

# Curriculum Vitae

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## Robert V. Parsons

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## Academic Qualifications

Doctor of Philosophy (PhD), University of Manitoba, Winnipeg, Manitoba.

Department of Biosystems Engineering. Thesis title:

“Selective Break-Down of Flax Shive for the Recovery of High-Value Bio-Products.”

(Work involved development of a new potential business opportunity within

Manitoba, specifically a biomass-based industrial process to extract two separate and independent high-value products from the same feedstock, fulfilling the “biorefinery”

concept. Flax decortication had been an significant industry within Manitoba, with flax shive the major waste product. Technically-based, there were cross-overs into chemistry and food science, also significant environmental implications and management-orientation, i.e., evaluating business prospects).

Portal: <https://mspace.lib.umanitoba.ca/handle/1993/18483>

Certification in Higher Education Teaching (CHET)

University Teaching Services (UTS), University of Manitoba, Winnipeg, Manitoba.

Master of Business Administration (with Distinction), York University, Toronto, Ontario.

Specialization in business and environment (Haub program on Business and Environment).

Significant additional coursework related to ethics, marketing, finance, management science, project management, and operations and technology management.

Master of Science in Chemical Engineering, University of Calgary, Calgary, Alberta.

Thesis title: “Efficiency and Kinetics of Ethanol Production by *Saccharomyces cerevisiae*”

Bachelor of Science (Honours) in Chemical Engineering, University of Calgary, Calgary, Alberta.

## Publications

### Peer-reviewed journal papers:

Larson, P.D., **R.V. Parsons** and D. Kalluri. 2024. Zero-emission heavy-duty, long-haul trucking: Obstacles and opportunities for logistics in North America. *Logistics* 8(3): 64. (Open access journal article) <https://www.mdpi.com/2305-6290/8/3/64>

**Parsons, R.V.** 2021. Canada as a case study for balanced presentation to address controversy on emission reduction policies. *Sustainability* 13: 7909. (Open access journal article). <https://www.mdpi.com/2071-1050/13/14/7909/pdf>

Delos Reyes, J.R.M., **R.V. Parsons** and R. Hoemsen. 2016. Winter happens: the effect of ambient temperature on the travel range of electric vehicles. *IEEE Transactions on Vehicular Technology* 65(5): 4016-4022.

Larson, P.D., J. Viafara, **R.V. Parsons** and A. Elias. 2014. Consumer attitudes about electric cars: pricing analysis and policy implications. *Transportation Research Part A: Policy and Practice* 69: 299-314.

**Parsons, R.V.**, S. Cenkowski, J.L. Sorensen, T. Beta and S.D. Arntfield. 2013. Hemicellulose polysaccharide recovery from flax shive using alkaline solutions with sodium ethoxide pretreatment. *Industrial Crops and Products* 44: 165-170.

**Parsons, R.V.** and S. Cenkowski. 2011. Liquid-holding capacity of flax shive versus other biomass materials using distilled water, alcohols, and hexane. *Canadian Biosystems Engineering* 53: 3.19-3.27.

**Parsons, R.V.**, K.A.L. Parsons and J.L. Sorensen. 2011. Extraction of flax shive using sodium ethoxide catalyst in anhydrous ethanol. *Industrial Crops and Products* 34: 1245-1249.

**Parsons, R.V.**, S. Cenkowski and Q. Zhang. 2008. Effects of alcohols versus water addition on the bulk solids frictional behaviour of flax shive. *Canadian Biosystems Engineering* 50: 3.67-3.75.

**Parsons, R.V.** and S. Cenkowski. 2008. Postharvest treatment of mycotoxin contamination in agricultural products. *Stewart Postharvest Review* 4: 1-14.

Cinq-Mars, C.D., S.D. Arntfield and **R.V. Parsons**. 2003. Quantification and optimization of the residence time distribution of navy beans (*Phaseous vulgaris*) during pilot scale micronization. *Food Research International* 36: 685-693.

#### **Book chapters (peer-reviewed):**

**Parsons, R.V.**, and S. Cenkowski. 2015. Dehydration technologies for functional foods and nutraceuticals. In *Functional Food Ingredients and Nutraceuticals: Processing, Second Edition*. Ed. J. Shi. CRC Press, pp 545-588.

#### **Papers associated with conference presentations (peer-reviewed):**

Klymchuk, M., **R. Parsons** and P.D. Larson. 2024. Canada and Ukraine: A comparison of opportunities for Sustainable Aviation Fuel (SAF). Paper prepared in association with presentation to Canadian Transportation Research Forum (CTRF), 59th Annual Conference, May 12-15, 2024, Kelowna, British Columbia. [https://ctrf.ca/wp-content/uploads/2024\\_ctrf\\_preliminary\\_program\\_april-24.pdf](https://ctrf.ca/wp-content/uploads/2024_ctrf_preliminary_program_april-24.pdf)

Larson, P.D., **R.V. Parsons**, and A. Elias. 2021. Active transportation and health: A tale of three cities. Paper prepared in association with presentation to Transportation Association of Canada (TAC) Conference & Exhibition: Recovery and Resilience, Transportation after COVID-19. September 20 - October 1, 2021 (Virtual Conference hosted by TAC).

Larson, P.D. and **R.V. Parsons**. 2021. North American crude oil movement: Pipeline vs. railway safety. Paper prepared in association with presentation to Canadian Transportation Research Forum

(CTRF), 56th Annual Conference, May 17-18, 2021 (Virtual Conference hosted from Fredericton, New Brunswick). [https://ctrf.ca/wp-content/uploads/2021/05/2021\\_CTRF\\_Conference\\_Program\\_v\\_4.pdf](https://ctrf.ca/wp-content/uploads/2021/05/2021_CTRF_Conference_Program_v_4.pdf)

Delos Reyes, J.R.M., **R.V. Parsons** and R. Hoemsen. 2016. Practical impacts of ambient temperature and aging combined on maximum travel range of the Nissan Leaf. Proceedings of EVS 29 International Battery, Hybrid and Fuel Cell Electric Vehicle Symposium, Montreal, Quebec, Electric Drive Transportation Association.

Delos Reyes, J.R.M., R. Hoemsen, and **R.V. Parsons**. 2015. Cold weather travel range and energy consumption of the Chevrolet Volt PHEV. Vehicle Power and Propulsion Conference (VPPC), Montreal, Quebec, IEEE.

**Parsons, R.V.**, S. Cenkowski and E. Liu. 2013. Application of selective bio-product recovery process developed for flax shive to additional biomass feedstocks: oat hulls, sunflower hulls, hemp hurds, and cereal straw. CSBE/SCGAB 2013 Annual Conference, Saskatoon, Saskatchewan. Paper No. CSBE13-066.

**Parsons, R.V.**, V.B. Agbor, J. Lam, D.B. Levin and S. Cenkowski. 2013. Fermentative production of ethanol and hydrogen from flax shive by *Clostridium thermocellum* after pretreatment using sodium ethoxide and aqueous sodium hydroxide. CSBE/SCGAB 2013 Annual Conference, Saskatoon, Saskatchewan. Paper No. CSBE13-067.

**Parsons, R.V.**, S. Cenkowski and E. Liu. 2011. Flax shive as a case study biorefining opportunity to support development of next-generation biofuels. CSBE/SCGAB 2011 Annual Conference, Winnipeg Manitoba. Paper No. CSBE11-523.

Gregor, C. and **R.V. Parsons**. 2011. Cold-weather modifications of plug-in hybrid electric vehicles for Manitoba operation. Electrical Power and Energy Conference (EPEC), Winnipeg, Manitoba, IEEE.

**Parsons, R.V.** and M.E. Weekes. 2000. Energy and cost efficient odour control using microturbines. Proceedings of the Water Environment Federation Odors and VOC Emissions 2000 Conference, Cincinnati, Ohio. Water Environment Federation, Alexandria, Virginia, pp. 1102-1125.

#### **Additional significant published articles and documents (not peer-reviewed):**

Articles broken down by: Conversation Canada, Policy Options, Eco-Journal, Winnipeg Free Press, and Other Venues or Reports Publicly-Available.

Conversation Canada (1 article)

Parsons, R., C.-C. Chen and R. Shanker. 2023. Funding electric public transit can reduce emissions and address economic inequality. Conversation Canada (Tuesday January 10, 2023 12.34pm EST) <https://theconversation.com/funding-electric-public-transit-can-reduce-emissions-and-address-economic-inequality-194434>

Policy Options (2 articles)

**Parsons, R.** and P.D. Larson. 2023. How gleaning food addresses greenhouse gas emissions and food insecurity: Food banks keep edible food out of landfills, reducing methane emissions, but pay taxes on their activities. Ottawa should give them a break. *Policy Options* (Monday January 30, 2023). <https://policyoptions.irpp.org/magazines/january-2023/how-gleaning-food-addresses-greenhouse-gas-emissions-and-food-insecurity/>

Melo, F. and **R. Parsons**. 2019. Simplified rebates would get more electric buses on Canadian roads: We've fallen behind in adopting electric buses, but predictable and streamlined funding would help transit agencies make the jump. *Policy Options* (Thursday August 22, 2019). <https://policyoptions.irpp.org/magazines/august-2019/simplified-rebates-would-get-more-electric-buses-on-canadian-roads/>

Eco-Journal (Manitoba Eco-Network - 3 articles)

**Parsons, R.**, J. Bunkowsky, A. Grycko, S. Thomas, D. Chevrier, A. Antony and S. Touchette. 2019. When will solar be generally viable in Manitoba? *Eco-Journal* (Manitoba Eco-Network, Spring 2019) 30(2): 9-10. [https://mbeconetwork.org/wp-content/uploads/2019/04/Eco\\_Journal-Spring-19\\_online-1.pdf](https://mbeconetwork.org/wp-content/uploads/2019/04/Eco_Journal-Spring-19_online-1.pdf)

**Parsons, R.**, M. Baranowski, K. Borce and T. MacHutchon. 2018. Environmental win-win is possible: Manitoba leads on renewable fuels. *Eco-Journal* (Manitoba Eco-Network, Fall 2018) 29(3): 8. [http://mbeconetwork.org/wp-content/uploads/2018/10/Eco\\_Journal-Fall-18\\_online.pdf](http://mbeconetwork.org/wp-content/uploads/2018/10/Eco_Journal-Fall-18_online.pdf)

**Parsons, R.V.** 2015. Not-so-good nature of compact fluorescent light bulbs in Manitoba. *Eco-Journal* (Manitoba Eco-Network, Fall 2015). 25(3): 5,9. [https://mbeconetwork.org/wp-content/uploads/2016/02/Eco-Journal-Fall15\\_Online.pdf](https://mbeconetwork.org/wp-content/uploads/2016/02/Eco-Journal-Fall15_Online.pdf)

Winnipeg Free Press (Op-Ed style - 44 articles)

**Parsons, R.** 2024. More thoughtful capital gains policy needed. *Winnipeg Free Press*, Think Tank Section (Wednesday July 3, 2024 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2024/07/03/more-thoughtful-capital-gains-policy-needed>

**Parsons, R.** 2024. Ground-source heat pumps promising. *Winnipeg Free Press*, Think Tank Section (Saturday May 25, 2024 print edition, page A7). [https://www.winnipegfreepress.com/opinion/analysis/2024/05/25/ground-source-heat-pumps-promising#history\\_popup](https://www.winnipegfreepress.com/opinion/analysis/2024/05/25/ground-source-heat-pumps-promising#history_popup)

**Parsons, R.** 2024. Still not getting to zero. *Winnipeg Free Press*, Think Tank Section (Friday May 10, 2024 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2024/05/10/still-not-getting-to-zero>

**Parsons, R.** 2024. Moving forward on electricity - practically. *Winnipeg Free Press*, Think Tank Section (Thursday February 22, 2024 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2024/02/22/moving-forward-on-electricity-practically>

**Parsons, R.** 2023. Canada's major climate failure. *Winnipeg Free Press*, Think Tank Section (Friday December 22, 2023 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2023/12/22/canadas-major-climate-failure>

**Parsons, R.** 2023. Energy is important - but subtle. *Winnipeg Free Press*, Think Tank Section (Tuesday October 31, 2023 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2023/10/31/energy-is-important-but-subtle>

**Parsons, R.** 2023. The next step at Prairie Green. *Winnipeg Free Press*, Think Tank Section (Monday August 14, 2023 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2023/08/14/the-next-step-at-prairie-green>

**Parsons, R.** 2023. Heat pump plan needs workable economics. *Winnipeg Free Press*, Think Tank Section (Thursday July 18, 2023 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2023/07/18/heat-pump-plan-needs-workable-economics>

**Parsons, R.** 2023. Asking candidates about a carbon tax problem. *Winnipeg Free Press*, Think Tank Section (Monday June 5, 2023 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2023/06/05/asking-candidates-about-a-carbon-tax-problem>

**Parsons, R.** 2023. Federal budget fails on energy, climate. *Winnipeg Free Press*, Think Tank Section (Friday April 14, 2023 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2023/04/14/federal-budget-fails-on-energy-climate>

**Parsons, R.** 2023. Finding opportunities for Churchill. *Winnipeg Free Press*, Think Tank Section (Friday March 24, 2023 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2023/03/24/finding-opportunities-for-churchill>

**Parsons R., C.-C. Chen and R. Shanker.** 2023. Electrified transit is part of the solution. *Winnipeg Free Press*, Think Tank Section (Monday January 30, 2023 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2023/01/30/electrified-transit-is-part-of-the-solution>

**Parsons, R.** 2022. Exploiting Manitoba's biofuel advantage. *Winnipeg Free Press*, Think Tank Section (Wednesday December 14, 2022 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2022/12/14/exploiting-manitobas-biofuel-advantage>

**Parsons, R.** 2022. Better ways needed to respond to protests. *Winnipeg Free Press*, Think Tank Section (Wednesday November 9, 2022 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2022/11/09/better-ways-needed-to-respond-to-protests>

**Parsons, R.** 2022. Manitoba should carefully consider carbon-tax options. *Winnipeg Free Press*, Think Tank Section (Thursday September 15, 2022 print edition, page A9). <https://www.winnipegfreepress.com/opinion/analysis/2022/09/16/manitoba-should-carefully-consider-carbon-tax-options>

**Parsons, R.** 2022. The inconvenient truth about food inflation. *Winnipeg Free Press*. Think Tank Section (Wednesday, August 10, 2022 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2022/08/10/the-inconvenient-truth-about-food-inflation>

**Parsons, R.** 2022. Poilievre support of Churchill too easily dismissed. *Winnipeg Free Press*, Think Tank Section (Saturday May 21, 2022 print edition, page A11). <https://www.winnipegfreepress.com/opinion/analysis/2022/05/21/poilievre-support-of-churchill-too-easily-dismissed>

**Parsons, R.** 2022. Trudeau's climate failures continue. *Winnipeg Free Press*, Think Tank Section (Friday April 29, 2022 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/trudeaus-climate-failures-continue-576446532.html>

Larson, P.D. and **R. Parsons**. 2022. Time to get people back on the bus. *Winnipeg Free Press*, Think Tank Section (Monday April 11, 2022 print edition, Page A7). <https://www.winnipegfreepress.com/opinion/analysis/time-to-get-people-back-on-the-bus-576384872.html>

Schreyer, E. and **R. Parsons**. 2022. Another diversion option should be considered. *Winnipeg Free Press*, Analysis Section (Thursday January 6, 2022 print edition, Page A7). <https://www.winnipegfreepress.com/opinion/analysis/another-diversion-option-should-be-considered-576017242.html>

**Parsons, R.** 2021. Greater accountability needed on emissions reduction. *Winnipeg Free Press*, Think Tank Section (Friday October 29, 2021 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/greater-accountability-needed-on-emissions-reduction-575636232.html>

**Parsons, R.** 2021. Keeyask and the future of Manitoba Hydro. *Winnipeg Free Press*, Think Tank Section (Friday October 8, 2021 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/keeyask-and-the-future-of-manitoba-hydro-575484782.html>

**Parsons, R.** 2021. Assessing carbon-tax election platforms. *Winnipeg Free Press*, Think Tank Section (Tuesday September 7, 2021 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/assessing-carbon-tax-election-platforms-575255572.html>

**Parsons, R.** 2021. Canada needs to get off coal. *Winnipeg Free Press*, Think Tank Section (Monday August 9, 2021 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/canada-needs-to-get-off-coal-575059862.html>

**Parsons, R.** 2021. Promises don't reduce emissions. *Winnipeg Free Press*, Think Tank Section, (Wednesday April 28, 2021 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/promises-dont-reduce-emissions-574299772.html>

**Parsons, R.** 2021. Wind-hybrid power a sound alternative. *Winnipeg Free Press*, Think Tank Section, (Friday February 26, 2021, print edition, Page A7). <https://www.winnipegfreepress.com/opinion/analysis/wind-hybrid-power-a-sound-alternative-573874652.html>

**Parsons, R.** 2020. A realistic plan for reducing emissions. *Winnipeg Free Press*, Think Tank Section, (Wednesday December 23, 2020 print edition, Page A7). [https://www.winnipegfreepress.com/opinion/analysis/a-realistic-plan-for-reducing-emissions-573463741.html#cxrecs\\_s](https://www.winnipegfreepress.com/opinion/analysis/a-realistic-plan-for-reducing-emissions-573463741.html#cxrecs_s)

**Parsons, R.** 2020. Liberals' announcement mostly wishful thinking. *Winnipeg Free Press*, Think Tank Section (Tuesday October 20, 2020 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/liberals-announcement-mostly-wishful-thinking-572801592.html>

**Parsons, R.** 2020. Green-shift requires robust oil industry. *Winnipeg Free Press*, Think Tank Section (Thursday July 9, 2020 print edition, page A7). [https://www.winnipegfreepress.com/opinion/analysis/green-transit-shift-requires-robust-oil-industry-571686082.html#cxrecs\\_s](https://www.winnipegfreepress.com/opinion/analysis/green-transit-shift-requires-robust-oil-industry-571686082.html#cxrecs_s)

**Parsons, R.** 2020. Indigenous women will be key to Manitoba's economy. *Winnipeg Free Press*, Think Tank Section (Monday June 15, 2020 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/indigenous-women-will-be-key-to-manitobas-economy-571256332.html>

- Parsons, R.** 2020. It's time to move past carbon taxes. *Winnipeg Free Press*, Think Tank Section (Wednesday May 6, 2020 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/its-time-to-move-past-carbon-taxes-570231902.html>
- Parsons, R.** 2020. Federal carbon tax leaves us in a hole. *Winnipeg Free Press*, Think Tank Section (Friday March 13, 2020 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/federal-carbon-tax-leaves-us-in-a-hole-568764722.html>
- Parsons, R.** 2020. Carbon tax: still here, still ineffective and still unfair. *Winnipeg Free Press*, Think Tank Section (Thursday January 9, 2020 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/2020/01/09/carbon-tax-still-here-still-ineffective-and-still-unfair>
- Parsons, R.** 2019. Improving carbon tax possible. *Winnipeg Free Press*, Think Tank Section (Tuesday November 12, 2019 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/improving-carbon-tax-possible-564788692.html>
- Parsons, R.** 2019. Carbon-tax ambitions reduced to pure misdirection. *Winnipeg Free Press*, Think Tank Section (Friday October 18, 2019 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/carbon-tax-ambitions-reduced-to-pure-misdirection-563353012.html>
- Parsons, R.** 2019. Clearing the air on carbon taxes. *Winnipeg Free Press*, Think Tanke Section (Tuesday September 10, 2019 print edition, page A9). <https://www.winnipegfreepress.com/special/provincial-election/clearing-the-air-on-carbon-taxes-559899832.html>
- Parsons, R.** 2019. Early assessment: the carbon tax is not working. *Winnipeg Free Press*, Think Tank Section (Wednesday June 26, 2019 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/early-assessment-the-carbon-tax-is-not-working-511822812.html>
- Parsons, R.** 2019. Manitoba must challenge the carbon tax. *Winnipeg Free Press*, Think Tank Section (Friday April 12, 2019 print edition, page A9). <https://www.winnipegfreepress.com/opinion/analysis/manitoba-must-challenge-carbon-tax-508475652.html>
- Parsons, R.V.** 2018. Carbon pricing a murky mess. *Winnipeg Free Press*, Think Tank Section (Monday December 31, 2018 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/carbon-pricing-a-murky-mess-503700552.html>
- Parsons, R.V.** 2018. Advancing electric vehicles requires careful consideration. *Winnipeg Free Press*, Think Tank Section (Saturday October 6, 2018 print edition, page A13). <https://www.winnipegfreepress.com/opinion/analysis/advancing-electric-vehicles-requires-careful-consideration-495338171.html>
- Parsons, R.V.** 2018. Has carbon pricing really worked so far? *Winnipeg Free Press*, Think Tank Section (Wednesday August 1, 2018 print edition). <https://www.winnipegfreepress.com/opinion/analysis/has-carbon-pricing-really-worked-so-far-489713381.html>

**Parsons, R.V.** 2018. Transit debate needs a sound business case. *Winnipeg Free Press*, Think Tank Section (Tuesday May 8, 2018 print edition). <https://www.winnipegfreepress.com/opinion/analysis/transit-debate-needs-a-sound-business-case-482006433.html>

**Parsons, R.V.** 2017. Crunching the green plan numbers. *Winnipeg Free Press*, Think Tank Section (Thursday November 16, 2017 print edition, page A7). <https://www.winnipegfreepress.com/opinion/analysis/crunching-the-green-plan-numbers-457897013.html>

**Parsons, R.V.** 2017. Clarity needed on carbon pricing. *Winnipeg Free Press*, Think Tank Section (Wednesday June 21, 2017 print edition, page A7). <http://www.winnipegfreepress.com/opinion/analysis/clarity-needed-on-carbon-pricing-429816453.html>

#### Other Venues or Reports Publicly-Available

**Parsons, R.V.**, N. Gamble and H. Battu, with additional advisory assistance from P.D. Larson and C. Jiang. 2022. *Cost Benefit Analysis (CBA) for Repurposed-Battery Direct Current Fast Charge (DCFC) Station for Light-Duty Electric Vehicles*, Prepared for Red River College Polytechnic (RRC Polytech) Winnipeg, Canada to Support Completion of Demonstration Project EVID #1022 awarded by Natural Resources Canada (NRCan) in 2019 and funded under Green Infrastructure - Electric Vehicle Infrastructure Demonstration (EVID) Program. Results released through the auspices of the University of Manitoba Transport Institute (UMTI), I.H. Asper School of Business, University of Manitoba, Winnipeg, Canada. <https://www.rrc.ca/vtec/wp-content/uploads/sites/78/2023/11/CBA-on-Repurposed-Battery-DCFC-at-RRC-Polytech-May-2022-V2Small.pdf>

Larson, P.D., **R.V. Parsons**, A. Elias and B. Yesiltas. 2022. *Public Transit and Active Transportation: Activity, Structural and Energy Efficiency Effects on Mobility and the Environment, Knowledge Synthesis Grant Final Report* (January 17, 2022) co-funded by the Social Sciences and Humanities Research Council (SSHRC) and Infrastructure Canada. <https://umanitoba.ca/asper/sites/asper/files/2022-07/larsonpaul-ksg-draft-jan-18.pdf>

Larson, P.D. and **R.V. Parsons**. 2021. *Final Proposal Document for the Manitoba Trucking Association Regarding Electrification of Heavy-Duty Freight Vehicles*, Document Prepared in Fulfillment of AIM Day Requirements, Manitoba Industry-Academic Partnership (MIAP), AIM Day Event, January 2021, Winnipeg, Canada.

**Parsons, R.V.**, O. Amromanoh and N. Pinette, with additional advisory assistance from P.D. Larson and B. Silvestre. 2021. *Preliminary Business Case for Electrification of Heavy-Duty Freight Vehicles*, Prepared for Manitoba Trucking Association (MTA), Winnipeg, Canada, as Partial Follow-up for Manitoba Industry-Academic Partnership (MIAP) AIM Day Event January 2021. Results released through the auspices of the University of Manitoba Transport Institute). University of Manitoba Transport Institute (UMTI), I.H. Asper School of Business, University of Manitoba, Winnipeg, Canada.



**Parsons, R.V.**, M.J. Kizuik, T.G. Miles, S.C. Prud'homme, J.S. Sodomsky and M. Wang. 2020. *Preliminary Cost Benefit Analysis (CBA) of Zero-Emission Transit Bus Options for the City of Winnipeg*. I.H. Asper School of Business, University of Manitoba, Winnipeg, Canada (Version 3.0, June 2020). [https://umanitoba.ca/faculties/management/faculty\\_staff/media/CBA\\_for\\_Zero\\_Emission\\_Bus\\_Options\\_June\\_2020\\_V3.pdf](https://umanitoba.ca/faculties/management/faculty_staff/media/CBA_for_Zero_Emission_Bus_Options_June_2020_V3.pdf)

**Parsons, R.** 2019. *Moving Forward with Transit Bus Electrification in Canada*, A follow-up to the report "Will Canada Miss the Bus?" released by Clean Energy Canada in March 2019. <https://cleanenergycanada.org/wp-content/uploads/2019/08/Parsons-EBus-Report-with-CEC-May-2019-V3.pdf> Clean Energy Canada, a think tank based at Simon Fraser University, reviewed this report and agreed to publish it at their website, with contents and conclusions solely those of the author. Work also supported the article by Melo and Parsons (2019) in *Policy Options*.

**Parsons, R.V.**, E.G. Kwan, N.L. Wood, M. Hall, A.A. Akerstream, J.E. Sinnock, T.N.N. Nguyen, I.D. Frank, J.E. Kopp, K. Shah and N.P.A. Nguyen. 2017. *Cost Benefit Analysis of Externality Factors for Battery Electric Transit Buses*. Report from Sustainability Economics (Course IDM 7090 G05), MBA Program, I.H. Asper School of Business, University of Manitoba. Compendium report of student work, and more, presented through the auspices of the Canadian Urban Transit Research and Innovation Consortium (CUTRIC). <https://www.rrc.ca/vtec/wp-content/uploads/sites/78/2019/05/UofM-AsperMBA-2017-EBus-Externalities-CBA-sgs15r.pdf>

Marcinkowska, K., D. Ryland, R. Swartz and **R. Parsons**. 2004. Demonstration of Passive Autocatalytic Recombiner (PAR) technology for hydrogen transit applications - Phase 1: Assessment of impacts of transit garage environment on PAR operational performance. Conference proceedings, Hydrogen and Fuel Cells 2004 Conference and Trade Show: Toward a Greener World, Toronto, Canada. [https://inis.iaea.org/search/search.aspx?orig\\_q=RN:37066857](https://inis.iaea.org/search/search.aspx?orig_q=RN:37066857)

## Employment Activities and Positions

### Relevant Recent Sessional Instructor Engagements with University of Manitoba

I.H. Asper School of Business, Interdepartmental Courses at Graduate Level

Sustainability Economics (IDM 7090 G05) - 3.0 credit hour course

- Provided instruction and full oversight of this interdepartmental special-topic graduate MBA course.
- Course conducted both in-person and completely on-line using WebEx platform during COVID-19 pandemic (indicated by asterisk \*).
- Relevant terms when acted as instructor (eight sessions) as follows:

Winter Session 2024 (January to April 2024)  
Winter Session 2023 (January to April 2023)  
Winter Session 2022 (January to April 2022) \*  
Winter Session 2021 (January to April 2021) \*  
Winter Session 2020 (January to April 2020) \*  
Winter Session 2019 (January to April 2019)  
Winter Session 2018 (January to April 2018)  
Winter Session 2017 (January to April 2017)

Sustainability Economics (FIN 7260 T01) - 3.0 credit hour course

- Developed completely new specialized, advanced-level economics graduate course dealing with Sustainability Economics as part of the Asper MBA Program.
- Provided instruction and oversight of course (note at the time this Special-Topics course initially was under the Accounting and Finance Department but transitioned to Interdepartmental).
- Relevant term when acted as instructor (one session) as follows:

Summer Session 2015 (May to July 2015)

International MBA Study Tour (Iceland 2023) (IDM 7050 G01) - 3.0 credit hour course

- Acted as co-instructor with Professor Paul D. Larson, providing development and oversight of international-oriented course, including travel to Iceland with student group for 10-day period.
- Relevant term when acted as co-instructor (one session) as follows:

Winter Session 2023 (January to April 2023)

I.H. Asper School of Business, Department of Supply Chain Management

Basic Quantitative Analysis for Management (MSCI 5110 G01/A01) - 1.0 credit hour course

- Provided instruction and full oversight of this mandated “Boot-Camp” introductory course, focused on mathematics relevant to graduate level management studies.
- Included students involved in Master of Business Administration (MBA), Master of Finance (MFin) and Master of Supply Chain Management and Logistics (MSCM) graduate programs.
- Included administration of a Challenge Exam.

- Course involved use of on-line educational software delivery program, combined with in-person or live-streamed tutorial sessions.
- With the exception of Winter Session 2020 (\*), the course has been conducted entirely based on remote learning, including on-line delivery platform and on-line tutorial sessions, with students sometimes situated on different continents.
- Relevant terms when acted as instructor (ten sessions) as follows:

Fall Session 2024 (August 2024)  
 Winter Session 2024 (January 2024)  
 Fall Session 2023 (August 2023)  
 Winter Session 2023 (January 2023)  
 Fall Session 2022 (August 20 2022)  
 Winter Session 2022 (January 2022)  
 Fall Session 2021 (August 2021)  
 Winter Session 2021 (January 2021)  
 Fall Session 2020 (August 2020)  
 Winter Session 2020 (January 2020) \*

Logistics Management (SCM 7040 G01/A01) - 3.0 credit hour course

- Provided instruction and full oversight of this graduate course, focused on presenting a practical, management perspective on logistics, and involving mixed group of MBA and MSCM students, thus combining specialist and generalist perspectives.
- Relevant term when acted as instructor (one session) as follows:

Fall Session 2023 (September to December 2023)

Recent Developments in Supply Chain Management (OPM 7300 G05/T23) - 3.0 credit hour course

- Provided instruction and full oversight of this graduate course, focused on covering recent trends and emerging issues in supply chains and logistics, and involving mixed group of MBA and MSCM students, thus combining specialist and generalist perspectives.
- Relevant term when acted as instructor (one session) as follows:

Winter Session 2024 (January to April 2024)

Introduction to Supply Chain Management (SCM 2230 - various sections) - 3.0 credit hour course

- Provided instruction and full oversight of this undergraduate course for specific sections, providing a broad introduction to the relatively new and increasingly important area of supply chains for business operations and management.
- Course conducted both in-person and completely on-line using WebEx platform during COVID-19 pandemic (indicated by asterisk \*).
- Relevant terms (and sections) when acted as instructor (six sessions) as follows:

Winter Session 2024 (January to April 2024) Section A02

Fall Session 2023 (September to December 2023) Section A02  
Summer Session 2023 (May to August 2023) Section A01  
Winter Session 2023 (January to April 2023) Section A02  
Fall Session 2022 (September to December 2022) Section A02  
Winter Session 2022 (January to April 2022) Section A02 \*

Extended Education, University of Manitoba

Case Studies in Public Sector Management (MGMT 0490 E01) - 3.0 credit hour course

- Provided instruction and full oversight of this extended education course.
- Capstone course for Certification in Public Sector Management (CPSM) program operated jointly between University of Manitoba, Extended Education, and Government of Manitoba.
- Relevant term when acted as instructor (one session) as follows:

Winter Session 2019 (January to February 2019)

### **On-Going and Recent Non-Instructional Positions**

Business consultant on advanced energy projects and technologies.

Red River College Polytechnic, Winnipeg, Manitoba, Research Partnerships and Innovation Department

- Specialized consulting assistance on advanced vehicle and energy technologies, in particular battery-electric transit buses, and other activities related to Vehicle Technology & Energy Centre (VTEC) initiative, including multiple successful and often novel proposals.
- Work included providing assistance on the highly successful Efficient Trucking Program for which RRCP acted as the administrator for this joint Federal-Provincial funded initiative.

Educational consultant (Work completed in 2021)

Fanshawe College (Fanshawe Global), London, Ontario

- Subject matter expert (SME) and consultant to provide corrections and improvements to remote-oriented (40-contact hour) program “Electric Vehicle Training of Trainers” for the Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE).

### **Significant Additional Past Activities**

Secretary/Treasurer (non-remunerated position within non-profit organization).

Centre for Emerging Renewable Energy Inc. (CERE), Winnipeg, Manitoba.

(Organization wound-down in 2020).

Business consultant on advanced energy projects and technologies.

Energy Division, sequentially over time under Manitoba Departments of Growth, Enterprise and Trade (GET); Municipal Government (MMG); Innovation, Energy and Mines (IEM); and Science, Technology, Energy and Mines (STEM), Winnipeg, Manitoba.

- More than 15 years working with the Government of Manitoba.
- Project manager involving advanced renewable energy technology including: vehicles, such as hybrid fuel cell bus, Manitoba plug-in hybrid electric vehicle (PHEV) demonstration, electric transit bus, including support for prototype development and demonstration, and in-service pilot; biofuels, such as “renewable diesel” and cellulosic ethanol; and confidential health-care related project.
- Preparation of extensive confidential briefings for Premier, Ministers, Deputy Ministers and other senior management within Government on a variety of inquires and topics.
- Policy development, including as part of team for Manitoba’s Clean Energy Strategy, and Electric Vehicle Road Map, particularly for key data and metrics, and as Manitoba representative in national working groups regarding the proposed Canadian Energy Strategy under the Council of the Federation, in particular regarding zero emission vehicles (ZEV).
- Economic evaluations, including assessment and development of potential incentive measures.
- Have received a variety of commendation letters for project successes.

Adjunct Professor (non-remunerated position)

Department of Biosystems Engineering, University of Manitoba, Winnipeg, Manitoba.

Senior Business Development Engineer, Business Development

Centra Gas Manitoba Inc., Winnipeg, Manitoba

- Senior marketing professional responsible for identifying, evaluating, promoting, and managing complex business and technical initiatives leading to new applications and business opportunities.

Continuing Education Instructor

University of Toronto, Department of Continuing Education, Toronto, Ontario.

- Developed and implemented one-day course on industrial pollution prevention.

Senior Process and Environmental Engineer

Wardrop Engineering Inc., Winnipeg, Manitoba, and Mississauga, Ontario.

- Broad range of consulting activities primarily focussed on process analysis, and environmental and energy improvement, in particular for food processing industries.

## **Selected Major Public Presentations (including internet references where available):**

**Parsons, R.V.** 2024. *Who is Robert Parsons? and What about electric vehicles?* Brief Presentation and Panel Member Participation at Electric Vehicle Town Hall. Sponsored by Sustainability Office, University of Manitoba, Graduate Students Association Lounge, University Centre, Winnipeg. Thursday, March 28, 2024.

**Parsons, R.V.** 2023, Not Getting to Zero ... Canada's misdirected and woeful performance on emission reductions. Presentation to Manitoba Chapter of the Canadian Society of Senior Engineers, APEM Offices, Winnipeg, Thursday, September 28, 2023.

Larson, P.D. and **R.V. Parsons**. 2022. Emerging business research insights on moving vehicle fleets to zero emissions. Presentation to Vehicle Technology Centre Inc. Conference - Moving Vehicle Fleets to Zero Emissions, Winnipeg. Tuesday, November 3, 2022. <https://vtci.ca/wp-content/uploads/2024/06/Larson-Parsons-Insights-from-Business-VTC-2022-1-1.pdf>

**Parsons, R.V.** 2020. If not carbon taxes, then what? Presentation to the Conservative Club of Winnipeg. Norwood Hotel, Winnipeg, Manitoba September 8, 2020.

**Parsons, R.V.** 2019, Insights from sustainability economics on improving environmental effects of transportation. Presentation to Manitoba Chapter of the Canadian Society of Senior Engineers, APEM Offices, Winnipeg, Monday, November 25, 2019.

**Parsons, R.V.** 2019. Insights from sustainability economics on improving environmental effects of transportation. Presentation to the Inaugural Vehicle Technology International Conference, sponsored by Red River College. Winnipeg, Manitoba, October 1, 2019. <https://custom.cvent.com/F379A37D5D5640028F9A2B8E15338F80/files/ed990c5fed4641f78218b282bf1ad138.pdf>

**Parsons, R.V.** 2015. What is happening to diesel prices and why is it Important? Presentation to the Canadian Institute for Traffic and Transportation (CITT), Manitoba Area Council Breakfast Meeting and Presentation, Winnipeg, Manitoba, November 25, 2015.

**Parsons, R.V.** 2013. Changing energy-implications in risk and risk management. Presentation to the Disaster Relief Information Exchange (DRIE) Central, 14th Annual Conference Workshop and Annual General Meeting, Winnipeg, Manitoba, November 29, 2013. <http://www.driecentral.org/DRIE%20Central%20Conference%20Agenda%20Nov%202013.pdf>

Larson, P.D., J. Viafara and **R.V. Parsons** (presenter). 2013. Consumer attitudes about electric cars: pricing analysis and policy implications. Presentation to Electric Vehicle 2013 Conference and Trade Show, Electric Mobility Canada, Gatineau, Quebec.

**Parsons, R.V.** and R. Hoemsen. 2013. Advancement of electric vehicles: update on Manitoba. Presentation to Electric Vehicle 2013 Conference and Trade Show, Electric Mobility Canada, Gatineau, Quebec.

**Parsons, R.V.** and R. Hoemsen. 2012. Advancing electric vehicle adoption: insights from Manitoba experience. Presentation to Electric Vehicle 2012 Conference and Trade Show, Electric Mobility Canada, Montreal, Quebec.

**Parsons, R.V.** 2011. Manitoba PHEV demonstration: experience from a three-year collaboration. Presentation to Electric Vehicle 2011 Conference and Trade Show, Electric Mobility Canada, Toronto, Ontario.

Gregor, C. and **R.V. Parsons** (presenter). 2011. Cold-weather modifications of plug-in hybrid electric vehicles for Manitoba operation. Presentation to Electrical Power and Energy Conference (EPEC), IEEE, Winnipeg, Manitoba. <https://cpb-ca-c1.wpmucdn.com/www.rrc.ca/dist/3/78/files/2019/05/Cold-Weather-PHEV-2011-IEEE-EPEC-reduced.pdf>

Hoemsen, R. and **R.V. Parsons** (co-presenters). 2010. Manitoba PHEV demonstration. Presentation to Electric Vehicle 2010 Conference and Trade Show, Electric Mobility Canada, Vancouver, British Columbia.

**Parsons, R.V.** 2010. Renewable energy directions in Manitoba: How hydrogen fits. Renewable Hydrogen Symposium. Winnipeg, Manitoba, January 18, 2010. Canadian Hydrogen Association.

**Parsons, R.V.** 2008. Urban transportation: fuel consumption and alternative fuels implications. Innovative Freight Practices – Round Table. University of Manitoba Transport Institute, Winnipeg, Manitoba.

**Parsons, R.V.** 2008. Opportunities and challenges for food production and fuels for transportation. Presentation to Red River Valley Clean Cities Coalition. Winnipeg, Manitoba.

**Parsons, R.V.** 2008. Supporting breakthrough research: insights and experience from the trenches. Presentation to E3 (Energy, Economic and Environmental) Conference, University of Minnesota, St. Paul, Minnesota. (Invited speaker by Canadian Consulate).

**Parsons, R.V.** 2007. Manitoba's advanced energy project directions. Presentation to Manitoba Environmental Industries Association (MEIA) Annual Conference. November 22, 2007.

**Parsons, R.V.** and J. Crone. 2007. Manitoba's continuing drive to hydrogen. Conference Proceedings, Hydrogen and Fuel Cells 2007 International Conference and Trade Show, Vancouver, British Columbia, Canada. pp. 42-59.

**Parsons, R.V.** 2007. Gasification technologies: perspectives and implications in Manitoba. Presentation to Canadian Prairie and Northern Section, Air and Waste Management Association. University of Manitoba, Winnipeg, Manitoba.

**Parsons, R.V.** 2006. Manitoba's hydrogen and renewable energy strategies. Presentation to Renewable Energy North of the Border Conference. Initiative for Renewable Energy and the Environment, University of Minnesota, and Canadian Consulate - Minneapolis, St. Paul, Minnesota, May 11, 2006.

**Parsons, R.V.** 2006. Hydrogen developments in Manitoba: directions and insights. Presented to Workshop on Building Canadian Strength in Hydrogen Systems, Canadian Hydrogen Association, Montreal, Quebec. [http://inis.iaea.org/search/search.aspx?orig\\_q=RN:40007701](http://inis.iaea.org/search/search.aspx?orig_q=RN:40007701)

**Parsons, R.V.** (panel chair and presenter). 2006. Electrolysis hydrogen: a panel discussion of experience with four different recent systems in Manitoba. Iceland/Manitoba Joint Seminar on Hydrogen. Winnipeg, Manitoba.

**Parsons, R.V.** 2004. Hydrogen: pathway to an energy future. Presentation to the Canadian Energy Partnership for Environmental Innovation (natural gas industry related organization). Calgary, Alberta, January 19, 2004.

**Parsons, R.V.** and J. Crone. 2003. Manitoba: path to a hydrogen future. Presentation to Towards a Greener World: 2003 Hydrogen and Fuel Cells Conference and Trade Show, Fuel Cells Canada and Canadian Hydrogen Association, Vancouver, British Columbia, June 8-11, 2003.

[http://inis.iaea.org/search/search.aspx?orig\\_q=RN:35096041](http://inis.iaea.org/search/search.aspx?orig_q=RN:35096041)

**Parsons, R.V.** 2001. Tools and techniques for working with small and medium companies on waste and wastewater issues. NRC Industrial Technology Advisor Forum on Food Processing Industry. November 20, 2001. Winnipeg, Manitoba. (Invited speaker).

**Parsons, R.V.** 2000. New directions for food preservation technologies? Agri-Food 2000 Conference - Joint Annual Conference of Agricultural Institute of Canada, Canadian Institute of Food Science and Technology, Canadian Society for Agricultural Engineering, and Flax Council of Canada. July 18, 2000. Winnipeg, Manitoba. (Invited speaker).

**Parsons, R.V.** 1997. Cleaner production for chemical industries. Presentation to Chinese Study Tour Group. China/Canada Cooperation Project in Cleaner Production. October, 1997, Toronto, Ontario. (Invited speaker by Ontario Ministry of Environment and Energy).

**Parsons, R.V.** 1997. Resource conservation and cost savings opportunities for agri-food industries. Presentation to Inter-American Program for Environmental Technology Cooperation in Key Industry Sectors: Round Table on Agri-Food Sector. August 1997, San Jose, Costa Rica. Organization of American States. (Invited speaker by Industry Canada). <http://www.science.oas.org/ENVIRO/agri-food%20sector.pdf> (note site no longer active)



## Additional Success Highlights

**Lecturing.** In addition to undertaking my own courses, I have done significant guest lecturing over the past number of years in three different faculty areas at the University of Manitoba:

- Engineering, primarily for Dr. Stefan Cenkowski, on topics including blood rheology, ethanol production technology, and friction.
- Natural Resources Institute, for Dr. Shirley Thompson, on topics of energy and business case development.
- Supply Chain Management, primarily for Dr. Paul Larson, on topics of business and environment.

Recently in May 2017, I was invited to present on the topic of “Energy in Northern Climates: Canada and Nordic Countries” as part of the University of Winnipeg 2017 Summer Institute - Geography and Development Practice (Indigenous Focus), coordinated by Dr. Jeffery Cottes. This work dealt with energy production and energy use characteristics, as well as emissions impacts.

**Mentoring.** Have acted as a mentor in a variety of cases, including the following:

- Mentor and advisor, at request of Minister, of student entrepreneur, who instead of engaging in conventional “summer employment” initiated with colleagues a small company to import an advanced kinetic turbine technology for use in Canada. Work in this regard primarily involved providing appropriate contacts, and guidance through a funding-proposal application.
- Mentor and industrial liaison (while as Adjunct Professor) for Master student working on Seabuckthorn extraction for high-value food-related products.
- Mentor and project sponsor for undergraduate student design team in Mechanical Engineering, working on microturbine-based odour control application project.

**Proposal evaluation** for range of funding agencies, including:

- Atlantic Canada Opportunities Agency (ACOA), which included receiving a letter of commendation;
- Manitoba Research Innovation Fund (MRIF), Government of Manitoba;
- Sustainable Development Innovation Fund (SDIF), Government of Manitoba;
- Agriculture Research and Development Initiative (ARDI), jointly Government of Canada and Government of Manitoba; and
- Canadian Transportation Fuel Cell Alliance (CTFCA), Government of Canada program under Natural Resources Canada, specifically regarding transit-related application study.

## Additional Specific Activities

Member of successful team in international grant competition under Danone Institute North America "One Planet. One Health" Initiative. Project team: P.D. Larson, **R.V. Parsons**, M. Baranowski and M. Bencz. Project entitled: Building a post-pandemic sustainable food system: Starting in Edmonton. Grant awarded in 2021. <http://www.danoneinstitutena.org>

Story about project award and team by UM Today: Team led by Asper professor awarded funding to address food system issues <https://news.umanitoba.ca/team-led-by-asper-professor-awarded-30000-to-address-food-system-issues/>

Successful co-applicant in Social Sciences and Humanities Research Council of Canada (SSHRC), Knowledge Synthesis Grant: Mobility and Public Transit (December 2020 competition). Project entitled: Public Transit and Active Transportation: Activity, Structural and Energy Efficiency Effects on Mobility and the Environment. Project team: P.D. Larson (applicant), **R.V. Parsons** (co-applicant), A. Elias (collaborator) and B. Silvestre (collaborator). Awarded in 2021. [https://www.sshrc-crsh.gc.ca/results-resultats/recipient-recipientaires/2020/ksg\\_public\\_transit-ssc\\_transport\\_commun-eng.aspx](https://www.sshrc-crsh.gc.ca/results-resultats/recipient-recipientaires/2020/ksg_public_transit-ssc_transport_commun-eng.aspx)

Successful collaborator in Social Sciences and Humanities Research Council of Canada (SSHRC), Partnership Engage Grant (PEG): COVID-19 Special Initiative (June 2020 competition). Project entitled: COVID-19: Food Insecurity and the Not-for-Profit Food and Nutrition Supply Chain. Project team: P.D. Larson (applicant), **R.V. Parsons** (collaborator) and Winnipeg Harvest (collaborator). Awarded in 2021. <https://www.sshrc-crsh.gc.ca/results-resultats/recipient-recipientaires/2020/peg-jun2020-covid19-eng.aspx>

Session moderator, Panel Discussion 2 (Addressing Barriers and Enabling Measures, with focus on Agri-Food Industry). Manitoba Expert Advisory Council (EAC) Forum on Opportunities in the Low-Carbon Economy, November 29, 2019, Delta Hotel, Winnipeg (Invited by Government of Manitoba).

Conference organization. Member of conference organizing committee for successful inaugural **Vehicle Technology International Conference** sponsored by Red River College, and held from September 30 through October 2, 2019, Victoria Inn, Winnipeg, Manitoba.

Successful collaborator in Social Sciences and Humanities Research Council of Canada (SSHRC), Insight Grant (October 2017 competition). Project entitled: Reducing Food Waste: The Role of Consumer Logistics. Project team: P.D. Larson (applicant), A. Halldorsson (collaborator), **R.V. Parsons** (collaborator) and C. Sundgren (collaborator). Awarded in 2018. [https://www.sshrc-crsh.gc.ca/results-resultats/recipient-recipientaires/2017/insight\\_savoir-eng.aspx](https://www.sshrc-crsh.gc.ca/results-resultats/recipient-recipientaires/2017/insight_savoir-eng.aspx)

Member (representing Manitoba). Canadian General Standards Board, Middle-Distillates Committee. Group responsible for developing, and approving relevant fuel-standards in Canada.

Funding administration and funder representative. Acted as the Secretary-Treasurer of the non-profit Centre for Emerging Renewable Energy Inc. (CERE) from inception through wind-down (14 years). CERE has had responsibility for managing research-related funds in excess of \$350,000.

Secretariat function. 2016. Government of Manitoba and City of Winnipeg Joint Task Force on Transit Electrification. Ongoing documentation, analysis and preparation of detailed confidential report, and abbreviated public report. Final public report dated July 2016, but released in March 2018: <https://digitalcollection.gov.mb.ca/awweb/pdfopener?smd=1&did=25975&md=1>

Manitoba representative. Team 4 Working Group (“Accelerate the development and deployment of energy research and technologies that advance more efficient production, transmission and use of clean and conventional energy sources.”) Canadian Energy Strategy development. Council of the Federation. 2013-14. In progress. [http://www.councilofthefederation.ca/phocadownload/publications/cof\\_energy\\_strategy\\_2013\\_eng.pdf](http://www.councilofthefederation.ca/phocadownload/publications/cof_energy_strategy_2013_eng.pdf)

Development of Prototype Electric Transit Bus Development and Demonstration Final Report Drafts for Consortium Partnership. 2017. Work undertaken for Red River College, June, 2017.  
<https://cpb-ca-c1.wpmucdn.com/www.rrc.ca/dist/3/78/files/2019/05/Prototype-Electric-Bus-Development-and-Demonstration-Final-report-1pxb35m.pdf>

Policy support in development of Manitoba Clean Energy Strategy document. 2012. Energy Division, Manitoba Innovation, Energy and Mines.  
[https://www.gov.mb.ca/sd/environment\\_and\\_biodiversity/energy/pubs/energy\\_strategy\\_2012.pdf](https://www.gov.mb.ca/sd/environment_and_biodiversity/energy/pubs/energy_strategy_2012.pdf)

Policy support in development of Manitoba Electric Vehicle Road Map document, and supporting materials. 2011. Energy Division, Manitoba Innovation, Energy and Mines.  
[https://www.gov.mb.ca/sd/environment\\_and\\_biodiversity/energy/pubs/elec\\_vehicle\\_road\\_map.pdf](https://www.gov.mb.ca/sd/environment_and_biodiversity/energy/pubs/elec_vehicle_road_map.pdf)

Assistance in funding proposal preparation by New Flyer to Sustainable Development Technology Canada (SDTC). Responsible for proposal sections dealing with environmental performance and related metrics. Overall project value was \$10.3 million, with \$3.4 million awarded by SDTC. Assistance has continued in regard to reporting on environmental performance.

Coordination of business aspects for consortium partnership on development of prototype all-electric transit bus, involving Government of Manitoba, Manitoba Hydro, New Flyer, Red River College and Mitsubishi Heavy Industries of Japan.

Policy support in development of Memorandum of Understanding (MOU) between Government of Manitoba and Mitsubishi Heavy Industries of Japan on renewable energy. The MOU was signed in December 2010 in Winnipeg, Manitoba.

Overall coordination and administration of Manitoba Plug-in Hybrid Electric Vehicle (PHEV) Demonstration. This project, which ran from 2008 through 2011, involved the conversion and monitoring of ten Toyota Prius hybrids to PHEV using technology from lithium battery-supplier A123 Systems Inc. This project was one of the largest demonstrations of its kind in North America. In addition to presentations (listed separately above), this project led to the preparation of three annual-reports plus a final summary report. All reports were issued under the Centre for Emerging Renewable Energy Inc. (or predecessor organization), and with all publicly available.

Final summary report:

[https://www.gov.mb.ca/sd/environment\\_and\\_biodiversity/energy/pubs/phev\\_summary\\_report.pdf](https://www.gov.mb.ca/sd/environment_and_biodiversity/energy/pubs/phev_summary_report.pdf)

Report of third year operations:

[https://www.gov.mb.ca/sd/environment\\_and\\_biodiversity/energy/pubs/phev\\_third\\_report.pdf](https://www.gov.mb.ca/sd/environment_and_biodiversity/energy/pubs/phev_third_report.pdf)

Report of second year operations:

[https://www.gov.mb.ca/sd/environment\\_and\\_biodiversity/energy/pubs/phev\\_second\\_report\\_hires.pdf](https://www.gov.mb.ca/sd/environment_and_biodiversity/energy/pubs/phev_second_report_hires.pdf)

Report of first year operations:

[https://www.gov.mb.ca/sd/environment\\_and\\_biodiversity/energy/pubs/phev\\_first\\_report\\_hi.pdf](https://www.gov.mb.ca/sd/environment_and_biodiversity/energy/pubs/phev_first_report_hi.pdf)

Policy support in development of Manitoba Hybrid Electric Vehicle Rebate Program. 2005-2006. Program was operated from 2006 through 2010.  
[https://www.gov.mb.ca/conservation//climate/mb\\_doing/hybrid/index.html](https://www.gov.mb.ca/conservation//climate/mb_doing/hybrid/index.html)

Manitoba representative. Canadian Transportation Fuel Cell Alliance. Natural Resources Canada.

Policy support in development of Memorandum of Understanding (MOU) between Government of Manitoba and Government of Iceland on hydrogen. The MOU was signed in September 2003 in Reykjavik, Iceland. This included support on the first defined action under the MOU, which was the Joint Seminar on Hydrogen Infrastructure held in September 2006, for which funding support to administer the event was provided to the University of Manitoba Transport Institute.

Overall project management of demonstration of Hybrid Fuel Cell bus undertaken in Winnipeg, Manitoba in 2006. Involved collaboration with Hydrogenics and other partners, and included refueling and support infrastructure required for operation.

Brochure: <https://cpb-ca-c1.wpmucdn.com/www.rrc.ca/dist/3/78/files/2019/05/RRC-AUTM-HybridFuelCellBus.pdf>

Project manager for hydrogen-related infrastructure for Hybrid Hydrogen Internal Combustion Engine (HHICE) transit bus demonstration. This important project involved a large number of participating organizations (more than a dozen) and required two coordinating project managers, the second being Dr. Alistair Hickson of the University of Manitoba Transport Institute, who was responsible for bus operational aspects. Infrastructure aspects of project involved siting and operation of temporary refueling infrastructure and selection of a suitable storage location. Specific complex approval processes were involved in both cases. Also responsible for acquisition of project-based insurance to cover the entire project and all participants. Lastly, this also included a first-of-kind in the world use of AECL's passive autocatalytic re-combiner (PAR) technology in a non-nuclear application (although not disclosed in report). This work included two successful funding applications.

Report: <https://cpb-ca-c1.wpmucdn.com/www.rrc.ca/dist/3/78/files/2019/05/HydrogBusRep.pdf>

Coordination of in-depth, multi-stakeholder process to evaluate and identify hydrogen-related opportunities for Manitoba. This extensive process included roughly 15 organizations and 50 different people, with work consolidated into a single overall report, including recommendations. The resulting Preliminary Hydrogen Opportunities Report was publicly released in 2003:

[https://www.gov.mb.ca/sd/environment\\_and\\_biodiversity/energy/pubs/hydrogen.pdf](https://www.gov.mb.ca/sd/environment_and_biodiversity/energy/pubs/hydrogen.pdf)

Overall responsibility for development, funding applications, management, implementation and reporting for multi-partner demonstration project involving the use of a micro-turbine at the City of Winnipeg's South End Water Pollution Control Centre (SEWPCC) for odour control. This was a first-of-kind in the world application of the technology.

## Teaching Philosophy Statement

“What is teaching?” implies to me a duty to transfer sound knowledge of methodologies and underlying principles by an instructor. “What is learning?” implies to me a reciprocal duty of acquisition and understanding by students. My self-identified key assets for teaching involve: (i) enthusiasm; (ii) communications and presentation skills; and (iii) breadth of experience. But teaching is also more than just “sounding smart” and “being entertaining.” In terms of teaching philosophy, I have identified two major themes:

My first theme is an emphasis on relevance, i.e., “real world” applications and utility of the subject materials in practice. Students in general often describe a critical factor in how they judge utility of individual courses to be how relevant the materials are to real world applications. Problem-based methods are a key approach I have emphasized in this regard. Maintaining relevance for me also means continuing to innovate and adapt in teaching methods, being realistic (i.e., working within constraints), and being analytically sound (i.e., being evidence-based rather than adopting what may just be trendy). One example that I have learned through my own experience is the importance of senior-management oriented briefings, i.e., describing issues quickly, in understandable terms, succinctly providing recommendations and associated rationales, etc. A specific approach I have also directly used, where appropriate, is to incorporate student-based work in published papers and analysis documents that clearly demonstrate relevance and importance of the study activities (see **Additional significant published articles** on Page 3).

My second theme is preparation of students for the assumption of responsibility, in particular emphasizing societal and ethical aspects, including sustainability. This is crucial in education across disciplines within a university setting. For business, government and policy organizations in general, motivations, beyond self-interest, have been increasingly questioned by the public. Maintenance of “credibility” has become increasingly important, no matter what entity is involved.

**On-air appearances:** I have been interviewed on radio and television, and quoted in print media:

- Richard Cloutier on CJOB Radio on December 01, 2015 at 03:40 pm discussing transitioning of public transit in Winnipeg to electric operation.
- CBC Information Radio (morning AM radio show) on Friday August 3, 2018 at 7:40 AM discussing carbon tax problems, and other emission reduction options available; and
- CBC Up to Speed (afternoon AM radio show), Monday March 11, 2019 at 4:05 PM discussing solar PV economics within Manitoba.
- Richard Cloutier on CJOB Radio (Global) on Thursday April 7, 2022 at 4:15 PM responding to the the federal budget regarding positive nature of incentives versus ineffectiveness of carbon pricing.
- Quoted in article by Gabrielle Piche, Winnipeg Free Press in 2023 about problems for small grocers. <https://www.winnipegfreepress.com/business/2023/05/19/rough-times-at-the-register>
- Richard Cloutier on CJOB Radio (Global) on Wednesday January 3, 2024 at 3:05 PM regarding possible electric vehicle battery component plant being considered for Winnipeg.
- Related on-television interview with Marney Blunt, Global News <https://globalnews.ca/news/10202662/japanese-company-manitoba-lithium-ion-battery-facility/amp/>
- CBC Up to Speed (afternoon AM radio show) on Monday March 18, 2024 at 5:05 PM regarding preventative shutdown of Winnipeg Products (petroleum) pipeline.
- Related follow-up story by Brittany Greenslade, CBC News <https://www.cbc.ca/amp/1.7148594>

Effective Date: August 2024