Vehicle Total Cost of Ownership Comparisons

Total Cost of Ownership- F-350 (Gasoline) v. Prius Prime (PHEV) v. Nissan Leaf (EV)

Results
F-350: $153,819
Prius Prime: $88,426
Nissan Leaf: $87,887

Assumptions

State: Hawaii
County: Honolulu
Vehicle Type: Passenger Car

Three Vehicles for Comparison:

**Light Duty Fuel Type:** Gasoline (2020 Ford F350)
- Number of Vehicles: 1
- Annual Vehicle Mileage: 10,000
- Fuel Economy (MPGGE): 18
- Purchase Price: $35,550

**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**

<table>
<thead>
<tr>
<th></th>
<th>Public Station ($)/fuel unit</th>
<th>Private Station ($)/fuel unit</th>
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<tbody>
<tr>
<td>Gasoline (gallon)</td>
<td>$3.22</td>
<td>$3.22</td>
</tr>
<tr>
<td>Diesel (gallon)</td>
<td>$4.27</td>
<td>$3.50</td>
</tr>
<tr>
<td>Electricity (kWh)</td>
<td>$0.32</td>
<td>$0.32</td>
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**Years of Planned Ownership:** 15 years
**Financial Assumptions:** No Loan

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 ($0.076/mile first year)

**Maintenance and repair of PHEV:** $0.156/mile ($0.073/mile first year)

**Maintenance and repair of BEV:** $0.146/mile ($0.070/mile first year)