September 3, 2024

Executive Director's Message

The 2024 SIMSA member survey results are being compiled, but the big broad news is . . .

SIMSA Member Survey Results
August 1st, 2024



James Bulmer completed the survey and reporting work. And as an update, his title has changed from Industrial Concierge to now Manager of Member Services, to reflect is current scope of work. Also, included in subsequent sections below, James is working on a labour force development piece (see the "Member Services" section herein) as well as a review of ISN, Ariba, and Fieldglass (see the "Advocacy" section herein).

SIMSA tracks membership growth as of September 1st each year and the current graph reveals steady growth since our inception. As you will notice below, our growth has been steady through the good and bad times.

Total SIMSA Membership Number

(All as of Sept 1 each year)



The 2025 Mining Supply Chain tradeshow booth and tickets go on sale to SIMSA members October 30th! And new this year, there will be 2 registrations included with each booth (there was only 1 previously). Tradeshow booths and tickets will go on sale to non-SIMSA members on November 6th.

Given the overwhelming demand for MSCF sponsorships last year, this year we will not use a "first-come first-serve" format for buying sponsorships, but rather a "deadline for submissions of interest" and then we will "draw names out of a hat." SIMSA Member deadline for submissions of interest is October 7, 2024 at 9:00 a.m. Interested sponsors must attend at SIMSA's office or virtually on October 10, 2024 at 9:00 a.m. for sponsorship draw.

Levels of sponsorship will be drawn in the following order: Platinum, Swag Bag, Gold, Silver, Bronze. The "hat" will be reloaded at the start for each level's draw, with names of companies interested in that level. If your name is drawn in a category and you refuse the sponsorship, you will not be eligible for sponsorship in any other category. Also, for example, if you were in the draw for Platinum but were not drawn, you do not get to pick from another level – you must re-enter the draw for the other desired level.

Additional details including sponsorship cost and benefits can be found **HERE**.

Don't miss the 2024 Saskatchewan Suppliers' Energy Forum!



Saskatchewan Suppliers' Energy Forum

Oct. 2, 2024 - Delta Hotel, Regina, SK

Presenters include Cenovus, Federated Co-operaters Ltd, CAAP, Burns & McDonnell, and Arizona Lithium. More to be announced soon.



SIMSA will be hosting Roundtable events with Nutrien and BHP, on September 12 and 25 respectively. At these events, SIMSA members hear from and network with top purchasing, planning, and management persons from those companies for an entire day. You can purchase tickets for the Nutrien event HERE and the BHP event HERE.

Look for an event with Westinghouse and Cameco in November.

We will be hosting member sessions – that we are calling Town Halls - in Regina and Esterhazy on October 1 and November 20th respectively. The <u>Regina session</u> will begin with a lunch, while <u>Esterhazy session</u> will begin with a breakfast. Both are free and are targeting regional members. Members will hear a strategic update, learn about Protecture, and be able to ask questions and provide feedback.

Member's News

Adding Value to the Process: SRC's Unique Support for Unique Industry Clients

Team Power Solutions: In our community at the White Buffalo Youth Lodge

North Fringe Industrial Technologies Becomes Saskatchewan's First Private Certified Training Provider Under New WorkSafe Program

Energy lawyers Kevin Mehi and Brady Chapman rejoin MLT Aikins LLP

<u>Shaping the power generation sector - Davis Machine has been producing babbitt bearings since its start in 1919</u>

Advocacy

As per the board strategic plan and multiple member comments, SIMSA is engaging in an advocacy program that will focus on reducing reporting burdens to SIMSA members' businesses, stemming from ISN, Ariba, and Fieldglass.

The work will be completed in four phases:

- 1) Discovery Phase
 - a) Where we are now Collection of issues that SIMSA members are facing with compliance software. Items to be considered include:
 - i) Relevance of data requested
 - ii) A risk-based approach and questionable of competence of software companies to be evaluating content
 - iii) Ownership of data
 - iv) Bias towards larger and/or smaller companies, sectors, etc.
 - v) Software companies vetting of data
 - vi) Fee structures
 - vii) Effort required to input data
 - viii) Etc.
 - b) Explore the creation of a committee to assist in the subsequent phases.
 - c) High-level presentation of early findings to members and gathering of further member feedback
 - d) Compilation/vetting of feedback and creation of possible solutions when applicable
- 2) Scoping Phase A meeting with the major buyers using these programs to determine the necessary work needed to fix issues identified by SIMSA members.
- 3) Enactment A project involving all stakeholders (SIMSA members, buyers, software companies), to determine the reasonable and prudent questions that should be asked. To remove and rework questions to enable a more streamlined business environment.
- 4) Maintenance Establishment of an advisory committee formed from SIMSA board members.

Nuclear

Genealogy of the BWRX-300 Small Modular Reactor

The genealogy of General Electric's (GE) Boiling Water Reactor (BWR) technology reflects the continuous advancement of nuclear reactor technology over time. Following is an outline of the genealogy of GE's BWR technology, broken down by generation and key innovations:

1. Origins & Early Concepts (1950s)

The BWR concept was first conceived by Samuel Untermyer II and his team at Argonne National Laboratory. It proposed a direct-cycle system where water boils in the reactor core to produce steam that drives turbines. This concept was transferred to GE for further development and commercialization. The first experimental BWR was built by GE in 1957 at the Vallecitos Nuclear Center in California. It served as a testbed for proving the basic BWR technology.

2. First Generation (BWR1) - Late 1950s to Early 1960s

The first commercial BWR, based on the BWR1 design, began operation in 1960 at the Dresden Nuclear Power Station in Illinois. This reactor had a capacity of 210 MW(e) and established the foundation for commercial BWR technology.

3. Second and Third Generation (BWR2 and BWR3) – 1960s

The BWR2 was an evolutionary step from BWR1, with improvements in power output, reliability, and efficiency. The design increased the steam flow rate and featured improvements in the reactor vessel and fuel assemblies.

The BWR3 was introduced in the mid-1960s and incorporated enhanced safety systems, more robust control mechanisms, and higher power levels compared to BWR2. A plant at Oyster Creek was based on this design.

4. Fourth Generation (BWR4) - Late 1960s to Early 1970s

The BRW4 generation featured significant improvements in reactor control, safety systems, and fuel management. The BWR4 introduced the first use of jet pumps to recirculate water in the core, which improved thermal efficiency and power output. The Vermont Yankee plant used the BWR4 design.

5. Fifth and Sixth Generations (BWR5 and BWR6) - 1970s to Early 1980s

The BWR5 generation featured further safety enhancements, including improved emergency core cooling systems (ECCS) and refined control systems. It also utilized the Mark II containment design, which was an improvement over the Mark I design

The BWR6 design became GE's most advanced iteration of the BWR line before the Advanced Boiling Water Reactor (ABWR) design. It included features such as greater automation, improved core designs, better fuel utilization, and advanced ECCS configurations. The BWR6 design was used at Kuoeng 1.

6. Advanced Boiling Water Reactor (ABWR) - 1990s

The ABWR design was developed as a collaboration between GE, Hitachi, and Toshiba. The ABWR was the first Generation III nuclear reactor to be built and operated commercially, with the first unit completed in 1996 at the Kashiwazaki-Kariwa Nuclear Power Plant in Japan. The ABWR features fully digital controls, modular construction, higher efficiency, and improved safety features, including a more robust containment system and better thermal efficiency

7. Economic Simplified Boiling Water Reactor (ESBWR) – 2000s to 2010s

GE Hitachi and Hitachi GE developed the ESBWR, which emphasized passive safety systems that required no operator action or mechanical systems to function in an emergency. The ESBWR uses natural circulation for cooling and eliminates the need for complex pumping systems, making it inherently safer.

8. Small Modular Reactors (BWRX-300) - 2020s

The GE Hitachi BWRX-300 represents the latest evolution in the BWR genealogy. It is a small modular reactor (SMR) that takes advantage of the passive safety features and simplified design of the ESBWR but in a smaller, more flexible, and scalable package. The BWRX-300 is designed for deployment in a variety of settings, offering lower initial capital costs and shorter construction times.

Further Reading:

Large Boiling Water Reactors | GE Hitachi Nuclear Energy (gevernova.com)

GE BWR - Wikipedia

BWRX-300 General Description Revision F December 2023 005N9751 (gevernova.com)

NUCLEAR REACTORS BUILD, BEING BUILT, OR PLANNED IN THE UNITED STATES AS OF JUNE 30, 1970. (Technical Report) | OSTI.GOV

Member Services

In response to the growing labour shortage, we are turning to the ones building it – to see what we can do to help them by launching our "Education Ecosystem Enhancement" project – or "3E."

The focus is groups and individuals who are supporting curricular outcomes off-reserve in the K-12 space, that promote STEM and the trades, and are developers and/or creators of programming for students. This <u>tight</u> group has ideas that are scalable, innovative, and something industry can support.

We are beginning our Education Ecosystem Enhancement or "3E" project, with an initial four-step approach:

- 1. We are now launching a short quick-turnaround survey of the groups doing the educating or "the do'ers" (not you) to find out, "Who is doing what, which grades, where, and how big?" as well as "what do you need to grow?" The "what do you need?" portion, can include things such as:
 - a. Resources funding, people, equipment
 - b. Policy or system changes do we need to change how we do things, or what we do or not do?
 - c. Networking do you need access to certain and/or more people?
 - d. Interest do you need champions?
 - e. Seismic shifts do we need to make a massive shift?
- 2. In late September, we will compile the profile information portion into a directory, share it back to all of the participants. While retaining respondent anonymity for barriers and solutions to barriers.
- 3. In October will study and develop our thoughts, suggestions, and further questions and share them.
- 4. And then on November 28 in Saskatoon, stakeholders will gather to discuss the findings and develop near-term and long-term solutions, plus some next steps.

Sector News

The use of steel sourced from other countries has been a major issue.

In August, the federal government placed a tariff on Chinese steel per below:

Canada to Hit China With Tariffs on Electric Vehicles, Steel

Plans 100% levy on electric cars, 25% on steel and aluminum

Move follows US, EU tariffs and risks retaliation from China

By Brian Platt

August 26, 2024

https://www.bloomberg.com/news/articles/2024-08-26/canada-to-hit-china-with-tariffs-on-electric-vehicles-steel?srnd=homepage-canada

Canada will impose new tariffs on Chinese-made electric vehicles, aluminum and steel, lining up behind western allies and taking steps to protect domestic manufacturers.

The government announced a 100% levy on electric cars and 25% on steel and aluminum, confirming an earlier report from Bloomberg News. Prime Minister Justin Trudeau unveiled the policy Monday in Halifax, Nova Scotia, where he's gathered with the rest of his cabinet for a series of meetings about the economy and foreign relations.

The surtax on electric vehicles will take effect Oct. 1 and will also include certain hybrid passenger automobiles, trucks, buses and delivery vans. It will be added to an existing 6.1% tariff that applies to Chinese EVs.

The levies on aluminum and steel will come into place Oct. 15. The government released an <u>initial list of</u> goods on Monday and the public will have a chance to comment before it is finalized on Oct. 1.

Trudeau's government is also launching a new 30-day consultation on other sectors, including batteries and battery parts, semiconductors, solar products and critical minerals.

"We are transforming Canada's automotive sector to be a global leader in building the vehicles of tomorrow," Trudeau told reporters in Halifax.

"But actors like China have chosen to give themselves an unfair advantage in the global marketplace, compromising the security of our critical industries and displacing dedicated Canadian autos and metal workers."

Canada, an export-driven economy that relies heavily on trade with the US, has been closely watching moves by the Biden administration to erect a much higher tariff wall against Chinese EVs, batteries, solar cells, steel and other products. Canada's auto sector is highly integrated with that of its closest neighbor: The vast majority of its light vehicle production — which was 1.5 million units last year — is exported to the US.

Finance Minister Chrystia Freeland, the most powerful person in Trudeau's cabinet, has been one of the most prominent voices in favor of a <u>harder approach</u> to Chinese vehicle exports, and becoming a closer trade ally with the US.

Freeland said in Halifax that the Chinese policy of oversupply was built on "abysmal" labor and environmental standards. "We are not going to build Canadian policy based on abuses of workers in China and based on pollution in China," she said.

The government also announced it will limit eligibility for electric vehicle incentives to products made in countries that have negotiated free-trade agreements with Canada.

It will review the new levies within a year of them coming into effect.

'All Necessary Measures'

China's embassy in Ottawa said the move was a "typical act of trade protectionism and political domination" in defiance of <u>World Trade Organization</u> rules and inconsistent with Canada's position as a self-proclaimed advocate of global free trade and climate action.

Canada's accusation of "overcapacity" is groundless, it said in a <u>statement</u>, arguing that China's rapid development of electric vehicles relies on technological innovation, sound production and sufficient market competition.

"China will take all necessary measures to safeguard the legitimate rights and interests of Chinese enterprises," the embassy said.

China has retaliated against Canada before. It previously <u>restricted imports of Canadian canola seed</u> for three years — a move seen as retribution for a decision by Canada authorities to arrest <u>Huawei</u> executive Meng Wanzhou in Vancouver on a US extradition warrant. Meng returned to China in 2021.

The <u>European Union</u> has also announced proposed new tariffs on electric vehicles important from China, though at <u>lower levels</u> than the US and now Canada are proposing.

Chinese leaders plan to raise the issue of tariffs when US National Security Adviser Jake Sullivan visits this week, according to the official Xinhua News Agency. Sullivan is due to meet with Foreign Minister Wang Yi and may also meet with Chinese leader Xi Jinping.

The value of Chinese electric vehicles imported by Canada surged to C\$2.2 billion (\$1.6 billion) last year, from less than C\$100 million in 2022, according to data from Statistics Canada. The number of cars arriving from China at the port of Vancouver jumped after <u>Tesla Inc.</u> started shipping Model Y vehicles there from its Shanghai factory.

However, the Canadian government's main concern isn't Tesla, but the prospect of cheap cars made by Chinese automakers eventually becoming available. BYD <u>informed the Canadian government</u> in July that it intends to lobby lawmakers and officials about its plans to enter the country.

Trudeau also faced political and industry pressure to protect domestic jobs and wages. The government has bet big on automakers and manufacturers from democratic allies: the government has agreed to to multibillion-dollar subsidies for electric vehicle plants or battery factories for <u>Stellantis NV</u>, <u>Volkswagen AG</u> and <u>Honda Motor Co.</u>, among others.

With an upcoming review of the <u>US-Mexico-Canada Agreement</u> in 2026, there is "simply too much at stake" for the auto industry and economy if Canada is misaligned with the US, Brian Kingston, president and chief executive officer of the <u>Canadian Vehicle Manufacturers</u>' Association, said in a statement.

Steel and aluminum producers in Canada have also publicly and repeatedly urged the government to restrict China's access. Catherine Cobden, president and chief executive officer of the Canadian Steel Producers Association, said the move won't create major supply chain challenges.

"Of course there will be adjustments that will have to take place, but we're confident there's enough steel to meet the needs of Canadian and American consumers without unfairly traded, highly subsidized Chinese steel," she said in an interview.

Upcoming Events

Register for Upcoming Events HERE

• Nutrien Roundtable - September 12, 2024

SIMSA's Nutrien Roundtable will be on September 12, 2024 at Prairieland Park in Saskatoon. This is an all-day event for SIMSA members only. Tickets are \$125 until September 5th, then price increases to \$250.

SaskPoly Fundraising Event - "Time to Rise" – September 17, 2024

Join us virtually to learn about the new Saskatoon Campus project and how it will provide highly skilled and trained graduates for Saskatchewan business and industry.

BHP Roundtable – September 25, 2024

SIMSA's BHP Roundtable will be on September 25, 2024 at Prairieland Park in Saskatoon. This is an all-day event for SIMSA members only. Tickets are \$125 until September 18th, then price increases to \$250.

SIMSA Town Hall-Regina – October 1, 2024

Come meet with SIMSA staff to learn about how to utilize your membership, provide feedback on what you'd like SIMSA to provide its members, and learn about "Protecture" – SIMSA's new benefits plan that is available only to SIMSA members. This event is intended for SIMSA member companies in the southern part of Saskatchewan. Complimentary lunch provided – limit 2 attendees per SIMSA member company.

Saskatchewan Suppliers Energy Forum (SSEF) – October 2, 2024

The 10th Annual Saskatchewan Suppliers Energy Forum will be on October 2, 2024 at the Delta Hotel in Regina. Tradeshow and sponsorship sold out. Tickets are \$275 until September 19th, then price increases to \$525.

• SIMSA Town Hall-Esterhazy – November 20, 2024

Come meet with SIMSA staff to learn about how to utilize your membership, provide feedback on what you'd like SIMSA to provide its members, and learn about "Protecture" – SIMSA's new benefits plan that is available only to SIMSA members. This event is intended for SIMSA member companies in Esterhazy and surrounding area. Complimentary breakfast provided – limit 2 attendees per SIMSA member company.

- Saskatchewan Mining Supply Chain Forum (MSCF) April 9 & 10, 2025
 Save the Date! The 17th Annual Saskatchewan Mining Supply Chain Forum will take place on April 9 and 10, 2025 at Prairieland Park in Saskatoon.
- SIMSA AGM May 14, 2025
 Save the date! Our 2025 AGM will be on May 14, 2025 at Prairieland Park in Saskatoon.

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