

### **Hamilton CarShare Corporate Membership**

This document provides detailed background information, data and assumptions used to evaluate the carshare corporate membership.

The carshare corporate membership was initiated in 2013. Since then, employees have used the program to travel over 12,000 km. Table 1 provides a summary of the carshare corporate membership usage throughout the pilot period by year. This information was provided by Community Carshare. Please note that usage in 2013 is low because the pilot started in September of that year. Usage in 2015 is from January until the end of August.

Table 1 – Carshare usage statics for the duration of the Pilot.

Year of Data	KM being assessed	Number of Trips	Mean Reservation Time (hours)
2013	1560	43	4.1
2014	5504	142	4.4
2015	5582	172	3.6

Table 2 provides a summary of the carshare corporate membership costs throughout the duration of the pilot, provided by Community CarShare. The actual cost billed is equal to the sum of the cost of each individual trip billed to the City of Hamilton by Community CarShare by year.

Table 2 – Carshare corporate membership costs throughout the Pilot.

Year	Hourly Rate (\$/hr)	Average Distance Traveled per Time (km/hr)	Mileage Rate	Actual Cost Billed
2013	\$ 5.00	8.8	\$ 0.30	\$ 1,195.07
2014	\$ 5.00	8.8	\$ 0.30	\$ 4,473.37
2015	\$ 5.00	9.1	\$ 0.30	\$ 4,996.89

In order to compare the cost of using carshare to the cost of owning and operating one or more fleet vehicles, several assumptions were made. For the purposes of this analysis, it is assumed that the distance traveled by carshare each year (Table 1) is the same as the distance traveled by the fleet vehicle(s); no additional usage is considered. It is conservatively assumed that the fleet vehicle is a Ford Escape Hybrid. Ownership and usage costs (fuel and maintenance) were provided by Al Fletcher, Central Fleet Superintendent. It is assumed that the cost of insurance is \$1,200 per vehicle per year. Tables 3a, 3b and 3c summarize the costs associated with owning and operating one, two and three fleet vehicles, respectively, for the duration of the pilot.

Table 3a – Costs associated with ownership and operation of one (1) fleet vehicle for the usage provide in Table 1.

Year	Fixed Costs		Variable Costs				Total Cost
	Lease	Insurance	Fuel		Maintenance		
			Rate (\$/km)	Cost (\$)	Rate (\$/km)	Cost (\$)	
2013	\$ 4,437.50	\$ 1,200.00	\$ 0.09	\$ 140.40	\$ 0.11	\$ 171.60	\$ 5,949.50
2014	\$ 4,437.50	\$ 1,200.00	\$ 0.09	\$ 495.36	\$ 0.09	\$ 495.36	\$ 6,628.22
2015	\$ 4,437.50	\$ 1,200.00	\$ 0.08	\$ 446.56	\$ 0.15	\$ 837.30	\$ 6,921.36

Table 3b - Costs associated with ownership and operation of two (2) fleet vehicles for the usage provide in Table 1.

Year	Fixed Costs		Variable Costs				Total Cost
	Lease	Insurance	Fuel		Maintenance		
			Rate (\$/km)	Cost (\$)	Rate (\$/km)	Cost (\$)	
2013	\$8,875.00	\$2,400.00	\$ 0.09	\$ 140.40	\$0.11	\$171.60	\$11,587.00
2014	\$8,875.00	\$2,400.00	\$ 0.09	\$ 495.36	\$0.09	\$495.36	\$12,265.72
2015	\$8,875.00	\$2,400.00	\$ 0.08	\$ 446.56	\$0.15	\$837.30	\$12,558.86

Table 3c - Costs associated with ownership and operation of three (3) fleet vehicles for the usage provide in Table 1.

Year	Fixed Costs		Variable Costs				Total Cost
	Lease	Insurance	Fuel		Maintenance		
			Rate (\$/km)	Cost (\$)	Rate (\$/km)	Cost (\$)	
2013	\$13,312.50	\$3,600.00	\$0.09	\$140.40	\$0.11	\$171.60	\$17,224.50
2014	\$13,312.50	\$3,600.00	\$0.09	\$495.36	\$0.09	\$495.36	\$17,903.22
2015	\$13,312.50	\$3,600.00	\$0.08	\$446.56	\$0.15	\$837.30	\$18,196.36

Table 4 below summarizes the cost of carshare usage versus the costs associated with owning and operating one, two and three fleet vehicles. These values are taken from the tables above. Based on the kilometres being assessed, the cost of using carshare is less than the cost of owning and operating one, two and three fleet vehicles to travel the same distance on an annual basis.

Table 4 – Summary of carshare usage costs versus Fleet Vehicle usage costs.

Year of Data	KM being assessed	Carshare Usage Cost	Cost for 1 Fleet Vehicle	Cost for 2 Fleet Vehicles	Cost for 3 Fleet Vehicles
2013	1560	\$1,195.07	\$5,949.50	\$11,587.00	\$17,224.50
2014	5504	\$4,473.37	\$6,628.22	\$12,265.72	\$17,903.22
2015	5582	\$4,996.89	\$6,921.36	\$12,558.86	\$18,196.36

Table 5 below summarizes the cost of carshare usage versus the costs associated with owning and operating one, two and three fleet vehicles. Further, this table considers the cost of reimbursing mileage at the City of Hamilton rate, and it also includes a consideration for reimbursing parking costs incurred by employees who are required to use their vehicle throughout the day for work-related purposes but who do not qualify for a parking pass. It is assumed that the average cost of parking in this instance is \$6.00 per trip. Based on the kilometres being assessed, the cost of using carshare is comparable to the cost of reimbursing employees for mileage and parking to travel the same distance on an annual basis. This analysis does not consider the additional insurance premium required by employees who use personal vehicles for work-related travel.

Table 5 – Summary of carshare usage costs versus Fleet Vehicle usage costs, including mileage and parking reimbursement.

Vehicle Option	2013	2014	2015	Total
1 Fleet Vehicle	\$ 5,949.50	\$ 6,628.22	\$ 6,921.36	\$19,499.08
2 Fleet Vehicles	\$11,587.00	\$12,265.72	\$12,558.86	\$36,411.58
3 Fleet Vehicles	\$17,224.50	\$17,903.22	\$18,196.36	\$53,324.08
Mileage	\$ 858.00	\$ 2,996.96	\$ 3,035.18	\$ 6,890.14
Mileage + Parking	\$ 1,116.00	\$ 3,848.96	\$ 4,067.18	\$ 9,032.14
Carshare	\$ 1,195.07	\$ 4,473.37	\$ 4,996.89	\$10,665.33