sophisticated climatic wind tunnels in the world. It also boasts a solar array that replicates the effects of the sun and is hydrogen-capable, allowing for alternative fuel cell development. Tickets must be purchased in advance and can be ordered through the OSPE website.

Speed Networking: January 19, 2012

Speed networking is quickly becoming the most popular way for employers and employees to connect. OPSE is excited to host another Speed Networking Session on January 19th from 6:30-9:00pm. Employers offer guidance, answer questions, and join discussions about their company, hiring trends, and valuable skills. Check out the OSPE website for more details. Registration opens soon.

Innovation At Vale – An Exclusive Networking Event: February 16, 2012

OSPE is excited to announce an exclusive networking event with our Gold sponsorship partner Vale. Don't miss the opportunity to mix and mingle with your fellow engineers at the head office of one of the largest mining firms in the world. Tickets are limited. Please contact Victoria Houle at vhoule@ospe.on.ca to book your spot today!

Boundary Layer Wind Tunnel Laboratory: March 29, 2012

Engineers at The University of Western Ontario in London, Ontario, are world leaders in the field of wind engineering research. Join OSPE members at 3:00 pm on March 29 at the Boundary Layer Wind Tunnel Laboratory (BLWT), a cutting-edge facility for developing wind tunnel testing and analysis methods. Check out www.uwo.ca/research/excellence/docs/blwt.pdf for more information. To reserve your spot, visit the *Events* section of our website today.

Policy series breakfast: March 22, 2012

OSPE is pleased to host a Policy Series Breakfast titled, "Seizing Innovation Opportunities in Ontario." The event will facilitate dialogue between engineers and organizations that offer research and innovation funding and support. For more details check *Events* at www.ospe.on.ca, or contact mbaird@ospe.on.ca.

Women in Engineering Advisory Committee (WEAC): Spring Forum

In April WEAC will be holding an evening Spring Forum with counterparts from industry to discuss issues confronting women in engineering. Are the issues the same across industries? Can we learn from other successes and failures? The Forum, which will be held at the Toronto Board of Trade, will also provide engineers with opportunities to network with affinity groups and industry organizations. For more details check *Events* at www.ospe.on.ca, or contact mbaird@ospe.on.ca.

Professional Development Courses

Examination Skills Preparation for Internationally Trained Engineers
Mississauga: January 24 - March 27, 2012
Toronto: January 25 - March 28, 2012

Preparatory Course for Professional Practice Examination as Administered by PEO
Toronto: March 31- April, 1, 2012

PMP® Exam Prep Course – 4 Days
London: January 31 - February 21, 2012
Kitchener: February 1 - 22, 2012
Toronto: February 2 - 23, 2012

Getting Your Point Across – Essential Communications for Engineers
Toronto: February 13, 2012

Fundamentals of Project Management
Toronto, March 15-16, 2012

Engineer your career – Moving into Management
Toronto: February 23, 2012

Facility Management Operations Essentials
Toronto: March 6 to April 3, 2012

Evidence-Based Facility Management Program
Toronto: February 22-24, 2012

Master of Negotiation Seminar
London: April 12, 2012
Kitchener: April 26, 2012

Business Writing & Grammar Skills
Ottawa: June 21, 2012
St. Catharines: June 18, 2012

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