

Vehicle Total Cost of Ownership Comparisons

Total Cost of Ownership- Malibu (Gasoline) v. Prius Prime (PHEV) v. Nissan Leaf (EV)

Results

Malibu: \$91,009 Prius Prime: \$88,426 Nissan Leaf: \$87,887





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Assumptions

State: Hawaii County: Honolulu

Vehicle Type: Passenger Car

Three Vehicles for Comparison:

Light Duty Fuel Type: Gasoline (2020 Chevrolet Malibu)

Number of Vehicles: 1

Annual Vehicle Mileage: 10,000 Fuel Economy (MPGGE): 29 Purchase Price: \$22,140

Light Duty Fuel Type: Gasoline Plug-in Hybrid Electric Vehicle (PHEV) (2020 Prius Prime PHEV)

Number of Vehicles: 1

Annual Vehicle Mileage: 10,000

Fuel Economy (MPGGE): 133 MPGGE, 25 all-electric miles, 1.9 GGE/100 miles, 25 kwh/100 miles

Purchase Price: \$27,900 Federal Incentive: \$4,502

Light Duty Fuel Type: All-Electric Vehicle (PHEV) (2020 Nissan Leaf)

Number of Vehicles: 1

Annual Vehicle Mileage: 10,000 Fuel Economy (MPGGE): 99.0 Purchase Price: \$31,600 Federal Incentive: \$7,500

Fuel Prices		
	Public Station (\$/fuel unit)	Private Station (\$/fuel unit)
Gasoline (gallon)	\$3.22	\$3.22
Diesel (gallon)	\$4.27	\$3.50
Electricity (kWh)	\$0.32	\$0.32

Years of Planned Ownership: 15 years **Financial Assumptions:** No Loan

Developed for Hawai'i Climate Change Mitigation and Adaptation Commission by Sustainable Transportation Coalition of Hawai'i. August 2020. See http://climate.hawaii.gov/fleet-tools/ for details and assumptions.



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Assumptions (cont'd)

Level of Analysis: Well-to-Wheels and Vehicle Production, Petroleum Use, GHGs, Air Pollutants

EV Chargers: Not built into analysis because they are shared infrastructure

Maintenance and repair of current vehicles: \$0.163/mile (\$.076/mile first year)

Maintenance and repair of PHEV: \$0.156/mile (\$.073/mile first year) **Maintenance and repair of BEV:** \$0.146/mile (\$.070mile first year)