

Past & Current Project Sampling

July 04, 2022

| Client | Scope of Work | Brief Description/ Additional Information |
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| The Government of the Yukon | Review of Light-Duty Fleet Owned by the Government of the Yukon | (Currently underway) A comprehensive review to examine the current structure, organization and overall operations of the Yukon Governments light-duty fleet to evaluate the operational efficiency and effectiveness of current fleet management. |
| Solas Energy Consulting Inc., Calgary, AB | E3 Fleet Review | (Currently underway). An E3 Fleet Review, including three-level reports and recommendations, exception list for Solas Energy. |
| Town of Quispamsis, NB | Fleet Asset Assessment and Optimization and Replacement Plan | (Currently underway) A detailed evaluation of the Town's fleet and the overall fleet management operations. Recommendations the Town can take to improve the effectiveness and efficiency of fleet management, maintenance, and replacement. |
| City of North Battleford, SK | Fleet Equipment and Vehicle Optimization Study | (Currently underway) Launched in April 2022, the project is a comprehensive analysis of the City's fleet management and maintenance operations, practices, and policies with the goal of reducing lifecycle costs and increasing efficiency and utilization while meeting operational needs. |
| Toronto-Hydro Electric System | Battery-electric vehicle transition plan | Completed in 2022, Fleet Challenge developed a long-term electric vehicle phase-in plan for the utility based on return-on-investment and business case analysis. |
| Grey County, ON | Fleet Review - Fleet and Equipment Assets, Electric Vehicle Transition Plan | Completed early 2022, Grey County engaged Fleet Challenge Canada Inc. to complete a Fleet Review for its fleet and equipment assets. The project included an electric vehicle transition plan for the County. |
| The Town of Niagara-on-the-Lake, ON. | Fleet Services Review, Electrification Plan | Completed in early 2022, the Town of Niagara-on-the-Lake (NOTL) engaged Fleet Challenge Canada Inc. to provide consulting services for a Fleet Services Review. |

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| | | The vision for the NOTL Fleet Service Review was for the Town to improve fleet asset management and operational efficiency while steadily transitioning towards electrification and becoming a green fleet. |
| The Municipality of Strathroy-Caradoc, ON | Comprehensive Fleet Review & Green Fleet Strategy and EV Transition Plan | Completed in September 2021, the strategy will help the municipality reduce its fleet greenhouse gas (GHG) emissions by 94% by 2035 over a 2019 baseline. |
| City of Brampton, ON | Sustainable Fleet Strategy and EV Phase-in Plan | Completed to the client's full satisfaction in August 2021 and featuring balanced long-term capital budget spending based on return-on-investment (ROI). When implemented, the plan will reduce the Brampton fleet's CO2 by 86% by 2035 (over base-line year). |
| City of Hamilton, ON | Green Fleet Strategy (2021), EV Transition Plan | The actions and recommendations prepared by FCC in City of Hamilton Green Fleet Strategy, if fully implemented, have the potential to reduce Hamilton's fleet GHG emissions by more than 90% by 2035. |
| Durham Region, ON | Green Fleet Strategy and EV Transition Plan | FCC developed a Green Fleet Strategy for the Region with balanced long-term (to fiscal year 2035) capital budgets and operating expenses in step with inflation for the period. The actions recommended in Durham Region's Green Fleet Review and Strategy, if fully implemented, can reduce the Region's fleet GHG emissions by nearly 90% by 2035. |
| City of Hamilton, ON, Office of City Auditor | Review of Sub-Contractor Fleets | (Currently underway) Fleet Challenge is completing a comprehensive management and safety practices review of DARTS and sub-contractor fleets for the City Auditor's office. See: https://www.cbc.ca/news/canada/hamilton/darts-accessible-transit-safety-concerns-one-third-taken-off-road-1.6459139 |
| Government of Canada, Natural | Total Cost of Ownership (TCO) Web App | FCC and partner Calstart (Pasadena, CA, USA) were engaged by the Government of Canada, Natural Resources Canada, to co-develop a "Total Cost of Ownership" (TCO) Web App that enables |

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| Resources Canada (NRCan) | | fleet managers to evaluate various truck options from standard diesel to renewable and alternate fuels as well as battery-electric and hydrogen fuel cells. The app will soon be released publicly for fleet managers use. |
| Toronto-Hydro Electric System | Fleet Vehicle Acquisition - Buy Versus Lease Versus Rent Analysis | Completed in early 2022, in this study Fleet Challenge completed discounted cashflow analysis to determine the lowest costs options of buying, leasing, and renting. |
| Toronto-Hydro Electric System | Key Performance Metrics Benchmarking Study | Completed in early 2022, in this study Fleet Challenge researched and made recommendations for several performance benchmarks for the utility. As well, FCC prepared comparisons with several peer electrical utility fleets. |
| City of Brampton, ON | Lease versus Buy versus Rent Study | In early 2021, our team completed discounted cashflow analysis to determine the lowest cost options of buying, renting, or leasing vehicles for the fleet. |
| City of Brampton, ON | Garage Bay and Fleet Technician Labour Demand Study | The Brampton fleet was space constrained in one of its two garages. FCC was engaged to calculate the number of Fleet Maintenance Technicians and garage service bays required today and in the future given population growth estimates by 2040. |
| Saskatoon, SK | Green Fleet Assessments (4) (2020) | Green Fleet Assessments for four City of Saskatoon sub-fleets |
| Town of Gander, NL | Fleet Review and EV Plan (2020) | FCC completed a fleet review and developed an EV phase-in plan for the Town of Gander |
| Bison Transport | Green Fleet Assessment | For Bison Transport, one of Canada's largest commercial carriers, FCC completed a Green Fleet Assessment in 2020 and evaluated many low-carbon options, including fuel-switching and electrification. |
| The Town of Aurora, ON | Fleet Management Strategy | Comprehensive analysis of Aurora's fleet operations, including lifecycle analysis, long-term capital plan, mechanic's labour and garage bay |

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| | | <p>capacity vs. demand study and a fleet management study.</p> <p>The plan was presented to Town Council on Nov. 17, 2019, and passed/approved on December 2, 2019.</p> |
| The Town of Whitby, ON | Master Fleet Plan | A comprehensive review of Whitby's fleet operations, including lifecycle analysis, long-term capital plan, mechanic's labour and garage bay capacity vs. demand study and a fleet management best management practices study and a master fleet plan. |
| City of Brantford, ON | Fleet Energy Management Assessment | A review of Brantford's Public Works and Transit fleets with recommendations for fuel-use reduction and cost-benefit analysis. |
| City of Greater Sudbury, ON | Fleet Energy Management Assessment | A review of Sudbury's Class 5 to 8 fleet vehicles with recommendations for fuel-use reduction and cost-benefit analysis. |
| The Town of Caledon, ON | Life Cycle Analysis Study | Economic lifecycle analysis for all vehicle types in the Town of Caledon's fleet (completed Dec. 2019) |
| The District of Summerland, BC | Green Fleet Action Plan | Comprehensive analysis of Summerland's fleet operations, including lifecycle analysis, long-term capital plan, best management practices review, and a long-term green fleet action plan. |
| Sweeteners Plus, Lakeville, NY | Fleet Management System | Needs-analysis, business process review, software assessment and selection, recommendations. Currently underway |
| R. Conley Trucking LLC, Elma, NY | Fleet Management System | Needs-analysis, business process review, software assessment and selection, recommendations. Currently underway |
| The Food Union Group, Republic of | Fleet Lifecycle Analysis | Lifecycle analysis to inform replacement planning. (current project) |

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| Latvia, Northern Europe | | |
| Day and Ross Transportation, Moncton, NB | GFAST Fleet Assessment (Freight Assessment) | The analysis was completed in October 2019 on time and on budget. |
| The Government of Canada, Natural Resources Canada (NRCan) | Canadian Freight Industry Analysis | The analysis was completed in March 2019 on time and budget. |
| Armour Transportation, Moncton, NB | GFAST Fleet Assessment (Freight Assessment) | Data received from the client and processed by FCC via GFAST. |
| The Town of Enfield, Connecticut, USA | Fleet Review, FAR Analysis and Long-Term Capital Plan | The work was successfully completed, and Enfield accepted the final report. |
| The Region of Peel, ON | Long-Term (to the year 2050) Green Fleet Plan | The Peel project was successfully completed on-time and on-budget. |
| The Government of Canada, Natural Resources Canada (NRCan) | The Potential for Fuel Efficiency Savings in Canadian Trucking Fleets | Completed as planned on-time, on-budget |
| NW Natural Gas Company, Portland, Oregon | Fleet Review and Long-Term Low Carbon Strategy | The 2018 project included a Fleet Analytics Review (FAR), Best Management Practices Review (BMPPR), Life Cycle Analysis (LCA) and Long-Term Capital Budget plan. |
| City of Vaughan, ON | Fleet Review, long-term capital budgeting 2017- | City of Vaughan employs FCC's FAR analysis in its annual capital budget planning. Vaughan also |

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| | 2021 and 2018-2022, develop vehicle specifications and life cycle analysis. | plans vehicle & equipment replacements based on FCC's LCA recommendations. FCC now regularly prepares detailed specifications for Vaughan RFQs and tenders. |
| Greater Toronto Airport Authority (GTAA), ON | Various projects | FC completed a detailed analysis of the cost/benefits and ROI for the Total Fleet Plan, which was adopted by GTAA senior management. |
| The Government of Canada, Natural Resources Canada | Green Freight Assessment Program (GFAP) framework and Green Freight Assessment Software Tool (GFAST) | The GFAP program was successfully launched in April 2018 and re-launched in May 2019. |
| Titanium Logistics | GFAST (beta test) | GFAST was completed to the client's full satisfaction. |
| The Province of Ontario, Canada Ministry of Transportation | Green Commercial Vehicle Program (GCVP) | The initial Fleet Challenge GCVP was successfully launched by the Province of Ontario. |
| The Municipality of Middlesex Centre | Fleet Baseline Data Review, Best Management Practices Review, Life Cycle Analysis and Green Fleet Plan | Completed successfully. |
| Winnipeg Airport Authority (WAA) | Fleet Baseline Data Review, Best Management Practices Review, Life Cycle Analysis | The WAA fleet project was successfully completed. |

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| The County of Oxford | Fleet Baseline Data Review, Best Management Practices Review, Life Cycle Analysis | The project was approved by City Council directive and target for 2019 |
| City of Mississauga, Parks and Recreation Dept. | Discounted cash flow analysis to determine optimal financing model (lease vs. rent vs. buy) for 68 seasonal -use pickup trucks. | Project identified optimal financing solution that will save the municipality over \$200k per year. |
| Greater Toronto Airport Authority | A comparison of gasoline, electric and compressed natural gas options for the GTAA pool fleet | To conduct the analysis, FCC developed the current-day baseline for the operating fleet (largely conventional gasoline powered vehicles) and applied the following three scenarios: <ol style="list-style-type: none"> (1) All vehicles switched to Battery-Electric Vehicles (BEV) or Plug-In Hybrid Vehicles (PHEV), except for pickups. (2) All vehicles switched to BEV or PHEV and pickups to CNG; and, (3) All vehicles in the pool switched to CNG |
| Toronto Hydro Fleet Data Review and Life Cycle Analysis 2013 and 2017 | Data review of 580 vehicles to compile data, life cycle analysis (LCA), peer fleet comparison, and recommendations on fleet replacement guidelines. FC completed the analysis in 2013 | Compilation of 10+ Hydro datasets to provide detailed operational and financial evaluation of operations. |

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| | and a data refresh in 2017. | |
| Department of Fisheries & Oceans (DFO) Motor Vehicle Fleet Rationalization Report | Project reviewing ~1,500 DFO motor vehicle fleet to identify if federal carbon reduction targets and financial savings could be achieved through comprehensive fleet right-sizing. | Approach involved multiple face-to-face meetings with DFO staff across Canada to refine vehicle specifications templates and regional needs. Project included Phase Three (implementation) with our team's direct support. |
| Toronto Catholic District School Board | Fleet best management practices review Completed Fleet Plan, including Life Cycle Analysis and a review of current vehicles and developed a funding model for new vehicle acquisition. | Project completed on time and on-budget. Client very satisfied with project outcomes. |
| BC Ministry of Labour, Citizens' Services, and Open Government – Fleet Efficiency Project | Fleet Review of comparable best in class fleet practices to inform BC government fleet policy development | Items reviewed included business models, fleet financing, GHG reduction strategies, procurement, information systems, vehicle replacement, and performance management. |

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| MicroTransit Scoping Study | FCC-Fleet Challenge, with partner the MaRS Discovery District completed a Micro Transit Scoping Study in 2017. | The project was successfully completed, and recommendations were provided. |