

# Gasoline versus Electric Vehicle Life Cycle Cost Comparison

!! Only enter data in Red Font Cells !! Blue Font is output. Use at your own risk of errors!

Gasoline Cost	1.5	\$/litre
Electricity Cost	0.13	\$/kWh
Gasoline Efficiency (litres/100 km)	7	litres/100 km
Electricity Efficiency (kWh/100 km)	20	kWh/100 km
Gasoline Inflation Rate	5.0	%/year
Electricity Inflation rate	5.0	%/year
General inflation	5.0	%
Annual driving	20,000	km/year
ICE annual maintenance	1000	per year
EV annual maintenance	500	per year
Annual Insurance	2	% of MSRP
EV loan	15000	\$
GAS Car Loan	0	\$
Loan annual interest	7.0	% annual
Loan term	8.0	Years
Years of Ownership	10.0	Years
% Depreciation per year	9%	of MSRP
Ont elec emissions factor	0.1	kg CO2/kWh

April 27 - 2023 revision

### 2023 MSRP Data for Reference

	2023 models
Kona Gas MSRP	\$ 27,655
Kona EV MSRP	\$ 47,250
Bolt EV MSRP	\$ 41,150
F150 Gas Basic 4wd quad cab	\$ 65,000
F150 Pro Lightning EV	\$ 76,000
F150 XLT EV	\$ 81,000
F150 Lariat Lightning EV	\$ 92,000

	Gasoline Vehicle	Electric Vehicle
MSRP+Dest before federal EV rebate	\$ 26,000	\$ 41,000
Tax	\$ 3,380	\$ 5,330
Federal rebate	N/A	\$ 5,000
Cash price inc. tax and rebate	\$ 29,380	\$ 41,330
Loan amount	\$ -	\$ 15,000
Total costs		
Price including rebate and taxes	\$ 29,380	\$ 26,330
Energy, Maintenance and Insurance		
1	\$ 3,688	\$ 1,847
2	\$ 3,872	\$ 1,939
3	\$ 4,066	\$ 2,036
4	\$ 4,269	\$ 2,138
5	\$ 4,482	\$ 2,245
6	\$ 4,706	\$ 2,357
7	\$ 4,942	\$ 2,475
8	\$ 5,189	\$ 2,598
9	\$ 5,448	\$ 2,728
10	\$ 5,721	\$ 2,865
11	\$ -	\$ -
12	\$ -	\$ -
13	\$ -	\$ -
14	\$ -	\$ -
15	\$ -	\$ -
Total Loan Cost	\$ -	\$ 19,633
Trade in value	\$ 2,556	\$ 3,596
Total \$ cost of ownership for years owned	\$ 73,206	\$ 65,593
GHG tonnes emitted during ownership	32.2	4.00

### Background Calculaitons - Do not change

#### Loan Payment Calculaitons

Year	Gas car	EV
1	\$0	\$ 2,454
2	\$0	\$ 2,454
3	\$0	\$ 2,454
4	\$0	\$ 2,454
5	\$0	\$ 2,454
6	\$0	\$ 2,454
7	\$0	\$ 2,454
8	\$0	\$ 2,454
9	\$0	\$ -
10	\$0	\$ -
11	\$0	\$ -
12	\$0	\$ -
13	\$0	\$ -
14	\$0	\$ -
15	\$0	\$ -
Total Payments	\$0	\$ 19,633

#### Energy/Fuel, Maintenance and Insurance Costs

Gasoline Vehicle			Electric Veh #1		
Fuel	Maint	Ins	Elec	Maint	Ins
\$ 2,100	\$ 1,000	\$ 588	\$ 520	\$ 500	\$ 827
\$ 2,205	\$ 1,050	\$ 617	\$ 546	\$ 525	\$ 868
\$ 2,315	\$ 1,103	\$ 648	\$ 573	\$ 551	\$ 911
\$ 2,431	\$ 1,158	\$ 680	\$ 602	\$ 579	\$ 957
\$ 2,553	\$ 1,216	\$ 714	\$ 632	\$ 608	\$ 1,005
\$ 2,680	\$ 1,276	\$ 750	\$ 664	\$ 638	\$ 1,055
\$ 2,814	\$ 1,340	\$ 787	\$ 697	\$ 670	\$ 1,108
\$ 2,955	\$ 1,407	\$ 827	\$ 732	\$ 704	\$ 1,163
\$ 3,103	\$ 1,477	\$ 868	\$ 768	\$ 739	\$ 1,221
\$ 3,258	\$ 1,551	\$ 912	\$ 807	\$ 776	\$ 1,282
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -