

November 1, 2023

Executive Director's Message

I am often asked, "How does SIMSA decide to do or not do certain things?"

The over-arching statement I use is, "We help our members sell stuff." And then, when prioritising time, the rule is "What will help our members sell more stuff – doing option 1 or 2 or 3?"

Now before this goes any further, we also have a hidden rule of honesty, integrity, wisdom, and graciousness – but even those can lead to "selling more stuff."

As an example of how this works, consider the question of allocating time to lobby the Federal and Provincial governments. We consider the questions: "If I say or ask something, will it result in our members being able to sell more stuff? Will the Government respond in a positive manner or even respond at all? What is the best use of our time and resources?"

We also note that if the major resource producers get financially squeezed, the supply chain gets crushed. So, we look for ways to support our sectors.

You may have noticed that SIMSA hosted one social event in 10-years - our 10th Anniversary event. Why? Well, staging social events takes a lot of time. So, we go back to our original theme and consider, "What would help a member sell more stuff – hosting a social event or a procurement event?" Yes, networking is part of business but our procurement events usually set aside half of the time for networking.

Our events with Nutrien, BHP, FCL, and others allow us to state, "If you can't pay for your membership by participating in one of our major events, you are probably in the wrong business."

Another prioritisation question, we be something like, "Do we hire a lobbyist or event co-ordinator, or do we hire a Nuclear Specialist or Industrial Concierge?" We chose the latter pair as they are better at "helping our members sell stuff."

In addition to the above, we operate by the concept of "staying in our lane" – we do not get involved in issues or items which are not our direct concern. This could be broadly or focused – a focused item could be when we have a stage to speak from.

Now, there are a lot of things we could do for SIMSA to make more money, but "Does it help our members sell stuff?" If the answer is yes, we pursue things.

The 16th Annual Saskatchewan Mining Supply Chain Forum will take place on April 17 and 18, 2024 at Prairieland Park in Saskatoon, SK. Sponsorship sold out in 24 hours! Thank you!

There will be 25% more time for the tradeshow this year!

Tradeshow booth, and ticket "On Sale" dates are:

- Booths and tickets on sale to SIMSA members November 6 at 9:00 a.m.
- Booths and tickets on sale to non-SIMSA members November 13 at 9:00 a.m.

The high-level 2024 MSCF Draft Agenda is:

- Tuesday, April 16
Tradeshow set up (no set up permitted on April 17)
- Wednesday, April 17
Speakers will be 8:00 - 12:00 (subject to change)
Tradeshow open 10:00 – 6:00
- Thursday, April 18
Speakers will be 8:00 - 12:00 (subject to change)
Tradeshow open 10:00 - 4:00

Member's News

[Cross Country Canada Forms Partnership with KDM Constructors](#)

[3twenty Modular brings new industrial rental space Smart Bays to Saskatoon](#)

[SRC Helps Move Helium Forward in Saskatchewan](#)

[Cross Country Canada Provides Efficiency at Your Fingertips with Mobile Warehouse Solutions](#)

[Saskatchewan Polytechnic Fieldtrip to Team Power Solutions - Sharing Workforce Insights](#)

[Empowering Women: Pathway Supply LP Breaks Barriers with Exclusive Women's PPE Line](#)

[Delta Cleantech Inc. – Carbon Capture Canada and World Petroleum Conference 2023](#)

[Explosive growth for MEMS in our Saskatoon office! | Millennium EMS Solutions Ltd.](#)

Advocacy

SIMSA's Executive Director – Eric Anderson – spoke at CANREA's Electricity Transformation Canada event in Calgary.

A common topic at the event was the wind and solar power supply chains – the string of companies and supplies that are required to build a wind or solar farm.

His comment was, there is no “wind and solar supply chain” there is only “the” supply chain. Yes, there are suppliers of the solar panels themselves and the wind towers or turbines, but other than that – everything is pretty much shared.

It's the same copper mines making the wiring materials; and same ships, trucks and rail cars hauling goods. It's the same crane companies lifting the pieces, the same concrete companies pouring the foundations, and the same electrical companies installing parts. So, when there is a supply chain problem – basically everybody has a problem – except for some very focused pieces.

The poster is titled "Supply Chain Past, Present, and Future" and is for an event on Tuesday, October 24, 2023, from 10:30 to 11:30. It is part of the "Electricity Transformation Canada" and "Transition électrique Canada" series, held from October 23-25, 2023, in Calgary, Alberta. The event features a Moderator, Mark Gallagher (Director of Development, EDF Renewables North America), and four Speakers: Eric Anderson (Executive Director, Saskatchewan Industrial Mining Suppliers Association), David Vonesch (President, SkyFire Energy Inc), and Roslyn McMann (Director, Market Development, BluEarth Renewables). The poster is organized by the Canadian Renewable Energy Association (WIND, SOLAR, STORAGE), the Association canadienne de l'énergie renouvelable (ÉOLIEN, SOLAIRE, STOCKAGE), RE+ EVENTS, ITALIAN EXHIBITION GROUP (Providing the Future), and Deutsche Messe.

He has also spoken at Board meetings or with Board members of a few major corporations, plus shared similar discussions publicly on his daily radio commentary “[Prosperity Saskatchewan](#).” The thoughts were around the complete electrification of the grid.

The major topic for this was to get to a non-fossil-fuel based power-grid in Saskatchewan – as in remove all coal, natural gas, gasoline, and diesel - we have two projects to complete. The first project is to

replace about 5 Gigawatts of our current electricity source, which is currently based on coal and natural gas.

The next project is to add about another 8 gigawatts'ish of electricity, to replace all of the gasoline, diesel, natural gas used in transportation and heating. Remember, one option is to switch everything to electricity – there are other options, but if it all went electric that's the ballpark number. So, we need to switch over 5 gigawatts and then add up to another 8. So, things like hydrogen fuel makes sense to offset a chunk of that electrical requirement.

On the challenges this complete electrification creates, he noted that if we need to remove fossil fuels from our homes, and go all electric, we need to do a lot of re-wiring. He suggested that they look at their power panel in their house – the top breaker will likely say 100 or 200 on it. That's the maximum "amps" of power your current system can handle.

Now, to convert our natural gas or propane furnace to electricity, you are adding another about 80-amps (or more). And then, we need to add about 40 amps'ish for each of your electric cars. Then maybe your gas stove and water heater will need to be replaced, using up another say 40 amps or more.

Now, remember you had only 100 or 200 amps - maximum - to use – and we have just added another 100 or more. So, you'll need to do some serious re-wiring in your house, and then maybe to the power source in the alley or pole.

And then on top of this, farmers only have a window of a few weeks to harvest. So, to convert a farm operation to electricity – away from diesel – you will need a massive power source, to recharge batteries quickly. And that's power to a remote location.

Similarly, if you live in an apartment or tower type of building, there will need to be a massive upgrade to its power source, as everybody's power consumption will about double given the need for car chargers and electric heat.

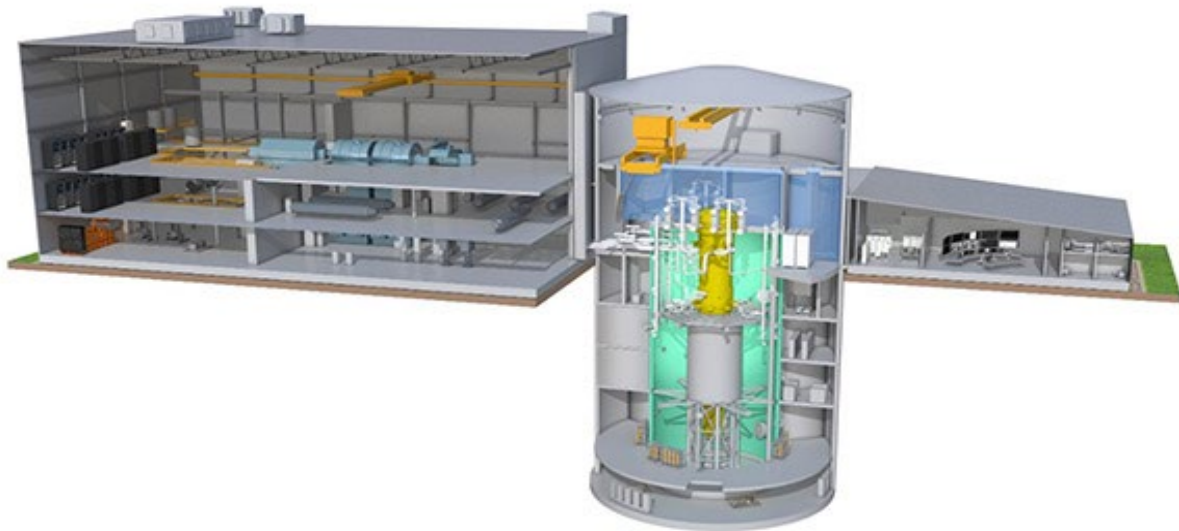
Now, if you live in an area without driveways – you park on the street – an electric car charger will need to be added to a post in front of every house.

That's a lot of wiring to be added, and lot of re-landscaping and paving after all of it is done.

Nuclear

Market Opportunities for Small Modular Reactor Supply Chain in Saskatchewan

Recent announcements have identified two nuclear power technologies that are being considered for deployment in Saskatchewan; the GE Hitachi BWRX-300, a 300 MW utility scale power plant, and the Westinghouse eVinci, a 5 MW micro reactor that is capable of producing both electricity and heat. Market opportunities related to these technologies are described below.



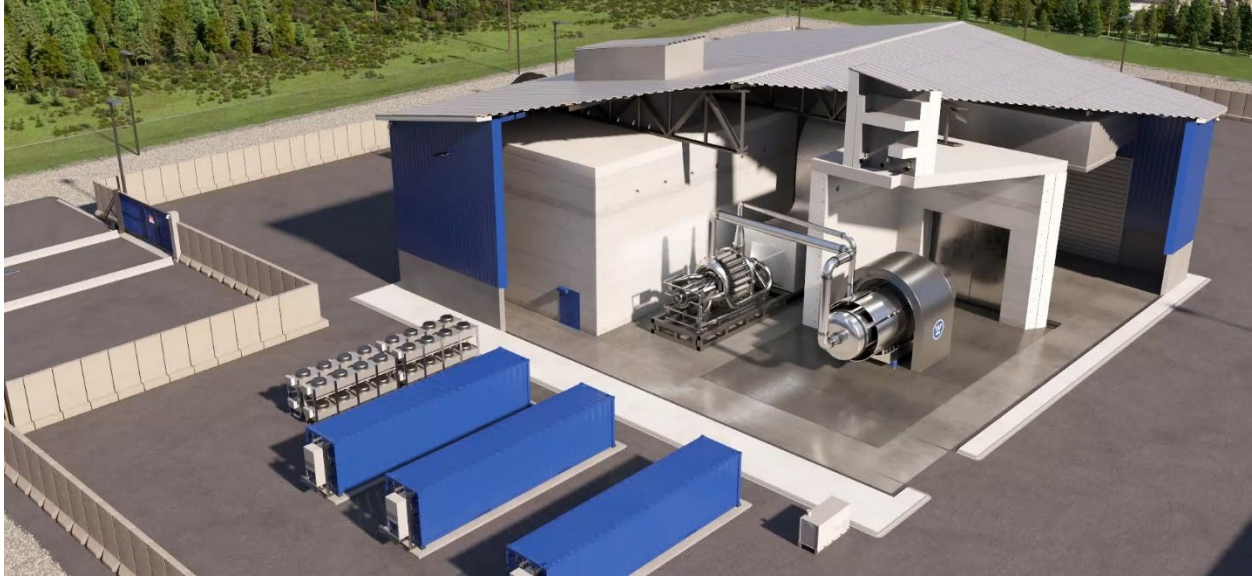
GE Hitachi BWRX-300 Power Plant Sectional View

On June 27, 2022 SaskPower announced that they have selected the GE Hitachi BWRX-300 Small Modular Reactor (SMR) technology for potential deployment in Saskatchewan. Indigenous, stakeholder and public engagement on the use of low carbon power generation technologies, including SMRs, has been ongoing since 2019. Following several stages of regulatory applications that will be made to the Canadian Nuclear Safety Commission (CNSC), SaskPower expects to decide on whether or not to build an SMR in 2029. Separate applications to the CNSC are required for the siting, construction, operations, and decommissioning phases of a nuclear power project.

To further support the site evaluation and regulatory application processes it is expected that services will be provided to SaskPower and its contractors by Saskatchewan based suppliers in 2024.

It is anticipated that the development and qualification of suppliers for the goods and services needed to construct and operate a BWRX-300 power plant in Saskatchewan would commence four to five years

in advance of a decision to construct. With a construction decision in 2029 this means that supplier development and qualification activities will commence in the 2024 to 2025 time frame.



Westinghouse Electric Canada eVinci Power Plant Sectional View

On May 18, 2022 the Saskatchewan Research Council (SRC) and Westinghouse Electric Canada (WEC) announced the signing of a Memorandum of Understanding (MOU) to advance the deployment of micro SMRs in Saskatchewan. Under this MOU, SRC and WEC will jointly develop a project in Saskatchewan for the development and testing of industrial, research and energy use applications.

On October 4, 2023 SRC announced the formation of an operating entity, SRC Nuclear Inc., to facilitate the advancement of this development work. It is expected that activities for Indigenous, stakeholder and public engagement will be launching soon and that requirements for service providers needed to support the site evaluation and regulatory application processes will become visible in 2024. It was also indicated by SRC on October 4, 2023 that there may be potential to site up to 15 eVinci micro SMRs by 2040.

The SIMSA Nuclear Specialist is continuing to review the designs of several SMRs in order to gain an understanding of the technical requirements, vendor procurement needs, and supply chain opportunities for SIMSA members. These reviews include identification of which portions of the plant will require nuclear certification. Information gathered to date indicates that significant portions of several of the designs will not require full nuclear certification. The transportability (dimensions and weights) of the individual components is also being considered as part of these reviews. More to come on these and other topics in the following months.

Industrial Concierge Update

A couple bits of news and upcoming initiatives from the Industrial Concierge Initiative for 2024:

- A potential Hackathon within the University of Saskatchewan College of Engineering Entrepreneurship group. Will help bring new ideas to DEMOday, showcase student talent to the mining industry (SIMSA members and mining companies), and promote interest in the mining industry to students.
- An “Innovation Newsletter” which will be circulated to the mining companies 2 weeks prior to the mining forum to showcase innovative SIMSA suppliers for mining company employees to connect with at the forum.
 - Submissions for the newsletter will start in early January together with the input of the IMII.
 - Guest articles from SIMSA members in addition to the products/services.
 - SIMSA members only.
 - Submissions are FREE
 - Featured companies will not be restricted to new products/services to the mining industry. However, it must be still be an innovative product/service.
- A framework or process map for innovation within the mining industry of Saskatchewan.
- An ESG roadmap (focus decarbonization) for SIMSA members for them to seek expert help, additional resources, and opportunities to supply decarbonization products to the mining industry.
- An ESG workshop in Q1 2024 (potentially annual) to help companies build an ESG strategy in response to the needs of the mining industry.
- An early Q2 release of our advanced manufacturing study for nuclear which will showcase opportunities in the nuclear supply chain.
- Multiple innovation events in Estevan.

If you’re interested in participating in the Hackathon or the Innovation Newsletter, please let me know and we can start discussing how you and your company could be involved.

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Sector News

Given the conversion of high-powered diesel engines used in transportation, agriculture, mining, etc. to electricity would require a herculean expansion of our power grid (see the “Advocacy” piece above), solutions such as hydrogen become critical.

In an October 26th, 2023 press release found [HERE](#), Mitsubishi Power America noted that they have “delivered the first shipment of major equipment for its Hydaptive™ integrated hydrogen production plant forming part of the Advanced Clean Energy Storage Hub (ACES Delta Hub) in Delta, UT.”

They state that, “Hydaptive™ will use renewable energy via electrolysis to produce green hydrogen by splitting water into hydrogen and oxygen through electrolysis. This delivery marks yet another milestone in the project’s development and another step in advancing the long-term use of green hydrogen in reducing carbon emissions in the U.S.”

They note that, “Mitsubishi Power’s delivery of equipment is being coordinated with the onsite construction schedule to optimize the overall project timeline. Once completed, the system at ACES Delta Hub will nearly double the annual production levels of clean hydrogen worldwide.”



The ACES Delta Hub, a joint project led by Mitsubishi Power Americas and Chevron U.S.A. Inc.’s New Energies Company (formerly Magnum Development), is a large-scale, world-class clean hydrogen facility designed to produce, store, and deliver green hydrogen to the western U.S. The hub will initially be capable of converting 220 MW of renewable energy into almost 100 tonnes per day of green hydrogen, which will then be stored in two massive salt caverns, having a storage capacity of more than 300 GWh of dispatchable clean energy. These salt caverns are located within the only major geologic salt dome formation in the western U.S.

A pipeline from the ACES Delta Hub will supply hydrogen to the nearby Intermountain Power Agency’s “IPP Renewed” power plant project to achieve seasonal, dispatchable renewable energy storage utilizing two advanced-class Mitsubishi Power J-series gas turbines. The turbines will use up to 30 percent hydrogen blended with natural gas at start-up, with a goal of transitioning up to 100 percent

hydrogen by 2045 or sooner, thereby resulting in carbon-free utility-scale power generation. Together, the high-performance turbines have a capacity of 840 MW of electricity generation.

“The integrated Hydaptive™ technologies will empower our customers to produce cost effective hydrogen at scale, and facilitate the transition to a cleaner, more sustainable energy future. This equipment delivery represents just one of many significant milestones as we move closer toward completion of the ACES Delta Hub,” said Kent Rockaway, Vice President, Hydrogen Production, Mitsubishi Power Americas.

Upcoming Events

Register for Upcoming Events [HERE](#)

- **BHP Roundtable – November 7, 2023**
Meet with BHP personnel and executives for a day of presentations and networking. This event is happening at Prairieland Park in Saskatoon.
- **Federated Co-operatives Limited Roundtable – November 27, 2023**
Meet with FCL personnel and executives for a day of presentations and networking. This event is happening at the Delta Hotel in Regina.
- **Saskatchewan Mining Supply Chain Forum (MSCF) – April 17 & 18, 2024**
The 16th Annual Saskatchewan Mining Supply Chain Forum will take place on April 17 and 18, 2024 at Prairieland Park in Saskatoon. Booths and tickets on sale to SIMSA members November 6, 2023.
- **SIMSA AGM – May 15, 2024**
Save the Date! The SIMSA AGM will be on May 15, 2024 at Prairieland Park in Saskatoon.
- **Saskatchewan Suppliers Energy Forum (SSEF) – October 2, 2024**
Save the Date! The 10th Annual Saskatchewan Suppliers Energy Forum will be on October 2, 2024 at the Delta Hotel in Regina.

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