CHFCA
Clean. Efficient. Energy.

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Nominees – CHFCA Vice-Chair 2021-22

Daniel Charette, Chief Operating Officer, Charbone Corp.

Daniel Charette is a veteran in renewable energy and an entrepreneur that has been managing many sustainable energy companies for over 30 years. In the early days, when the Canadian wind energy sector started being considered as a viable solution, he developed into a highly recognized executive within the renewable energy markets and built a solid reputation across Canada and internationally.

In 1998, he was appointed Director of Manufacturing by Danish Wind Turbine manufacturer NEG Micon A/S to set-up the first Canadian wind turbine nacelles assembly plant. The following year, he established Canada's first regional centre for operations and maintenance of wind turbines for America`s largest wind farm. He acted as NEG Micon's National Sales for Canada and for Vestas where he reached sales levels of almost $1 B. As a Business Development Manager for the Renewable Energy Division at Brookfield Power, his responsibilities included permitting and managing the construction of the company's first two projects valued over $300 M. He was also involved in the due diligence and acquisition nearing $2 B.

In 2006, he joined AAER as Senior Vice-president; the first pure play Canadian wind turbine manufacturer who was later acquired by Pioneer Power Solutions Inc. where he became President of Pioneer Wind Energy Systems. He then went on to the Canadian subsidiary of NRG Systems where he became Director of operations for the tall-tower manufacturing and installation division. More recently, he acted as Project Manager at Leader Resources Services for the construction of wind, solar and storage energy projects.

Daniel has served on various Association Boards & Councils, including the Board of Directors of the Canadian Wind Energy Association (CanWEA) for nine years, Association Québécoise des Producteurs d'Énergie Renouvelable (AQPER) for two years and Latin Wind Energy Association (LAWEA) for 3 years. Daniel is fully engaged into the development of sustainable, renewable and socially acceptable energy projects for the benefit of future generations.

Daniel's goals and interests in becoming the CHFCA vice-chair is to educate and promote to all Canadian stakeholders from coast to coast the use of hydrogen as a new combustible to replace the fossil fuel and accelerate the energy transition to a lower caron economy, including the R&D and the manufacturing.

For Daniel, the hydrogen file and sector pathway is the same that he had participated in created a viable and sustainable wind energy sector in Canada from less than a 100MW in 1998 to over 13,000 MW today. From his implication at the first manufacturing facility, first large wind farm and first O&M service center and joining the CanWEA board in 2002 for 9 years and convince the governments and the private sector that this file was one of the climate changes winning path, Daniel believes that the CHFCA can execute a similar plan to move the hydrogen economy forward.

As Vice-chair, Daniel will bring the balance of the message between the large companies interests and the smaller private sector to accelerate the energy transition in a positive and proactive way. Bringing the entrepreneurship perspective of the growing path for the sector, day-to-day reality of hydrogen implementation in the different industrial and logistic sectors with a business development view in a short-term vision and moving to the target to a larger economy with a mid term vision.

- Start the transition now with smaller steps while developing the larger projects
- Educating and convincing the different stakeholders of the maturity of the technology
- Increasing and promoting the visibility of the use of hydrogen across Canada
- Supporting the Canadian companies and entrepreneurship to become carbon neutral
- Working and networking with other association to advance the climate change economy

The goals are:

- By the end of 2022, have 100MW of new hydrogen production facilities and by 2030, 4,000MW of installed capacity.
- In 2022, have installed an hydrogen filling station at least one in each provinces and territories and by 2024 have at least one hydrogen filling station in a range of 500km of each to cross Canada coats to coast.
- By the end of 2025, have 25% of long-haul buses and trucks using hydrogen.
- By 2025, have increase hydrogen penetration into the different sectors, including; local transportation, automobile, construction and mining equipment's, power-to-gas and new processes.

Sam McDermott, Technical Manager, Enbridge Gas Distribution

Sam McDermott is a licensed professional engineer in the province of Ontario, with over 24 years of Engineering and Project Management experience in both the Manufacturing and Energy sectors.

He holds a Bachelor of Mechanical Engineering degree from Ryerson University as well as a Masters of Advanced Design and Manufacturing post graduate degree from the University of Toronto.

He has worked as a mechanical designer and project manager to develop highly specialized equipment for various industries, a project manager in the automotive industry and a designer and project manager of mechanical and fluids systems in the water industry.

Sam then went on to work in the energy sector with Enbridge Gas Inc., where he has held leadership roles in engineering, project management, design, contract management, operational, and customer service roles managing large volume customers. Sam is currently the specialist for the Power to Gas program in Enbridge's Business Development team.

His experience is varied and extensive covering diverse areas of the manufacturing and business sectors. He is an effective communicator, highly organized, customer focused, results driven with a passion for what he does. His educational background and experience have enabled him to lead and manage with positive outcomes.

Philip Horacek, P. Eng. Director, Business Operations; Director of Technology, Advanced Transportation, Powertech Labs

Mr. Philip Horacek is responsible for strategy and business development for Powertech's Advanced Transportation business unit. Powertech is a technical leader in supporting the electrification of the transportation sector through three departments: High Pressure Testing, Hydrogen Infrastructure, and Electric Vehicle Infrastructure. High Pressure Testing is the world leader in the testing and certification of high-pressure gas components, automotive fuel systems, and hydrogen fueling protocols.

He has almost 20 years of experience in the hydrogen and alternative fuels industry and serves as a technical expert for various CSA, SAE, UN ECE, ISO, and UN GTR committees. In addition to pressure vessel testing and certification programs, he has also overseen a significant number of hydrogen pressure vessel safety characterization studies including simulated crash testing, damage tolerance testing, pneumatic ruptures, localized and engulfing fire testing, and other highly specialized destructive testing projects.

If elected as Vice-Chair, Mr. Horacek's objectives for the association would comprise the following:

- **Support members by providing baseline education to sectors about the fit and benefits of hydrogen.** The CHFCA + branches already do a great job organizing webinars for aspects of the value chain or applications for hydrogen (i.e. urban transit). I found the general benefits of hydrogen infographic generated by the Assoc. some time ago useful in educating our parent company, BC Hydro, on how hydrogen fits into their potential future strategy. I've found that many companies have their internal hydrogen supporters and they would benefit from some fit-for-purpose, articulate material to provide to their executive management to build support. I would suggest the generation of some additional infographics on the benefits of hydrogen in various transport or energy value chains along with their benefits, such as transit, heavy-duty, energy storage, etc. I also wonder if it might be the CHFCA's role to attend industry specific conferences relevant for the Canadian market to advocate for hydrogen-based solutions – such as highlighting hydrogen at mining, transit, utility grid modernization, etc. conferences. Maybe even an informal report being generated from those conferences to brief members on the interest level of hydrogen and which organizations expressed them.

- **Help members with resources on what's going on in Canada and beyond.** Establish a site for members to share/pin helpful market information so they don't have to go hunting for it. I am aware that the CHFCA already currently tracks funding opportunities and sends out emails but these can get lost in the tidal wave of emails we manage every day. A central resource for members to pull the information they need would be helpful. Moving on from the site itself and more to the generation of helpful resources: I also wonder whether the CHFCA could work closely with Canada's Trade Commissioners Service to identify prime export opportunities for the different industries.
    - Tracking of provincial/federal funding opportunities + how to navigate funding process
    - Tracking of hydrogen projects in Canada
    - Navigating codes and standards – high level overview of which standards apply for different types of hydrogen projects

William Ma, Principal, Pacific Wellfare Resource Investment

William has over 25 years of rich business experiences mainly in the areas of manufacturing and production management, real estate development for industrial centres, and renewable and green energy development in hydrogen, solar & wind energy.

Since 2005, William has dedicated his efforts to the hydrogen energy industry. William joined the CHFCA in 2017 and continues to serve as an active member. William believes that long term cooperation between every CHFCA member will be the key to the Canadian sector's overall success.

In 2017, with the great confidence of the industry future, and with the manufacturing management experience, William joined a bid offer to purchase a prominent fuel cell research, development and engineering company, and planned to hire 100 employees to continue the hydrogen R&D and manufacturer's operations in Vancouver. That shows a strong commitment for his time and money into developing Hydrogen business in Canada.

In 2017-2018. William together with CHFCA, joined couple of events in Japan and China, and also help CHFCA to set up several meetings with some big Auto groups, energy groups in China, and also help CHFCA to sign some agreements with related big associations. All these efforts were intended to help Canada's Hydrogen technologies to create more jobs locally and catch more market shares in Asian markets.

In 2019. William also work together with one of the famous CHFCA members to exhibit in Shang Hai, China, a big international event named CIIE (China International Import Event 2019). The exhibition booth set up in Auto Car pavilion and the booth size is over 2000 sf. in the prime location, the booth number is 001, Hyundai Motor is 002, Toyota Is 003, Benz is 004, and Porsche etc. During the exhibition, the president of Hyundai and Toyota all came to our booth. We were the only Canada hydrogen company in that event, CHFCA logo also on that event, to allow many professional people and companies to know CHFCA and Canada Hydrogen technology is advanced in the world, and we got many order inquiries from all around the world. CCTV, the most inferential TV channel in China, also have dedicated report for our exhibition.

Since the outbreak of COVID 19 in earlier 2020, William continues working hard, and prepare to set up hydrogen equipment's manufacture facilities in greater Vancouver to facilitate big order inquiries from the US, Canada, Europe, and China. William and his

families already purchased several large size warehouses and industry lands in greater Vancouver in prior years and has established connections with north American green energy auto manufactures, William has the capacity and dedication to continue his Hydrogen business and ready to push it to the next level in the immediate future.

William believes he will be the good fit for the CHFCA Chair. With the passion about Hydrogen business, years of rich business experience, solid preparation including manufacturing facilities and necessary financial means, William is now ready to work with every CHFCA members and build a great future together, for Canadian Hydrogen industry.

Sabina Russell, B.A.SC., P.ENG, Principal, Zen Clean Energy Solutions

Sabina holds a degree in mechanical engineering from the University of British Columbia, and an Executive Certificate in Strategy & Innovation from MIT Sloan. She has over twenty years experience working in the clean energy sector spanning a range of roles from technology and product development, to product management and corporate development.

Sabina specializes in helping clients where combined technical knowledge and hands-on commercial experience are an asset. Sabina leads Zen's project management branch, with a focus on consortium based projects deploying clean and zero emission technologies. She also enjoys working with small companies developing new cleantech products, where her extensive product development and new market development expertise help clients mature and commercialize their technology.

Prior to joining Zen, Sabina was with Ballard Power Systems where she held a range of technical and commercial roles, including Director of Product Engineering, where she led an organization of over 95 engineers and scientists.

As a mother of two daughters, Sabina thinks a lot about the legacy we leave to our children, and is passionate about playing a role in both developing and deploying technologies that will lead to a more sustainable future.