

Vehicle Affordability and Incentive Amounts

August 31, 2022



Affordability Calculation Purposes

Does a given incentive mix enable meaningful vehicle choice for consumers?



Today's Meeting

Gather feedback about and ground assumptions in reality

Set up future conversations about rebate amounts

Key Takeaways

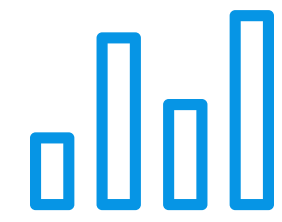
1

Current incentive levels do not enable affordable EV choices for households with income less than 400% of the federal poverty level

2

Incentive dollars enable relatively more choice in the used EV market

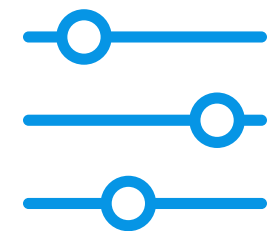
Outline



Cost Calculations



Affordability calculations overview



Cost assumptions



Example calculation and summary

Cost Calculations

Loan Costs

- Principal
(incl. tax & fees)
- Interest

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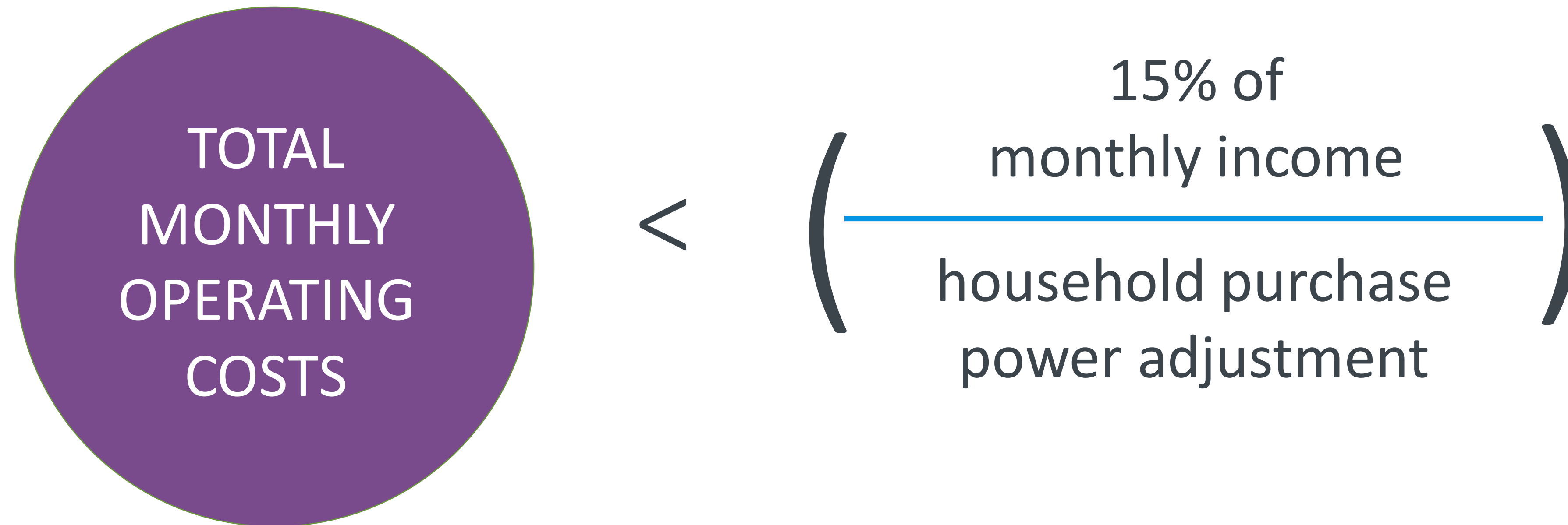
Operating Costs

- Insurance
- Fuel
- Avg. other maintenance

=

TOTAL
MONTHLY
OPERATING
COSTS

Affordability Calculations



- 10% down payment
- 4-year (48-month) loan

New Vehicle Inputs

- 2022 model year vehicles from FuelEconomy.gov
- Make, model, and trim combinations where trim is related to electric range
- Where price information is available
- Limited to CVRP-eligible vehicles
 - Under MSRP cap
 - Exceeding all-electric range minimum



Photos from Kelly Blue Book

Vehicle Cost Assumptions

- Vehicle cost: MSRP or KBB Fair Purchase Price without options
- Interest rate: 9.77% for new, 10% for used
- Insurance premium: \$190/month
- Maintenance: \$33/month (lifetime average)
- DMV and doc fees: \$789
- Sales tax rate: 8.82% (average via taxfoundation.org)
- Fuel costs: varies by vehicle, based on FuelEconomy.gov
- Purchasing power adjustment for larger households



Max Monthly Cost

Including interest, insurance, fuel, and lifetime-average maintenance costs

Four-person household / Joint-filers		
Income Level	Income	Max Monthly Cost
225% of FPL	\$62,438	\$390
300% of FPL	\$83,250	\$520
400% of FPL	\$111,000	\$694
CVRP Income Cap	\$200,000	\$1,250

Example: New CVRP-Eligible BEVs

- Four-person household
- \$111,000 income (400% FPL)
- CVRP-eligible vehicles
- \$14,000 point-of-sale incentive



- 2022 Model Year Options = 1
- Nissan LEAF (40 kWh)



Example: New CVRP-Eligible BEVs

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- 2022 Model Year Options = 1
- Nissan LEAF (40 kWh)

Income	Incentive				
	\$2k	\$4.5k	\$10k	\$14k	\$21.5k
\$62,438					
\$83,250					
\$111,000				1	
\$200,000					

Example: New CVRP-Eligible BEVs

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Income	Incentive				
	\$2k	\$4.5k	\$10k	\$14k	\$21.5k
\$62,438					
\$83,250					
\$111,000				1	7
\$200,000	8	12	17	22	27

Four-person Household: CVRP Eligible NEW EVs

PHEV

Income	Incentive				
	\$2k	\$4.5k	\$10k	\$14k	\$21.5k
\$62,438					
\$83,250					
\$111,000					
\$200,000	3	3	5	5	5

BEV

Income	Incentive				
	\$2k	\$4.5k	\$10k	\$14k	\$21.5k
\$62,438					
\$83,250					
\$111,000				1	7
\$200,000	8	12	17	22	27

Out of 33 model year 2022 vehicles for which price data are available. Price data are gathered from OEM websites and auto media sites. Vehicles are combinations of make, model, and trim, where the trim results in a difference in all-electric range, as provided by fueleconomy.gov.

Four-person Household: Used EVs

Assuming same eligibility criteria applied to new EVs in CVRP

PHEV

Income	Incentive					
	\$1k	\$2k	\$3k	\$4k	\$5k	\$9k
\$62,438						3
\$83,250	1	2	3	3	4	8
\$111,000	8	8	9	9	9	16
\$200,000	27	29	30	31	31	31

BEV

Income	Incentive					
	\$1k	\$2k	\$3k	\$4k	\$5k	\$9k
\$62,438	4	9	16	19	24	46
\$83,250	30	33	41	47	55	63
\$111,000	61	62	65	67	69	80
\$200,000	102	102	103	107	109	109

Out of 140 model year 2010 or later vehicles meeting CVRP MSRP limits and all-electric range minimum for which used price data are available. Price data are Fair Purchase Prices from Kelly Blue Book. Vehicles are combinations of make, model, and trim, where the trim results in a difference in all-electric range, as provided by fueleconomy.gov.

Revisiting Key Takeaways

1

Current incentive levels do not enable affordable EV choices for households with income less than 400% of the federal poverty level

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Incentive dollars enable relatively more choice in the used EV market

Appendix

Vehicle Cost Assumptions Explained



Interest Rates

- Values chosen:
 - New: 9.77%
 - Used: 10%
- Why this was chosen: Average interest rate during August 2022 assuming a 700–750 credit score.
- Sources:
 - Average credit score: Experian
 - Average August Loan Rates: U.S. News and MyAutoLoan
- Possible alternatives: 3.86% for new vehicles and 8.21% for used via Experian Q4 2021 report

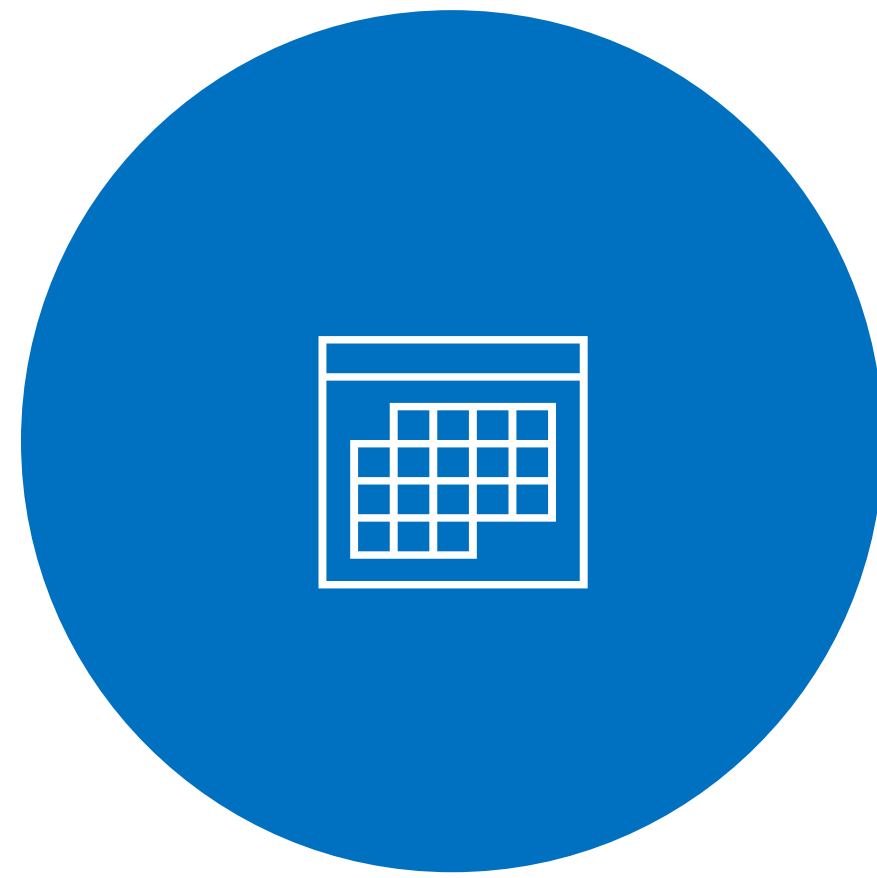
Vehicle Cost Assumptions Explained



Maintenance

- Value chosen: \$33 per month
- Why this was chosen: Maintenance cost per mile of BEV \$0.031 and PHEV \$0.030, at 13,000 miles a year this equals about \$33 a month
- Source: 2020 Consumer Reports report
- Possible alternative: \$66.08 per month for BEV and \$97.50 per month for PHEV via April 2021 Department of Energy report

Vehicle Cost Assumptions Explained



Insurance

- Value chosen: \$190 per month
- Why this was chosen: National EV average
- Source: Forbes
- Possible alternatives: Weighted average of EV model specific quotes from independent quote generators

Vehicle Cost Assumptions Explained



DMV and Document Fees, Taxes

- Value chosen: \$789; 8.82% tax rate
- Why this was chosen: \$709 DMV fee (new vehicles) and \$80 median doc fees; California average tax rate
- Source: Edmunds, Tax Foundation
- Additional considerations: Recent dealer markups for EVs are 2.6% for non-Tesla BEVs and 1.6% for PHEVs via Edmunds. Markups in CA could be higher.

Vehicle Price Data Summary

Applying CVRP eligibility criteria to both new and used cars

