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# CSSE Newsletter



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## President's Editorial

Dear CSSE Members,

The CSSE Board would like to increase the value proposition for members. Member surveys in 2025 (response rate 25%) suggested that one promising way to accomplish this would be to provide more opportunities for communication among members on topics of national and personal interest. Currently, we have three venues for communication: the AGM, this newsletter and our website.

In 2025, the format for the AGM was changed to include a presentation on offshore wind in Nova Scotia. We hope to continue with a similar format in 2026. Our webmaster, **Alan Pollard**, has found a new web service provider and is updating website content. CSSE has successfully attracted several prominent engineers as new members, as noted herein, and the Honours and Awards Committee is working on new, accomplished Fellows for 2026. The Charitable Donations committee plans to support 6 different projects in the amount of \$6500 including the National Science Fair and youth education in Alberta, British Columbia and Saskatchewan. The History and Archives Committee continues with the oral history project conducted via Western University and archived at the Ontario Tech University, with funding support from EIC and Mitacs.

If you have ideas for how CSSE can better support communication among members please email me: [president@seniorengineers.ca](mailto:president@seniorengineers.ca).

Best wishes for a healthy, Happy New Year!

**Tom Tiedje**, PEng (ret), FRSC, FCAE, FCSSE  
President, Canadian Society of Senior Engineers  
Professor Emeritus, Electrical and Computer Engineering,  
University of Victoria and University of British Columbia



President Tom Tiedje

## CSSE Annual General Meeting (AGM) - May 11, 2026

The CSSE AGM will be held Monday, May 11, 2026, via videoconference. CSSE Secretary, **Bruce Peachey** will send out the Agenda and Zoom link in late April to attend via videoconference.

### New Members

**Moncef Nehdi**, PhD, P.Eng., FCAE, FEIC, FACI, FCSCE, FAAIA, FAIIA, is Dean of the College of Engineering at the University of Guelph and Emeritus Professor at Western University and McMaster University, Canada. An award-winning higher education leader, scholar, and industry manager, he was Technical Director for three firms including one of the world's largest contractors. His work impacted landmark projects including 2 of the world's 4 tallest buildings and world's largest airport. Nehdi is a fellow of the Canadian Academy of Engineering, Engineering Institute of Canada, ACI, CSCE, AIIA and AAIA. He served as Chair of the ACI recycled materials committee, deputy chair of RILEM's data-driven concrete science committee, and chair CSCE Materials and Mechanics Division. Nehdi received numerous awards, including ACI Sustainability Award, KY LO Medal of the Engineering Institute of Canada, PEO Engineering Medal for Research and Development, Ontario Premier's Research Excellence Award, ACI Award for Professional Achievement, CSCE Horst Liepholz Medal, CSCE Whitman Wright Award, ICE Bill Curtin Medal, ASEE Fellow Award for Excellence in Engineering Education, Western University Engineering Prize for Excellence in Teaching, and several best paper awards and recognitions. A prolific author with more than 500 research publications, he was ranked among the world's most impactful civil engineers by Elsevier. Nehdi obtained his PhD from the University of British Columbia, MASc from Sherbrooke University, and BASc from Laval University, all in civil engineering.



**Janaka Ruwanpura**, PhD, P.Eng., PQS, FCAE, FCSCE, FEIC, NAC, is an accomplished engineering academic and an award-winning leader, who has served as Vice-Provost and Associate Vice-President of Research (International) at the University of Calgary for 11+ years. As a Professor of Civil Engineering, he was the Canada Research Chair in Project Management Systems and the Founding Director of the Centre for Project Management Excellence at the Schulich School of Engineering. Ruwanpura's academic journey began with a B.Sc. (Honours) from the University of Moratuwa, Sri Lanka, followed by an M.Sc. in Construction Management from Arizona State University, and a Ph.D. in Construction Engineering and Management from the University of Alberta. A former US Fulbright scholar, Ruwanpura has been instrumental in developing innovative tools and practices in the construction industry,



## New Members *(continued)*

focusing on productivity improvement, project management, and risk management. His scholarly contributions include over 180 technical papers and commercialization tools. His expertise and leadership have been recognized nationally and internationally, earning him teaching, research, and service awards at UCalgary and over a dozen external awards, including the Top 25 Canadian Immigrants Award (2022), introduced by the Prime Minister of Canada. Ruwanpura holds several professional titles, including a P.Eng. and PQS and fellowships from the Canadian Academy of Engineering (FCAE), Engineering Institute of Canada (FEIC), Canadian Society for Civil Engineering (FCSCE), and the US National Academy of Construction (NAC).

**Khaled Sennah**, PhD, P.Eng., P.E., FASCE, FCSCE, FEIC, FCAE, FIAAM, is a Professor of Structural Engineering at Toronto Metropolitan University. His expertise encompasses bridge design and rehabilitation, with over 370 publications and the supervision of more than 100 graduate students. He has received numerous awards, including the Arthur Wellington Prize and the A.B. Sanderson Award. He is an Elected Fellow of the Canadian Society for Civil Engineering, the Engineering Institute of Canada, the Canadian Academy of Engineering, the International Association of Advanced Materials, and the American Society of Civil Engineers. He has made significant contributions to CSA Design Standards, serving as chair of international conferences and conference scientific committees. He is an Associate Editor for the Canadian Journal for Civil Engineering and the ASCE Journal of Composites for Construction. Additionally, he serves as the Vice President of the International Association of Jointless Bridges.



**Wolfram Lunscher**, P.Eng. (Ret.), PMP, LSMIEEE, AFAIAA, is a retired spacecraft instrumentation engineer with a B.Sc. in physics ('74) from the University of Toronto, and a B.A.Sc ('80) and M.A.Sc. ('83) in electrical engineering from the University of British Columbia. He first joined the Canadian space industry in 1987 pursuing a diverse range of projects with companies such as Com Dev, EMS Technologies and Canadian Astronautics Ltd. These include data communication hardware flying on the International Space Station, a patented tracking algorithm developed for optical satellite communication that has been adapted to control the James Webb Space Telescope, and a radio science instrument aboard Canada's CASSIOPE spacecraft. Since retirement he's been involved with IEEE Ottawa section as a volunteer assisting with local conference organization, leading STEM Outreach and the Life Members. At Carleton university he volunteers as lead engineer of fourth year aerospace engineering students designing a CubeSat. He is also a mentor for the Zenith Canada Pathways Foundation. He is an Associate Fellow of the American Institute of Aeronautics and Astronautics, a Life Senior Member of the IEEE, and a PMI Project Management Professional.



## Canadian Academy of Engineering

The CAE, a member of the International Council of Academies of Engineering and Technological Sciences (CAETS), has engaged with the CSSE to

create a CAE-CSSE Memorandum of Understanding (MOU) to provide a framework for CSSE Members and CAE Fellows to collaborate more closely on initiatives of mutual interest. Liaison: (CSSE) **Ken Putt** [kwputt@shaw.ca](mailto:kwputt@shaw.ca) and (CAE) **Soheil Asgarpour** [asgar@telus.net](mailto:asgar@telus.net)

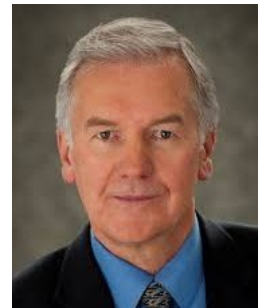
**Soheil Asgarpour**, PhD, P.Eng., FCAE, FCIM, FCSSE, is leading an initiative to map current efforts to advance women in engineering. This work involves collaboration with various national and international organizations to identify gaps, expand existing initiatives, and ultimately convene a workshop in 2027.



## Members in the News

Two CSSE Fellows, **Colin Smith**, CSSE Director and CSSE Honours and Awards Chair and Professor **Stephanie Willerth**, Royal Academy of Canada Scholar were honoured by the Engineering Institute of Canada (EIC).

**Colin Smith**, PEng, PE, FCAE, FEIC, FCSSE, FCIM, FEC, FGC (Hon) was awarded the EIC John B. Stirling Medal. The John B. Stirling Medal is awarded for leadership and distinguished service at the national level within the Institute and/or its Member Societies, by members of these Societies. One medal may be awarded annually.



**Stephanie Willerth**, Ph.D., P.Eng., FCSSE, FBSE, RSC Scholar, was recognized as an EIC Fellow. Members of EIC constituent societies are awarded the title of EIC Fellow by the Council of the Institute in recognition of their excellence in engineering and their services to the profession and to society. The actual number of new Fellows each year may vary owing to ties for the 20th spot.



## 2026 Charitable Awards

The Board of Directors, at its January 9th meeting, approved 2026 charitable donations as follows:

Youth Science Foundation - National Science Fair (matched by EIC)	\$1,000
TRIUMF - Gordon Lindsay Summer Student Internship	\$1,000
Alberta Science Network - School Student Engineering Outreach	\$1,000
Saskatchewan Science Centre - Student Science Programming	\$1,000
VIES Scholarship Awards - VI Graduates, Women Students, Leaders Entrance	\$1,000
Victoria Hand Project - Female High School Student Summer Eng. Internship	\$1,500



## CSSE Charitable Donations

The CSSE'S VIES sponsors five student awards within three scholarships in UVic's Faculty of Engineering and Computer Science: the VIES Leaders Entrance Award for students admitted to first year in the Faculty, the CSSE-EIC Vancouver Island Award for graduates of Vancouver Island high schools and the Bonnie and Ken Putt Award for women engineering students. The 2025 recipients of our five VIES-sponsored awards of \$2,000 each are:

CSSE-EIC Vancouver Island Award: **Nathaniel Holmes; Luis Almhanna**

VIES Leaders Entrance Award: **Alexander Kovats**

Bonnie and Ken Putt Award: **Faeze Naderi\***; **Cathy Yeung**

*\*See acceptance letter below*

To donate, click on the links below:

<https://extrweb.uvic.ca/donate-online/csse-eic>

<https://extrweb.uvic.ca/donate/vies-leadership>

<http://extrweb.uvic.ca/donation/bonnie-ken-putt>

As donors, we recently received the following acceptance and thank you letter from one of our Awardees:

*Dear donors of the Bonnie and Ken Putt Award for women engineering students,*

*I am deeply grateful for this generous award and for lifting a major financial burden from my shoulders. As a woman aspiring to become a civil engineer, your support brings me closer to my dream and fills me with hope. This award truly changes my life, allowing me to focus fully on my education without financial burden.*

*My journey to this point has not been easy. As a child in Afghanistan, I faced mistreatment in school that nearly destroyed my love for learning. Following the assassination of my teacher father, my family fled to Turkey, where I was finally able to experience an education built on respect. There, I rediscovered my passion for learning. After immigrating to Canada, I was immediately challenged, as I was placed three grades higher than my Turkey grade level. I faced language barriers, homelessness, and depression, yet never gave up. I worked hard, learned English, became an honour student in my high school, was elected to the Student Council, led clubs, and volunteered in my community.*

*Choosing the University of Victoria was an easy decision as I was drawn to its welcoming environment, excellent engineering program, and strong student support. Although my first year was challenging, I learned to overcome self-doubt and now feel proud of my progress and personal growth.*

*Outside of academics, I stay active through sports and participate in ECS Student Society activities, always eager to contribute and connect with others. I hope to continue growing as both a student and a future engineer.*

*Thank you again for believing in me and investing in my future. Your generosity motivates me to work harder and give back to others one day.*

*With gratitude,*

**Faeze Naderi**

## Regional News

### Quebec

Contact **Jim Nicell** PhD, P.Eng., FCAE, FCSSE [jim.nicell@mcgill.ca](mailto:jim.nicell@mcgill.ca) or **Suzelle Barrington**, PhD, P.Eng., FCAE, FCSSE [suzelle.barrington@consumaj.com](mailto:suzelle.barrington@consumaj.com) for more information on the **Montreal Chapter** of the Canadian Academy of Engineering meetings or any activities of the **Montreal CSSE Chapter**.

### Manitoba

Contact **Dave Ennis**, FCSSE, Chair of the **CSSE Winnipeg Chapter** for information on the next meeting or with your questions at [dave.ennis18@outlook.com](mailto:dave.ennis18@outlook.com).

### Alberta

**CSEM/CSSE Calgary** - CSSE Calgary members are invited to attend the CSEM monthly luncheons.

The Calgary Section of the Canadian Society for Engineering Management has conducted a series of luncheons on topics related to engineering management. Since their venue has changed, for current information go to <http://www.csem-scgi.org/calgary.html>.

The **Edmonton Chapter** meetings are held via Zoom™ They start at 12:45 Mountain Time and, depending on the number of questions, are over between 13:30 and 14:00. CSSE meetings are open to everyone. This notice can be forwarded to anyone who may be interested. The CSSE Edmonton Zoom Coordinator is **Tom Madsen** but if you have received this notice indirectly you need to email Tom, [tcmdasen@telus.net](mailto:tcmdasen@telus.net), to register and to be added to the Edmonton Chapter direct email list for future meeting notices.

**Tom Madsen** sends out a meeting notice/invitation to those on the Edmonton CSSE Chapter direct email list a couple of weeks ahead of the meeting and asks invitees to inform him (register) if they plan to attend. The notice includes a brief biography of the speaker and an abstract of the presentation. On the day prior to the meeting **Tom** sends out the Zoom link to those who have indicated they wish to attend.

### Winter 2026 Program

Thursday, February 19, 2026 - C-FER Full-Scale Technology Testing of Engineering Futures

**Kelly Piers** of C-FER Technologies will be speaking on how C-FER is contributing to quantifying challenges and qualifying solutions to support energy transition. His talk will include examples in the areas of Geothermal, and Hydrogen and CO<sub>2</sub> transportation. C-FER works in partnership with the global energy industry to advance safety, environmental performance and efficiency. They provide full-scale testing and specialized engineering consulting services from two world-class facilities in Edmonton, Alberta, Canada.

**Kelly** is a Principal Engineer at C-FER Technologies has 30 years of experience in applied research, testing, and product development for the energy industry. He has a BSc in Mechanical Engineering with Distinction from the UofA in 1995. He has managed various multi-

## Regional News (Continued)

year Joint Industry Projects related to production technologies for the energy industry. Then, after managerial and leadership roles, he more recently transitioned to Business Development and Planning to focus on diversification areas for C-FER (such as geothermal and CCUS) as well as Strategic and Business Planning.

March 19: Trevor Tkach/Matt Svienbjornson, ATCO Electric - Jasper Fire Electric System Recovery

April 16: Leon Sutherland, Deep Sky - Carbon Capture Update

May 21: TBA

June 18: TBA

### British Columbia

#### CSSE Vancouver Island Branch / Vancouver Island Engineering Society (VIES)

##### VIES Meetings

The CSSE Vancouver Island Branch operates as the Vancouver Island Engineering Society (VIES) and meets the first Friday of each month from October through June via Zoom™. The program details with the speaker's biography and the presentation abstract are issued via a VIES Newsletter, typically one or two weeks prior to the presentation date, where the links are provided to register; one for CSSE/VIES Members and guests, the other for EGBC professionals who want EGBC to record their Professional Development Hour (PDH) for each session. Alternatively, register at [www.viengsoc.ca](http://www.viengsoc.ca)

##### VIES 2026 Winter Technical Speaker Series Program

- February 6, 2026: Presentation by Dr. **Yussuf Esmaeili** for AIGreening - AI for Wildfire Prediction, Preparedness, and Decision Support
- March 6, 2025: Presentation by **Peter Dewdney** on the Square Kilometer Array, an International radio telescope project
- April 3, 2026: Presentation by **Scott Beatty** of Marine Labs. Coastal Intelligence for Marine Safety and Climate Resilience
- May 1, 2026: TBA

##### VIES NEWS - Follow VIES on LinkedIn!

Stay connected with VIES by following their LinkedIn page.

<https://www.linkedin.com/company/viengsoc>

### Correspondence with the CSSE Administration Office

All "snail-mail" correspondence, including cheques, and enquiries, should be sent to:

The Canadian Society  
of Senior Engineers  
464 Briar Avenue  
Ottawa, Ontario  
K1H 5H6

[administrator@seniorengineers.ca](mailto:administrator@seniorengineers.ca)

Phone calls: 613-795-9363

Dues and donations can be paid securely by credit card by going to the "Members" page at the CSSE website [www.seniorengineers.ca](http://www.seniorengineers.ca)

## History and Archives – EIC Oral History Project

In April 2025, the EIC History and Archives Committee initiated a second Oral History Project. The interviews from the first project are available on the web site of the Ontario Tech Library/OTU, along with a wide range of documents pertaining to the history of engineering in Canada. A link to the interviews is also found on the EIC web site <http://eic-ici.ca/index> or <https://digitalcollections.library.ontariotechu.ca/engineering-institute-canada>

The link to the Oral Histories Project banner is <https://drive.google.com/file/d/1JvbBmJBiheGQCawU+LfeLspEIixotv4e/view>

Initially, the project objective was to preserve the achievements of our members through interviews, with an additional objective now of promoting engineering. This second project is financially supported by 10 EIC constituent societies (CDA, CGS, CNS, CSBE, CSCE, CSChE, CSME, CSSE, IISE CDN Region, and TAC), and the EIC FUND. The committee also received financial matching support from MITACS for a total of \$35,000 for 2025 and 2026. Project Leader, **Michael Bartlett**, and **Eric Norris**, the summer 2026 intern, conducted 9 interviews, 6 of which have now been uploaded to the Ontario Tech University website.

Oral History Project interviews have been archived for the following CSSE Members:

**Suzelle Barrington**

**Karl Doetsch**

**John Plant**

**Robin Black**

**Willy Kotiuga**

**Ken Putt**

**Emily Cheung**

**Bruce McGibbon**

**Guy Van Uytven**

**Sarah Devereaux**

**Christine MacKinnon**

**Chan Wirasinghe**

The link to the interviews on the Ontario Tech University website is <https://digitalcollections.library.ontariotechu.ca/engineering-institute-canada>

## Honours and Awards Committee

### CSSE Fellowship Awards

CSSE - Fellowships nominations are under committee review for eight accomplished Canadian Engineers who have distinguished themselves in academic or engineering practice over a minimum of twenty years since graduation.

Thanks to CSSE Members who nominated our 2026 cohort of accomplished Engineers and to the Honours and Awards Committee for their rigorous assessments, led by Chair **Colin Smith** [colin.smith.ca@gmail.com](mailto:colin.smith.ca@gmail.com).

The 2026 Fellows will be announced at the 2026 CSSE AGM May 11, 2026.



## Member Opinion

### Diversifying the Engineering Profession in Canada

For several generations now, diversification is a goal of the engineering profession to publicize itself and increase its numbers. Promoting engineering to women, has too slowly moved towards a wider range of underrepresented groups. Today in 2026, where should we invest our efforts? In my opinion, we must improve career development in the private sector, followed by the public sector, meaning access to management level for all. The following is a recap of my experience since 1995, when I started my diversification work as President of the Women in Engineering group of l'Ordre des ingénieurs du Québec.

We have come a long way since the 1989 massacre at Polytechnique, an event that triggered awareness of the very few women in engineering at that time, in Canada. L'Ordre des ingénieurs du Québec counted less than 1% women in 1989 as compared to 15% in 2025: still a long way to go before reaching 50%.

Still, we have come a long way since 1989, because the aim of the engineering 'promotional culture' went from women to, finally around 2024, all underrepresented groups. I still believe, as I did promote since 2005, that we would reach a diversified goal when we succeed in a 'non biased' culture at all levels, from primary school to university, and within all working organizations. By non bias culture, I mean such simple things as diaper changing tables in men's washroom, because not only do we need to support underrepresented groups in achieving their career goals, but we must also support men in taking a wider role in all aspects of life. If a non bias culture had been adapted in 2005, today, we would be one generation ahead of where we are today.

Why is changing a baby's diaper a culture change? Please note that there is more than changing diapers to helping in everyday life, but this is a good example. I will be blunt in my explanation. Even in the early 21st century, many men were served by their mothers and then their wife. They therefore considered women as servants rather than equals. The first generation of women taking part in the 'work culture' obliged men to look after themselves and thus changed the attitude especially of their sons. These sons in turn respected their mother as an intellectual rather than as a 'maid'.

### Recruit a New Member!

If you have a friend who is not a CSSE member, simply refer them to the CSSE website at [www.seniorengineers.ca](http://www.seniorengineers.ca)

### Changed Your Coordinates?

If you have a new mailing (or emailing) address, please inform the CSSE Administration Office at [administrator@seniorengineers.ca](mailto:administrator@seniorengineers.ca) or (613) 795-9363.

## **Member Opinion** *(continued)*

Promoting diversity is a complex issue which cannot be solved overnight with one simple line of action. It is a generational issue requiring a change of culture, and adaptation of methods as the culture changes. Women themselves have not understood that they need to change their behaviour towards men to change their own. In other words, women needed to understand that they had to stop acting as 'maids' to be considered differently, even if it is generally in their blood to think about everyone else before themselves.

In my opinion, the biggest challenge today is subconscious behavior: telling oneself and our entourage, that we promote diversity when inside, we act differently without being aware of it. In industry, least profitable contracts or jobs will often subconsciously be given to underrepresented groups, to tell them at the end of the year, that they are not profitable. In 2005, talking about diversity to some of my former male students, they would express the need for all bosses to treat everyone equally, not just 'their favorites', meaning that the ordinary Joe Blow could benefit from diversity practices.

Most resources to encourage diversity are allocated to universities who have little understanding of the private and public culture, where the real action is, because they have never been exposed to it and if they do have contacts, the victims very often are not aware of their treatment.

The solution I have advocated for subconscious issues, since 2015, is the use of human resource specialists in private organizations. A good manager will be supported by a human resource specialist who will not only identify subconscious behaviour but promote employee policies towards a balance in work and life. Many pro-diversity groups need to add 'improved competitiveness' in their promotional discourse, as not only does diversity improve innovation, but it also improves better product adaptation (products adapted to all clients including underrepresented groups) and work effectiveness. Good jobs in the private sector, with fair promotional opportunities, can go a long way in promoting engineering to all young people who will also accept working along with and respecting underrepresented groups.

**Suzelle Barrington**, ing., agr., Ph.D., FCSAE, FIC, FCSSE, FCAE, FEIC.

**Suzelle Barrington** has worked in the public sector for 12 years, then as a university professor for 25 years, and finally as an engineering consultant in a private firm for 15 years.

## **Professional Programs**

### **D. Eng Program Launch DEng in Leadership in Engineering Applications and Practice (LEAP)**

UVic is now accepting applications for the Doctor of Engineering (DEng): Leadership in Engineering Applications and Practice, a first-of-its-kind program in Canada designed specifically for experienced professional engineers. The DEng is built for those who want to deepen their technical leadership, tackle complex real-world challenges, and translate research into practical solutions, without stepping away from their careers.

## Member's Input - Review of Important Issues

### Implications for Canada of American Control of Venezuelan Oil

by **Bruce Peachey**, P.Eng, CD, FCIC, FEIC, FCSSE and **Ken Putt**, P.Eng., FCAE, FEIC, FCSSE, FEC, FCGS

#### CSSE Newsletter Opinion Piece

In the recent CSSE survey of Members' interests, Members expressed an interest in having more CSSE 'Opinion Pieces' by knowledgeable CSSE Members on topics of current societal importance. This article is such an 'Opinion Piece' by two CSSE Fellows with long and broad experience in Canada's oil industry.

Much has recently been written on the implications for Canada's oil industry since the U.S. Government did a forced military 'extraction' of the illegitimate President of Venezuela, Nicolas Maduro, and asserted control over Venezuela's oil resources.

#### Current Situation and Historical Perspective - Ken Putt

Currently, Canada produces some 4.6 million barrels of oil per day (Source CAPP 2025 plus ~1.4 million bbls./d of natural gas liquids). Oil Sands Production makes up ~3.4 million barrels per day of that, mostly a grade sold as Western Canadian Select (WCS), a grade of diluted bitumen. Of the Canadian oil exports, some 1-1.5 million barrels/day find their way to the U.S. Gulf Coast, where they feed refineries that have been built or modified to effectively process heavy oil grades, which were originally Arab heavy from Saudi Arabia, Orinoco heavy from Venezuela and Mexico's Maya heavy, before Canada's oil sands were expanded and pipeline egress made WCS accessible to Gulf Coast refineries. Canada's Trans Mountain Pipeline Expansion (TMX) project was intended to alleviate this situation and provide a Pacific tidewater egress option to diversify market access. The TMX operator, Kinder Morgan, seeing the political roadblocks being established by the Federal Trudeau government and the stated opposition of B.C.'s Premier Horgan, rightly said they would not proceed with TMX under such political risk and heightened uncertainty. Originally, TMX was estimated to cost ~ CDN \$5.4 Billion in 2013 (source Global News Report), Since the Federal Government had foreclosed the Northern Gateway and Energy East tidewater export egress options, they were obliged to purchase the TMX and the Trans Mountain corporate entity from Kinder Morgan. Since TMX had been unreasonably delayed and B.C. Premier Horgan fought further delaying losing obstructive court cases, the cost of the now Government of Canada-owned TMX ballooned incredibly to CDN \$34+ Billion (2024 source Fraser Institute Report). The TMX was completed and now has a capacity of some 890,000 Bbl./day (Google AI) which is currently operating at ~80-90% of design capacity, with ~ 240,000 Bbl./day (Google AI) going to Washington State Refineries by pipeline, with the rest exported via tankers, mostly to China, Korea and other Asian locations.

Turning to Venezuela, they are currently only producing just over 900,000 Bbl./day, the fourth smallest OPEC country's production. Of that, Chevron, the only remaining U.S. multinational operating in Venezuela, is the largest Venezuelan producer at ~100,000 Bbl./day. U.S. President Trump summoned major U.S. oil producers and service company CEO's to the White House last January 9th. The only U.S. major producer in Venezuela, Chevron, said they could increase their

## **Member's Input - Review of Important Issues** (continued)

production, citing ability to increase by 50-100% in 2-3 years. Spanish multi-national, Repsol, said they could triple their production from ~70,000 Bbl./day to 210,000 B/d. ExxonMobil's CEO, Darren Woods, said, "Venezuela is uninvestable." He also said Venezuela was currently an unsafe place to send employees. He noted that Exxon and then ExxonMobil assets had been expropriated twice since the 1970's and they exited the country rather than accept Venezuela's expropriation terms. Conoco Phillips (and Petro Canada) also exited Venezuela at that time. Subsequently, the pro-Communist Venezuela dictatorship of Hugo Chavez purged Western-educated executives and engineers from PDVSA, the national oil company. Many of the Engineers with Orinoco heavy oil operating experience were attracted to Canada's oil sands. After the Chavez purges, the Chavez and subsequent Maduro kleptocratic Venezuela governments used PDVSA and their oil industry as a 'piggy bank' and let their oil infrastructure fall into incredible disrepair. U.S. experts say it likely would cost some USD\$100 Billion and take ten years to get Venezuelan production back to ~3.5 million Bbl./day.

Realistically, Canada has 2-3 years to increase tidewater access to export an additional 250,000-300,000 Bbl./day of Canadian WCS displaced by near term Venezuelan Orinoco heavy crude oil accessing U.S. Gulf Coast refineries, then we have maybe 5-8 years to build an additional 1,000,000 Bbl./day pipeline export egress capacity to tidewater, ideally via the B.C. Pacific North Coast.

Time is of the essence.

### **Why Venezuela heavy oil is unlikely to threaten Canadian oil exports to the U.S. for perhaps Decades - Bruce Peachey**

Oil Company Interests - As was indicated by ExxonMobil CEO, Darren Woods, "Venezuela is uninvestable". All companies have a fiduciary obligation to make as much money as they can for their shareholders and in the case of oil and gas multi-nationals they have an extremely wide range of potential producing areas to invest in. Making investment decisions requires considering a balance of factors including: 1) characteristics of the Resource; 2) Technology to produce it; 3) Policies of the countries involved; 4) Risks of development (environmental, social, security); 5) Markets for the production and all of these feed into 6) Economics for a given project. Oil companies don't have unlimited money to spend and they know that every resource, once developed, will begin to decline and will eventually have to be replaced. These factors give oil producers a much longer view than is the case for most political systems.

**Venezuela Heavy vs. Offshore Light Oil in the Region** - Currently, Venezuelan heavy oil does not come close to being the best place to invest and, as ExxonMobil has indicated, for most investors it would be a non-starter at the current time and commodity price, as the production has already declined since it was first developed in the 1940s, technology is stagnant, policies are extremely adverse if not hostile, risks to investments and personnel are extremely high, and markets are already being satisfied by reliable, low cost, stable production from Alberta. Notably, some of that Canadian production is coming from assets owned by ExxonMobil, or its 69%-owned affiliate, Imperial Oil. Why under-cut your own production? With existing Venezuelan heavy oil being

## Member's Input - Review of Important Issues *(continued)*

diverted to the US, it is not getting to China and other markets which now are more open for Canadian exports from TMX.

**Guyana-Suriname Basin** - What does look extremely promising in the north of South America right now is oil development offshore of Guyana, Venezuela's small English-speaking neighbour with a population of less than 1 million people. ExxonMobil, Chevron, and others have been developing offshore oil formations very quickly and production is now set to exceed Venezuela's total oil production and reach 1.2 million bpd with another 0.2 million bpd in Suriname. This southern Caribbean area has experienced very rapid, low risk production increases with no "boots on the ground" as all activity is offshore. A challenge related to Venezuela is that there is a border dispute over a major portion of Guyana which impacts offshore leases that was originally settled in Guyana's favour with US intervention in the late 1800s, but is now again under international review over control of that area. There is no reason why this highly lucrative offshore basin couldn't continue into Venezuelan waters, with new exploration if the U.S. restrictions on development there were lifted. Offshore developments similar to those in Guyana would be much more to the liking of oil producer investors. ExxonMobil's CEO thanked President Trump for "ensuring the energy security of the region."(although President Trump didn't appreciate CEO Woods 'speaking truth to power!')

**Venezuelan Future Uncertain** - The political and social situation in Venezuela is really no more certain than it was before Maduro was extracted and may be less so. The fact the Venezuelan President needed to be guarded by Cuban mercenaries says much about the lack of a stable regime in the country. Currently "Chavista" mercenaries are setting up armed roadblocks searching for any evidence of American affiliation amongst detainees. The Exxon Mobil CEO was right; Venezuela is currently unsafe for American oil company employees. That's unlikely to change any time soon.

If you wish to explore this topic further, please contact **Bruce Peachey** at [newparadigm@shaw.ca](mailto:newparadigm@shaw.ca) or **Ken Putt** at [kwputt@shaw.ca](mailto:kwputt@shaw.ca).

## Member's Input - Suggested Article for Member Awareness Issues

By CSSE President-elect, **Esam Hussein**, PhD, P.Eng., FCSSE

**Esam Hussein** said, "In these days of growing emphasis in both Canada and the United States on reducing regulatory timelines to spur development of major projects, a bit of reflection helps put the issue into context. Understanding where we are requires looking back on our history that brought us to today."

A cautionary note on expediting regulatory approvals of industrial projects - Graduate School of Public Policy may be found at <https://www.schoolofpublicpolicy.sk.ca/research-ideas/publications-and-policy-insight/policy-brief/policy-brief-industrial-regulations.php>  
[esam.hussein@uregina.ca](mailto:esam.hussein@uregina.ca)

This is perhaps an example of a position paper that the CSSE may wish to publish.